

OCEANO COMMUNITY SERVICES DISTRICT

CONSTRUCTION CONTRACT

2019 REPLACEMENT GENERATOR

PROJECT # 2019-01

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TABLE OF CONTENTS

SECTION 1	INCORPORATION OF RECITALS AND DEFINITIONS.....	3
SECTION 2	THE PROJECT.	4
SECTION 3	THE CONTRACT DOCUMENTS	4
SECTION 4	THE WORK.....	4
SECTION 5	PROJECT TEAM.....	4
SECTION 6	TIME OF COMPLETION.	5
SECTION 7	COMPENSATION TO CONTRACTOR.	6
SECTION 8	STANDARD OF CARE.....	7
SECTION 9	INDEMNIFICATION.	7
SECTION 10	COMPLIANCE WITH APPLICABLE CODE REQUIREMENTS.....	8
SECTION 11	INSURANCE AND BONDS.....	8
SECTION 12	PROHIBITION AGAINST TRANSFERS.....	8
SECTION 13	NOTICES.	9
SECTION 14	DISPUTE RESOLUTION.....	10
SECTION 15	DEFAULT.....	13
SECTION 16	DISTRICT'S RIGHTS AND REMEDIES	14
SECTION 17	CONTRACTOR'S RIGHTS AND REMEDIES.	17
SECTION 18	ACCOUNTING RECORDS.	18
SECTION 19	INDEPENDENT PARTIES.	18
SECTION 20	NUISANCE.....	18
SECTION 21	PERMITS AND LICENSES.	18
SECTION 22	WAIVER.....	19
SECTION 23	CONFLICTS WITH THE CONSTRUCTION CONTRACT.	19
SECTION 24	GOVERNING LAW AND VENUE.....	19
SECTION 25	COMPLETE AGREEMENT.....	19
SECTION 26	SURVIVAL OF CONTRACT.....	19
SECTION 27	ADDITIONAL CONTRACT REQUIREMENTS.	19
SECTION 28	PUBLIC WORKS CONTRACTOR REGISTRATION PROGAM- SB 854...	20
SECTION 29	GOVERNMENTAL POWERS	20
SECTION 30	SEVERABILITY.....	20
SECTION 31	EXHIBITS.....	20

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CONSTRUCTION CONTRACT

THIS CONSTRUCTION CONTRACT entered into on _____, 2019 (“Execution Date”) by and between the OCEANO COMMUNITY SERVICES DISTRICT, a California community services district (“District”), and **Mark Schwind Electric Inc.** (“Contractor”), is made with reference to the following:

RECITALS:

A. District is a community services district duly organized and validly existing under the laws of the State of California with the power to carry on its business as it is now being conducted under the statutes of the State of California.

B. Contractor is a Corporation or company duly organized and in good standing in the State of California, License Number **710572**. Contractor represents that it is duly licensed by the State of California and has the background, knowledge, experience and expertise to perform the obligations set forth in this Construction Contract.

C. On **June 12, 2019**, District issued a Notice Inviting Bids to contractors for **2019 Generator Replacement** Project. A copy of District’s Notice Inviting Bids is attached hereto as Exhibit “A” and incorporated by reference. In response to District’s Notice Inviting Bids, Contractor submitted its Bid. A copy of Contractor’s Bid is attached hereto as Exhibit “B” and incorporated herein by reference. Also attached hereto and incorporated by reference are the following:

- Exhibit C – General Conditions.
- Exhibit D – Special Provisions and/or Technical Specifications.
- Exhibit E – Payment and Performance Bonds.
- Exhibit F – Insurance Requirements.
- Exhibit G – Rules Governing Bid Protests
- Exhibit H – Other Contract Documents

D. District and Contractor desire to enter into this Construction Contract for the 2019 Replacement Generator Project, and other services as identified in the Bid Documents for the upon the following terms and conditions.

NOW THEREFORE, in consideration of the mutual promises and undertakings hereinafter set forth and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, it is mutually agreed by and between the undersigned parties as follows:

SECTION 1 INCORPORATION OF RECITALS AND DEFINITIONS.

1.1 Recitals.

All of the recitals are incorporated herein by reference.

1.2 Definitions.

Capitalized terms shall have the meanings set forth in this Construction Contract and/or in the General Conditions. If there is a conflict between the definitions in this Construction Contract and in the General Conditions, the definitions in this Construction Contract shall prevail.

Contract No. 2019-01
(2019 Replacement Generator)

SECTION 2 THE PROJECT.

The Project is the construction of the 2019 Replacement Generator ("Project").

SECTION 3 THE CONTRACT DOCUMENTS.

The Contract Documents consist of the following collection of documents:

- (i) Executed Construction Contract between District and Contractor.
- (ii) Notice Inviting Bids.
- (iii) Instructions to Bidders.
- (iv) Bidding Addenda.
- (v) Contractor's Bid.
- (vi) General Conditions.
- (vii) Special Provisions and Technical Specifications.
- (viii) Performance and Payment Bonds.
- (ix) Insurance Forms.
- (x) Plans and Drawings.
- (xi) Reports listed in the Bidding Documents.
- (xii) Supplements, Attachments, and Exhibits attached to the above items.
- (xiii) Modifications.
- (xiv) Change Orders.
- (xv) Field Orders.
- (xvi) Other documents as so designated by written agreement of the Parties.

SECTION 4 THE WORK.

The Work includes all labor, materials, equipment, services, permits, licenses and taxes, and all other things necessary for Contractor to perform its obligations and complete the Project, including, without limitation, any Changes requested by District, in accordance with the Contract Documents and all Applicable Code Requirements.

SECTION 5 PROJECT TEAM.

In addition to Contractor, District has retained, or may retain, consultants and contractors to provide professional and technical consultation for the design and construction of the Project. The Project requires that Contractor operate efficiently, effectively and cooperatively with District as well as all other members of the Project Team.

SECTION 6 TIME OF COMPLETION.**6.1 Time Is of the Essence.**

Time is of the essence with respect to all time limits set forth in the Contract Documents.

6.2 Commencement of Work.

Contractor shall commence the Work on the date specified in District's Notice to Proceed.

6.3 Contract Time.

Contractor shall diligently prosecute the Work to Substantial Completion within 80 Calendar Days after the date specified in District's Notice to Proceed.

6.4 Liquidated Damages.**6.4.1 Entitlement.**

District and Contractor acknowledge and agree that if Contractor fails to fully and satisfactorily complete the Work within the Contract Time, District will suffer, as a result of Contractor's failure, substantial damages which are both extremely difficult and impracticable to ascertain. Such damages may include, but are not limited to:

- (i) Loss of public confidence in District and its contractors and consultants.
- (ii) Loss of public use of public facilities.
- (iii) Extended disruption to public.

6.4.2 Daily Amount.

District and Contractor have reasonably endeavored, but failed, to ascertain the precise amount in relation to the actual damage that District will incur if Contractor fails to achieve Substantial Completion of the entire Work within the Contract Time. Therefore, the parties agree that in addition to all other damages to which District may be entitled, in the event Contractor shall fail to achieve Substantial Completion of the entire Work within the Contract Time, Contractor shall pay District as liquidated damages the amount of \$250.00 per day for each Day occurring after the expiration of the Contract Time until Contractor achieves Substantial Completion of the entire Work. The liquidated damages amount is not a penalty but considered to be a reasonable estimate of the amount of damages District will suffer.

6.4.3 Apportionment.

Such liquidated damages shall be subject to apportionment for delays to Substantial Completion for which Contractor is entitled to receive an extension of time under the Contract Documents. Such apportionment shall not be affected by the fact that liquidated damages may not be capable of apportionment for other periods of time during which there have occurred delays concurrently caused by both District and Contractor. It being the Contractor's obligation to have the entire Work Substantially Completed within the Contract Time, it is agreed that such liquidated damages shall not be apportioned for portions of the Work completed prior to expiration of the Contract Time.

6.4.4 Damages upon Abandonment.

In the event that Contractor either abandons the Work or is terminated for default in accordance with the provisions of Section 15 of this Construction Contract, District shall have the right to liquidated damages pursuant to Paragraph 6.4 in addition to all actual Losses proximately resulting from Contractor's failure to complete the Work within the Contract Time.

6.4.5 Other Remedies.

The parties further acknowledge and agree that District is entitled to any and all available legal and equitable remedies District may have where District's Losses are caused by any reason other than Contractor's failure to achieve Substantial Completion of the entire Work within the Contract Time.

6.5 Adjustments to Contract Time.

The Contract Time may only be adjusted for time extensions approved by District and agreed to by Change Order executed by District and Contractor in accordance with the requirements of the Contract Documents.

6.6 Additional Compensation to Contractor.

The Contract Sum shall be increased by the amount of \$250.00 for each day of extension to the Contract Time that is permitted under the terms of the General Conditions solely due to Compensable Delay occurring prior to Substantial Completion, but only to the extent that such Compensable Delay is not concurrent with a Non-Compensable Delay.

Regardless of the cause of the Delay (including, without limitation, acts or omissions of District or its consultants, errors, conflicts or omissions in the Contract Documents, or Changes to the Work), Contractor agrees to accept the compensation provided for in this Paragraph as its sole and exclusive right, remedy and recovery arising from or related to any Delay, interruption, hindrance, compression, acceleration, disruption or the impact or ripple effect of Delays on the Work, that may occur in connection with Contractor's performance of Work on the Project and for any resulting foreseen or unforeseen:

- (i) Overhead expenses such as, but not limited to, additional supervision, administration, extended or extraordinary overhead (direct or home office), insurance or bond costs; and
- (ii) Productivity expenses such as additional loss of productivity, inefficiency, and escalation of costs of labor, wage, material or equipment.

SECTION 7 COMPENSATION TO CONTRACTOR.**7.1 Contract Sum.**

Contractor shall be compensated for satisfactory completion of the Work in compliance with the Contract Documents the Contract Sum of **Fifty One Thousand Eight Hundred Twenty Dollars (\$ 51,820.00)**.

7.2 Full Compensation.

The Contract Sum shall be full compensation for all Work provided by Contractor and, except as otherwise expressly permitted by the terms of the Contract Documents, shall cover all Losses arising out of the nature of the Work or from the acts of the elements or

Contract No. 2019-01
(2019 Replacement Generator)

any unforeseen difficulties or obstructions which may arise or be encountered in performance of the Work until its Acceptance by District, all risks connected with the Work, and any and all expenses incurred due to suspension or discontinuance of the Work. The Contract Sum may only be adjusted for Change Orders issued, executed and satisfactorily performed in accordance with the requirements of the Contract Documents.

7.3 Compensation for Extra or Deleted Work.

The Contract Sum shall be adjusted (either by addition or credit) for Changes in the Work involving Extra Work or Deleted Work on the basis of both of the following:

- (i) The sum of Allowable Costs as defined in Paragraph 7.2.5 of the General Conditions to be added (for Extra Work) or credited (for Deleted Work); and
- (ii) An additional sum (for Extra Work) or deductive credit (for Deleted Work) based on Contractor Markup and Subcontractor/Sub-subcontractor Markups allowable pursuant to this Section 7.3.

Contractor Markup and Subcontractor/Sub-subcontractor Markups set forth herein are the full amount of compensation to be added for Extra Work or to be subtracted for Deleted Work that is attributable to overhead (direct and indirect) and profit of Contractor and of its Subcontractors and Sub-subcontractors, of every Tier. Contractor Markup and Subcontractor/Sub-subcontractor Markups, which shall not be compounded, shall be computed as follows:

7.3.1 Self-Performed Work.

Fifteen percent (15%) of the Allowable Costs for that portion of the Extra Work or Deleted Work to be performed by Contractor with its own forces.

7.3.2 Subcontractors.

15% of the Allowable Costs for that portion of the Extra Work or Deleted Work to be performed by a first Tier Subcontractor with its own forces, plus 2.5% thereon for Contractor Markup.

7.3.3 Sub-subcontractors.

15% of the Allowable Costs of that portion of the Work to be performed by Sub-subcontractors of the second and lower Tier with their own forces, plus 2.5% thereon for the Subcontractor, plus 2.5% on the combined total thereof for Contractor Markup.

SECTION 8 STANDARD OF CARE.

Contractor agrees that the Work shall be performed by qualified, experienced and well-supervised personnel. All services performed in connection with this Construction Contract shall be performed in a manner consistent with the standard of care under California law applicable to those who specialize in providing such services for projects of the type, scope and complexity of the Project.

SECTION 9 INDEMNIFICATION.

9.1 Hold Harmless.

To the fullest extent allowed by law, Contractor hereby agrees to defend, indemnify, and

Contract No. 2019-01
(2019 Replacement Generator)

hold harmless District, its District Board of Directors, officers, agents, employees, representatives and volunteers (hereinafter collectively referred to as "Indemnitees"), through legal counsel acceptable to District, from and against any and all Losses, claims, causes of action arising directly or indirectly from, or in any manner relating to any of, the following:

- (i) Performance or nonperformance of the Work by Contractor or its Subcontractors or Sub-subcontractors, of any Tier;
- (ii) Performance or nonperformance by Contractor or its Subcontractors or Sub-subcontractors, of any Tier, of any of the obligations under the Contract Documents;
- (iii) The construction activities of Contractor or its Subcontractors or Sub-subcontractors, of any Tier, either on the Site or on other properties;
- (iv) The payment or nonpayment by Contractor of any of its Subcontractors or Sub-subcontractors, of any Tier, for Work performed on or off the Site for the Project; and
- (v) Any personal injury, including but not limited to bodily injury or death, arising out of or relating to the performance or non-performance of the Work.
- (vi) Any injury, property damage or economic loss to third parties associated with the performance or nonperformance by Contractor or its Subcontractors or Sub-subcontractors, of any Tier, of the Work.

However, nothing contained herein shall be construed as obligating Contractor to indemnify any Indemnitee for Losses resulting from the sole or active negligence or willful misconduct of the Indemnitee. Contractor shall pay District for any costs incurred in enforcing this provision. Nothing in the Contract Documents shall be construed to give rise to any implied right of indemnity in favor of Contractor against District or any other Indemnitee.

9.2 Survival.

The provisions of Section 9 shall survive the termination of this Construction Contract.

SECTION 10 COMPLIANCE WITH APPLICABLE CODE REQUIREMENTS.

This Project constitutes "public works" within the meaning of California Labor Code section 1720 and is subject to the prevailing wage laws. Contractor agrees to be subject to and comply with all applicable federal, state and municipal laws, codes, ordinances and regulations governing the Work, including, but not limited to applicable provisions of the California Labor Code.

SECTION 11 INSURANCE AND BONDS.

Prior to the commencement of any Work, Contractor shall provide District with evidence that it has obtained insurance and Performance and Payment Bonds satisfying all requirements in Article 11 of the General Conditions. Failure to do so shall be deemed a material breach of this Construction Contract.

SECTION 12 PROHIBITION AGAINST TRANSFERS.

District is entering into this Construction Contract based upon the stated experience and qualifications set forth in Contractor's Bid. Accordingly, Contractor shall not assign, hypothecate or transfer this Construction Contract or any interest therein directly or indirectly, by operation of

Contract No. 2019-01
(2019 Replacement Generator)

law or otherwise without the prior written consent of District. Any assignment, hypothecation or transfer without said consent shall be null and void.

For purposes of applying the provisions of this Section, the sale, assignment, transfer or other disposition of any of the issued and outstanding capital stock of Contractor or of any general partner or joint venture or syndicate member of Contractor, if a partnership or joint venture or syndicate or co-tenancy exists, which shall result in changing the control of Contractor, shall be construed as an assignment of this Construction Contract. Control means more than fifty percent (50%) of the voting power of the corporation or other entity.

SECTION 13 NOTICES.

13.1 Method of Notice.

Except as provided in Section 13.2 below, all notices, demands, requests or approvals to be given under this Construction Contract shall be given in writing and conclusively shall be deemed served on the earlier of the following:

- (i) On the date delivered, if delivered personally;
- (ii) On the third business day after the deposit thereof in the United States mail, postage prepaid, and addressed as hereinafter provided;
- (iii) On the date sent, if sent by facsimile transmission; or
- (iv) On the date it is accepted or rejected, if sent by certified mail.

13.2 Notice Recipients.

All notices, demands or requests (including, without limitation, Claims) from Contractor to District at:

Oceano Community Services District
 1655 Front Street
 Oceano, CA 93455
 Attn: General Manager

In addition, copies of all Claims by Contractor under this Construction Contract shall be provided to the following:

Jeffery A. Minnery
 P.O. Box 3835
 San Luis Obispo, CA 93403-3835

All Claims shall be delivered personally or sent by certified mail.

All notices, demands, requests or approvals from District to Contractor shall be addressed to:

Mark Schwind
P.O. Box 2117
Nipomo, CA 93444

Re: _____, _____ (CCS)

13.3 Change of Address.

In the event of any change of address, the moving party is obligated to notify the other party of the change of address in writing. Each party may, by written notice only, add, delete or replace any listed individuals.

SECTION 14 DISPUTE RESOLUTION.**14.1 Resolution of Contract Disputes.**

Contractor Claims (as defined by Public Contract Code Section 9204(c)) and General Conditions Section 1.1.18 shall be resolved by the parties in accordance with General Conditions Section 4.2 and applicable law. The procedures set forth in General Conditions Section 4.2 shall be the exclusive recourse of Contractor for such claims.

14.2 Resolution of Other Disputes.**14.2.1 Other Disputes.**

The definition of Contractor Claims shall not include any of the following:

- (i) Penalties or forfeitures prescribed by statute or regulation imposed by a governmental agency (other than relief from damages or penalties for delay assessed by a public entity under a contract for a public works project);
- (ii) Third party tort claims for personal injury, property damage or death relating to any Work performed by Contractor or its Subcontractors or Sub-subcontractors of any Tier;
- (iii) False claims liability under California Government Code Section 12650, et. seq.;
- (iv) Defects in the Work first discovered by District after Final Payment by District to Contractor; or
- (vi) The right of District to specific performance or injunctive relief to compel performance of any provision of the Contract Documents or for other District claims against the Contractor.

14.2.2 Litigation, District Election.

Matters that do not constitute Contractor Claims shall be resolved by way of an action filed in the Superior Court of the State of California, County of San Luis Obispo, and shall not be subject to the Contract Dispute Resolution Process. However, the District reserves the right, in its sole and absolute discretion, to treat such disputes as Contract Disputes.

Upon written notice by District of its election as provided in the preceding sentence, such dispute shall be submitted by the parties and finally decided pursuant to the Contract Dispute Resolution Process in the manner as required for Contract Disputes, including, without limitation, District's right under Paragraph 14.4.2 to defer resolution and final determination until after Final Completion of the Work.

14.3 Submission of Contractor Claim.**14.3.1 By Contractor.**

Contractor shall submit a written Contractor Claim in accordance with Section 4.2 of the General Conditions.

14.3.2 By District.

District's right to commence the Contract Dispute Resolution Process shall arise at any time following District's actual discovery of the circumstances giving rise to the Contract Dispute. Nothing contained herein shall preclude District from asserting Contract Disputes in response to a Claim asserted by Contractor. A Statement of Contract Dispute submitted by District shall state the events or circumstances giving rise to the Contract Dispute, the dates of their occurrence and the damages or other relief claimed by District as a result of such events.

14.4 Contract Dispute Resolution Process.

The parties shall utilize each of the following steps in the Contract Dispute Resolution Process in the sequence they appear below. Each party shall participate fully and in good faith in each step in the Contract Dispute Resolution Process, which good faith effort shall be a condition precedent to the right of each party to proceed to the next step in the process.

14.4.1 Response by District.

The time periods for the District's response are set forth in General Conditions Section 4.2.6; however, any failure to respond shall be governed by General Condition Section 4.2.9.

14.4.2 Meet and Confer Conference.

If the claimant disputes the District's written response, or if the District fails to respond to a claim issued within the time prescribed in General Conditions Section 4.2, the claimant may demand in writing an informal conference to meet and confer for settlement of the issue in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the District shall schedule a meet and confer conference within 30 days for settlement of the dispute.

14.4.3 Mediation.

(i) Within ten (10) business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the District shall provide the claimant a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within sixty (60) days after the public entity issues its written statement. Any disputed portion of the claim, as identified by the contractor in writing, shall be submitted to nonbinding mediation, with the District and the claimant sharing the associated costs equally.

The District and the claimant shall mutually agree to a mediator within ten (10) business days after the disputed portion of the claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject to applicable procedures outside this section.

(ii) For purposes of this section, mediation includes any nonbinding

Contract No. 2019-01
(2019 Replacement Generator)

process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.

(iii) Unless otherwise agreed to by the District and the contractor in writing, the mediation conducted pursuant to this section shall excuse any further obligation under Public Contract Code Section 20104.4 to mediate after litigation has been commenced.

14.4.4 Binding Arbitration.

If the Contract Dispute is not resolved by mediation, then the party wishing to further pursue resolution or determination of the Contract Dispute shall submit the Contract Dispute for final and binding arbitration pursuant to the provisions of California Public Contract Code Sections 10240, et seq. The award of the arbitrator therein shall be final and may be entered as a judgment by any court of competent jurisdiction. Such arbitration shall be conducted in accordance with the following:

- .1 Arbitration Initiation.** The arbitration shall be initiated by filing a complaint in arbitration in accordance with the regulations promulgated pursuant to California Public Contract Code Section 10240.5.
- .2 Qualifications of the Arbitrator.** The arbitrator shall be selected based by mutual agreement of the parties. The arbitrator shall be a retired judge or an attorney with at least five (5) years of experience with public works construction contract law and in arbitrating public works construction disputes. In addition, the arbitrator shall have at least twenty (20) hours of formal training in arbitration skills. In the event the parties cannot agree upon a mutually acceptable arbitrator, then the provisions of California Public Contract Code Section 10240.3 shall be followed in selecting an arbitrator possessing the qualifications required herein.
- .3 Hearing Days and Location.** Arbitration hearings shall be held at the offices of District and shall, except for good cause shown to and determined by the arbitrator, be conducted on consecutive business days, without interruption or continuance.
- .4 Hearing Delays.** Arbitration hearings shall not be delayed except upon good cause shown.
- .5 Recording Hearings.** All hearings to receive evidence shall be recorded by a certified stenographic reporter, with the costs thereof borne equally by District and Contractor and allocated by the arbitrator in the final award.
- .6 Limitation of Depositions.** Discovery shall be permitted in accordance with the provisions of section 10240.11 of the Public Contract Code; provided, however, that depositions shall be limited to both of the following:
 - (i) Ten (10) percipient witnesses for District and ten (10) percipient witnesses for Contractor; and
 - (ii) Expert witnesses.

Contract No. 2019-01
(2019 Replacement Generator)

Upon a showing of good cause, the arbitrator may increase the number of permitted depositions. An individual who is both percipient and expert shall, for purposes of applying the foregoing numerical limitation only, be deemed an expert. Expert reports shall be exchanged prior to receipt of evidence, in accordance with the direction of the arbitrator, and expert reports (including initial and rebuttal reports) not so submitted shall not be admissible as evidence

- .7 Authority of the Arbitrator.** The arbitrator shall have the authority to hear dispositive motions and issue interim orders and interim or executory awards.
- .8 Waiver of Jury Trial.** Contractor and District each voluntarily waives its right to a jury trial with respect to any Contract Dispute that is subject to binding arbitration in accordance with the provisions of this Paragraph 14.4.4. Contractor shall include this provision for waiver of jury trial, waiving the right to jury trial in any action involving District as a party in its contracts with its Subcontractors who provide any portion of the Work.

14.5 Non-Waiver.

There shall be no waiver of the rights granted pursuant to the Dispute Resolution Process, unless specifically set forth in Public Contract Code Section 9204((f)(1) or (2). Specifically, participation in the Contract Dispute Resolution Process shall not constitute a waiver, release or compromise of any defense of District, including, without limitation, any defense based on the assertion that the rights or Claims of Contractor that are the basis of a Contract Dispute were previously waived by Contractor due to failure to comply with the Contract Documents, including, without limitation, Contractor's failure to comply with any time periods for providing notice of requests for adjustments of the Contract Sum or Contract Time or for submission of Claims or supporting documentation of Claims.

SECTION 15 DEFAULT.

15.1 Notice of Default.

In the event that District determines, in its sole discretion, that Contractor has failed or refused to perform any of the obligations set forth in the Contract Documents, or is in breach of any provision of the Contract Documents, District may give written notice of default to Contractor in the manner specified for the giving of notices in the Construction Contract.

15.2 Opportunity to Cure Default.

Except for emergencies, Contractor shall cure any default in performance of its obligations under the Contract Documents within two (2) Days after receipt of written notice. However, if the breach cannot be reasonably cured within such time, Contractor will commence to cure the breach within two (2) Days and will diligently and continuously prosecute such cure to completion within a reasonable time, which shall in no event be later than ten (10) Days after receipt of such written notice.

SECTION 16 DISTRICT'S RIGHTS AND REMEDIES.

Contract No. 2019-01
(2019 Replacement Generator)

16.1 Remedies Upon Default.

In the event that Contractor fails to cure any default of this Construction Contract within the time period set forth above in Section 15, then District may pursue any remedies available under law or equity, including, without limitation, the following:

16.1.1 Delete Certain Services.

District may, without terminating the Construction Contract, delete certain portions of the Work, reserving to itself all rights to Losses related thereto.

16.1.2 Perform and Withhold.

District may, without terminating the Construction Contract, engage others to perform the Work or portion of the Work that has not been performed by Contractor and withhold the cost thereof to District from future payments to Contractor, reserving to itself all rights to Losses related thereto.

16.1.3 Suspend the Construction Contract.

District may, without terminating the Construction Contract and reserving to itself all rights to Losses related thereto, suspend all or any portion of this Construction Contract for as long a period of time as District determines, in its sole discretion, appropriate, in which event District shall have no obligation to adjust the Contract Sum or Contract Time, and shall have no liability to Contractor for damages if District directs Contractor to resume Work.

16.1.4 Terminate the Construction Contract for Default.

District may terminate all or any part of this Construction Contract for default in accordance with Paragraph 16.4 below, reserving to itself all rights to Losses related thereto and any other damages proximately caused or resulting from the Default.

16.1.5 Invoke the Performance Bond.

District may, with or without terminating the Construction Contract and reserving to itself all rights to Losses related thereto, exercise its rights under the Performance Bond.

16.1.6 Additional Provisions.

All of District's rights and remedies under this Construction Contract are cumulative, and shall be in addition to those rights and remedies available in law or in equity. Designation in the Contract Documents of certain breaches as material shall not be construed as implying that other breaches not so designated are not material nor shall such designations be construed as limiting District's right to terminate the Construction Contract, or the exercise of its other rights or remedies for default, to only material breaches. District's determination of whether there has been noncompliance with the Construction Contract so as to warrant exercise by District of its rights and remedies for default under the Construction Contract, shall be binding on all parties. No termination or action taken by District after such termination shall prejudice any other rights or remedies of District provided by law or equity or by the Contract Documents upon such termination; and District may proceed against Contractor to recover all liquidated damages and Losses suffered by District.

16.2 Delays by Sureties.

Contract No. 2019-01
(2019 Replacement Generator)

Without limitation to any of District's other rights or remedies under the law, District has the right to suspend the performance by Contractor's sureties in the event of any of the following:

- (i) Failure of the sureties to begin Work within a reasonable time in such manner as to insure full compliance with the Construction Contract within the Contract Time;
- (ii) Abandonment of the Work;
- (iii) If at any time District is of the opinion the Work is unnecessarily or unreasonably delayed;
- (iv) Willful violation of any terms of the Construction Contract;
- (v) Failure to perform according to the Contract Documents; or
- (vi) Failure to follow instructions of District for its completion within the Contract Time.

District will serve notice of such failure upon the sureties and in the event the sureties neglect or refuse to cure the breach within the time specified in such notice, District shall have the power to suspend the performance or any part thereof of the sureties.

16.3 Damages to District.

16.3.1 For Contractor's Default.

District will be entitled to recovery of all Losses under law or equity in the event of Contractor's default under the Contract Documents.

16.3.2 Compensation for Losses.

In the event that District's Losses arise from Contractor's default under the Contract Documents, District shall be entitled to withhold monies otherwise payable to Contractor until Final Completion of the Project. If District incurs Losses due to Contractor's default, then the amount of Losses shall be deducted from the amounts withheld. Should the amount withheld exceed the amount deducted, the balance will be paid to Contractor or its designee upon Final Completion of the Project. If the Losses incurred by District exceed the amount withheld, Contractor shall be liable to District for the difference and shall promptly remit same to District.

16.4 Termination of the Construction Contract for Default.

Without limitation to any of District's other rights or remedies at law or in equity, and reserving to itself all rights to Losses related thereto, District shall have the right to terminate this Construction Contract, in whole or in part, upon the failure of Contractor to promptly cure any default as required by Section 15. District's election to terminate the Construction Contract for default shall be communicated by giving Contractor a written notice of termination in the manner specified for the giving of notices in the Construction Contract. Any notice of termination given to Contractor by District shall be effective immediately, unless otherwise provided therein.

16.5 Suspension by District for Convenience.

District may, at any time and from time to time, without cause, order Contractor, in writing, to suspend, delay, or interrupt the Work in whole or in part for such period of time, up to an aggregate of fifty percent (50%) of the Contract Time, as District may determine, with such period of suspension to be computed from the date of the written order. Such order shall be specifically identified as a Suspension Order by District. Upon receipt of a Suspension Order, Contractor shall, at District's expense, comply with its terms and take all reasonable steps to minimize costs allocable to the Work covered by the Suspension Order during the period of Work stoppage. Within the period of the above noted aggregate

Contract No. 2019-01
(2019 Replacement Generator)

time, or such extension to that period as is agreed upon by Contractor and District, District shall either cancel the Suspension Order or delete the Work covered by such Suspension Order by issuing a Change Order. If a Suspension Order is canceled or expires, Contractor shall resume and continue with the Work. A Change Order will be issued to cover any adjustments of the Contract Sum or the Contract Time necessarily caused by such suspension. The provisions of this Paragraph 16.5 shall not apply if a Suspension Order is not issued by District. A Suspension Order shall not be required to stop the Work as permitted or required under any other provision of the Contract Documents.

16.6 Termination Without Cause.

District shall have the option, at its sole discretion and without cause, of terminating this Construction Contract in part or in whole by giving thirty (30) Days written notice to Contractor. Contractor agrees to accept such sums as allowed under this Paragraph 16.6 as its sole and exclusive compensation and waives any claim for other compensation or Losses, including, but not limited to, loss of anticipated profits, loss of revenue, lost opportunity, or other consequential, direct, indirect or incidental damages of any kind.

16.6.1 Compensation.

Following such termination and within forty-five (45) Days after receipt of a billing from Contractor seeking payment of sums authorized by this Paragraph 16.6, District shall pay to Contractor as its sole compensation for performance of the Work the following:

- .1 For Work Performed.** The amount of the Contract Sum allocable to the portion of the Work properly performed by Contractor as of the date of termination, less sums previously paid to Contractor.
- .2 For Close-out Costs.** Reasonable costs of Contractor and its Subcontractors and Sub-subcontractors for:
 - (i) Demobilizing and
 - (ii) Administering the close-out of its participation in the Project (including, without limitation, all billing and accounting functions, not including attorney or expert fees) for a period of no longer than thirty (30) Days after receipt of the notice of termination in an amount not to exceed the daily sum payable to Contractor for Compensable Delays in Paragraph 6.6 of this Construction Contract.
- .3 For Fabricated Items.** Previously unpaid cost of any items delivered to the Project Site which were fabricated for subsequent incorporation in the Work.

16.6.2 Subcontractors.

Contractor shall include provisions in all of its subcontracts, purchase orders and other contracts permitting termination for convenience by Contractor on terms that are consistent with this Construction Contract and that afford no greater rights of recovery against Contractor than are afforded to Contractor under this Section 16.6.

16.7 Contractor's Duties Upon Termination.

Upon receipt of a notice of termination for default or for convenience, Contractor shall, unless the notice directs otherwise, do the following:

- (i) Immediately discontinue the Work to the extent specified in the notice;

Contract No. 2019-01
(2019 Replacement Generator)

- (ii) Place no further orders or subcontracts for materials, equipment, services or facilities, except as may be necessary for completion of such portion of the Work as is not discontinued;
- (iii) Provide to District a description, in writing no later than fifteen (15) days after receipt of the notice of termination, of all subcontracts, purchase orders and contracts that are outstanding, including, without limitation, the terms of the original price, any changes, payments, balance owing, the status of the portion of the Work covered and a copy of the subcontract, purchase order or contract and any written changes, amendments or modifications thereto, together with such other information as District may determine necessary in order to decide whether to accept assignment of or request Contractor to terminate the subcontract, purchase order or contract;
- (iv) Promptly assign to District those subcontracts, purchase orders or contracts, or portions thereof, that District elects to accept by assignment and cancel, on the most favorable terms reasonably possible, all subcontracts, purchase orders or contracts, or portions thereof, that District does not elect to accept by assignment; and
- (v) Thereafter do only such Work as may be necessary to preserve and protect Work already in progress and to protect materials, plants, and equipment on the Project Site or in transit thereto.

SECTION 17 CONTRACTOR'S RIGHTS AND REMEDIES.

17.1 Contractor's Remedies.

Contractor may terminate this Construction Contract for cause only upon the occurrence of one of the following:

17.1.1 For Work Stoppage.

The Work is stopped for sixty (60) consecutive Days, through no act or fault of Contractor, any Subcontractor, or any employee or agent of Contractor or any Subcontractor, due to issuance of an order of a court or other public authority other than District having jurisdiction or due to an act of government, such as a declaration of a national emergency making material unavailable.

17.1.2 For District's Non-Payment.

If District does not make payment, of sums that are not in good faith disputed by District, and does not cure such default within ninety (90) Days after receipt of notice from Contractor, then upon an additional thirty (30) Days' notice to District, Contractor may terminate the Construction Contract.

17.2 Damages to Contractor.

In the event of termination for cause by Contractor, District shall pay Contractor the sums provided for in Paragraph 16.6 above. Contractor agrees to accept such sums as its sole and exclusive compensation and agrees to waive any claim for other compensation or Losses, including, but not limited to, loss of anticipated profits, loss of revenue, lost opportunity, or other consequential, direct, indirect and incidental damages, of any kind.

SECTION 18 ACCOUNTING RECORDS.

Contract No. 2019-01
(2019 Replacement Generator)

18.1 Financial Management and District Access.

Contractor shall keep full and detailed accounts and exercise such controls as may be necessary for proper financial management under this Construction Contract in accordance with generally accepted accounting principles and practices consistently applied. District and District's accountants shall be afforded access at all times during normal business hours, to inspect, audit and copy Contractor's records, books, estimates, take-offs, cost reports, ledgers, schedules, correspondence, instructions, drawings, receipts, subcontracts, purchase orders, vouchers, memoranda and other data relating to this Project, and Contractor shall preserve these for a period of three (3) years after the later of (i) final payment or (ii) final resolution of all Contract Disputes and other disputes or for such longer period as may be required by law.

18.2 Compliance with District Requests.

Contractor's compliance with any request by District pursuant to this Section 18 shall be a condition precedent to filing or maintenance of any legal action or proceeding by Contractor against District and to Contractor's right to receive further payments under the Contract Documents. Any failure by Contractor to provide access to its business records for inspection or copying by District shall be specifically enforceable by issuance of a writ or a provisional or permanent mandatory injunction by a court of competent jurisdiction based on affidavits submitted to such court, without the necessity of oral testimony.

SECTION 19 INDEPENDENT PARTIES.

Both parties to this Construction Contract will be acting in an independent capacity and not as agents, employees, partners, or joint venturers of one another. District, its officers or employees shall have no control over the conduct of Contractor or its respective agents, employees, subconsultants, or subcontractors, except as herein set forth.

SECTION 20 NUISANCE.

Contractor shall not maintain, commit, nor permit the maintenance or commission of any nuisance in connection with the performance of services under this Construction Contract.

SECTION 21 PERMITS AND LICENSES.

Contractor, at its sole expense, shall obtain and maintain during the term of this Construction Contract, all appropriate permits, licenses, and certificates that may be required in connection with the performance of services hereunder.

SECTION 22 WAIVER.

A waiver by District of any breach of any term, covenant, or condition contained herein shall not be deemed to be a waiver of any subsequent breach of the same or any other term, covenant, or condition contained herein, whether of the same or a different character.

SECTION 23 CONFLICTS WITH THE CONSTRUCTION CONTRACT.

District and Contractor agree that if there is any conflict between the terms of this Construction Contract and the other Contract Documents, this Construction Contract shall control.

SECTION 24 GOVERNING LAW AND VENUE.

This Construction Contract shall be construed in accordance with and governed by the laws of the State of California. Any and all legal proceedings, including but not limited to mediations, arbitrations, and/or Civil Actions shall be commenced and maintained in the County of San Luis Obispo.

SECTION 25 COMPLETE AGREEMENT.

This Construction Contract represents the full and complete understanding of every kind or nature between the parties with respect to the services set forth in this Construction Contract, and all preliminary negotiations and contracts of whatever kind or nature are merged herein. No verbal agreed or implied covenant shall be held to vary the provisions of this Construction Contract. Any modification of this Construction Contract will be effective only upon written execution signed by both District and Contractor and approved as to form by District Legal Counsel.

SECTION 26 SURVIVAL OF CONTRACT.

The provisions of the Construction Contract which by their nature survive termination of the Construction Contract or Final Completion, including, without limitation, all warranties, indemnities, payment obligations, and District's right to audit Contractor's books and records, shall remain in full force and effect after Final Completion or any termination of the Construction Contract.

SECTION 27 ADDITIONAL CONTRACT REQUIREMENTS.

This contract (does or does not) have special fund(s) involved requiring additional contract requirements, therefore this section (does or does not) apply.

This Contract includes the following source of fund(s) or the District intends to apply to the following source of fund(s) for reimbursement of the expenses associated with the work set forth in this Contract:

N/A

This contract (does or does not) have permit(s) obtained by the District, or which the contractor must obtain, requiring additional contract requirements, therefore this section (does or does not) apply.

This Contract includes the following permits that that the contractor must comply with and/or obtain:

- County of San Luis Obispo Construction Permit PMTC2018-00004
- County of San Luis Obispo Air Pollution Control District Authority to Construct (ATC) 6697

District shall require Contractor to comply with the special requirements (Exhibit "G"), as they may be amended from time to time, in addition to all other requirements imposed by District.

SECTION 28 PUBLIC WORKS CONTRACTOR REGISTRATION PROGRAM- SB 854

In accordance with State of California Senate Bill No. 854 (SB 854):

- No contractor or subcontractor may be listed on a bid proposal for a public works project (submitted on or after March 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1(a)].
- No contractor or subcontractor may be awarded a contract for public work on a public works project (awarded on or after April 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5.
- This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

As of April 1, 2015, contractors and subcontractors must furnish electronic certified payroll records to the Labor Commissioner (State of California, Division of Labor Standards Enforcement).

Please see the DIR website for complete details and actions. It is the responsibility of the contractor to ensure all DIR requirements and regulations are met and stay current. For more information on Senate Bill No. 854, see <http://www.dir.ca.gov/Public-Works/SB854.html>.

SECTION 29 GOVERNMENTAL POWERS.

Nothing in this Agreement shall be deemed directly or indirectly to restrict or to impair in any manner or respect whatsoever any of District's governmental powers or rights or the exercise thereof by District, with respect to the Work or Project.

SECTION 30 SEVERABILITY.

In case a provision of this Construction Contract is held to be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions shall not be affected.

SECTION 31 EXHIBITS.

Exhibit A – Notice Inviting Bids.

Exhibit B – Contractor's Bid.

Exhibit C – General Conditions.

Exhibit D – Plans and Specifications.

Contract No. 2019-01
(2019 Replacement Generator)

Exhibit E – Payment and Performance Bonds.
Exhibit F – Insurance Requirements.
Exhibit G – Rules Governing Bid
Protests

IN WITNESS WHEREOF, the parties have caused this Construction Contract to be executed the date and year first above written.

OCEANO COMMUNITY SERVICES DISTRICT

BY: _____
OCSD President

DATE: ____/____/ 2019

Approved as to FORM:

BY: _____
OCSD Legal Counsel

DATE: ____/____/ 2019

Mark Schwind Electric, INC. (Contractor)

BY: _____

DATE: ____/____/ 2019

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OCEANO COMMUNITY SERVICES DISTRICT

NOTICE INVITING BIDS

FOR

2019 GENERATOR REPLACEMENT PROJECT

**OCEANO, CA
CONTRACT NO. 2019-01**

EXHIBIT "A"

Notice to Bidders

Contract No. 2019-01

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**OCEANO COMMUNITY SERVICES DISTRICT
NOTICE TO BIDDERS**

Notice is given that sealed bids will be received at the District office District at 1655 Front Street
before 3:00 p.m. on Tuesday,
July 2, 2019 ("Bid Deadline"), for the following public works project:

**2019 GENERATOR REPLACEMENT PROJECT
OCEANO, CA
CONTRACT NO. 2019-01**

Bids will be opened and declared by the Business and Account Manager District at 3:15 p.m. on July 2, 2019 at a public meeting at 1655 Front Street, Oceano, CA, 93445.

Any bid received at the District Office at or after 3:00 p.m. on the date specified above will not be accepted, and will be returned to the bidder unopened.

Bids are required for the entire work described in the Contract Documents. The award of the contract, if it be awarded, will be to the responsible bidder with the lowest responsive bid price on the **GRAND TOTAL BASE BID PLUS ADDITIVE BID ITEMS**. The District does not currently include any additive bid items on the bid sheet but reserves the right to include an additive bid item with an addendum if necessary. If an additive bid item is included with an addendum, then the addendum will state how the lowest responsive bid price will be determined. The District reserves the right to the award of the contract after the lowest responsible bidder has been determined, and the bidder is bound by its bid amount for said additive bid items. Such award, if made, will be made within 90 calendar days after the opening of proposals, and bidder agrees to be bound by its bid, including all of its bid prices, for the entire 90 day period. The District reserves the right to reject all bids and the right to self-perform the work as provided by Public Contract Code Section 22038. The District's Contract No. 2018-01 is not federally funded.

Description of Work

The work is comprised of providing all necessary labor, materials, equipment, and supervision to install a permanent replacement emergency generator serving the Sheriff Substation and the Five Cities Fire Authority fire station in Oceano, California as specified herein and as shown on the Contract Drawings. The work will include grading and construction of a new concrete pad per the structural engineering specifications, installation of the generator, connecting to existing electrical conduit, removing existing conductors and replace with new conductors, removal of the existing manual transfer switches and installing new automatic transfer switches per plan and testing of the newly installed emergency generator system.

The generator unit and the automatic transfer switches have been acquired by the District and will be provided as owner supplied equipment. It is located at the District's utility yard at 1935 Wilmar Avenue, Oceano, Ca and the contractor must transport it from its current location to the location it will be installed. The generator unit provided by the District is (1) 218, 176 hp Cummins Model QSB5-G13 diesel engine, EPA Family Number JCEXLO275AAK, Tier 3, Serial # D190547499 driving a 60kw electrical generator.

The work is located at 1687, 1681 and 1655 Front Street (Highway One), Oceano, California. The contractor must comply with permit conditions established by the County of San Luis Obispo (PMTC2018-00004), the condition established in Authority to Construct (ATC) 6697 issued by the San Luis Obispo County Air Pollution Control District.

Bid Documents

The following collection of documents are designated as the Bid Documents:

- (i) Notice Inviting Bids.
- (ii) Instructions to Bidders.
- (iii) Blank Bid Form.
- (iv) Construction Contract between District and Contractor.
- (v) General Conditions.
- (vi) Special Provisions and Technical Specifications.
- (vii) Plans and Drawings.
- (viii) Bidding Addenda.
- (ix) Reports, Supplements, Attachments, Modifications, and Exhibits attached to the above items including the following:
 - a. County of San Luis Obispo Construction Permit PMTC2018-00004
 - b. County of San Luis Obispo Air Pollution Control District Authority to Construct (ATC) 6697
 - c. Geotechnical Engineering Report prepared by Earth Systems dated July 26, 2018
 - d. Geotechnical Engineering Review of Project Plans and Details prepared by Earth Systems dated August 2, 2018
 - e. District Supplied Equipment

**NOTICE PURSUANT TO THE
UNIFORM PUBLIC CONSTRUCTION COST ACCOUNTING ACT (Act)**

The District's estimated project costs are less than \$200,000 and noticing is being provided pursuant to the Act.

In accordance with Public Contract Code 22034(a)(2), a notice inviting informal bids including a description of the project in general terms and how to obtain more detailed information about the project, and the time and place for submission of bids, has been emailed to the following construction trade journals:

Required Journals	San Luis Obispo County Journals
Construction Bidboard (Ebidboard) 11622 El Camino Real, #100 San Diego, CA 92130 Phone: 800-479-5314 Email: support@ebidboard.com Website: www.ebidboard.com	Central Coast Builders Association 242 East Romie Lane Salinas, CA 93907 Phone: 831-758-1624 Email: staff@ccbabuild.com Website: www.ccbabuilds.com
Dodge Data & Analytics 830 Third Avenue, 6th Floor New York, NY 10022 Phone: support@construction.com Email: support@construction.com Website: www.construction.com	San Luis Obispo County Builders Exchange 153 Cross Street, #130 San Luis Obispo, CA 93401 Phone: 805-543-7330 Email: info@slocbe.com Website: www.slocbe.com

Obtaining detailed information, which is the Bid package, (also referred to herein as the “Contract Documents”) are posted on the District’s website:

<http://www.oceanocsd.org>

If the website and/or links are not providing access to the bid package and related information, please contact the District's Business and Accounting Manager at 805-481-6730.

Any changes, additions, or deletions to these Contract Documents will be in the form of written addenda issued by the District. Any addenda will be posted on the website. Prospective bidders must check the website for addenda or other relevant new information at up to 5:00 p.m. the day before the prescribed date/time for submittal of bids. The District is not responsible for the failure of any prospective bidder to receive such addenda. All addenda so issued shall become a part of this Bid.

All bidders are required to acknowledge and confirm receipt of every addendum in their bid proposal.

All bidder Requests for Information must be submitted no later than 3:00 p.m., 5 business days prior to the bid opening date. Requests submitted after said date may not be considered. All questions pertaining to the content of this invitation to Bid must be made in writing through the District website. Questions and responses will be posted on the District website and can be

viewed by accessing the Invitation to Bid located at the District website. The identity of the entity submitting the question will not be posted. The District reserves the right to determine the appropriateness of comments / questions that will be posted on the website.

The bidder must have either a Class A license or a combination of class C licenses that make up a majority of the work at the time the Contract is awarded (Public Contract Code § 3300). When the bidder holds a combination of Class C licenses, all work to be performed outside of the bidder's license specialties, except work that is incidental or supplemental to the licenses of the bidder, shall be performed by licensed Subcontractors in compliance with the Subletting and Subcontracting Fair Practices Act (Chapter 4 (commencing with Section 4100) of Part 1 of Division 2 of the Public Contract Code)

Pursuant to section 1770 et seq. of the California Labor Code, the Contractor and all Subcontractors shall pay not less than the prevailing rate of per diem wages as determined by the Director of the California Department of Industrial Relations and comply with all applicable Labor Code provisions, which include, but are not limited to the employment of apprentices, the hours of labor, and the debarment of Contractors and Subcontractors. The Director of the California Department of Industrial Relations determines the general prevailing wage rates. Copies are available at the District Office or at the DIR website, <http://www.dir.ca.gov/DLSR/PWD>.

Pursuant to Public Contract Code section 1771.1:

- A Contractor or Subcontractor shall not be qualified to bid on, be listed in the Bid Proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of this public works project, unless currently registered with the Department of Industrial Relations and qualified to perform work pursuant to Labor Code section 1725.5. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded.
- This Project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

Bids must be submitted under sealed cover plainly marked as a bid and identified with the project number, the date and time for receipt of sealed bids, and the name of the bidder.

Bids must be accompanied by cash, a certified or cashier's check, or a bidder's bond in favor of the District in an amount not less than ten percent (10%) of the submitted total base Bid.

Pursuant to Public Contract Code section 22300, the successful bidder may substitute certain securities for funds withheld by District to ensure performance under the Contract or, in the alternative, request the District to make payment of retention to an escrow agent.

The successful bidder will be required to furnish the District with payment and performance bonds, with each issued by a California admitted surety insurer equal to 100% of the Contract Price.

By order of the General Manager of the Oceano Community Services District, made this _____ day of _____, 2019.

By _____
Paavo Ogren, General Manager
Oceano Community Services District

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INSTRUCTIONS TO BIDDERS

1. CONTRACT DOCUMENTS

The Contract Documents may be obtained from the District at the location specified in the Notice to Bidders.

The Contract Documents include the Notice to Bidders, Instructions to Bidders, Bid Forms, Agreement, General Conditions, Technical Provisions, and Project Plans and Specifications, and documents incorporated by reference therein.

Contract Documents can also be obtained from the District website at:

<http://www.oceanocsd.org>

If the website and/or links are not providing access to the bid package and related information, please contact the District's Business and Accounting Manager at 805-481-6730.

The District does not assume any liability or responsibility based on any defective or incomplete copying, excerpting, scanning, faxing, downloading, or printing of the Contract Documents.

2. JOB SITE AND CONTRACT DOCUMENT EXAMINATION

Bidders are responsible for examining the job site and the Contract Documents, including any Addenda issued prior to the Bid Deadline, and for informing themselves with respect to local labor availability, means of transportation, necessity for security, laws and codes, local permit requirements, wage scales, local tax structure, contractors licensing requirements, availability of required insurance, and other factors that could affect the work. Bidders are responsible for consulting the standards referenced in the Contract Documents.

Submission of a Bid is a bidder's acknowledgment that the bidder has examined the job site and bid documents and is satisfied with:

1. General and local conditions to be encountered
2. Character, quality, and scope of work to be performed
3. Quantities of materials to be furnished
4. Character, quality, and quantity of surface and subsurface materials or obstacles
5. Requirements of the Contract Documents

3. PRE-BID CONFERENCE

A pre-bid conference will not be held for this Contract.

4. ADDENDA

The District reserves the right to revise the Contract Documents prior to the Bid opening date. Revisions, if any, will be made by written Addenda. All Addenda issued by the District shall be included in the Bid and made part of the Contract Documents. Pursuant to Public Contract Code section 4104.5, if the District issues an Addendum that includes material changes to the work less than 72 hours prior to the Bid Deadline, the District will extend the Bid Deadline. The District may determine, in its sole discretion, whether an Addendum warrants postponement of the Bid Deadline.

All Addenda issued will be posted on the following website: <http://www.oceanocsd.org>

Interested persons should be aware that the District is currently upgrading its website. If the website and/or links are not providing access to the bid package and related information, please contact the District's Business and Accounting Manager at 805-481-6730.

Prospective bidders must check the website for addenda or other relevant new information during the response period. The District is not responsible for the failure of any prospective bidder to receive such addenda. All addenda so issued shall become a part of this Bid.

All bidders are required to acknowledge and confirm receipt of each and every addendum in their Bid. Failure to acknowledge all Addenda may result in a Bid being deemed nonresponsive and not eligible for award of the Contract.

5. ENGINEER'S ESTIMATE

Any engineers estimate provided by the District relating to this work has been provided strictly for informational purposes, and cannot be relied upon by any bidder as representing an accurate estimate of the value of the work. The purpose of providing any such engineer's estimate is simply to provide each potential bidder with some preliminary information relating to whether the work may be within its bonding capacity and available resources. Under no circumstance may a bidder rely upon the engineer's estimate as representing a reasonable value of the work.

6. COMPLETION OF BID FORMS

Prepare bids using only copies of the Bid Forms, which are included in the Contract Documents issued by the District. The use of Bid Forms other than clear and correct photocopies of those provided by the District will not be permitted. Bids must be executed by an authorized signatory as described in these Instructions to Bidders. Bidders must fill in all blank spaces (including inserting "N/A" where applicable) and initial all interlineations, alterations, or erasures to the Bid Forms. Bidders must not delete, modify, or supplement the printed matter on the Bid Forms or make substitutions thereon. Use of black or blue ink, indelible pencil, or a typewriter is required. Deviations in the Bid Forms may result in a Bid being deemed nonresponsive and not eligible for award of the Contract.

7. LICENSING REQUIREMENTS

Pursuant to section 7028.15 of the Business and Professions Code, bidders must possess licenses issued by the California Contractors State License Board for performance of this Contract. Subcontractors must possess the appropriate licenses for each specialty subcontracted.

The District has determined that bidders must have the class of license designated in the Notice to Bidders to be eligible for award of this Contract. The Contractor shall be properly licensed by the time the Contract is awarded, pursuant to the provisions of Public Contract Code section 20103.5. Failure of the bidder to obtain proper and adequate licensing for award of the Contract constitutes a failure to execute the Contract and shall result in the forfeiture of the security of the bidder.

8. REGISTRATION REQUIREMENTS

A Contractor or Subcontractor shall not be qualified to bid on, be listed in a bid proposal subject to the requirements of Public Contract Code section 4104, or engage in the performance of this Contract unless currently registered with the California Department of Industrial Relations and qualified to perform public work pursuant to Labor Code section 1725.5. It is not a violation of Labor Code section 1725.5 for an unregistered Contractor to submit a Bid on this Contract provided the Contractor is registered to perform public work pursuant to Section 1725.5 at the time this Contract is awarded.

9. BID SECURITY

Each Bid shall be accompanied by Bid Security consisting of: (a) cash; (b) a certified check made payable to the Oceano Community Services District; (c) a cashier's check made payable to the Oceano Community Services District; or (d) a bidder's bond in favor of the Oceano Community Services District executed by the bidder as principal and surety as obligor, in an amount not less than 10% of the total base Bid.

The surety insurer shall be admitted to transact surety business in the State of California, as defined in Code of Civil Procedure section 995.120. Personal sureties and unregistered surety companies are unacceptable. The cash, check, or bidder's bond shall be given as a guarantee that the bidder: (1) will execute the Contract if it is awarded to the bidder, and (2) shall provide the required payment and performance bonds and insurance certificates and endorsements as required by the Contract Documents. Failure to provide the required documents may result in forfeiture of the Bid Security and the District may award the Contract to another bidder or may call for new Bids.

10. BID ITEM LIST

Bidder shall submit a Bid based on the bid item quantities the District shows on the Bid Item List. The Bid Item List is included in the Bid Forms.

In case of discrepancy between the unit price and the total set forth for a unit basis item, the unit price shall prevail, except as provided:

- A. If the amount set forth as a unit price is ambiguous, unintelligible, or uncertain for any reason, or is omitted, or is the same amount as the entry in the "Total" column, then the amount set forth in the "Total" column for the item shall prevail and shall be divided by the estimated quantity for the item and the price thus obtained shall be the unit price.
- B. (Decimal Errors) If the product of the entered unit price and the estimated quantity is exactly off by a factor of ten, one hundred, etc., or one-tenth, or one-hundredth, etc. from the entered total, the discrepancy will be resolved by using the entered unit price or item total, whichever most closely approximates percentage-wise the unit price or item total in the District's final estimate of cost.

11. DESIGNATION OF SUBCONTRACTORS (Public Contract Code 4100-4114)

On the *Designation of Subcontractors - Base Bid and the Designation of Subcontractors – Base Plus Additive Bid forms*, Bidders shall list each Subcontractor to whom the bidder proposes to directly subcontract portions of the work in an amount in excess of 1/2 of one percent of the total Bid. The *Designation of Subcontractors* forms for listing Subcontractors are included in the Bid Forms.

For each Subcontractor listed, the *Designation of Subcontractors* forms must show:

1. Business name and the location of its place of business.
2. California contractor license number.
3. Public works contractor registration number
4. Portion of work it will perform. Show the portion of the work by:
 - 4.1. Description of portion of subcontracted work
 - 4.2. Bid item numbers for the work involved in the portion of work listed
 - 4.3. Percentage of the total Bid for each bid item listed

12. DEBARMENT OF CONTRACTORS AND SUBCONTRACTORS

In accordance with the provisions of the Labor Code, Contractors or Subcontractors may not perform work on a public works project with a Subcontractor who is ineligible to perform work on a public project pursuant to section 1777.1 or section 1777.7 of the Labor Code. Any contract on a public works project entered into between a Contractor and a debarred Subcontractor is void as a matter of law. A debarred Subcontractor may not receive any public money for performing work as a Subcontractor on a public works contract. Any public money that is paid to a debarred Subcontractor by the Contractor shall be returned to the District. The Contractor shall be responsible for the payment of wages to workers of a debarred Subcontractor used on the work

A list of Contractors barred by the Division of Labor Standards Enforcements is available on the following Department of Industrial Relations website:

<http://www.dir.ca.gov/dlse/debar.html>

13. DECLARATION OF NONCOLLUSION

The *Declaration of Noncollusion* form shall be signed, under penalty of perjury, certifying that the Bid is not the result of and has not been influenced by collusion. Any Bid made without such declaration, or believed to be made in violation thereof, may be rejected.

14. IRAN CONTRACTING ACT CERTIFICATION

Each bidder shall submit the certification required by the Iran Contracting Act of 2010, Public Contract Code section 2200 et seq. with its Bid. The certification is included in the Bid Forms section of the Contract Documents.

15. SIGNING OF BIDS

All Bids submitted shall be executed by the bidder or its authorized representative. Bidders may be asked to provide evidence in the form of an authenticated resolution of its Board of Directors or a Power of Attorney evidencing the capacity of the person signing the Bid to bind the bidder to each Bid and to any Contract.

If the bidder is a corporation, the legal name of the corporation shall be set forth on the Bid Proposal Form with the signature of the officer or officers authorized to sign contracts on behalf of the corporation. If the bidder is a partnership, the true name of the firm shall be set forth on the Bid Proposal Form with the signature of the partner or partners authorized to sign contracts on behalf of the partnership. If the bidder is an individual, his or her signature shall be placed on the Bid Proposal. If signature is by an agent, other than an officer of a corporation or a member of a partnership, a Power of Attorney must be submitted with the Bid; otherwise, the Bid will be disregarded as irregular and unauthorized.

16. SUBMISSION OF SEALED BIDS

Once the Bid Forms have been completed and signed as set forth herein, place them, along with the Bid Security and other required materials, in an envelope, sealed, addressed, and delivered or mailed, postage prepaid, to the District as indicated in the Notice to Bidders. No oral or telephonic bids will be considered. No forms transmitted via the internet, e-mail, facsimile, or any other electronic means will be considered. Bids must be plainly marked as a Bid and identified with the Project number, the date and time of receipt of sealed Bids, and the name of the bidder.

17. DELIVERY AND OPENING OF BIDS

Bids will be received by the District at the address shown in the Notice to Bidders prior to the date and time shown therein. The District will leave unopened any Bid received after the specified date and time, and any such unopened Bid will be returned to the bidder. It is the bidder's sole responsibility to ensure that its Bid is received as specified. Bids may be submitted earlier than the date and time indicated.

Bids will be opened as stated in the Notice to Bidders, and the amount of each Bid will be read aloud and recorded. All bidders may, if they desire, attend the opening of Bids. The District may in its sole discretion, elect to postpone the opening of the submitted Bids. District reserves the right to reject any or all Bids and to waive any informality or irregularity in any Bid.

18. WITHDRAWAL OF BID

Any bidder may withdraw its Bid by written request any time prior to the time set forth in the Notice to Bidders for the opening of Bids by notice to the District's Business and Accounting Manager at 1655 Front Street, Oceano, CA 93445. Such notice shall be in writing signed by the bidder and shall be received, and date-stamped and time-stamped by the District. Withdrawn Bids may be resubmitted on or before the time set forth in the Notice to Bidders for receipt of Bids provided that they are in full conformance with the Contract Documents. Once submitted, all Bids are irrevocable, except as otherwise provided by law. Each bidder agrees by submitting a Bid that its Bid shall remain open, is irrevocable, and may not be modified, withdrawn, or cancelled for a period of at least 90 days after Bid opening. Any request for District's consent to permit a bidder to withdraw a Bid after the Bid Deadline must be made in accordance with Public Contract Code section 5100 et seq., including, but not limited to, submission of written notice to the District within 5 business days after Bid opening specifying in detail how the mistake occurred.

19. RESERVATION OF RIGHTS

The District reserves the right to reject any or all bids, and to waive discrepancies, irregularities, informalities, or any other error in the bid or bidding, if to do so seems to best serve the public interest. The right of the District to waive errors applies even if the Contract Documents state that a discrepancy, irregularity, informality, or other error make a bid nonresponsive, so long as the error does not constitute a material error.

The District reserves the right, in its sole discretion, to: judge the bidder's representations as stated in the Bid forms and any post-Bid information to determine whether or not bidder is qualified to perform the work; be the sole judge regarding the suitability of the products, services, or supplies offered; to not purchase all items or the full quantity of each item listed in the Bid Item List; reject any or all Bids; waive any deficiencies, irregularities, or informalities in any Bids or in the bidding process; modify, cancel, or withdraw the Notice to Bidders; issue a new Notice to Bidders; suspend or abandon the Project; seek the assistance of outside technical experts in Bid evaluation; require a bidder to provide a guarantee (or guarantees) of the Contract by a third party; and not issue a Notice to Proceed after execution of the Contract. In submitting a Bid in response to the Notice to Bidders, the bidder is specifically acknowledging the District holds these rights. The Notice to Bidders does not commit the District to enter into a Contract, to reject, in its sole discretion, all Bids, nor does it obligate the District pay for any costs incurred in preparation and submission of a Bid or in anticipation of a Contract. By submitting a Bid, the bidder disclaims any right to be paid for such costs.

20. BASIS OF AWARD; BALANCED BIDS

The District will award the Contract to the responsible bidder that submits the lowest responsive Bid, which shall be determined as set forth in the Notice to Bidders and as provided in these Instructions to Bidders and subject to the rights reserved by the District.

21. DISQUALIFICATION OF BIDDERS; INTEREST IN MORE THAN ONE BID

No bidder shall be allowed to make, submit, or be interested in more than one Bid. However, a person, firm, corporation or other entity that has submitted a proposal to a bidder, or that has quoted prices of materials to a bidder, is not thereby disqualified from submitting a proposal or quoting prices to other bidders submitting a Bid to the District, or submitting a Bid to the District as a prime bidder.

Submitting bids on County Contract 300430 does not preclude a bidder from submitting a bid on District Contract 2018-01.

A firm that the District has hired to provide architectural or engineering services to the District for this Contract before Bid submittal for this Contract is prohibited from all of the following:

- 1. Submitting a Bid;
- 2. Subcontracting for a part of the work; and
- 3. Supplying materials.

22. INSURANCE REQUIREMENTS

The successful bidder shall procure and maintain insurance in the forms, in the amounts and for the durations specified in the General Conditions.

23. RESPONSIVE BID

A responsive Bid is a Bid that conforms, in all material respects, to these Instructions to Bidders. Non-responsive Bids will be rejected.

24. RESPONSIBLE BIDDER

A responsible bidder means a bidder who has demonstrated the attributes of trustworthiness, quality, fitness, capacity, and experience to satisfactorily perform fully the requirements of the Contract Documents and the moral and business integrity and reliability that will assure good faith performance in the sole discretion of the District. Any determination of a bidder's nonresponsibility by the District shall be based on the fitness and capacity of the bidder to satisfactorily perform the obligations of the Contract, whether or not the bidder is qualified to perform those obligations, whether or not the bidder is trustworthy, and such other bases as may be relevant.

25. EVIDENCE OF RESPONSIBILITY AND ADDITIONAL INFORMATION

In addition to other provisions of the Bidding Requirements, upon the request of the District, a bidder whose Bid is under consideration for the award of the Contract shall promptly submit satisfactory evidence to District showing the bidder's financial resources, experience in the field, and organization and other factors evidencing bidder's ability to successfully execute and complete the Contract.

26. AWARD PROCESS

Once all Bids are opened and reviewed to determine the lowest responsive and responsible bidder, the District may award the Contract or reject all Bids. Once the District notifies the selected bidder of the award, the bidder will have 10 business days from the date of the award and tender of Contract to deliver to the District the executed Contract, all of the required bonds, evidence of insurance, and other materials set forth in the Contract Documents. Once the District receives all of the properly executed documents and certifications, the District will deliver the fully executed Contract to the Contractor and issue a Notice to Proceed. If the District's issuance of a Notice to Proceed is delayed due to Contractor's failure to return fully-executed Contract, insurance, bond, and other required documents within 5 working days after the award and tender of the Contract, then Contractor agrees to the deduction of 1 working day from the number of days in the Contract Time for every day of delay in District's receipt of said documents. This right is in addition

to and does not affect the District's right to demand forfeiture of the Bid Security if Contractor persistently delays in providing the required documentation. The Contractor's failure to return all of the required documents within 5 working days may result in the award of the contract to the next lowest bidder or rejection of all bids if, in the General Manager's sole discretion, it is determined that uncertainty in awarding and contract execution for the work impairs the District's ability to meet the deadline established in the District's agreement with the County regarding the permanent utility relocation work for the Oceano Beach Lagoon Bridge Replacement Project.

27. RETENTION AND SUBSTITUTION OF SECURITY

The District will make monthly progress payments based upon work performed in accordance with the Contract Documents. Unless otherwise specified in the Notice to Bidders, the District will retain five percent (5%) of each progress payment as provided by the Contract Documents. At the request and expense of the Contractor, the Contractor may substitute securities for the amount so retained, or in the alternative, request the District make payment to an escrow agent in accordance with Public Contract Code section 22300. Contractor shall have 30 days following award of the Contract to submit a written request to the District to permit substitution of securities or payment of retention to an escrow agent; failure to do so shall be deemed a waiver of the right.

28. PERFORMANCE BOND AND PAYMENT (LABOR AND MATERIALS) BOND REQUIREMENTS

The successful bidder shall deliver to the District two (2) fully executed, identical counterparts of the performance bond and payment (labor and materials) bond in the form supplied by the District and included in the Contract Documents. The penal amount of each bond shall be for one hundred percent (100%) of the total base Bid plus the additive bid items, if added by District. The surety insurer shall be admitted to transact surety business in the State of California, in accordance with Code of Civil Procedure section 995.120. Personal sureties and unregistered surety companies are unacceptable. Failure to furnish a bond within this time may, in the sole discretion of District, result in the forfeiture of the Bid Security.

29. SALES AND OTHER APPLICABLE TAXES, PERMITS, LICENSES AND FEES

Contractor and its Subcontractors performing work under this Contract will be required to pay California sales tax and other applicable taxes, and to pay for permits, licenses, and fees required by the agencies with authority in the jurisdiction in which the work will be located, unless otherwise expressly provided by the Contract Documents. Bidders shall include all applicable taxes and fees that are in effect or reasonably anticipated at the Bid Deadline in all Bid prices.

30. BID PROTEST PROCEDURE

Bid protests and other challenges to the award of this Contract must comply with Rules Governing Bid Protests and Other Challenges to Awards of Construction Contracts ("Rules"). A copy of the Rules is attached to this Contract as an appendix. In addition, any Bid protest must be submitted in writing to the Oceano Community Services District, 1655 Front Street, Oceano CA 93445; Attention: General Manager.

END OF INSTRUCTIONS TO BIDDERS

OCEANO COMMUNITY SERVICES DISTRICT

BID

FORMS

FOR

2019 GENERATOR REPLACEMENT PROJECT

OCEANO, CA

CONTRACT NO. 2019-01

BID PROPOSAL FORM
TO THE BOARD OF DIRECTORS
OF THE OCEANO COMMUNITY SERVICES DISTRICT
2019 GENERATOR REPLACEMENT PROJECT
OCEANO, CA
CONTRACT NO. 2019-01

NAME OF BIDDER _____

BUSINESS P.O. BOX _____

CITY, STATE, ZIP _____

BUSINESS STREET ADDRESS _____

(include even if P.O. Box used)

CITY, STATE, ZIP _____

PHONE NO: AREA CODE (____) _____

FAX NO: AREA CODE (____) _____

CONTRACTOR LICENSE NO. _____ CLASSIFICATION _____

PUBLIC WORKS CONTRACTOR REGISTRATION NO: _____

TAX I.D. NUMBER: _____

BUSINESS TYPE (Check one): Corporation ___ Partnership ___ Sole Proprietorship ___
Limited Liability Company ___

CONTACT PERSON NAME _____

CONTACT PERSON PHONE No. _____

CONTACT PERSON E-MAIL _____

EMPLOYER'S TAX IDENTIFICATION NUMBER _____

Bidder agrees that the Bid and all prices shall remain open and shall not be withdrawn for a period of not less than **90 days** from the Bid Deadline, or until rejected by the District, whichever period is shorter.

1. ADDENDA

The undersigned acknowledges and confirms the receipt of the following Addenda:

<u>Addenda Number</u>	<u>Date</u>
_____	_____
_____	_____
_____	_____

and agrees that said addenda are covered in the bid proposal and shall form a part of the Contract Documents.

2. CERTIFICATION OF INSPECTION OF THE SITE AND CONTRACT DOCUMENTS

By signing below, bidder certifies that it: has received, carefully examined, and is fully familiar with all of the provisions of the Contract Documents, including all Addenda and attachments, and that said Contract Documents contain sufficient detail regarding the work to be performed; has notified the District of any errors or omissions in the Contract Documents and unusual site conditions; has carefully checked all words, prices, and statements in this Bid Proposal Form; and has visited the job site and conducted such other field investigations which are prudent and reasonable in preparing the Bid. Bidder agrees that the District will not be responsible for any errors or omissions on the part of the undersigned in making the Bid.

3. BIDDER’S REPRESENTATIONS REGARDING INSURANCE AND BONDS

This Bid is made with the full knowledge of the kind, quantity, and quality of the materials and work required and, if it is accepted by the District, the bidder will enter into a Contract and furnish the bonds, insurance and other documents as required by the Contract Documents within 10 business days after award and tender of the Contract. **By its signature below, the bidder agrees to provide the proper evidence of insurance and bonds within 10 business days after District’s tender of the Contract. Failure to do so may result in forfeiture of Bid Security and rescission of the award by the District.**

4. CONTRACTORS LICENSE CERTIFICATION.

The undersigned certifies that:

Contractors License No. _____ issued by the California Contractors State License Board (“CSLB”) to the undersigned on _____, _____, is current, valid, has not been revoked, suspended or cancelled, and is appropriate to the work to be undertaken.

Contractors License Classification(s): _____

Expiration Date: _____

Name of Qualifying Individual: _____

5. TIME FOR COMPLETION

The bidder agrees that if awarded the Contract, it shall complete the work within 80 calendar days after the date specific in the District’s Notice to Proceed.

6. ATTACHMENTS TO THIS BID PROPOSAL FORM

Enclosed herewith (except as otherwise provided for optional forms) and by this reference incorporated herein and made a part of this Bid Proposal Form are the following items:

1. Bid Item List
2. Designation of Subcontractors Base Bid Form
3. Declaration of Noncollusion
4. California Public Contract Code 10162 Questionnaire
5. California Public Contract Code 10232 Statement
6. California Public Contract Code 10285.1 Statement
7. Iran Contracting Act Certification
8. Non-Lobbying Certification for Federal-Aid Contracts
9. Disclosure of Lobbying Activities
10. Bidder's Bond or other Bid Security

Bids are to be submitted for the entire work. The amount for Bid comparison purposes will be the total of all items.

The bidder shall set forth for each unit basis item of work a unit price and a total for the item, and for each lump sum item a total for the item, all in clearly legible figures in the respective spaces provided for that purpose. In the case of unit basis items, the amount set forth under the "Total" column is the extension of the unit price bid on the basis of the approximate quantity for the item.

Accompanying this Bid Proposal is a bidder's bond, cash, cashier's check, or a certified check, payable to the Oceano Community Services District, for the sum of at least ten percent (10%) of the total of the base bid. The proceeds thereof shall become the property of the District if the Bid is withdrawn after the time fixed in the Notice to Bidders for the opening of Bids, or if, in case this Bid is accepted by the District and such bidder has received written notice that the Contract has been awarded to him/her, the undersigned shall fail within 15 business days to execute the Contract with the District and furnish all documents required in the Bid Documents. Otherwise, said Bid Security, except a bidder's bond, will be returned to the undersigned.

7. BIDDER'S ORGANIZATION AND SIGNATURE AUTHORIZATION

The undersigned certifies that he/she/they is/are authorized to sign this Bid and any subsequent Contract on behalf of the bidding firm or company and that the nature of this bidding firm is an individual, partnership, corporation, or limited liability company with the principals or authorized officers of the firm listed as follows:

Nature of Firm:

(Corporation, Partnership, Individual, etc.) _____

Principal Officers/Partners/Members: _____

Name of President of Corporation: _____

Name of Secretary of Corporation: _____

Corporation is organized under laws of State of _____, and is authorized to transact business in the State of California.

Company/Contractor Legal Name

Signature

Name (print/type)

Title (print/type)

Date

BID FORM - BID ITEM LIST

BASE BID

ITEM NO.	CODE NO.	DESCRIPTION OF ITEM	APPROX. QUANTITY	UNIT OF MEASURE	UNIT PRICE (IN FIGURES) DOLLARS. CENTS	TOTAL AMOUNT DOLLARS. CENTS
1		Construction staking, site preparation and concrete pad install.	1	LS		
2		Electrical Rough-In, Generator Installation and Testing	1	LS		
3		Generator Placement	1	LS		
TOTAL BASE BID						

ADDITIVE BID ITEM 1 - None

ITEM NO.	CODE NO.	DESCRIPTION OF ITEM	APPROX. QUANTITY	UNIT OF MEASURE	UNIT PRICE (IN FIGURES) DOLLARS. CENTS	TOTAL AMOUNT DOLLARS. CENTS
TOTAL ADDITIVE BID						

GRAND TOTAL BASE BID PLUS ADDITIVE BID ITEMS						
---	--	--	--	--	--	--

Name of bidder _____

Signature of bidder _____

Printed Name and Title _____

Date _____

DESIGNATION OF SUBCONTRACTORS – BASE BID

In accordance with the provisions of Public Contract Code section 4100 et seq., the undersigned bidder sets forth the following:

- a. The name, location of the place of business, and California contractors license number of each Subcontractor who will perform work or labor, or render service to the undersigned Prime Contractor in or about the construction of the work or improvement, or a Subcontractor licensed by the State of California who, under subcontract to the Prime Contractor, specially fabricates and installs a portion of the work or improvement according to detailed drawings contained in the plans and specifications, in an amount in excess of one-half of one percent of the undersigned Prime Contractor's Total Bid.
- b. The portion of the work which will be done by each such Subcontractor. Only one Subcontractor shall be listed for each such portion. If the Subcontractor is not performing all of the work under the bid item number(s) listed for that Subcontractor, the bidder shall set forth the portion of the work relating to said bid item number(s) that will be done by the Subcontractor.

Bid Item No.	Description of Trade/Portion of Work	Subcontractor Name	License No.	DIR Reg No.**	Business Address	Percent of Total Bid

By: _____
 (Bidder's Company Name)

NOTES: *When there is a failure to list a Subcontractor as required, or when the bidder lists two Subcontractor for the same portion of the work, the law provides that the bidder agrees that bidder is fully qualified to perform that portion itself, and that the bidder shall perform that portion itself. In such case, bidder must be authorized to perform said work. Any Bid not complying with the provisions hereof may be rejected.

** Pursuant to Labor Code Section 1771.1, no contractor or Subcontractor may be listed on the bid proposal for this public works project unless registered with the Department of Industrial Relations pursuant to Labor Code Section 1725.5.

DECLARATION OF NONCOLLUSION

In accordance with Public Contract Code Section 7106, the bidder declares as follows:

I am the _____ [title] of _____ [name] of bidder], the party making the foregoing Bid. The Bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The Bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham Bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham Bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the Bid price, or of that of any other bidder. All statements contained in the Bid are true. The bidder has not, directly or indirectly, submitted his or her Bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose. Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on:

_____ [date], at _____ [city], _____ [state].

Signed: _____

Print Name: _____

If the bidder fails to complete and properly sign this declaration, the Bid will be considered non-responsive and will be rejected.

PUBLIC CONTRACT CODE SECTION 10162 QUESTIONNAIRE

The bidder shall complete, under penalty of perjury, the following questionnaire:

Has the bidder, any officer of the bidder, or any employee of the bidder who has a proprietary interest in the bidder, ever been disqualified, removed, or otherwise prevented from bidding on, or completing a federal, state, or local government project because of a violation of law or a safety regulation?

Yes _____ No _____

If the answer is yes, explain the circumstances in the following space.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Company: _____

Signed: _____

Printed Name: _____

Title: _____

Date: _____

PUBLIC CONTRACT CODE SECTION 10232 STATEMENT

The bidder, hereby states under penalty of perjury, that no more than one final unappealable finding of contempt of court by a federal court has been issued against the Contractor within the immediately preceding two-year period because of the bidder's failure to comply with an order of a federal court which orders the bidder to comply with an order of the National Labor Relations Board.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct:

Company: _____

Signed: _____

Printed Name: _____

Title: _____

Date: _____

**PUBLIC CONTRACT CODE SECTION 10285.1
STATEMENT**

The bidder hereby declares under penalty of perjury under the laws of the State of California that the bidder has ___ , has not ___ been convicted within the preceding three years of any offenses referred to in that section, including any charge of fraud, bribery, collusion, conspiracy, or any other act in violation of any state or Federal antitrust law in connection with the bidding upon, award of, or performance of, any public works contract, as defined in Public Contract Code Section 1101, with any public entity, as defined in Public Contract Code Section 1100, including the Regents of the University of California or the Trustees of the California State University. The term "bidder" is understood to include any partner, member, officer, director, responsible managing officer, or responsible managing employee thereof, as referred to in Section 10285.1.

Note: The bidder must place a check mark after "has" or "has not" in one of the blank spaces provided (above).

Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct:

Company: _____

Signed: _____

Printed Name: _____

Title: _____

Date: _____

IRAN CONTRACTING ACT CERTIFICATION
(Public Contract Code section 2200 et seq.)

As required by California Public Contract Code section 2204, the Contractor certifies subject to penalty for perjury that the option checked below relating to the Contractor's status regarding the Iran Contracting Act of 2010 (Public Contract Code section 2200 et seq.) is true and correct:

- The Contractor is not:
 - (i) identified on the current list of persons and entities engaging in investment activities in Iran prepared by the California Department of General Services in accordance with subdivision (b) of Public Contract Code section 2203; or
 - (ii) a financial institution that extends, for 45 days or more, credit in the amount of \$20,000,000 or more to any other person or entity identified on the current list of persons and entities engaging in investment activities in prepared by the California Department of General Services in accordance with subdivision (b) of Public Contract Code section 2203, if that person or entity uses or will use the credit to provide goods or services in the energy sector in Iran.
- The County has exempted the Contractor from the requirements of the Iran Contracting Act of 2010 after making a public finding that, absent the exemption, the County will be unable to obtain the goods and/or services to be provided pursuant to the Contract.
- The amount of the Contract payable to the Contractor for work does not exceed \$1,000,000.

Company: _____

Signed: _____

Printed Name: _____

Title: _____

Date: _____

Note: In accordance with Public Contract Code section 2205, false certification of this form shall be reported to the California Attorney General and may result in civil penalties equal to the greater of \$250,000 or twice the Contract Price, termination of the Contract and/or ineligibility to bid on contracts for three years.

BIDDER'S BOND

KNOW ALL BY THESE PRESENTS:

That we, _____

as Principal, and _____

as Surety, are held and firmly bound unto the Oceano Community Services District, County of San Luis Obispo, State of California (hereinafter called "District") in the penal sum of Ten Percent (10%) of the total aggregate amount of the base Bid of the Principal above named, submitted by said Principal to the District for the work described below, for the payment of which sum in lawful money of the United States, well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents. In no case shall the liability of the Surety hereunder exceed the sum of _____
_____ (\$_____).

THE CONDITION OF THIS OBLIGATION IS SUCH,

That whereas a bid to District for certain construction specifically described as follows, for which bids are to be opened on _____, 20____, has been submitted by Principal to District for:

**2019 GENERATOR REPLACEMENT PROJECT
OCEANO, CA
CONTRACT NO. 2019-01**

NOW, THEREFORE, the penal sum guaranteed by this bond shall be forfeited to the District in the event of any of the following:

- (1) The aforesaid Principal withdraws said bid after the time fixed in the Notice to Bidders for the opening of bids; or,
- (2) Principal fails to provide the District within the time(s) specified in the aforesaid contract documents all of the completed DBE documents required to perfect the Principal's bid before the contract is awarded; or
- (3) Principal fails, within fifteen (15) business days after receipt of written notice that the contract has been awarded to Principal, to enter into a written contract with District, in the prescribed form, in accordance with the bid as accepted, and file with the District the certificates of insurance as stipulated in Article 11 of the General Conditions and the two bonds (in the prescribed forms), one to guarantee faithful performance and the other to guarantee payment for labor and materials.

Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of said contract or to the work to be performed thereunder or the specifications accompanying the same shall in any manner affect its obligations on this bond, and it does hereby waive notice of any such change, extension, alteration, or addition.

In the event suit is brought upon said bond by District and judgment is recovered, the Surety shall pay all costs incurred by District in such suit, including a reasonable attorney's fee to be fixed by the court. Death of the Principal shall not relieve Surety of its obligations hereunder.

IN WITNESS WHEREOF, we have hereunto set our hands and seals on this _____

day of _____, 20_____.

(Seal)

(Seal)

(Seal)

Principal

(Seal)

(Seal)

(Seal)

Surety

Address

NOTE: Signatures of those executing for Surety must be properly acknowledged.

OCEANO COMMUNITY SERVICES DISTRICT

BID

FORMS

FOR

2019 GENERATOR REPLACEMENT PROJECT

OCEANO, CA

CONTRACT NO. 2019-01

EXHIBIT "B"

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BID PROPOSAL FORM
TO THE BOARD OF DIRECTORS
OF THE OCEANO COMMUNITY SERVICES DISTRICT
2019 GENERATOR REPLACEMENT PROJECT
OCEANO, CA
CONTRACT NO. 2019-01

NAME OF BIDDER Mark Schwind Electric, Inc.
BUSINESS P.O. BOX P.O. Box 2117
CITY, STATE, ZIP Nipomo, CA 93444
BUSINESS STREET ADDRESS 958 Olympic Way
(include even if P.O. Box used)
CITY, STATE, ZIP Nipomo CA 93444
PHONE NO: AREA CODE (805) 929-4722
FAX NO: AREA CODE (805) 929-4722 Same as phone
CONTRACTOR LICENSE NO. 710572 CLASSIFICATION C-10
PUBLIC WORKS CONTRACTOR REGISTRATION NO: 1000004401
TAX I.D. NUMBER: 45-3619571
BUSINESS TYPE (Check one): Corporation Partnership Sole Proprietorship
Limited Liability Company
CONTACT PERSON NAME Mark Schwind
CONTACT PERSON PHONE No. 805-459-2518 cell
CONTACT PERSON E-MAIL mschwindelectric@charter.net
EMPLOYER'S TAX IDENTIFICATION NUMBER 254-8546-7

Bidder agrees that the Bid and all prices shall remain open and shall not be withdrawn for a period of not less than **90 days** from the Bid Deadline, or until rejected by the District, whichever period is shorter.

1. ADDENDA

The undersigned acknowledges and confirms the receipt of the following Addenda:

<u>Addenda Number</u>	<u>Date</u>
<u>1</u>	<u>6/28/19</u>
<u>2</u>	<u>6/28/19</u>
_____	_____

and agrees that said addenda are covered in the bid proposal and shall form a part of the Contract Documents.

2. CERTIFICATION OF INSPECTION OF THE SITE AND CONTRACT DOCUMENTS

By signing below, bidder certifies that it: has received, carefully examined, and is fully familiar with all of the provisions of the Contract Documents, including all Addenda and attachments, and that said Contract Documents contain sufficient detail regarding the work to be performed; has notified the District of any errors or omissions in the Contract Documents and unusual site conditions; has carefully checked all words, prices, and statements in this Bid Proposal Form; and has visited the job site and conducted such other field investigations which are prudent and reasonable in preparing the Bid. Bidder agrees that the District will not be responsible for any errors or omissions on the part of the undersigned in making the Bid.

3. BIDDER'S REPRESENTATIONS REGARDING INSURANCE AND BONDS

This Bid is made with the full knowledge of the kind, quantity, and quality of the materials and work required and, if it is accepted by the District, the bidder will enter into a Contract and furnish the bonds, insurance and other documents as required by the Contract Documents within 10 business days after award and tender of the Contract. By its signature below, the bidder agrees to provide the proper evidence of insurance and bonds within 10 business days after District's tender of the Contract. Failure to do so may result in forfeiture of Bid Security and rescission of the award by the District.

4. CONTRACTORS LICENSE CERTIFICATION.

The undersigned certifies that:

Contractors License No. 710572 issued by the California Contractors State License Board ("CSLB") to the undersigned on _____, is current, valid, has not been revoked, suspended or cancelled, and is appropriate to the work to be undertaken.

Contractors License Classification(s): C-10

Expiration Date: 12/31/19

Name of Qualifying Individual: Mark Edgar Schwind

5. TIME FOR COMPLETION

The bidder agrees that if awarded the Contract, it shall complete the work within 80 calendar days after the date specific in the District's Notice to Proceed.

6. ATTACHMENTS TO THIS BID PROPOSAL FORM

Enclosed herewith (except as otherwise provided for optional forms) and by this reference incorporated herein and made a part of this Bid Proposal Form are the following items:

1. Bid Item List
2. Designation of Subcontractors Base Bid Form
3. Declaration of Noncollusion
4. California Public Contract Code 10162 Questionnaire
5. California Public Contract Code 10232 Statement
6. California Public Contract Code 10285.1 Statement
7. Iran Contracting Act Certification
8. Non-Lobbying Certification for Federal-Aid Contracts
9. Disclosure of Lobbying Activities
10. Bidder's Bond or other Bid Security

Bids are to be submitted for the entire work. The amount for Bid comparison purposes will be the total of all items.

The bidder shall set forth for each unit basis item of work a unit price and a total for the item, and for each lump sum item a total for the item, all in clearly legible figures in the respective spaces provided for that purpose. In the case of unit basis items, the amount set forth under the "Total" column is the extension of the unit price bid on the basis of the approximate quantity for the item.

Accompanying this Bid Proposal is a bidder's bond, cash, cashier's check, or a certified check, payable to the Oceano Community Services District, for the sum of at least ten percent (10%) of the total of the base bid. The proceeds thereof shall become the property of the District if the Bid is withdrawn after the time fixed in the Notice to Bidders for the opening of Bids, or if, in case this Bid is accepted by the District and such bidder has received written notice that the Contract has been awarded to him/her, the undersigned shall fail within 15 business days to execute the Contract with the District and furnish all documents required in the Bid Documents. Otherwise, said Bid Security, except a bidder's bond, will be returned to the undersigned.

7. BIDDER'S ORGANIZATION AND SIGNATURE AUTHORIZATION

The undersigned certifies that he/she/they is/are authorized to sign this Bid and any subsequent Contract on behalf of the bidding firm or company and that the nature of this bidding firm is an individual, partnership, corporation, or limited liability company with the principals or authorized officers of the firm listed as follows:

Nature of Firm:

(Corporation, Partnership, Individual, etc.)

Corporation

Principal Officers/Partners/Members:

Mark Edgar Schwind
Helen Sue Schwind

Name of President of Corporation:

Mark Edgar Schwind

Name of Secretary of Corporation:

Helen Sue Schwind

Corporation is organized under laws of State of CA, and is authorized to transact business in the State of California.

Mark Schwind Electric Incorporated

Company/Contractor Legal Name

Helen Sue Schwind

Signature

Helen Sue Schwind

Name (print/type)

Secretary

Title (print/type)

7/10/2019

Date

BID FORM - BID ITEM LIST

BASE BID

ITEM NO.	CODE NO.	DESCRIPTION OF ITEM	APPROX. QUANTITY	UNIT OF MEASURE	UNIT PRICE (IN FIGURES) DOLLARS. CENTS	TOTAL AMOUNT DOLLARS. CENTS
1		Construction staking, site preparation and concrete pad install.	1	LS	\$15,789.00	\$15,789.00
2		Electrical Rough-In, Generator Installation and Testing	1	LS	\$31,418.00	\$31,418.00
3		Generator Placement	1	LS	\$4,500.00	\$4,613.00
TOTAL BASE BID						\$51,820.00

ADDITIVE BID ITEM 1 - None

ITEM NO.	CODE NO.	DESCRIPTION OF ITEM	APPROX. QUANTITY	UNIT OF MEASURE	UNIT PRICE (IN FIGURES) DOLLARS. CENTS	TOTAL AMOUNT DOLLARS. CENTS
TOTAL ADDITIVE BID						0

GRAND TOTAL BASE BID PLUS ADDITIVE BID ITEMS						\$51,820.00
---	--	--	--	--	--	-------------

Name of bidder Mark Schwind Electric, Inc.
 Signature of bidder *Helen Sue Schwind*
 Printed Name and Title Helen Sue Schwind Secretary
 Date 7/10/19

DESIGNATION OF SUBCONTRACTORS – BASE BID

In accordance with the provisions of Public Contract Code section 4100 et seq., the undersigned bidder sets forth the following:

- a. The name, location of the place of business, and California contractors license number of each Subcontractor who will perform work or labor, or render service to the undersigned Prime Contractor in or about the construction of the work or improvement, or a Subcontractor licensed by the State of California who, under subcontract to the Prime Contractor, specially fabricates and installs a portion of the work or improvement according to detailed drawings contained in the plans and specifications, in an amount in excess of one-half of one percent of the undersigned Prime Contractor's Total Bid.
- b. The portion of the work which will be done by each such Subcontractor. Only one Subcontractor shall be listed for each such portion. If the Subcontractor is not performing all of the work under the bid item number(s) listed for that Subcontractor, the bidder shall set forth the portion of the work relating to said bid item number(s) that will be done by the Subcontractor.

Bid Item No.	Description of Trade/Portion of Work	Subcontractor Name	License No.	DIR Reg No.**	Business Address	Percent of Total Bid
1	Trenching	Rdz Contractors	1004110	1000027023	P.O. Box 760, Nipomo, CA 93444	7%
1	Concrete	TJN Dozer & Backhoe Services LLC	477598	1000012089	P.O. Box 1307, Santa Maria, CA 93456	24%

By: Mark Schwind Electric, Inc.
 (Bidder's Company Name)

NOTES: *When there is a failure to list a Subcontractor as required, or when the bidder lists two Subcontractors for the same portion of the work, the law provides that the bidder agrees that bidder is fully qualified to perform that portion itself, and that the bidder shall perform that portion itself. In such case, bidder must be authorized to perform said work. Any Bid not complying with the provisions hereof may be rejected.

** Pursuant to Labor Code Section 1771.1, no contractor or Subcontractor may be listed on the bid proposal for this public works project unless registered with the Department of Industrial Relations pursuant to Labor Code Section 1725.5.



DECLARATION OF NONCOLLUSION

In accordance with Public Contract Code Section 7106, the bidder declares as follows:

I am the Secretary [title] of Mark Schwind Electric Inc. [name] of bidder], the party making the foregoing Bid. The Bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The Bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham Bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham Bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the Bid price, or of that of any other bidder. All statements contained in the Bid are true. The bidder has not, directly or indirectly, submitted his or her Bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose. Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on:

7/10/2019 [date], at Nipomo [city], CA [state].

Signed: Helen Sue Schwind

Print Name: Helen Sue Schwind

If the bidder fails to complete and properly sign this declaration, the Bid will be considered non-responsive and will be rejected.

PUBLIC CONTRACT CODE SECTION 10162 QUESTIONNAIRE

The bidder shall complete, under penalty of perjury, the following questionnaire:

Has the bidder, any officer of the bidder, or any employee of the bidder who has a proprietary interest in the bidder, ever been disqualified, removed, or otherwise prevented from bidding on, or completing a federal, state, or local government project because of a violation of law or a safety regulation?

Yes _____

No X _____

If the answer is yes, explain the circumstances in the following space.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Company: Mark Schwind Electric, Inc

Signed: Helen Sue Schwind

Printed Name: Helen Sue Schwind

Title: Secretary

Date: 7/10/2019

PUBLIC CONTRACT CODE SECTION 10232 STATEMENT

The bidder, hereby states under penalty of perjury, that no more than one final unappealable finding of contempt of court by a federal court has been issued against the Contractor within the immediately preceding two-year period because of the bidder's failure to comply with an order of a federal court which orders the bidder to comply with an order of the National Labor Relations Board.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct:

Company: Mark Schwind Electric, Inc

Signed: Helen Sue Schwind

Printed Name: Helen Sue Schwind

Title: Secretary

Date: 7/10/19

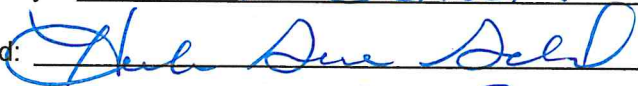
**PUBLIC CONTRACT CODE SECTION 10285.1
STATEMENT**

The bidder hereby declares under penalty of perjury under the laws of the State of California that the bidder has , has not been convicted within the preceding three years of any offenses referred to in that section, including any charge of fraud, bribery, collusion, conspiracy, or any other act in violation of any state or Federal antitrust law in connection with the bidding upon, award of, or performance of, any public works contract, as defined in Public Contract Code Section 1101, with any public entity, as defined in Public Contract Code Section 1100, including the Regents of the University of California or the Trustees of the California State University. The term "bidder" is understood to include any partner, member, officer, director, responsible managing officer, or responsible managing employee thereof, as referred to in Section 10285.1.

Note: The bidder must place a check mark after "has" or "has not" in one of the blank spaces provided (above).

Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct:

Company: Mark Schwind Electric, Inc
Signed: 
Printed Name: Helen Sue Schwind
Title: Secretary
Date: 7/10/19

IRAN CONTRACTING ACT CERTIFICATION
(Public Contract Code section 2200 et seq.)

As required by California Public Contract Code section 2204, the Contractor certifies subject to penalty for perjury that the option checked below relating to the Contractor's status regarding the Iran Contracting Act of 2010 (Public Contract Code section 2200 et seq.) is true and correct:

- The Contractor is not:
 - (i) identified on the current list of persons and entities engaging in investment activities in Iran prepared by the California Department of General Services in accordance with subdivision (b) of Public Contract Code section 2203; or
 - (ii) a financial institution that extends, for 45 days or more, credit in the amount of \$20,000,000 or more to any other person or entity identified on the current list of persons and entities engaging in investment activities in prepared by the California Department of General Services in accordance with subdivision (b) of Public Contract Code section 2203, if that person or entity uses or will use the credit to provide goods or services in the energy sector in Iran.
- The County has exempted the Contractor from the requirements of the Iran Contracting Act of 2010 after making a public finding that, absent the exemption, the County will be unable to obtain the goods and/or services to be provided pursuant to the Contract.
- The amount of the Contract payable to the Contractor for work does not exceed \$1,000,000.

Company: Mark Schwind Electric, Inc
Signed: Helen Sue Schwind
Printed Name: Helen Sue Schwind
Title: Secretary
Date: 7/10/19

Note: In accordance with Public Contract Code section 2205, false certification of this form shall be reported to the California Attorney General and may result in civil penalties equal to the greater of \$250,000 or twice the Contract Price, termination of the Contract and/or ineligibility to bid on contracts for three years.

BIDDER'S BOND

KNOW ALL BY THESE PRESENTS:

That we, Mark Schwind Electric, Inc.

as Principal, and Indemnity Company of California

as Surety, are held and firmly bound unto the Oceano Community Services District, County of San Luis Obispo, State of California (hereinafter called "District") in the penal sum of Ten Percent (10%) of the total aggregate amount of the base Bid of the Principal above named, submitted by said Principal to the District for the work described below, for the payment of which sum in lawful money of the United States, well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents. In no case shall the liability of the Surety hereunder exceed the sum of ten percent of the total bid amount (\$ 10% of the total bid amount).

THE CONDITION OF THIS OBLIGATION IS SUCH,

That whereas a bid to District for certain construction specifically described as follows, for which bids are to be opened on July 2, 2019, has been submitted by Principal to District for:

**2019 GENERATOR REPLACEMENT PROJECT
OCEANO, CA
CONTRACT NO. 2019-01**

NOW, THEREFORE, the penal sum guaranteed by this bond shall be forfeited to the District in the event of any of the following:

- (1) The aforesaid Principal withdraws said bid after the time fixed in the Notice to Bidders for the opening of bids; or,
- (2) Principal fails to provide the District within the time(s) specified in the aforesaid contract documents all of the completed DBE documents required to perfect the Principal's bid before the contract is awarded; or
- (3) Principal fails, within fifteen (15) business days after receipt of written notice that the contract has been awarded to Principal, to enter into a written contract with District, in the prescribed form, in accordance with the bid as accepted, and file with the District the certificates of insurance as stipulated in Article 11 of the General Conditions and the two bonds (in the prescribed forms), one to guarantee faithful performance and the other to guarantee payment for labor and materials.

Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of said contract or to the work to be performed thereunder or the specifications accompanying the same shall in any manner affect its obligations on this bond, and it does hereby waive notice of any such change, extension, alteration, or addition.

In the event suit is brought upon said bond by District and judgment is recovered, the Surety shall pay all costs incurred by District in such suit, including a reasonable attorney's fee to be fixed by the court. Death of the Principal shall not relieve Surety of its obligations hereunder.

IN WITNESS WHEREOF, we have hereunto set our hands and seals on this 27th

day of June, 2019.

Mark Schwind Electric, Inc. (Seal)

Deborah Sue Schindler (Seal)

Secretary (Seal)

Principal

Indemnity Company of California (Seal)

Brendan Morris (Seal)

J. Brendan Morris, Attorney-in-Fact (Seal)

Surety

17771 Cowan, Suite 100

Irvine, CA 92614

Address

NOTE: Signatures of those executing for Surety must be properly acknowledged.

**POWER OF ATTORNEY FOR
DEVELOPERS SURETY AND INDEMNITY COMPANY
INDEMNITY COMPANY OF CALIFORNIA
PO Box 19725, IRVINE, CA 92623 (949) 263-3300**

KNOW ALL BY THESE PRESENTS that except as expressly limited, DEVELOPERS SURETY AND INDEMNITY COMPANY and INDEMNITY COMPANY OF CALIFORNIA, do each hereby make, constitute and appoint:

Kerry Morris, Gene M. Garritano, Martine Domingues, J. Brendan Morris, Gabe Garcia, jointly or severally

as their true and lawful Attorney(s)-in-Fact, to make, execute, deliver and acknowledge, for and on behalf of said corporations, as sureties, bonds, undertakings and contracts of suretyship giving and granting unto said Attorney(s)-in-Fact full power and authority to do and to perform every act necessary, requisite or proper to be done in connection therewith as each of said corporations could do, but reserving to each of said corporations full power of substitution and revocation, and all of the acts of said Attorney(s)-in-Fact, pursuant to these presents, are hereby ratified and confirmed.

This Power of Attorney is granted and is signed by facsimile under and by authority of the following resolutions adopted by the respective Boards of Directors of DEVELOPERS SURETY AND INDEMNITY COMPANY and INDEMNITY COMPANY OF CALIFORNIA, effective as of January 1st, 2008.

RESOLVED, that a combination of any two of the Chairman of the Board, the President, Executive Vice-President, Senior Vice-President or any Vice President of the corporations be, and that each of them hereby is, authorized to execute this Power of Attorney, qualifying the attorney(s) named in the Power of Attorney to execute, on behalf of the corporations, bonds, undertakings and contracts of suretyship; and that the Secretary or any Assistant Secretary of either of the corporations be, and each of them hereby is, authorized to attest the execution of any such Power of Attorney;

RESOLVED, FURTHER, that the signatures of such officers may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signatures shall be valid and binding upon the corporations when so affixed and in the future with respect to any bond, undertaking or contract of suretyship to which it is attached.

IN WITNESS WHEREOF, DEVELOPERS SURETY AND INDEMNITY COMPANY and INDEMNITY COMPANY OF CALIFORNIA have severally caused these presents to be signed by their respective officers and attested by their respective Secretary or Assistant Secretary this 4th day of October, 2018.

By: *Daniel Young*
Daniel Young, Senior Vice-President

By: *Mark Lansdon*
Mark Lansdon, Vice-President



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 Orange

On October 4, 2018 before me, Lucille Raymond, Notary Public
Date Here Insert Name and Title of the Officer

personally appeared Daniel Young and Mark Lansdon
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 *Lucille Raymond*
Lucille Raymond, Notary Public



Place Notary Seal Above

CERTIFICATE

The undersigned, as Secretary or Assistant Secretary of DEVELOPERS SURETY AND INDEMNITY COMPANY or INDEMNITY COMPANY OF CALIFORNIA, does hereby certify that the foregoing Power of Attorney remains in full force and has not been revoked and, furthermore, that the provisions of the resolutions of the respective Boards of Directors of said corporations set forth in the Power of Attorney are in force as of the date of this Certificate.

This Certificate is executed in the City of Irvine, California, this 27th day of June, 2019.

By: *Cassie J. Bernisford*
Cassie J. Bernisford, Assistant Secretary



CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

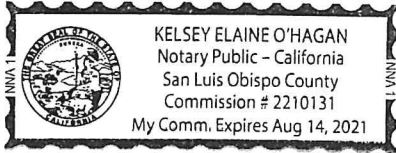
A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA

County of San Luis Obispo }

On June 27, 2019 before me, Kelsey Elaine O'Hagan, Notary Public,
Date Insert Name of Notary exactly as it appears on the official seal

personally appeared J. Brendan Morris
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/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 Kelsey O'Hagan
Signature of Notary Public

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:



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OCEANO COMMUNITY SERVICES DISTRICT

EMERGENCY GENERATOR REPLACEMENT PROJECT

OCEANO, CA

CONTRACT NO. 2019-01

EXHIBIT "C"

GENERAL CONDITIONS

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OCEANO COMMUNITY SERVICES DISTRICT

STANDARD CONSTRUCTION CONTRACT GENERAL
CONDITIONS

OCTOBER 10, 2018

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GENERAL CONDITIONS TABLE OF CONTENTS

ARTICLE 1 – GENERAL PROVISIONS	5
1.1 DEFINITIONS.....	5
1.2 OWNERSHIP AND USE OF DOCUMENTS	15
1.3 AUTHORITY OF DISTRICT.....	16
1.4 INTERPRETATION OF CONTRACT DOCUMENTS.....	16
ARTICLE 2 – DISTRICT	19
2.1 INFORMATION AND SERVICES PROVIDED BY DISTRICT.....	19
2.2 ACCESS TO PROJECT SITE.....	19
2.3 DISTRICT'S RIGHT TO STOP THE WORK.....	19
2.4 DISTRICT'S RIGHT TO CARRY OUT THE WORK.....	20
ARTICLE 3 – CONTRACTOR.....	21
3.1 REVIEW OF THE SITE, CONTRACT DOCUMENTS AND FIELD CONDITIONS.....	21
3.2 SUPERVISION AND CONSTRUCTION PROCEDURES.....	23
3.3 RESPONSIBILITY FOR THE WORK	23
3.4 LABOR, WORKMANSHIP, MATERIALS AND MANUFACTURED ITEMS	24
3.5 CONTRACTOR'S WARRANTY	24
3.6 CONSTRUCTION METHODS AND PROCEDURES.....	24
3.7 TAXES.....	25
3.8 LEGAL REQUIREMENTS.....	25
3.9 SUPERINTENDENT/PROJECT STAFF.....	25
3.10 SCHEDULES REQUIRED OF CONTRACTOR	26
3.11 DOCUMENTS AND SAMPLES AT PROJECT SITE.....	28
3.12 SUBMITTALS	29
3.13 TRADE NAMES, SUBSTITUTIONS	31
3.14 DAILY REPORTS BY CONTRACTOR.....	32
3.15 CUTTING AND PATCHING	33
3.16 ACCESS TO THE WORK	33
3.17 ROYALTIES AND PATENTS.....	33
3.18 PERMITS AND LICENSES.....	34
3.19 DIFFERING SITE CONDITIONS.....	34
3.20 INSPECTIONS.....	35
3.21 INDEMNIFICATION, STOP NOTICES.....	36
3.22 PARKING	36
3.23 USE OF THE PROJECT SITE AND CLEAN UP.....	36

3.24 ENVIRONMENTAL CONTROLS.....	38
ARTICLE 4 – ADMINISTRATION OF THE CONTRACT.....	44
4.1 CONTRACT ADMINISTRATION BY DISTRICT, DESIGN CONSULTANT AND CONSTRUCTION MANAGER.....	44
4.2 CLAIMS.....	45
ARTICLE 5 – SUBCONTRACTORS.....	51
5.1 CONTRACTOR'S AWARD OF SUBCONTRACTS.....	51
5.2 SUBCONTRACTUAL RELATIONS.....	52
5.3 CONTINGENT ASSIGNMENT OF SUBCONTRACTS.....	54
ARTICLE 6 – CONSTRUCTION BY DISTRICT OR BY SEPARATE CONTRACTORS.....	55
6.1 DISTRICT'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS.....	55
6.2 MUTUAL RESPONSIBILITY.....	55
6.3 DISTRICT'S RIGHT TO CLEAN UP.....	56
ARTICLE 7 – CHANGES.....	57
7.1 CHANGES.....	57
7.2 CHANGE ORDERS AND CHANGE ORDER REQUESTS.....	58
7.3 FIELD ORDERS.....	64
7.4 DISPUTES REGARDING CHANGES.....	64
ARTICLE 8 – CONTRACT TIME.....	65
8.1 COMMENCEMENT OF THE WORK.....	65
8.2 PROGRESS AND COMPLETION.....	65
8.3 DELAY.....	66
ARTICLE 9 – PAYMENTS AND COMPLETION.....	69
9.1 SCHEDULE OF VALUES.....	69
9.2 PROGRESS PAYMENT.....	69
9.3 APPLICATION FOR PAYMENT.....	70
9.4 CERTIFICATE FOR PAYMENT.....	71
9.5 DEPOSIT OF SECURITIES IN LIEU OF RETENTION AND DEPOSIT OF RETENTION INTO ESCROW.....	73
9.6 BENEFICIAL OCCUPANCY/BENEFICIAL USE.....	73
9.7 SUBSTANTIAL COMPLETION.....	75
9.8 FINAL COMPLETION AND FINAL PAYMENT.....	75
ARTICLE 10 – PROTECTION OF PERSONS AND PROPERTY.....	77
10.1 SAFETY PRECAUTIONS AND PROGRAMS.....	77
10.2 SAFETY OF PERSONS AND PROPERTY.....	77
10.3 EMERGENCIES.....	79

ARTICLE 11 – INSURANCE AND BONDS.....	80
11.1 CONTRACTOR'S INSURANCE.....	80
11.2 BOND REQUIREMENTS.....	80
ARTICLE 12 – DEFECTIVE WORK.....	82
12.1 UNCOVERING OF WORK.....	82
12.2 CORRECTION OF DEFECTIVE WORK AND GUARANTEE TO REPAIR PERIOD.....	82
12.3 ACCEPTANCE OF DEFECTIVE WORK.....	84
ARTICLE 13 – STATUTORY REQUIREMENTS.....	85
13.1 NONDISCRIMINATION/EQUAL OPPORTUNITY.....	85
13.2 STATE LABOR LAW.....	87
13.3 PAYROLL RECORDS.....	88
13.4 APPRENTICES.....	89
13.5 WORK DAY.....	89

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ARTICLE 1 – GENERAL PROVISIONS

1.1 DEFINITIONS

Terms appearing in the Contract Documents with initial capitalization shall have the meanings set forth below:

1.1.1 ACCEPTANCE: The point after Final Completion when Contractor has fully performed all of the requirements of the Contract Documents and the Work is accepted by District in writing.

1.1.2 ADDENDA, ADDENDUM: Written or graphic information (including, without limitation, Drawings or Special Provisions and Technical Specifications) prepared and issued by District General Manager or its designee prior to the receipt of Contractor's Bid, which modify or interpret the Bid Documents by additions, deletions, clarifications or corrections.

1.1.3 ALLOWABLE COSTS: Costs for which reimbursement is allowed under Article 7.2.5 of these General Conditions and for which reimbursement is allowed under other provisions of the Contract Documents, that may be added by Change Order to the Contract Sum for Extra Work or deducted by Change Order from the Contract Sum for Deleted Work.

1.1.4 ALTERNATE(S): Those portions of the Bid setting forth the price(s) for optional or alternative items of Work not covered by the Base Bid.

1.1.5 APPLICABLE CODE REQUIREMENTS: All applicable federal, state and municipal laws, statutes, building codes, ordinances and regulations of governmental authorities having jurisdiction over the Project, Work, Site, Contractor or District.

1.1.6 APPLICATION FOR PAYMENT: An itemized application for payment prepared and submitted by Contractor for review and approval by District, which is prepared, submitted and accompanied by supporting documentation in accordance with the requirements of the Contract Documents.

1.1.7 APPROVE, APPROVED or APPROVAL: Whether capitalized or not capitalized, shall mean, unless otherwise stated, either an express approval contained in a written statement signed by the approving individual or entity or deemed approved in accordance with the terms, conditions and procedures set forth in the Contract Documents. All such approvals by or on behalf of District (including, without limitation, approvals by Construction Manager) may be granted or withheld in the sole discretion of District.

1.1.8 AS-BUILT DOCUMENTS: The Contract Documents showing the condition of the Work as actually built, including, without limitation, the locations of mechanical, electrical, plumbing, HVAC or similar portions of the Work that are

shown diagrammatically in the Contract Documents approved by District. These documents are maintained by Contractor on the Site and delivered, along with an electronic version of the set, to District upon Final Completion.

1.1.9 BASE BID: The sum stated in the Bid to perform the Work, exclusive of any Alternate(s).

1.1.10 BENEFICIAL OCCUPANCY: District's right, at its option and convenience, to occupy or otherwise make use of all or any part of the Work prior to either Substantial Completion, Final Completion, or Acceptance.

1.1.11 BID: Contractor's written bid proposal submitted to District for the Project in response to District's Notice Inviting Bids.

1.1.12 BID DOCUMENTS: The following collection of documents are designated as the Bid Documents:

- (i) Notice Inviting Bids.
- (ii) Instructions to Bidders.
- (iii) Blank Bid Form.
- (iv) Construction Contract between District and Contractor.
- (v) General Conditions.
- (vi) Special Provisions and Technical Specifications.
- (vii) Plans and Drawings.
- (viii) Bidding Addenda.
- (ix) Reports, Supplements, Attachments, Modifications, and Exhibits attached to the above items.

1.1.13 CERTIFICATE FOR PAYMENT: The form for approval by the Construction Manager of Contractor's Application for Payment.

1.1.14 CHANGE: Whether capitalized or not, when used in reference to changes in the Work is a generic term encompassing additions, deletion, alterations or changes in the Work, which may or may not involve Extra Work and for which Contractor may or may not be entitled to a Change Order under the terms of the Contract Documents.

1.1.15 CHANGE ORDER: A written instrument signed by District, or by District and Contractor, describing a Change to the Work of Contractor.

1.1.16 CHANGE ORDER REQUEST: Contractor's written request for an adjustment in the Contract Sum or Contract Time due to a Change resulting in Extra Work or Deleted Work.

1.1.17 DISTRICT: Oceano Community Services District, a California special district.

1.1.18 CONTRACTOR CLAIM: A separate demand by a Contractor sent by registered mail or certified mail, with return receipt requested, for one or more of the following: (A) a time extension, including, without limitation, for relief from damages or penalties for delay assessed by the District; (B) payment by the District of money or damages arising from work done by, or on behalf of, the Contractor pursuant to the Construction Contract and payment for which is not otherwise expressly provided or to which the claimant is not otherwise entitled; (C) payment of an amount that is disputed by the District. A Contractor Claim does not include, and the procedures for processing of Contractor Claims do not apply to the following:

- (i) Penalties or forfeitures prescribed by statute or regulation imposed by a governmental agency other than penalties for delay assessed by the District pursuant to Section 1.1.18(B);
- (ii) Tort claims for personal injury or death;
- (iii) False claims liability under California Government Code Section 12650, et seq.;
- (iv) Defects in the Work first discovered by District after final payment by District to Contractor;
- (v) Stop notices;
- (vi) The right of District to specific performance or injunctive relief to compel performance of any provision of the Contract Documents or for other District claims against the Contractor.

1.1.19 COMPENSABLE DELAY: A Delay for which Contractor may be entitled under the Contract Documents to both an extension of the Contract Time and an adjustment of the Contract Sum for additional compensation. "Compensable Delay" means any Delay to the path of activities that is critical to Contractor's Substantial Completion of the Work within the Contract Time, which Delay is all of the following:

- (i) Solely due to Changes requested by District that adds time, but does not involve Extra Work.
- (ii) Not due, in whole or in part, to the fault or negligence or breach of Contractor or any Subcontractor or Sub-subcontractor, of any Tier.
- (iii) Not concurrent with another Excusable Delay or any Unexcused Delay.

1.1.20 CONSTRUCTION CONTRACT: The written contract executed between District and Contractor for construction of the Project.

1.1.21 CONSTRUCTION MANAGER: The District General Manager or any person designated by the District General Manager or District Board to oversee the Project. The Construction Manager can be an individual, partnership, corporation, joint venture or other legal entity under contract with District to perform construction management services for the Project. The term "Construction Manager" means Construction Manager or Construction Manager's authorized representative.

1.1.22 CONSTRUCTION SCHEDULE: The graphical representation of Contractor's as-planned schedule for performance of the Work, prepared in accordance with the requirements of the Contract Documents and that provides for Substantial Completion of the Work within the Contract Time.

1.1.23 CONTRACT DISPUTE: A dispute, other than a dispute listed in Section 14.2.1 (Non-Contract Disputes) of the Construction Contract, arising out of or related to the Construction Contract or the interpretation, enforcement or breach thereof.

1.1.24 CONTRACT DISPUTE RESOLUTION PROCESS: The process of resolution of Contract Disputes, and, upon election of District, disputes as set forth in Section 14 (Dispute Resolution) of the Construction Contract.

1.1.25 CONTRACT DOCUMENTS: The following collection of documents are designated as contract documents:

- (i) The Notice Inviting Pre-Qualification Statements, Pre-Qualification Statement, and Pre-Qualification Checklist (if applicable).
- (ii) Executed Construction Contract between District and Contractor.
- (iii) Notice Inviting Bids.
- (iv) Instructions to Bidders.
- (v) Bidding Addenda.
- (vi) Contractor's Bid.

- (vii) General Conditions.
- (viii) Special Provisions and Technical Specifications.
- (ix) Performance and Payment Bonds.
- (x) Insurance Forms.
- (xi) Plans and Drawings.
- (xii) Reports listed in the Bidding Documents.
- (xiii) Supplements, Attachments and Exhibits attached to the above items.
- (xiv) Modifications.
- (xv) Change Orders.
- (xvi) Field Orders.
- (xvii) Other Documents if so designated by written agreement of the Parties.

1.1.26 CONTRACT SUM: The total amount of compensation stated in the Construction Contract that is payable to Contractor for the performance of the Work in accordance with the Contract Documents.

1.1.27 CONTRACT TIME: The total number of days set forth in the Construction Contract within which Substantial Completion of the Work must be achieved by Contractor, including approved extensions of time permitted under the terms of the Contract Documents.

1.1.28 CONTRACTOR: The individual or firm under contract with District to serve as the General Contractor for construction of the Project. The term "Contractor" means Contractor or Contractor's authorized representative.

1.1.29 CONTRACTOR MARKUP: The additional sum or deductive credit provided for under the Construction Contract for Contractor's profit and overhead on Extra or Deleted Work for which a Change Order is required to be executed under the Contract Documents adjusting the Contract Sum.

1.1.30 DAY: Whether capitalized or not, unless otherwise specifically provided, means calendar day. NOTE: For Federally-funded projects DAY, whether capitalized or not, is considered WORKING DAY and is defined as any day, except weekends and legal holidays.

1.1.31 DEFECTIVE WORK: Work by Contractor that is unsatisfactory, faulty, omitted, incomplete, deficient or does not conform to the Applicable Code

Requirements, the Contract Documents, the directives of District or the requirements of any inspection, reference standard, test, code or approval specified in the Contract Documents.

1.1.32 DELAY: Whether capitalized or not, includes any circumstances involving disruption, hindrance, or interference in the performance of the Work.

1.1.33 DELETED WORK: Work that is eliminated due to a Change in the Work requested by District or Contractor for which District is entitled to a deductive adjustment in the Contract Sum.

1.1.34 DESIGN CONSULTANT. The individual(s) or firm(s) under contract with District to provide design or engineering services for the Project and are responsible for preparing the Contract Documents for the Project. The term "Design Consultant" means Design Consultant or Design Consultant's authorized representative.

1.1.35 DIFFERING SITE CONDITIONS. Differing Site Conditions are those conditions encountered at the Site or in Existing Improvements that are (1) subsurface or concealed conditions which differ materially from those indicated in the Contract Documents; or (2) unknown physical conditions at the Site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the Work of the character provided for in the Contract Documents.

1.1.36 DRAWINGS: The graphic and pictorial portions of the Contract Documents showing the design, location, and dimensions of the Work, generally including plans, elevations, subparagraphs, details, schedules and diagrams. The Drawings are outlined in the Drawing Index. The term "Drawings" may be used interchangeably with "Plans."

1.1.37 ESCROW AGENT: A state or federally chartered bank in the State of California which holds securities pursuant to an escrow agreement as set forth in Article 9.5 of these General Conditions.

1.1.38 EXCUSABLE DELAY: A Delay for which Contractor may be entitled under the Contract Documents to an extension of time, but not compensation. "Excusable Delay" means any delay to the path of activities that is critical to Substantial Completion of the Work within the Contract Time caused by conditions beyond the control or foreseeability, and without the fault or negligence of Contractor or its Subcontractors or Sub-subcontractors, of any Tier, such as, but not limited to: war, embargoes, fire, unavoidable casualties, unusual delays in transportation, national emergency, and stormy and inclement weather conditions that are unusual and unseasonable and in which the Work cannot continue. Without limitation to the foregoing, the financial inability of Contractor or any Subcontractor or Sub-subcontractor, shall not be deemed conditions beyond Contractor's control or foreseeability.

Contractor may claim an Excusable Delay only if all Work on a critically scheduled activity is stopped for more than six (6) hours of a normal eight (8) hour working day, or if three to six hours are lost in one working day, then it may be claimed for one-half day. A Compensable Delay shall, to the extent that it is concurrent with an Excusable Delay, be conclusively deemed an Excusable Delay.

1.1.39 EXISTING IMPROVEMENTS: All improvements located on the Site as of the date of execution of the Construction Contract, whether above or below the surface of the ground, including but not limited to existing buildings, utilities, infrastructure improvements and other facilities.

1.1.40 EXTRA WORK: Additional Work or costs due to a Change in the Work that is not described in or reasonably inferable from the Contract Documents and for which Contractor is entitled to an adjustment of the Contract Sum under the terms of the Contract Documents. Extra Work shall not include additional Work or costs arising from Contractor's failure to perform any of its duties or obligations under the Contract Documents or arising from errors, omissions, conflicts, ambiguities, lack of coordination or noncompliance with Applicable Code Requirements in the Contract Documents with respect to which Contractor has assumed responsibility in connection with its obligation to conduct a careful review of the Bid Documents and Contract Documents.

1.1.41 FIELD ORDER: A written instrument signed by the Construction Manager that requests performance of Work in one of the following categories:

- (i) Over which there is a dispute as to whether the Work is or is not Extra Work.
- (ii) Involving Extra Work which District requests be performed without a unilateral Change Order adjustment to the Contract Sum or Contract Time and before all terms of an adjustment to the Contract Sum or Contract Time are fully agreed upon by District and Contractor.

The purpose of a Field Order is to direct performance of Work, which may be disputed, and, whether or not it expressly so states, shall not be construed as an acknowledgment by District that the Work described constitutes a Change or Extra Work if that is, in fact, not the case.

1.1.42 FINAL COMPLETION: The point at which:

- (i) Work is completed to the satisfaction of District in accordance with the Contract Documents, including minor corrective or completion items.
- (ii) All requirements of the Contract Documents entitling Contractor to final payment shall have been performed by Contractor (including, without

limitation, delivery of all warranties and guarantees, equipment operation and maintenance manuals, as-built drawings and schedules and certificates required prior to occupancy).

(iii) All approvals and acceptances shall have been made pursuant to Applicable Code Requirements.

(iv) All rubbish, tools, scaffolding and surplus materials and equipment have been removed from the Site.

1.1.43 FRAGNET: A "Fragnet", sometimes referred to as "time impact analysis," is a contemporaneous, fragmentary scheduling network, which graphically identifies the sequencing of all critical and non-critical new activities and/or activity revisions affected by a Change Order Request, Field Order or Change Order, with logic ties to all affected existing activities noted on the Construction Schedule. Its objective is to isolate and quantify any time impact of a specific issue, determine and demonstrate any such specific Delay in relation to past and/or other current Delays and to provide a method for incorporating adjustments to the Contract Time into the Construction Schedule.

1.1.44 GENERAL CONDITIONS: That portion of the Contract Documents relating to the administrative procedures to be followed by Contractor in carrying out the Work.

1.1.45 HAZARDOUS SUBSTANCES: Refers to, without limitation, the following: any chemical, material or other substance defined as or included within the definition of hazardous substances, hazardous wastes, extremely hazardous substances, toxic substances, toxic material, restricted hazardous waste, special waste, or words of similar import under any Environmental Law.

1.1.46 LOSSES: Any and all losses, costs, liabilities, Claims, damages, liquidated damages, actions, judgments, settlements, expenses, fines and penalties. "Losses" do not include attorneys' fees.

1.1.47 MODIFICATION: A document other than a Change Order, approved by District Legal Counsel and signed by District or Construction Manager and Contractor, agreeing to alter, amend or modify the Contract Documents.

1.1.48 NON-COMPENSABLE DELAY: An (i) Unexcused Delay; and (ii) an Excusable Delay that is not also a Compensable Delay.

1.1.49 NOTICE OF AWARD: Written notice issued by District notifying Contractor of issuance of the Construction Contract.

1.1.50 NOTICE TO PROCEED: Written notice issued by District to Contractor to begin the Work.

1.1.51 PERFORMANCE BOND, PAYMENT BOND: The performance and

payment bonds to be provided by Contractor for the Project.

1.1.52 PLANS: The graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, subparagraphs, details, schedules and diagrams. The term "Plans" may be used interchangeably with "Drawings."

1.1.53 PRE-CONSTRUCTION MEETING: A meeting held with the Project Team prior to beginning construction in order to review Contract Documents and clarify roles, responsibilities and authority of the Project Team.

1.1.54 PROJECT: The total construction, of which the Work performed by Contractor under the Contract Documents may be the whole or part and which may include Work performed by District's own forces or by Separate Contractors.

1.1.55 PROJECT TEAM: Collectively, the Contractor, District, Design Consultant, Separate Contractors, Construction Manager and other consultants and contractors providing professional and technical consultation for the design and construction of the Project.

1.1.56 RECORD DOCUMENTS: The term "Record Documents" refers to the As-Built Documents, warranties, guarantees and other documents required to be submitted by Contractor as a condition of Final Completion.

1.1.57 REQUEST FOR INFORMATION: A written instrument, prepared by Contractor, which requests an interpretation or clarification in the Work or a response to a question concerning the Work. A Request for Information does not entitle Contractor to an adjustment in the Contract Sum unless it requires Extra Work and Contractor requests and is entitled to such an adjustment in accordance with the provisions of the Contract Documents.

1.1.58 REQUEST FOR INFORMATION RESPONSE: A written instrument, usually prepared by the Design Consultant, which sets forth an interpretation or clarification in the Work or a response to a Contractor question concerning the Work.

1.1.59 SCHEDULE OF VALUES: A detailed, itemized breakdown of the Contract Sum, which provides for a fair and reasonable allocation of the dollar values to each of the various parts of the Work.

1.1.60 SEPARATE CONTRACTOR: A person or firm under separate contract with District or other entity performing other Work at the Site.

1.1.61 SITE: The physical site located within District where the Project is to be constructed, including all adjacent areas for staging, storage, parking and temporary offices.

1.1.62 SPECIAL PROVISIONS AND TECHNICAL SPECIFICATIONS: The portion of the Contract Documents consisting of the written requirements for materials, equipment, standards, skill, quality for the Work and performance of related services. These provisions may also contain amendments, deletions or additions to the General Conditions.

1.1.63 STATEMENT OF CONTRACT DISPUTE: The Contractor's written statement prepared in accordance with Section 14.3 (Submission of Contractor Claim) of the Construction Contract required as a condition of its initiating the Contract Dispute Resolution Process.

1.1.64 SUBCONTRACTOR: A person or firm that has a contract with a Contractor to perform a portion of the Work. The term "Subcontractor" includes suppliers and vendors and is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor.

1.1.65 SUB-SUBCONTRACTOR: A person or firm that has a contract with a Subcontractor to perform a portion of the Work. The term "Sub-subcontractor" includes suppliers and vendors and is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

1.1.66 SUBCONTRACTOR/SUB-SUBCONTRACTOR MARKUPS: The sum allowable under the Construction Contract for Subcontractor and Sub-subcontractor profit and overhead on Extra or Deleted Work for which Contractor is entitled to a Change Order under the Contract Documents adjusting the Contract Sum.

1.1.67 SUBMITTALS: All shop drawings, samples, exemplars, product data and other submittals required to be submitted by Contractor under the Contract Documents.

1.1.68 SUBSTANTIAL COMPLETION, SUBSTANTIALLY COMPLETE: The point at which the Work is sufficiently complete to be occupied and/or utilized by District for its intended purpose, and Contractor has fulfilled its obligations under the Contract Documents as determined by District, except for minor punch-list items which do not impair District's ability to so occupy and utilize the Project.

1.1.69 SUPERINTENDENT: The person appointed by Contractor, subject to approval by District, to supervise and coordinate Contractor's own forces and Subcontractors in all aspects of the Work.

1.1.70 TIER: The contractual level of a Subcontractor with respect to Contractor. For example, a first-tier Subcontractor is under subcontract with Contractor. A Sub-subcontractor under subcontract with a first-tier

Subcontractor, is in the second tier, and so on.

1.1.71 UNEXCUSED DELAY: Any Delay in the path of activities that is critical to Substantial Completion of the Work within the Contract Time resulting from causes other than Excusable Delay or Compensable Delay. An Unexcused Delay shall not entitle Contractor to either an extension of the Contract Time or an adjustment of the Contract Sum. A Compensable Delay or Excusable Delay shall, to the extent it is concurrent with an Unexcused Delay, be conclusively deemed an Unexcused Delay.

1.1.72 WORK: All labor, materials, equipment, services, permits, licenses and taxes, and all other things necessary for Contractor to perform its obligations and complete the Project, including, without limitation, any changes or additions requested by District, in accordance with the Contract Documents and all Applicable Code Requirements.

1.1.73 INTERPRETATION OF "SHALL" AND "MAY." Where applicable to determine obligations of the Parties, the term "SHALL" is to be construed as mandatory and "MAY" shall be construed as permissive.

1.2 OWNERSHIP AND USE OF DOCUMENTS

1.2.1 All originals, copies and electronic forms of Drawings, Plans, specifications, shop drawings, samples, reports, schedules and other materials or documents prepared for the Project (including, without limitation, the Contract Documents) shall not be used by Contractor, or any Subcontractor or Sub-subcontractor, of any Tier, for any purpose other than performance of the Work. Contractor, Subcontractors and Sub-subcontractors are granted a limited license, revocable at will by District, to use and reproduce applicable portions of the Contract Documents appropriate to and for use in the execution of their Work under the Contract Documents; provided however, that such use shall not be construed in derogation of Owner's rights to use and ownership under this provision.

1.2.2 Contractor shall keep on the Site of the Project, at all times, a complete set of District approved, permitted Contract Documents for use by District.

1.2.3 Proposed Changes or refinements and clarifications will be provided to Contractor in the form of reproducible prints. Contractor shall, at its own expense and without adjustment to the Contract Sum, do all reproduction and distribution of such reproducible prints as necessary for the complete pricing of the Change and for performance of the Work.

1.2.4 Contractor shall take all necessary steps to assure that a provision is included in all contracts with Subcontractors and Sub-subcontractors, of every Tier, who perform Work on the Project, protecting and preserving District's rights to ownership and use of documents as set forth in this Article 1.2.

1.2.5 All documents, including but not limited to Drawings, Plans, specifications, shop drawings, samples, reports, schedules and other materials or documents prepared for the Project (including, without limitation, the Contract Documents) shall be owned exclusively by the District prior to and after completion of the Project.

1.3 AUTHORITY OF DISTRICT

1.3.1 The Design Consultant shall, upon request, make recommendations to District and the Construction Manager concerning the quality or acceptability of Work performed.

1.3.2 District, in its sole discretion, will interpret the Contract Documents and make the determination of whether or not Contractor has fulfilled the requirements of the Contract Documents. Such interpretations and decisions of District shall be final and binding upon Contractor.

1.4 INTERPRETATION OF CONTRACT DOCUMENTS

1.4.1 The Contract Documents are complementary and what is required by one shall be as binding as if required by all.

1.4.2 In general, the Drawings will show dimensions, positions, and kind of construction; and the Special Provisions and Technical Specifications will define materials, quality and standards. Any Work called for on the Drawings and not mentioned in the Special Provisions and Technical Specifications, or vice versa, shall be performed as though fully set forth in both. Work not particularly detailed, marked or specified, shall be the same as similar parts that are detailed, marked or specified.

1.4.3 Unless otherwise stated in the Contract Documents, technical words and abbreviations contained in the Contract Documents are used in accordance with commonly understood construction industry meanings and non-technical words and abbreviations are used in accordance with their commonly understood meanings.

1.4.4 The Contract Documents may omit modifying words such as "all" and "any," and articles such as "the" and "an." If a modifier or an article is not included in one statement and appears in another it is not intended to affect the interpretation of either statement. The use of the word "including," when following any general statement, shall not be construed to limit such statement to specific items or matters set forth immediately following such word or to similar items or matters whether or not non-limiting language (such as "without limitation," "but not limited to," or words of similar import) is used with reference thereto, but rather shall be deemed to refer to all other items or matters that could reasonably fall within the broadest possible scope of such

general statement. To the extent the Contract Documents define obligations of the parties, the word "shall" means a mandatory obligation and "may" means a permissive obligation.

1.4.5 Whenever the context so requires, the use of the singular number shall be deemed to include the plural and vice versa. Each gender shall be deemed to include the other gender, and each shall include corporation, partnership, trust, or other legal entity whenever the context so requires. The captions and headings of the various subdivisions of the Contract Documents are intended only as a matter of reference and convenience and in no way define, limit, or prescribe the scope or intent of the Contract Documents or any subdivision thereof.

1.4.6 Any cross-references indicated between various subparagraphs or Drawings and Documents are provided for the convenience of Contractor and shall not be deemed to be all-inclusive.

1.4.7 Unless specifically noted to the contrary, it is the intention of the Contract Documents that all Work, equipment, casework, mechanical, electrical and similar devices of whatever nature, be completely installed, hooked-up, made operational and made functional for the purpose such are intended, and that all costs therefor be included in the Contract Sum.

1.4.8 Figured dimensions on scale Drawings and on full size Drawings shall govern over scale Drawings without figured dimensions. The Drawings shall not be scaled to determine dimensions, and (except in the case of diagrammatic Drawings) shall be calculated from figures shown on the Drawings. Obvious discrepancies between scale and figured dimensions, not marked "not to scale," must be brought to the Construction Manager's attention before proceeding with the Work affected by the discrepancy.

1.4.9 If there is a conflict between or among any of the Contract Documents, Contractor shall immediately bring such conflict to the attention of District, whose decisions regarding such conflict shall be final and binding as to the requirements of the Contract Documents. In the event of any conflicts between or among the Applicable Code Requirements, the more stringent shall govern. In resolving any conflict in the Contract Documents, the highest standard of quality and skill, the most stringent requirements, and the most specific provision of the Contract Documents shall govern and shall be required in the performance of the Work.

1.4.10 The general character of the Work is shown in the Contract Documents, but Changes, Modifications, clarifications and refinements may be made in details when needed to more fully explain the Work. Provided that there is a logical evolution of the Bid Documents that were bid by Contractor or were reasonably inferable as necessary to provide a completed and fully operational system, facility or structure, the same shall be considered part of

the scope of the Work to be performed without adjustment in the Contract Sum or the Contract Time.

1.4.11 Where on any Drawing a portion of the Work is drawn out and the remainder is indicated in outline, the drawn-out parts shall apply also to all other like portions of the Work. Where ornament or other detail is indicated on starting only, such detail shall be continued throughout the course of parts in which it occurs and shall also apply to all other similar parts in the Work unless otherwise indicated.

1.4.12 For convenience, the Special Provisions and Technical Specifications are arranged in various trade subparagraphs, but such segregation shall not be considered as limiting the Work of any subcontract or trade. Contractor shall be solely responsible for all subcontract arrangements of Work regardless of the location or provision in the Special Provisions and Technical Specifications.

1.4.13 Contractor will provide all necessary labor, equipment, transportation and incidentals required to complete the Work, even if the Contract Documents do not describe the Work in complete detail.

1.4.14 Drawings and diagrams for mechanical, plumbing and electrical Work shall be considered as diagrammatic only, not to be used for any structural guidance or physical layout, unless specifically detailed or dimensioned, and Contractor shall be responsible to provide any and all numbers and lengths of mechanical, plumbing or electrical fittings, wire, conduit, connections, attachments or similar materials needed to complete the Work, at no adjustment to the Contract Sum or Contract Time, whether or not they exceed the numbers of such pieces or the lengths indicated by the Drawings.

ARTICLE 2 – DISTRICT

2.1 INFORMATION AND SERVICES PROVIDED BY DISTRICT

2.1.1 District will furnish up to five (5) (sets) of the Contract Documents or portions thereof free of charge.

2.1.2 Except as otherwise provided in the Special Provisions and Technical Specifications and Article 3.18 herein, District shall obtain and pay for any permits, easements and governmental approvals for the use or occupancy of permanent structures required in connection with the Work.

2.1.3 Requests for Information Responses, Approvals and decisions required of District, Design Consultant or Construction Manager under the Contract Documents shall be provided by District, Design Consultant or Construction Manager to Contractor upon request in a timely manner in order to avoid unreasonable Delay in the orderly and sequential progress of the Work. Notwithstanding the foregoing, failure by District, Design Consultant, Construction Manager or District's other consultants to provide Request for Information Response, Approvals or decisions shall not be considered as a basis for Contractor to seek adjustment in the Contract Time until seven (7) Days after Contractor has delivered written notice to District and to the person from whom such information, Approval or decision is needed, stating the following:

- (i) You are hereby notified that certain information, approval or decision described herein has not been provided in accordance with this provision and if not provided within seven (7) Days from this notice may result in additional cost or a request for time extension due to Delay;
- (ii) A detailed description of the information, approval or decision required; and
- (iii) The date by which the information, approval or decision must be received as to not result in Delay to the Project, which shall in no event be earlier than seven (7) Days after the date of District's receipt of such notice.

2.2 ACCESS TO PROJECT SITE

2.2.1 District will make available, no later than the date designated in the current Construction Schedule accepted by District, the lands and facilities upon which the Work is to be performed, including such access and other lands and facilities designated in the Contract Documents, for use by Contractor.

2.3 DISTRICT'S RIGHT TO STOP THE WORK

2.3.1 If Contractor fails to correct Defective Work as required by Article 12.2, fails to perform the Work in accordance with the Contract Documents, or violates

any Applicable Code Requirement, District may direct Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated by Contractor. Contractor shall not be entitled to any adjustment of Contract Time or Contract Sum as a result of any such order. District shall have no duty or responsibility to Contractor or any other party to exercise the right to stop the Work.

2.4 DISTRICT'S RIGHT TO CARRY OUT THE WORK

2.4.1 If Contractor fails to carry out the Work in accordance with the Contract Documents, fails to provide sufficient labor, materials, equipment, tools and services to maintain the Construction Schedule, or otherwise fails to comply with any requirement of the Contract Documents, and fails within the time specified in the Contract Documents, after receipt of notice from District to promptly commence and thereafter diligently continue to completion the correction of such failure, District may, without prejudice to other remedies District may have, correct such failure at Contractor's expense. In such case, District shall be entitled to deduct from payments then or thereafter due Contractor the cost of correcting such failure, including compensation for the additional services and expenses of District and District's consultants made necessary thereby. If payments then or thereafter due Contractor are not sufficient to cover such amounts, Contractor shall pay the additional amount to District.

ARTICLE 3 – CONTRACTOR

3.1 REVIEW OF THE SITE, CONTRACT DOCUMENTS AND FIELD CONDITIONS

3.1.1 Contractor acknowledges that it is satisfied as to character, quality, and quantities of surface and subsurface materials or obstacles to be encountered insofar as reasonably ascertainable from a careful inspection of the Site (including, without limitation, Existing Improvements on the Site) and from the geological investigation reports, data and similar information made available to Contractor by District. Any failure by Contractor to take such information or conditions into consideration will not relieve Contractor from responsibility for estimating the difficulty and cost of successfully completing the Work within the Contract Sum and Contract Time.

3.1.2 Contractor warrants and represents that it has carefully reviewed and compared the Bid and Bid Documents prior to submitting its Bid and executing the Contract. Based upon its careful review, Contractor agrees that it shall not be entitled, and conclusively waives any right, to an adjustment in the Contract Sum or Contract Time for any additional or unforeseen costs or Delay in the performance of Work due to conditions in Contract Documents constituting errors, omissions, conflicts, ambiguities, lack of coordination or noncompliance with Applicable Code Requirements, if such conditions were either discovered by Contractor or could have been reasonably discovered by Contractor or its Subcontractors or Sub-subcontractors, of every Tier, in the exercise of care and diligence in the review of the Bid Documents.

3.1.3 If Contractor discovers what it perceives to be errors, omissions, conflicts, ambiguities, lack of coordination or noncompliance with Applicable Code Requirements in the Contract Documents, then Contractor shall, before proceeding with the Work affected, notify District or the Construction Manager in writing within two (2) Days stating both of the following:

- (i) A detailed description of the conditions discovered; and
- (ii) Contractor's request for clarification, further details or correction of the Contract Documents.

Failure by Contractor to provide written notice within the period of time required shall result in Contractor waiving any right to adjustment in the Contract Sum or Contract Time on account thereof.

3.1.4 Contractor shall submit written notice thereof to District if, in Contractor's opinion, District, Design Consultant or Construction Manager furnishes additional written or verbal instructions, information or directions that Contractor considers constitute additional Work or Delay for which Contractor believes it is entitled to an adjustment of the Contract Sum or Contract Time. Such notice shall

be provided prior to performance of the Work affected by such instruction, information or direction and seven (7) Days after Contractor first received such instruction, information or direction. Failure to provide such written notice in the manner required by this provision shall constitute a waiver by Contractor of the right to any adjustment to the Contract Sum or Contract Time by reason of such instruction, information or direction.

3.1.5 Field measurements shall be taken and existing field conditions verified by Contractor, and carefully compared with the Contract Documents and other information known to Contractor before commencing the Work. Contractor shall promptly report in writing to the Construction Manager any errors, inconsistencies, or omissions discovered.

3.1.6 If Contractor or any Subcontractor or Sub-subcontractor, of every Tier, performs any portion of the Work which it knows, or in the exercise of care and diligence should have known, involves an error, omission, conflict, ambiguity, lack of coordination or noncompliance with Applicable Code Requirements, without notifying and obtaining the written Approval of District or before obtaining a written clarification, interpretation, instruction or decision from District, Design Consultant or Construction Manager, then any Work that is performed that is not in conformance with the clarifications, interpretation, instruction or decision of District, Design Consultant or Construction Manager shall be removed or replaced and Contractor shall be responsible for the resultant Losses with no adjustment in the Contract Sum or Contract Time.

3.1.7 District does not impliedly or expressly warrant, and assumes no responsibility for, the accuracy, suitability or completeness of the Bid Documents, Contract Documents or of the data, opinions or recommendations contained or expressed in any information, data or reports provided to Contractor relating to the following conditions at the Site: geological, soils, hydrologic, groundwater, Hazardous Substances, surface and subsurface obstructions, surface and subsurface utilities or Existing Improvements. Existing Improvements at the Site, for which no specific description is made on the Drawings, but which could be reasonably assumed to interfere with the satisfactory completion of the Work, shall be removed and disposed of by Contractor, but only upon the specific direction and control of District. Without limitation to the foregoing, and notwithstanding any information provided by District pertaining to groundwater elevations and/or geological and soils conditions encountered, it is understood that it is Contractor's responsibility to determine and allow for the elevation of groundwater, and the geological and soils conditions at the date of performance of the Work and any difference between elevation of groundwater and the geotechnical and soils conditions shown in the information provided by District and groundwater and the geotechnical and soils conditions actually encountered will not be considered as a Differing Site Condition or as a basis for an adjustment to the Contract Sum or Contract Time.

3.2 SUPERVISION AND CONSTRUCTION PROCEDURES

3.2.1 Contractor shall supervise, coordinate and direct the Work using Contractor's best skill and attention and shall provide supervision sufficient to assure proper coordination and timely completion. Contractor shall be solely responsible for and have control over construction means, methods, techniques, safety, sequences, procedures and the coordination of all portions of the Work.

3.2.2 Contractor shall be responsible for the accurate layout of all portions of the Work and shall verify all dimensions on the Drawings and shall report to District any discrepancies before proceeding with related Work.

3.2.3 Contractor may be assigned working space adjacent to the Site, and all field offices, materials and equipment shall be kept within this area. Contractor shall be responsible for leaving the space in as good condition as Contractor found it, or restoring it to the condition it was in prior to Contractor commencing the Work.

3.2.4 Contractor shall be responsible to District for acts and omissions of Contractor's agents, employees, and of Contractor's Subcontractors and Sub-subcontractors, of every Tier, and their respective agents and employees. Unless otherwise stated in the Contract Documents, references to Contractor, when used in reference to an obligation bearing upon performance of the Work, shall be deemed to include Contractor's Subcontractors and Sub-subcontractors of every Tier.

3.2.5 Contractor shall not be relieved of its obligation to perform the Work in accordance with the Contract Documents by the act(s) or omission(s) by District in the administration of the Contract, or by tests, inspections or Approvals required or performed by persons or firms other than Contractor.

3.3 RESPONSIBILITY FOR THE WORK

3.3.1 Contractor shall be in charge of and responsible for all portions of the Work of the Contract, and shall be responsible for conforming such portions to the requirements of the Contract Documents and readying such portions to receive subsequent Work.

3.3.2 Contractor shall at all times maintain good discipline and order among its employees and Subcontractors. Contractor shall provide competent, fully qualified personnel to perform the Work, and shall ensure that each Subcontractor and Sub-subcontractor engaged on the Site arranges the storage of materials and equipment and performance of its Work so as to interfere as little as possible with Separate Contractors or other persons engaged in work for District on the Site.

3.3.3 During the installation of Work, Contractor shall insure that existing facilities, fences, and other structures are all adequately protected. Upon Final Completion of all Work, all facilities that may have been damaged shall be restored to a condition acceptable to District.

3.3.4 Contractor is responsible for the security of the Site and all Work provided under the terms of this Contract, as well as all Work provided by Separate Contractors that occurs on the Site at any time prior to Final Completion and Acceptance of the Work by District.

3.4 LABOR, WORKMANSHIP, MATERIALS AND MANUFACTURED ITEMS

3.4.1 Contractor shall provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work. Unless otherwise provided in the Contract Documents or otherwise Approved by the Construction Manager, all articles, equipment and materials incorporated in the Work shall be new, of good quality, undamaged and not defective.

3.5 CONTRACTOR'S WARRANTY

3.5.1 Contractor warrants to District that all materials and equipment used in or incorporated into the Work will be of good quality, new and free of liens, Claims and security interests of third parties; that all labor, installation, materials and equipment used or incorporated into the Work will be of good quality and free from defects; and that the Work will conform with the requirements of the Contract Documents and Applicable Code Requirements. If required by District, Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment. Manufactured items installed in the Work and not specifically covered in the Contract Documents are to be installed in strict accordance with manufacturers' current printed instructions.

3.5.2 All materials to be incorporated in the Work shall be protected from damage during delivery, storage, and handling, and after installation until Acceptance of the Work, and Contractor shall, without charge to District, be responsible for all damage due to Contractor's failure to provide such proper protection.

3.6 CONSTRUCTION METHODS AND PROCEDURES

3.6.1 The methods and procedures adopted by Contractor shall be such as to secure a quality of Work satisfactory to District and to enable completion of the Work in the time agreed upon. If at any time such methods and procedures appear inadequate, District may order Contractor to improve their character or increase efficiency, and Contractor shall conform to such order;

but the failure of District to order such improvement of methods or increase of efficiency will not relieve Contractor from its obligation to perform the Work in accordance with the Contract Documents or within the Contract Time.

3.6.2 If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, Contractor shall be fully and solely responsible for the Site safety for implementing such means, methods, techniques, sequences or procedures. If Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, Contractor shall give written notice to District and shall not proceed with that portion of the Work without further written instruction by District.

3.7 TAXES

3.7.1 Contractor, Subcontractors and Sub-subcontractors are responsible for paying all sales, consumer, business license, use, income and payroll, and similar taxes for the Work or portions thereof provided by Contractor and Subcontractors.

3.8 LEGAL REQUIREMENTS

3.8.1 Contractor shall perform the Work in accordance with all Applicable Code Requirements, even though such requirements are not specifically mentioned in the Contract Documents.

3.8.2 When the Work required by the Contract Documents is in conflict with any Applicable Code Requirement, Contractor shall notify District and shall not proceed with the Work until District has so ordered.

3.9 SUPERINTENDENT/PROJECT STAFF

3.9.1 Contractor shall employ a complete and competent project staff for the duration of the Work, which shall include separate individuals designated to act as Superintendent(s), project manager(s), project engineer(s) and administrative assistant(s), plus such other members as necessary to diligently prosecute the Work. Contractor shall not replace the designated Superintendent or project manager without a minimum seven (7) Day written notice and only with the written approval of District, which may be granted or withheld in its sole discretion. Any Project staff member and any replacement member shall be subject to the approval of District, which may be granted or withheld in its sole discretion. Upon notice from District requesting replacement of any Project staff member who is unsatisfactory to District, Contractor shall in a timely manner, but in no event longer than three (3) Days after notification, replace such member with a competent member satisfactory to District. Failure by Contractor to comply with this provision shall entitle District, at its option exercised in its sole discretion, to terminate the Contract or suspend the Work until

compliance is demonstrated. All costs or damages associated with such termination or suspension shall be borne by Contractor, without adjustment in the Contract Sum or Contract Time.

3.9.2 The Superintendent shall be at the Site at all times during the performance of the Work. The Superintendent shall represent Contractor and communications given to and acknowledged by the Superintendent shall be binding on Contractor. Further, communications issued by or received from the Superintendent shall be deemed as binding on Contractor. The Superintendent must be able to read, write and communicate fluently in English. The Superintendent shall not perform the Work of any trade, pickup materials or perform any Work not directly related to the supervision and coordination of the Work.

3.10 SCHEDULES REQUIRED OF CONTRACTOR

3.10.1 Contractor shall submit a preliminary Construction Schedule to District in a form approved by the Construction Manager at the Pre-Construction Meeting.

3.10.2 Updated Construction Schedules shall be submitted in the form and frequency approved by the Construction Manager.

3.10.3 The Construction Schedule and Construction Schedule updates shall meet the following requirements:

.1 Schedules must be suitable in format and clarity for monitoring progress of the Work and shall utilize the critical path method of scheduling.

.2 Schedules must provide necessary data about the timing for District's decisions and District-furnished items.

.3 Schedules must be in sufficient detail to demonstrate adequate planning and staffing for the Work.

.4 Schedules must represent a practical plan to complete the Work within the Contract Time. If at any time during the Work, any activity is not completed by its latest scheduled completion date, Contractor shall notify the Construction Manager within seven (7) Days of Contractor's plans to reorganize the work force to return to the schedule and prevent Delays on any other activity.

.5 An updated Construction Schedule shall be submitted with each progress payment request, but no less frequently than monthly, and shall include all of the following:

- (i) A written narrative report detailing the actual progress of the Work as of the date of submission;

- (ii) The expected progress of the Work as of such date according to the approved Construction Schedule;
- (iii) The reasons for any variance between the approved Construction Schedule and the updated Construction Schedule; and
- (iv) Contractor's plan for placing the Work back on Schedule, at Contractor's expense.

3.10.4 Contractor shall plan, develop, supervise, control and coordinate the performance of the Work so the progress, sequence and timing of the Work conform to the current accepted Construction Schedule. Contractor shall continuously obtain from Subcontractors information and data about the planning for and progress of the Work, the ordering and fabrication of materials, required Submittals, and the delivery of equipment, shall coordinate and integrate such information and data in updated Construction Schedules and Record Documents, and shall monitor the progress of the Work and the delivery of equipment. Contractor shall act as the expediter of potential and actual delays, interruptions, hindrances or disruptions for its own forces and those forces of Subcontractors, regardless of Tier. Contractor shall cooperate with District in the development of the Construction Schedule and updated Construction Schedules.

3.10.5 District's review, comments, requests for revisions, or acceptance of any schedule or scheduling data shall not:

- (i) Relieve Contractor from its sole responsibility for the feasibility of the schedule and to plan for, perform, and complete the Work within the Contract Time;
- (ii) Transfer responsibility for any schedule from Contractor to District; nor
- (iii) Imply District's agreement with any assumption upon which such schedule is based or any matter underlying or contained in such schedule.

3.10.6 Failure of District to discover errors or omissions in schedules that it has reviewed, or to inform Contractor that Contractor, Subcontractors, or others are behind schedule, or to direct or enforce procedures for complying with the Construction Schedule, shall not relieve Contractor from its sole responsibility to perform and complete the Work within the Contract Time and shall not be a cause for an adjustment of the Contract Time or the Contract Sum.

3.10.7 Contractor shall cooperate with and coordinate its schedule with work of District and District's Separate Contractors.

3.11 DOCUMENTS AND SAMPLES AT PROJECT SITE

3.11.1 Contractor shall maintain one (1) set of As-Built Documents at the Site, which shall be kept up to date on a daily basis at all times during the performance of the Work. All performed changes, deletions or additions in the Work from that shown in the Contract Documents shall be recorded accurately and completely in the Record Documents. Upon Final Completion and as a condition to final payment, each sheet of the As-Built Documents and other Record Documents shall be signed and attested to by a representative of Contractor as being complete and accurate.

3.11.2 Contractor shall, at all times during performance of the Work, also maintain the following at the Site:

- (i) The latest updated Construction Schedule approved by District;
- (ii) Shop Drawings, product data, and samples; and
- (iii) All other required Submittals.

At all times during the course of the Project, these documents shall be available to District, the Construction Manager and the Design Consultant to audit, excerpt, or copy as they see fit. Upon Final Completion or termination of the Construction Contract, these shall be delivered to District.

3.11.3 It shall be the responsibility of Contractor to maintain a current and complete record of all Changes performed during the progress of the Project construction. The record shall be in the form of a complete set of prints of the As-Built Documents on which daily recordings are made by Contractor, indicating in detail and dimension each variation from the original set of Contract Documents and including all of the construction Work. At the completion of construction, Contractor shall, as a requirement of the Final Completion of the Work, certify that to the best of its knowledge, the As-Built Documents are true and accurate, and that the indications thereon represent all Changes performed during the construction of the Project. At the Final Completion of the Work, the As-Built and other Record Documents shall become the property of District.

3.11.4 Contractor, in concert with the Design Consultant and the Construction Manager, shall review Contractor's As-Built Documents for conformance with all current Changes prior to presenting its monthly Application For Payment. The monthly progress payment statement will not be accepted or processed by District unless the As-Built Documents are current and complete, and Approved by District.

3.11.5 At the Final Completion of the Work, all information annotated monthly on the As-Built Documents shall be fully incorporated by Contractor onto a set

of mylar reproducibles furnished by Contractor. These As-Built Documents will become the permanent property of District at the Final Completion of the Work. If the As-Built Documents are prepared on a computer, then the revised computer files shall also be provided to District in the file format specified by District.

3.12 SUBMITTALS

3.12.1 Submittals are not Contract Documents. Their purpose is to demonstrate, for those portions of the Work for which Submittals are required, how Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents. Prior to starting Work, Contractor shall provide to District an initial schedule for all materials and equipment for which shop drawings are required by the Contract Documents. For each required shop drawing, Contractor shall provide to District the date for the drawing's intended Submittal to the Design Consultant for review. The date required for its return to avoid Delay in any activity beyond the scheduled start date shall also be given.

3.12.2 All shop drawings and other Submittals shall be provided at Contractor's expense, when required by the Contract Documents or requested by the Construction Manager.

3.12.3 Contractor shall review, stamp approved, and submit to the Construction Manager, all Submittals required by the Contract Documents to be submitted and reviewed by the Design Consultant. Submittals to the Construction Manager without evidence thereon of Contractor's approval shall be returned, without further consideration, for resubmission in accordance with these requirements. Submittals shall be provided within the time frame specified in the Special Provisions and Technical Specifications in accordance with the Construction Schedule, and in such sequence as to cause no Delay in the Work or in the activities of District or of Separate Contractors. Submittals made by Contractor which are not required by the Contract Documents, may be returned without action by the Construction Manager or Design Consultant. Submittal to the Construction Manager and Design Consultant must include a statement, in writing, identifying any deviations from the Contract Documents required due to manufacturing or installation limitations contained in the Submittal.

3.12.4 All Submittals shall be submitted in six (6) sets, accompanied by letters of transmittal, and addressed to the Construction Manager for review. Unless otherwise specified in the Contract Documents, Submittals consisting of Drawings or Plans shall be in the form of six (6) copies. The Submittal must be in accordance with the Contract Documents. If the Submittal involves a request for substitution of materials, the request shall be clearly identified on the Submittal that it is a "Request for Substitution." Unless so clearly marked, Submittals shall not be considered as a request for substitution. If changes or corrections are required, three marked-up prints shall be returned to

Contractor. Submittals shall consist of the appropriate combination of catalog sheets, material lists, manufacturer's brochures, technical bulletins, specifications, diagrams, or product samples, necessary to describe a system, product, or item. The letter of transmittal shall give a list of the numbers of the sheets submitted. All sheets shall be marked with the name of the Project and the name of Contractor, shall be numbered consecutively, and shall be referenced to the sheets or paragraphs of the Contract Documents, referenced by sheet or subparagraph affected. Submittals shall be combined for singular assemblies, items or materials.

3.12.5 No Work requiring a Submittal shall be performed by Contractor until the Submittal has been reviewed by District, Construction Manager or Design Consultant and the Design Consultant has documented the exceptions noted on the Submittal. Contractor shall allow twenty (20) Days for review of Submittals. Once the Submittal is returned to Contractor by the Construction Manager with a statement that it has been reviewed and no exceptions are taken or further action requested, such Work shall be performed in accordance with the Submittal and the Contract Documents.

3.12.6 Contractor's Submittals represent that Contractor has determined or verified materials and field measurements and conditions related thereto and that it has checked and coordinated the information contained within such Submittals with the requirements of the Contract Documents and Submittals for related Work.

3.12.7 If Contractor discovers any conflicts, omissions or errors in Submittals, Contractor shall notify the Construction Manager and receive instruction before proceeding with the affected Work.

3.12.8 Contractor shall remain solely responsible, notwithstanding District, Construction Manager or Design Consultant's review or approval of Submittals, for deviations (including, without limitation, those arising from standard shop practice) from requirements of the Contract Documents, unless Contractor has specifically informed District, Construction Manager or Design Consultant in writing of such deviation at the time of transmitting the Submittal and District, Construction Manager or Design Consultant has given written approval of such deviation. No adjustment in the Contract Sum or Contract Time shall be permitted with respect to any such deviations that are noted in writing by Contractor and as to which District, Construction Manager or Design Consultant takes no exception or approves.

3.12.9 After review of Contractor's Submittals by District, Construction Manager or Design Consultant, the Construction Manager will transmit to Contractor the required number of sets. If the Submittals are found to be incomplete or incorrect, Contractor shall resubmit after corrective action has been taken. Contractor shall reimburse District, or District may withhold from payments due Contractor, sums owing by District for any fees charged by District,

Construction Manager or Design Consultant or District's other consultants for more than two (2) reviews of a Submittal, or for accelerated review in a shorter time than set forth in the approved Construction Schedule, if requested by Contractor or caused by late Submittals by Contractor. The return of a Submittal due to failure to comply with the Contract Documents or for correction or additional information shall be considered a review.

3.12.10 Review of Submittals by District, Construction Manager or Design Consultant will be general and for conformance with design intent, and shall not relieve Contractor from the responsibility for proper fitting and construction of the Work, nor from furnished materials and Work required by the Contract which may not be indicated on the reviewed Submittals.

3.12.11 Submittals shall be in English, be of good quality, and be of a size and scale to clearly show all necessary details. Submittals shall show in detail the size, sections and dimensions of all members; the arrangement and construction of all connections, joints and other pertinent details; and all holes, straps and other fittings required by other Separate Contractors for attaching their Work. When required by District, Construction Manager or Design Consultant, engineering computations shall be submitted. Contractor shall be responsible for delivering duplicates of Submittals to all other persons whose Work is dependent thereon.

3.12.12 Contractor shall, at all times, maintain at the Site a complete file of all District, Construction Manager or Design Consultant-reviewed Submittals.

3.13 TRADE NAMES, SUBSTITUTIONS

3.13.1 Except as otherwise noted and permitted by law, whenever in the Contract Documents any material or process is indicated or specified by two or fewer patents, proprietary names, brand names and/or manufacturers, such specification shall be deemed pursuant to Public Contract Code 3400 to be followed by the words "or approved equal".

3.13.2 Contractor shall have ten (10) Days after submission of the Bid to submit data substantiating substitution of "or equal" items. District, with the advice of the Design Consultant, will determine whether the proposed brand or item is equal in quality and utility to that specified in the Contract Documents, and its decision shall be final. District, Construction Manager or Design Consultant may require the submission of samples, formulae, and/or statements of physical properties for consideration in determining equality of the material or process in question. No proposal for an equal will be considered complete unless accompanied by complete information and descriptive data necessary to determine the equality of the offered equal.

3.13.3 If Contractor requests use of substitute material or process, it shall be incumbent upon Contractor to furnish sufficient evidence to support the claim

of equality to the satisfaction of District, Construction Manager or Design Consultant.

3.13.4 If District accepts for use in the Project a substitute material or process which in the opinion of District, Construction Manager or Design Consultant is not the equal of that specified, a Change Order shall be issued issuing a credit to District for the difference in value.

3.13.5 Substitutions by Contractor that are incorporated into the Work without the prior review and Approval by District, Construction Manager or Design Consultant in accordance with the requirements of the Contract Documents shall be deemed to be Defective Work.

3.13.6 The specified Construction Contract completion time shall not be affected by any circumstance developing from the substitution provisions of this Article 3.13.

3.14 DAILY REPORTS BY CONTRACTOR

3.14.1 At the end of each working day, Contractor shall submit a daily report to the Construction Manager (on a form provided by or accepted by the Construction Manager) listing:

- (i) At the end of each working day, Contractor shall submit a daily report to the Construction Manager (on a form provided by or accepted by the Construction Manager) listing: Labor - Names of workers, classification, and hours worked;
- (ii) Material - Description and list of quantities of materials used;
- (iii) Equipment - Type of equipment, size, identification number, and hours of operation, including loading and transportation, if applicable;
- (iv) Inspection and Testing Activities - Name, District or company and items involved;
- (v) Areas of Work - The areas of the Site on which Work was performed and a detailed description of the stage, status and progress of the Work in each such area at the beginning and end of the day;
- (vi) Accidents, Delays, Defective Work - Description in detail of any injuries to workers, accidents, Delays, or Defective Work that were encountered; and
- (vii) Other Services and Expenditures - Description in such detail as District may require of other services and expenditures.

3.14.2 Reports by Subcontractors and Sub-subcontractors that comply with the requirements of this Article 3.14 shall also be submitted to the Construction Manager through Contractor at the end of each working day.

3.14.3 Submission of daily reports by Contractor, Subcontractors and Sub-subcontractors, of every Tier performing Work on the Site shall be a condition precedent to Contractor's right to payment under the Contract.

3.14.4 Facts, notice or information contained in daily reports of Contractor or its Subcontractors or Sub-subcontractors, whether known or not known to District or Construction Manager, shall under no circumstances be considered evidence of compliance by Contractor with any of the specific written notice requirements of the Contract Documents.

3.15 CUTTING AND PATCHING

3.15.1 Contractor shall do all cutting, fitting, or patching of the Work required to make all parts of the Work join properly and to allow the Work to join the work of Separate Contractors shown in, or reasonably implied by, the Contract Documents.

3.15.2 Contractor shall not endanger the Work, the Project, Existing Improvements, or adjacent property by cutting, digging, or otherwise. Contractor shall not cut or alter the work of any Separate Contractor without the prior consent of District.

3.15.3 In all cases, cutting shall be performed under the supervision of competent workers skilled in the applicable trade and shall cause the openings to be cut as small as possible to minimize unnecessary damage.

3.16 ACCESS TO THE WORK

3.16.1 District, Construction Manager, Design Consultant, their consultants and other persons authorized by District shall at all times have access to the Work wherever it is in preparation or progress. Contractor shall provide safe and proper facilities for such access and for inspection.

3.16.2 District may, at any time, and from time to time during the performance of the Work, enter the Project for the purpose of installing any necessary other work by District labor or other contracts or for any other purpose. Contractor shall cooperate with District and not interfere with other work being done by or on behalf of District.

3.17 ROYALTIES AND PATENTS

3.17.1 Contractor shall pay all royalties and license fees required for the performance of the Work. Contractor shall immediately notify District if it learns of any circumstances that may constitute an infringement of patent rights and shall defend and indemnify District and the members of the Project Team in accordance with Article 3.21 against Losses, liabilities, suits or Claims

resulting from Contractor's or any Subcontractor's or Sub-subcontractor's infringement of patent rights.

3.18 PERMITS AND LICENSES

3.18.1 Contractor and all Subcontractors shall obtain and be responsible for the cost of all permits and applications related to the construction of the Project.

3.19 DIFFERING SITE CONDITIONS

3.19.1 Save and except as permitted for Differing Site Conditions as defined in this Article 3.19, Contractor agrees to solely bear the risk and the additional cost and Delay of all concealed or unknown conditions at the Site or in Existing Improvements, without adjustment to the Contract Sum or Contract Time.

3.19.2 Differing Site Conditions are those conditions encountered at the Site or in Existing Improvements that are (1) subsurface or concealed conditions which differ materially from those indicated in the Contract Documents; or (2) unknown physical conditions at the Site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the Work of the character provided for in the Contract Documents.

3.19.3 If Contractor encounters conditions it believes constitute Differing Site Conditions, then notice of such conditions shall be immediately reported to District and the Construction Manager followed within twenty-four (24) hours by a written notice stating a detailed description of the conditions encountered.

3.19.4 District shall promptly investigate Contractor's report of Differing Site Conditions. If District finds that Differing Site Conditions exist, in accordance with this Article 3.19, an adjustment shall be made in the Contract Sum and Contract Time in such amount as District approves.

3.19.5 If Contractor intends to seek an adjustment to the Contract Sum or Contract Time based upon Differing Site Conditions, it must, within seven (7) Days after it first discovered, or should have discovered in the exercise of diligence and care, the existence of such Differing Site Conditions, submit a written statement setting forth a detailed cost breakdown in the form required by Article 7.2 setting forth the basis of Contractor's calculation of the costs saved or incurred, detailed information demonstrating the effect on the Construction Schedule in the same manner as required by the Contract Documents for obtaining approval of extensions of time, identification of the Bid Documents that formed the basis of Contractor's Bid estimate to perform the Work affected by such conditions and a complete and detailed explanation of the factual basis for the request.

3.19.6 Failure by Contractor to strictly comply with the requirements of this Article 3.19 concerning the timing and content of any notice of Differing Site Conditions or request for adjustment in Contract Sum or Contract Time based on

Differing Site Conditions shall be deemed a waiver of any right by Contractor for an adjustment in the Contract Sum or Contract Time by reason of such conditions.

3.19.7 No Claim by Contractor for additional compensation for Differing Site Conditions shall be allowed if asserted after final payment under the Construction Contract.

3.20 INSPECTIONS

3.20.1 In order to allow for inspection by District and other agencies, or any inspection required elsewhere in the Special Provisions and Technical Specifications, Contractor shall notify District in writing three (3) Days in advance of the permanent concealment of any materials or Work.

3.20.2 Whenever Contractor desires to carry on the Work of this Construction Contract at hours other than 7:00 AM to 6:00 PM, Monday through Friday and from 9:00 AM to 5:00 PM on Saturdays, it shall request authorization in writing from District for such Work at least twelve (12) Days in advance and, if approved to proceed, Contractor agrees to pay overtime reimbursement of costs, of such required inspector(s) and the Construction Manager, Design Consultant and/or other District consultants whose presence is necessary and requested by District.

3.20.3 If any Work is concealed or performed without the prior notice specified above, then the Work shall be subject to such tests or exposure as may be necessary to prove to District that the materials used and the Work done are in conformity with the Contract Documents. All labor and equipment necessary for exposing and testing shall be furnished by Contractor at its expense. Contractor shall replace, at its own expense and without reimbursement by District, any materials or Work damaged by exposure and any faulty materials or work evidenced by such exposure or testing.

3.20.4 When, in order to comply with the intent of the Contract Documents, inspection must be made at the plant or mill of the manufacturer or fabricator of material or equipment, Contractor shall notify District a sufficient length of time in advance to allow for arrangements to be made for such inspection.

3.20.5 Any inspection or approval by any representative or agent of District will not relieve Contractor of the responsibility of incorporating into the Work only those materials which conform to the Contract Documents, and any nonconforming materials all be removed from the Site whenever identified.

3.20.6 When Contractor believes it has achieved either Substantial or Final Completion of the Work, Contractor shall notify District and the Construction Manager in writing and request a Substantial or Final Completion inspection of

the Work. District, Design Consultant and Construction Manager will make such inspection as soon thereafter as possible.

3.21 INDEMNIFICATION, STOP NOTICES

3.21.1 Contractor shall fully comply with the Indemnification provision of the Construction Contract.

3.21.2 Contractor shall take steps to assure that a right of indemnification is included in all subcontracts, purchase orders and other contracts entered into by Subcontractors and Sub-subcontractors, of every Tier, for the Project that afford the same coverage, benefits and protections as provided for in Article 3.21.1.

3.21.3 Nothing set forth in the Contract Documents shall be construed to give rise to any express or implied right in favor of Contractor for indemnity or contribution.

3.21.4 Contractor shall not permit any stop notices or other claims, valid or invalid, to be served, filed, recorded or otherwise imposed on District or on any part of the Work or the property on which the Work is performed. If any stop notice or other claim is served, filed or recorded in connection with the Work, District shall have the option, in its sole discretion, to require that Contractor immediately and at its own expense obtain a bond executed by a good and sufficient surety, in accordance with the California Civil Code, Section 3196, in a sum equal to one hundred twenty-five percent (125%) of the amount of such stop notice or claim. Such bond shall guarantee the payment of any amounts which the claimant may recover on the stop notice or claim, together with the claimant's costs of suit in any action to enforce such stop notice or claim if the claimant recovers therein. This remedy shall be in addition to all other rights and remedies of District under the Contract Documents and applicable law, including, without limitation, the right to withhold funds from sums due to Contractor.

3.22 PARKING

3.22.1 Contractor shall provide and maintain suitable parking areas, for use by all construction workers and others performing work or furnishing services in connection with the Project, as required to avoid any need for parking personal vehicles where they may interfere with public traffic, construction activities or public parking.

3.23 USE OF THE PROJECT SITE AND CLEAN UP

3.23.1 Contractor shall confine operations at the Site to areas permitted by Applicable Code Requirements and the Contract Documents. Contractor shall not encumber the Site with materials or equipment so that Separate Contractors' work is hindered or impeded due to such encumbrances.

3.23.2 Contractor shall, during performance of the Work, keep the Site and surrounding area free from the accumulation of excess dirt, dust, waste materials, water and rubbish caused by Contractor or any Subcontractors. Contractor shall continuously remove all excess dirt, waste material, water and rubbish caused by Contractor and all tools, equipment, machinery and surplus materials from the Site and surrounding area at the completion of the Work. Adequate cleanup will be a condition for progress payments.

3.23.3 Personnel of Contractor, Subcontractors, and Sub-subcontractors shall not occupy, live upon, or otherwise make use of the Site during any time that Work is not being performed at the Site, except as otherwise provided in the Contract Documents.

3.23.4 Upon Final Completion of the Work, Contractor shall remove all construction facilities, appurtenances, tools, material and other articles from the Site. The entire area, including all fixed equipment, floors, surfaces and hardware shall be cleaned and restored to their original condition in accordance with the Special Provisions and Technical Specifications.

3.23.5 In addition to water sprinkling, temporary enclosures and anti-dust sweeping compounds should be used to limit dust and dirt rising and to keep the Site clean.

3.23.6 Construction materials shall be neatly stacked by Contractor when not in use. Dusty materials in piles or in transit shall be covered to prevent suspension of the dirt in the air. Contractor shall promptly remove splattered concrete, asphalt, oil, paint, corrosive liquids and cleaning solutions from the affected surfaces to prevent marring or other damage.

3.23.7 Volatile wastes shall be properly stored in covered metal containers and removed daily. All other trash receptacles shall be promptly emptied when full. Contractor shall promptly and legally transport and dispose of removed and demolished items and waste materials not identified to be recycled or reused in a manner complying with local ordinances and anti-pollution laws. No rubbish or waste materials shall be burned, buried, or otherwise disposed of on the Site.

3.23.8 Sanitary facilities shall be of reasonable capacity, properly maintained throughout the construction period, and obscured from public view to the greatest practical extent. Contractor shall enforce the use of such sanitary facilities by all personnel at the Site. Sanitary facilities shall be on a portable trailer and shall be removed from the Site at the end of each workday. For sewer lining projects, Contractor shall provide additional sanitary facilities on a portable trailer to be used by the residents during lining installation (one sanitary facility per each 30 meters [100 feet]). Contractor shall remove those sanitary facilities as soon as relief holes are cut and notices of completion are delivered.

3.24 ENVIRONMENTAL CONTROLS

3.24.1 AIR POLLUTION CONTROL. Contractor shall comply with all air pollution control rules, regulations, ordinances and statutes which apply to any work performed pursuant to the Contract, including any air pollution control rules, regulations, ordinances and statutes, specified in the California Government Code, Section 11017, or any other applicable law. In the absence of any applicable air pollution control rules, regulations, ordinances or statutes governing solvents, all solvents, including but not limited to the solvent portions of paints, thinners, curing compounds and liquid asphalt used on the Project shall comply with the applicable material requirements of the San Luis Obispo County Air Pollution Control District. All containers of paint, thinner, curing compound or liquid asphalt shall be labeled to indicate that the contents fully comply with said requirements. Material to be disposed of shall not be burned.

.1 Mold. If any material susceptible to microbial growth becomes wet during the construction phase, that material should be carefully removed from the construction Site to prevent further contamination of the indoor air.

.2 VOC's. Construction materials that emit low levels of volatile organic compounds (VOC) shall be used to improve indoor air quality. Adequate ventilation of packaged dry products shall be used prior to installation. Contractor is responsible to ventilate the building during the application of wet products (e.g., paints, glues, sealants), which release their highest levels of VOC's during the curing period immediately after the application. Also, wet products shall be applied before installing materials that act as "sinks" such as carpets, fabric, ceiling tiles, movable partitions, furniture, etc. in order to reduce the chance of the "sinks" absorbing contaminants and slowly releasing them into the building over time.

.3 Off-Gassing. Contractor is responsible for identifying specific materials that require more complex ventilation to accelerate off-gassing. In addition to paints, glues and sealants, those materials that generally require temporary ventilation include, without limitation: composite wood products, plastics, waterproofing, insulation, fireproofing, caulking, acoustical ceilings, resilient flooring and wood preservatives.

.4 Barriers. Barriers shall be used to prevent the migration of airborne pollutants from areas under construction and to mitigate any construction noise that may disrupt occupant activities. If effective controls for pollution emissions cannot be practically implemented, activities involving significant airborne pollutants shall be scheduled during off-hours at Contractor's expense. The Site shall be ventilated with fresh outside air during and immediately after the noxious activity.

.5 Exhaust. Contractor shall install a temporary exhaust in a construction area to prevent contaminated air from entering the building's return-air system, including, without limitation:

- (i) Removing windows in a space.
- (ii) Using available or dedicated exhaust systems (e.g., kitchen or toilet exhaust) that are not tied into the building's overall return-air system.

The building shall be flushed with full outdoor air for seven (7) Days prior to occupancy. Full capacity of the HVAC system shall be used for at least 2.5 ACH (air changes per hour), provided by temporary fans. During this time, the interiors shall be thoroughly cleaned, the HVAC ducts vacuumed, and air and HVAC system filters replaced.

3.24.2 TEMPORARY WATER, LIGHT AND POWER. Water for any purpose shall be obtained by Contractor, at its expense, from District. Contractor is to contact the Construction Manager for a phone number and contact person. In no case may Contractor obtain water from unmetered fire hydrants. The costs of obtaining water shall be included in the prices paid for the various contract items of work included and no additional compensation will be allowed therefore, unless otherwise specified in these Contract Documents. Contractor should be aware that there is a penalty for taking water from an unmetered fire hydrant. This amount shall be deducted from the payment due Contractor.

3.24.3 WATER POLLUTION CONTROL.

.1 Contractor shall use "Best Available Technology" and "Best Management Practices" to prevent the pollution of drains and watercourses by discharges of materials other than uncontaminated storm water. Prohibited discharge include storm water, discharge that may threaten to cause pollution, contamination or nuisance, sanitary waste, sediment and debris from erosion and other substances resulting from construction activities. Sanitary wastes will not be permitted to enter any drain or watercourse other than sanitary sewers. No sediment, debris or other substance will be permitted to enter sanitary sewers.

.2 Contractor to provide effective and continuous control of water pollution, including where Work is in small or multiple units, on an out of phase schedule or with modified construction procedures. Contractor shall determine which methods are most effective in achieving control of water pollution as a result of Contractor's operations. Contractor shall coordinate water pollution control work with all other Work performed by Contractor and Separate Contractors.

.3 Before starting any Work on the Project, Contractor shall submit to the Construction Manager for acceptance a program for effective control of

water pollution. Such program shall show the schedule and detailed description for the pollution and erosion control work or practices included in the Construction Contract and for all water pollution control measures which Contractor proposes to take in connection with construction of the Project to minimize the effects of their operations upon adjacent streams and other bodies of water. Contractor shall not perform any clearing and grubbing or earthwork on the Project, other than that specifically authorized in writing by the Construction Manager, until such program has been approved by District or Construction Manager. Contractor shall revise and bring up to date said water pollution control program at any time the Construction Manager makes written request for such revisions.

.4 The Construction Manager will notify Contractor within seven (7) Days of its learning of the acceptance or rejection of any submitted or revised water pollution control program.

.5 District shall not be liable to Contractor for failure to accept all or any portion of any originally submitted or revised water pollution control program, or for any Delays to the Work due to Contractor's failure to submit an acceptable water pollution control program. Contractor assumes sole responsibility for all costs associated with treatment of water polluted as a result of Contractor's Site activities, whether treatment is initiated by Contractor or District.

.6 Contractor may request the Construction Manager to waive the requirement for submission of a written program for control of water pollution when the nature of Contractor's operation is such that pollution discharge or erosion is not likely to occur. Waiver of this requirement will not relieve Contractor from responsibility for compliance with the other provisions of this Section. Waiver of the requirement for a written program for control of water pollution will not preclude District requiring submittal of a written program at a later time if the Construction Manager deems it necessary because of the effect of Contractor's operations.

.7 Where erosion damage which will cause water pollution is probable due to the nature of the material or the season of the year, Contractor's operation shall be so scheduled that permanent erosion control features will be installed concurrently with or immediately following grading operations.

.8 All water pollution control work required elsewhere in the Contract Documents which may be accomplished under the various contract items of Work will be measured and paid for as provided in said items of Work elsewhere in these Contract Documents.

.9 All water pollution control work performed in accordance with the accepted program which is not otherwise required under the Construction Contract and which is ordered by the Construction Manager will be paid for as Extra Work as provided for in the General Conditions. Except as otherwise

provided in Article 3.24.3 or elsewhere in the Contract Documents, full compensation for conforming to the requirements of Article 3.24.3 shall be considered as included in the prices paid for the various contract items of Work and no additional compensation will be allowed therefore.

3.24.4 URBAN RUNOFF. The following Best Management Practices which address the problem of urban runoff shall apply to all projects undergoing construction in District. The Best Management Practices list set forth below is required by District, and shall apply at the time of demolition of an existing structure or commencement of construction until receipt of a certificate of occupancy or certificate of completion:

.1 Runoff, sediments and construction waste from construction sites and parking areas shall not leave the site.

.2 Any sediments or other materials which are tracked off the Site shall be removed the same day. When determined necessary by the Construction Manager to provide temporary pollution control measures, a temporary sediment barrier shall be installed.

.3 On an emergency basis only, plastic covering may be utilized to prevent erosion of an otherwise unprotected area, along with runoff devices to intercept and safely convey the runoff. Excavated soil shall be located on the Site in a manner that eliminates the possibility of sediment running into the street or adjoining properties. Undocumented fills shall be covered until the soil is either used or removed.

.4 No washing of construction or other industrial vehicles shall be allowed adjacent to the Site. No runoff from washing vehicles on the Site is allowed to leave the Site.

.5 Drainage controls shall be utilized as needed, depending on the extent of proposed grading and topography of the Site, including, but not limited to the following: (i) detention ponds, sediment ponds or infiltration pits; (ii) dikes, filter berms or ditches; and (iii) down drains, chutes or flumes.

3.24.5 STORMWATER POLLUTION. To avoid stormwater pollution, Contractor shall plan roadwork and pavement construction as follows:

(i) Apply concrete, asphalt, and seal coat during dry weather to prevent contaminants from contacting stormwater runoff.

(ii) Cover storm drain inlets and personnel access holes when paving or applying seal coat, slurry seal, fog seal, etc.

(iii) Always park paving machines over drip pans or absorbent materials, since they tend to drip continuously.

(iv) When making saw-cuts in pavement, use as little water as possible. Cover each catch basin completely with filter fabric during the sawing operation and contain the slurry by placing straw bales, sand bags, or gravel dams around the catch basin. After the liquid drains or evaporates, shovel or vacuum the slurry residue from the pavement or gutter and remove from the Site.

3.24.6 DRAINAGE CONTROL. Contractor shall provide for the drainage of storm water and such water as may be applied or discharged on the Site in performance of the Work. Drainage facilities shall be adequate to prevent damage to the Work, Site and adjacent property. Also drainage facilities shall be constructed to minimize the potential pollution to the ocean.

Existing drainage channels and conduits shall be cleaned, enlarged or supplemented as necessary to carry all increased runoff attributable to Contractor's operations. Dikes shall be constructed as necessary to divert increased runoff from entering adjacent property (except in natural channels), to protect District's private property and utility owner's facilities and the Work, and to direct water to drainage channels or conduits. Retention of drainage on the Site shall be provided as necessary to prevent downstream flooding.

3.24.7 SOUND CONTROL.

.1 Contractor shall comply with all local sound control and noise level rules, regulations and ordinances which apply to any Work performed pursuant to the Construction Contract, except as modified in the Special Provisions and Technical Specifications.

.2 Each internal combustion engine, used for any purpose on the job or related to the job, shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated on the Project without said muffler. The noise level from Contractor's operations, between the hours of 7:00 A.M. and 6:00 P.M., shall not exceed 86 DBA at a distance of 15 meters (50 feet). This requirement in no way relieves Contractor from responsibility for complying with local ordinances regulating noise level.

.3 The noise level requirement shall apply to all equipment on the job or related to the job, including but not limited to trucks, transit mixers or transient equipment that may or may not be owned by Contractor. The use of loud sound signals shall be avoided in favor of light warnings except those required by safety laws for the protection of personnel.

.4 Prior to starting construction, all equipment to be used on the Project shall be inspected and tested for compliance with the requirements of this Project. Sound blankets or other sound mitigation equipment approved by the Construction Manager shall be required to bring equipment into compliance

with the requirements of this Project.

.5 Full compensation for conforming to the requirements of this provision shall be considered as included in the prices paid for the various contract items of Work involved and no additional compensation will be allowed therefor.

3.24.8 SPECIAL HAZARDOUS SUBSTANCES AND PROCESSES. Contractor acknowledges that it is aware of and in compliance with the provisions of the Hazard Communication Standards (California Code of Regulations, Title 8, Section 5194). Contractor shall, at the request of the Construction Manager, demonstrate that Contractor is in complete compliance with the Hazard Communication Standards. In addition, Contractor shall, at the request of the Construction Manager, provide to the Construction Manager a material safety data sheet and a copy of the product label for any product handled or used by Contractor on District property or in an area where a District employee is working. Contractor shall contact the District's "Household Hazardous Waste Facility" regarding the intent to dispose of any materials containing asbestos or any petroleum-contaminated soil.

ARTICLE 4 – ADMINISTRATION OF THE CONTRACT

4.1 CONTRACT ADMINISTRATION BY DISTRICT, DESIGN CONSULTANT AND CONSTRUCTION MANAGER

4.1.1 District and the Construction Manager will provide administration of the Construction Contract as provided in the Contract Documents.

4.1.2 No actions taken by District, Construction Manager or Design Consultant shall relieve Contractor of its obligations as described in the Contract Documents.

4.1.3 The Construction Manager will be present on the Site, as is convenient or necessary in the sole discretion of the Construction Manager, during the performance of the Work primarily for the purposes of providing administration, inspection and expediting communications between District, Design Consultant and Contractor.

4.1.4 Neither District, Design Consultant nor Construction Manager will have control over, will be in charge of, or will be responsible for construction means, methods, techniques, safety, sequences or procedures or for safety precautions and programs in connection with the Work, all of which are the sole responsibility of Contractor.

4.1.5 Unless otherwise provided in the Contract Documents or when direct communications have been specifically authorized, communications between Contractor and District or Design Consultant shall be in writing through Construction Manager. Communications by Contractor, Subcontractors and Sub-subcontractors with Separate Contractors shall be through the Construction Manager. Contractor shall not rely on oral or other non-written communications.

4.1.6 Based on the Construction Manager's Site visits and evaluations of Contractor's Applications For Payment, the Construction Manager will review and recommend to District for District approval the amounts, if any, due Contractor.

4.1.7 Construction Manager will make recommendations to District to reject the Work, or any portion thereof, which does not conform to the Contract Documents. District alone shall have the authority to stop the Work or any portion thereof. Whenever District considers it necessary or advisable, District will have the authority to require additional inspection or testing of the Work in accordance with the Contract Documents, whether or not such Work is fabricated, installed or completed. However, no authority of District conferred by the Contract Documents nor any decision made in good faith either to exercise or not exercise such authority, nor any recommendation by the Construction Manager, shall give rise to a duty or responsibility of District or the Construction Manager to Contractor or its Subcontractors or Sub-

subcontractors, of any Tier.

4.1.8 Construction Manager will have the authority to do the following:

- (i) Conduct inspections in connection with Beneficial Occupancy or beneficial use of the District;
- (ii) Assist District in determining the dates of Substantial Completion and Final Completion;
- (iii) Review any records, written warranties and related documents required by the Contract Documents and assembled by Contractor; and
- (iv) Make recommendations to District for issuance of final payment upon Contractor's compliance with the requirements of the Contract Documents.

4.1.9 District, with the assistance of recommendations from the Design Consultant and/or Construction Manager, shall be the ultimate interpreter of the requirements of the Contract Documents and the judge of performance thereunder by Contractor. Such decisions by District will be final and binding upon Contractor.

4.2 CLAIMS

As set forth in the Section 1.1.18, a Contractor Claim means a separate demand by a Contractor sent by registered mail or certified mail with return receipt requested, for one or more of the following: (A) a time extension, including, without limitation, for relief from damages or penalties for delay assessed by the District; (B) payment by the District of money or damages arising from work done by, or on behalf of, the Contractor pursuant to the Construction Contract and payment for which is not otherwise expressly provided or to which the claimant is not otherwise entitled; (C) payment of an amount that is disputed by the District.

4.2.1 Time period for submission of Contractor Claim.

- (i) If a Contractor Claim involves an adjustment to the Contract Sum or to the Contract Time due to Extra Work, then the Claim arises upon issuance of a decision denying, in whole or in part, Contractor's Change Order Request. All other Claims arise when Contractor discovers, or should have discovered, the circumstances giving rise to the Claim (even if Contractor has not yet been damaged or delayed).
- (ii) A Contractor Claim that does not involve an adjustment to the Contract Sum or Contract Time for Extra Work may be asserted if, and only if, Contractor gives written notice of intent to file the Claim within five (5) Days of the date the Claim arises under Article 4.2.1. A written notice of intent to file a Claim shall be valid if, and only if, it identifies the event or condition giving

rise to the Claim, states its probable effect, if any, with respect to Contractor's entitlement to an adjustment of the Contract Sum or Contract Time, and complies with the requirements of Article 4.2.3.

4.2.2 The claimant shall furnish reasonable documentation to support a Contractor Claim. The documentation is to include the following:

(i) A statement that it is a Contractor Claim and a request for a decision on the Contractor Claim;

(ii) A detailed description of the act, error, omission, Differing Site Condition, event or other circumstance giving rise to the Contractor Claim; and

(iii) If the Contractor Claim involves an adjustment to the Contract Sum or Contract Time for Extra Work, a statement demonstrating that a Change Order Request was submitted in a timely manner as required by Article 7.2. If the Contractor Claim does not involve an adjustment to the Contract Sum or Contract Time for Extra Work, a statement demonstrating that a notice of intent to file the Contractor Claim was submitted in a timely manner as required by Article 4.2.2.

(iv) A detailed justification for any remedy or relief sought by the Contractor Claim, including, without limitation:

a. A detailed cost breakdown in the form required for submittal of Change Order Requests and subject to the prohibition in Article 7.2.14 relating to calculations based on total cost methodology.

b. Copies of actual job cost records demonstrating that the costs have been incurred.

c. If the Contractor Claim is based on an error, omission, conflict or ambiguity in the Contract Documents: (i) a sworn statement by Contractor and any Subcontractors or Sub-subcontractors involved in the Claim, to the effect that the error, omission, conflict or ambiguity was not discovered prior to submission of the Bid, or (ii) if not discovered, a statement demonstrating that the error, omission, conflict or ambiguity could not have been discovered by Contractor, its Subcontractors or Sub-subcontractors in exercise of the degree of care required of them under the Contract Documents for review of the Bid Documents prior to submission of the Bid.

(v) If the Contractor Claim involves a request for adjustment of the Contract Time, written documentation demonstrating that Contractor has complied with the requirements of the Contract Documents pertaining to proving the right to an extension of time and demonstrating that Contractor is entitled to an extension of time under the Contract Documents.

(vi) A written certification signed by a responsible managing officer of Contractor's organization, who has the authority to sign subcontracts and purchase orders on behalf of Contractor and who has personally investigated and confirmed the truth and accuracy of the matters set forth in such certification, in the following form:

I hereby certify under penalty of perjury under the laws of the State of California that I am a managing officer of [Contractor's name] and that I have reviewed the Claim presented herewith on Contractor's behalf and/or on behalf of [Subcontractor's/Sub-subcontractor's name(s)] and that the following statements are true and correct.

(i) The facts alleged in or that form the basis for the Claim are true and accurate; and,

(ii) Contractor does not know of any facts or circumstances, not alleged in the Claim, that by reason of their not being alleged render any fact or statement alleged in the Claim materially misleading; and,

(iii) Contractor has, with respect to any request for money or damages alleged in or that forms the basis for the Claim, reviewed the job cost records (including those maintained by Contractor and by any Subcontractor or Sub-subcontractor, of any Tier, that is asserting all or any portion of the Claim) and confirmed with reasonable certainty that the Losses or damages suffered by Contractor and/or such Subcontractor or Sub-subcontractor were in fact suffered in the amounts and for the reasons alleged in the Claim; and,

(iv) Contractor has, with respect to any request for extension of time or claim of Delay, disruption, hindrance or interference alleged in or that forms the basis for the Claim, reviewed the job schedules (including those maintained by Contractor and by any Subcontractor or Sub-subcontractor, of any Tier, that is asserting all or any portion of the Claim) and confirmed on an event-by-event basis that the delays or disruption suffered by Contractor and/or such Subcontractor or Sub-subcontractor were in fact experienced for the durations, in the manner, and with the consequent effects on the time and/or sequence of performance of the Work, as alleged in the Claim; and,

(v) Contractor has not received payment from District for, nor has Contractor previously released District from, any portion of the Claim.

Signature:

Name:

Title:

Company:

Date:

4.2.3 Notwithstanding the making of any Contractor Claim or the existence of any dispute regarding any Contractor Claim, unless otherwise directed by District, Contractor shall not delay, slow or stop performance of the Work, but shall diligently proceed with performance in accordance with the Contract Documents and District will continue to make payments as required by the Contract Documents.

4.2.4 All Contractor Claims and supporting documentation and certifications must be filed within thirty (30) Days after the Contractor Claim arises. No Contractor Claims shall be filed after the final payment has been issued unless otherwise permitted by law.

4.2.5 All Contractor Claims and supporting documentation must be sent by registered mail or certified mail with return receipt requested.

4.2.6 Time Period for Response.

(i) Upon receipt of a Contractor Claim pursuant to this Section 4.2, the District shall conduct a reasonable review of the claim and, within a period not to exceed forty-five (45) days, shall provide the claimant a written statement identifying what portion of the claim is disputed and what portion is undisputed. Upon receipt of a claim, the District and Contractor may, by mutual agreement, extend the time period provide in this Section 4.2.6(i).

(ii) If the District needs approval from its governing body to provide the claimant with a written statement identifying the disputed portion and the undisputed portion of the claim, and the governing body does not meet within the forty-five (45) days or within the mutually agreed to extension of time following receipt of a claim sent by registered mail or certified mail, return receipt requested, the District shall have up to three (3) days following the next duly publicly noticed meeting of the governing body after the forty-five (45) day period, or extension, expires to provide the claimant a written statement identifying the disputed portion and the undisputed portion.

(iii) Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the District issues its written statement. If the District fails to issue a written statement, Section 4.2.9 shall apply.

4.2.7 Meet and Confer Conference. If the claimant disputes the District's written response, or if the District fails to respond to a claim issued pursuant to Section 4.2 within the time prescribed, the claimant may demand in writing and an informal conference to meet and confer for settlement of the issue in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the District shall schedule a meet and confer conference within 30 days for settlement of the dispute.

4.2.8. Mediation.

(i) Within ten (10) business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the District shall provide the claimant a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within sixty (60) days after the public entity issues its written statement. Any disputed portion of the claim, as identified by the contractor in writing, shall be submitted to nonbinding mediation, with the District and the claimant sharing the associated costs equally. The District and the claimant shall mutually agree to a mediator within ten (10) business days after the disputed portion of the claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject to applicable procedures outside this section.

(ii) For purposes of this section, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.

(iii) Unless otherwise agreed to by the District and the contractor in writing, the mediation conducted pursuant to this section shall excuse any further obligation under Public Contract Code Section 20104.4 to mediate after litigation has been commenced.

(iv) In the event mediation does not resolve the parties' dispute, the parties shall comply with the binding Arbitration provisions set forth in Section 14.4.4 of the Construction Contract.

4.2.9 Failure by the District to respond to a Construction Claim within the time periods described in this subdivision or to otherwise meet the time

requirements of this Section 4.2 shall result in the Construction Claim being deemed rejected in its entirety. A Construction Claim that is denied by reason of the District's failure to have responded to a claim, or its failure to otherwise meet the time requirements of this section, shall not constitute an adverse finding with regard to the merits of the claim or the responsibility or qualifications of the claimant.

4.2.10 Amounts not paid in a timely as required by this section shall bear interest at 7 percent (7%) per annum.

4.2.11 If a subcontractor or a lower tier subcontractor lacks legal standing to assert a claim against the District because privity of contract does not exist, the Contractor may present to the District a claim on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing, either on his or her own behalf or on behalf of a lower tier subcontractor, that the Contractor present a claim for work which was performed by the subcontractor or by the lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the claim be presented to the District shall comply with the Agreement, including the General Conditions, and shall furnish reasonable documentation to support the Construction Claim. Within 45 days of the receipt of this written request, the Contractor shall notify the subcontractor in writing as to whether the Contractor presented the claim to the District and, if the Contractor did not present the claim, provide the subcontractor with a statement of reasons for not having done so.

4.2.12 There shall be no waiver of any of the rights set forth in this Section 4.2; provided, however, that (i) upon receipt of a Construction Claim, the parties may mutually agree to waive, in writing, mediation and proceed directly to the commencement of a civil action or binding arbitration, as applicable; and (ii) the District may prescribe reasonable Change Order, Construction Claim, and Dispute Resolution Procedures and requirements in addition to the provisions of this section, so long as the contractual provisions do not conflict with or otherwise the timeframes and procedures set forth in Public Contract Code Section 9204.

ARTICLE 5 – SUBCONTRACTORS

5.1 CONTRACTOR'S AWARD OF SUBCONTRACTS

5.1.1 Contractor shall perform, with its own employees, Work amounting to at least 50 percent of the Contract Sum except that any designated "Specialty Items" may be performed by subcontract and the amount of any such "Specialty Items" so performed may be deducted from the Contract Sum before computing the amount required to be performed by Contractor with its own employees. "Specialty Items" are identified in the Bid Documents. Where an entire item is subcontracted, the value of Work subcontracted will, where no prices are provided, be based on the unit price and when a portion of an item is subcontracted, the value of Work subcontracted will be based on the estimated percentage of the unit price. Such percentages will be determined from information submitted by Contractor, and subject to approval by the Construction Manager.

5.1.2 Unless otherwise stated in the Contract Documents, Contractor shall submit in writing, prior to entering into any subcontract agreements, the company name, address, telephone and facsimile numbers, point-of-contact and contractor's license number of all Subcontractors proposed for the Work that are changed from those previously listed in Contractor's Bid. Any Subcontractor may be disqualified if District or the Construction Manager determines that such Subcontractor fails to meet the requirements of the Contract Documents or for any other appropriate reason. If District or the Construction Manager has reasonable objections to a person or entity proposed by Contractor, Contractor shall propose an alternate party to whom District and the Construction Manager have no reasonable objection.

5.1.3 Contractor shall comply with the Subletting and Subcontracting Fair Practices Act, California Public Contract Code, Sections 4100 through 4114. Nothing herein shall be deemed to entitle Contractor, without the written approval of District, to substitute other Subcontractors for those named in Contractor's List of Subcontractors contained in the completed Bid; and, except with such approval, no such substitution shall be made. Should Contractor violate any of the provisions of the Subletting and Subcontracting Fair Practices Act, such violation shall be deemed a violation of the Construction Contract, entitling District, without limitation to any other rights or remedies under the law, to suspend or terminate the Construction Contract.

5.1.4 Except as hereinafter provided, any increase in the cost of the Work resulting from the replacement or substitution of a Subcontractor, shall be borne solely by Contractor and without any adjustment in Contract Sum or Contract Time. However, if a replacement or substitution of any Subcontractor is made as a result of a request of District or the Construction Manager for any reason other than failure of such Subcontractor to meet the requirements of the Contract Documents or a request by Contractor for substitution, the

Contract Sum only, and not the Contract Time, shall be subject to adjustment pursuant to the Change Order provisions of the Contract Documents for the amount of the increase or decrease in the original subcontract amount, with no additional sum for Contractor Markup. In such cases and at the request of District, the replacement Subcontractor shall be selected through a competitive bidding process acceptable to District.

5.1.5 Where a hearing is held pursuant to the provisions of the California Public Contract Code Division 2, Part 1 – Chapter 4 (commencing with Subparagraph 4100), by the awarding authority or a duly appointed hearing officer, District's representative shall prepare and certify a statement of all costs incurred by District for investigation and conduct of the hearing, including the costs of any hearing officer and reporter appointed. The statement shall then be sent to Contractor who shall reimburse District for such costs. If not paid separately, such reimbursement may be deducted from any money due and owing to Contractor.

5.2 SUBCONTRACTUAL RELATIONS

5.2.1 Prior to the execution of each subcontract agreement, Contractor shall make available to each proposed Subcontractor, copies of the Contract Documents to which the Subcontractor will be bound, including the provisions for dispute resolution. Within thirty (30) Days of the Notice To Proceed, Contractor shall provide District with a complete listing of all Subcontractors, which shall include, but not be limited to, the Work contracted for, Subcontractor's name, address, telephone and facsimile numbers, form for doing business (i.e., sole proprietor, corporation, partnership), point-of-contact and Subcontractor's license classification and number.

5.2.2 Any part of the Work performed for Contractor by a first Tier Subcontractor shall be pursuant to a written subcontract. Each such subcontract shall require that the Subcontractor:

- (i) Perform the Work in accordance with the terms of the Contract Documents.
- (ii) Assume toward Contractor all the obligations and responsibilities which Contractor assumes towards District by the Contract Documents.
- (iii) Preserve and protect the rights of District under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights.
- (iv) Waive all rights that the Subcontractor may have against District for damages caused by fire or other perils covered by builder's risk property insurance carried by Contractor or District, except for such rights Subcontractor may have to the proceeds of such insurance held by District under Article 11 of these General Conditions.

(v) Afford District and entities and agencies designated by District the same rights and remedies with respect to access to and the right to audit and the right to copy at District's cost all of the Subcontractor's books, records, contracts, correspondence, instructions, drawings, receipts, vouchers, purchase orders and memoranda relating to the Work and requiring the Subcontractor to preserve all such records and other items for a period of at least three (3) years after Final Completion.

(vi) Recognize the rights of District under Article 5.3, Contingent Assignment of Subcontracts, including, without limitation, District's right to elect to accept assignment of the subcontract and to retain Subcontractor pursuant to the terms of the subcontract, to complete the unperformed obligations under the subcontract and, if requested by District, to execute a written agreement on terms acceptable to District confirming that the Subcontractor is bound to District under the terms of the subcontract.

(vii) Submit Applications for payment, requests for Change Orders and extensions of time and Claims, and to comply with all other notice and submission requirements of the Contract Documents, sufficiently in advance to allow Contractor time to comply with its obligations under the Contract Documents.

(viii) Purchase and maintain insurance in accordance with the requirements of the Contract Documents and reserving the right to Owner to purchase, in its sole discretion, such insurance pursuant to an Owner Controlled Insurance or other form of Wrap-Up Program.

(ix) Defend and indemnify the Indemnitees listed in Article 3.21 on the same terms.

(x) Agree to participate in the dispute resolution procedures specified in the Contract, at the election of District.

5.2.3 Contractor shall promptly, after execution, furnish to District true, complete, and executed copies of all subcontracts, change orders and modifications thereto. Progress payments shall not be made for items of Work for which District has not received executed subcontracts or Change Orders.

5.2.4 Nothing contained in the Contract Documents shall create any contractual relationship between any Subcontractor and District, except when, and only to the extent that, District elects to accept the assignment of the subcontract with such Subcontractor pursuant to Article 5.3.

5.2.5 District and the Construction Manager shall have the right to communicate with Contractor's Subcontractors and Sub-subcontractors with respect to matters that are related to Contractor's performance of its obligations under the Contract Documents. Contractor shall be provided with

a copy of all such written communications. Such communications shall not create or be interpreted as creating any contractual relationship between District or the Construction Manager and any such Subcontractor or Sub-subcontractor.

5.3 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

5.3.1 In the event of any suspension or termination of the Construction Contract, Contractor is hereby deemed to have assigned to District all its interest in contracts with Subcontractors now or hereafter entered into by Contractor for performance of any part of the Work. The assignment will be effective upon acceptance by District in writing and only as to those contracts which District designates in writing. District may accept, at its sole election, said assignment at any time during the course of the Work and prior to Final Completion in the event of a suspension or termination of Contractor's rights under the Contract Documents. Such assignment is part of the consideration to District for entering into the Contract with Contractor and may not be withdrawn prior to Final Completion.

ARTICLE 6 -
CONSTRUCTION BY DISTRICT OR BY SEPARATE CONTRACTORS

6.1 DISTRICT'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

6.1.1 District reserves the right to award separate contracts for, or to perform with its own forces as provided for by law, construction or operations related to the Work or other construction or operations at or affecting the Site, including portions of the Work which have been deleted by modification. Contractor shall cooperate with District's forces and Separate Contractors.

6.1.2 District shall provide coordination of the activities of District forces and of each Separate Contractor with the Work of Contractor. Contractor shall participate with District and Separate Contractors in joint review of construction schedules and Project requirements when directed to do so. Contractor shall make necessary revisions to the Construction Schedule after such joint review.

6.1.3 Without limitation upon any of the rights or remedies of District under the Contract Documents or under law arising from a default by Contractor, in the event that Contractor fails to have personnel on Site to supervise the Work, District shall have the right, in its sole discretion, but not the responsibility, upon twenty-four (24) hours' telephonic notice to Contractor, to provide such supervision on a temporary basis. Contractor shall, notwithstanding District's providing such temporary supervision, remain solely responsible for all actions of its personnel and Subcontractors and shall defend and indemnify District in accordance with Article 3.21 against any Losses arising therefrom. District shall have the right, in its discretion, to deduct from the sums owing to Contractor the reasonable cost of such temporary supervision.

6.2 MUTUAL RESPONSIBILITY

6.2.1 Contractor shall be responsible for affording Separate Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities. Contractor shall schedule and coordinate its construction and operations with the construction and operations of Separate Contractors as required by the Contract Documents.

6.2.2 If a portion of the Work is dependent upon the proper execution or results of other construction or operations by Separate Contractors, Contractor shall inspect such other construction or operations before proceeding with that portion of the Work. Contractor shall promptly report to District apparent discrepancies or defects which render the other construction or operations unsuitable to receive the Work. Unless otherwise directed by District, Contractor shall not proceed with the portion of the Work affected until apparent discrepancies or defects have been corrected. Failure of Contractor to so report

within a reasonable time after discovering such discrepancies or defects shall constitute an acknowledgment that the other construction or operations by District or Separate Contractors is suitable to receive the Work, except as to defects not then reasonably discoverable.

6.2.3 In the event of Delays, improperly timed activities or Defective Work, the costs of such occurrences shall be borne by the party responsible therefore.

6.2.4 If Contractor wrongfully causes damage to completed or partially completed construction or to property of District or Separate Contractors, Contractor shall promptly remedy damage.

6.2.5 If a dispute, or other matters in question arise between Contractor and a Separate Contractor, these occurrences shall be subject to the provisions of Section 14 (Dispute Resolution) of the Construction Contract. Contractor shall immediately notify the Construction Manager in writing and within seventy-two (72) hours of such occurrences.

6.3 DISTRICT'S RIGHT TO CLEAN UP

6.3.1 If a dispute arises between Contractor and Separate Contractors as to the responsibility under their respective contracts for maintaining the Site and surrounding areas free from waste materials and rubbish, District may clean up and allocate the cost between those firms it deems, in its sole discretion, to be responsible.

ARTICLE 7 – CHANGES

7.1 CHANGES

7.1.1 District may, at any time and without notice to Contractor's sureties, order Changes in the Work without invalidating the Construction Contract and without relieving sureties of their obligations to District.

7.1.2 District shall be entitled to a deductive adjustment in the Contract Sum for Changes that involve Deleted Work that result in a reduction in the cost of Contractor's performing the Work and shall be entitled to an adjustment reducing the Contract Time for Deleted Work that results in Contractor's being able to complete the Work earlier than the Contract Time.

7.1.3 Unless such rights have been waived and provided that Contractor has complied with the requirements of the Contract Documents with respect to, without limitation, complete and timely submission of all notices, requests and supporting documentation, Contractor shall be entitled to an additive adjustment to the Contract Sum for Changes that involve Extra Work and an adjustment extending the Contract Time for Delays for which Contractor is entitled under the Contract Documents to an extension of time.

7.1.4 District shall have the right to require performance of Changes that result in Extra Work on a lump sum basis, a unit price basis or a time and material basis, all as hereinafter more particularly described.

7.1.5 Changes may be ordered by District or the Construction Manager in writing by issuance of an agreed or unilateral Change Order or a Field Order. Contractor shall not be entitled to an adjustment of the Contract Sum or Contract Time for Changes that are not authorized by a Change Order or Field Order signed by District or Construction Manager. It is of essence to this agreement that all Changes in the Work that are the basis of an adjustment to the Contract Sum or Contract Time must be authorized in advance, in writing, by District or Construction Manager. Accordingly, no verbal directions, course of conduct between the parties or express or implied Acceptance of Changes or Work, and no claim that the Owner has been unjustly enriched (whether or not there has been such enrichment) shall be the basis for an adjustment to the Contract Sum or Contract Time if Contractor has not obtained advance written authorization to perform the Change in the manner required by this provision.

7.1.6 District reserves the absolute right to make whatever Changes that it determines in its sole discretion are necessary and in its best interests and under no circumstances shall the number (individual or cumulative value) or scope of Changes become a basis for Contractor to claim that the Construction Contract has been rescinded, terminated, abandoned or should be reformed nor shall such circumstances be the basis for Contractor, or any

Subcontractor or Sub-subcontractor, of any Tier, to recover any compensation or damages not permitted by, or in excess of that allowed under, the Contract Documents.

7.1.7 District shall have authority to order minor changes in the Work not involving an adjustment in the Contract Sum or an extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes shall be effected by written order, and shall be binding on District and Contractor. Contractor shall carry out such written orders promptly.

7.2 CHANGE ORDERS AND CHANGE ORDER REQUESTS

7.2.1 Contractor may request adjustments to the Contract Sum or Contract Time if, and only if, Contractor follows the procedures specified in the Contract Documents, including, without limitation, the procedures set forth in this Article 7.2. If requested by District or Construction Manager, or if Contractor believes that it is entitled to an adjustment of the Contract Sum or Contract Time due to Extra Work, Contractor shall submit to District and the Construction Manager a Change Order Request in writing within seven (7) Days after the occurrence of the circumstances giving rise thereto setting forth the circumstances that are the basis of the Change and Contractor's estimate of the additional Allowable Costs associated with the Extra Work in the form required by the General Conditions, Special Provisions and Technical Specifications and Contractor's proposed adjustments of the Contract Sum and the Contract Time, if any, for performing the Extra Work. If Contractor's Change Order Request includes a request for adjustment to the Contract Time, it shall include such information as required by the General Conditions and/or Special Provisions and Technical Specifications, including but not limited to a "Fragnet" or "time impact analysis," which identifies all critical and non-critical activities affected by the Change Order Request and showing logic ties into all existing affected activities noted on the latest approved, updated Construction Schedule.

7.2.2 In the event that the parties are unable to agree as to the reasonable cost and time to perform a Change to the Work based upon Contractor's Change Order Request and District does not elect to have the Change in the Work performed on a time and material basis, District may, in its discretion, either order performance of the Work by Field Order or make a unilateral determination of the reasonable additions or savings in cost and time attributable to the Change in the Work, based upon District's estimate, Contractor's submission or a combination thereof. A Change Order shall be issued for the amounts of cost and time determined by District and shall be promptly performed by Contractor. District's unilateral determination shall become binding upon Contractor unless Contractor submits a Contractor Claim in writing to District within twenty-one (21) Days of the issuance of the Change Order. No dispute, disagreement, nor failure of the parties to reach agreement regarding the amount, if any, of any adjustment to the Contract Sum or

Contract Time due to a Change in the Work, shall relieve Contractor from the obligation to proceed with performance of the Work, including, without limitation, performance of the Change, promptly and expeditiously.

7.2.3 Changes involving Extra Work that District elects to have performed on a time and material basis shall be performed, whether by Contractor's forces or the forces of Subcontractors or Sub-Subcontractors, based on actual Allowable Costs in performing the Change in the Work and with mark-ups in accordance with Section 7.3 of the Contract. Contractor shall submit on a daily basis to the Construction Manager daily time and material tickets to include the identification number assigned to the Change; the location and description of the Change; the classification of labor employed (and names and social security numbers if requested); the materials used; the equipment rented (not tools); and such other evidence of cost as the Construction Manager may require. The Construction Manager may require authentication of all time and material tickets and invoices by persons designated by the Construction Manager for such purpose. The failure of Contractor to secure any required authentication shall, if District elects to treat it as such, constitute a waiver by Contractor of any right to adjustment of the Contract Sum for the cost of all or that portion of the Extra Work covered by a non-authenticated ticket or invoice. The adjustment to the Contract Sum for the Extra Work will be based on the accumulation of Allowable Costs as provided in Article 7.2.5 below. It is Contractor's responsibility to review the Change Order Request invoicing of Contractor and Subcontractors and Sub-subcontractors for accuracy of Subcontractor Markups as defined in Section 7.3 (Compensation to Contractor) of the Construction Contract.

7.2.4 Adjustments to the Contract Sum for Changes for which Contractor is entitled to an adjustment of the Contract Sum by Change Order shall be computed at District's sole election on the basis of one or more of the following:

- (i) Unit prices stated in the Contract Documents or agreed upon by District and Contractor, which unit prices shall be deemed to include Contractor Markup and Subcontractor/Sub-subcontractor Markups permitted by Section 7.3 (Compensation for Extra or Deleted Work) of the Construction Contract.
- (ii) A lump sum agreed upon by District and Contractor, based on the estimated Allowable Costs and Contractor Markup and Subcontractor/Sub-Subcontractor Markup computed in accordance with Section 7.3 (Compensation for Extra or Deleted Work) of the Construction Contract.
- (iii) Contractor's Allowable Costs, plus Contractor Markup and Subcontractor/Sub- subcontractor Markups applicable to such Extra Work computed in accordance with Section 7.3 (Compensation for Extra or Deleted Work) of the Construction Contract.

7.2.5 Allowable Costs shall mean only those costs listed in, and

substantiated and documented in accordance with, this provision and that are not disallowed pursuant to Articles 7.2.6, 7.2.11 or other provisions of the Contract Documents. Allowable Costs are the actual costs necessarily incurred by Contractor and all Subcontractors and Sub-subcontractors, of every Tier, that actually perform the Extra Work caused by the Change(s) and that are incurred in the direct performance of the Extra Work or that are saved by reason of Deleted Work, and are strictly limited to the following:

.1 Labor. The actual straight-time (and the premium time portion of overtime, if approved in writing in advance by District or the Construction Manager) wages or salaries for employees employed at the Site, or at fabrication sites off the Site, plus employer payments collectively referred to as "Fringe Benefits and Payroll Taxes," of payroll, taxes and insurance, health and welfare pension, vacation, apprenticeship funds, and other direct costs resulting from Federal, State or local laws, as well as assessments or benefits required by lawful collective bargaining agreements. The use of a labor classification, which would increase the Allowable Costs will not be permitted unless Contractor establishes the necessity for such additional costs. Labor costs for equipment operators and helpers shall be payable under this provision only when such costs are not included in the invoice for equipment rental.

.2 Material. The cost of materials and consumable items which are furnished and incorporated into the Work at invoice or lowest current price at which such materials are locally available and delivered to the Site in the quantities involved, plus sales tax, freight and delivery. District reserves the right to approve materials and sources of supply, or to supply materials to Contractor, if necessary, for the Work. No markup shall be applied to any material provided by District. Material re-stocking charges shall be limited to 5% of the amount of material. All discounts, rebates and refunds from the sale of surplus materials and consumable items shall accrue to District, and Contractor shall make provision so that they may be obtained.

.3 Tool and Equipment Rental. Rental charges for necessary machinery and equipment, whether owned or hired, as authorized in writing by District or the Construction Manager, exclusive of hand tools. No payment will be made for the use of tools that have a replacement value of \$500 or less. When the equipment is owned by Contractor, the rental rate shall be as listed for such equipment in the California Department of Transportation publication entitled "Labor Surcharge and Equipment Rental Rates," which is in effect on the date the Work is accomplished. When equipment is not listed in said publication, the rate to be paid shall be as herein defined, or a suitable rental rate for such equipment will be established by the Construction Manager. Regardless of ownership, the rates to be used in determining equipment rental cost shall not exceed listed rates prevailing locally at equipment rental agencies or distributors at the time the work is performed. The rental rates paid shall include the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance and all incidentals.

If equipment is used intermittently, when not in use it shall be returned to its rental source unless Contractor elects to keep it at the Site at no expense to District. The reported rental time for equipment already at the Site shall be the duration of its use on the Extra Work, commencing at the time it is first put into actual operation on the Extra Work, plus the time required to move it from its previous site and back, or to a closer site.

.4 Royalties and Permits. Costs of royalties and permits solely related to the Extra or Deleted Work.

.5 Insurance and Bonds. Additional costs of insurance and bonds, not to exceed two percent (2%) of the total of Parts .1 through .4, above.

7.2.6 Extra Work Costs shall not include any of the following, which are construed to be included in Contractor's Markup:

- (i) Superintendent(s).
- (ii) Assistant Superintendent(s).
- (iii) Project Engineer(s).
- (iv) Project Manager(s).
- (v) Scheduler(s).
- (vi) Estimator(s).
- (vii) Drafting or detailing.
- (viii) Small tools (with a replacement value under \$500).
- (ix) Home or field office expenses, including staff, materials, and supplies.
- (x) Trailer or storage rental and expense, whether on the Site or off the Site.
- (xi) Data processing personnel and equipment.
- (xii) Site fencing.
- (xiii) Utilities, including, without limitation, gas, electric, sewer, water, telephones.
- (xiv) Telephone, facsimile, e-mail and copier.
- (xv) Overhead, administrative, or general expenses of any kind.
- (xvi) Loss of efficiency or productivity, or other impact cost due to the effect of

the Extra Work on the performance of other Work or the Work of other trades on the Project.

(xvii) Capital expenses, including interest on capital employed in connection with Extra Work.

(xviii) Legal costs.

(xix) Federal, State, or local income and franchise taxes.

(xx) Profit.

(xxi) Any Extra Work Costs incurred more than twenty (20) Days prior to submission by Contractor of its Change Order Request pursuant to Article 7.2.1.

(xxii) Cost of any item not specifically and expressly included in the items described in Article 7.2.5.

7.2.7 The term "Contractor Markup" shall mean the full amount of compensation for all costs and expenses including overhead and profit not included in the Allowable Costs, whether or not referred to in Article 7.2.5. Contractor Markup shall be computed as provided in Section 7.3 (Compensation for Extra or Deleted Work) of the Construction Contract.

(i) For Work to be omitted by Change Order, the reduction of the Contract Sum shall be computed on the basis of one or more of the following: Unit prices stated in the Contract Documents or agreed upon by District and Contractor.

(ii) A lump sum agreed upon by District and Contractor, based upon the estimated Allowable Costs that would have been incurred in performing the Deleted Work, plus Contractor Markup provided for in the Construction Contract.

(iii) A sum unilaterally determined by District, if District and Contractor cannot agree upon one or both of the methods described in paragraphs (i) or (ii), above.

7.2.8 No Contractor Claim for adjustment of the Contract Sum shall be allowed if asserted after final payment under the Construction Contract.

7.2.9 If anyone Change involves both Extra Work and Deleted Work in the same portion of the Work, the Contractor Markup to be added or credited will be based on the net difference between amount allowed for the Extra Work and Deleted Work.

7.2.10 The Contract Sum will be adjusted for Delay only if and to the extent allowed by the Contract for Compensable Delay. Contractor agrees to accept such adjustments in its compensation as its sole and exclusive remedy and recovery for Delay, disruption, hindrance, interference, loss of productivity, labor or material cost escalations, inefficiency, acceleration, impact costs associated with the effect of the Changes on the Work, extended or extraordinary overhead (direct or indirect) or other Losses or damages due to Delay, of any kind.

7.2.11 District has the right to increase or decrease the quantity of any unit price item for which an estimated quantity is stated in the Bid Documents.

7.2.12 The signing of a Change Order indicates that the parties have reached a full resolution, settlement and accord and satisfaction with respect to all Contractor Claims for cost and extensions of time that were asserted, or that could have been asserted, in connection with the Change, whether known or unknown at the time of execution of the Change Order, and that are related to the subject matter of the Change Order, including, without limitation, all Contractor Claims, costs or damages for Delay, disruption, hindrance, interference, extended or extraordinary direct and indirect overhead, multiplicity of Changes, loss of productivity, labor or material cost escalations, inefficiency, the impact of the Change on the Work, legal expenses, consultant costs, interest, lost profits or revenue, bond or insurance costs, currency fluctuations, changes in taxes or other related Claims, costs or damages. Change Orders shall be executed by Contractor without any express reservation of rights by Contractor to reserve for the future the right to assert or recover from District any such Claims, costs or damages.

7.2.13 Contractor's cost breakdowns submitted with its Change Order Requests (including, without limitation, requests for cost reimbursement for Delay, disruption, hindrance and interference associated with extras, Changes, additions or deletions) shall be itemized in a manner that, with mathematical certainty and without reliance upon probabilities or inferences, segregates the direct, actual reimbursable costs associated with each individual extra, Change, addition, deletion and (on an event-by-event basis) each individual Delay or disruption event. Change Order Requests shall not be based, in whole or in part, upon any methodology (such as total cost or modified total cost methodologies) that purports to calculate Contractor's additional costs of performance of the extra, Change, addition or deletion (including, without limitation, the additional costs of Delay, disruption or other impact) based on the difference between Contractor's total actual Project or line item costs and its original bid estimate for the Project or any original bid estimate line item. In connection with the foregoing, Contractor represents and warrants that it has the ability to generate and maintain complete and accurate cost accounting records that will reflect:

- (i) The actual Allowable Costs incurred or saved for each individual item

of Extra Work or Deleted Work; and

(ii) On an event-by-event basis, the effect of each Delay that forms the basis of each request for extension of time, regardless of their scope, number, complexity, cumulative effect or time of issuance or occurrence.

7.2.14 As a further condition of Contractor's right to an adjustment of the Contract Sum for Extra Work, Contractor must keep daily, detailed and accurate records itemizing each element of Extra Work Cost and shall provide substantiating records and documentation, including time cards, invoices and delivery tickets listing all labor, materials, and equipment involved for that day. Failure to submit such records daily shall waive any rights for recovery of Allowable Costs for that day. Such records and documentation shall be submitted to and Approved by Construction Manager on a daily basis.

7.3 FIELD ORDERS

7.3.1 Upon receipt of a Field Order, Contractor shall, within a reasonable time, proceed with the Work described in the Field Order. If the Field Order involves Extra Work and sets forth a determination for adjustment of the Contract Sum or Contract Time with which Contractor disagrees, Contractor shall advise District of its agreement or disagreement in writing within seven (7) Days of such receipt. Failure by Contractor to provide such written notice shall result in its waiving any right to adjustment of the Contract Sum or Contract Time on account thereof.

7.4 DISPUTES REGARDING CHANGES

7.4.1 Provided that District pays to Contractor all undisputed sums due under the Contract Documents for Work performed under Change Orders, Contractor shall not delay, slow, interrupt, or suspend the performance of any Work or any Change because of a dispute between the parties with respect to an adjustment in the Contract Sum or Contract Time.

ARTICLE 8 – CONTRACT TIME

8.1 COMMENCEMENT OF THE WORK

8.1.1 Commencement of the Work shall begin on the date specified in the Notice to Proceed.

8.2 PROGRESS AND COMPLETION

8.2.1 By signing the Contract, Contractor represents to District that the Contract Time is reasonable for performing the Work and that Contractor is able to perform the Work within the Contract Time.

.1 The Construction Schedule may reflect a period of performance that is shorter than the Contract Time; provided however, that the difference shall be deemed as float and nothing in this provision or in any other provision of the Contract Documents shall be construed as creating any contractual right, express or implied, on the part of Contractor to finish the Project earlier than the Contract Time and under no circumstances shall District be liable to Contractor for any costs, damages or compensation due to the inability of Contractor to complete the Work earlier than the Contract Time, regardless of the cause, including, without limitation, acts or omissions (intentional or negligent) of District.

.2 Contractor has included in its Bid price the costs of all Contractor and Subcontractor overhead (direct and indirect) and Special Provisions and Technical Specifications, including but not limited to all Project staff, temporary facilities, temporary utilities, and home office overhead for the entire duration of the Contract Time. The above costs must be included in Contractor's Bid notwithstanding Contractor's anticipation of completion in fewer days than established by the Contract Time.

.3 No increase in the Contract Sum shall be made or granted for Compensable Delay if, for any reason including but not limited to Delay caused by District, Contractor completes the Work before expiration of the Contract Time.

.4 No reduction in the Contract Sum shall be made nor will Contractor be required to remain on the Project Site if the Work is completed before expiration of the Contract Time.

.5 The Construction Manager will schedule and hold weekly progress meetings and other meetings as determined by the Construction Manager. Contractor and/or Contractor's designee shall be present at each meeting. Contractor may also be required to request attendance by representatives of its suppliers, manufacturers and Subcontractors.

8.2.2 Except by agreement or instruction of District in writing, Contractor shall

not commence operations on the Site or elsewhere prior to the effective date of insurance required by Article 11 to be furnished by Contractor. Contractor's obligations to commence the Work and to complete the Work within the Contract Time shall not be changed by the effective date of such insurance.

8.2.3 Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time. If District determines and notifies Contractor that Contractor's progress is such that Contractor will not complete the Work within the Contract Time, Contractor shall, immediately and at no additional cost to District, take all measures necessary, including working such overtime and additional shifts (other than District's normal working hours of 7:00 AM to 6:00 PM, Monday through Friday and 9:00 AM to 5:00 PM on Saturday), to ensure that the Work is Substantially Completed within the Contract Time. Upon receipt of such notice from District, Contractor shall immediately respond in writing setting forth a detailed plan for accelerating the Work in a manner acceptable to District. Contractor shall not be entitled to any reimbursement or payment of costs, expenses or damages incurred as a result of an acceleration of the Work that is performed pursuant to this provision. District may also take all necessary measures to ensure no further Delays to the Substantial Completion of the Work within the Contract Time. Contractor shall reimburse District, or District may withhold from payment due to Contractor, sums expended by District to perform such measures.

8.2.4. During unfavorable weather, wet ground or other unsuitable construction conditions, Contractor shall confine the operations to Work that will not be affected adversely by such conditions. No portion of the Work shall be constructed under conditions which would affect adversely the quality thereof or be detrimental to the quality of water discharges, unless special means or precautions are taken by Contractor to perform the Work in a proper and satisfactory manner.

8.3 DELAY

8.3.1 Contractor may make a Contractor Claim for an extension of the Contract Time, for an Excusable Delay or a Compensable Delay, subject to the following:

.1 In order to avoid double counting concurrent Delays, if an Excusable Delay and a Compensable Delay occur concurrently, the maximum extension of the Contract Time shall be the number of days from the commencement of the first Delay to the cessation of the Delay which ends last.

.2 If an Unexcused Delay occurs concurrently with either an Excusable Delay or a Compensable Delay, the maximum extension of the Contract Time shall be the number of Days, if any, by which the Excusable Delay or the Compensable Delay exceeds the Unexcused Delay.

.3 If an Unexcused Delay occurs concurrently with both an Excusable

Delay and a Compensable Delay, the maximum extension of the Contract Time shall be the number of Days, if any, by which the number of Days determined pursuant to Article 8.3.1.2 exceeds the number of Days of the Unexcused Delay.

8.3.2 As a condition precedent to Contractor's right to an extension of Time adjusting the Contract Time and the Contract Sum for Compensable Delay, it must provide written notice to District within seven (7) Days of the date that Contractor learned of the Delay or should have learned of the Delay in exercise of diligence and reasonable care, setting forth:

- (i) A description of the Delay;
- (ii) A statement that the Delay is critical to completion; and
- (iii) The probable effect of the Delay in terms of the number of Days' extension Contractor believes are required to the Contract Time.

It is agreed that the form, content and timeliness of the written notice required by Article 8.3.2 is of the essence to District's ability to adequately monitor the progress of the Work, to differentiate between critical and non-critical Delays, and to prioritize its actions in a manner that is appropriately targeted to mitigate the effect of delays. Accordingly, Contractor agrees that failure to provide written notice in the manner required by Article 8.3.2 shall be conclusively deemed a waiver of the right to an adjustment of the Contract Sum and Contract Time on account thereby, regardless of whether the circumstances of the Delay may have been known or suspected by District or the Construction Manager and that no other form of notice (including, without limitation, meeting minutes, log entries or schedule updates) shall suffice as constituting notice to District in accordance with Article 8.3.2.

8.3.3 For a Compensable Delay, Contractor shall be entitled to an adjustment in the Contract Sum in a daily amount equal to Contractor's per diem amount as stated in the Contract multiplied by the number of Days of extension for Compensable Delay, if any, permitted under the Contract Documents. Such per diem amount shall be Contractor's sole and exclusive right and compensation to cover all costs and damages to Contractor and to its Subcontractors and Sub-subcontractors, of every Tier, for Compensable Delays and all other Claims for costs, acceleration, expenses, Losses, damage or compensation, of any kind, for additional supervision, administration, extended or extraordinary overhead (direct or home office), additional insurance or bond costs, loss of productivity, inefficiency, labor, wage, material or equipment escalation, or other costs, expenses or damages due to Delay, interruption, hindrance, compression, disruption, or the impact or ripple effect of Delays on the Work, are conclusively waived.

8.3.4 The parties agree that District's exercise of its rights to order Changes,

whether or not resulting in Extra Work, regardless of the extent and number of Changes, or to suspend the Work, is within the contemplation of the parties.

8.3.5 The determination of whether a Delay is an Excusable Delay, Compensable Delay or Unexcused Delay shall not be affected by the fact that any earlier Delay occurred, regardless of fault or causation.

8.3.6 All time limits stated in the Contract Documents are of the essence.

ARTICLE 9 – PAYMENTS AND COMPLETION

9.1 SCHEDULE OF VALUES

9.1.1 Within thirty (30) Days after signing the Contract, but in any event a maximum of ten (10) Days of receipt of the Notice to Proceed, Contractor shall submit to District through the Construction Manager a Schedule of Values reflecting cost breakdown of the Contract Sum in a form approved by the Construction Manager. The Schedule of Values shall itemize as separate line items the cost of each scheduled Work activity and all other costs, including warranties, Record Documents, insurance, bonds, overhead and profit, the total of which shall equal the Contract Sum and shall be made out in a form approved by the Construction Manager. The Schedule of Values, when approved by District, shall become the basis for determining the cost of Work requested on Contractor's Applications For Payment. Contractor shall submit a statement based upon this breakdown, and if required, itemized in such form and supported by such evidence as the Construction Manager may direct, showing Contractor's right to the payment claimed.

9.2 PROGRESS PAYMENT

9.2.1 Subject to District's right of withholding under Article 9.4.2, District agrees to pay to Contractor within thirty (30) Days of receipt of an undisputed and properly submitted Application for Payment an amount equal to ninety-five percent (95%) of the sum of the following:

- (i) Construction Manager's determination of the value, expressed as a percentage of the Contract Sum, of the Work in permanent place that has been tested as of the end of the preceding month.
- (ii) Plus Construction Manager's determination of the value of materials suitably stored but not yet incorporated into the Work, subject to Article 9.3.6.
- (iii) Less amounts previously paid.

9.2.2 At any Time after 50% of the Work has been determined by District to be completed, if District determines in its sole discretion that satisfactory progress on the Work is being made, District may, in its sole discretion, make any of the remaining progress payments in accordance with the calculation in Article 9.2.1 based on 100% of District's determination of the value of the Work in place and of stored materials not incorporated.

9.2.3 Progress payments shall not be construed as District's Acceptance of any or all of the Work and shall not be a waiver of any or all rights District has under the Contract Documents.

9.3 APPLICATION FOR PAYMENT

9.3.1 At the end of each month, Contractor shall submit to District an itemized Application For Payment, requesting payment for Work as of the end of that month that is calculated in accordance with the formula for payment set forth in Article 9.2.1. The Application For Payment shall be prepared:

- (i) Utilizing the format as designated by District or the Construction Manager.
- (ii) Itemized in accordance with the Schedule of Values.
- (iii) Including such data substantiating Contractor's right to payment as District may reasonably require, such as invoices, certified payrolls, daily time and material records, and, if securities are deposited in lieu of retention pursuant to Article 9.5, a certification of the market value of all such securities as of a date not earlier than five (5) Days prior to the date of the Application For Payment.
- (iv) Showing itemized amounts for Change Orders, Modifications and retention.

9.3.2 Applications For Payment shall not include requests for payment on account of Changes which have not been authorized by Change Orders or amounts Contractor does not intend to pay a Subcontractor because of a dispute or other reason.

9.3.3 If required by District, an Application For Payment shall be accompanied by all of the following:

- (i) A summary showing payments that will be made to Subcontractors covered by such application.
- (ii) Conditional waivers and releases of claims and stop notices from Contractor and each Subcontractor and Sub-subcontractor, of every Tier, listed in the current Application For Payment covering sums requested in the current Application For Payment.
- (iii) Unconditional waivers and releases of claims and stop notices, from Contractor and each Subcontractor and Sub-subcontractor, of every Tier, listed in the preceding Application For Payment covering sums disbursed pursuant to that preceding Application For Payment.

9.3.4 Contractor warrants that, upon submittal of an Application For Payment, all Work for which Certificates For Payment have been previously issued and payment has been received from District, shall be free and clear of all claims, stop notices, security interests and encumbrances in favor of Contractor, Subcontractors, Sub-subcontractors, of every Tier, or other persons or firms entitled to make claims by reason of having provided labor, materials or

equipment relating to the Work.

9.3.5 The making of final payment shall constitute a waiver of all Claims by District except those arising from unsettled liens, faulty or Defective Work, failure of the Work to comply with the requirements of the Contract Documents or terms of any special guarantees required by the Contract Documents.

9.3.6 At the sole discretion of District, the Construction Manager may approve for inclusion in Contractor's Application For Payment the cost of materials to be incorporated in the Work but not yet incorporated in the Work and already delivered and suitably stored either at the Site or at some other appropriate location acceptable to District. In such case, Contractor shall furnish evidence satisfactory to District:

- (i) Of the cost of such materials.
- (ii) That such materials are under the exclusive control of Contractor, or if not, that title to the materials is in District, free of any lien or encumbrance and that the materials are safely and suitably stored in a bonded warehouse with appropriate insurance coverage satisfactory to District to cover any Loss.

Any payment pursuant to this provision shall not be construed as an inspection or acceptance of the materials nor shall it relieve Contractor of its continuing and sole responsibility for the care and protection of such materials nor shall it relieve Contractor from sole responsibility for any loss or damage to the materials from any cause whatsoever nor act as a waiver of the right of District to require strict fulfillment by Contractor with all terms of the Contract Documents.

9.3.7 District shall have the right, in its sole discretion, to make payments of monies owing to Contractor by means of direct payment to Subcontractors or Sub-subcontractors, of any Tier of any unpaid work performed by any Subcontractor or Sub-subcontractor of any Tier, or by joint payment to Contractor and to Subcontractors or Sub-subcontractors, of any Tier. The making of such payments shall not be construed as the assumption of any obligation on the part of District or as creating any contractual relationship between District and any Subcontractor or Sub-subcontractor and shall not relieve Contractor of any of its obligations under the Contract Documents.

9.4 CERTIFICATE FOR PAYMENT

9.4.1 If Contractor has made an Application For Payment in accordance with Article 9.3, the Construction Manager will, not later than seven (7) Days after the date of receipt of an Application For Payment prepared and submitted in accordance with the Contract Documents, issue to District, with copy to Contractor, a Certificate For Payment in such amount as the Construction Manager determines is due.

If Construction Manager determines that Contractor's Application For Payment has not been properly prepared or submitted, then Construction Manager, within the seven (7) Day period provided for in Article 9.4.1, notify Contractor in writing of the reasons why the Application for Payment is being rejected.

9.4.2 Approval of all or any part of an Application For Payment may be withheld, a Certificate For Payment may be withheld or all or part of a previous Certificate For Payment may be nullified and that amount withheld from a current Certificate For Payment in order to protect District against actual or threatened loss as a result of any of the following:

- (i) Defective Work not remedied.
- (ii) Third-party claims against Contractor or District arising from the acts or omissions of Contractor, Subcontractors, or Sub-subcontractor, of any Tier.
- (iii) Stop notices.
- (iv) Failure of Contractor to make timely payments due Subcontractors for material or labor.
- (v) A reasonable doubt that the Work can be completed for the balance of the Contract Sum then unpaid.
- (vi) Damage to District or Separate Contractor for which Contractor is responsible.
- (vii) Reasonable evidence that the Work will not be completed within the Contract Time.
- (viii) Failure of Contractor to maintain and update As-Built or Record Documents.
- (ix) Failure of Contractor to submit schedules, reports, or their updates as required by the Contract Documents.
- (x) Performance of Work by Contractor without approved Submittals.
- (xi) Liquidated or actual damages assessed in accordance with the Construction Contract.
- (xii) Any other failure of Contractor to perform an obligation under the Contract Documents.

9.4.3 Subject to the withholding provisions of Article 9.4.2 and when any or all of the noted deficiencies or others have been removed, District shall pay Contractor the amount set forth in the Certificate For Payment in

accordance with its normal disbursement procedures.

9.4.4 Neither District nor the Construction Manager shall have an obligation to pay or to see to the payment of money to a Subcontractor or Sub-subcontractors, of any Tier, except as may otherwise be required by Law.

9.4.5 Neither a Certificate For Payment nor any payment (progress or final) shall be construed as a waiver of any rights arising from Defective Work.

9.5 DEPOSIT OF SECURITIES IN LIEU OF RETENTION AND DEPOSIT OF RETENTION INTO ESCROW

9.5.1 At the request and expense of Contractor, a substitution of securities may be made as found in the California Government Code, Section 16430, and as authorized by the California Public Contract Code, Section 22300, in lieu of monies retained by District under Article 9.2 to ensure performance under the Contract Documents. Securities equivalent in value to the retention amount required by the Contract Documents for each Certificate For Payment shall be deposited by Contractor with a state or federally chartered bank in the State of California ("Escrow Agent"), which shall hold such securities pursuant to the escrow agreement referred to in Article 9.5.3 until final payment is due in accordance with Article 9.8. Securities shall be valued as often as conditions of the securities market warrant, but in no case less than once per month. Contractor shall deposit additional securities so that the current market value of the total of all deposited securities shall be at least equal to the total required amount of retention.

9.5.2 Alternatively to Article 9.5.1, and at the request and expense of Contractor, District shall deposit retention directly with the Escrow Agent. Contractor may direct the investment of such deposited retention into interest bearing accounts or securities, and such deposits or securities shall be held by the Escrow Agent upon the same terms provided for securities deposited by Contractor.

9.5.3 A prerequisite to the substitution of securities in lieu of retention or the deposit of retention into escrow shall be the execution by Contractor, District, and the Escrow Agent of an Escrow Contract for Deposit of Securities in Lieu of Retention and Deposit of Retention forms provided by District. The terms of such escrow agreement are incorporated into the requirements of Article 9.5.

9.5.4 Release of funds or securities from escrow shall be made with Contractor's final payment.

9.6 BENEFICIAL OCCUPANCY / BENEFICIAL USE

9.6.1 District reserves the right, at its option and convenience, to occupy or otherwise make use of all or any part of the Work, at any time prior to issuing the

Certificate of Substantial Completion, upon thirty (30) Days' notice to Contractor. Such occupancy or use is herein referred to as "Beneficial Occupancy/Use." Beneficial Occupancy/Use shall be subject to the following conditions:

.1 District, Design Consultant and Construction Manager will make an inspection of the portion of the Work to be beneficially occupied and prepare a list of items to be completed or corrected prior to Substantial Completion.

.2 Beneficial Occupancy/Use by District shall not be construed by Contractor as Acceptance by District of that portion of the Work which is to be occupied. District may, however, at its sole option, relieve Contractor of Contract requirements to protect Work being beneficially occupied by District where such relief is specifically designated by District in writing.

.3 Beneficial Occupancy/Use by District shall not constitute a waiver of existing Claims of District or Contractor against each other.

.4 Contractor shall provide, in the areas beneficially occupied and on a continual basis (if required), utility services, heating, and cooling for systems which are in operable condition at the time of Beneficial Occupancy/Use. All responsibility for the operation and maintenance of equipment shall remain with Contractor while the equipment is so operated. Contractor shall submit to District an itemized list of each piece of equipment so operated with the date operation commences.

.5 The Guarantee to Repair Periods, as defined in Article 12.2, will commence upon the first dates of actual occupancy or use of portions of the Work actually occupied and equipment or systems fully utilized.

.6 District shall pay all normal operating and maintenance costs resulting from its use of equipment in areas beneficially occupied.

.7 District shall pay all utility costs which arise out of the Beneficial Occupancy/Use.

.8 Contractor shall not be responsible for providing security in areas beneficially occupied or used.

.9 District shall use its best efforts to prevent its Beneficial Occupancy/Use from interfering with the conduct of Contractor's remaining Work.

.10 Contractor shall not be required to repair damage caused by District in its Beneficial Occupancy/Use.

.11 Except as provided in Article 9.6, there shall be no added cost to District due to Beneficial Occupancy/Use.

.12 Contractor shall continue to maintain all insurance required by the Contract in full force and effect.

9.7 SUBSTANTIAL COMPLETION

9.7.1 When Contractor gives notice to District that the Work, or portion thereof designated by District for separate delivery, is Substantially Complete, unless District determines that the Work or designated portion thereof is not sufficiently complete to warrant an inspection to determine Substantial Completion, District will inspect the Work, or such designated portion thereof, and prepare and give to Contractor a comprehensive list of items, if any, to be completed or corrected before establishing Substantial Completion. Contractor shall promptly proceed to complete and correct items on the list. Failure to include an item on such list does not alter the responsibility of Contractor to complete all Work in accordance with the Contract Documents. District will then make a further inspection to determine whether the Work or such designated portion thereof is Substantially Complete. If District's inspection discloses any item, whether or not included on the list, which must be completed or corrected before Substantial Completion, Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item. Contractor shall then submit a request for another inspection by District to determine Substantial Completion.

9.7.2 When District determines that the Work or such designated portion thereof is Substantially Complete, District will prepare a Certificate of Substantial Completion on District's form, which when signed by District shall establish the date of Substantial Completion and the responsibilities of District and Contractor for security, maintenance, heat, utilities, insurance, completion of minor items and correction or repair of the Work or such designated portion thereof. Unless otherwise provided in the Certificate of Substantial Completion, the Guarantee To Repair Period for the Work (which is defined in Article 12.2.1), or such designated portion thereof covered by the Certificate of Substantial Completion, excluding any systems provided by Separate Contractors which are not yet fully operational or accepted by District, shall commence on the date of Substantial Completion of the Work or such designated portion thereof. The Guarantee To Repair Period for systems which become fully operational or Accepted subsequent to Substantial Completion will begin on the later of the date they are operational or Acceptance of the Project by District.

9.8 FINAL COMPLETION AND FINAL PAYMENT

9.8.1 Upon receipt of notice from Contractor that the Work is ready for final inspection, District will make such inspection. District will file a notice of completion within ten (10) Days after Acceptance by District. After receipt of the Final Application for Payment, if District determines that Final Completion is achieved, District will issue a Certificate for final payment.

9.8.2 Without limitation to any other provisions of the Contract Documents, before final payment for Work under this Construction Contract is authorized, the Work has been completed in accordance with the Contract Documents and all applicable standards of care and the following requirements of the Contract Documents must be fulfilled by Contractor:

(i) The submittal of an Application for Final Payment, together with supporting documentation, as required by Article 9.3.

(ii) Completion and delivery by Contractor to District of all required written guarantees, warranties, operation and maintenance manuals, As-Built Documents and other Record Documents and such other documents as required by the Contract Documents.

(iii) Delivery by Contractor to District of an affidavit, signed under penalty of perjury, stating that all workers and persons employed, all firms supplying the materials, and all Subcontractors and Sub-subcontractors, of every Tier, have been paid in full; and that there are no bills outstanding against the Work for either labor or materials, except certain items, to be set forth in such affidavit covering disputed claims or items in connection with which notices to withhold have been filed under the provisions of the statutes of the State of California.

(iv) Completion of all construction work in a manner acceptable to District.

(v) Submission of conditional releases of claims and stop notices upon final payment from Contractor and its Subcontractors and Sub-subcontractors, of every Tier, with no reservation of rights for disputed claims or amounts. Contractor shall pay or cause to be paid to Subcontractors and Sub-Subcontractors, of every Tier, the amount stated in the conditional releases within five (5) Days after receipt of the final payment, and shall promptly thereafter furnish evidence of such payment to District.

9.8.3 Acceptance of final payment by Contractor shall constitute a waiver of all Claims, except those previously made in writing and identified by Contractor as unsettled at the time of the Application for Final Payment.

9.8.4 District shall have the right, in its sole discretion, to make payment of amounts retained from progress payments on the Work of any Subcontractor at any time prior to Final Completion. The making of such early payment of retention shall not be construed as creating any obligation on the part of District nor shall it relieve Contractor of any of its obligations under the Contract Documents.

ARTICLE 10 – PROTECTION OF PERSONS AND PROPERTY

10.1 SAFETY PRECAUTIONS AND PROGRAMS

10.1.1 Contractor shall be solely and completely responsible for initiating, maintaining and supervising all safety precautions and programs on the Site in connection with the performance of the Construction Contract, including safety of all persons for the duration of the Work, on a 24-hour day, 7-day week basis.

10.1.2 Prior to the start of construction, Contractor shall submit to District a copy of Contractor's safety program for the Project. A copy of this program shall be maintained on Site at all times. The safety program shall include, at a minimum:

- (i) Management policy, illness and injury prevention program (as described below).
- (ii) Safety meetings.
- (iii) Accident investigation.
- (iv) Basic accident causes.
- (v) Safety inspection check list.
- (vi) Fire prevention and control.
- (vii) Report forms.
- (viii) Employee safety manual.

10.1.3 Prior to the start of construction, Contractor shall submit to District a copy of an illness and injury prevention program as required by law. This program must be submitted prior to issuance by District of Notice to Proceed. It must include provisions for Contractor reviewing and monitoring all Subcontractor safety programs.

10.2 SAFETY OF PERSONS AND PROPERTY

10.2.1 Precaution shall be exercised at all times for the protection of persons and property. Contractor shall have available at the Site, copies or suitable extracts of "Construction Safety Orders" and "General Industrial Safety Orders" issued by the State Division of Industrial Safety. Contractor shall comply with provisions of these and all other applicable laws, ordinances, and regulations.

10.2.2 Contractor shall immediately respond to notice from District of unsafe conditions, shall take adequate precautions for safety of persons on the Site, and shall provide adequate protection to prevent injury or Loss to the following:

- (i) Employees involved in the Work and other persons who may be affected thereby.
- (ii) The Work in place and materials and equipment to be incorporated therein, whether in storage on or off the Site, under care, custody, or control of Contractor, Subcontractors, or Sub-subcontractors.
- (iii) Other property at the Site and adjoining property(ies).

10.2.3 Contractor shall promptly remedy damage and Loss (other than damage or Loss insured under property insurance required by the Contract Documents) to property caused in whole or in part by Contractor or its Subcontractors or Sub-subcontractors, of any Tier, or anyone for whose acts they may be liable and for which Contractor is responsible. An exception is Loss attributable to acts of the Construction Manager, District or Design Consultant or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of Contractor or its Subcontractors or Sub-subcontractors, of any Tier.

10.2.4 Contractor shall erect and maintain, as required by existing conditions and performance of the Work, adequate safeguards for safety and protection, including providing adequate lighting and ventilation, posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities.

10.2.5 When use or storage of hazardous materials, equipment, or unusual methods are necessary for execution of the Work, Contractor shall exercise the utmost care and carry on such activities only under the supervision of properly qualified personnel.

10.2.6 Contractor shall be required to provide at the Site a member of Contractor's organization, typically the Superintendent, whose responsibility it shall be to provide instruction to persons present on the Site about prevention of accidents and overall jobsite safety. If Contractor has another individual responsible for these activities, Contractor shall notify District in writing.

10.2.7 Contractor shall be responsible for locating, providing, and coordinating the storage and staging of materials and equipment on-Site and off-Site and shall not load/store or permit any part of the Work on the Site to be loaded/stored so as to endanger the safety of persons or property.

10.2.8 Contractor shall protect its materials and the Work from damage in a manner satisfactory to District and shall make good, without charge to District, all damage due to negligence in providing proper protection.

10.2.9 Contractor shall take necessary precautions to guard against and eliminate possible fire hazards and to prevent damage to the Work, building materials, equipment, temporary field offices, storage sheds and public and private property.

10.2.10 Contractor shall not permit the possession or use of alcohol or controlled substances on the Site.

10.2.11 Explosives may be used only when authorized in writing by District. Explosives shall be handled, used and stored in accordance with applicable regulations.

10.3 EMERGENCIES

10.3.1 In an emergency affecting the safety of persons or property, Contractor shall immediately act to prevent or minimize damage, injury or loss. Contractor shall immediately notify the Construction Manager and District, which notice may be oral, followed within twenty-four (24) hours after occurrence of the incident by written confirmation, of the occurrence of such an emergency and Contractor's action.

ARTICLE 11 – INSURANCE AND BONDS

11.1 CONTRACTOR'S INSURANCE

11.1.1 Prior to commencing the Work, Contractor shall procure and maintain at Contractor's own cost and expense, insurance as required in the Construction Contract between Contractor and District against claims for injuries to persons or damages to property which may arise out of or result from the performance of the Work by Contractor, its Subcontractors or Sub-subcontractors, by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable.

11.2 BOND REQUIREMENTS

11.2.1 Within ten (10) Days after the issuance of the Notice of Award and prior to commencing Work on the Project, Contractor shall file with District good and sufficient Labor and Material Payment and Performance Bonds each in the amount of 100% of the Contract Sum. The bonds shall be signed by both Contractor and Surety and properly notarized on the District's forms or such other forms as required by District. Should any bond required hereunder or any surety on such bond become or be determined by District to be insufficient, it shall be replaced within ten (10) Days by a bond that fully complies with the requirements of Article 11.2. No further payments to Contractor for Work performed shall be made or due until Contractor has fully complied with the requirements of Article 11.2.

11.2.2 The Payment Bond shall remain in effect until Acceptance of the Work and payment of all Claims by Contractor, Subcontractors, or Sub-subcontractors, of any Tier, have been satisfied. The Performance Bond provided by Contractor shall remain in effect for the duration of the period of all warranties required by the Contract Documents and shall assure faithful performance of all Contractor's obligations under the Contract Documents, including, without limitation, all obligations that survive Final Completion or termination, such as, but not limited to. Contractor's warranty and indemnity obligations.

11.2.3 Contractor shall promptly furnish such additional security as may be required by District to protect its interests and those interests of persons or firms supplying labor or materials to the Work.

11.2.4 Surety companies used by Contractor shall be, on the date the Contract is signed by District and at all times while the bonds are in effect, either California Admitted Sureties or listed in the latest published United States Treasury Department list of Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies and either have a current A.M. Best A VIII rating or be an admitted surety that meets the requirements of the California Code of Civil Procedure, Section 995.660.

11.2.5 The premiums for all Bonds are included in the Contract Sum and shall be paid by Contractor.

11.2.6 The bonds shall name District as obligee.

11.2.7 Change Orders, Field Orders, Modifications, Changes in the Work and adjustments in the scope of Work Contract Sum or Contract Time shall in no way release or exonerate Contractor or its sureties from their obligations and notice thereof shall be waived by such sureties.

11.2.8 District and the Construction Manager shall have the right to communicate with Contractor's sureties with respect to matters that are related to Contractor's performance of its obligations under the Contract Documents. Contractor shall be provided with a copy of all such written communications. Such communications shall not create or be interpreted as creating any contractual relationship between District or the Construction Manager and any such surety.

11.2.9 In the event of a significant (15% or more) increase in Contract Sum, replacement bonds totaling the new Construction Contract amount may be required by District.

ARTICLE 12 – DEFECTIVE WORK

12.1 UNCOVERING OF WORK

12.1.1 If a portion of the Work is covered contrary to District's request or direction, or contrary to the requirements of the Contract Documents, it must, if required in writing by District, be uncovered for District's observation and be replaced at Contractor's expense without adjustment of the Contract Time or the Contract Sum.

12.1.2 If a portion of the Work has been covered, which is not required by the Contract Documents to be observed or inspected prior to its being covered and which District has not specifically requested to observe prior to its being covered, District may request to see such Work and it shall be uncovered and replaced by Contractor. If such Work is in accordance with the Contract Documents, the costs of uncovering and replacing the Work shall be added to the Contract Sum by Change Order; and if the uncovering and replacing of the Work extends the Contract Time, an appropriate adjustment of the Contract Time shall be made by Change Order. If such Work is not in accordance with the Contract Documents, Contractor shall pay such costs and shall not be entitled to an adjustment of the Contract Time or the Contract Sum.

12.2 CORRECTION OF DEFECTIVE WORK AND GUARANTEE TO REPAIR PERIOD

12.2.1 Besides guarantees required elsewhere, Contractor shall guarantee in writing all Work for a period of one (1) year. This guarantee termed "Guarantee To Repair Period," is a period of one (1) year, unless a longer period of time is specified in the Special Provisions and Technical Specifications, commencing as follows:

- (i) For any Work not described as incomplete in the Certificate of Substantial Completion, on the date of Substantial Completion.
- (ii) For space beneficially occupied or for separate systems fully utilized prior to Substantial Completion pursuant to Article 9.6, from the first date of such Beneficial Occupancy or actual use, as established an appropriate written authorization for Beneficial Occupancy.
- (iii) For all Work other than (i) or (ii) above, from the date of filing of notice of completion pursuant to Article 9.8.

12.2.2 Contractor shall (i) correct Defective Work that becomes apparent during the progress of the Work or during the Guarantee To Repair Period and (ii) replace, repair, or restore to District's satisfaction any other parts of the Work and any other real or personal property which is damaged or destroyed as a result of Defective Work or the correction of Defective Work, without any expense whatsoever to District. District will give notice of observed Defective

Work with reasonable promptness, and Contractor shall promptly commence such correction, replacement, repair or restoration upon notice from District, but in no case later than seven (7) Days after receipt of such notice. Contractor shall diligently and continuously prosecute such correction to completion. Contractor shall bear all costs of such correction, replacement, repair, or restoration and all Losses resulting from such Defective Work, including additional testing, inspection and compensation for District's or District's services and expenses. Contractor shall perform corrective Work at such times that are acceptable to District and in such a manner as to avoid, to the extent practicable, disruption to District's activities. Ordinary wear and tear, unusual abuse or neglect are excepted from this guarantee. Contractor shall notify District upon completion of repairs.

12.2.3 If immediate correction of Defective Work is required for life safety or the protection of property or, if in the opinion of District, Defective Work creates a dangerous condition or requires immediate corrections or attention to prevent further Loss to District or to prevent interruption of operations of District, District will attempt to give immediate notice to Contractor. If Contractor cannot be contacted or does not comply with District's request for correction within a reasonable time as determined by District, District or Separate Contractors under District's direction, may, notwithstanding the provisions of this Article, proceed to make such corrections or provide such attention; and the costs of such correction or attention shall be charged against Contractor. Such action by District will not relieve Contractor of the guarantees provided in this Article or elsewhere in the Construction Contract. Contractor shall replace, repair or restore to District's satisfaction any other parts of the Work and any other real or personal property, which is damaged or destroyed as a result of such Defective Work or the correction of such Defective Work.

12.2.4 Contractor shall promptly remove from the Site those portions of the Work and materials which are not in accordance with the Contract Documents and which are neither corrected by Contractor nor accepted by District.

12.2.5 If Contractor fails to commence correction of Defective Work within seven (7) Days after notice from District or fails to diligently prosecute such correction to completion, District may correct the Defective Work in accordance with Article 2.4; and, in addition, District may remove the Defective Work and store salvageable materials and equipment at Contractor's expense.

12.2.6 If Contractor fails to pay the costs of such removal and storage as required by Articles 12.2.4 and 12.2.5 within seven (7) Days after written demand, District may, without prejudice to other remedies, sell such materials at auction or at private sale or otherwise dispose of such material. Contractor shall be entitled to the proceeds of such sale, if any, in excess of the costs and damages for which Contractor is liable to District, including compensation for District's services and expenses. If such proceeds of sale do not cover costs and damages for which Contractor is liable to District, the Contract Sum

shall be reduced by such deficiency. If there are no remaining payments due Contractor or the remaining payments are insufficient to cover such deficiency, Contractor shall promptly pay the difference to District.

12.2.7 Contractor's obligations under this Article are in addition to and not in limitation of its warranty under Article 3.5 or any other obligation of Contractor under the Contract Documents. Enforcement of Contractor's express warranties and guarantees to repair contained in the Contract Documents shall be in addition to and not in limitation of any other rights or remedies District may have under the Contract Documents or at law or in equity for Defective Work. Nothing contained in this Article shall be construed to establish a period of limitation with respect to other obligations of Contractor under the Contract Documents, which may be longer specified periods. Establishment of the Guarantee To Repair Period relates only to the specific obligation of Contractor to correct the Work and in no way limits either Contractor's liability for Defective Work or the time within which proceedings may be commenced to enforce Contractor's obligations under the Contract Documents.

12.3 ACCEPTANCE OF DEFECTIVE WORK

12.3.1 Notwithstanding the provisions of Article 12.2 of these General Conditions, District shall have the option, at its sole discretion and by notice to Contractor, to accept Defective Work instead of requiring its removal or correction, in which case the Contract Sum shall be reduced by an amount equal to the difference between the value to District the Work would have had were it complete, correct and in conformity with the Contract Documents and the value to District of such Defective Work. Such option shall be exercised solely by notice to Contractor and shall not be implied from any act or omission by District or Construction Manager. If there are no remaining payments of the Contract Sum to be made to Contractor, or if the remaining payments and retention are insufficient to cover the amount of the reduction of the Contract Sum, Contractor shall promptly pay to District the amount of any such deficiency.

ARTICLE 13 – STATUTORY REQUIREMENTS

13.1 NONDISCRIMINATION/EQUAL OPPORTUNITY

13.1.1 For purposes of this Article, the term Subcontractor shall not include suppliers, manufacturers, or distributors, except those who will actually perform work on the Site.

13.1.2 Contractor shall comply and shall ensure that all Subcontractors comply with the California Government Code, Section 12900, and the applicable sections that follow.

13.1.3 Contractor agrees as follows during the performance of the Work:

.1 Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, age, ancestry, national origin, sexual orientation, handicap, veteran's status, medical condition (as defined in the California Government Code, Section 12926), marital status, or citizenship. All applicants for employment and employees are to be treated without regard to their race, color, religion, sex, age, ancestry, national origin, sexual orientation, handicap, veteran's status, medical condition (as defined in the California Government Code, Section 12926), marital status, or citizenship. Such equal treatment shall apply, but not be limited to:

- (i) Employment, upgrading, demotion, or transfer.
- (ii) Recruitment or recruitment advertising.
- (iii) Layoff or termination.
- (iv) Rates of pay or other forms of compensation.
- (v) Selection for training, including apprenticeship.

.2 Contractor agrees to post in conspicuous places, available to employees and applicants for employment, the Notice of Equal Employment Opportunity (EEO) setting forth this provision.

.3 Contractor shall send to each labor union, with which it has a collective bargaining agreement or other contract or understanding, the letter of Concurrence and the Notice of Equal Employment Opportunity (EEO) advising them of Contractor's commitments under this provision; and Contractor shall post copies of the Notice of Equal Employment Opportunity (EEO) in conspicuous places available to employees and applicants for employment. The Notice of Equal Employment Opportunity (EEO) shall be in English and other applicable languages.

.4 Contractor and all Subcontractors will permit access to their records of employment, employment advertisements, application forms, and other pertinent data and records by District or any appropriate District of the State of California designated by District for the purposes of investigation to ascertain compliance with this provision. The outcome of the investigation may result in the following:

a. A finding of willful violation of the provisions of this Construction Contract or of the Fair Employment Practices Act may be regarded by District as either of the following:

(i) A basis for determining that Contractor is not a "responsible bidder" as to future contracts for which such Contractor may submit bids.

(ii) A basis for refusing to accept or consider the bids of Contractor for future contracts.

b. District may deem a finding of willful violation of the Fair Employment Practices Act to have occurred upon receipt of written notice from the Fair Employment Practices Commission that it has done both of the following:

(i) Investigated and determined that Contractor has violated the Fair Employment Practices Act.

(ii) Issued an order under the California Government Code, Section 12970, or obtained an injunction under the California Government Code Section 12973.

c. Upon receipt of such written notice from the Fair Employment Practices Commission, District may notify Contractor that, unless it demonstrates to the satisfaction of District within a stated period that the violation has been corrected, Contractor's bids on future projects will not be considered.

.5 Contractor agrees that, should District determine that Contractor has not complied with this provision, Contractor shall forfeit to District, as a penalty, for each day or portion thereof, for each person who was denied employment as a result of such non-compliance, the penalties provided in Article 13.3 for violation of prevailing wage rates. Such penalty amounts may be recovered from Contractor; and District may deduct any such penalty amounts from the Contract Sum.

.6 Nothing contained in this provision shall be construed in any manner so as to prevent District from pursuing any other remedies that may be available at law.

.7 Contractor shall meet the following standards for affirmative compliance and provide District with satisfactory evidence of such compliance

upon District's request, which shall be evaluated in each case by District:

a. Contractor shall notify its Superintendent and other supervisory personnel of the nondiscrimination requirements of the Contract Documents and their responsibilities thereunder.

b. Contractor shall notify all sources of employee referrals (including unions, employment agencies, and the State of California Department of Employment) of the nondiscrimination requirements of the Contract Documents by sending to such sources and by posting the Notice of Equal Employment Opportunity (EEO).

c. Contractor or its representative shall, through all unions with whom it may have agreements, develop agreements that:

(i) Define responsibilities for nondiscrimination in hiring, referrals, upgrading, and training.

(ii) Implement an affirmative nondiscrimination program, in terms of the unions' specific areas of skill and geography, such that qualified minority women, non-minority women, and minority men shall be available and given an equal opportunity for employment.

d. Contractor shall notify District of opposition to the nondiscrimination requirements of the Contract Documents by individuals, firms or organizations during the term of the Contract.

.8 Contractor shall include the provisions of the foregoing Articles 13.1.3.1 through 13.1.3.6 in all subcontracts with Subcontractors, so that such provisions will be binding upon each such Subcontractor.

13.2 STATE LABOR LAW

13.2.1 Contractor, its agents, and employees shall be bound by and comply with all applicable provisions of the Labor Code and such federal, state and local laws which affect the conduct of the Work.

13.2.2 Contractor shall strictly adhere to the provisions of the Labor Code regarding the employment of apprentices; minimum wages; payment of wages; alien labor, the eight- hour day; overtime, Saturday, Sunday and holiday work; registration with the Department of Industrial Relations to maintain eligibility to work on public works; and nondiscrimination because of race, color, national origin, age, marital status, sexual orientation, disability, sex or religion. Contractor shall forfeit to District the penalties prescribed in the Labor Code for violations.

13.2.3 District has ascertained that the general prevailing rate of wages and

employer payments for health and welfare, vacation, pensions, and similar purposes applicable to the locality in which the Work is to be done are as set forth in that certain document entitled, "Prevailing Wage Scale," as indicated in the California Labor Code Part 7, Chapter 1 – Article 2, as determined by the Director of Industrial Relations. Applicable Prevailing Wage Rates and related information not listed are to be obtained from the State of California by Contractor. Contractor shall post a copy of applicable exhibits/wage rates at each Site. Contractor to whom the Construction Contract is awarded and any Subcontractor agree to pay wages and benefits not less than said specified rates to all workers employed by them in the execution of the Construction Contract. A person or concern who fails to do so shall be subject to withholding of contract payments equal to the underpayment of required wages and benefits and subject to the penalties provided for in the California Labor Code, Section 1775. Contractor and each Subcontractor shall prepare and certify their payrolls on forms satisfactory and in accordance with instructions to be furnished by District.

13.2.4 In accordance with the Labor Code, prevailing wage rate determinations for the work to be done on this Project are maintained by the District.

13.2.5 In the event there is a determination that Contractor is in violation of prevailing wage requirements, Contractor shall reimburse District for all investigative costs incurred in addition to any other remedies provided under the Contract Documents.

13.3 PAYROLL RECORDS

13.3.1 Contractor and all Subcontractors shall keep an accurate payroll record, showing the name, address, social security number, job classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journey worker, apprentice worker, or other employee employed in connection with the Work. All payroll records shall be certified as being true and correct by Contractor or Subcontractors keeping such records; and the payroll records shall be available for inspection at all reasonable hours at the principal office of Contractor on the following basis:

.1 A certified copy of an employee's payroll record shall be made available for inspection or furnished to such employee or the employee's authorized representative upon request.

.2 A certified copy of all Contractor and Subcontractor payroll records shall be made available for inspection upon request to District, the State of California Division of Labor Standards Enforcement, and the Division of Apprenticeship Standards of the State of California Division of Industrial Relations. A certified copy of all payroll records shall be furnished to District or its representatives upon request.

.3 A certified copy of all payroll records shall be made available upon request by the public for inspection or copies thereof made; provided, however, that the request by the public shall be made to either District, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement. The public shall not be given access to such records at the principal offices of Contractor or Subcontractors. Any copy of the records made available for inspection as copies and furnished upon request to the public or any public entity by District shall be marked or obliterated in such a manner as to prevent disclosure of an individual's name, address, and social security number. The name and address of Contractor awarded the Construction Contract or performing the Construction Contract shall not be marked or obliterated.

.4 As of April 1, 2015: contractors and subcontractors must furnish electronic certified payroll records to the Labor Commissioner (State of California, Division of Labor Standards Enforcement).

13.3.2 Contractor and all Subcontractors shall file a certified copy of the payroll records with the entity that requested the records within ten (10) Days after receipt of a written request. Contractor shall inform District of the location of such payroll records for the Project, including the street address, District, and county; and Contractor shall, within ten (10) days, provide notice of change of location of such records. In the event of noncompliance with the requirements of Article 13.3 or with the California Labor Code Section 1776, Contractor and its Subcontractors shall have ten (10) Days in which to comply following receipt of a notice specifying in what respects Contractor must comply. Should non-compliance still be evident after the ten (10) Day period, Contractor shall forfeit to District, as a penalty, one hundred dollars (\$100.00) for each Day, or portion thereof, for each worker, until strict compliance is accomplished. Such forfeiture amounts may be deducted from the Contract Sum. Contractor shall include stipulations in all of its subcontracts to ensure that Subcontractors comply with Section 13.3.

13.4 APPRENTICES

13.4.1 Attention is directed to the California Labor Code, Sections 1777.5, 1777.6, and 1777.7 and the California Code of Regulations, Title 8, Section 200, and the applicable sections that follow. To ensure compliance and complete understanding of the law requiring apprentices, and specifically the required ratio thereunder, Contractor or Subcontractors should, where some question exists, contact the State of California Division of Apprenticeship Standards prior to commencement of the Work. Responsibility for compliance with these requirements lies with Contractor

13.5 WORK DAY

13.5.1 Contractor shall not permit any worker to labor more than eight (8) hours during any one (1) Day or more than forty (40) hours during any one (1) calendar week, except as permitted by law and in such cases only upon such

conditions as are provided by law. Contractor shall forfeit to District, as a penalty, fifty dollars (\$50.00) for each worker employed in the execution of this Construction Contract by Contractor, or any Subcontractor, for each Day during which such worker is required or permitted to Work more than eight (8) hours in any one (1) Day and forty (40) hours in any one (1) calendar week in violation of the terms of this provision or in violation of the provisions of any law of the State of California. Such forfeiture amounts may be deducted from the Contract Sum. Contractor and each Subcontractor shall keep, or cause to be kept, an accurate record showing the actual hours worked each Day and each calendar week by each worker employed on the Project, which record shall be kept open at all reasonable hours to the inspection of District, its officers and agents, and to the inspection of the appropriate enforcement agency or representative and the State of California.

END OF GENERAL CONDITIONS

OCEANO COMMUNITY SERVICES DISTRICT

EMERGENCY GENERATOR REPLACEMENT PROJECT

OCEANO, CA

CONTRACT NO. 2019-01

EXHIBIT "D"

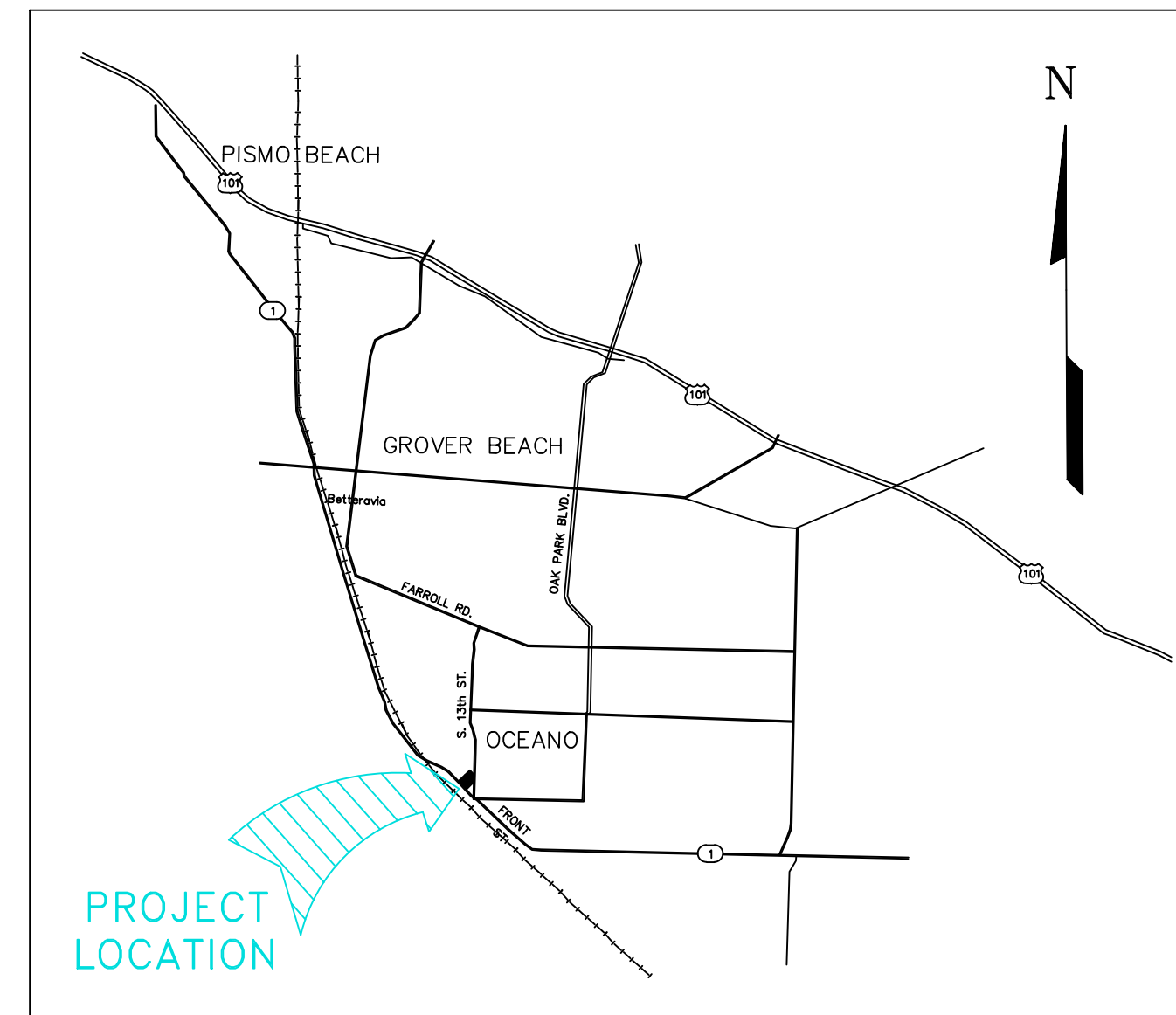
PLANS AND SPECIFICATIONS

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OCEANO COMMUNITY SERVICES DISTRICT REPLACEMENT STANDBY GENERATOR

OCEANO, CA
APN: 062-271-026

SHEET INDEX				
SHEET NO.	REV	DRAWING NO.	DESCRIPTION	
1	1	E-171001-01	TITLE SHEET	
2	1	E-171001-02	NOTES SHEET	
3	1	E-171001-03	SITE PLAN	
4	1	E-171001-04	SINGLE LINE DIAGRAM	
5	1	E-171001-05	ELEVATION PLAN	
S-1	0	N.A.	STRUCTURAL NOTES	
S-2	0	N.A.	FOUNDATION AND ANCHOR PLAN	



VICINITY MAP
SAN LUIS OBISPO COUNTY, CA.
SCALE : NONE

SITE LOCATION:

1687 FRONT STREET
OCEANO, CA 93445

OWNER:

OCEANO COMMUNITY SERVICES DISTRICT
ATTN: PAAVO OGREN
1655 FRONT STREET
OCEANO, CA 93445
TEL: (805) 481-6730

ENGINEER OF RECORD:

WILSON ENGINEERING
GARY D. WILSON, P.E.
771 MERCED ST.
PISMO BEACH, CA 93449
TEL. (805) 748-6209
GaryW@wilsonengineering.net

PROJECT DESCRIPTION:

REPLACE EXISTING EMERGENCY STANBY GENERATOR WITH A NEW EMERGENCY STANDBY GENERATOR ON A NEW CONCRETE PAD. INSTALL NEW CONDUCTORS IN EXISTING CONDUIT FROM THE NEW STANBY GENERATOR TO TWO LOCATIONS: THE SHERIFF SUBSTATION AND THE COMBINED OCEANO COMMUNITY SERVICES DISTRICT FIRE STATION AND OFFICE. INSTALL TWO NEW AUTOMATIC TRANSFER SWITCHES, ONE AT THE SHERIFF SUBSTATION AND ONE AT THE COMBINED OCEANO COMMUNITY SERVICES DISTRICT FIRE STATION AND OFFICE.

GENERATOR DESCRIPTION:

THE GENERATOR SHALL BE A CUMMINS C60 D6C DIESEL GENSET, 60 HZ, 60 kW- STANDBY RATING. THE GENERATOR SET SHALL INCLUDE A DOUBLE-WALLED FUEL TANK SUB BASE WITH AUTOMATIC LEAK DETECTION, CUMMINS MODEL A053L911, 48 HR MINIMUM. THE GENERATOR SET SHALL HAVE IBC SEISMIC CERTIFICATION AND THE ENGINE SHALL BE APPROVED BY THE SAN LUIS OBISPO AIR POLLUTION CONTROL DISTRICT. THE GENERATOR SET SHALL INCLUDE A CUMMINS F217-2 SOUND ATTENUATION LEVEL 2 CONFIGURATION.

SPECIAL INSPECTORS:

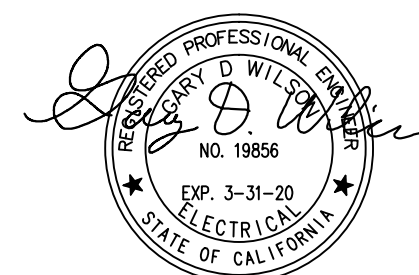
ELECTRICAL AND CIVIL:
GARY WILSON, P.E.
WILSON ENGINEERING
771 MERCED STREET
PISMO BEACH, CA 93449
(805) 748-6209
GaryW@wilsonengineering.net
CALIFORNIA P.E. LICENSES: ELECTRICAL E-19856
CIVIL C-70607

GEOTECHNICAL:
KYLE MARTINEZ, P.E.
EARTH SYSTEMS
4378 OLD SANTA FE ROAD
SAN LUIS OBISPO, CA 93401
(805) 544-3276
kmartinez@earthsystems.com
CALIFORNIA P.E. LICENSES: CIVIL C-80666



NOTES:

CODE COMPLIANCE: ALL WORK SHALL CONFORM TO AND BE PERFORMED IN ACCORDANCE WITH THE 2016 CALIFORNIA ELECTRIC CODE.



WILSON ENGINEERING

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Pismo Beach, CA 93449

(805) 748-6209



REV.	DATE	REVISION	REV. BY	CHK. BY
A	1/10/18	ISSUED FOR REVIEW	GW	
O	2/16/18	ISSUED FOR SUBMITTAL FOR PERMIT	GW	
Δ	5/7/18	CORRECTIONS FOR PLAN CHECK COMMENTS DATED 3/16/2018	GW	

OCEANO COMMUNITY SERVICES DISTRICT
NEW EMERGENCY GENERATOR
TITLE SHEET
1655 FRONT ST., OCEANO, CA 9345

DRAWING NO. E-171001-01	DRAWN BY GW	FACILITY: OFFICE	REV. 1
CHECKED BY GW	SCALE AS SHOWN	SHEET 1	OF 5
PROJECT NUMBER 171001	DATE 1/3/2018		

GENERAL NOTES

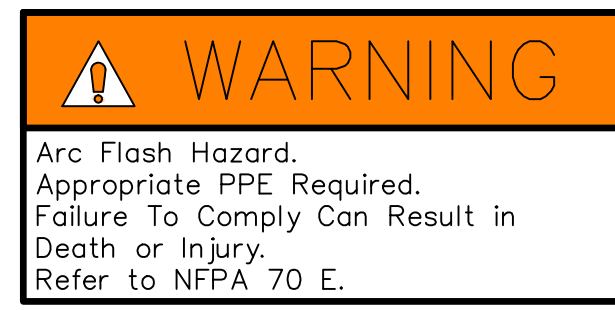
- ALL WORK SHALL CONFORM TO AND BE PERFORMED IN ACCORDANCE WITH CODES, STANDARDS, AND ORDINANCES AS SET FORTH BY THE AUTHORITIES HAVING JURISDICTION AND THEIR LATEST ADOPTED EDITIONS (IN EFFECT AT TIME OF BUILDING PERMIT APPLICATION) OF THE FOLLOWING PUBLICATIONS:
 - CALIFORNIA CODE OF REGULATIONS TITLE 24: INCLUDES NATIONAL ELECTRICAL CODE AND INTERNATIONAL FIRE CODE, INTERNATIONAL BUILDING CODE, ETC. WITH CALIFORNIA AND OTHER LOCAL AMENDMENTS AS APPLICABLE.
 - AMERICANS WITH DISABILITIES ACT (ADA).
- THE ELECTRICAL CONTRACTOR IS RESPONSIBLE TO MAINTAIN ALL EQUIPMENT IN A SAFE AND RESPONSIBLE MANNER. KEEP DEAD FRONT EQUIPMENT IN PLACE WHILE EQUIPMENT IS ENERGIZED. CONDUCT ALL CONSTRUCTION OPERATIONS IN A SAFE MANNER FOR EMPLOYEES AS WELL AS OTHER WORKPERSONS OR ANYONE VISITING THE JOB SITE. PROVIDE BARRIERS, FLAGS, TAPE, ETC. AS REQUIRED FOR SAFETY. THE CONTRACTOR SHALL HOLD ALL PARTIES HARMLESS OF NEGLIGENT SAFETY PRACTICES, WHICH MAY CAUSE INJURY TO OTHERS ON OR NEAR THE JOB SITE.
- FIRE RATED ASSEMBLIES SHALL MAINTAIN RATINGS AS SPECIFIED IN THE CALIFORNIA BUILDING CODE CHAPTER 7. CONTRACTOR SHALL PROVIDE AND INSTALL PHYSICAL ENCLOSURE AROUND FIXTURES, PANELS, ETC. AS REQUIRED. ALL ASSEMBLIES TO BE PENETRATED SHALL BE INSTALLED WITH APPLICABLE THROUGH-PENETRATION FIRESTOP SYSTEM AS DETERMINED BY UL CLASSIFICATION. BEFORE CONSTRUCTION, VERIFY AND COMPLY WITH REQUIREMENTS OF LOCAL AUTHORITY HAVING JURISDICTION.
- BEFORE ROUGH-IN, VERIFY ALL MOUNTING HEIGHTS AND EXACT LOCATIONS FOR ALL EQUIPMENT, ELECTRICAL CONNECTIONS, STUB-UPS, RECEPTACLES, ETC. WITH OWNER.
- LABEL PANELS, CABINETS, BACKBOARDS, MAIN DEVICES, SAFETY SWITCHES, CONTACTORS AND OTHER SPECIFICALLY DESIGNATED EQUIPMENT SHOWN ON PLANS. USE ENGRAVED LAMINATED PLASTIC NAMEPLATES ATTACHED BY SCREWS OR RIVETS. FOR FEEDERS, NEATLY AND INDELIBLY LABEL CONDUIT DESTINATIONS ON BOTH VISIBLE ENDS OF CONDUIT RUNS WHERE CONDUITS TERMINATE AT DESIGNATED ENCLOSURES, STRUCTURES OR EQUIPMENT (INCLUDING PULL AND SPLICE BOXES).
- ALL MECHANICAL AND ELECTRICAL EQUIPMENT SHALL BE ANCHORED OR BRACED TO MEET THE HORIZONTAL AND VERTICAL FORCES PRESCRIBED IN THE 2007 CBC, SECTION 1614A.1.3 AND ASCE 7-05 SECTIONS 13.3, 13.4 AND 13.6.
- ANY DEMOLITION WORK SHOWN WAS PREPARED FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER DOES NOT REPRESENT THAT ALL ITEMS WHICH REQUIRE DEMOLITION HAVE BEEN SHOWN.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CAREFULLY EXAMINE THE SITE AND THE CONTRACT DOCUMENTS AND TO PERFORM ALL DEMOLITION AND RECONSTRUCTION WHICH MAY BE REQUIRED FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK.
- INFORMATION FOR EXISTING CONDITIONS WAS PRIMARILY GAINED FROM DRAWINGS BY OTHERS AND/OR LIMITED FIELD INVESTIGATION. BEFORE BID, VISIT SITE TO VERIFY EXISTING CONDITIONS AND MAKE ALLOWANCE FOR VARIATIONS FROM THAT SHOWN.
- CLOSELY COORDINATE OUTAGE AND FACILITY DISRUPTION TIME WITH THE OWNER. MINIMUM 72-HOUR NOTICE IS REQUIRED BEFORE ANY CIRCUIT SHUTDOWN OR DISRUPTION OF FACILITY PERSONNEL FUNCTIONING.

EXISTING CONDITIONS NOTES

- ANY INFORMATION SHOWN ON THE PLANS FOR EXISTING CONDITIONS WAS PRIMARILY GAINED FROM "AS BUILT" DRAWINGS AND/OR LIMITED FIELD INVESTIGATION. BEFORE CONSTRUCTION, THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND MAKE ALLOWANCE FOR VARIATIONS FROM THAT SHOWN. CONTRACTOR SHALL ALSO FIELD VERIFY AND TAKE ALL DUE PRECAUTIONARY MEANS TO PROTECT ALL UNDERGROUND LINES, WIRING AND STRUCTURES REGARDLESS IF SHOWN OR NOT ON THE DRAWINGS.
- PRIOR TO CONSTRUCTION, CONTRACTOR SHALL POTHOLE AND VERIFY LOCATION AND DEPTH OF EXISTING UTILITIES AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF THE DISCOVERY OF ANY UTILITY OR ANY UNDERGROUND LINES, WIRING AND STRUCTURES THAT WAS OMITTED FROM THE PLANS, INCORRECTLY SHOWN OR NOT PROPERLY MARKED. IF THE UTILITY DOES NOT PROVIDE LOCATION INFORMATION OR MARKING SERVICES IN THE FIELD, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER.
- OVERHEAD UTILITIES ARE NOT SHOWN IN ALL INSTANCES. CONTRACTOR SHALL USE DUE CARE WHEN WORKING NEAR OR UNDER SAID UTILITIES AND SHALL PROTECT THEM IN PLACE.
- THE CONTRACTOR SHALL NOT INTERRUPT THE SERVICE FUNCTION OF ANY UTILITY OR FIELD PRODUCTION EQUIPMENT, DISTURB THE SUPPORT BASE, OR MODIFY ANY FACILITY WITHOUT AUTHORITY FROM THE UTILITY OWNER AND/OR POC MANAGEMENT.
- EXISTING PIPELINES/UTILITIES THAT CROSS NEW SYSTEM PIPING OR SIMILAR EXCAVATIONS REQUIRED TO CONSTRUCT THE PIPING, SHALL BE PROTECTED IN PLACE, UNLESS OTHERWISE NOTED. ALL EXISTING PIPELINES/UTILITIES SHALL BE SUPPORTED ACROSS THE EXCAVATION DURING CONSTRUCTION.
- THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY OWNER AND OCEANO COMMUNITY SERVICES DISTRICT MANAGEMENT IF ANY UTILITY OR UNDERGROUND LINES, WIRING AND STRUCTURES IS DISTURBED OR DAMAGED DURING THE COURSE OF THE WORK. THE CONTRACTOR SHALL BEAR THE COSTS OF REPAIR OR REPLACEMENT OF ANY MARKED UTILITY WHERE DAMAGE WAS CAUSED BY THE CONTRACTOR'S ACTIVITIES.

GROUNDING NOTES

- ALL DIRECT BURIAL GROUNDING CONDUCTORS SHALL BE INSTALLED A MINIMUM 30 INCHES BELOW FINISHED GRADE UNLESS OTHERWISE NOTED.
- EQUIPMENT GROUND CONDUCTOR SHALL BE MIN. #6 COPPER AND TAP TO EQUIPMENT SHALL BE MIN. #6 COPPER OR AS SHOWN.
- UNDERGROUND CONNECTION SHALL BE "CADWELD", BURNDY HYPRESS OR APPROVED EQUAL.
- FRAMES OF ALL MOTORS SHALL BE BONDED TO THE GROUND GRID.
- ABOVE-GROUND GROUND WIRE TO BE PROTECTED FROM MECHANICAL DAMAGE.
- A SUPPLEMENTAL ELECTRODE SHALL BE REQUIRED NOT LESS THAN 6 FT. APART UNLESS A SINGLE ROD, PIPE, OR PLATE GROUNDING ELECTRODE HAS A RESISTANCE TO EARTH OF 25 OHMS OR LESS. A MEASURE OF RESISTANCE IS REQUIRED TO DETERMINE GROUND RESISTANCE FOR SINGLE ELECTRODE INSTALLATIONS TO VERIFY A RESISTANCE TO EARTH OF 25 OHMS OR LESS.
- ALL MEASURE OF RESISTANCE SHALL BE DOCUMENTED IN A WRITTEN REPORT AND SIGNED AND STAMPED BY A REGISTERED ELECTRICAL ENGINEER AND BE AVAILABLE FOR THE INSPECTOR AT THE TIME OF INSPECTION.



NOTE: IN ACCORDANCE WITH CEC 110.16, PROVIDE ARC FLASH PROTECTION WARNING LABELS ON ELECTRICAL EQUIPMENT SUCH AS SWITCHBOARDS, PANELBOARDS, INDUSTRIAL CONTROL PANELS, METER SOCKET ENCLOSURES, AND MOTOR CONTROL CENTERS THAT ARE LIKELY TO REQUIRE EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE WHILE ENERGIZED. THE MARKING SHALL BE LOCATED SO AS TO BE CLEARLY VISIBLE TO QUALIFIED PERSONS BEFORE EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE OF EQUIPMENT.

ARC FLASH SIGNAGE

SHORT CIRCUIT CURRENT

THE SHORT CIRCUIT CURRENT AVAILABLE FROM A TYPICAL 75 KVA, 480V GENERATOR IS:
 $I_{sc} = FLA/X$ (FULL LOAD AMP/0.16)
 $FLA = (KVA*1000)/480V = 75,000/480 = 156A$
 THEREFORE, $I_{sc} = 156/0.16 = 976$ AMPS.

LOAD ANALYSIS

METER DATA PROVIDED BY PG&E FOR THE FIRE STATION AND SHERIFF SUBSTATIONS SHOWS A PEAK KW DEMAND OVER THE PAST 18 MONTHS AS FOLLOWS:
 FIRE STATION 11 KW (NOVEMBER 2016)
 SHERIFF SUBSTATION 20 KW (NOVEMBER 2016 AND SEPTEMBER 2017)
 PER CEC 220.87, THE FEEDER LOAD IS 125% OF THE MAXIMUM DEMAND (ASSUME 0.8 POWER FACTOR):
 FIRE STATION $((11 KW*1000)/(480V*0.8PF))*1.25 = 35.8A$
 SHERIFF SUBSTATION $((20 KW*1000)/(480V*0.8PF))*1.25 = 65.1A$

VOLTAGE DROP CALCULATION

THE VOLTAGE DROP FOR THE FEEDER FROM THE GENERATOR TO THE FIRE STATION IS CALCULATED BASED ON A DISTANCE OF 350 FT. FOR #2 COPPER CONDUCTORS, SINGLE PHASE, 480V, WITH A CURRENT OF 35.8 AMPS:
 VOLTAGE DROP: 3.92V
 VOLTAGE DROP PERCENT: 0.82%

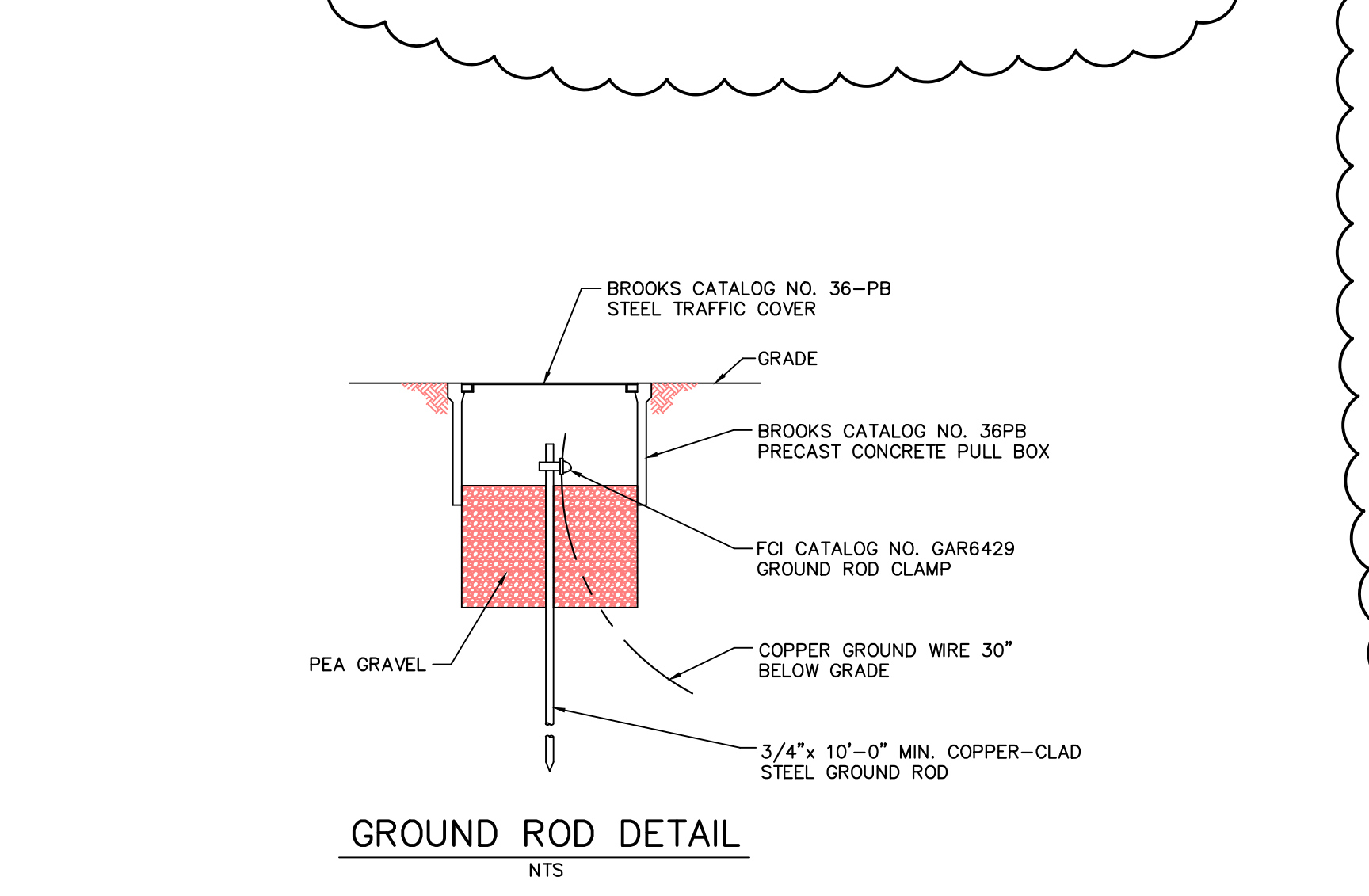
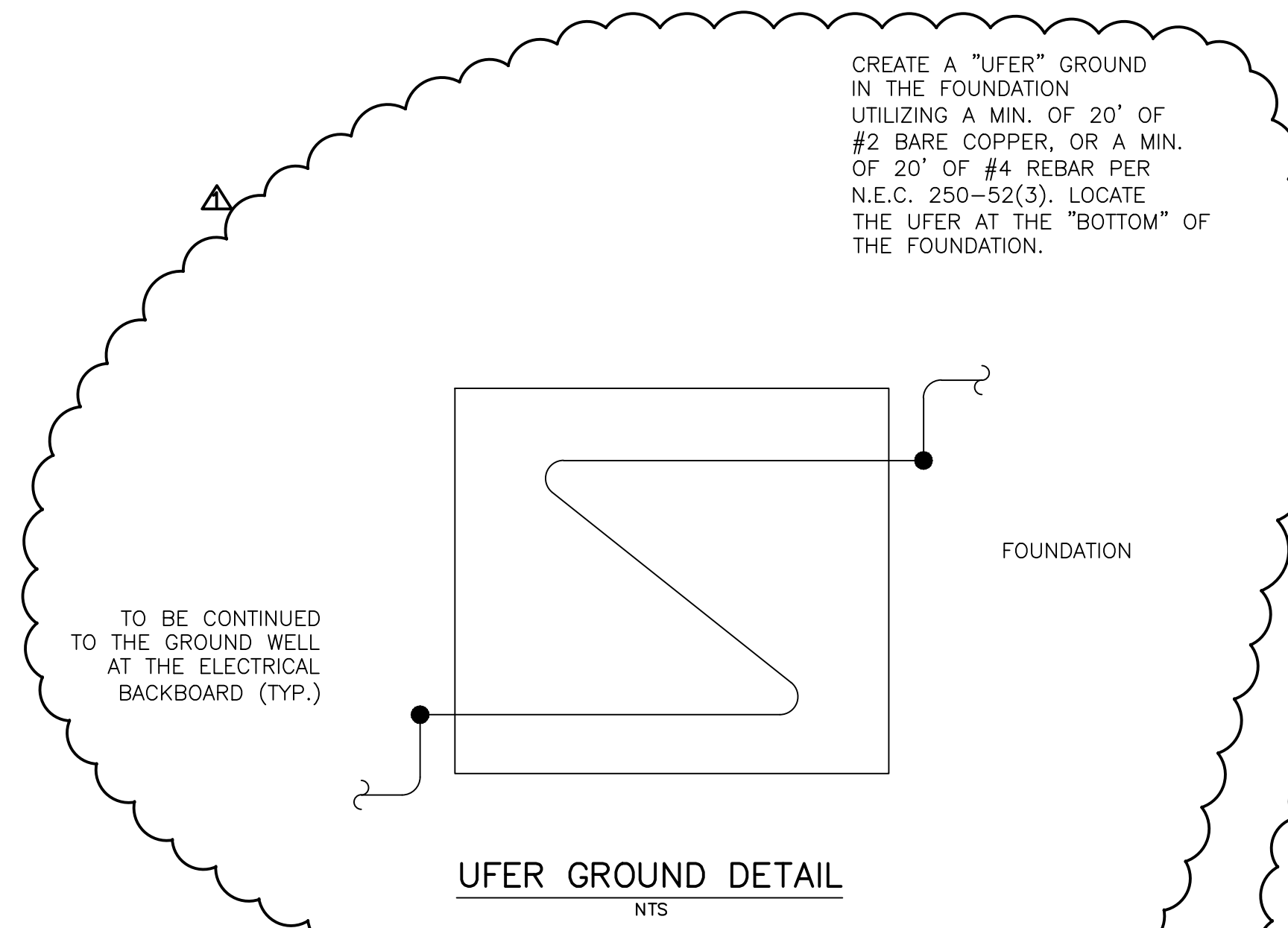
THE VOLTAGE DROP FOR THE FEEDER FROM THE GENERATOR TO THE SHERIFF SUBSTATION IS CALCULATED BASED ON A DISTANCE OF 175 FT. FOR #2 COPPER CONDUCTORS, SINGLE PHASE, 480V, WITH A CURRENT OF 65.1 AMPS:
 VOLTAGE DROP: 3.56V
 VOLTAGE DROP PERCENT: 0.74%

CONCRETE WASTE MANAGEMENT WM-8

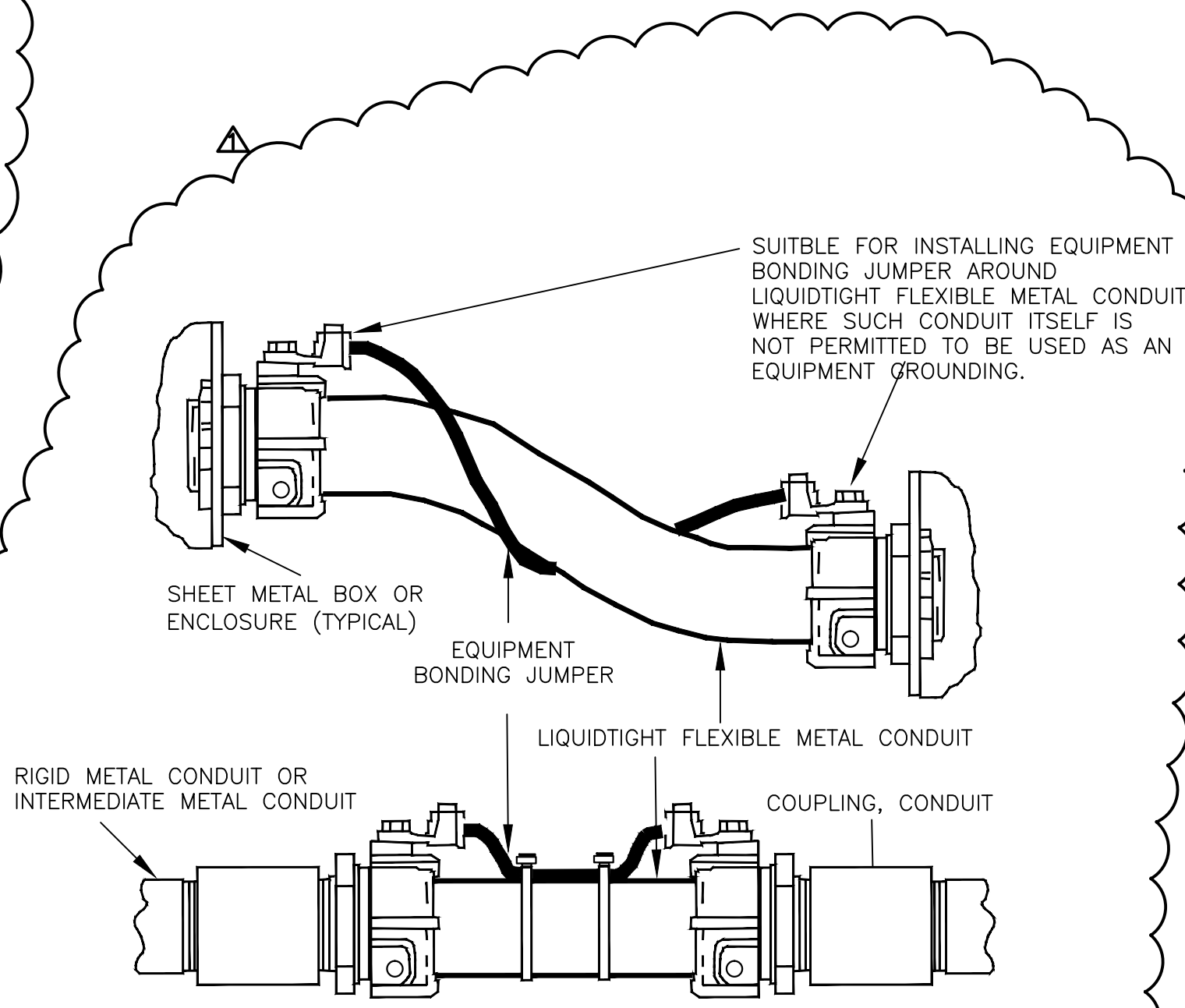
A CONCRETE WASHOUT BASIN SHALL BE CONSTRUCTED PER THE CALIFORNIA STORMWATER BMP HANDBOOK SECTION WM-8 PUBLISHED ON JULY 2012 BY THE CALIFORNIA STORMWATER QUALITY ASSOCIATION (CASQA).

THE WASHOUT SITE SHALL BE AT LEAST 50 FT. AWAY FROM STORM DRAINS, OPEN DITCHES, OR WATER BODIES. DO NOT ALLOW RUNOFF FROM THIS AREA BY CONSTRUCTION A TEMPORARY PIT OR BERMED AREA LARGE ENOUGH FOR THE LIQUID AND SOLID WASTE. REFER TO PAGE 6 OF THE PUBLICATION FOR BASIN CONSTRUCTION DETAILS.

USE 10 MIL PLASTIC FOR THE LINING OF THE TEMPORARY BASIN AND INSTALL A CONCRETE WASHOUT SIGN WITHIN 30 FT. OF THE BASIN.



NOTES SHEET



- NOTES:
- WHERE SPECIFICATIONS REQUIRE INSTALLATION OF AN EXTERNAL BONDING JUMPER AROUND LIQUIDTIGHT METAL CONDUIT, TERMINATING FITTINGS INSTALLED SHALL BE LISTED AS EXTERNAL BONDING LIQUIDTIGHT METAL CONDUIT CONNECTORS. EXAMPLE: THOMAS & BETTS SERIES 5331GR, 5341GR, 5351GR OR 5271GR.
 - GROUNDING LIQUIDTIGHT FLEXIBLE METAL CONDUIT FITTINGS INSTALLED SHALL BE OF RUGGED CONSTRUCTION WITH THE CAPABILITY FOR MOUNTING THE EQUIPMENT BONDING JUMPER IN SEVERAL POSITIONS. MECHANICAL OR COMPRESSION TYPE LUGS SHALL BE USED TO INSTALL BONDING JUMPER.
 - EQUIPMENT BONDING JUMPER SHALL BE ROUTED WITH RACEWAY AND WHERE NECESSARY HELD IN PLACE BY CABLE TIES.

BONDING LIQUITTIGHT FLEXIBLE METAL CONDUIT DETAIL

RATING OR SETTING OF OVERCURRENT PROTECTIVE DEVICE	MINIMUM EQUIPMENT GROUND SIZE COPPER
15	14
20	12
30	10
40	10
60	10
100	8
200	6
300	4
400	3
500	2
600	1
800	1/0

CONDUCTOR SIZE	COPPER THW/THHN, 60°C	COPPER THW/THHN, 75°C
14	20	20
12	25	25
10	30	35
8	40	50
6	55	65
4	70	85
3	85	100
2	95	115
1	110	130
1/0	125	150
2/0	175	175
3/0	200	200
4/0	230	230
250	255	255
300	285	285
350	310	310
400	335	335
500	380	380

NOTE: PER NEC 240.3 (B); THE NEXT HIGHER STANDARD OVERCURRENT DEVICE RATING (ABOVE THE AMPACITY OF THE CONDUCTORS BEING PROTECTED) SHALL BE PERMITTED, PROVIDED ALL OF CONDITIONS (1), (2) AND (3) OF THIS ARTICLE HAVE BEEN MET.

NOTES:



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E 19856 C 70607
 Gary D. Wilson, P.E.
 gmwilson888@scgobol.net
 771 Merced St. Pismo Beach, CA 93449 (805) 748-6209

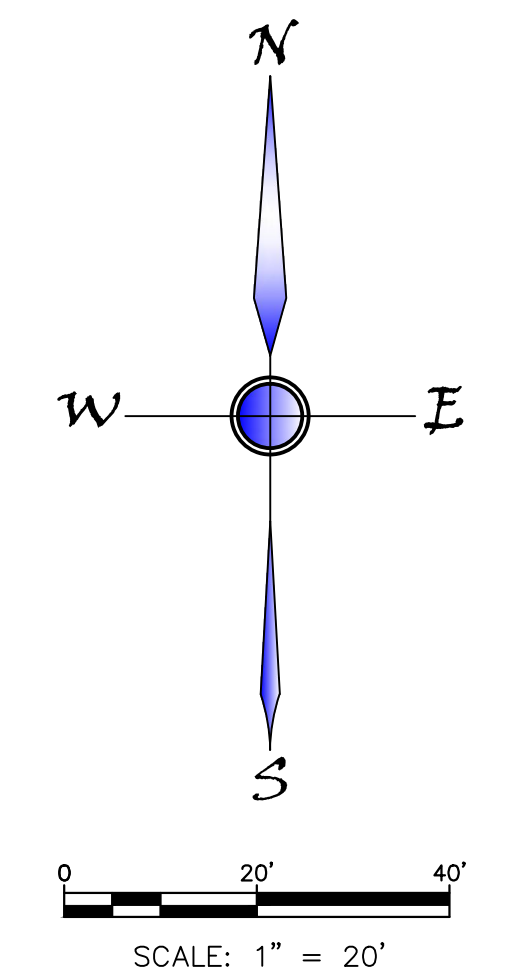
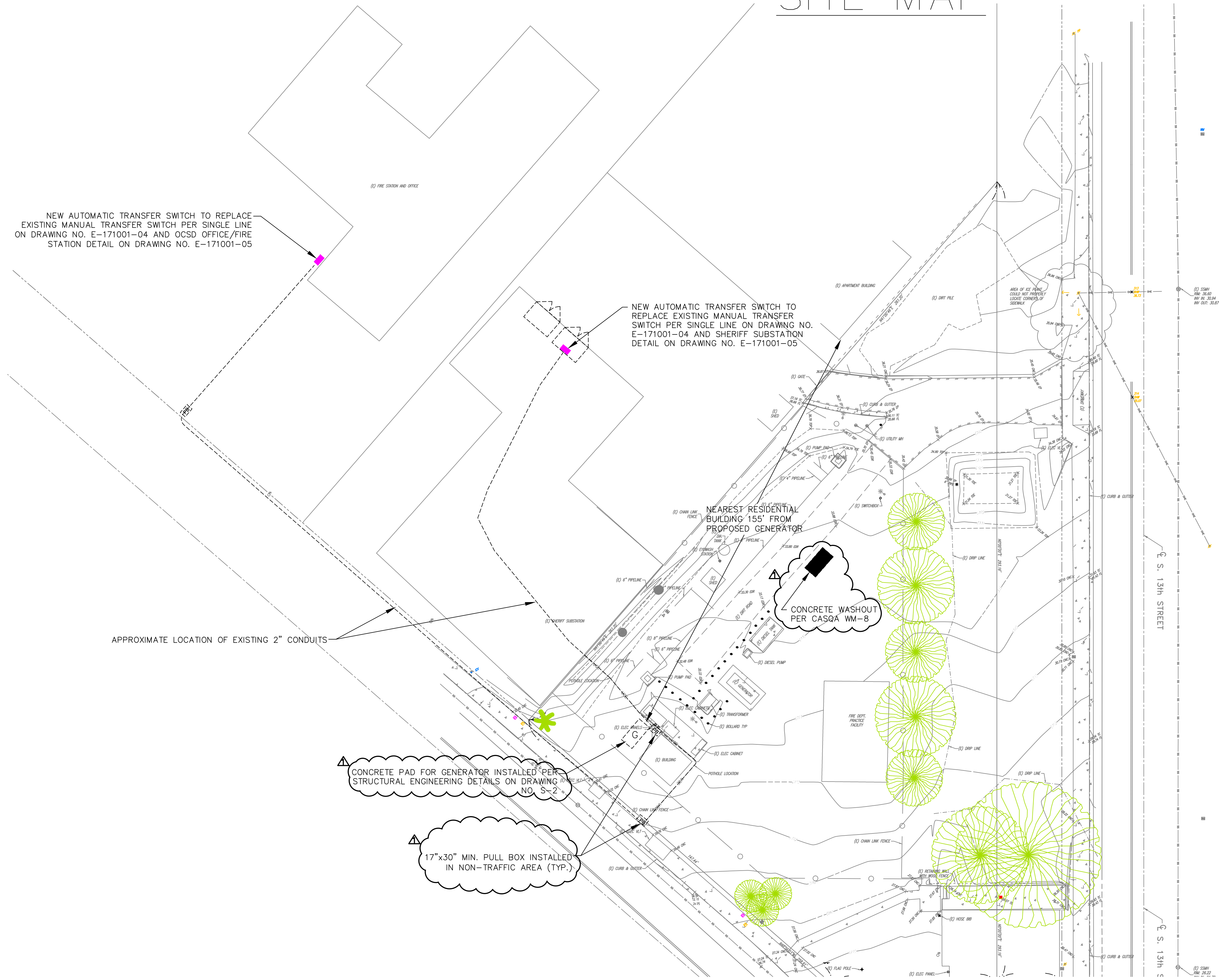


REV.	DATE	REVISION	REV. BY	CHK. BY
A	1/10/18	ISSUED FOR REVIEW	GW	
0	2/16/18	ISSUED FOR SUBMITTAL FOR PERMIT	GW	
Δ	5/7/18	CORRECTIONS FOR PLAN CHECK COMMENTS DATED 3/16/2018	GW	

OCEANO COMMUNITY SERVICES DISTRICT
 NEW EMERGENCY GENERATOR
 NOTES SHEET
 1655 FRONT ST., OCEANO, CA 9345

DRAWING NO. E-171001-02	DRAWN BY: GW CHECKED BY: GW SCALE: AS SHOWN	FACILITY: OFFICE	REV. 1
PROJECT NUMBER 171001	DATE 1/3/2018	SHEET 2	OF 5

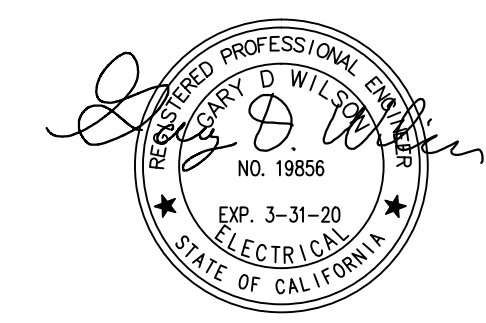
SITE MAP



LEGEND

- EXISTING 480V UNDERGROUND CONDUIT
- PROPOSED AUTOMATIC TRANSFER SWITCH
- PROPOSED CONCRETE PAD FOR GENERATOR
- PROPOSED PULL BOX, 17"x30" MIN.

NOTES: TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS. CONTRACTOR TO VERIFY LOCATION AND DISTANCES.



WILSON ENGINEERING
E 19856 C 70607

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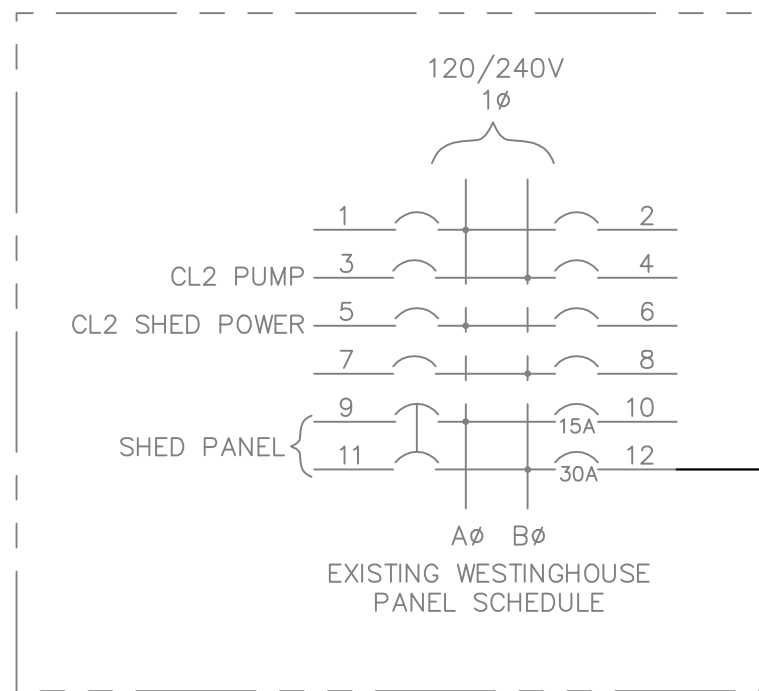


REV.	DATE	REVISION	REV. BY	CHK. BY
A	1/10/18	ISSUED FOR REVIEW	GW	
0	2/16/18	ISSUED FOR SUBMITTAL FOR PERMIT	GW	
Δ	5/7/18	CORRECTIONS FOR PLAN CHECK COMMENTS DATED 3/16/2018	GW	

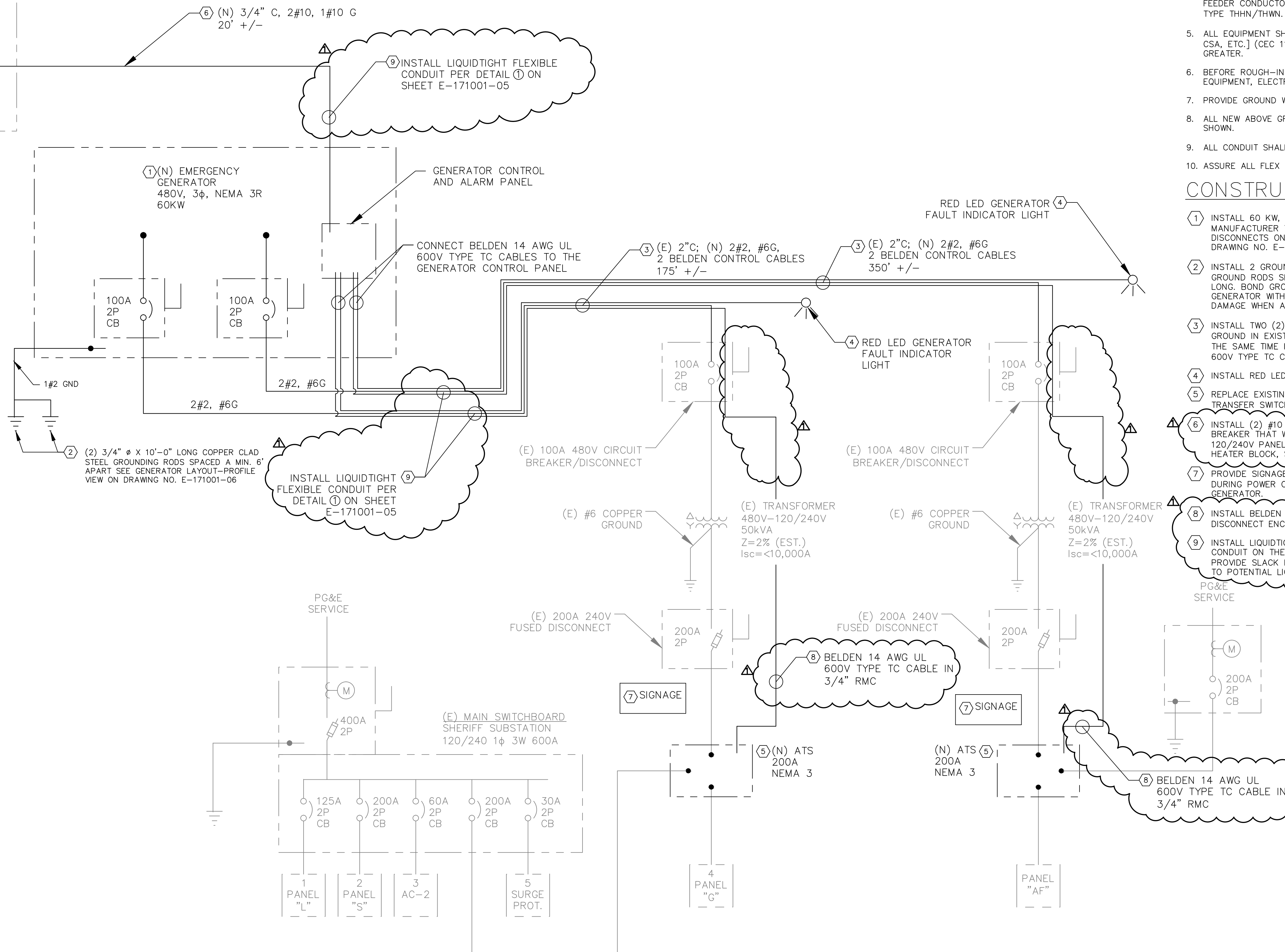
OCEANO COMMUNITY SERVICES DISTRICT
NEW EMERGENCY GENERATOR
SITE MAP
1655 FRONT ST., OCEANO, CA 9345

DRAWING NO. E-171001-03	DRAWN BY GW	FACILITY OFFICE	REV. 1
PROJECT NUMBER 171001	CHECKED BY AS SHOWN	DATE 1/3/2018	SHEET 3 OF 5

SINGLE LINE DIAGRAM



(E) PANELBOARD
WELL 8 CONTROL PANEL
120/240 1φ



GENERAL NOTES:

- ALL ELECTRICAL WORK SHALL CONFORM TO THE LATEST EDITION OF THE CEC.
- ALL CONDUCTORS SHALL BE RATED FOR 600V.
- ALL SINGLE CONDUCTORS SHALL BE COPPER WITH TYPE THHN/THWN INSULATION UNLESS OTHERWISE NOTED.
- ALL SWITCHES, CIRCUIT BREAKERS AND OTHER EQUIPMENT, AS SPECIFIED, SHALL HAVE TERMINATION PROVISIONS LISTED AND IDENTIFIED FOR USE WITH 75°C CONDUCTORS, AND ALL FEEDER CONDUCTORS, AND CONDUITS, ARE SIZED BASED ON USE OF 75°C COPPER WIRES TYPE THHN/THWN.
- ALL EQUIPMENT SHALL HAVE AN APPROVED TESTING LABORATORY LABEL ATTACHED [UL, CSA, ETC.] (CEC 110-2) AND HAVE A SHORT CIRCUIT (Isc) RATING OF 10,000 AMPS OR GREATER.
- BEFORE ROUGH-IN, VERIFY ALL MOUNTING HEIGHTS AND EXACT LOCATIONS FOR ALL EQUIPMENT, ELECTRICAL CONNECTIONS, STUB-UPS, RECEPTACLES, ETC. WITH OWNER.
- PROVIDE GROUND WIRE IN ALL CONDUITS CONTAINING POWER OR LIGHTING CIRCUITS.
- ALL NEW ABOVE GROUND CONDUIT SHALL BE THREADED RIGID METAL CONDUIT EXCEPT AS SHOWN.
- ALL CONDUIT SHALL BE MINIMUM 3/4" UNLESS NOTED OTHERWISE.
- ASSURE ALL FLEX FITTINGS ARE PROPERLY TIGHTENED.

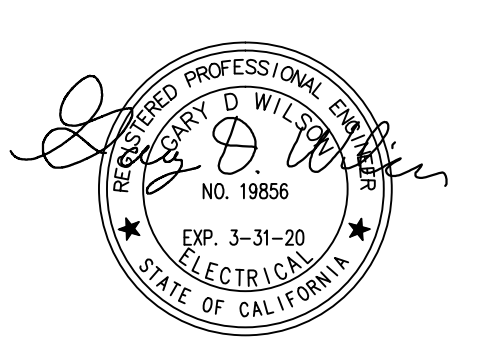
CONSTRUCTION NOTES

- INSTALL 60 KW, 480V, 3 PHASE GENERATOR PER MANUFACTURERS INSTRUCTIONS. GENERATOR MANUFACTURER TO SUPPLY TWO (2) 100A, 480V, 2 PHASE FUSED OR CIRCUIT BREAKER DISCONNECTS ON THE GENERATOR. MOUNT GENERATOR ON CONCRETE PAD PER DETAILS ON DRAWING NO. E-171001-06.
- INSTALL 2 GROUND RODS A MINIMUM 6' APART PER DETAIL ON DRAWING NO. E-171001-06. GROUND RODS SHALL BE COPPER-CLAD STEEL WITH MINIMUM DIMENSIONS OF 3/4" X 10'-0" LONG. BOND GROUNDING RODS TOGETHER WITH #2 AWG BARE COPPER WIRE AND BOND TO GENERATOR WITH #2 AWG BARE COPPER WIRE. PROTECT GROUND WIRE FROM MECHANICAL DAMAGE WHEN ABOVE GROUND.
- INSTALL TWO (2) #2 THHN/THWN COPPER CONDUCTORS, ONE (1) #6 THHN/THWN COPPER GROUND IN EXISTING 2" CONDUIT FROM GENERATOR TO NEW AUTOMATIC TRANSFER SWITCH. AT THE SAME TIME INSTALL TWO (2) BELDEN PART NUMBER 27081AS 14 GAGE 3 CONDUCTOR 600V TYPE TC CABLES WITH THE ABOVE CONDUCTORS IN THE EXISTING 2" CONDUIT.
- INSTALL RED LED WARNING LIGHT, GRANGER ITEM #2ERP4, OR EQUAL.
- REPLACE EXISTING MANUAL TRANSFER SWITCH WITH AN ASCO SERIES 300 AUTOMATIC POWER TRANSFER SWITCH, 200 AMP 240V/60HZ, NEMA 3R RATED ENCLOSURE, OR EQUAL.
- INSTALL (2) #10 THHN/THWN CONDUCTORS AND (1) #10 GROUND FROM THE EXISTING 120V 30A BREAKER THAT WAS USED TO PROVIDE POWER TO THE EXISTING GENERATOR ON EXISTING 120/240V PANELBOARD TO GENERATOR CONTROL PANEL TO PROVIDE POWER FOR GENERATOR HEATER BLOCK, SPACE HEATER AND BATTERY CHARGER.
- PROVIDE SIGNAGE AT EACH SERVICE "CAUTION STANDBY GENERATOR AUTOMATICALLY STARTS DURING POWER OUTAGE" AND PROVIDE PARTIAL SITE MAP SHOWING APPROXIMATE LOCATION OF GENERATOR.
- INSTALL BELDEN CABLE IN 3/4" RIGID METAL CONDUIT (RMC) FROM THE EXISTING 100A DISCONNECT ENCLOSURE TO THE NEW AUTOMATIC TRANSFER SWITCH (ATS).
- INSTALL LIQUIDTIGHT FLEXIBLE METAL CONDUIT FROM THE GENERATOR TO THE RIGID METAL CONDUIT ON THE OUTSIDE OF THE CONCRETE PAD PER FIGURE 1 ON SHEET E-171001-05. PROVIDE SLACK IN THE CONDUIT TO ALLOW FOR 6" OF SETTLING OF THE CONCRETE SLAB DUE TO POTENTIAL LIQUIFICATION.

ELECTRICAL ABBREVIATIONS

A	AMPERE
BC	BARE COPPER
CB	CIRCUIT BREAKER
C	CONDUIT
CEC	CALIFORNIA ELECTRIC CODE
(E)	EXISTING EQUIPMENT
G	GROUND
KCML	1000 CIRCULAR MILS (AREA)
KV	KILOVOLT
KVA	KILOVOLT AMPHRE
M	METER
(N)	NEW EQUIPMENT
NEC	NATIONAL ELECTRIC CODE
RMC	RIGID METAL CONDUIT
V	VOLTAGE
XFMR	TRANSFORMER

NOTES:
EXISTING EQUIPMENT SHOWN ON THIS PLAN IS SHADED LIGHT AND WAS BASED ON VISUAL EVIDENCE, IF POSSIBLE, OR FROM INFORMATION BY OTHERS. CONTRACTOR TO VERIFY ALL EXISTING EQUIPMENT AND NOTIFY ENGINEER OF ANY DISCREPANCIES.



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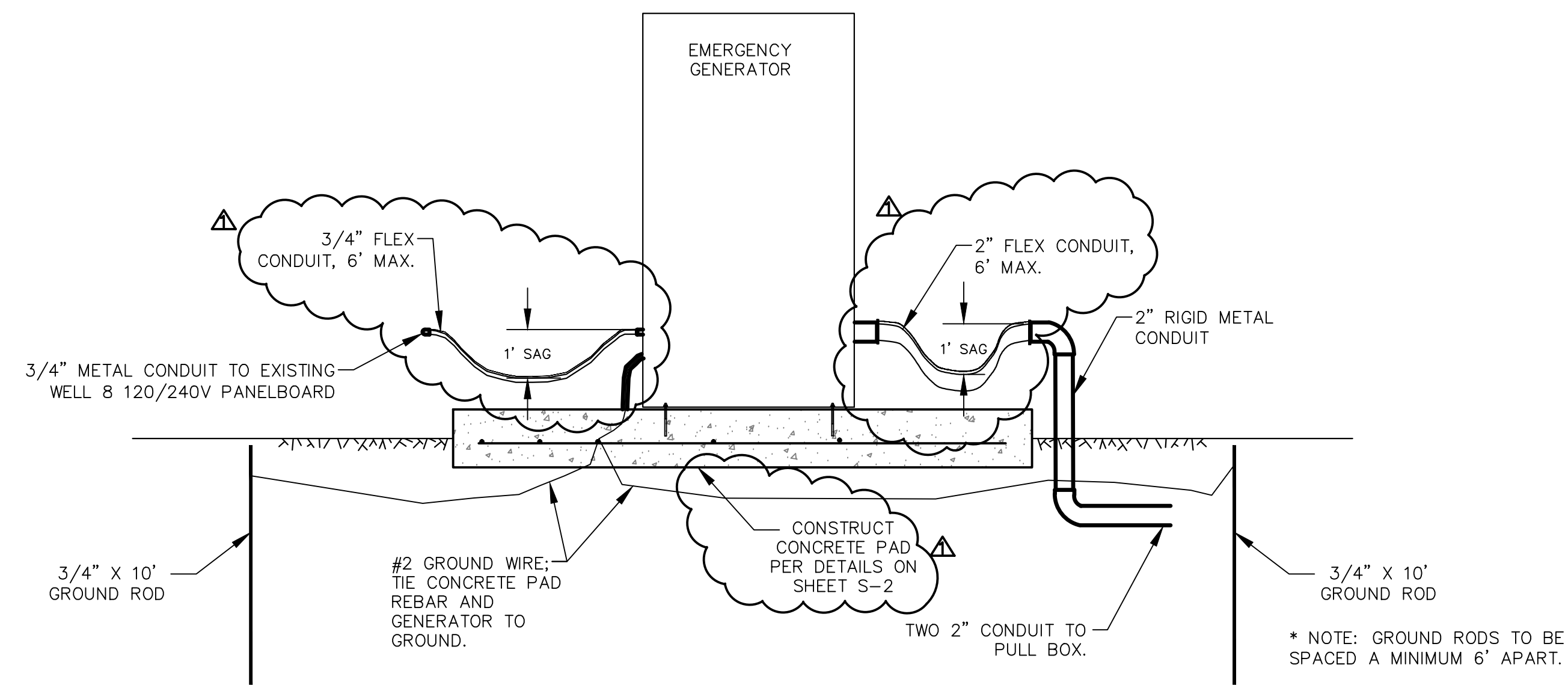
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OCEANO COMMUNITY SERVICES DISTRICT NEW EMERGENCY GENERATOR SINGLE LINE DIAGRAM 1655 FRONT ST., OCEANO, CA 9345			
DRAWING NO. E-171001-04	DRAWN BY GW	FACILITY OFFICE	REV. 1
PROJECT NUMBER 171001	CHECKED BY AS SHOWN	DATE 1/3/2018	SHEET 4 OF 5

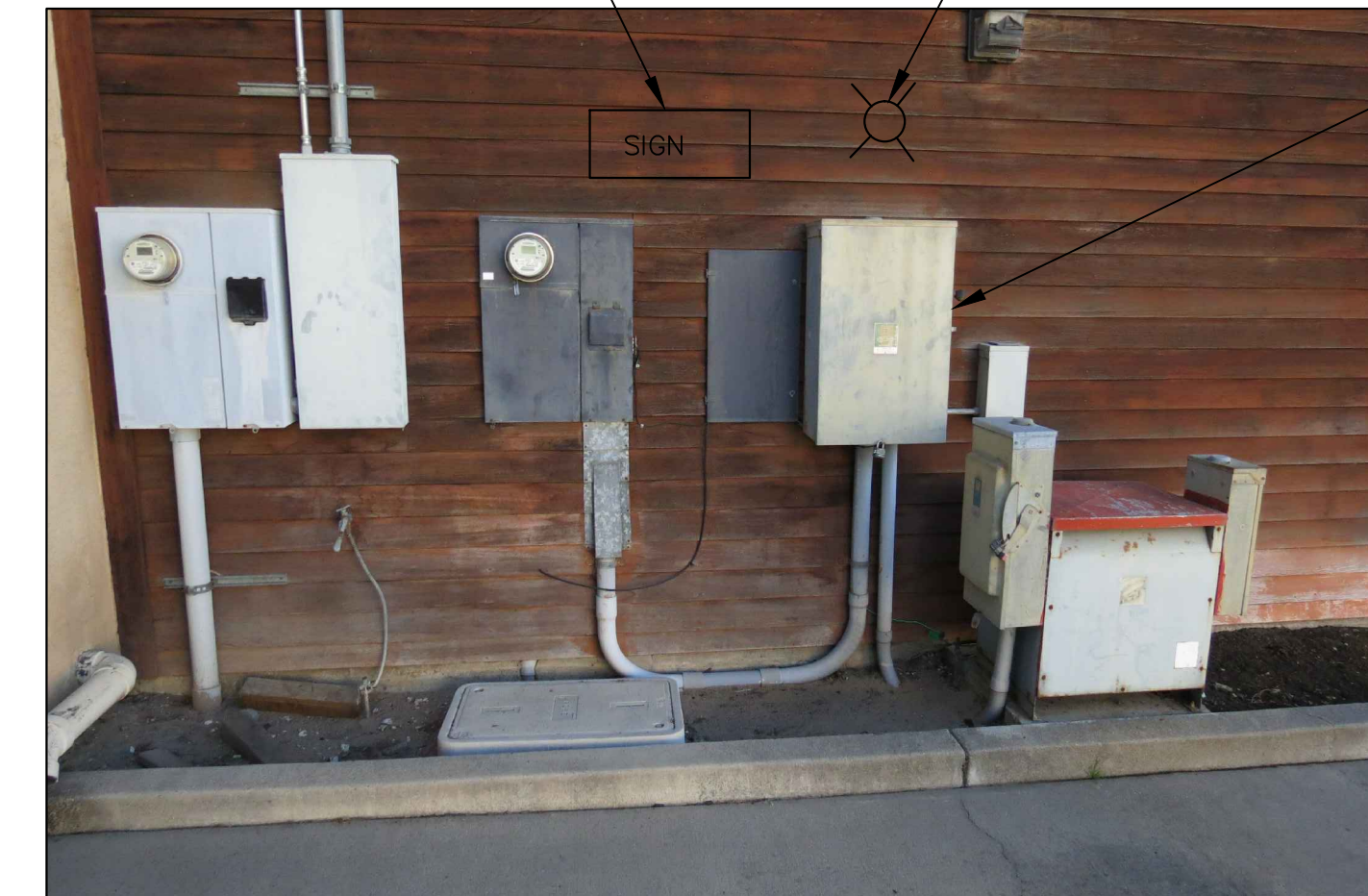
ELEVATION PLAN



① GENERATOR LAYOUT - PROFILE VIEW
SCALE: N.T.S.

SIGNAGE STATING "STANBY GENERATOR AUTOMATICALLY STARTS DURING POWER OUTAGE" AND MAP SHOWING APPROXIMATE LOCATION OF GENERATOR

INSTALL GENERATOR MALFUNCTION WARNING LIGHT PER SINGLE LINE ON DRAWING NO. E-171001-04.



REPLACE EXISTING MANUAL TRANSFER SWITCH WITH AN AUTOMATIC TRANSFER SWITCH PER SINGLE LINE ON DRAWING NO. E-171001-04.

② OCSD OFFICE/FIRESTATION AUTOMATIC TRANSFER SWITCH
SCALE: N.T.S.

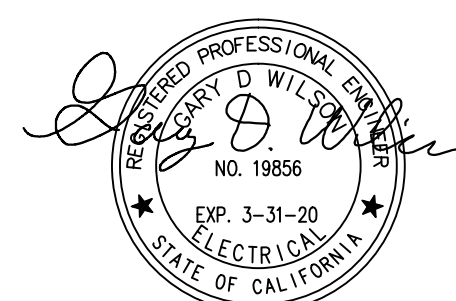
REPLACE EXISTING MANUAL TRANSFER SWITCH WITH AN AUTOMATIC TRANSFER SWITCH PER SINGLE LINE ON DRAWING NO. E-171001-04.

SIGNAGE STATING "STANBY GENERATOR AUTOMATICALLY STARTS DURING POWER OUTAGE" AND MAP SHOWING APPROXIMATE LOCATION OF GENERATOR



③ SHERIFF SUBSTATION AUTOMATIC TRANSFER SWITCH
SCALE: N.T.S.

NOTES:



WILSON ENGINEERING

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OCEANO COMMUNITY SERVICES DISTRICT
NEW EMERGENCY GENERATOR
ELEVATION PLAN
1655 FRONT ST., OCEANO, CA 9345

DRAWING NO. E-171001-05	DRAWN BY: GW CHECKED BY: GW SCALE: AS SHOWN DATE: 1/3/2018	FACILITY: OFFICE	REV. 1
PROJECT NUMBER 171001		SHEET 5	OF 5

CONCRETE

- ALL PHASES OF WORK PERTAINING TO THE CONCRETE CONSTRUCTION SHALL CONFORM TO THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", ACI 318, AND THE SPECIFICATIONS FOR "STRUCTURAL CONCRETE FOR BUILDINGS", ACI 301, LATEST EDITIONS, WITH MODIFICATIONS AS NOTED ON THE DESIGN DRAWINGS OR SPECIFICATIONS.
- REINFORCED CONCRETE DESIGN IS BY THE ULTIMATE STRENGTH DESIGN METHOD.
- CONCRETE MIXES SHALL BE DESIGNED BY A QUALIFIED TESTING LABORATORY AND SHALL BEAR THE WET SEAL OF A CIVIL ENGINEER LICENSED IN THE STATE OF CALIFORNIA. SUBMIT A COPY OF THE MIX DESIGN FOR REVIEW BY THE STRUCTURAL ENGINEER PRIOR TO ORDERING. THE MIX DESIGNS SHALL STATE THE PROJECT NAME AND THE INTENDED USAGE OF THE CONCRETE.
- SCHEDULE OF STRUCTURAL CONCRETE 28-DAY STRENGTHS & TYPES:

LOCATIONS IN STRUCTURE	STRENGTH (PSI)	TYPE
FOOTINGS	4,500	HARD ROCK (0.45 MAX W/C RATIO)
- PORTLAND CEMENT SHALL CONFORM TO ASTM C 150, TYPE V IN CONTACT WITH SOIL AND TYPE II ELSEWHERE. CONCRETE EXPOSED TO SOILS CONTAINING SULFATES SHALL COMPLY WITH ACI 318 TABLE 4.3.1.
- CONCRETE MIXES SHALL CONTAIN FLY ASH. THE FLY ASH SHALL CONFORM TO ASTM C618 CLASS F AND THE LOSS OF IGNITION SHALL BE LIMITED TO 2%. THE ADDITION RATE SHALL NOT EXCEED 20% OF THE CEMENT WEIGHT. THE CONTRACTOR SHALL SUBMIT ALL CERTIFICATES SHOWING THE FLY ASH CONFORMS TO THE ABOVE CRITERIA.
- AGGREGATE FOR HARD ROCK CONCRETE SHALL CONFORM TO ALL REQUIREMENTS AND TESTS OF ASTM C39 AND PROJECT SPECIFICATIONS, EXCEPTIONS MAY BE USED ONLY WITH PERMISSION OF THE STRUCTURAL ENGINEER.
- AGGREGATE FOR LIGHTWEIGHT CONCRETE SHALL CONFORM TO ASTM C330 AND PROJECT SPECIFICATIONS. LIGHTWEIGHT CONCRETE MIX DESIGN SHALL BE TESTED, PRIOR TO APPROVAL, FOR SHRINKAGE IN ACCORDANCE WITH ASTM C157. SHRINKAGE SHALL NOT EXCEED 0.0005 INCHES/INCH.
- FORMS FOR CONCRETE SHALL BE LAID OUT AND CONSTRUCTED TO PROVIDE THE SPECIFIED CAMBERS SHOWN ON THE DRAWINGS.
- DRY PACK OR GROUT UNDER BASE PLATES, SILL PLATES, ETC., SHALL BE NON-SHRINK w/ 8000psi MINIMUM COMPRESSIVE STRENGTH.
- CONCRETE MIXING OPERATIONS, ETC. SHALL CONFORM TO ASTM C94.
- PLACEMENT OF CONCRETE SHALL CONFORM TO ACI STANDARD 304 AND PROJECT SPECIFICATIONS. SANDBLAST ALL CONCRETE SURFACES AGAINST WHICH CONCRETE IS TO BE PLACED.
- IF COLUMNS AND WALLS ARE PLACED WITH A FLOOR, TWO HOURS MUST ELAPSE BETWEEN END OF COLUMN OR WALL POUR AND BEGINNING OF THE FLOOR POUR.
- CLEAR COVERAGE OF CONCRETE OVER REINFORCING BARS SHALL BE AS FOLLOWS: MINIMUM COVER, INCHES
 - CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3"
 - CONCRETE EXPOSED TO EARTH OR WEATHER: NO. 6 THROUGH NO. 18 BAR NO. 5 BAR AND SMALLER 1-1/2"
 - CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND, UNO: SLABS, WALLS, JOISTS; NO. 14 AND NO. 18 BAR NO. 11 BAR AND SMALLER 3/4"
 - BEAMS, COLUMNS, SHEARWALLS, PRIMARY REINF. TIES, STIRRUPS, SPIRALS 1-1/2"

- CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3"
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 - BEAMS, COLUMNS, SHEARWALLS, PRIMARY REINF. TIES, STIRRUPS, SPIRALS 1-1/2"
- ALL REINFORCING BARS, ANCHOR BOLTS AND OTHER CONCRETE INSERTS AND EMBEDDED ITEMS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE AND PRIOR TO CALLING FOR INSPECTION OR OBSERVATION. "WET STABBING" AND ADJUSTING BOLTS AFTER CONCRETE PLACEMENT IS NOT ALLOWED.
 - MECHANICAL PIPES AND ELECTRICAL CONDUITS WHICH PASS THROUGH SLAB ON GRADE, CONCRETE ON STEEL DECK, FRAMED CONCRETE FLOORS AND WALLS DO NOT REQUIRE SLEEVES, UNLESS OTHERWISE INDICATED IN THE PROJECT SPECIFICATIONS, MECHANICAL OR ELECTRICAL DRAWINGS, IF SLEEVES ARE REQUIRED, INSTALL SLEEVES BEFORE PLACING CONCRETE. DO NOT CUT ANY REINFORCING WHICH MAY INTERFERE WITH SLEEVE PLACEMENT. CORING OPENINGS IN CONCRETE IS NOT PERMITTED. NOTIFY THE STRUCTURAL ENGINEER IN ADVANCE OF CONDITIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS. NO PIPES OR ELECTRICAL CONDUIT SHALL PASS THROUGH CONCRETE BEAMS OR COLUMNS UNLESS SPECIFICALLY DETAILED.
 - EXCEPT FOR SLABS ON GRADE AND CONCRETE ON STEEL DECK, EMBEDDED ELECTRICAL CONDUITS OR MECHANICAL PIPES (OTHER THAN THOSE PASSING THROUGH) OUTSIDE DIAMETER SHALL NOT EXCEED 30 PERCENT OF THE SLAB THICKNESS AND SHALL BE PLACED BETWEEN THE TOP AND BOTTOM REINFORCING, UNLESS SPECIFICALLY DETAILED OTHERWISE CONCENTRATIONS OF ELECTRICAL CONDUITS OR MECHANICAL PIPES SHALL BE AVOIDED EXCEPT WHERE DETAILED OPENINGS ARE PROVIDED. FOR SLABS ON GRADE, UNLESS OTHERWISE DETAILED, NO PIPES OR CONDUITS SHALL BE PLACED WITHIN THE INDICATED CONCRETE SLAB THICKNESS AND SHALL BE LOCATED BELOW THE SLAB.
 - CURING COMPOUNDS USED ON CONCRETE THAT IS TO RECEIVE A RESILIENT TILE FINISH SHALL BE APPROVED BY THE FINISH APPLICATOR BEFORE USE.
 - MODULUS OF ELASTICITY OF CONCRETE, WHEN TESTED IN ACCORDANCE WITH ASTM C469, SHALL BE AT LEAST THE VALUE GIVEN BY THE EQUATIONS IN SECTION 8.5.1 OF ACI 318 FOR THE SPECIFIED CONCRETE 28-DAY STRENGTH.

DESIGN CRITERIA

SEISMIC DESIGN:
A. SEISMIC DESIGN FACTORS
 SITE LOCATION; LAT 35.1019, LONG -120.6164
 SEISMIC DESIGN CATEGORY; D
 SITE CLASS; D
 $F_g = 1.007$
 $F_v = 1.551$
 $S_{ms} = 1.241 g$
 $S_{m1} = 0.697 g$
 $S_{os} = 0.827 g$
 $S_{d1} = 0.465 g$
 OCCUPANCY CATEGORY = IV
 SEISMIC IMPORTANCE FACTOR; I = 1.5

B. ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE NON-BUILDING STRUCTURES

FOUNDATION

- FOUNDATION DESIGN IS BASED ON CBC MINIMUM VALUES FROM TABLE 1806.2 ASSUMING "CLASS OF MATERIALS, 5. CLAY, SILTY CLAY, ... ETC. : ALLOWABLE BEARING PRESSURE:

DL+LL =	1,500 psf
DL+LL+EQ =	1,500 psf
COEFFICIENT OF FRICTION:	0.25

 LATERAL PRESSURES:

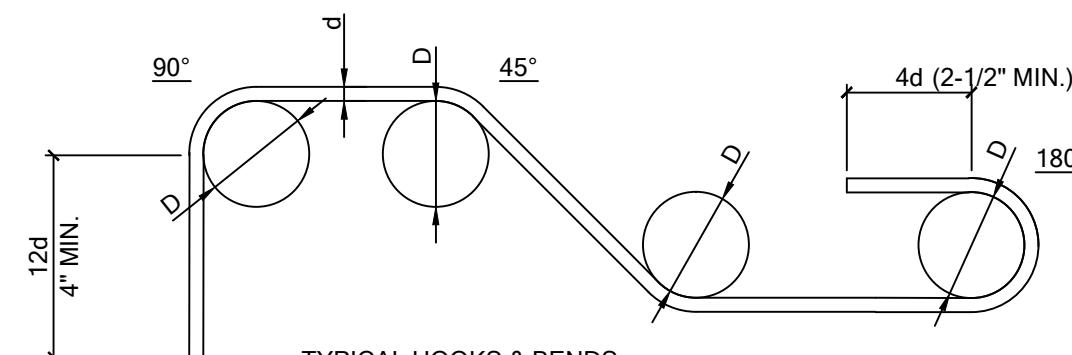
PASSIVE PRESSURE:	150 psf
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- FOUNDATIONS SHALL BEAR ON FIRM FOUNDATION SOIL STRATA, AS APPROVED BY THE GEOTECHNICAL ENGINEER.
- CONTRACTOR SHALL PROVIDE FOR PROPER DEWATERING OF EXCAVATIONS FROM SURFACE WATER, GROUND WATER, SEEPAGE, ETC.
- CONTRACTOR SHALL PROVIDE FOR THE DESIGN AND INSTALLATION OF ALL CRIBBING, SHEATHING AND SHORING REQUIRED TO SAFELY AND ADEQUATELY RETAIN THE EARTH BANKS AND ANY EXISTING STRUCTURE.
- EXCAVATIONS FOR FOOTINGS SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING THE CONCRETE AND REINFORCING. THE CONTRACTOR SHALL NOTIFY THE GEOTECHNICAL ENGINEER WHEN THE EXCAVATIONS ARE READY FOR INSPECTION. THE GEOTECHNICAL ENGINEER SHALL SUBMIT A LETTER OF COMPLIANCE TO THE OWNER AND SEOR.
- ALL EXCAVATIONS SHALL BE PROPERLY BACKFILLED. DO NOT PLACE BACKFILL BEHIND RETAINING WALLS BEFORE CONCRETE OR MASONRY HAS ATTAINED FULL DESIGN STRENGTH.
- FOOTINGS SHALL BE PLACED AND ESTIMATED ACCORDING TO DEPTHS SHOWN ON THE DRAWINGS. SHOULD SOIL ENCOUNTERED AT THESE DEPTHS NOT BE APPROVED BY THE GEOTECHNICAL ENGINEER.
- FOOTING BACKFILL AND UTILITY TRENCH BACKFILL WITHIN THE STRUCTURE PERIMETER SHALL BE MECHANICALLY COMPACTED IN LAYERS, TO THE APPROVAL OF THE GEOTECHNICAL ENGINEER. FLOODING WILL NOT BE PERMITTED.
- ALL ABANDONED FOOTINGS, UTILITIES, ETC., THAT INTERFERE WITH THE NEW CONSTRUCTION SHALL BE REMOVED.
- ALL FOOTINGS SHALL BEAR ON LEVEL SURFACES.
- FOOTING PENETRATIONS AND TRENCHING UNDER AND NEAR FOOTINGS SHOULD BE AVOIDED.
- ALL STEEL (INCLUDING ANCHOR BOLTS, BASE PLATES, COLUMNS, EMBED PLATES, ETC) SHALL BE PROTECTED FROM SOILS WITH A MINIMUM OF 3" OF CONCRETE COVER.

GENERAL NOTES

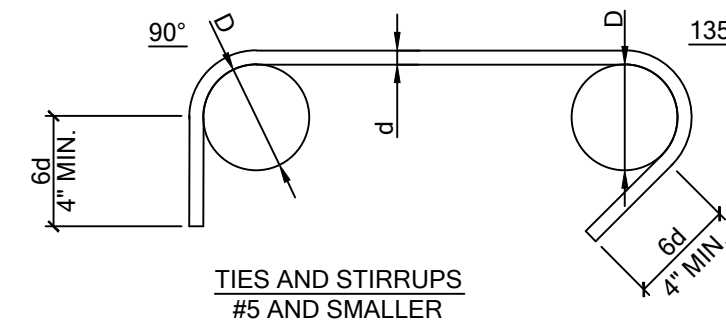
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION. THE ARCHITECT AND SEOR SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES.
- DO NOT SCALE THESE DRAWINGS.
- IF A DISCREPANCY OCCURS; THE MORE STRINGENT REQUIREMENT SHALL TAKE PRECEDENCE OVER THESE GENERAL NOTES, THE TYPICAL DETAILS, AND THE NOTES AND DETAILS ON THE DRAWINGS. NOTIFY SEOR IF A QUESTION ARISES.
- ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE FOLLOWING CODES: THE 2016 CALIFORNIA BUILDING CODE TITLE 24, AND OTHER REGULATING AGENCIES WHICH HAVE AUTHORITY OVER ANY PORTION OF THE WORK, AND THOSE CODES AND STANDARDS LISTED IN THESE NOTES AND/OR IN THE PROJECT SPECIFICATIONS.
- SEE MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR THE FOLLOWING:
 - PIPES, SLEEVES, HANGERS, TRENCHES, WALL FLOOR AND ROOF OPENINGS, DUCT PENETRATION ETC., EXCEPT AS SHOWN OR NOTED.
 - ELECTRICAL CONDUIT RUNS, BOXES, OUTLETS IN WALLS AND SLABS. CONCRETE INSERTS FOR ELECTRICAL MECHANICAL OR PLUMBING FIXTURES. SIZE AND LOCATION OF MACHINE OR EQUIPMENT BASES, ANCHOR BOLTS FOR MOUNTS.
- THE CONTRACT STRUCTURAL DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION.
- THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND BE SOLELY RESPONSIBLE FOR ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT ARE NOT BE LIMITED TO BRACING AND SHORING FOR LOADS DUE TO HYDROSTATIC, EARTH, WIND AND SEISMIC FORCES, CONSTRUCTION EQUIPMENT, ETC. IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO TO NORMAL WORKING HOURS. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OR OBSERVATION OF THE ABOVE ITEMS.
- NOTIFY THE STRUCTURAL ENGINEER WHEN DRAWINGS BY OTHERS SHOW OPENINGS, POCKETS, ETC., NOT SHOWN ON THE STRUCTURAL DRAWINGS, BUT WHICH AFFECT THE STRUCTURAL MEMBERS.
- ALL SPECIFICATIONS AND CODES NOTED SHALL BE THE LATEST APPROVED EDITIONS INCLUDING ALL REVISIONS BY THE GOVERNMENTAL AGENCY HAVING JURISDICTION OVER THIS PROJECT.
- CONTRACTOR SHALL INVESTIGATE THE SITE DURING CLEARING AND EARTH WORK OPERATIONS FOR FILLED EXCAVATIONS OR BURIED STRUCTURES SUCH AS CESSPOOLS, CISTERNS, FOUNDATIONS, UTILITIES, ETC. IF ANY SUCH STRUCTURES ARE FOUND, THE STRUCTURAL ENGINEER SHALL BE NOTIFIED IN WRITING IMMEDIATELY.
- SHOP DRAWINGS SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW SHALL CONSIST OF ONE REPRODUCIBLE COPY, ONE WET SEALED COPY FOR THE STRUCTURAL ENGINEER OF RECORD'S FILE, AND ADDITIONAL COPIES AS IS NECESSARY FOR THE BUILDING DEPARTMENT.

TESTS & SPECIAL INSPECTIONS

- SPECIAL INSPECTION SHALL BE REQUIRED FOR THE FOLLOWING TYPES OF WORK AND SHALL BE IN COMPLIANCE WITH CBC SECTIONS 1704 THRU 1705. INSPECTIONS SHALL BE PERIODICAL OR CONTINUOUS AS REQ'D BY THE CBC AS NOTED THUS (P) OR (C).
 - (P) FOUNDATIONS: SIZE & LOCATION OF REBAR, EMBEDS, AND ANCHOR BOLTS.
 - (C) CONCRETE WORK WITH STRENGTHS GREATER THAN 2500psi, EXCEPT FOR NONSTRUCTURAL CONCRETE SUCH AS SLAB ON GRADE. SEE CBC 1705.3.
 - (C) SOIL OVER-EXCAVATION AND RECOMPACTION. SEE CBC 1705.6 AND TABLE 1705.6
 - (P) SOILS: VERIFY BEARING MATERIAL PRIOR TO PLACING REINFORCING. SEE CBC 1705.6 AND TABLE 1705.6
 - (P) PERFORM CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS.
 - (P) PRIOR TO PLACEMENT OF CONTROLLED FILL, OBSERVE SUB-GRADE AND VERIFY THAT SITE HAS BEEN PROPERLY PREPARED.
 - (P) VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.
 - (C) EPOXY ANCHOR INSTALLATION
- THE OWNER SHALL EMPLOY A QUALIFIED TESTING AGENCY TO PROVIDE A QUALITY ASSURANCE AND TESTING PROGRAM AS NOTED IN SECTIONS 1704 AND 1705 OF THE CBC. THE TESTING AGENCY SHALL WORK WITH THE ENGINEER OF RECORD IN DEVELOPING A QUALITY ASSURANCE PLAN.
 - SOIL COMPACTION TESTING BY GEOTECHNICAL ENGINEER.
 - INSTALLATION OF EPOXY ANCHORS.
 - CONCRETE:
 - ONE SET OF CYLINDERS FOR EVERY 50 YARDS. BREAK ONE AT 7 DAYS, TWO AT 28 DAYS, AND HOLD ONE. CURE AND TEST PER ASTM C31 AND C39.
 - SUMP TEST PER ASTM C143 AT EA. CYLINDER TEST AND WHEN CONSISTENCY CHANGES. (ONE MINIMUM PER DAY).
 - AIR CONTENT PER ASTM C231. ONE PER DAY MINIMUM AND AT EA. CYLINDER SET.
- THE TESTING AGENCY SHALL SUBMIT A COPY OF ALL TESTING REPORTS TO SEOR, PER CBC 1704.2.4.



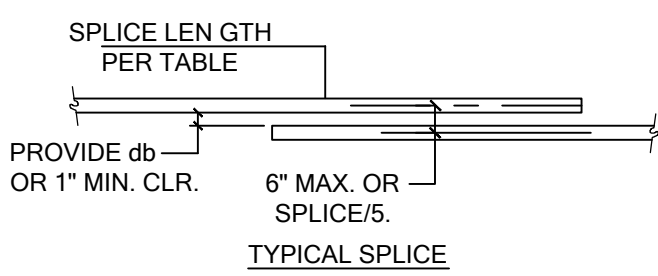
TYPICAL HOOKS & BENDS



TIES AND STIRRUPS #5 AND SMALLER

INSIDE BEND DIAMETERS

BAR SIZE	D
#3 TO #8	6d
#9, #10, #11	8d
#14, #18	10d



TYPICAL SPLICE

BAR SIZE	SPLICE LEN GTH (IN.)	
	BOT. BARS	TOP BARS
#3	24	31
#4	32	41
#5	39	51
#6	47	61
#7	69	87
#8	78	102
#9	88	115
#10	100	124
#11	110	143

- NOTE:**
- ALL BARS BENT COLD.
 - NO FIELD BENDING ALLOWED EXCEPT WHERE SPECIFICALLY SHOWN ON DRAWINGS.
 - SPLICES ARE SHOWN IN INCHES AND SHALL CONFORM TO CLASS "B" SPLICES AS PER ACI 318-11, FOR 3,000 psi CONCRETE.
 - SPLICE LENGTHS ASSUME THE MODIFICATION FACTORS OF ACI 318 SECTIONS 12.2 ARE 1.0. FOR OTHER CONDITIONS PROVIDE SPLICE LENGTHS IN ACCORDANCE WITH ACI 318-11.
 - USE THE SPLICE LENGTH GIVEN FOR TOP BARS WHEN MORE THAN 12" OF CONC. IS CAST BELOW HORIZ. BARS IN THE MEMBER. USE THE SPLICE LENGTH GIVEN FOR BOTTOM BARS FOR ALL OTHER CONDITIONS

1 TYP. REINFORCEMENT BEND & SPLICE DETAILS
S-1

NOTES:



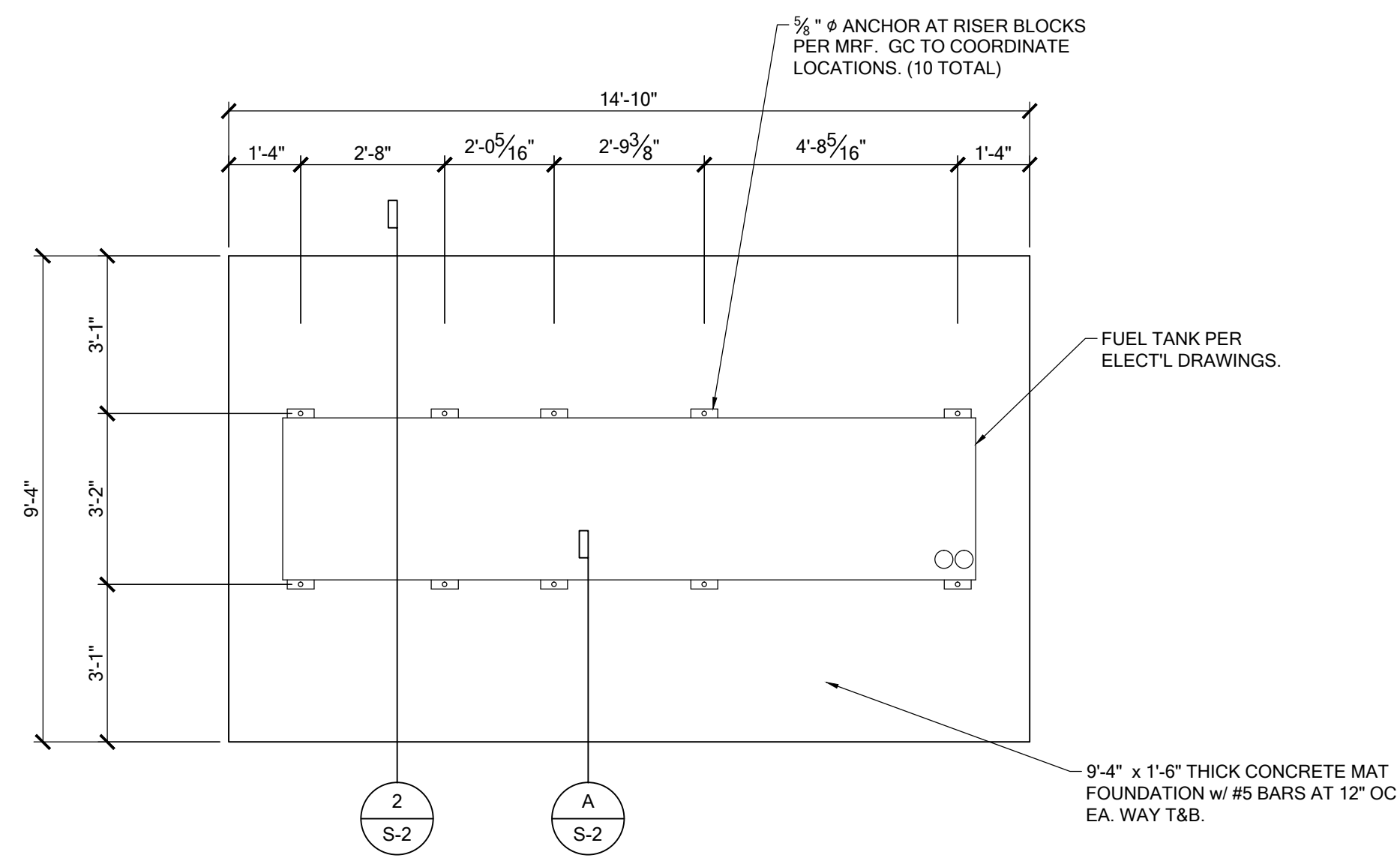
JOSHUA MOODY
 STRUCTURAL ENGINEER
 3107 Johnson Avenue, San Luis Obispo, CA 93401
 805.540.8343 • www.MoodySE.com

WILSON ENGINEERING
 E 19856 C 70607
 Gary D. Wilson, P.E.
 gmwilson888@bcglobal.net

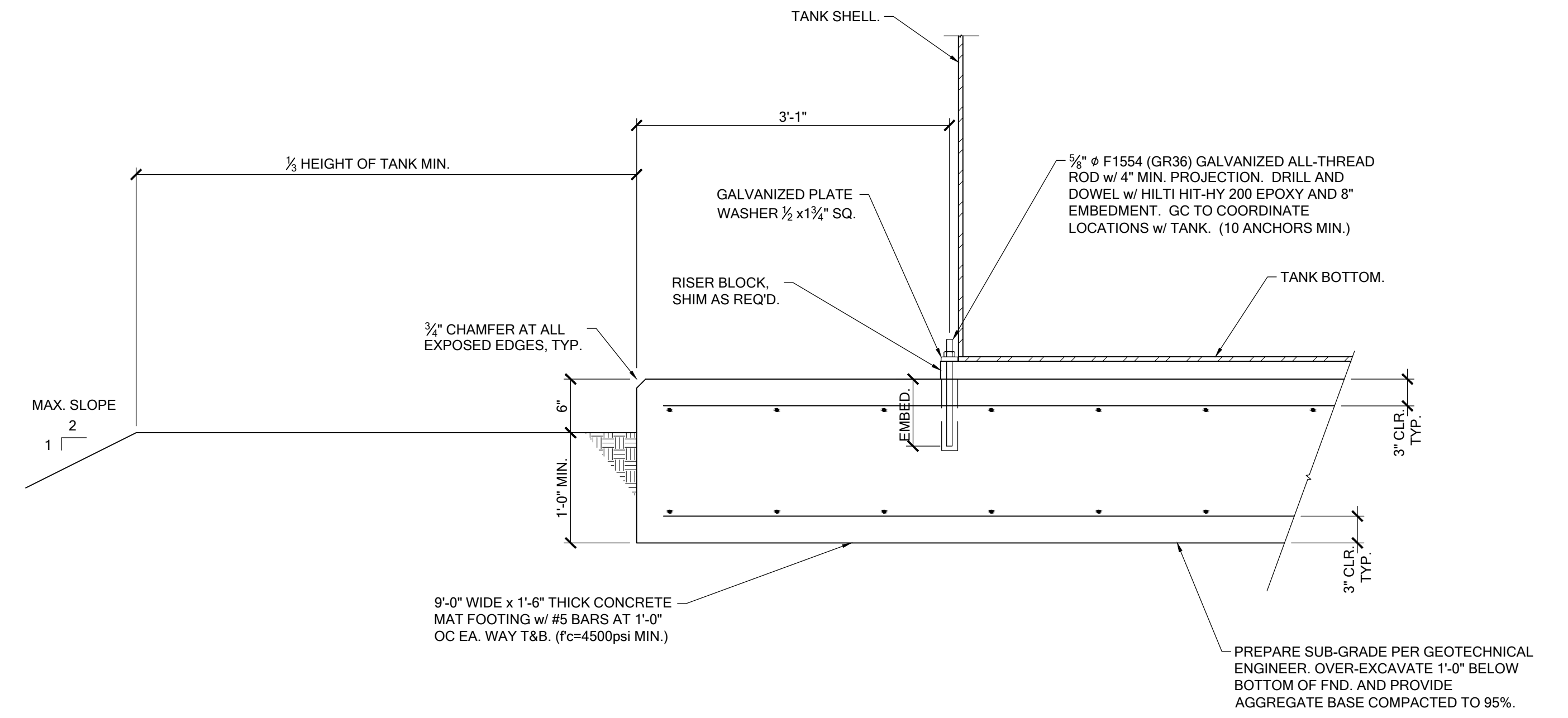
771 Merced St. Pismo Beach, CA 93449 (805) 748-6209

REV.	DATE	REVISION

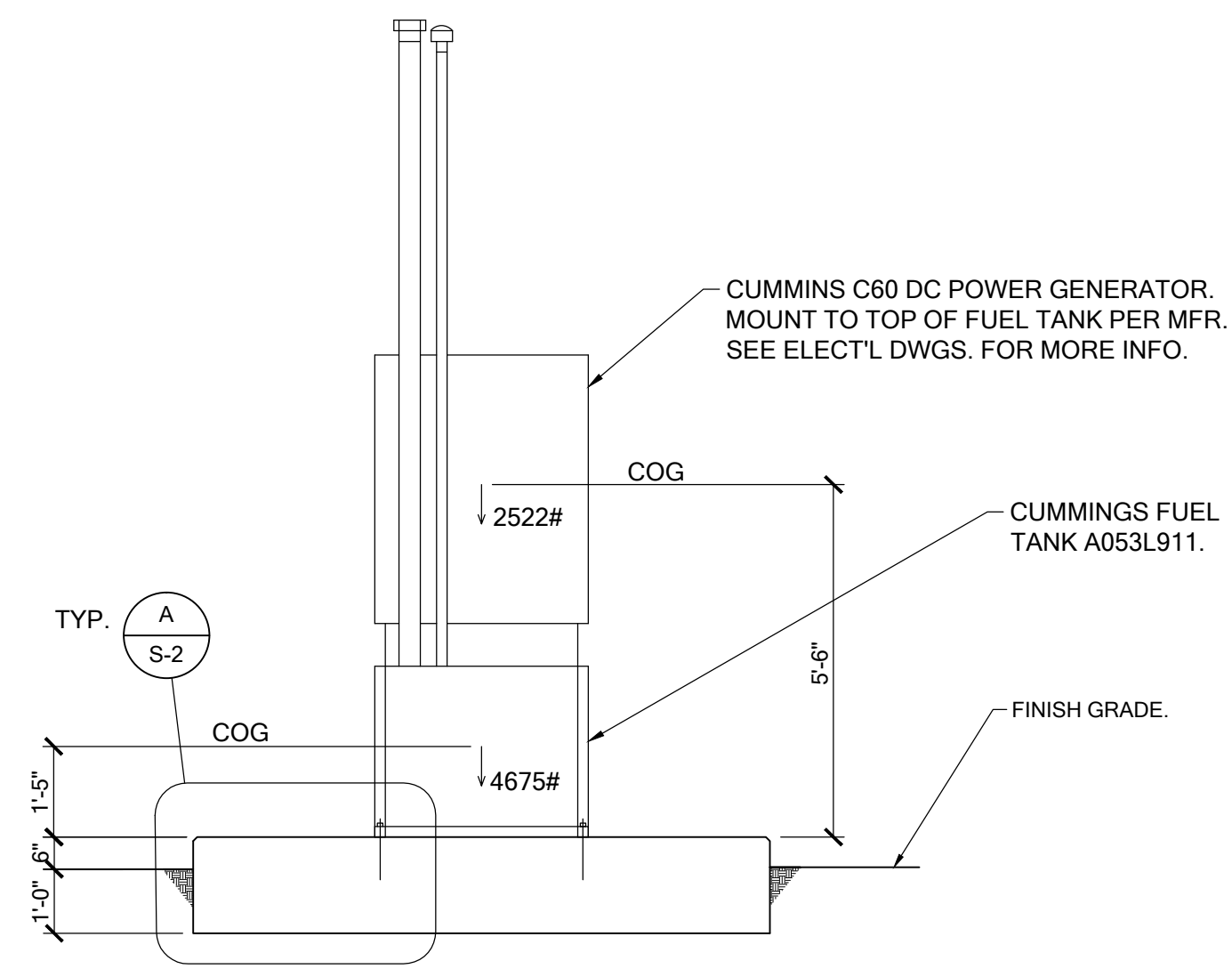
OCEANO COMMUNITY SERVICES DISTRICT NEW EMERGENCY GENERATOR		1655 FRONT ST., OCEANO, CA 9345	
DRAWING NO. S-1	DRAWN BY: <u>jem</u> CHECKED BY: <u>jem</u> SCALE: <u>AS SHOWN</u> DATE: <u>5/17/2018</u>	FACILITY:	REV. <u>0</u>
PROJECT NUMBER 180403	SHEET	of 5	



1 GENERATOR FOUNDATION PLAN
 S-2 SCALE: 3/8" = 1'-0"



A TANK ANCHOR SECTION
 S-2 SCALE: 1" = 1'-0"



2 GENERATOR FOUNDATION SECTION
 S-2 SCALE: 3/8" = 1'-0"

NOTES:



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 gmwilson888@bcglobal.net

771 Merced St.
 Pismo Beach, CA 93449

(805) 748-6209

REV.	DATE	REVISION	REV. BY	CKD. BY

OCEANO COMMUNITY SERVICES DISTRICT NEW EMERGENCY GENERATOR			
1655 FRONT ST., OCEANO, CA 9345			
DRAWING NO. S-2	DRAWN BY jem	FACILITY:	REV. 0
PROJECT NUMBER 180403	CHECKED BY jem	SCALE AS SHOWN	SHEET OF 5
DATE 9/17/2018			

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OCEANO COMMUNITY SERVICES DISTRICT

EMERGENCY GENERATOR REPLACEMENT PROJECT

OCEANO, CA

CONTRACT NO. 2019-01

EXHIBIT "E"

PERFORMANCE AND PAYMENT BOND FORMS

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PERFORMANCE BOND

CONTRACTOR (*Name and Address*):

SURETY (*Name, and Address of Principal Place of Business*):

OWNER (*Name and Address*):

Oceano Community Services District
1655 Front Street
Oceano, CA 93445
Attention: General Manager

CONSTRUCTION CONTRACT

Effective Date of Agreement:

Amount:

Description: Emergency Generator Replacement Project, Oceano, Ca, Contract No. 2019-01

BOND

Bond Number:

Date (*Not earlier than Effective Date of Agreement of the Construction Contract*):

Amount:

Modifications to this Bond Form: None See Paragraph 16

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

(Seal)
Contractor's Name and Corporate Seal

(Seal)
Surety's Name and Corporate Seal

By: _____
Signature

By: _____
Signature (Attach Power of Attorney)

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers, (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after:
 - 3.1 The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;
 - 3.2 The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
 - 3.3 The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.
4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.
5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
 - 5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;
 - 5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;
 - 5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or
 - 5.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:
 - 5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or
 - 5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.
6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the

Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment, or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:
 - 7.1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
 - 7.2 additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and
 - 7.3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.
8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.
9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.
10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
11. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit shall be applicable.
12. Notice to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.
13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted here from and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
14. Definitions
 - 14.1 Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.
 - 14.2 Construction Contract: The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

- 14.3 Contractor Default: Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.
- 14.4 Owner Default: Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
- 14.5 Contract Documents: All the documents that comprise the agreement between the Owner and Contractor.
15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.
16. Modifications to this Bond are as follows:
17. The effective date of this Bond shall be the same date as the Effective Date of the Construction Contract.

END OF SECTION

PAYMENT BOND

CONTRACTOR (*Name and Address*):

SURETY (*Name, and Address of Principal Place of Business*):

OWNER (*Name and Address*):

Oceano Community Services District
1655 Front Street
Oceano, CA 93445
Attention: General Manager

CONSTRUCTION CONTRACT

Effective Date of Agreement:

Amount:

Description: Emergency Generator Replacement Project, Oceano, Ca, Contract No. 2019-01

BOND

Bond Number:

Date (*Not earlier than Effective Date of Agreement of the Construction Contract*):

Amount:

Modifications to this Bond Form: None See Paragraph 18

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

(Seal)
Contractor's Name and Corporate Seal

(Seal)
Surety's Name and Corporate Seal

By: _____
Signature

By: _____
Signature (Attach Power of Attorney)

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers, (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond shall arise after the following:
 - 5.1 Claimants who do not have a direct contract with the Contractor,
 - 5.1.1 have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
 - 5.1.2 have sent a Claim to the Surety (at the address described in Paragraph 13).
 - 5.2 Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
 - 7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
 - 7.2 Pay or arrange for payment of any undisputed amounts.
 - 7.3 The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.
8. The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.
9. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the

performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.
11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
12. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
13. Notice and Claims to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.
14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.
16. Definitions
 - 16.1 Claim: A written statement by the Claimant including at a minimum:
 1. The name of the Claimant;
 2. The name of the person for whom the labor was done, or materials or equipment furnished;
 3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
 4. A brief description of the labor, materials, or equipment furnished;
 5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
 6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
 7. The total amount of previous payments received by the Claimant; and
 8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.

- 16.2 Claimant: An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond shall be to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.
- 16.3 Construction Contract: The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.
- 16.4 Owner Default: Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
- 16.5 Contract Documents: All the documents that comprise the agreement between the Owner and Contractor.
17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.
18. Modifications to this Bond are as follows:
19. The effective date of this Bond shall be the same date as the Effective Date of the Construction Contract.

ENDOFSECTION

OCEANO COMMUNITY SERVICES DISTRICT

EMERGENCY GENERATOR REPLACEMENT PROJECT

**OCEANO, CA
CONTRACT NO. 2019-01**

EXHIBIT "F"

INSURANCE REQUIREMENTS

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INSURANCE REQUIREMENTS

INDEMNIFICATION

To the fullest extent permitted by law, CONTRACTOR shall indemnify, defend and hold harmless the District and its officers, agents, employees, and volunteers from and against all claims, demands, damages, liabilities, loss, costs, and expense (including attorney's fees and costs of litigation) of every nature arising out of or in connection with Contractor's performance or attempted performance of work hereunder or its failure to comply with any of its obligations contained in the agreement, except such loss or damage which was caused by sole negligence or willful misconduct of the District.

INSURANCE COVERAGE

Contractor shall procure and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the Contractor, its agents, representatives, or employees.

MINIMUM SCOPE AND LIMIT OF INSURANCE

Coverage shall be at least as broad as:

1. Commercial General Liability (CGL); Insurance Services Office (ISO) Form CG 0001 covering CGL on an "occurrence" basis for bodily injury and property damage, including products-completed, operations, personal injury and advertising injury, with limits no less than \$1,000,000 per occurrence. If a general aggregate limit applies either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit.
2. Automobile Liability: ISO Form Number CA 0001 covering, Code 1 (any auto), or if Contractor has no owned autos, Code 8 (hired) and 9 (non-owned), with limit no less than \$1,000,000 per accident for bodily injury and property damages.
3. Worker Compensation insurance as required by the State of California, with Statutory Limits, and Employer's Liability insurance with limit of no less than \$1,000,000 per accident for bodily injury or disease. If Contractor will provide leased employees, or is an employee leasing or temporary staffing firm or a professional employer organization (PEO), coverage shall also include an Alternate Employer Endorsement (providing scope of coverage equivalent to ISO policy form WC 00 03 O1 A) naming the District as the Alternate Employer, and the endorsement form shall be modified to provide that District will receive not less than thirty (30) days advance written notice of cancellation of this coverage provision. If applicable to Contractor's operations, coverage also shall be arranged to satisfy the requirements of any federal workers or workmen's compensation law or any federal occupational disease law.
(Not required if Contractor provides written verification it has no employees)

If the contractor maintains higher limits than the minimums shown above, the District requires and shall be entitled to coverage for the higher limits maintained by the contractor.

OTHER INSURANCE PROVISIONS

The insurance policies are to contain, or be endorsed to contain, the following provisions:

Additional Insured Status:

The District, its officers, officials, employees, and volunteers are to be covered as insureds on the auto policy with respect to liability arising out of automobiles owned, leased, hired or borrowed by, or on behalf of the Contractor; and on the CGL policy with respect to liability arising out of work or operations performed by or on behalf of the Contractor including materials, parts, or equipment furnished in connection with such work or operations. General liability coverage can be provided in the form of an endorsement to the Contractor's insurance (at least as broad as ISO Form CG 20 10, 11 85 or both CG 20 10 and CG 23 37 forms if later revisions used).

Primary Coverage

For any claims related to this contract, the Contractor's insurance coverage shall be primary insurance as respects the District, its officers, officials, employees, and volunteers. Any insurance of self-insurance maintained by the District, its officers, officials, employees, or volunteers shall be excess of the Contractor's insurance and shall not contribute with it.

Notice of Cancellation

Each insurance policy required above shall state that coverage shall not be canceled, except after thirty (30) days prior written notice (10 days for non-payment) has been given to the District.

Failure to Maintain Insurance

Contractor's failure to maintain or to provide acceptable evidence that it maintains the required insurance shall constitute a material breach of the Contract upon which the District immediately may withhold payments due to Contractor, and/or suspend or terminate this Contract. The District, at its sole discretion, may obtain damages from Contractor resulting from said breach.

Waiver of Subrogation

Contractor hereby grants to District a waiver of any right to subrogation which any insurer of said Contractor may acquire against the District by virtue of the payment of any loss under such insurance. Contractor agrees to obtain any endorsement that may be necessary to affect this waiver of subrogation, but this provision applies regardless of whether or not the District has received a waiver of subrogation endorsement from the insurer.

Deductibles and Self-Insured Retentions

Any deductibles or self-insured retentions must be declared to and approved by the District. The District may require the Contractor to provide proof of ability to pay losses and related investigation, claim administration, and defense expenses within the retention.

Acceptability of Insurers

Insurance is to be placed with insurers with a current A.A. Best's rating of no less than A:VII, unless otherwise acceptable to the District.

Claims Made Policies

If any of the required policies provide coverage on a claims-made basis:

1. The Retroactive Date must be shown and must be before the date of the contract or the beginning of contract work;
2. Insurance must be maintained and evidence of insurance must be provided for at least five (5) years after completion of the contract of work;
3. If coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a Retroactive date prior to the contract effective date, the Contractor must purchase "extended reporting" coverage for a minimum of five (5) years.

Separation of Insured's

All liability policies shall provide cross-liability coverage as would be afforded by the standard ISO (Insurance Services Office, Inc.) separate of insured's provision with no insured versus insured exclusions or limitation.

Verification of Coverage

Contractor shall furnish the District with original certificates and mandatory endorsements or copies of the applicable policy language effecting coverage required by this clause. All certificates and endorsements are to be received and approved by the District before work commences. However, failure to obtain the required documents prior to the work beginning shall not waive the Contractor's obligation to provide them. The District reserves the right to required complete, certified copies of all required insurance policies, including endorsements required by these specifications, at any time.

Certificates and copies of any required endorsements shall be sent to:

Oceano Community Services District
P.O. Box 599
Oceano, CA 93475-0599

Subcontractors

Contractor shall require and verify that all subcontractors maintain insurance meeting all the requirements stated herein.

Special Risks or Circumstances

District reserves the right to modify these requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other special circumstances.

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OCEANO COMMUNITY SERVICES DISTRICT

EMERGENCY GENERATOR REPLACEMENT PROJECT

OCEANO, CA

CONTRACT NO. 2019-01

EXHIBIT "G"

RULES GOVERNING BID PROTESTS

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OCEANO COMMUNITY SERVICES DISTRICT

Rules Governing Bid Protests And Other Challenges to Awards of Construction Contracts

The requirements set forth in these “Rules Governing Bid Protests And Other Challenges to Awards of Construction Contracts” (“Rules”) are mandatory and are a Bidder’s sole and exclusive remedy in the event a Bidder desires to challenge, protest or contest the award of any Construction Contract. A Bidder’s failure to comply with these requirements shall constitute a waiver of any right to challenge, protest or contest the award of a Construction Contract in any subsequent proceeding, including but not limited to, the filing of a court action.

A Bidder may not rely upon another Bidder’s compliance with the requirements of these Rules. Any Bidder that does not independently comply with the requirements set forth herein shall be deemed to have waived any right to challenge, protest or contest the award of a Construction Contract.

Nothing in these Rules affects the right of the District to reject all bids at any time prior to the award of a Construction Contract, or for the District to self-perform as provided by Public Contract Code 22038, all of which shall not constitute grounds for a bid protest.

1.1 Definitions

- 1.1.1 Bidder - The contractor submitting a bid in response to a District solicitation for bids on a Construction Contract.
- 1.1.2 Protestor - A Bidder who files a Protest in accordance with the provisions of these Rules.
- 1.1.3 Board – Board of Directors of the Oceano Community Services District (hereinafter, also “District”)
- 1.1.4 Construction Contract - Any Construction Contract which is formally or informally advertised for bids in which the District, or will be, a party.
- 1.1.5 Protest – Any challenge, objection, or protest to the award of a Construction Contract to any Bidder.
- 1.1.6 Response – Any response to a Protest that is filed by an Interested

Party in accordance with the provisions of these Rules.

General Manager - The person designated by the Board to assume the powers, duties, and responsibilities conferred under these Rules.

- 1.1.7 Initial Determination – A written notice by the General Manager that notifies a Bidder of the reasons why the General Manager believes that a bid is nonresponsive, or that a Bidder is not a responsible Bidder.
- 1.1.8 Interested Parties - For the purpose of these Rules, Interested Parties are defined as:
 - 1.1.8.1 The District.
 - 1.1.8.2 Any Bidder that filed a Protest or whose bid is the subject of an Initial Determination.
 - 1.1.8.3 Any Bidder whose eligibility for having the Construction Contract awarded to it as a responsible Bidder with the lowest responsive bid would be affected by the outcome of a Protest or Initial Determination.

1.2 General Manager's Independent Authority to Determine Bid Responsiveness and Bidder Responsibility.

- 1.2.1 Regardless of whether a Protest is submitted under these Rules, the General Manager is authorized to determine whether any bid is a responsive bid and whether any Bidder is a responsible Bidder. In the event the General Manager issues an Initial Determination, the General Manager shall provide the Interested Parties with written notice of the Initial Determination at least five (5) business days before the General Manager renders a final decision addressing the grounds stated in the Initial Determination. A final decision of the General Manager under this section 1.2 shall be the final decision of the District with no provision for reconsideration or appeal to the Board.
- 1.2.2 The General Manager need not issue an Initial Determination in order to make a final decision on whether a bid is a responsive bid or a Bidder is a responsible Bidder. A final decision can also be issued by the General Manager through the processing of a Protest pursuant to the procedures set forth in these Rules.
- 1.2.3 The General Manager reserves the right to amend or withdraw an Initial Determination at any time before the General Manager renders a final decision addressing the grounds stated in the Initial Determination. When an Initial Determination is withdrawn, it shall have the same effect as if the Initial Determination had never been made.

1.3 Basis for Protest

- 1.3.1 Grounds for Protest – The grounds for a Protest may include any grounds a Protestor may have for contesting or challenging the award of a Construction Contract to any Bidder, including but not limited to the following grounds:

- 1.3.1.1 A Protestor objects to a Construction Contract being awarded to another Bidder on the grounds that the other Bidder's bid is nonresponsive.
- 1.3.1.2 A Protestor objects to a Construction Contract being awarded to another Bidder on the grounds that the other Bidder is not a responsible Bidder.
- 1.3.1.3 A Protestor objects to a Construction Contract being awarded to the Protestor on the grounds that the Protestor made a mistake in its bid that entitles the Protestor to be relieved of its bid under Public Contract Code Sections 5100 et seq
- 1.3.1.4 A Protestor objects to a General Manager's Initial Determination issued under section 1.2.1 above.
- 1.3.2 Required Form of Protest - All Protests shall be made in writing, containing the information listed below, and shall be filed with the General Manager. Protests shall contain the following information:
 - 1.3.2.1 The name, address, telephone, facsimile numbers, and email address of the Protestor.
 - 1.3.2.2 The signature of the Protestor or its representative.
 - 1.3.2.3 The bid, solicitation and/or contract number.
 - 1.3.2.4 The Protest must contain a complete statement of all grounds for the Protest, and must refer to the specific portion of the bid documents that are the basis of the Protest. The Protest must set forth all supporting facts and documentation. If Protester believes there are some facts relevant to its Protest that Protester cannot adequately present in writing, Protester must describe such facts in its Protest under the heading "Facts Requiring Oral Presentation", and state therein the reasons why the Bid Protester believes it cannot adequately present those facts through documentation.
 - 1.3.2.5 All information establishing that the Protestor is a Bidder for the purpose of filing a Protest.
 - 1.3.2.6 The form of relief requested.

1.4 Protest Requirements and Procedure

- 1.4.1 Standing to Protest - Protests shall be filed only by a Bidder.
- 1.4.2 Time for Filing a Protest
 - 1.4.2.1 Except as provided in sections 1.4.2.2 and 1.4.2.3 below, all Protests must be submitted in writing to the General Manager before 5 p.m. PST of the sixth (6) business day following the date upon which the bids on the Construction Contract were opened.
 - 1.4.2.2 When a Protestor objects to a Construction Contract being awarded to the Protestor on the grounds that the Protestor made a mistake in its bid that entitles the Protestor to be relieved of its bid under Public Contract Code Sections 5100 et seq, the Protest must be submitted in writing to the General Manager before 5 p.m. PST of the fifth (5) business day following the date upon

which the bids on the Construction Contract were opened pursuant to Public Contract Code Section 5103.

- 1.4.2.3 When the Protestor objects to an Initial Determination made by the General Manager under section 1.2.1 above, the Protest must be submitted in writing to the General Manager before 5 p.m. PST of the fifth (5) business day following the date upon which the Initial Determination was first delivered to Protestor (either electronically or otherwise).
- 1.4.3 Written Responses of Interested Parties - If any Interested Party desires to respond to the Protest, the Response must be submitted in writing to the General Manager within five (5) business days of the date the Protest was first delivered to the Interested Party (either electronically or otherwise). If an Interested Party believes there are some facts relevant to its Response that the Interested Party cannot adequately present in writing, the Interested Party must describe such facts in its Response under the heading "Facts Requiring Oral Presentation", and state therein the reasons why the Interested Party believes it cannot adequately present those facts through documentation.
- 1.4.4 Proof of Transmittal - All Protests, Responses, and Replies shall include documentation evidencing that all Interested Parties were concurrently sent a complete copy of the respective Protest, Response or Reply in a manner that would provide all Interested Parties with a complete copy of the respective Protest, Response or Reply no later than one (1) business day after it was sent to the General Manager. The means of transmission chosen must also provide the sending party a means of verifying the date and time the copy was received by each Interested Party. Transmission by email may be an acceptable means of transmittal.
- 1.4.5 No Ex Parte or Unilateral Communications on the Merits of a Protest - No Bidder shall have any written communications regarding the merits of a Protest with the General Manager that are not concurrently sent to all of the other Interested Parties. No Bidder shall have any oral communications regarding the merits of a Protest with the General Manager other than during an oral presentation properly noticed by the General Manager under these Rules.
- 1.4.6 Suspension of Process for Proposed Rejection of all Bids - At any time during the processing of a Protest, the General Manager may elect to indefinitely suspend any further processing of the Protest by providing written notice to all Interested Parties that the General Manager intends to recommend to the Board that all bids be rejected. All time deadlines provided in these Rules shall be tolled during any such suspension period. If the Board decides to not reject all bids, or if the General Manager otherwise decides to lift the suspension, the requirements of these Rules shall be reactivated upon the General Manager providing all Interested Parties with written notice thereof.

1.5 Summary Dismissal of Protest

The General Manager may summarily dismiss a protest, or specific protest allegations, at any time that the General Manager determines that the Protest is untimely, frivolous, or without merit; is not submitted in the required form of Protest, as set forth above in section 1.3.2., "Required Form of Protest;" or is submitted by a non-Bidder. In such cases, a notice of summary dismissal will be furnished to the Interested Parties. Such a summary dismissal shall be the final decision of the District with no provision for reconsideration or appeal to the Board.

1.6 Decision by the General Manager Based on Written Submissions Only

In reaching a decision on the merits of a Protest, the General Manager may consider relevant documentation submitted by the Protestor and any other Interested Party. If the General Manager wishes to have additional information submitted that was not included in the Protest or in any documentation from other Interested Parties, the General Manager may make a request specifying the information sought and time for submittal. Submissions of additional information that have not been specifically requested by the General Manager may not be considered at the General Manager's sole discretion. If the General Manager does not provide an opportunity for an oral presentation under section 1.7 below, the General Manager will issue a written decision without any oral presentation. . The General Manager's decision shall be the final decision of the District with no provision for reconsideration or appeal to the Board.

1.7 Decision by the General Manager Following Oral Presentation

1.7.1 The General Manager may, at his or her discretion, elect to provide an opportunity for the Protestor and other Interested Parties to make an oral presentation to the General Manager regarding the Protest. In such event, oral presentations shall be conducted in accordance with the following procedure:

1.7.1.1 Notice of Oral Presentation - The General Manager will set a date, time, and place for an oral presentation. Written notice will be sent to Interested Parties not less than five (5) business days in advance of the oral presentation unless it is agreeable to all parties that an earlier date be established. Continuances may be granted by the General Manager for good cause.

1.7.1.2 Guidelines for Oral Presentation - Oral presentations are informal in nature and shall be made by the Protestor or its authorized representative. Technical rules of evidence shall not apply. The General Manager will determine how the oral presentations will be conducted and may set time limits for the presentation. The General Manager may question Interested Parties or provide an opportunity for Interested Parties to make an oral presentation. The General Manager may request additional documentation or information prior to, during or after the oral presentation. Unless

requested by the General Manager, additional documentation or information may not be accepted.

1.7.1.3 Record of Oral Presentation - Any Interested Party may request, and in the General Manager's sole discretion, the General Manager may allow recording of the presentation. If the General Manager allows the presentation to be recorded, the Interested Party requesting that the presentation be recorded must pay the cost of recording, including the costs to make and distribute copies of the recording to the General Manager and other Interested Parties. There shall be no cost to the District.

1.7.1.4 Decisions - The General Manager will issue a written decision within 30 calendar days of the oral presentation; however, the time for issuing the written decision may be extended by the General Manager. A copy of the decision will be furnished to the Interested Parties. The decision shall be the final decision of the District with no provision for reconsideration or appeal to the Board.

1.8 Effect on Contracts

The failure of a District employee or department to comply with the provisions stated in these Rules shall in no way affect the validity of any Construction Contract entered into by the District.

1.9 General Manager Decisions on Protests Seeking Relief from a Bidder's Mistake under Public Contract Code Section 5103.

When a Protestor objects to a Construction Contract being awarded to the Bid Protester on the grounds that the Protestor made a mistake in its bid that entitles the Protestor to be relieved of its bid under Public Contract Code Sections 5100 et seq, a final decision of the General Manager that relieves the Protestor of its bid on the grounds of mistake must be approved by the Board before it can become a final decision of the District. Any other final decision of the General Manager regarding a Protestor's request to be relieved of its bid on the grounds of mistake under Public Contract Code Sections 5100 et seq, shall be the final decision of the District with no provision for reconsideration or appeal to the Board.

OCEANO COMMUNITY SERVICES DISTRICT

EMERGENCY GENERATOR REPLACEMENT PROJECT

OCEANO, CA

CONTRACT NO. 2019-01

EXHIBIT "H"

H1 - DISTRICT SUPPLIED EQUIPMENT

H2 - SLO APCD PERMIT

H3 - GEOTECHNICAL REPORT

H4 - REVIEW OF PLANS

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CUMMINS INC

4601 E. Brundage Lane
Bakersfield, CA 93307
661 326-4003

December 6, 2018

Submittal for:
Oceano CSD

Cummins Inc. Project No. 30852
PO No.: 2018-19-17

Customer Requested Delivery Date: _____

Customer Requested Equipment Delivery Address: _____

Contact Person & Phone # for Deliveries: _____

Please provide the manufacturer, model, and rating of the breaker directly upstream of the transfer switch: _____

Provide available fault current at the breaker directly upstream of the transfer switch per single line: _____

Prepared for:

Nicole Miller

Oceano CSD

PO BOX 599

Oceano CA, 93475-0599

Phone No.: 805 481-6730

Fax No. : 805 481-6836

Email : nicole@oceanocsd.org

Prepared by: Dan Goetz

Office Number: 661-326-4003

Mobile Number:

Fax Number: 661 861-8719

Email address: daniel.p.goetz@cummins.com

Customer Approval

- Revise and Resubmit
- Approved as Noted/Release for Production
- Released for Production

By: _____ **Dated:** _____

Important:

1. By signing this submittal you're approving it as submitted unless noted.
2. Any change to the scope of supply may impact the current shipping schedule and the contract price, as such, Cummins Inc. can NOT accept any changes to the scope of supply within 60 Calendar days before shipment.
3. **Our Company policy states that "We can NOT order any materials or proceed with production without an approved and release submittal that includes a required ship date".**



December 6, 2018

Project Name: **Oceano CSD**

Project Number: **30852**

Dear: Nicole Miller

Thank you for your order. The next step in the process is the submittals phase. Attached please find the submittal, prepared by Dan Goetz the Project Engineer assigned to your Project. Please review the submittal and return it to him as soon as possible along with your approval and/or changes clearly indicated so we can continue to process your order.

Our company policy states we cannot order any materials or proceed with any production without an approved Submittal returned from you along with requested delivery date, and data for the circuit breaker being used upstream of our transfer switch(s).

Current lead time is approximately **12-16 weeks** Split shipments and drop shipments on equipment that do not need local upfit are possible, but requirements must be advised at the time of release.

Note: Requested delivery date is not a guarantee of delivery date. Leadtimes at time of release can vary due to market conditions and manufacturing production capacities. We will advise you of our closest delivery target to match your request within 1-2 weeks.

A Cummins Project Team has now been assigned to your project. Their names and contacts are listed below. For all technical issues, your Project Engineer, Dan Goetz, will best be able to assist you at this stage of the project. Feel free to contact anyone on your Project Team directly.

Name	Title	Function	Phone	email
Jeff Thompson	Territory Manager	Sales	661 326-4002	jeffrey.e.thompson@cummins.com
Dan Goetz	Project Manager Bakersfield	Prepares Submittals, handles all Technical issues	661-326-4003	daniel.p.goetz@cummins.com
Michelle Garza	PC	Project Coordinator	(510) 347-6679	michelle.e.garza@cummins.com
John McWilliams	Senior Application Engineer	Technical Resource for all projects	510-347-6673	john.l.mcwilliams@cummins.com
Dennis Long	Start up Coordinator	Schedules pre-inspect and S&T	510-347-6651	Dennis.d.long@cummins.com
Tom S Golnick	GM - PowerGen Sales South	Sales Management	619-219-5044	tom.g.golnick@cummins.com

Best regards,

Jeff Thompson
Cummins Inc.



December 6, 2018

Notice to End User or Contractor

Please be advised that without a permit to construct or operate from AQMD, we will not be able to start and commission this generator, it is therefore suggested that an AQMD permit be filed at the same time you issue an approval for this submittal.

Please make sure you've reviewed our Automatic Transfer Switch Withstand and Closing Rating Chart for compliance with our list of acceptable breakers being used upstream of the ATS.

This order is provided with one set of owners and installation manual meant for the installing contractor. Additional copies may require a change order while electronic copies can be provided free of charge.

Approval Drawings

This Approval Drawing Package is submitted as our interpretation of the contract drawings and/or the specifications for this job.

It is the obligation of the electrical contractor and reviewing engineer to determine that the item quantities and accuracy of this submittal is correct as required for the job. Any inaccuracies or deviations must be addressed with Cummins Inc. before release to manufacturing. Any releases of material to manufacturing by the above parties constitute an acceptance of the accuracy of the submittal. Any changes after release will be viewed as a change order, subject to pricing changes.

Please take the time to review this package for accuracy to prevent any after-shipment problems. This will allow the job to be shipped correctly and prevent any delay in energization.

Cummins Power Generation provides a large amount of technical information on its products, as well as specific technical topics aimed at clarifying our position on topical issues. Below you'll find links to valuable information that would help you with our recommendations for installation on different topics.

Technical Manuals

[T-011 Application Manual - Transfer Switches](#)

[T-016 Application Manual - Paralleling](#)

[T-030 Application Manual - Liquid Cooled Generator Sets](#)

[T-034 Application Manual - Networking](#)

**Automatic Transfer Switch Withstand and Closing Rating:
OT-B (150A - 260A)**



Cummins Transfer Switch Product	Transfer Switch Frame Size	Number of Poles	Transfer Switch Rating (Amps)	Max Breaker Amp Rating
OT	B	3 / 4	150/225/260	400A

Specific Circuit Breaker Ratings

Max Voltage	Circuit Breaker Manufacturer	Circuit Breaker Type or Class	Withstand/Closing Rating (WCR) kA RMS Symmetrical Amps	Cummins Drawing Part Number	
240VAC	GE	TEYD, TEYH, TEYL, THJK, TJJ, TJK	30	A048E949	
		SEL, SFL, SGL, TEC, TECL, TEL, TEML, TFL	100	A048J539	
		AKRU, AKU, FB, FC, FE, FG, SEP, SFP, SGP, THLC1, THLC2, THLC4	200		
	HD, JD, LD	25			
	Schneider	DG, HG, JG, LG, NSF150N, NSF250N, NSJ400N, NSJ600N	65	A048J539	
		DJ, HJ, JJ, LJ, NSF150H, NSF250H, NSJ400H, NSJ600H	100		
		DL, HL, JL, LL	125		
		CE106L, CF250L, CJ400L, CK1000L, NSJ400L, NSJ600L	150		
		FI, KI, LI, HR, JR, LR	200		
	Eaton	BAB, CHKD ¹ , CKD ¹ , DK, ED, EDB, EDC, EDH, EDS, EGB ² , EGE ² , EGH ² , EGS ² , EHD, FD, FDB, FDE, GBHS, GD, GHB, GHBGFEP, GHBS, GHC, GHCGFEP, HFD6, HJD, HKD, HOP, JD, JDB, JGE, JGH, JGS, KD, KDB, QBGF, QBGFEP, QBH, QBHGF, QBHGFEP, QBHW, QC, QCF, QCGF, QCGFEP, QCHGF, QCHGFEP, OCHW, OCR, OHCW, QHCX, QHPW, QHPX, QPGF, QPGFEP, QPHGF, QPHGFEP, QPHW	30	A048E949	
		DSL, LA, NB, FDC, JDC, EGC, JGU, JGX, KDC, LDC, JGC, LGC, LCL, LGU, LGX	200	A048J539	
	Siemens	BOCH, BOD, CC, COD, ED2, ED4, ED6, FD6, FD6A, FXD6, FXD6A, HDGA, HED4, HED6, HFD6, HFGA, HFXD6, HHFD6, HHFXD6, HJGD6, HHJXD6, HJD6, HJGA, HJXD6, HLGA, HLGB, HOJ2, JD6, JXD2, JXD6, LDGA, LFGA, LJGA, LLGA, LLGB, NFGA, NGB, NDGA, NGA, NJGA, NLGA, NLGB, QJ2, QJ2H, QJH2	30	A048E949	
		CED6, CFD6, CJD6, CLD6, SCLD6	200	A048J539	
		TEYD, TEYH, TEYL, THJK, TJJ, TJK	30	A048E949	
	480VAC	GE	SEL, SFL, SGL, TEL, TEML, TFL	65	A048J539
SEP, SFP, SGP, TEC, TECL			100		
FB, FC, FE, FG			150		
Schneider		AKRU, AKU, THLC1, THLC2, THLC4	200	A048J539	
		HD, JD, LD, NSE100N	18		
		DG, HG, JG, LG, NSF150N, NSF250N, NSJ400N, NSJ600N	35		
		CK1000L	50		
		DJ, HL, JJ, LJ, NSF150H, NSF250H, NSJ400H, NSJ600H	65		
Eaton		CE106L, DL, HL, JL, LL, NSJ400L, NSJ600L	100	A048E949	
		CF250L, CJ400L	150		
Siemens		FI, KI, LI, HR, JR, LR	200	A048J539	
		BAB, CHKD ¹ , CKD ¹ , DK, ED, EDB, EDC, EDH, EDS, EGB ² , EGE ² , EGH ² , EGS ² , EHD, FD, FDB, FDE, GBHS, GD, GHB, GHBGFEP, GHBS, GHC, GHCGFEP, HFD6, HJD, HKD, HOP, JD, JDB, JGE, JGH, JGS, KD, KDB, QBGF, QBGFEP, QBH, QBHGF, QBHGFEP, QBHW, QC, QCF, QCGF, QCGFEP, QCHGF, QCHGFEP, OCHW, OCR, OHCW, QHCX, QHPW, QHPX, QPGF, QPGFEP, QPHGF, QPHGFEP, QPHW	30		A048E949
		FDC, JDC, EGC, KDC, LDC, JGC, LGC	100		A048J539
JGU, LGU		150			
Siemens		DSL, LA, NB, JGX, LCL, LGX	200	A048E949	
	BOCH, BOD, CC, COD, ED2, ED4, ED6, FD6, FD6A, FXD6, FXD6A, HDGA, HED4, HED6, HFD6, HFGA, HFXD6, HHFD6, HHFXD6, HJGA, HLGA, HLGB, HOJ2, JXD2, LDGA, LFGA, LJGA, LLGA, LLGB, NFGA, NGB, NDGA, NGA, NJGA, NLGA, NLGB, QJ2, QJ2H, QJH2	30	A048E949		
	CJD6, CLD6, SCLD6	150	A048J539		
600VAC	GE	CED6, CFD6	200	A048J539	
		SEL, SFL, SEP, SFP, TEL, TEML, TFL	25		A048E949
		TEYD, TEYH, TEYL, THJK, TJJ, TJK	30		
		FB, FC	42		
		THLC1, THLC2, THLC4	50		
	FG, SGL, SGP	65			
	Schneider	TEC, TECL	100	A048J539	
		AKRU, AKU	200		
		HD, JD, LD	14		
		DG, HG, JG, LG, NSF150N, NSF250N, NSJ400N, NSJ600N	18		
		DJ, HL, JJ, LJ, DL, NSF150H, NSF250H, NSJ400H, NSJ600H, NSJ400L, NSJ600L	25		
	Eaton	CE106L, CK1000L	42	A048J539	
		HL, JL, LL	50		
		CF250L, CJ400L	65		
		FI, KI, LI, HR, JR, LR	100		
BAB, CHKD ¹ , CKD ¹ , DK, ED, EDB, EDC, EDH, EDS, EGB ² , EGE ² , EGH ² , EGS ² , EHD, FD, FDB, FDE, GBHS, GD, GHB, GHBGFEP, GHBS, GHC, GHCGFEP, HFD6, HJD, HKD, HOP, JD, JDB, JGE, JGH, JGS, KD, KDB, QBGF, QBGFEP, QBH, QBHGF, QBHGFEP, QBHW, QC, QCF, QCGF, QCGFEP, QCHGF, QCHGFEP, OCHW, OCR, OHCW, QHCX, QHPW, QHPX, QPGF, QPGFEP, QPHGF, QPHGFEP, QPHW		30	A048E949		
FDC, JDC, EGC, JGX	35	A048J539			
JGU, KDC, LDC, JGC, LGC	50				
LGU, LGX	65				
LCL	100				
DSL, LA, NB	200				
Siemens	BOCH, BOD, CC, COD, ED2, ED4, ED6, FD6, FD6A, FXD6, FXD6A, HDGA, HED4, HED6, HFD6, HFGA, HFXD6, HHFD6, HHFXD6, HJGA, HLGA, HLGB, HOJ2, JXD2, LDGA, LFGA, LJGA, LLGA, LLGB, NFGA, NGB, NDGA, NGA, NJGA, NLGA, NLGB, QJ2, QJ2H, QJH2	30	A048E949		
	CED6, CFD6, CJD6, CLD6, SCLD6	100	A048J539		

Note 1: 310 trip unit only
Note 2: Limited to 70A maximum



December 6, 2018

Project Name: **Oceano CSD**

Project Number: **30852**

PO Number: **2018-19-17**

Summary Sheet

(Not for Construction, please refer to specific materials within submittal or call Cummins Inc. to double check values.)

Project Engineer

Dan Goetz

661-326-4003

Major Equipment Shipping Weights and Dimensions

Equipment	Length (in)	Width (in)	Height (in)	Weight (lbs)	Color	Sources Drawing Number
Genset	97.7	38	51.7	2,217	Green	A054Y897
Housing	136.06	40	58.3	290	Green	A051P365
Fuel Tank (Dry)	154	40	24	1,388	Black	A029V774
Diesel Fuel Gallonage						
	274			2,055		
Total Genset Package	154	40	82	5,950		
ATS	30.35	14.75	39.85	190		0310-0454

Generator Set - Lug Information

Max. Breaker Amps	Wire (Cooper)	
	Quantity	Size
100	1	#14-3/0 AWG
100	1	#14-3/0 AWG

Automatic Transfer Switch - Lug Information

Amperage	Cable/Phase	Cable Size
225	1	#6 AWG - 300 MCM

AC Power Supplies needed for Genset Accessories

Accessories	No. phases	Voltage	Wattage
Coolant heater*	1	120VAC	1000
Battery Charger (Cummins)	1	120/208 - 240	6 Amp

Table of Contents

Project Number: 30852	Page
Bill of Material	8
Section I Data Sheets:	11
Generator Set Specification Sheet	12
Generator Set Data Sheet	18
Alternator Data Sheet	21
Control Panel - Genset	23
Sound Data	30
Prototype Test Support (PTS)	32
Cooling System Data	33
Exhaust Emission Data	34
Battery	35
Battery Charger	37
Certificate of Compliance IBC	39
Fuel Tank Specification Sheet	42
Circuit Breaker Data	46
Transfer Switch Data	50
Section II Drawings:	57
Interconnection Diagram	58
Genset Outline	59
Enclosure Outline Drawing	61
Fuel Tank & Foundation Outline Drawing	63
Generator IBC Anchor Installation	67
Circuit Breaker Outline Drawing	71
Generator Set Option Outline Drawing	72
Transfer Switch Drawing	73
Warranty	75
Start and Test	79

BILL OF MATERIAL

Items listed in this section are unit mounted

Qty.	Description	Model/Order Designation
1	(One) Diesel powered generator set, standby power rated at 60 KW, C60D6C 75 KVA, 277/480 volts, 3 ϕ , Wye, 4 wire, 60 HZ at 1800 RPM, with standard equipment per bulletin #NAS-6211-EN and the following accessories:	
	• Duty Rating-Stanby Power	A331
	• Listing-UL 2200	L090
	• NFPA 110 Type 10 Level 1 Capable	L193
	• IBC Seismic Certification	L224
	• EmissionCert,EPA,Tier 3,NSPS CI Stationary Emergency,	L169
	• Enclosure-Aluminum,Sound Att, Level 2, w/Exh System	F217
	• Voltage-277/480,3 Phase Wye, 4 Wire	R002
	• Alternator-60Hz,12L,480/277V, 120C,40C amb	B943
	• Genset Control-PowerCommand 2.3	H703
	• Exciter/Regulator – Torque Match	B240
	• Engine Governor-Electronic, Isochronous Only	A366
	• Display Language-English	H536
	• Gauge-Oil Pressure	H012
	• AmpSentry TM Protective Relay	H720
	• Stop Switch-Emergency	K796
	• Control Mounting-Left Facing	H609
	• Load Connection-Dual	KV04
	• CB,Loc A,100A,3P,LSI,600VAC,80%,UL	KV40
	• CB,Loc B,100A,3P,LSI,600VAC,80%,UL	KV90
	• Enclosure Color-Green, Aluminum Enclosure	P176
	• Enclosure-Wind Load 180 MPH,ASCE7-10	F252
	• Fuel Tank-Regional, 2 Wall, Sub Base,24Hr Minimum	C301
	• Separator-Fuel/Water	C127
	• Mechanical Fuel Gauge	C312
	• Extensions Kit-Fuel tank Vents, 12Ft	C315
	• Risers-Fuel Tank, 2 Inches	C317
	• Box-Spill Containment, 5 Gal, Lockable	C314
	• Switch-High, 90% Fuel	C308
	• Switch-Low, 40% Fuel	C310
	• Skidbase-Housing Ready	F179
	• Engine Starter-12 VDC Motor	A422



- Battery Charging Alternator-Normal Output A333
- Battery Charger-6 Amp, Regulated BB89
- Engine Cooling-High Ambient Air Temperature E125
- Extension-Engine Coolant Drain E089
- Engine Coolant-50% Antifreeze, 50% Water Mixture H669
- Coolant Heater, Cold Ambient E153
- Engine Air Cleaner-Normal Duty D041
- Engine Oil H706
- Test Record-Certified L026
- Literature English L050
- Packing-Slid, Poly Bag A322
- Ship Loose-Green SL2 Baffle L260
- Ship Loose-Vent Kit A L261
- Ship Loose-Tank Riser B L264
- Rack-Larger Battery F253
- Extension-Oil Drain H268
- Ship Loose-Flex Fuel Connection

BILL OF MATERIAL

The following items are supplied loose, and are to be field-installed by others

Qty.	Description	Model/Order Designatio
2(Two)	Automatic transfer switch, 225Amp, 240 volts, 1 \emptyset , 2 or 3 wire, 3 pole, NEMA 3R enclosed with standard equipment per bulletin # S-1464 plus the following optional equipment:	OTEC
	<ul style="list-style-type: none"> • Poles-3 • Listing-UL 1008/CSA Certification • Frequency060 Hertz • System-Single Phase, 2 or 3 Wire • Voltage-240 Vac • Cabinet-Type 3R • Genset Starting Battery-12VDC • Cover-Switch Control, Security 	A028 A046 A044 A041 R023 B002 M033 C027
1	Extension Kit, Fuel Tank Vents, 1 Normal, 2 Emergency, 12Ft	A048C543
1	Sound Level 2 Baffle (Shipped Loose)	A052M018
1	Kit, Fuel Ststem, Tank Risers (shipped Loose)	A054H766
	Genset Warranty-Base	L028
	Transfer switch Warranty- 1 Year Comprehensive	G009

This quote was based on written specification. "Specification for a 60Kw, 60Hz, 3 Phase standby power system". Rev.February 26,2018.

SECTION I

DATA SHEETS



Diesel generator set

QSB5 series engine
50-125 kW @ 60 Hz
EPA Tier 3 emissions



Description

Cummins® generator sets are fully integrated power generation systems providing optimum performance, reliability and versatility for stationary Standby applications.

Features

Heavy duty engine - Rugged 4-cycle industrial diesel delivers reliable power and fast response to load changes.

Alternator - Several alternator sizes offer selectable motor starting capability with low reactance 2/3 pitch windings, low waveform distortion with non-linear loads and fault clearing short-circuit capability.

Control system - The PowerCommand® 2.3 electronic control is standard equipment and provides total generator set system integration including automatic remote starting/stopping, precise frequency and voltage regulation, alarm and status message display, output metering, auto-shutdown at fault detection and NFPA 110 Level 1 compliance.

Cooling system - Standard cooling package provides reliable running at up to 50 °C (122 °F) ambient temperature.

Enclosures - The aesthetically appealing enclosure incorporates special designs that deliver one of the quietest generators of its kind. Aluminium material plus durable powder coat paint provides the best anti-corrosion performance. The generator set enclosure has been evaluated to withstand 180 MPH wind loads in accordance with ASCE7 -10. The design has hinged doors to provide easy access for service and maintenance.

Fuel tanks - Dual wall sub-base fuel tanks are offered as optional features, providing economical and flexible solutions to meet extensive code requirements on diesel fuel tanks.

NFPA - The generator set accepts full rated load in a single step in accordance with NFPA 110 for Level 1 systems.

Warranty and service - Backed by a comprehensive warranty and worldwide distributor network.

Model	Standby 60 Hz		Prime 60 Hz		Data sheets
	kW	kVA	kW	kVA	
C50D6C	50	63	45	56	NAD-6212-EN
C60D6C	60	75	54	68	NAD-6213-EN
C80D6C	80	100	72	90	NAD-6214-EN
C100D6C	100	125	90	113	NAD-6215-EN
C125D6C	125	156	112.5	141	NAD-6216-EN

Generator set specifications

Governor regulation class	ISO8528 Part 1 Class G3
Voltage regulation, no load to full load	± 1.0%
Random voltage variation	± 1.0%
Frequency regulation	Isochronous
Random frequency variation	± 0.50%
Radio frequency emissions compliance	FCC code title 47 part 15 class A and B

Engine specifications

Design	Turbocharged and charge air cooled
Bore	107 mm (4.21 in.)
Stroke	124 mm (4.88 in.)
Displacement	4.5 L (272 in ³)
Cylinder block	Cast iron, in-line 4 cylinder
Battery capacity	850 amps per battery at ambient temperature of 0 °C (32 °F)
Battery charging alternator	100 amps
Starting voltage	2 x 12 volt in parallel, negative ground
Lube oil filter type(s)	Spin-on with relief valve
Standard cooling system	High ambient radiator
Rated speed	1800 rpm

Alternator specifications

Design	Brushless, 4 pole, drip proof, revolving field
Stator	2/3 pitch
Rotor	Direct coupled, flexible disc
Insulation system	Class H per NEMA MG1-1.65
Standard temperature rise	120 °C (248 °F) Standby
Exciter type	Torque match (shunt) with PMG as option
Alternator cooling	Direct drive centrifugal blower
AC waveform Total Harmonic Distortion (THDV)	< 5% no load to full linear load, < 3% for any single harmonic
Telephone Influence Factor (TIF)	< 50 per NEMA MG1-22.43
Telephone Harmonic Factor (THF)	< 3%

Available voltages

1-phase		3-phase			
• 120/240	• 120/208	• 120/240	• 277/480	• 347/600	• 127/220

Generator set options

Fuel system

- Basic fuel tanks
- Regional fuel tanks

Engine

- Engine air cleaner – normal or heavy duty
- Shut down – low oil pressure
- Extension – oil drain
- Engine oil heater

Alternator

- 120 °C temperature rise alternator
- 105 °C temperature rise alternator
- PMG excitation
- Alternator heater, 120 V
- Reconnectable full 1 phase output alternator

Control

- AC output analog meters
- Stop switch – emergency
- Auxiliary output relays (2)
- Auxiliary configurable signal inputs (8) and relay outputs (8)

Electrical

- One, two or three circuit breaker configurations
- 80% rated circuit breakers
- 80% or 100% rated LSI circuit breakers
- Battery charger

Enclosure

- Aluminium enclosure Sound Level 1 or Level 2, sandstone or green color
- Aluminium weather protective enclosure with muffler installed, green color

Cooling system

- Shutdown – low coolant level
- Warning – low coolant level
- Extension – coolant drain
- Coolant heater options:
 - <4 °C (40 °F) – cold weather
 - <-18 °C (0 °F) – extreme cold

Exhaust system

- Exhaust connector NPT
- Exhaust muffler mounted

Generator set application

- Base barrier – elevated genset
- Radiator outlet duct adapter

Warranty

- Base warranty – 2 year/1000 hours, Standby
- Base warranty – 1 year/unlimited hours, Prime
- 3 year Standby warranty options
- 5 year Standby warranty options

Generator set accessories

- Coolant heater
- Battery heater kit
- Engine oil heater
- Remote control displays
- Auxiliary output relays (2)
- Auxiliary configurable signal inputs (8) and relay outputs (8)
- Annunciator – RS485
- Audible alarm
- Remote monitoring device – PowerCommand 500/550
- Battery charger – stand-alone, 12 V
- Circuit breakers
- Enclosure Sound Level 1 to Sound Level 2 upgrade kit
- Base barrier – elevated generator set
- Mufflers – industrial, residential or critical
- Alternator PMG excitation
- Alternator heater

Control system PowerCommand 2.3

PowerCommand 2.3 control - An integrated generator set control system providing voltage regulation, engine protection and operator interface.

Control - Provides battery monitoring and testing features and smart-starting control system.

InPower™ - PC-based service tool available for detailed diagnostics.

PCCNet RS485 - Network interface (standard) to devices such as remote annunciator for NFPA 110 applications.

Control boards - Potted for environmental protection.

Ambient operation - Suitable for operation in ambient temperatures from -40 °C to +70 °C and altitudes to 13,000 feet (5,000 meters).

AC protection

- AmpSentry™ protective relay
- Over current warning and shutdown
- Over and under voltage shutdown
- Over and under frequency shutdown
- Over excitation (loss of sensing) fault
- Field overload
- Overload warning
- Reverse kW shutdown
- Reverse Var shutdown
- Short circuit protection

Engine protection

- Overspeed shutdown
- Low oil pressure warning and shutdown
- High coolant temperature warning and shutdown
- Low coolant level warning or shutdown
- Low coolant temperature warning
- High, low and weak battery voltage warning
- Fail to start (overcrank) shutdown
- Fail to crank shutdown
- Redundant start disconnect
- Cranking lockout
- Sensor failure indication
- Low fuel level warning or shutdown
- Emergency stop
- Fuel-in-rupture-basin warning or shutdown

Operator/display panel

- Manual off switch
- 320 x 240 Pixels graphic LED backlight LCD with push button access for viewing engine and alternator data and providing setup, controls, and adjustments (English, Spanish, or French).

- LED lamps indicating genset running, not in auto, common warning, common shutdown, manual run mode and remote start.

- Suitable for operation in ambient temperatures from -20 °C to +70 °C

Alternator data

- Line-to-Line and Line-to-Neutral AC volts
- 3-phase AC current
- Frequency
- kVa, kW, power factor

Engine data

- DC voltage
- Lube oil pressure
- Coolant temperature

Other data

- Generator set model data
- Start attempts, starts, running hours
- Fault history
- RS485 Modbus® interface
- Data logging and fault simulation (requires InPower service tool)

Digital voltage regulation

- Integrated digital electronic voltage regulator
- 3-phase Line-to-Line sensing
- Configurable torque matching
- Fault current regulation under single or three phase fault conditions

Control functions

- Time delay start and cooldown
- Cycle cranking
- PCCNet interface
- (2) Configurable inputs
- (2) Configurable outputs
- Remote emergency stop
- Automatic Transfer Switch (ATS) control
- Generator set exercise, field adjustable

Options

- Auxiliary output relays (2)
- Remote annunciator with (3) configurable inputs and (4) configurable outputs
- PMG alternator excitation
- PowerCommand 500/550 for remote monitoring and alarm notification (accessory)
- Auxiliary, configurable signal inputs (8) and configurable relay outputs (8)

- AC output analog meters (bargraph)
 - Color-coded graphical display of:
 - 3-phase AC voltage
 - 3-phase current
 - Frequency
 - kVa
- Remote operator panel

Ratings definitions

Emergency Standby Power (ESP):

Applicable for supplying power to varying electrical load for the duration of power interruption of a reliable utility source. Emergency Standby Power (ESP) is in accordance with ISO 8528. Fuel Stop power in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.

Limited-Time Running Power (LTP):

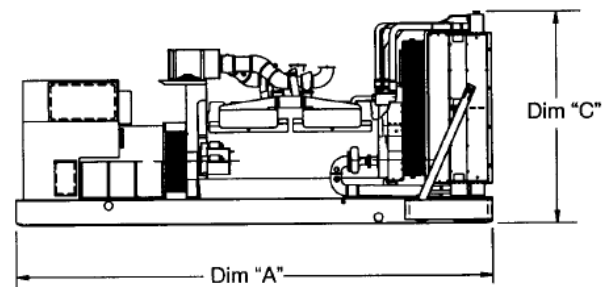
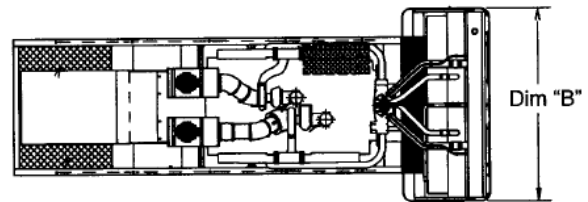
Applicable for supplying power to a constant electrical load for limited hours. Limited Time Running Power (LTP) is in accordance with ISO 8528.

Prime Power (PRP):

Applicable for supplying power to varying electrical load for unlimited hours. Prime Power (PRP) is in accordance with ISO 8528. Ten percent overload capability is available in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.

Base Load (Continuous) Power (COP):

Applicable for supplying power continuously to a constant electrical load for unlimited hours. Continuous Power (COP) in accordance with ISO 8528, ISO 3046, AS 2789, DIN 6271 and BS 5514.



This outline drawing is for reference only. See respective model data sheet for specific model outline drawing number.





Do not use for installation design

Model	Dim "A" mm (in.)	Dim "B" mm (in.)	Dim "C" mm (in.)	Set weight* kg (lbs.)
Open set				
C50D6C	2482 (98)	965 (38)	1321 (52)	958 (2113)
C60D6C	2482 (98)	965 (38)	1321 (52)	1006 (2217)
C80D6C	2482 (98)	965 (38)	1321 (52)	1054 (2324)
C100D6C	2482 (98)	965 (38)	1321 (52)	1106 (2439)
C125D6C	2482 (98)	965 (38)	1321 (52)	1173 (2586)
Weather protective enclosure				
C50D6C	2482 (98)	1016 (40)	1473 (58)	1039 (2290)
C60D6C	2482 (98)	1016 (40)	1473 (58)	1087 (2396)
C80D6C	2482 (98)	1016 (40)	1473 (58)	1135 (2503)
C100D6C	2482 (98)	1016 (40)	1473 (58)	1187 (2618)
C125D6C	2482 (98)	1016 (40)	1473 (58)	1254 (2765)
Sound attenuated enclosure Level 1				
C50D6C	3016 (119)	1016 (40)	1473 (58)	1221 (2693)
C60D6C	3016 (119)	1016 (40)	1473 (58)	1137 (2507)
C80D6C	3016 (119)	1016 (40)	1473 (58)	1185 (2614)
C100D6C	3016 (119)	1016 (40)	1473 (58)	1237 (2729)
C125D6C	3016 (119)	1016 (40)	1473 (58)	1304 (2876)
Sound attenuated enclosure Level 2				
C50D6C	3456 (136)	1016 (40)	1473 (58)	1228 (2708)
C60D6C	3456 (136)	1016 (40)	1473 (58)	1144 (2522)
C80D6C	3456 (136)	1016 (40)	1473 (58)	1192 (2629)
C100D6C	3456 (136)	1016 (40)	1473 (58)	1244 (2744)
C125D6C	3456 (136)	1016 (40)	1473 (58)	1311 (2891)

* Weights above are average. Actual weight varies with product configuration.

Codes and standards

Codes or standards compliance may not be available with all model configurations – consult factory for availability.

	<p>This generator set is designed in facilities certified to ISO 9001 and manufactured in facilities certified to ISO 9001 or ISO 9002.</p>		<p>The generator set is available Listed to UL 2200, Stationary Engine Generator Assemblies.</p>
	<p>The Prototype Test Support (PTS) program verifies the performance integrity of the generator set design. Cummins products bearing the PTS symbol meet the prototype test requirements of NFPA 110 for Level 1 systems.</p>	<p>U.S. EPA</p>	<p>Engine certified to U.S. EPA SI Stationary Emission Regulation 40 CFR, Part 60.</p>
	<p>All low voltage models are CSA certified to product class 4215-01.</p>	<p>International Building Code</p>	<p>The generator set is certified to International Building Code (IBC) 2012.</p>

Warning: Back feed to a utility system can cause electrocution and/or property damage. Do not connect to any building's electrical system except through an approved device or after building main switch is open.

For more information contact your local Cummins distributor or visit power.cummins.com

Our energy working for you.™





Generator set data sheet

Model: C60D6C
Frequency: 60 Hz
Fuel type: Diesel
KW rating: 60 standby
 54 prime
Emissions level: EPA Tier 3, Stationary emergency

Exhaust emission data sheet:	EDS-2027
Exhaust emission compliance sheet:	EPA-3034
Sound performance data sheet:	MSP-1301
Cooling performance data sheet:	MCP-1401
Prototype test summary data sheet:	PTS-450

Fuel consumption	Standby				Prime			
	kW (kVA)				kW (kVA)			
Ratings	60 (75)				54 (68)			
Load	1/4	1/2	3/4	Full	1/4	1/2	3/4	Full
US gph	2.20	3.30	4.60	6.10	2.1	3.00	4.20	5.50
L/hr	8.33	12.49	17.41	23.09	7.95	11.36	15.90	20.82

Engine	Standby rating	Prime rating
Engine manufacturer	Cummins Inc.	
Engine model	QSB5-G13	
Configuration	Cast iron, in-line, 4 cylinder	
Aspiration	Turbocharged and charge air cooled	
Gross engine power output, kWm (bhp)	129 (173)	113 (152)
BMEP at set rated load, kPa (psi)	1205 (174.7)	1083 (157.1)
Bore, mm (in)	107 (4.21)	
Stroke, mm (in)	124 (4.88)	
Rated speed, rpm	1800	
Piston speed, m/s (ft/min)	7.44 (1464)	
Compression ratio	17.3:1	
Lube oil capacity, L (qt)	12.2 (12.9)	
Overspeed limit, rpm	2250	

Fuel flow

Maximum fuel flow, L/hr (US gph)	133 (35.0)
Maximum fuel inlet restriction with clean filter, mm Hg (in Hg)	127 (5.0)

Air

	Standby rating	Prime rating
Combustion air, m ³ /min (scfm)	9.63 (340)	9.34 (330)
Maximum air cleaner restriction with clean filter, kPa (in H ₂ O)	1.25 (5)	

Exhaust

Exhaust flow at set rated load, m ³ /min (cfm)	20 (696)	18.52 (654)
Exhaust temperature, °C (°F)	370 (697)	341 (645)
Maximum back pressure, kPa (in H ₂ O)	10 (40.18)	10(40.18)
Available exhaust back pressure with CPG sound level 2 enclosure muffler, kPa (in H ₂ O)	3.5 (14.1)	4.5 (18.1)
Available exhaust back pressure with CPG weather enclosure muffler, kPa (in H ₂ O)	4.5 (18.1)	5 (20.1)

Standard set-mounted radiator cooling

Ambient design, °C (°F)	50 (122)	
Fan load, kW _m (HP)	5.22 (7)	
Coolant capacity (with radiator), L (US Gal)	16 (4.2)	
Cooling system air flow, m ³ /min (scfm)	218.04 (7700)	
Total heat rejection, MJ/min (Btu/min)	8.96 (8491)	8.38 (7943)
Maximum cooling air flow static restriction, kPa (in H ₂ O)	0.12 (0.5)	

Weight²

Unit wet weight kgs (lbs)	1006 (2217)
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Notes:

¹ For non-standard remote installations contact your local Cummins Power Generation representative.

² Weights represent a set with standard features. See outline drawing for weights of other configurations.

Derating factors

Standby	Engine power available to 3581 m (11750 ft) and ambient temperatures up to 40°C (104°F). Above these conditions, derate at 2.2% per 300 m (1000 ft) and 16.1% per 10°C (18°F)
Prime	Engine power available to 4343 m (14250 ft) and ambient temperatures up to 40°C (104°F). Above these conditions, derate at 2.3% per 300 m (1000 ft) and 18.8% per 10°C (18°F)

Ratings definitions

Emergency standby power (ESP):	Limited-time running power (LTP):	Prime power (PRP):	Base load (continuous) power (COP):
Applicable for supplying power to varying electrical load for the duration of power interruption of a reliable utility source. Emergency Standby Power (ESP) is in accordance with ISO 8528. Fuel Stop power in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.	Applicable for supplying power to a constant electrical load for limited hours. Limited Time Running Power (LTP) is in accordance with ISO 8528.	Applicable for supplying power to varying electrical load for unlimited hours. Prime Power (PRP) is in accordance with ISO 8528. Ten percent overload capability is available in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.	Applicable for supplying power continuously to a constant electrical load for unlimited hours. Continuous Power (COP) is in accordance with ISO 8528, ISO 3046, AS 2789, DIN 6271 and BS 5514.

Alternator data

Standard Alternators	Single phase ²		Three phase ¹				
	120 °C	120 °C	120 °C	120 °C	120 °C	120 °C	120 °C
Maximum temperature rise above 40 °C ambient							
Feature code	BB88-2 ³	BB90-2	B946-2	B986-2	B943-2	B952-2	BB86-2
Alternator data sheet number	ADS-205	ADS-204	ADS-204	ADS-204	ADS-204	ADS-202	ADS-204
Voltage ranges	120/240	120/240	120/208	120/240	277/480	347/600	127/220
Voltage feature code	R104-2	R104-2	R098-2	R106-2	R002-2	R114-2	R020-2
Surge kW	69.3	71.0	73.3	73.3	73.9	72.6	73.5
Motor starting kVA (at 90% sustained voltage) Shunt			231	231	231	188	231
Motor starting kVA (at 90% sustained voltage) PMG			272	272	272	221	272
Full load current amps at standby rating	250	250	208	181	90	72	197

Alternator data

Standard Alternators	Single phase ²		Three phase ¹				
	105 °C	105 °C	105 °C	105 °C	105 °C	105 °C	105 °C
Maximum temperature rise above 40 °C ambient							
Feature code	BB87-2 ³	BB91-2	BB93-2	BB94-2	BB95-2	BB92-2	BB85-2
Alternator data sheet number	ADS-207	ADS-205	ADS-204	ADS-204	ADS-204	ADS-204	ADS-204
Voltage ranges	120/240	120/240	120/208	120/240	277/480	347/600	127/220
Voltage feature code	R104-2	R104-2	R098-2	R106-2	R002-2	R114-2	R020-2
Surge kW	70.2	71.7	73.3	73.3	73.9	73.9	73.5
Motor starting kVA (at 90% sustained voltage) Shunt			231	231	231	231	231
Motor starting kVA (at 90% sustained voltage) PMG			272	272	272	272	272
Full load current amps at standby rating	250	250	208	181	90	72	197

Notes:

¹ Single phase power can be taken from a three phase generator set at up to 2/3 set rated 3-phase kW at 1.0 power factor

² Full single phase output up to full set rated 3-phase kW at 1.0 power factor

³ Reconnectable option

Formulas for calculating full load currents:

$\frac{\text{Three phase output}}{\text{Voltage} \times 1.73 \times 0.8} = \frac{\text{kW} \times 1000}{\text{Voltage} \times 1.73 \times 0.8}$	$\frac{\text{Single phase output}}{\text{Voltage}} = \frac{\text{kW} \times \text{SinglePhaseFactor} \times 1000}{\text{Voltage}}$
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Warning: Back feed to a utility system can cause electrocution and/or property damage. Do not connect to any building's electrical system except through an approved device or after building main switch is open.

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 NAD-6334-EN (03/18) A059X434



power.cummins.com



Alternator data sheet

Frame size: **UC2F**

Characteristics								
Weights:		Wound stator assembly:	243 lb	110 kg				
		Rotor assembly:	247 lb	112 kg				
		Complete alternator:	732 lb	332 kg				
Maximum speed:			2250 rpm					
Excitation current:		Full load:	2 Amps					
		No load:	0.5 Amps					
Insulation system:		Class H throughout						
1 ∅ Ratings (1.0 power factor)		60 Hz			50 Hz			
(Based on specific temperature rise at 40 °C ambient temperature)		Double delta		4 lead	Double delta			
		<u>120/240</u>		<u>120/240</u>	<u>110-120</u> <u>220-240</u>			
125 °C rise ratings	kW/kVA	56/56	60/60		49/49			
105 °C rise ratings	kW/kVA	50/50	54/54		44/44			
3 ∅ Ratings (0.8 power factor)		Upper broad range		LBR*	347/600	Broad range		
(Based on specified temperature rise at 40 °C ambient temperature)		<u>120/208</u>	<u>139/240</u>	<u>190-208</u>		<u>110/190</u>	<u>120/208</u>	<u>127/220</u>
		<u>240/416</u>	<u>277/480</u>	<u>380-416</u>	<u>347/600</u>	<u>220/380</u>	<u>240/415</u>	<u>254/440</u>
150 °C Rise ratings	kW	71	79	72	79	62	62	59
	kVA	89	99	89	99	77	77	74
125 °C Rise ratings	kW	67	75	68	75	58	58	56
	kVA	84	94	85	94	73	73	70
105 °C Rise ratings	kW	60	66	60	66	52	52	50
	kVA	75	83	75	83	65	65	62
80 °C Rise ratings	kW	52	57	52	57	45	45	43
	kVA	65	72	65	72	56	56	53
3 ∅ Reactances (per unit, ± 10%)		(Based on full load at 105 °C rise rating)						
Synchronous		2.27	1.87	1.95	1.63	2.04	1.71	1.45
Transient		0.17	0.14	0.15	0.13	0.16	0.14	0.12
Subtransient		0.13	0.11	0.11	0.11	0.11	0.09	0.08
Negative sequence		0.13	0.11	0.11	0.11	0.12	0.10	0.09
Zero sequence		0.09	0.07	0.07	0.07	0.09	0.07	0.06
3 ∅ Motor starting								
Maximum kVA	(Shunt)	231	231	231		156		
(90% sustained voltage)	(PMG)	272	272	272		194		
Time constants (Sec)								
Transient		0.030	0.030	0.030		0.030		
Subtransient		0.008	0.008	0.008		0.008		
Open circuit		0.750	0.750	0.750		0.750		
DC		0.007	0.007	0.007		0.007		



Alternator data sheet

Frame size: **UC2F**

Windings (@ 20° C)					
Stator resistance	(Line to Line, Ohms)	0.1300	0.0960	0.2040	0.1300
Rotor resistance	(Ohms)	0.8000	0.8000	0.8000	0.8000
Number of leads		12	12	6	12

* Lower broad range 110/190 thru 120/208, 220/380 thru 240/416.



PowerCommand® 2.3 control system



Control system description

The PowerCommand control system is a microprocessor-based generator set monitoring, metering and control system designed to meet the demands of today's engine driven generator sets. The integration of all control functions into a single control system provides enhanced reliability and performance, compared to conventional generator set control systems. These control systems have been designed and tested to meet the harsh environment in which gensets are typically applied.

Features

- 320 x 240 pixels graphic LED backlight LCD.
- Multiple language support.
- AmpSentry™ protective relay - true alternator overcurrent protection.
- Real time clock for fault and event time stamping.
- Exerciser clock and time of day start/stop.
- Digital voltage regulation. Three phase full wave FET type regulator compatible with either shunt or PMG systems.
- Generator set monitoring and protection.
- 12 and 24 VDC battery operation.
- Modbus® interface for interconnecting to customer equipment.
- Warranty and service. Backed by a comprehensive warranty and worldwide distributor service network.
- Certifications - suitable for use on generator sets that are designed, manufactured, tested and certified to relevant UL, NFPA, ISO, IEC, Mil Std., CE and CSA standards.

PowerCommand digital genset control PCC 2300



Description

The PowerCommand generator set control is suitable for use on a wide range of generator sets in non-paralleling applications. The PowerCommand control is compatible with shunt or PMG excitation style. It is suitable for use with reconnectable or non-reconnectable generators, and it can be configured for any frequency, voltage and power connection from 120-600 VAC Line-to-Line.

Power for this control system is derived from the generator set starting batteries. The control functions over a voltage range from 8 VDC to 30 VDC.

Features

- 12 and 24 VDC battery operation.
- Digital voltage regulation - Three phase full wave FET type regulator compatible with either shunt or PMG systems. Sensing is three phase.
- Full authority engine communications (where applicable) - Provides communication and control with the Engine Control Module (ECM).
- AmpSentry protection - for true alternator overcurrent protection.
- Common harnessing - with higher feature Cummins controls. Allows for easy field upgrades.
- Generator set monitoring - Monitors status of all critical engine and alternator functions.
- Digital genset metering (AC and DC).
- Genset battery monitoring system to sense and warn against a weak battery condition.
- Configurable for single or three phase AC metering.
- Engine starting - Includes relay drivers for starter, Fuel Shut Off (FSO), glow plug/spark ignition power and switch B+ applications.
- Generator set protection – Protects engine and alternator.
- Real time clock for fault and event time stamping.
- Exerciser clock and time of day start/stop.
- Advanced serviceability - using InPower™, a PC-based software service tool.

- Environmental protection - The control system is designed for reliable operation in harsh environments. The main control board is a fully encapsulated module that is protected from the elements.
- Modbus interface for interconnecting to customer equipment.
- Configurable inputs and outputs - Four discrete inputs and four dry contact relay outputs.
- Warranty and service - Backed by a comprehensive warranty and worldwide distributor service network.
- Certifications - Suitable for use on generator sets that are designed, manufactured, tested and certified to relevant UL, NFPA, ISO, IEC, Mil Std., CE and CSA standards.

Base control functions

HMI capability

Operator adjustments - The HMI includes provisions for many set up and adjustment functions.

Generator set hardware data - Access to the control and software part number, generator set rating in kVA and generator set model number is provided from the HMI or InPower.

Data logs - Includes engine run time, controller on time, number of start attempts, total kWh, and load profile (control logs data indicating the operating hours at percent of rated kW load, in 5% increments. The data is presented on the operation panel based on total operating hours on the generator.)

Fault history - Provides a record of the most recent fault conditions with control date and time stamp. Up to 32 events are stored in the control non-volatile memory.

Alternator data

- Voltage (single or three phase Line-to-Line and Line-to-Neutral)
- Current (single or three phase)
- kW, kVar, power factor, kVA (three phase and total)
- Frequency

Engine data

- Starting battery voltage
- Engine speed
- Engine temperature
- Engine oil pressure
- Engine oil temperature
- Intake manifold temperature
- Comprehensive Full Authority Engine (FAE) data (where applicable)

Service adjustments - The HMI includes provisions for adjustment and calibration of generator set control functions. Adjustments are protected by a password. Functions include:

Service adjustments (continued)

- Engine speed governor adjustments
- Voltage regulation adjustments
- Cycle cranking
- Configurable fault set up
- Configurable output set up
- Meter calibration
- Display language and units of measurement

Engine control

SAE-J1939 CAN interface to full authority ECMs (where applicable). Provides data swapping between genset and engine controller for control, metering and diagnostics.

12 VDC/24 VDC battery operations - PowerCommand will operate either on 12 VDC or 24 VDC batteries.

Temperature dependent governing dynamics (with electronic governing) - modifies the engine governing control parameters as a function of engine temperature. This allows the engine to be more responsive when warm and more stable when operating at lower temperature levels.

Isochronous governing - (where applicable) Capable of controlling engine speed within +/-0.25% for any steady state load from no load to full load. Frequency drift will not exceed +/-0.5% for a 33 °C (60 °F) change in ambient temperature over an 8 hour period.

Drop electronic speed governing - Control can be adjusted to droop from 0 to 10% from no load to full load.

Remote start mode - It accepts a ground signal from remote devices to automatically start the generator set and immediately accelerate to rated speed and voltage. The remote start signal will also wake up the control from sleep mode. The control can incorporate a time delay start and stop.

Remote and local emergency stop - The control accepts a ground signal from a local (genset mounted) or remote (facility mounted) emergency stop switch to cause the generator set to immediately shut down. The generator set is prevented from running or cranking with the switch engaged. If in sleep mode, activation of either emergency stop switch will wakeup the control.

Sleep mode - The control includes a configurable low current draw state to minimize starting battery current draw when the genset is not operating. The control can also be configured to go into a low current state while in auto for prime applications or applications without a battery charger.

Engine starting - The control system supports automatic engine starting. Primary and backup start disconnects are achieved by one of two methods: magnetic pickup or main alternator output frequency. The control also supports configurable glow plug control when applicable.

Cycle cranking - Is configurable for the number of starting cycles (1 to 7) and duration of crank and rest periods. Control includes starter protection algorithms to prevent the operator from specifying a starting sequence that might be damaging.

Time delay start and stop (cooldown) - Configurable for time delay of 0-300 seconds prior to starting after receiving a remote start signal and for time delay of 0-600 seconds prior to shut down after signal to stop in normal operation modes. Default for both time delay periods is 0 seconds.

Alternator control

The control includes an integrated three phase Line-to-Line sensing voltage regulation system that is compatible with shunt or PMG excitation systems. The voltage regulation system is a three phase full wave rectified and has an FET output for good motor starting capability.

Major system features include:

Digital output voltage regulation - Capable of regulating output voltage to within +/-1.0% for any loads between no load and full load. Voltage drift will not exceed +/- 1.5% for a 40 °C (104 °F) change in temperature in an eight hour period. On engine starting or sudden load acceptance, voltage is controlled to a maximum of 5% overshoot over nominal level. The automatic voltage regulator feature can be disabled to allow the use of an external voltage regulator.

Droop voltage regulation - Control can be adjusted to droop from 0-10% from no load to full load.

Torque-matched V/Hz overload control - The voltage roll-off set point and rate of decay (i.e. the slope of the V/Hz curve) is adjustable in the control.

Current regulation - PowerCommand will regulate the output current on any phase to a maximum of three times rated current under fault conditions for both single phase and three phase faults. In conjunction with a permanent magnet generator, it will provide three times rated current on all phases for motor starting and short circuit coordination purpose.

Protective functions

On operation of a protective function the control will indicate a fault by illuminating the appropriate status LED on the HMI, as well as display the fault code and fault description on the LCD. The nature of the fault and time of occurrence are logged in the control. The service manual and InPower service tool provide service keys and procedures based on the service codes provided.

Protective functions include:

Battle short mode

When enabled and the *battle short* switch is active, the control will allow some shutdown faults to be bypassed. If a bypassed shutdown fault occurs, the fault code and description will still be annunciated, but the genset will not shutdown. This will be followed by a *fail to shutdown* fault. Emergency stop shutdowns and others that are critical for proper operation are not bypassed. Please refer to the control application guide or manual for list of these faults.

Derate

The derate function reduces output power of the genset in response to a fault condition. If a derate command occurs while operating on an isolated bus, the control will issue commands to reduce the load on the genset via contact closures or modbus.

Configurable alarm and status inputs

The control accepts up to four alarm or status inputs (configurable contact closed to ground or open) to indicate a configurable (customer-specified) condition. The control is programmable for warning, shutdown or status indication and for labeling the input.

Emergency stop

Annunciated whenever either emergency stop signal is received from external switch.

Full authority electronic engine protection

Engine fault detection is handled inside the engine ECM. Fault information is communicated via the SAE-J1939 data link for annunciation in the HMI.

General engine protection

Low and high battery voltage warning - Indicates status of battery charging system (failure) by continuously monitoring battery voltage.

Weak battery warning - The control system will test the battery each time the generator set is signaled to start and indicate a warning if the battery indicates impending failure.

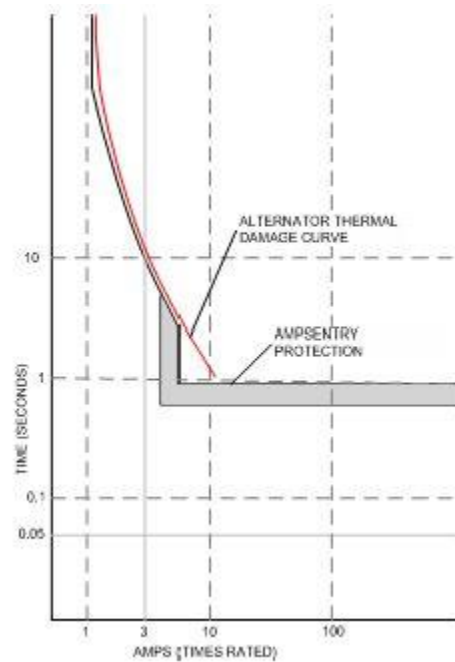
Fail to start (overcrank) shutdown - The control system will indicate a fault if the generator set fails to start by the completion of the engine crank sequence.

Fail to crank shutdown - Control has signaled starter to crank engine but engine does not rotate.

Cranking lockout - The control will not allow the starter to attempt to engage or to crank the engine when the engine is rotating.

Alternator protection

AmpSentry protective relay - A comprehensive monitoring and control system integral to the PowerCommand Control System that guards the electrical integrity of the alternator and power system by providing protection against a wide array of fault conditions in the generator set or in the load. It also provides single and three phase fault current regulation so that downstream protective devices have the maximum current available to quickly clear fault conditions without subjecting the alternator to potentially catastrophic failure conditions. See document R1053 for a full size time over current curve.



High AC voltage shutdown (59) - Output voltage on any phase exceeds preset values. Time to trip is inversely proportional to amount above threshold. Values adjustable from 105-125% of nominal voltage, with time delay adjustable from 0.1-10 seconds. Default value is 110% for 10 seconds.

Low AC voltage shutdown (27) - Voltage on any phase has dropped below a preset value. Adjustable over a range of 50-95% of reference voltage, time delay 2-20 seconds. Default value is 85% for 10 seconds. Function tracks reference voltage. Control does not nuisance trip when voltage varies due to the control directing voltage to drop, such as during a V/Hz roll-off during synchronizing.

Under frequency shutdown (81 u) - Generator set output frequency cannot be maintained. Settings are adjustable from 2-10 Hz below reference governor set point, for a 5- 20 second time delay. Default: 6 Hz, 10 seconds.

Under frequency protection is disabled when excitation is switched off, such as when engine is operating in idle speed mode.

Over frequency shutdown/warning (81 o) - Generator set is operating at a potentially damaging frequency level. Settings are adjustable from 2-10 Hz above nominal governor set point for a 1-20 second time delay. Default: 6 Hz, 20 seconds, disabled.

Overcurrent warning/shutdown - Thresholds and time delays are configurable. Implementation of the thermal damage curve with instantaneous trip level calculated based on current transformer ratio and application power rating.

Loss of sensing voltage shutdown - Shutdown of generator set will occur on loss of voltage sensing inputs to the control.

Field overload shutdown - Monitors field voltage to shutdown generator set when a field overload condition occurs.

Over load (kW) warning - Provides a warning indication when engine is operating at a load level over a set point. Adjustment range: 80-140% of application rated kW, 0-120 second delay. Defaults: 105%, 60 seconds.

Reverse power shutdown (32) - Adjustment range: 5-20% of standby kW rating, delay 1-15 seconds. Default: 10%, 3 seconds.

Reverse Var shutdown - Shutdown level is adjustable: 15-50% of rated Var output, delay 10-60 seconds. Default: 20%, 10 seconds.

Short circuit protection - Output current on any phase is more than 175% of rating and approaching the thermal damage point of the alternator. Control includes algorithms to protect alternator from repeated over current conditions over a short period of time.

Field control interface

Input signals to the PowerCommand control include:

- Coolant level (where applicable)
- Fuel level (where applicable)
- Remote emergency stop
- Remote fault reset
- Remote start
- Battleshort
- Rupture basin
- Start type signal
- Configurable inputs - Control includes (4) input signals from customer discrete devices that are configurable for warning, shutdown or status indication, as well as message displayed

Output signals from the PowerCommand control include:

- Load dump signal: Operates when the generator set is in an overload condition.
- Delayed off signal: Time delay based output which will continue to remain active after the control has removed the run command. Adjustment range: 0 – 120 seconds. Default: 0 seconds.

- Configurable relay outputs: Control includes (4) relay output contacts (3 A, 30 VDC). These outputs can be configured to activate on any control warning or shutdown fault as well as ready to load, not in auto, common alarm, common warning and common shutdown.

- Ready to load (generator set running) signal: Operates when the generator set has reached 90% of rated speed and voltage and latches until generator set is switched to off or idle mode.

Communications connections include:

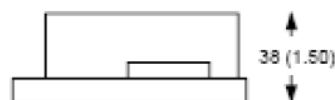
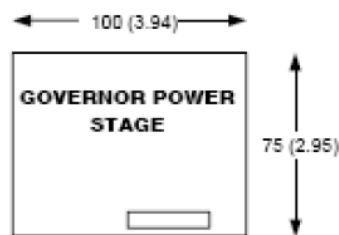
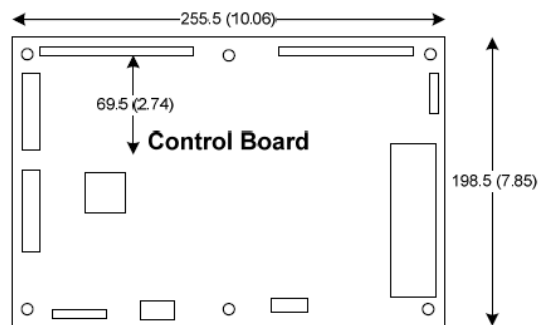
- PC tool interface: This RS-485 communication port allows the control to communicate with a personal computer running InPower software.

- Modbus RS-485 port: Allows the control to communicate with external devices such as PLCs using Modbus protocol.

Note - An RS-232 or USB to RS-485 converter is required for communication between PC and control.

- Networking: This RS-485 communication port allows connection from the control to the other Cummins products.

Mechanical drawings



PowerCommand Human Machine Interface HMI320



Description

This control system includes an intuitive operator interface panel that allows for complete genset control as well as system metering, fault annunciation, configuration and diagnostics. The interface includes five genset status LED lamps with both internationally accepted symbols and English text to comply with customer's needs. The interface also includes an LED backlit LCD display with tactile feel soft-switches for easy operation and screen navigation. It is configurable for units of measurement and has adjustable screen contrast and brightness.

The *run/off/auto* switch function is integrated into the interface panel.

All data on the control can be viewed by scrolling through screens with the navigation keys. The control displays the current active fault and a time-ordered history of the five previous faults.

Features

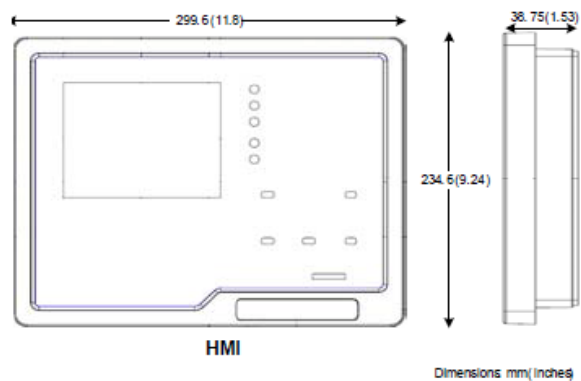
- LED indicating lamps:
 - Genset running
 - Remote start
 - Not in auto
 - Shutdown
 - Warning
 - Auto
 - Manual and stop
- 320 x 240 pixels graphic LED backlight LCD.
- Four tactile feel membrane switches for LCD defined operation. The functions of these switches are defined dynamically on the LCD.
- Seven tactile feel membrane switches dedicated screen navigation buttons for up, down, left, right, ok, home and cancel.
- Six tactile feel membrane switches dedicated to control for auto, stop, manual, manual start, fault reset and lamp test/panel lamps.

- Two tactile feel membrane switches dedicated to control of circuit breaker (where applicable).
- Allows for complete genset control setup.
- Certifications: Suitable for use on generator sets that are designed, manufactured, tested and certified to relevant UL, NFPA, ISO, IEC, Mil Std., CE and CSA standards.
- LCD languages supported: English, Spanish, French, German, Italian, Greek, Dutch, Portuguese, Finnish, Norwegian, Danish, Russian and Chinese Characters.

Communications connections include:

- PC tool interface - This RS-485 communication port allows the HMI to communicate with a personal computer running InPower.
- This RS-485 communication port allows the HMI to communicate with the main control board.

Mechanical drawing



Software

InPower (beyond 6.5 version) is a PC-based software service tool that is designed to directly communicate to PowerCommand generator sets and transfer switches, to facilitate service and monitoring of these products.

Environment

The control is designed for proper operation without recalibration in ambient temperatures from -40 °C to +70 °C (-40 °F to 158 °F) and for storage from -55 °C to +80 °C (-67 °F to 176 °F). Control will operate with humidity up to 95%, non-condensing.

The HMI is designed for proper operation in ambient temperatures from -20 °C to +70 °C (-4 °F to 158 °F) and for storage from -30 °C to +80 °C (-22 °F to 176 °F).

The control board is fully encapsulated to provide superior resistance to dust and moisture. Display panel has a single membrane surface, which is impervious to effects of dust, moisture, oil and exhaust fumes. This panel uses a sealed membrane to provide long reliable service life in harsh environments.

The control system is specifically designed and tested for resistance to RFI/EMI and to resist effects of vibration to provide a long reliable life when mounted on a generator set. The control includes transient voltage surge suppression to provide compliance to referenced standards.

Certifications

PowerCommand meets or exceeds the requirements of the following codes and standards:

- NFPA 110 for level 1 and 2 systems.
- ISO 8528-4: 1993 compliance, controls and switchgear.
- CE marking: The control system is suitable for use on generator sets to be CE-marked.
- EN50081-1,2 residential/light industrial emissions or industrial emissions.
- EN50082-1,2 residential/light industrial or industrial susceptibility.
- ISO 7637-2, level 2; DC supply surge voltage test.
- Mil Std 202C, Method 101 and ASTM B117: Salt fog test.
- UL 508 recognized or Listed and suitable for use on UL 2200 Listed generator sets.
- CSA C282-M1999 compliance
- CSA 22.2 No. 14 M91 industrial controls.
- PowerCommand control systems and generator sets are designed and manufactured in ISO 9001 certified facilities.

Warranty

All components and subsystems are covered by an express limited one year warranty. Other optional and extended factory warranties and local distributor maintenance agreements are available.



Sound Pressure Level @ 7 meters, dB(A)

See notes 2,5,7-11 listed below

Configuration	Exhaust system	Position (Note 1)								8 Position Average
		1	2	3	4	5	6	7	8	
Standard – Unhoused	Infinite Exhaust	81.2	80.8	81.2	80.8	81.2	80.8	81.2	80.8	81.2
F216-2 Weather Protective Aluminium	Mounted	78.6	79.9	78.6	81.8	80.5	80.9	79.7	79.4	80.1
F231-2 Sound Attenuated Level 1, Aluminium	Mounted	78.4	75.2	70.7	72.8	72.5	72.9	72	74.9	74.3
F217-2 Sound Attenuated Level 2, Aluminium	Mounted	71.3	71	68.4	70.3	70.2	70.6	70.3	71.1	70.5

Sound Power Level, dB(A)

See notes 2-4, 7 and 8 listed below

Configuration		Octave Band Center Frequency (Hz)										Overall Sound Power Level
		31.5	63	125	250	500	1000	2000	4000	8000	16000	
Standard – Unhoused	Infinite Exhaust	53.8	79.2	87.9	92.3	100.4	102.0	101.1	97.2	93.1	88.0	107.0
F216-2 Weather Protective Aluminium	Mounted	55.2	86.0	94.5	96.0	100.5	101.9	100.1	96.9	92.1	82.6	107.0
F231-2 Sound Attenuated Level 1, Aluminium	Mounted	59.6	84.6	88.0	90.1	95.6	96.7	94.9	91.9	87.5	79.6	101.9
F217-2 Sound Attenuated Level 2, Aluminium	Mounted	57.1	84.8	87.7	88.4	92.6	91.7	89.6	87.1	82.9	72.4	98.2

Exhaust Sound Power Level, dB(A)

See notes 4,6 and 9 listed below

Open Exhaust (No Muffler) @ Rated Load	Octave Band Center Frequency (Hz)									Overall Sound Power Level
	31.5	63	125	250	500	1000	2000	4000	8000	
	56	82	96	102	108	111	112	111	109	118

Note:

1. Sound pressure levels at 1 meter are measured per the requirements of ISO 3744, ISO 8528-10, ANSI S1.13, ANSI S12.1 and European Communities Directive 2000/14/EC as applicable. The microphone measurement locations are 1 meter from a reference parallelepiped just enclosing the generator set (enclosed or unenclosed).
2. Seven-meter measurement location 1 is 7 meters (23 feet) from the generator (alternator) end of the generator set, and the locations proceed counter clockwise around the generator set at 45° angles at a height of 1.2 meters (48 inches) above the ground surface.
3. Sound Power Levels are calculated according to ISO 3744, ISO 8528-10, and or CE (European Union) requirements.
4. Exhaust Sound Levels are measured and calculated per ISO 6798, Annex A.
5. Reference Sound Pressure Level is 20 µPa.
6. Reference Sound Power Level is 1 pW (10-12 Watt).
7. Sound data for remote-cooled generator sets are based on rated loads without cooling fan noise.
8. Sound data for the generator set with infinite exhaust do not include the exhaust noise contribution.
9. Sound levels are subject to instrumentation, measurement, installation, and manufacturing variability

10. Unhoused/Open configuration generator sets refers to generator sets with no sound enclosures of any kind
11. Housed/Enclosed/Closed/Canopy configuration generator sets refer to generator sets that have noise reduction sound enclosures installed over the generator set and usually integrally attached to the skid base/base frame/fuel container base of the generator set.



Prototype Test Support (PTS) 60 Hz test summary



Generator set models		Representative prototype	
C50D6C	C80D6C	Model:	C100D6C
C60D6C	C100D6C	Alternator:	UC27 D
		Engine:	QSB5-G5

The following summarizes prototype testing conducted on the designated representative prototype of the specified models. This testing is conducted to verify the complete generator set electrical and mechanical design integrity. Prototype testing is conducted only on generator sets not sold as new equipment.

Maximum surge power: 117.5 kW
The generator set was evaluated to determine the stated maximum surge power.

Maximum motor starting: 146.3 kVA
The generator set was tested to simulate motor starting by applying the specified kVA load at low lagging power factor (0.4 or lower). With this load applied, the generator set recovered to a minimum of 90% rated voltage.

Alternator temperature rise:
The highest rated temperature rise (120 °C) test results are reported as follows to verify that worst case temperature rises do not exceed allowable NEMA MG1 limits for class H insulation. Tests were conducted per IEEE 115, rise by resistance and embedded detector, with the rated voltages. Only the highest temperatures are reported.

Location	Maximum rise (°C)
Alternator stator	N/A
Alternator rotor	N/A
Exciter stator	N/A
Exciter rotor	N/A

Torsional analysis and testing:
The generator set was tested to verify that the design is not subjected to harmful torsional stresses. A spectrum analysis of the transducer output was conducted.

Cooling system: 50 °C ambient
0.5 in. H₂O restriction
The cooling system was tested to determine ambient temperature and static restriction capabilities. The test was performed at full rated load in elevated ambient temperature under static restriction conditions.

Durability:
The C100D6C generator set was subjected to a minimum 500 hour endurance test operating at variable load up to the Standby rating based upon MIL-STD-705 to verify structural soundness and durability of the design.

Electrical and mechanical strength:
The generator set was tested to several single phase and three phase faults to verify that the generator can safely withstand the forces associated with short circuit conditions. The generator set was capable of producing full rated output at the conclusion of the testing.

Steady state performance:
The generator set was tested to verify if the steady state operating performance was within the specified maximum limits.

Voltage regulation:	± 1%
Random voltage variation:	± 1%
Frequency regulation:	± Isochronous
Random frequency variation:	± 0.5%

Transient performance:
The generator set was tested to verify single step loading capability as required by NFPA 110 and verify acceptable voltage and frequency response on load addition or rejection. The following results were recorded at 1.0 power factor:

Full load acceptance:

Voltage dip:	28%
Recovery time:	1.3 seconds
Frequency dip:	9.1%
Recovery time:	2.6 seconds

Full load rejection:

Voltage rise:	20.2%
Recovery time:	0.6 seconds
Frequency rise:	7.0%
Recovery time:	1.7 seconds

Harmonic analysis:
(per MIL-STD-705B, method 601.4)

Harmonic	<u>Line to Line</u>		<u>Line to Neutral</u>	
	<u>No load</u>	<u>Full load</u>	<u>No load</u>	<u>Full load</u>
3	0.04	0.15	0.15	0.15
5	0.2	0.2	0.2	0.2
7	0.6	0.6	0.6	0.6
9	0.02	0.04	0.04	0.04
11	0.52	0.52	0.52	0.52
13	0.26	0.26	0.26	0.26
15	0.0	0.0	0.0	0.0



High ambient air temperature radiator cooling system

	Fuel type	Duty	Rating (kW)	Max cooling @ air flow static restriction, unboxed (inches water/mm water)					Housed in free air, no air discharge restriction		
				0.0/0.0	0.25/6.4	0.5/12.7	0.75/19.1	1.0/25.4	F231	F217	F216
				Maximum allowable ambient temperature, degree C							
60 Hz	Diesel	Standby	60	50	50	50	50	N/A	50	50	50
		Prime	54	50	50	50	50	N/A	50	50	50

Notes:

1. Data shown are anticipated cooling performance for typical generator set.
2. Cooling data is based on 1000 ft (305 m) site test location.
3. Generator set power output may need to be reduced at high ambient conditions. Refer generator set data sheet for derate schedules.
4. Cooling performance may be reduced due to several factors including but not limited to: Incorrect installation, improper operation, fouling of the cooling system, and other site installation variables.



2018 EPA Tier 3 Exhaust Emission Compliance Statement C60D6C Stationary Emergency 60 Hz Diesel Generator Set

Compliance Information:

The engine used in this generator set complies with Tier 3 emissions limit of U.S. EPA New Source Performance Standards for stationary emergency engines under the provisions of 40 CFR 60 Subpart IIII.

Engine Manufacturer:	Cummins Inc.
EPA Certificate Number:	JCEXL0275AAK-030
Effective Date:	11/01/2017
Date Issued:	11/01/2017
EPA Engine Family (Cummins Emissions Family):	JCEXL0275AAK

Engine Information:

Model:	QSB5-G13	Bore:	4.21 in. (106.9 mm)
Engine Nameplate HP:	173	Stroke:	4.88 in. (123.9 mm)
Type:	4 cycle, in-line, 4 cylinder	Displacement:	272 cu. in. (4.45 liters)
Diesel Aspiration:	Turbocharged	Compression Ratio:	17.3:1
Emission Control Device:		Exhaust Stack Diameter:	4 in. (102 mm)

Diesel Fuel Emission Limits

D2 Cycle Exhaust Emissions

	Grams per BHP-hr			Grams per kWm-hr		
	<u>NO_x + NMHC</u>	<u>CO</u>	<u>PM</u>	<u>NO_x + NMHC</u>	<u>CO</u>	<u>PM</u>
Test Results – Diesel Fuel (300-4000 ppm Sulphur)	2.79	0.66	0.10	3.80	0.90	0.15
EPA Emissions Limit	2.98	2.61	0.15	4.00	3.50	0.20

Test methods: EPA nonroad emissions recorded per 40 CFR 89 (ref. ISO8178-1) and weighted at load points prescribed in Subpart E, Appendix A for constant speed engines (ref. ISO8178-4, D2)

Diesel fuel specifications: 40-48 Cetane number, Reference: ASTM D975 No. 2-D, <15 ppm Sulphur

Reference conditions: Air Inlet Temperature: 25 °C (77 °F), Fuel Inlet Temperature: 40 °C (104 °F). Barometric Pressure: 100 kPa (29.53 in Hg), Humidity: 10.7 g/kg (75 grains H₂O/lb) of dry air; required for NO_x correction, Restrictions: Intake Restriction set to a maximum allowable limit for clean filter; Exhaust Back Pressure set to a maximum allowable limit.

Tests conducted using alternate test methods, instrumentation, fuel or reference conditions can yield different results. Engine operation with excessive air intake or exhaust restriction beyond published maximum limits, or with improper maintenance, may result in elevated emission levels.

Every™ Start. Ensured.



Batteries shown above: Group 65, 650 CCA, part number C65 and Group 31, 925 CCA, part number C31S-9.

Cummins lead acid batteries are designed for many applications giving you coverage in automotive, power generation, marine and recreational.

- Access to the largest and most capable parts and service network in North America with Cummins
- Extended free replacement warranty
- Offers performance and reliability

Ask us about our start up power batteries.



Every™ Start. Ensured.



Cummins start up batteries are designed to provide the cranking power needed to get you going and keep you going.



Technical Specifications of Cummins Popular Battery Lineup

CUMMINS PREMIUM 31 SERIES							
Cummins Part #	CCA	RC	Voltage	Length	Width	Height	Warranty (Free Replacement)
CHCL31A	700	190	12	13	6 13/16	9 7/16	18
CHCL31S	700	190	12	13	6 13/16	9 7/16	18
C31AHD	750	180	12	13	6 13/16	9 7/16	18
C31SHD	750	180	12	13	6 13/16	9 7/16	18
C31AXHD	950	195	12	13	6 13/16	9 7/16	18
C31SXHD	950	195	12	13	6 13/16	9 7/16	18

CUMMINS 31 VALUE LINE							
Cummins Part #	CCA	RC	Voltage	Length	Width	Height	Warranty (Free Replacement)
C31S-7	750	165	12	13	6 13/16	9 7/16	18
C31S-9	925	175	12	13	6 13/16	9 7/16	18

CUMMINS 31 AGM (Absorbed Glass Mat) SERIES							
Cummins Part #	CCA	RC	Voltage	Length	Width	Height	Warranty (Free Replacement)
CAGM31SHD	925	190	12	13	6 13/16	9 7/16	18
CAGM31S	800	180	12	13	6 13/16	9 7/16	18

CUMMINS HEAVY DUTY COMMERCIAL							
Cummins Part #	CCA	RC	Voltage	Length	Width	Height	Warranty (Free Replacement)
C4D	1000	290	12	20 3/4	8 3/4	9 13/16	18
C8DXH	1400	450	12	20 3/4	11 1/8	9 13/16	18
C8D	1155	380	12	20 3/4	11 1/8	9 13/16	18

CUMMINS LTV (Light Truck & Van)							
Cummins Part #	CCA	RC	Voltage	Length	Width	Height	Warranty (Free Replacement)
C24-HC	700	120	12	10 1/4	6 13/16	8 7/8	36
C24F-HC	700	120	12	10 3/4	6 13/16	9	36
C27-HC	750	120	12	12 1/16	6 13/16	8 7/8	36
C27F-HC	710	120	12	12 1/2	6 13/16	8 7/8	36
C34-HC	800	110	12	10 1/4	6 13/16	7 7/8	36
C65-HC	850	150	12	12 1/16	7 9/16	7 9/16	36

CUMMINS GOLF/RV							
Cummins Part #	AH	RC	Voltage	Length	Width	Height	Warranty (Free Replacement)
CGC2000P	200	395	6	10 3/8	7 3/16	10 7/8	18
CGC2200P	220	445	6	10 3/8	7 3/16	10 7/8	18



Battery charger-6 amp

A045D925 60Hz/50Hz



Description

Cummins Power Generation fully automatic battery chargers are designed to both recharge your batteries, and extend your battery's life in applications where it is stored for long periods of time. This charger can handle poor power quality, exposure to extreme weather and rough handling.

To maximize battery life, a 3-stage charging cycle is implemented. The three charging stages are bulk stage, absorption stage and maintenance stage. During the bulk stage, the charger uses its full amp output to do the heaviest charging, quickly bringing your battery to about 75% of capacity. In the absorption stage, the current slows, adjusting for maximum charging efficiency while it gently tops off the battery to about 98% of capacity.

During the maintenance stage, a lower, closely-regulated, constant voltage is applied to maintain full charge and prevent discharge.

Unlike some "trickle chargers," the float charger won't apply more current than necessary to maintain full charge. Batteries can be connected indefinitely, without harm; in fact, the float charge extends battery life.

Features

Protection – Surge protected to IEEE and EN standards. All models include single pole cartridge type fuses mounted on the printed circuit board to protect against input or output overcurrent.

Lightweight and silent – Lighter than transformer types, completely silent but still provides full output when overloaded outlets drop AC voltage below the normal 115V.

Monitoring – Status LED indicators are provided to show the condition or charging status of the battery. When the red LED is on, it indicates that the battery is discharged and is recharging at the 'BULK' rate. When both the red and green LEDs are on, the battery is charging at the 'midrange' rate. When the green LED is on, the battery is 90% charged and ready for use.

Construction – Made using epoxy-potted cases making it the ultimate in durability, completely waterproof and able to withstand numerous caustic chemicals and gases, as well as being shockproof.

Fault Indication – The charger senses and indicates the following fault conditions: Defective or damaged cells, under-voltage at the battery, battery drawing more current than charger can replace, loss of power or extremely low AC voltage at the charger, other battery fault conditions and charger failure.

Compatibility – Works with Sealed Lead Acid (SLA), Absorbed Glass Mat (AGM) and Gel type batteries.

Low Electromagnetic and Radio

Frequency Interference – This product meets FCC class B for conducted and radiated emissions.

Listed – This product is UL listed according to the UL 1236 Standard.

Warranty – This product has a two year warranty

Specifications

Performance and physical characteristics

Output:	Nominal voltage	12 VDC
	Float voltage – 12 V batteries	13.0-13.6 VDC at 0-2 amps
	Maximum output current	6 A @ 12 VDC nom
Input:	Voltage AC	115, 208, 240 ±10%, 90-135
	Frequency	60 Hz ±5%
Battery:	Maximum battery size	150 Amp Hours
	Maximum recharge time	20 hours
Approximate net weight:		4 lbs. (1.81 Kg)
Approximate dimensions: height x width x depth-in(mm)		2.25 x 6.4 x 3.5 (57 x 162 x 89)
Ambient temperature operation: At full rated output		- 40°F to 158 °F (-40 °C to 70 °C)



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10 Toh Guan Road #07-01
 TT International Tradepark
 Singapore 608838
 Phone 65 6417 2388
 Fax 65 6417 2399

Warning: Back feed to a utility system can cause electrocution and/or property damage. Do not connect generator sets to any building electrical system except through an approved device or after building main switch is open.

Warning: For professional use only. Must be installed by a qualified service technician. Improper installation presents hazards of electrical shock and improper operation, resulting in severe personal injury and/or property damage.



THE VMC GROUP

The Power of Together™



CERTIFICATE OF COMPLIANCE SEISMIC DESIGN OF NONSTRUCTURAL COMPONENTS AND SYSTEMS



Certification No.

VMA-51071-01C (REVISION 04)

Expiration Date: 06/30/2021

Certification Parameters:

The nonstructural products (mechanical and/or electrical components) listed on this certificate are CERTIFIED¹ FOR SEISMIC APPLICATIONS in accordance with the following building code² releases.

IBC 2012, 2015, 2018

The following model designations, options, and accessories are included in this certification. Reference report number **VMA-51071-01** as issued by The VMC Group for a complete list of certified models, included accessories/options, and certified installation methods.

Cummins Power Generation, Incorporated; Diesel Gensets Commercial Series; 10 kW – 125 kW

The above referenced equipment is **APPROVED** for seismic application when properly installed³, used as intended, and contains a Seismic Certification Label referencing this Certificate of Compliance⁴. As limited by the tabulated values, below grade, grade, and roof-level installations, installations in essential facilities, for life safety applications, and/or of equipment containing hazardous contents are permitted and included in this certification with an Equipment Importance Factor assigned as $I_p=1.5$. The equipment is qualified by successful seismic shake table testing at the nationally recognized Dynamic Certification Laboratories under the review of the ISO Accredited Product Certification Agency, The VMC Group.

Certified Seismic Design Levels⁸

Certified IBC	Importance $I_p \leq 1.5$ Soil Classes A-E Risk Categories I-IV Design Categories A-F	$S_{DS} \leq 2.500 \text{ g}$ $z/h = 0.0$		$S_{DS} \leq 2.000 \text{ g}$ $z/h \leq 1.0$
		Horizontal Design ¹⁰	$\frac{F_p}{W_p} = 0.4 S_{DS} I_p \frac{a_p}{R_p} \left(1 + 2 \frac{z}{h}\right) \leq$	2.400 g
Test Datum AC156	ISO 17025 Laboratory Pre/Post-Shake Functionality Tri-axial, 5% Damping SRS	$A_{FLEX-H} \leq 3.200 \text{ g}$		$A_{FLEX-V} \leq 1.667 \text{ g}$
		$A_{RIG-H} \leq 2.400 \text{ g}$		$A_{RIG-V} \leq 0.667 \text{ g}$
		$ZPA_H \leq 2.160 \text{ g}$		$ZPA_V \leq 0.600 \text{ g}$

Certified Seismic Installation Methods

Rigid mounting from unit base to rigid structure



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CERTIFICATE OF COMPLIANCE

SEISMIC DESIGN OF NONSTRUCTURAL COMPONENTS AND SYSTEMS

Certified Product Table:

Model	Power Rating	RPM	Maximum Dimensions (in.)			Max Weight with Enclosure (lbs.)	Certified Fuel Tank Capacities (gal.)	SDS (g)				
			Length	Width	Height			z/h = 0.0	z/h = 1.0			
C10 D6	10 kW	1800	98	34	88	4,300	46, 74, 91, 132, 195, 263	2.500	2.000			
C15 D6	15 kW					4,400						
C20 D6	20 kW					4,470						
C25 D6	25 kW		131			5,890	74, 132, 195, 263, 389					
C30 D6	30 kW					5,930						
C35 D6	35 kW					5,960						
C40 D6	40 kW					6,140						
C50 D6	50 kW		170			40	104			6,260	250, 425, 625	2.500
C60 D6	60 kW									6,260		
C50 D6C	50 kW									8,943		
C60 D6C	60 kW				8,990							
C80 D6C	80 kW				9,040							
C100 D6C	100 kW				9,216							
C125 D6C	125 kW				9,300							

This certification **includes** the open generator set and the enclosed generator set when installed with or without the sub-base tank. This certification also includes the sub-base tank as a stand-alone accessory. The generator set and included options shall be a catalogue design and factory supplied. The generator set and applicable options shall be installed and attached to the building structure per the manufacturer supplied seismic installation instructions. This certification **excludes** all non-factory supplied accessories, including but not limited to mufflers, isolation/restraint devices, remote control panels, remote radiators, pumps and other electrical/mechanical components.



VMA-51071-01C (Revision 04)
 Issue Date: July 3, 2015
 Revision Date: June 6, 2018
Expiration Date: June 30, 2021



THE VMC GROUP

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CERTIFICATE OF COMPLIANCE

SEISMIC DESIGN OF NONSTRUCTURAL COMPONENTS AND SYSTEMS

Notes and Comments:

1. All equipment listed herein successfully passed the seismic acceptance criteria for shake testing non-structural components and systems as set forth in the ICC AC-156. The Test Response Spectrum (TRS) enveloped the Required Response Spectrum (RRS) for all units tested. The units cited in this certification were representative sample(s) of a contingent of models and all remained captive and structurally sound after the seismic shake simulation. The units also remained functionally operational after the simulation testing as functional testing was completed by the equipment manufacturer before and after the seismic simulations. Although a seismic qualified unit inherently contains some wind resisting capacity, that capacity is undetermined and is excluded from this certification. Snow/Ice loads have been neglected and thus limit the unit to be installed both indoors (covered by an independent protective structure) and out of doors (exposed to accumulating snow/ice) for ground snow loads no greater than 30 psf for all applications.
2. The following building codes are addressed under this certification:
 IBC 2012 – referencing ASCE7-10 and ICC AC-156
 IBC 2015 – referencing ASCE7-10 and ICC AC-156
 IBC 2018 – referencing ASCE7-16 and ICC AC-156
3. Refer to the manufacturer supplied installation drawings for anchor requirements and mounting considerations for seismic applications. Required anchor locations, size, style, and load capacities (tension and shear) may be specified on the installation drawings or specified by a 3rd party. Mounting requirement details such as anchor brand, type, embedment depth, edge spacing, anchor-to-anchor spacing, concrete strength, special inspection, wall design, and attachment to non-building structures must be outlined and approved by the Engineer of Record for the project or building. Structural walls, structural floors, and housekeeping pads must also be seismically designed and approved by the project or building Structural Engineer of Record to withstand the seismic anchor loads as defined on the installation drawings. The installing contractor is responsible for observing the installation detailed in the seismic installation drawings and the proper installation of all anchors and mounting hardware.
4. For this certificate and certification to remain valid, this certificate must correspond to the "Seismic Certification Label" found affixed to the unit by the factory. The label ensures the manufacturer built the unit in conformance to the IBC seismic design criteria set forth by the Certified Seismic Qualification Agency, The VMC Group, and meets the seismic design levels claimed by this certificate.
5. Mechanical, Electrical, and Plumbing connections to the equipment must be flexibly attached as to not transfer load through the connection. The structural integrity of any conduit, cable trays, piping, ductwork and/or flexible connections is the responsibility of others. This certification does not guarantee the equipment will remain compliant to NEMA, IP, UL, or CSA standards after a seismic event.
6. This certificate applies to units manufactured at:
 1400 73rd Ave NE, OF 143, Minneapolis, MN 55432
7. This project follows The VMC Group's ISO-17065 Scheme for Product Certification of Nonstructural Components.
8. The qualified seismic design level stated is the lowest for all series this certificate covers, for more detailed ranges of qualified seismic design levels, see the certified product tables.

John P. Giuliano, PE
President, The VMC Group

VMA-51071-01C (Revision 04)
Issue Date: July 3, 2015
Revision Date: June 6, 2018
Expiration Date: June 30, 2021





Dual wall sub-base diesel fuel tanks - 10-200 kW generator sets



Description

Cummins® offers two series of fuel tanks (basic series and regional series) for the 10~125 kW diesel generator sets. The “basic” series of fuel tanks provide economical solutions for areas with no or minimal local/regional code requirements on diesel fuel tanks. The footprint of “basic” tanks matches the generator set’s footprint. The “regional” series of fuel tanks provide flexible and upgradable solutions for areas with extensive local/regional code requirements on diesel fuel tanks. The footprint of the “regional” series of fuel tanks extends beyond the generator set to allow room for installation of optional features at factory or accessories in the field for meeting local/regional code requirements or customer specification on diesel fuel tanks. All fuel tanks and optional features are compatible with factory installed enclosures.

These tanks are constructed of heavy gauge steel and include an internally reinforced baffle structure for supporting the generator set. The fuel tank design features fewer seams and welds for better corrosion resistance performance.

These tanks are pre-treated with a conversion coating and then finished with a textured powder paint. The paint has superior UV and chemical resistance with best-in-class adhesion, flexibility, and durability to resist chipping and substrate corrosion. Both interior compartments are treated with a rust preventative for extended corrosion protection.

These tanks are UL and ULC Listed as secondary containment generator base tanks. Inner and outer containments are leak checked per UL and ULC testing procedures to ensure their integrity.

These fuel tanks are offered in various sizes to satisfy different fuel capacities requirements.

Compatible generator set model

Engine	D1703M	V2203M	4BT3.3-G5	4BTAA3.3-G7	QSB5-G5	QSB7-G5
Generator set model names	C10D6	C20D6	C25D6	C50D6	C50D6C	C125D6D
	C15D6		C30D6	C60D6	C60D6C	C150D6D
			C35D6		C80D6C	C175D6D
			C40D6		C100D6C	C200D6D
					C125D6C	

Regional fuel tanks

Standard features:

UL 142 and ULC-S601 listed - Minimum 110% secondary IBC 2012 and 2015 certified - All optional features are seismically certified with this range of tanks and generator sets. Requires factory-installed 2 ft vent extensions or higher.

UL 142 & ULC-S601 listed - Minimum 125% secondary containment capacity.

NFPA & IFC - Capable of meeting NFPA 30, NFPA 110, and IFC codes with available factory-installed optional features.

Emergency pressure relief vents - Ensure adequate ventilation of the primary and secondary tank compartments under extreme temperature and emergency conditions.

Normal atmospheric vent - "Mushroom" style vent ensures adequate venting of the primary tank during fill, generator set running, and temperature variations. Raised above fuel fill.

Raised fuel fill - Includes lockable sealed fuel cap.

Lifting eyes - Allow lifting of fuel tank with generator set installed.

Optional features:

Secondary containment basin switch (rupture switch) - Activates a warning in the event of a primary tank leak. Side Mounted.

Low fuel level switch - Activates a warning when 40% of the fuel is left in the tank.

Fuel level gauge - Provides direct reading of fuel level. Top mounted.

Electric fuel level sender with gauge - Allows remote electrical monitoring of fuel tank level. Flying leads for customer connection.

Tank to foundation clearance - 2-inch bolt-thru risers allow visual inspection under tank including rodent barrier.

Spill containment box for fuel fill - 5 gallon capacity with integral drain (to tank). Lockable lid.

Overfill prevention valve - Shuts off fuel flow during filling at approximately 95% full*. Includes fill down tube, as needed, to terminate within 6" of the bottom of the fuel tank. Uses a 2 inch type "F" cam lock adapter for filling.

High fuel switch - Activates at 90% of full fuel level. Flying leads for customer connection.

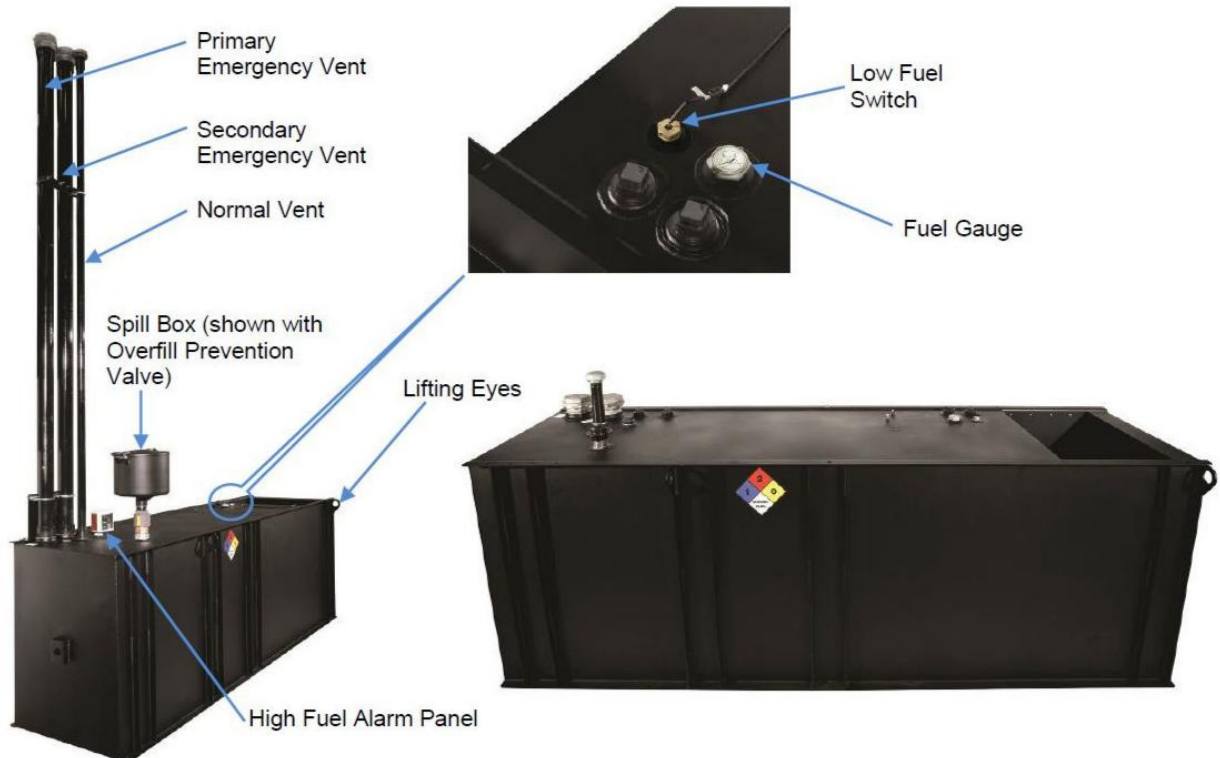
High fuel alarm panel - Provides audible & visual alarm when fuel level reaches 90% of full fuel level.

Fill drop tube - Terminates fuel fill location within 6" of the bottom of the fuel tank.

Vent extensions - Terminate normal and emergency vents (both primary and secondary) a minimum of 12 ft above the bottom of tank.

Seismic vent extensions - 2 ft normal and emergency (both primary & secondary) extensions to meet IBC/OSHPD seismic requirements.

* The OFPV inherently shuts off fuel at approximately 2" below the top of the fuel tank. Some tanks will shut off below this 95% fill level.



*Picture is for reference only. See outline drawing for tank specific information by model.

Regional tanks

Generator set Standby power output	Generator set model	Engine model	Fuel consumption (100% load, Standby)	Tank feature code	Minimum run time feature	Tank dimensions (L x W x H)	Nominal dry weight*	Tank usable volume	Actual run time w/o OFPV	Actual run time w/OPFV
kW			gal/hr		hr	inch	lbs	gal	hr	hr
10	C10 D6	D1703M	1.12	C301-2	24	87.6 x 34 x 15	510	74	66	56
				C303-2	48	87.6 x 34 x 15	510	74	66	56
				C305-2	72	87.6 x 34 x 23	723	132	118	107
				C307-2	96	87.6 x 34 x 23	723	132	118	107
15	C15 D6	D1703M	1.38	C301-2	24	87.6 x 34 x 15	510	74	53	45
				C303-2	48	87.6 x 34 x 15	510	74	53	45
				C305-2	72	87.6 x 34 x 23	723	132	95	86
				C307-2	96	87.6 x 34 x 32	962	195	141	132
20	C20 D6	V2203M	1.81	C301-2	24	87.6 x 34 x 15	510	74	41	35
				C303-2	48	87.6 x 34 x 23	723	132	73	66
				C305-2	72	87.6 x 34 x 32	962	195	108	101
				C307-2	96	87.6 x 34 x 32	962	195	108	101
25	C25 D6	4BT3.3-G5	2.42	C301-2	24	121 x 34 x 10.5	514	74	31	25
				C303-2	48	121 x 34 x 16.2	686	132	54	47
				C305-2	72	121 x 34 x 22.1	879	195	80	73
				C307-2	96	121 x 34 x 29.5	1120	263	109	101
30	C30 D6	4BT3.3-G5	2.81	C301-2	24	121 x 34 x 10.5	514	74	26	21
				C303-2	48	121 x 34 x 22.1	879	195	69	63
				C305-2	72	121 x 34 x 29.5	1120	263	94	87
				C307-2	96	121 x 34 x 42.0	1461	389	138	132
35	C35 D6	4BT3.3-G5	3.16	C301-2	24	121 x 34 x 16.2	686	132	42	36
				C303-2	48	121 x 34 x 22.1	879	195	62	56
				C305-2	72	121 x 34 x 29.5	1120	263	83	77
				C307-2	96	121 x 34 x 42.0	1461	389	123	117
40	C40 D6	4BT3.3-G5	3.66	C301-2	24	121 x 34 x 16.2	686	132	36	31
				C303-2	48	121 x 34 x 22.1	879	195	53	48
				C305-2	72	121 x 34 x 42.0	1461	389	106	101
				C307-2	96	121 x 34 x 42.0	1461	389	106	101
50	C50 D6	4BTAA3.3-G7	4.25	C301-2	24	121 x 34 x 16.2	686	132	31	27
				C303-2	48	121 x 34 x 29.5	1120	263	62	58
				C305-2	72	121 x 34 x 42.0	1461	389	92	87
60	C60 D6	4BTAA3.3-G7	5.04	C301-2	24	121 x 34 x 16.2	686	132	26	23
				C303-2	48	121 x 34 x 29.5	1120	263	52	49
				C305-2	72	121 x 34 x 42.0	1461	389	77	73
50	C50D6C	QSB5-G5	5.30	C301-2	24	154 x 40 x 22	1388	250	47	45
				C303-2	48	154 x 40 x 32	1657	425	80	76
				C305-2	72	154 x 40 x 32	1657	425	80	76
				C307-2	96	154 x 40 x 46	2096	625	118	112
60	C60D6C	QSB5-G5	6.10	C301-2	24	154 x 40 x 22	1388	250	41	39
				C303-2	48	154 x 40 x 32	1657	425	70	66
				C305-2	72	154 x 40 x 46	2096	625	102	97
				C307-2	96	154 x 40 x 46	2096	625	102	97
80	C80D6C	QSB5-G5	7.30	C301-2	24	154 x 40 x 22	1388	250	34	33
				C303-2	48	154 x 40 x 32	1657	425	58	55
				C305-2	72	154 x 40 x 46	2096	625	85	81
100	C100D6C	QSB5-G5	8.90	C301-2	24	154 x 40 x 22	1388	250	28	27
				C303-2	48	154 x 40 x 32	1657	425	48	45
				C305-2	72	154 x 40 x 46	2096	625	70	66
125	C125D6C	QSB5-G6	10.30	C301-2	24	154 x 40 x 22	1388	250	24	23
				C303-2	48	154 x 40 x 46	2096	625	60	58

* All weights are approximate.

Regional tanks

Generator set Standby power output	Generator set model	Engine model	Fuel consumption (100% load, Standby)	Tank feature code	Minimum run time feature	Tank dimensions (L x W x H)	Nominal dry weight*	Tank usable volume	Actual run time w/o OFPV	Actual run time w/OFPV
kW			gal/hr		hr	inch	lbs	gal	hr	hr
125	C125D6D	QSB7-G5	10.1	C301-2	24	180x40x21	1477	351	34	30
				C303-2	48	180x40x42	2302	737	72	69
				C305-2	72	180x40x42	2302	737	72	69
				C307-2	96	180x65.5x35.3	3552	1055	104	98
150	C150D6D		11.7	C301-2	24	180x40x21	1477	351	30	26
				C303-2	48	180x40x42	2302	737	63	59
				C305-2	72	180x65.5x35.3	3552	1055	90	84
175	C175D6D		13.3	C301-2	24	180x40x21	1477	351	26	23
				C303-2	48	180x40x42	2302	737	55	52
				C305-2	72	180x65.5x35.3	3552	1055	79	74
200	C200D6D		14.9	C301-2	24	180x40x21	1477	351	24	21
				C303-2	48	180x40x42	2302	737	49	47
		C305-2		72	180x65.5x35.3	3552	1055	72	66	

Certifications/standards/codes



UL 142 Listed - Cummins dual wall sub-base tanks are UL Listed and constructed in accordance with Underwriters Laboratories Standard UL 142 "steel aboveground tanks for flammable and combustible liquids," as a "secondary containment generator base tank"



NFPA - Cummins tanks are built in accordance with all applicable NFPA codes:

- NFPA 30 - Flammable and Combustible Liquids code
- NFPA 37 - Standard for Installation and use of Stationary Combustible Engine and Gas Turbines
- NFPA 110 - Standard for Emergency and Standby Power Systems



ISO9001 - This product was designed and manufactured in facilities certified to ISO9001.



ULC - Cummins tanks are built in accordance with all applicable ULC codes

For more information contact your local Cummins distributor or visit power.cummins.com

Our energy working for you.™



Data sheet

Circuit breakers

Description

This data sheet provides circuit breaker manufacturer part numbers and specifications. The circuit breaker box description is the rating of that breaker box installation on a Cummins generator. Please refer to the website of the circuit breaker manufacturer for breaker specific ratings and technical information.

Applicable models

Engine	Models					
Kubota	C10D6	C15D6	C20D6			
Q SJ2.4	C20N6	C25N6	C30N6	C30N6H	C36N6	C36N6H
	C40N6	C40N6H	C50N6H	C60N6H		
B3.3	C25D6	C30D6	C35D6	C40D6	C50D6	C60D6
Q SJ5.9G	C45N6	C50N6	C60N6	C70N6	C80N6	C100N6
Q SJ8.9G	C125N6	C150N6				
QSB5	DSFAC	DSFAD	DSFAE	C50D6C	C60D6C	C80D6C
	C100D6C	C125D6C				
QSB7	DSGAA	DSGAB	DSGAC	DSGAD	DSGAE	
		C125D6D	C150D6D	C175D6D	C200D6D	
QSL9	DSHAD	DQDAA	DQDAB	DQDAC		
QSM11	DQHAB					
Q SX15	DFEJ	DFEK				

Instructions

1. Locate the circuit breaker feature code or part number and use the charts below to find the corresponding manufacturer circuit breaker catalog number.
2. Use the first letter of the circuit breaker catalog number to determine the "frame" of the breaker. If the first letter is an "N", use the second letter. Then follow the corresponding website link from the table below to find the breaker catalog number description.

Please refer to the catalog numbering systems page, which is given in the chart, to understand the nomenclature of the catalog number.

Frame	Catalog name*	Catalog number description page(s)
P	0612CT0101 http://www.schneider-electric.us/en/download/document/0612CT0101/	16-17
H, J, and L	0611CT1001 http://www.schneider-electric.us/en/download/document/0611CT1001/	8-9
Q	0734CT0201 http://www.schneider-electric.us/en/download/document/0734CT0201/	4

*The following link may also be used to search specifically by the breaker part number or for the catalog name listed above. <http://products.schneider-electric.us/technical-library/>

3. Search the catalog by using the first 3 letters of the breaker catalog number and the first 5 numbers to find information such as trip curves, accessories, and dimensional details regarding the circuit breaker.

*If the catalog number starts with "N", skip the N and begin your search with the second letter.

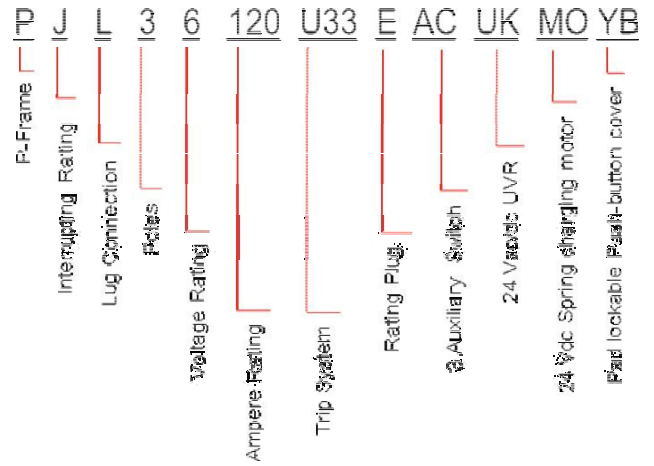
*If the first 3 letters are "PJP," the search will not work. You will need to start with just "PJ" and use the description pages to obtain the information you are looking for on the "PJP."

Example

After finding your circuit breaker catalog number to be "PJL36120U33EACUKMOYB," navigate to the P-frame catalog by using the link provided.

Look at pages 16-17 of the pdf catalog to find the nomenclature of the breaker.

Search the P-frame spec sheet using the search "PJL36120."



Feature Code	Breaker Box Description	Cummins Part #	Manufacturer	Breaker Catalog Number	Trip Unit	Plug Type
KV35-2	CB,Loc A,50A,3P,600VAC,80%,UL	A043L461	Schneider Electric	HDL36050	Thermal Magnetic	N/A
KV36-2	CB,Loc A,60A,3P,600VAC,80%,UL	A043L459	Schneider Electric	HDL36060	Thermal Magnetic	N/A
KV37-2	CB,Loc A,70A,3P,600VAC,80%,UL	A043L451	Schneider Electric	HDL36070	Thermal Magnetic	N/A
KV38-2	CB,Loc A,80A,3P,600VAC,80%,UL	A043L012	Schneider Electric	HDL36080	Thermal Magnetic	N/A
KV39-2	CB,Loc A,90A,3P,600VAC,80%,UL	A043K997	Schneider Electric	HDL36090	Thermal Magnetic	N/A
KV40-2	CB,Loc A,100A,3P,600VAC,80%,UL	A043L024	Schneider Electric	HDL36100	Thermal Magnetic	N/A
KV41-2	CB,Loc A,125A,3P,600VAC,80%,UL	A043K994	Schneider Electric	HDL36125	Thermal Magnetic	N/A
KV42-2	CB,Loc A,150A,3P,600VAC,80%,UL	A043K991	Schneider Electric	HDL36150	Thermal Magnetic	N/A
KV43-2	CB,Loc A,175A,3P,600VAC,80%,UL	A043L619	Schneider Electric	JDL36175	Thermal Magnetic	N/A
KV44-2	CB,Loc A,200A,3P,600VAC,80%,UL	A043L520	Schneider Electric	JDL36200	Thermal Magnetic	N/A
KV45-2	CB,Loc A,225A,3P,600VAC,80%,UL	A043L517	Schneider Electric	JDL36225	Thermal Magnetic	N/A
KV46-2	CB,Loc A,250A,3P,600VAC,80%,UL	A043L510	Schneider Electric	JDL36250	Thermal Magnetic	N/A
KV47-2	CB,Loc A,250A,3P,600VAC,100%,UL	A044C640	Schneider Electric	JDL36250U31XLC	MicroLogic 3.2S	N/A
KV55-2	CB,Loc B,15A,2P,600VAC,80%,UL	A043E189	Schneider Electric	HDL26015	Thermal Magnetic	N/A
KV57-2	CB,Loc B,25A,2P,600VAC,80%,UL	A043E191	Schneider Electric	HDL26025	Thermal Magnetic	N/A
KV58-2	CB,Loc B,30A,2P,600VAC,80%,UL	A043E185	Schneider Electric	HDL26030	Thermal Magnetic	N/A
KV59-2	CB,Loc B,40A,2P,600VAC,80%,UL	A043E183	Schneider Electric	HDL26040	Thermal Magnetic	N/A

Feature Code	Breaker Box Description	Cummins Part #	Manufacturer	Breaker Catalog Number	Trip Unit	Plug Type
KV85-2	CB, Loc B, 50A, 3P, 600VAC, 80%, UL	A043L461	Schneider Electric	HDL36050	Thermal Magnetic	N/A
KV86-2	CB, Loc B, 60A, 3P, 600VAC, 80%, UL	A043L459	Schneider Electric	HDL36060	Thermal Magnetic	N/A
KV87-2	CB, Loc B, 70A, 3P, 600VAC, 80%, UL	A043L451	Schneider Electric	HDL36070	Thermal Magnetic	N/A
KV88-2	CB, Loc B, 80A, 3P, 600VAC, 80%, UL	A043L012	Schneider Electric	HDL36080	Thermal Magnetic	N/A
KV89-2	CB, Loc B, 90A, 3P, 600VAC, 80%, UL	A043K997	Schneider Electric	HDL36090	Thermal Magnetic	N/A
KV90-2	CB, Loc B, 100A, 3P, 600VAC, 80%, UL	A043L024	Schneider Electric	HDL36100	Thermal Magnetic	N/A
KV91-2	CB, Loc B, 125A, 3P, 600VAC, 80%, UL	A043K994	Schneider Electric	HDL36125	Thermal Magnetic	N/A
KV92-2	CB, Loc B, 150A, 3P, 600VAC, 80%, UL	A043K991	Schneider Electric	HDL36150	Thermal Magnetic	N/A
KV93-2	CB, Loc B, 175A, 3P, 600VAC, 80%, UL	A043L619	Schneider Electric	JDL36175	Thermal Magnetic	N/A
KV94-2	CB, Loc B, 200A, 3P, 600VAC, 80%, UL	A043L520	Schneider Electric	JDL36200	Thermal Magnetic	N/A
KV95-2	CB, Loc B, 225A, 3P, 600VAC, 80%, UL	A043L517	Schneider Electric	JDL36225	Thermal Magnetic	N/A
KV96-2	CB, Loc B, 250A, 3P, 600VAC, 80%, UL	A043L510	Schneider Electric	JDL36250	Thermal Magnetic	N/A
KX09-2	Circuit Breaker-250A, Right CB on Right side, 3-Pole, UL 600, IEC 690 100%	A045U091	Schneider Electric	NLGL36250U33X-250A	MicroLogic 3.3S	N/A
KX14-2	CirBrkr-250A, Left, 3P, 600/690V, SS RMS, 80%, UL/IEC	A045U091	Schneider Electric	NLGL36250U33X-250A	MicroLogic 3.3S	N/A
KX15-2	CirBrkr-250A, Right, 3P, 600/690V, SS RMS, 80%, UL/IEC	A045U091	Schneider Electric	NLGL36250U33X-250A	MicroLogic 3.3S	N/A
KX22-2	Circuit Breaker-250A, Left CB on Right side, 3-Pole, UL 600, IEC 690 100%	A045U091	Schneider Electric	NLGL36250U33X-250A	MicroLogic 3.3S	N/A
KX26-2	CB, Loc A, 70A-250A, 3P, LSI, 600VAC, 100%, UL	A050J727	Schneider Electric	JDL36250CU33X	MicroLogic 3.2S	N/A



OTEC Transfer Switch Open Transition

40 – 1200 amp



Description

OTEC transfer switches are designed for operation and switching of electrical loads between primary power and Standby generator sets. They are suitable for use in emergency, legally required, and optional Standby applications. The switches monitor both power sources, signal generator set startup, automatically transfer power, and return the load to the primary power source once a stable utility is available. The fully integrated controller is designed for practical functionality, with LED indicators and digital pushbuttons for ease of operator use.

Features

Microprocessor control - Easy-to-use, standard control. LEDs display transfer switch status; pushbuttons allow operator to activate control test, exercise timing and transfer mode.

Programmed transition – Open transition timing can be adjusted to completely disconnect the load from both sources for a programmed time period, as recommended by NEMA MG-1 for transfer of inductive loads.

Advanced transfer switch mechanism – Unique bi-directional linear actuator provides virtually frictionfree, constant force, straight-line transfer switch action during automatic operation.

Manual operation - Manual operating handles, shielded termination, and over-center contact mechanisms allow effective manual operation under deenergized conditions.

Positive interlocking - Mechanical and electrical interlocking prevent source-to-source connection through the power or control wiring.

Main contacts - Heavy-duty silver alloy contacts and multi-leaf arc chutes are rated for motor loads or total system load transfer. They require no routine contact maintenance. Continuous load current not to exceed 100% of switch rating and Tungsten loads not to exceed 30% of switch rating.

Easy service/access - Single-plug harness connection and compatible terminal markings simplify servicing. Access space is ample. Door-mounted controls are field-programmable; no tool is required.

Complete product line - Cummins offers a wide range of equipment, accessories and services to suit virtually any backup power application.

Warranty and service - Products are backed by a comprehensive warranty and a worldwide network of distributors with factory-trained service technicians.

Transfer switch mechanism



- Transfer switch mechanism is electrically operated and mechanically held in the Source 1 and Source 2 positions. The transfer switch incorporates electrical and mechanical interlocks to prevent inadvertent interconnection of the sources.
- Independent break-before-make action is used for both 3-pole and 4-pole/switched neutral switches. This design allows use of sync check operation when required, or control of the operating speed of the transfer switch for proper transfer of motor and rectifier-based loads (programmed transition feature).
- True 4-pole switching allows for proper ground (earth) fault sensing and consistent, reliable operation for the life of the transfer switch. The neutral poles of the transfer switch have the same ratings as the phase poles and are operated by a common crossbar mechanism, eliminating the possibility of incorrect neutral operation at any point in the operating cycle, or due to failure of a neutral operator.
- Electrical interlocks prevent simultaneous closing signals to normal and emergency contacts and interconnection of normal and emergency sources through the control wiring
- High pressure silver alloy contacts resist burning and pitting. Separate arcing surfaces further protect the main contacts. Contact wear is reduced by multiple leaf arc chutes that cool and quench the arcs. Barriers separate the phases to prevent interphase flashover. A transparent protective cover allows visual inspection while inhibiting inadvertent contact with energized components.
- Switch mechanism, including contact assemblies, is third-party certified to verify suitability for applications requiring high endurance switching capability for the life of the transfer switch. Withstand and closing ratings are validated using the same set of contacts, further demonstrating the robust nature of the design.

Specifications

Voltage rating	Transfer switches rated from 40 A through 1200 A are rated up to 600 VAC, 50 or 60 Hz.
Arc interruption	Multiple leaf arc chutes cool and quench the arcs. Barriers prevent interphase flashover.
Neutral bar	A full current-rated neutral bar with lugs is standard on enclosed 3-pole transfer switches.
Auxiliary contacts	Two contacts (one for each source) are provided for customer use. Wired to terminal block for easy access. Rated at 10A Continuous and 250 VAC maximum.
Operating temperature	-22 °F (-30 °C) to 140 °F (60 °C)
Storage temperature	-40 °F (-40 °C) to 140 °F (60 °C)
Humidity	Up to 95% relative, non-condensing
Altitude	Up to 10,000 ft (3,000 m) without derating
Total transfer time (source-to-source)	Will not exceed 6 cycles at 60 Hz with normal voltage applied to the actuator and without delayed transition enabled.
Manual operation handles	Transfer switches are equipped with permanently attached operating handles and quickbreak, quick-make contact mechanisms suitable for manual operation under de-energized conditions.

Transition Modes

Open transition/programmed – Controls the time required for the device to switch from source to source, so that the load-generated voltages decay to a safe level before connecting to an energized source. Recommended by NEMA MG-1 to prevent nuisance tripping breakers and load damage. Adjustable 0-10 seconds, default 0 seconds.

Open transition/in-phase – Initiates open transition transfer when in-phase monitor senses both sources are in phase. Operates in a break-before-make sequence. Includes ability to enable programmed transition as a backup. If sources are not in phase within 120 seconds, the system will transfer using programmed transition.

Microprocessor control

- Simple, easy-to-use control provides transfer switch information and operator controls
- LED lamps for source availability and source connected indication, exercise mode, and test mode. LED status lamps also provided for control set-up and configuration.
- Pushbutton controls for initiating test, overriding time delays and setting exercise time.
- Field-configurable for in-phase open or programmed open transition.
- Integral exerciser clock
- Control is prototype-tested to withstand voltage surges per EN60947-6-1.
- Gold-flashed generator start contacts



Control functions

Voltage sensing: All phases on the normal source and single phase on generator source. Normal Source Pickup: adjustable 90-95%, Dropout: adjustable 70-90% of nominal voltage; Generator Source Pickup: 90%, dropout: 75% of nominal voltage.

Frequency sensing: Generator Source Pickup: 90% of nominal frequency; Dropout: 75% of nominal frequency.

Exerciser clock: Switch is furnished with an integral engine exerciser configurable for operation on a 7, 14, 21, or 28-day cycle with a fixed exercise period duration of 20 minutes. A 12-hr exerciser time offset allows for the convenient setting of exercise time without the need to activate the timer at the exact time that you need to schedule the generator exercise for. Software selectable capability allows for the exercising of the generator with or without load.

Time-delay functions

Engine start: Prevents nuisance genset starts due to momentary power system variation or loss. Adjustable: 0-10 seconds; default: 3 seconds

Transfer normal to emergency: Allows genset to stabilize before application of load. Prevents power interruption if normal source variation or loss is momentary. Allows staggered transfer of loads in multiple transfer switch systems. Adjustable 0-300 seconds, default 5 seconds.

Retransfer emergency to normal: Allows the utility to stabilize before retransfer of load. Prevents needless power interruption if return of normal source is momentary. Allows staggered transfer of loads in multiple transfer switch systems. Adjustable 0-30 minutes, default 10 minutes.

Genset stop: Maintains availability of the genset for immediate reconnection in the event that the normal source fails shortly after transfer. Allows gradual genset cool down by running unloaded. Adjustable 0-30 minutes, default 10 minutes.

Delayed (programmed) transition: Controls the speed of operation of the transfer switch power contacts to allow load generated voltages from inductive devices to decay prior to connecting a live source. Adjustable 0-10 seconds, default 0 seconds.

Elevator signal: Provides a relay output contact for the elevator signal relay (load disconnect). The signal can also be configured to provide a post transfer delay of the same duration. Adjustable: 0-300 seconds (requires optional elevator signal relay for use).

Options

Elevator signal relay: Provides a relay output contact for the signal relay function

Programmable exerciser clock: Provides a fully-programmable 7-day clock to provide greater flexibility in scheduling exercise periods than standard integral exerciser. Time-of-day setting feature operates generator during periods of high utility rates.

UL withstand and closing ratings

The transfer switches listed below must be protected by circuit breakers or fuses. Referenced drawings include detailed listings of specific breakers or fuse types that must be used with the respective transfer switches. Consult with your distributor/dealer to obtain the necessary drawings. Withstand and Closing Ratings (WCR) are stated in symmetrical RMS amperes..

Transfer switch ampere	MCCB protection			Special circuit breaker protection		
	WCR @ volts max with specific manufacturers MCCBs	Max MCCB ratings	Drawing reference	With specific current limiting breakers (CLB)	Max CLB rating	Drawing reference
40, 70, 125 3-pole	14,000 at 600	225 A	A050J441	200,000 @ 600	225 A	A048J566
40, 70, 125 4-pole	30,000 at 600	400 A	A048E949	200,000 @ 600	400 A	A051D533
150, 225, 260	30,000 at 600	400 A	A048E949	200,000 @ 600	400 A	A051D533
300, 400, 600	65,000 at 600	1200 A	A056M829	200,000 @ 600	1200 A	A048J564
800, 1000	65,000 @ 480	1400 A	A056M821	200,000 @ 600	1400 A	A048J562
	50,000 @ 600					
1200	85,000 @ 480	1600 A	A056M825	200,000 @ 600	1600 A	A048P186
	65,000 @ 600					

Fuse Protection

Transfer switch ampere	WCR @ volts max. with current limiting fuses	Max fuse, size and type	Drawing reference
40, 70, 125 3- and 4-pole	200,000 at 600	200 A Class, J, RK1, RK5, T	A050J441
150, 225, 260	200,000 at 600	1200 A Class L or T, or 600 A class J, RK1, RK5	A048E949
300, 400, 600	200,000 at 600	1200 A Class L or T, or 600 A Class, J, RK1, RK5	A056M829
800, 1000	200,000 at 600	2000 A Class L or 1200 A class T or 600 A class J, RK1, RK5	A056M821
1200	200,000 at 600	2000 A Class L or 1200 A class T or 600 A class J, RK1, RK5	A056M825

3-cycle ratings

Transfer switch ampere	WCR @ volts max 3 cycle rating	Max MCCB rating	Drawing reference
300, 400, 600	25,000 at 600	1200 A	A056M829
800, 1000	35,000 at 600	1400 A	A056M821
1200	42,000 at 600	1600 A	A056M825
	50,000 at 480		

Enclosures

The transfer switch and control are wall-mounted in a key-locking enclosure. Wire bend space complies with 2008 NEC.

Dimensions - transfer switch in UL type 1 enclosure

Amp rating	Height		Width		Depth				Weight		Outline drawing
	in	mm	in	mm	Door closed		Door open		lb	kg	
					in	mm	in	mm			
40, 70, 125 3-pole	27.0	686	20.5	521	12.0	305	31.5	800	82	37	0310-0544
40, 70, 125 4-pole	35.5	902	26.0	660	16.0	406	41.0	1042	165	75	0500-4896
150, 225	35.5	902	26.0	660	16.0	406	41.0	1042	165	75	0310-0414
260	43.5	1105	28.5	724	16.0	406	43.0	1093	170	77	0310-0540
300, 400, 600	54.0	1372	25.5	648	18.0	457	42.0	1067	225	102	0310-1307
800, 1000	68.0	1727	30.0	762	19.5	495	48.5	1232	360	163	0310-0417
1200	90.0	2286	39.0	991	27.0	698	63.0	1600	730	331	A030L411

Dimensions - transfer switch in UL type 3R, 4, 4x, or 12 enclosure

Amp rating	Height		Width		Depth				Weight		Cabinet type	Outline drawing
	in	mm	in	mm	Door closed		Door open		lb	kg		
					in	mm	in	mm				
40, 70, 125 3-pole	34.0	864	26.5	673	12.5	318	36.5	927	125	57	3R, 12	0310-0453
					4	0310-0445						
40, 70, 125 4-pole	42.5	1080	30.5	775	16.0	406	44.0	1118	215	97	4X	0500-4184
											3R, 12	0500-4896
											4	0500-4896
150, 225	42.5	1080	30.5	775	16.0	406	44.0	1118	215	97	3R, 12	310-0454
											4	0310-0446
											4X	0500-4184
260	46.0	1168	32.0	813	16.0	406	46.0	1168	255	102	3R, 12	0310-0455
											4	0310-0447
											4X	0500-4184
300, 400, 600	59.0	1499	27.5	699	16.5	419	41.5	1054	275	125	3R, 12	0310-1315
											4	0310-1316
											4X	0500-4185
800, 1000	73.5	1867	32.5	826	19.5	495	49.5	1257	410	186	3R, 12	0310-0457
											4	0310-0449
											4X	0500-4185
1200	90.0	2286	39.0	991	27.0	698	63.0	1600	730	331	3R, 12	A030L411
											4, 4X	A041N370

Transfer switch lug capacities

All lugs 90°C rated and accept copper or aluminum wire unless indicated otherwise.

Transfer switch ampere	Cables per phase	Size
40, 70, 125 3-pole	1	#12 AWG-2/0
40 4-pole	1	#12 AWG-2/0
70, 125 4-pole	1	#6 AWG - 300 MCM
150, 225	1	#6 AWG - 300 MCM
260	1	#6 AWG - 400 MCM
300, 400	2	One accepts 3/0 AWG - 600 MCM and One #4 AWG - 250 MCM
600	2	250 - 500 MCM
800, 1000	4	250 - 500 MCM
1200	4	#2 AWG to 600 MCM standard (feature N045) 1/0 AWG to 750 MCM optional (feature N066) Compression Lug Adapter optional (feature N032)

Certification



All switches are UL 1008 Listed with UL Type Rated cabinets and UL Listed CU-AL terminals.



All switches comply with NEMA ICS 10.



All switches are certified to CSA 282 Emergency Electrical Power Supply for Buildings, up to 600 VAC.



All switches comply with IEEE 446 Recommended Practice for Emergency and Standby Power Systems.

NEC

Suitable for use in emergency, legally required and Standby applications per NEC 700, 701 and 702.



This transfer switch is designed and manufactured in facilities certified to ISO9001.



All switches comply with NFPA 70, 99 and 110 (Level 1).

Submittal detail

Amperage ratings

- 40
- 70
- 125
- 150
- **225**
- 260
- 300
- 400
- 600
- 800
- 1000
- 1200

Voltage ratings

- R020 120
- R038 190
- R021 208
- R022 220
- **R023 240**
- R024 380
- R025 416
- R035 440
- R026 480
- R027 600

Pole configuration

- **A028 Poles - 3 (solid neutral)**
- A029 Poles - 4 (switched neutral)

Frequency

- **A044 60 Hertz**
- A045 50 Hertz

Application

- A035 Utility-to-genset

System options

- **A041 Single phase, 2-wire or 3-wire**
- A042 Three phase, 3-wire or 4-wire

Enclosure

- B001 Type 1: general purpose indoor (similar to IEC Type IP30)
- **B002 Type 3R: intended for outdoor use, provides some protection from dirt, rain and snow (similar to IEC Type IP34)**
- B003 Type 4: indoor or outdoor use, provides some protection from wind-blown dust and water spray (similar to IEC Type IP65)
- B010 Type 12: indoor use, some protection from dust (similar to IEC Type IP61)
- B025 Type 4X: stainless steel, indoor or outdoor use, provides some protection from corrosion (similar to IEC Type IP65)

Standards

- **A046 UL 1008/CSA certification**
- A080 Seismic certification

Control voltage

- **M033 12V, Genset starting voltage**
- M034 24V, Genset starting voltage

Control options

- J030 External exercise clock
- M032 Elevator signal relay

Battery chargers

- K001 2 Amps, 12/24 Volts
- KB59 15 Amps, 12 Volts
- KB60 12 Amps, 24 Volts

Auxiliary relays

Relays are UL Listed and factory installed. All relays provide (2) normally closed isolated contacts rated 10A @ 600 VAC. Relay terminals accept (1) 18 gauge to (2) 12 gauge wires per terminal.

- L101 24 VDC coil - installed, not wired (for customer use).
- L102 24 VDC coil - emergency position – relay energized when switch is in source 2 (emergency) position.
- L103 24 VDC coil - normal position - relay energized when switch is in source 1 (normal) position
- L201 12 VDC coil installed, not wired (for customer use)
- L202 12 VDC coil - emergency position – relay energized when switch is in source 2 (emergency) position
- L203 12 VDC coil - normal position - relay energized when switch is in source 1 (normal) position

Miscellaneous options

- **C027 Cover - guard**
- M003 Terminal block - 30 points (not wired)

Optional lug kits

- N032 Lug adapters, compression, ½ stab (1200A only)
- N045 Cable lugs, mechanical, 600 MCM, 4 per pole (1200A only)
- N066 Cable lugs, mechanical, 750 MCM, 4 per pole (1200A only)

Warranty

- **G009 1 year comprehensive**
- G004 2 year comprehensive
- G006 5 year basic
- G007 5 year comprehensive
- G008 10 year major components

Shipping

- A051 Packing – export box (800-1000 A)

Accessories

- AC-170 Accessories specifications sheet

Specifications are subject to change without notice.

For more information contact your local Cummins distributor or visit power.cummins.com

Our energy working for you.™



SECTION II

DRAWINGS



CUMMINS POWER GENERATION 2300 CONTROL INTERCONNECTION DIAGRAM

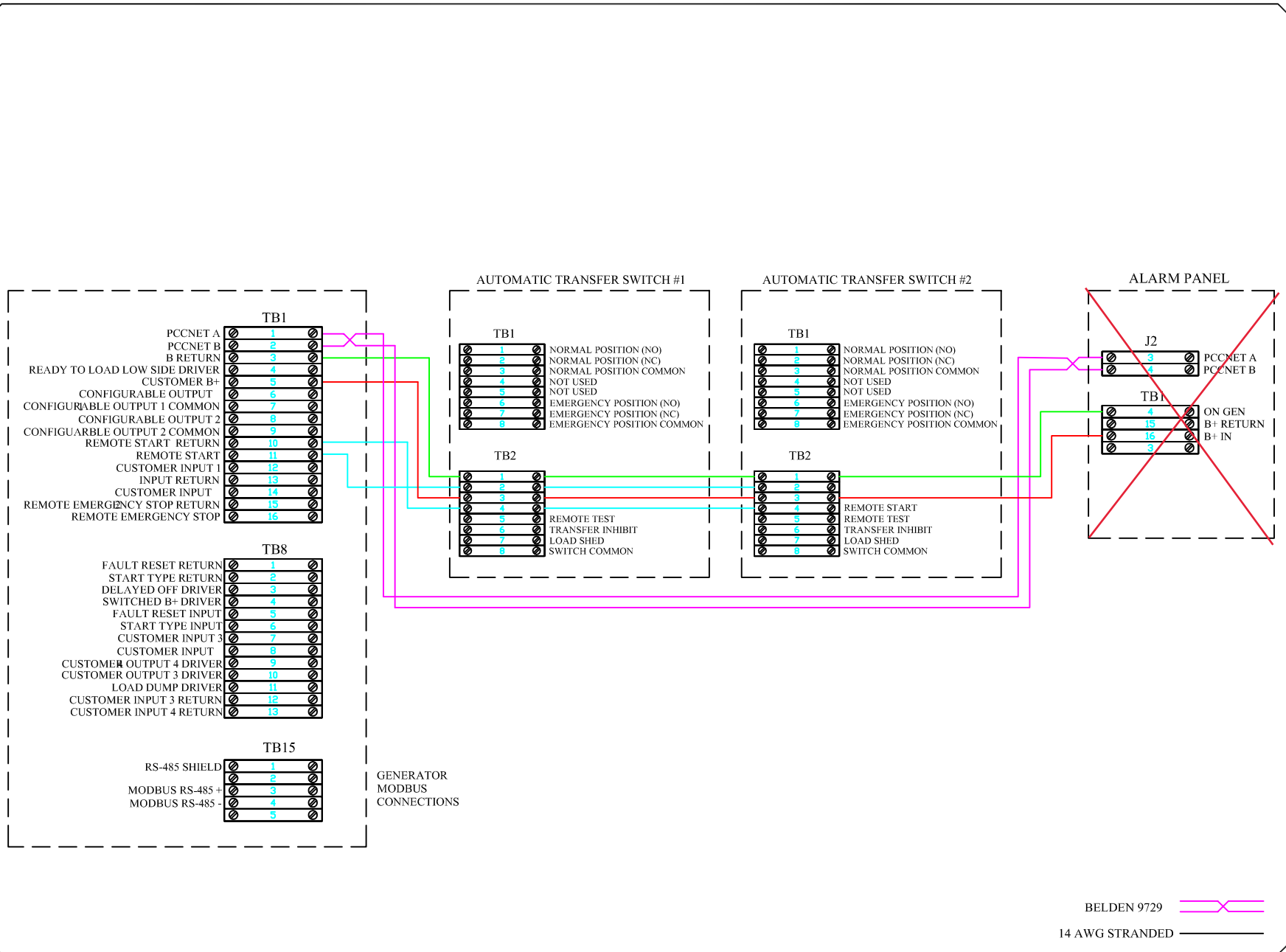
Cummins Pacific, LLC
1939 Deere Avenue
Irvine, CA 92606

NO.	DATE	REVISION	BY

John McWilliams
Direct: 510-347-6673
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DESIGNED BY JMAC
CHECKED BY JMAC
NO SCALE
12/13/10

DRAWN BY

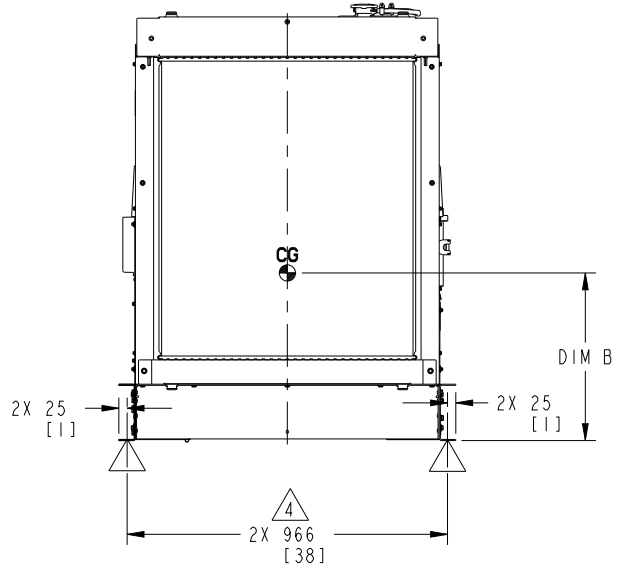
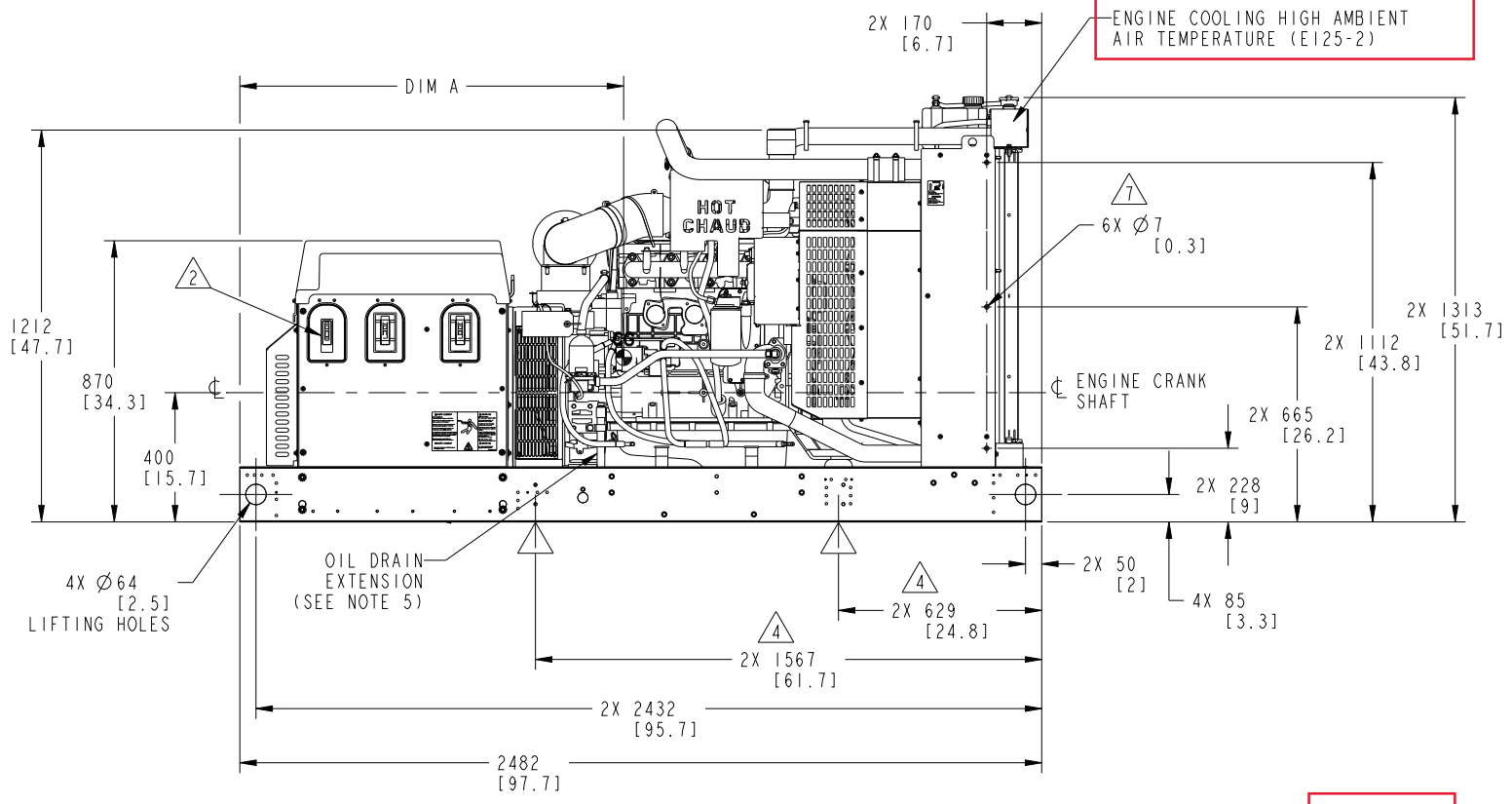
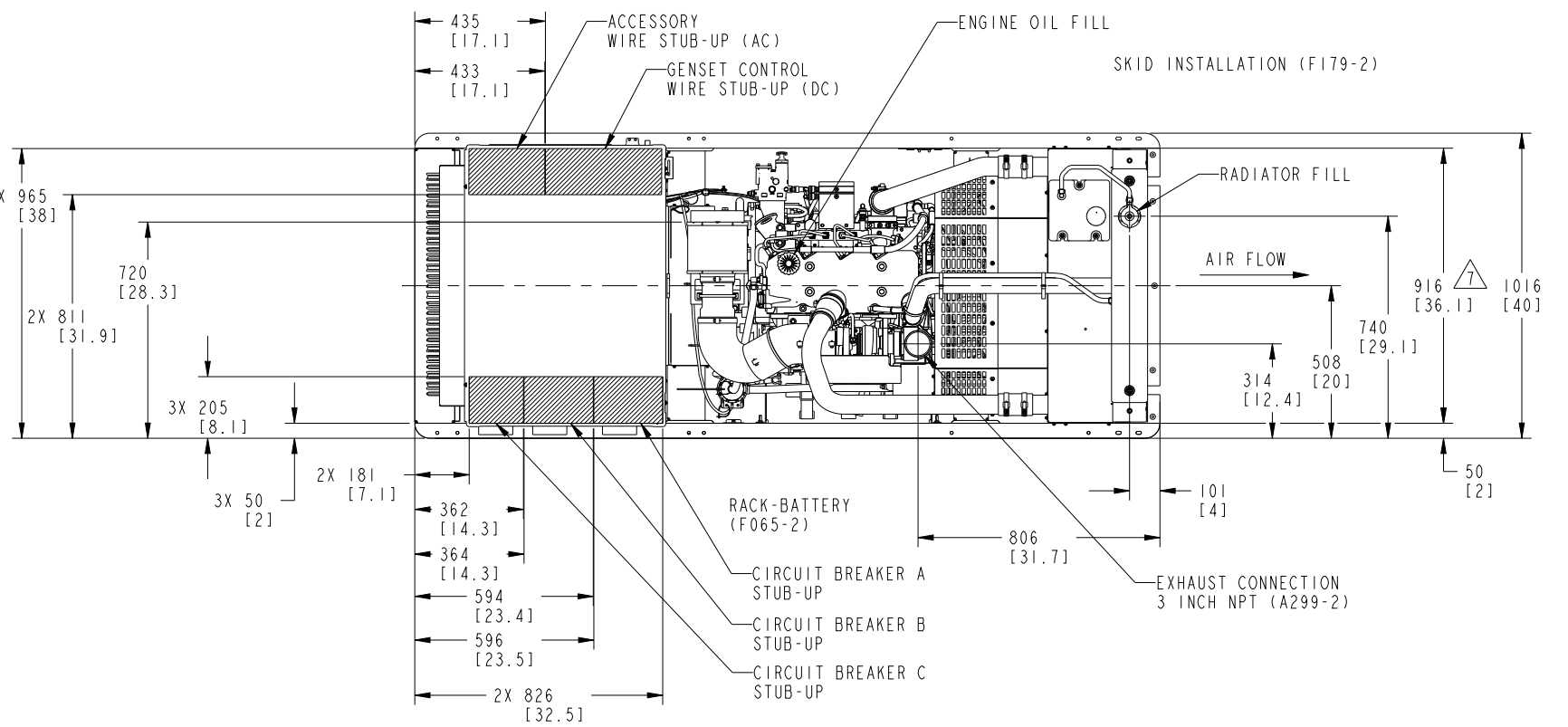


REL NO	REV	NO	REVISION	DWN	CKD	APVD	DATE
ECO-179354	B	1	NOTE 9.1: 5/16" WAS 1/4"	CJF	FE	M FRITSCH	07AUG18
		2	SEE SHEET 2	CJF	FE	M FRITSCH	07AUG18

NOTES:

1. DIMENSIONS SHOWN IN [] ARE IN INCHES.
 2. REFER TO CIRCUIT BREAKER OUTLINE DRAWING FOR ELECTRICAL STUB-UP AREA FOR SPECIFIC BREAKERS.
 3. CONTROL INTERFACE CONNECTION SHOULD BE MADE WITH FLEXIBLE CONNECTIONS.
 4. Ø21 [0.8] HOLES MARKED BY Δ FOR SECURING TO MOUNTING SURFACE.
 5. OIL DRAIN EXTENSION: 5/8 INCH HOSE ID.
 6. FOR IBC SEISMIC CERTIFIED INSTALLATION, SEE GENSET IBC SEISMIC INSTALLATION REQUIREMENT DRAWING.
 7. Ø7.3 HOLES FOR OPTIONAL COOLING EXHAUST AIR DUCT ADAPTER.
 8. REFER TO GENSET FOUNDATION OUTLINE FOR ELECTRICAL AND OTHER FOUNDATION SPECIFICS.
 9. GENSET SUPPLIED WITH FLEXIBLE FUEL LINE(S) THAT CAN BE CONNECTED TO GENSET INTERFACE POINT(S).
- 9.1 FUEL SUPPLY LINE: 686 [27.0] LONG WITH 5/16" JIC MALE TERMINATION.

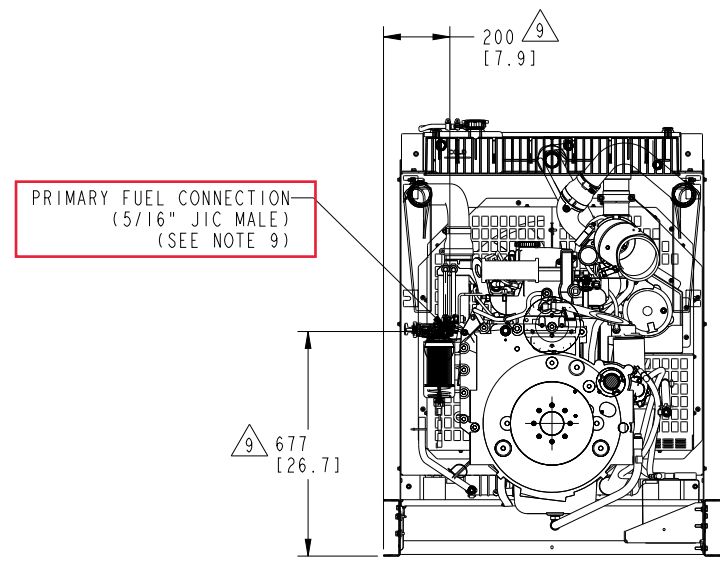
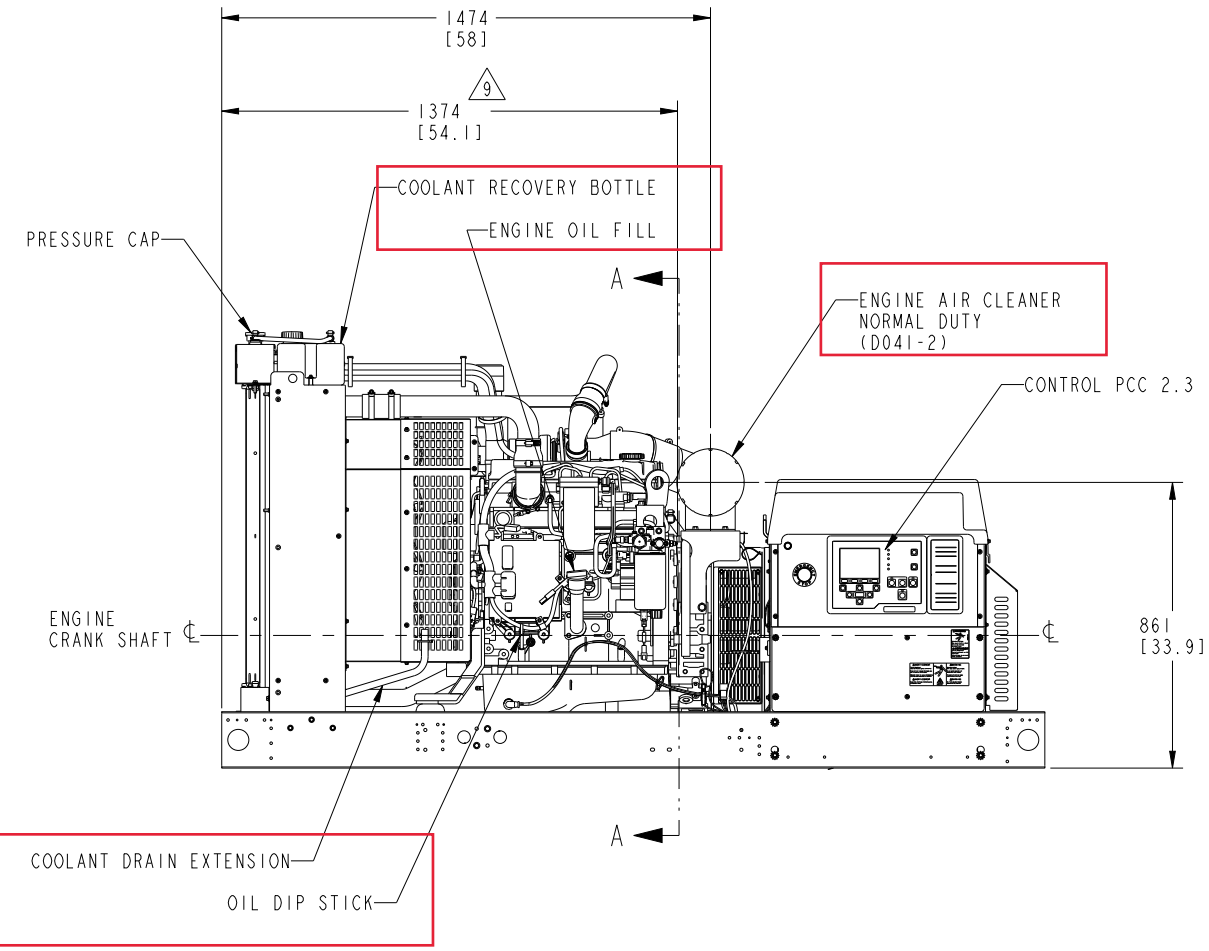
ALT DATA SHEET #	DIM A	DIM B	GENSET WET WEIGHT	
			KG	LB
ADS-202	1092	456	1090	2403
ADS-203	1207	495	986	2173
ADS-204	1184	492	1006	2217
ADS-205	1125	486	1054	2324
ADS-206	1086	482	1082	2386
ADS-207	1060	480	1106	2439
ADS-208	998	473	1173	2586
ADS-209	958	469	1211	2670



C50 D6C, C60 D6C, C80 D6C, C100 D6C, CT25 D6C

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS		SW TO	DWN D HOFMEISTER		CUMMINS POWER GENERATION		
DIM	TOLERANCE	DO NOT SCALE PRINT	CKD D HOFMEISTER				
X ± 1	0.00 - 4.99 +0.15/-0.08		APVD M JAWALE	DATE 17MAR16	SITE CODE		
.X ± 0.8	5.00 - 9.99 +0.20/-0.10		DATE 17MAR16				
.XX ± 0.38	10.00 - 17.49 +0.25/-0.13		DATE 17MAR16				
	17.50 - 24.99 +0.30/-0.13		DATE 17MAR16				
ANG TOL ± 1.0°	SCALE 3:32	THIS DOCUMENT (AND THE INFORMATION SHOWN THEREON) IS CONFIDENTIAL AND PROPRIETARY AND SHALL NOT BE DISCLOSED TO OTHERS IN HARD COPY OR ELECTRONIC FORM, REPRODUCED BY ANY MEANS, OR USED FOR ANY PURPOSE WITHOUT WRITTEN CONSENT OF CUMMINS INC.	FOR INTERPRETATION OF DIMENSIONING AND TOLERANCING, SEE ASME Y14.5-2009	FIRST USED ON	PGF	AWROW	
			PGF	AWROW	D	A054Y897	CAD SHEET 1 OF 2

REL NO	REV NO	NO	REVISION	DWN	CKD	APVD	DATE
ECO-179354	B	2	ZONE C-3: 5/16" WAS 1/4"	CJF	FE	M FRITSCHÉ	07AUG18



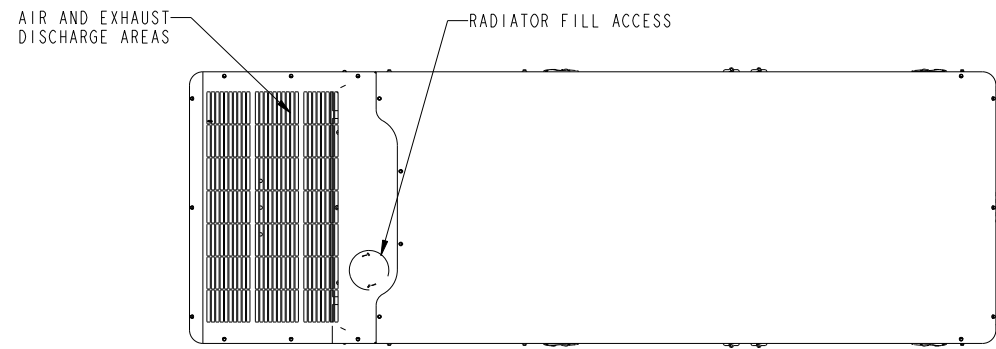
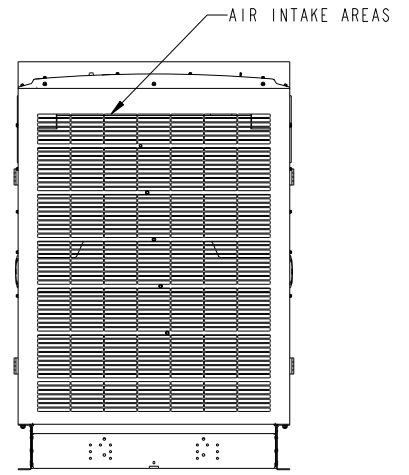
SECTION A-A

C50 D6C, C60 D6C, C80 D6C,
C100 D6C, C125 D6C

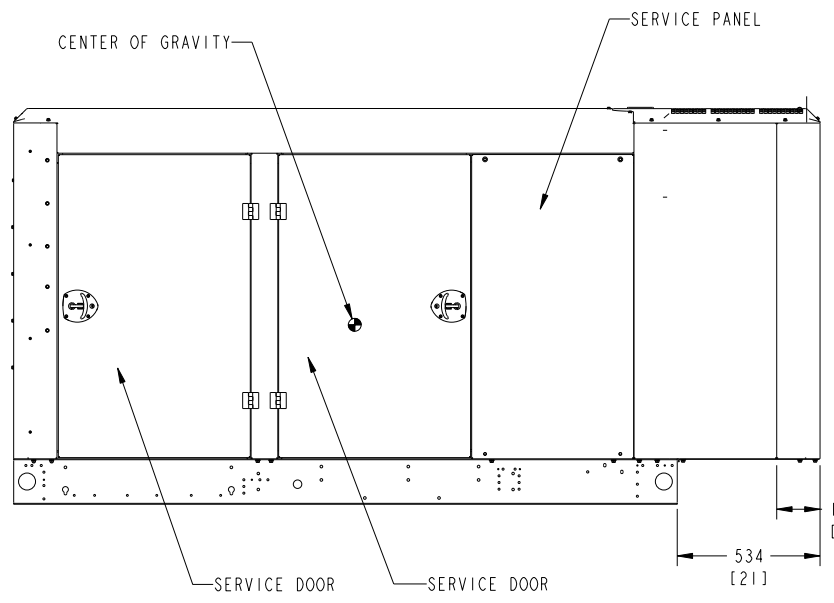
UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS		SHW TO	DWN D HOFMEISTER		CUMMINS POWER GENERATION								
DO NOT SCALE PRINT			CKD D HOFMEISTER		OUTLINE, GENSET								
DIM	TOLERANCE	<table border="1"> <tr> <td>X ± 1</td> <td>0.00-4.99 +0.15/-0.08</td> </tr> <tr> <td>.X ± 0.8</td> <td>5.00-9.99 +0.20/-0.10</td> </tr> <tr> <td>.XX ± 0.38</td> <td>10.00-17.49 +0.25/-0.13</td> </tr> <tr> <td></td> <td>17.50-24.99 +0.30/-0.13</td> </tr> </table>	X ± 1	0.00-4.99 +0.15/-0.08	.X ± 0.8	5.00-9.99 +0.20/-0.10	.XX ± 0.38	10.00-17.49 +0.25/-0.13		17.50-24.99 +0.30/-0.13	APVD M JAWALE	SITE CODE	
X ± 1	0.00-4.99 +0.15/-0.08												
.X ± 0.8	5.00-9.99 +0.20/-0.10												
.XX ± 0.38	10.00-17.49 +0.25/-0.13												
	17.50-24.99 +0.30/-0.13												
ANG TOL	SCALE	THIS DOCUMENT (AND THE INFORMATION SHOWN THEREON) IS CONFIDENTIAL AND PROPRIETARY AND SHALL NOT BE DISCLOSED TO OTHERS IN HARD COPY OR ELECTRONIC FORM, REPRODUCED BY ANY MEANS, OR USED FOR ANY PURPOSE WITHOUT WRITTEN CONSENT OF CUMMINS INC. © 2018 CUMMINS INC.	DATE 17MAR16	PGF	CAD SHEET 2 of 2								
± 1.0°	3:32	FOR INTERPRETATION OF DIMENSIONING AND TOLERANCING, SEE ASME Y14.5-2009	FIRST USED ON ARROW	D	A054Y897								

REL NO	LTR	NO	REVISION	OWN	CAD	APVD	DATE
ECO-152551	A	1	PRODUCTION RELEASE	CG	NK	M. WICKMANN	14MAY15

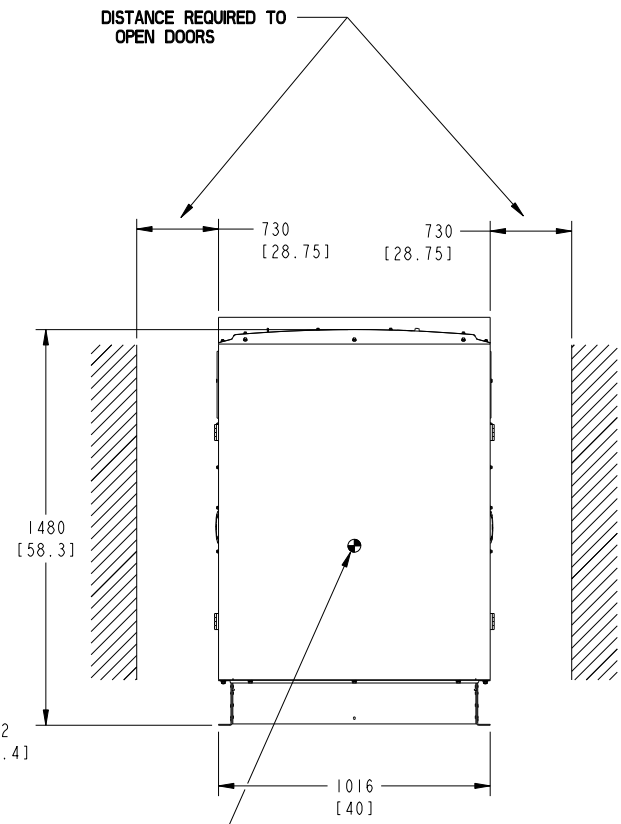
- NOTES:
1. DIM [] IN INCHES
 2. WHEN THE HOUSING INSTALLED ON AN OPEN GENERATOR SET, THE TOTAL WEIGHT WILL INCREASE BY 131.5 KG (290 LBS). THIS INCLUDES THE MUFFLER.
 3. THE CENTER OF GRAVITY (CG) OF THE GENERATOR SET WHEN EQUIPPED WITH THIS HOUSING SHIFTS APPROXIMATELY 65mm (2.55 inch) TOWARDS THE AIR DISCHARGE END OF THE HOUSING AND 42MM (1.66 INCH) HIGHER FROM THE GROUND, COMPARED TO THE EQUIVALENT NON-HOUSED PRODUCT WITH THE F179 SKID. SEE HOUSING READY SKID BASE OUTLINE DRAWING FOR CG LOCATION OF NON HOUSED PRODUCT.



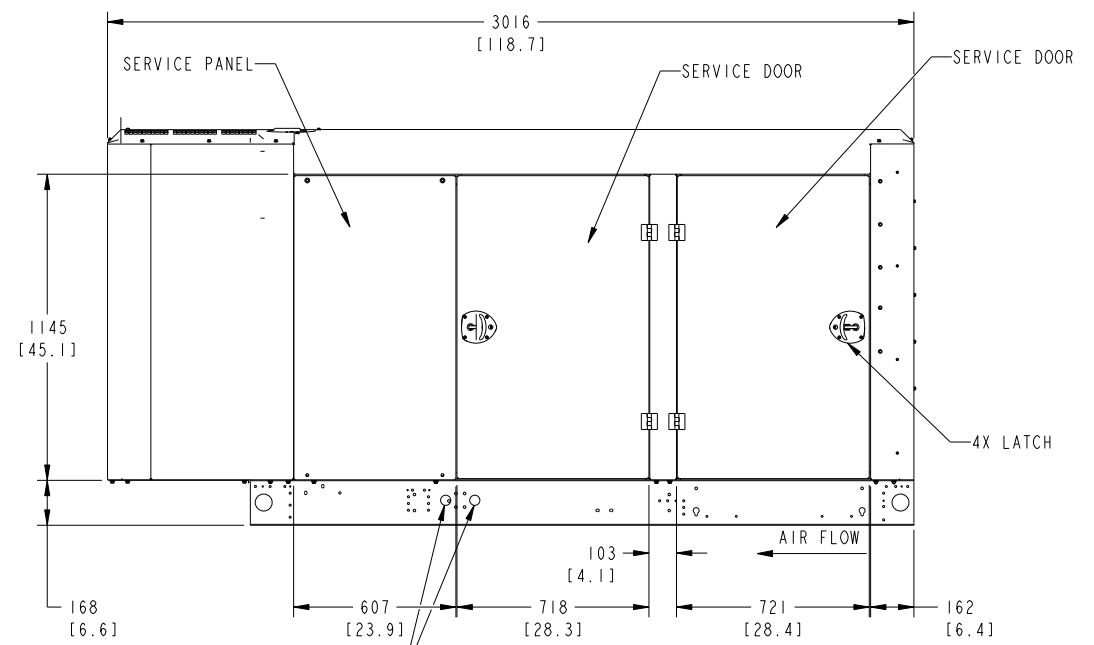
TOP VIEW



RIGHT SIDE VIEW



OUTLET VIEW

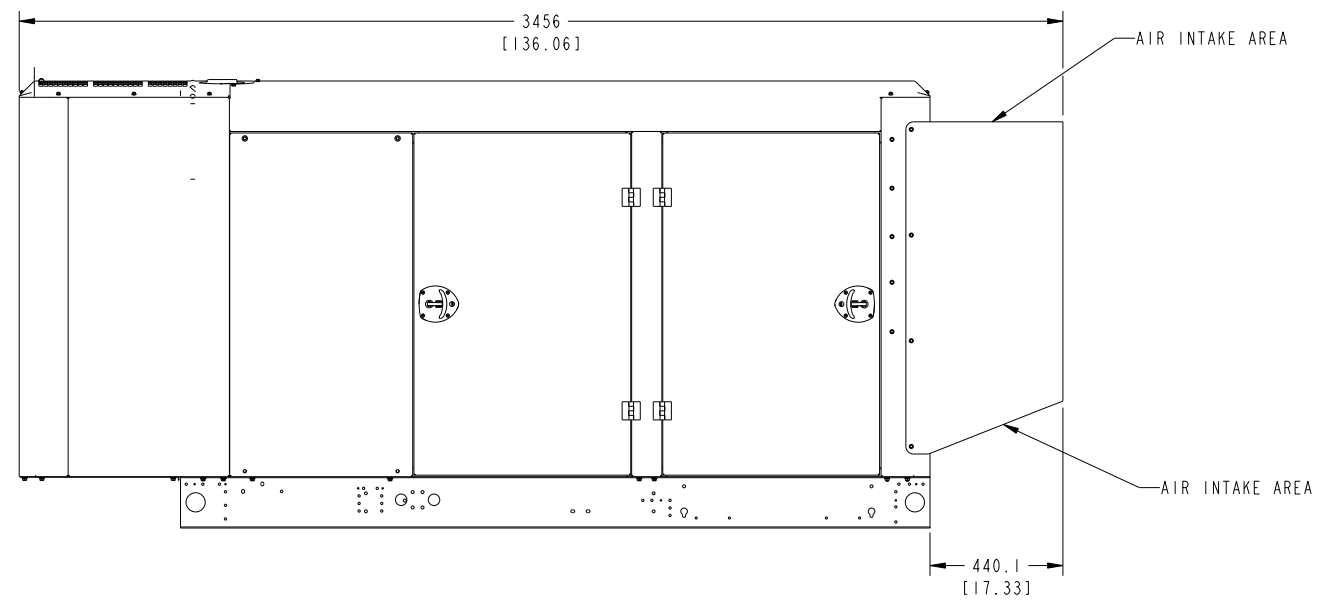
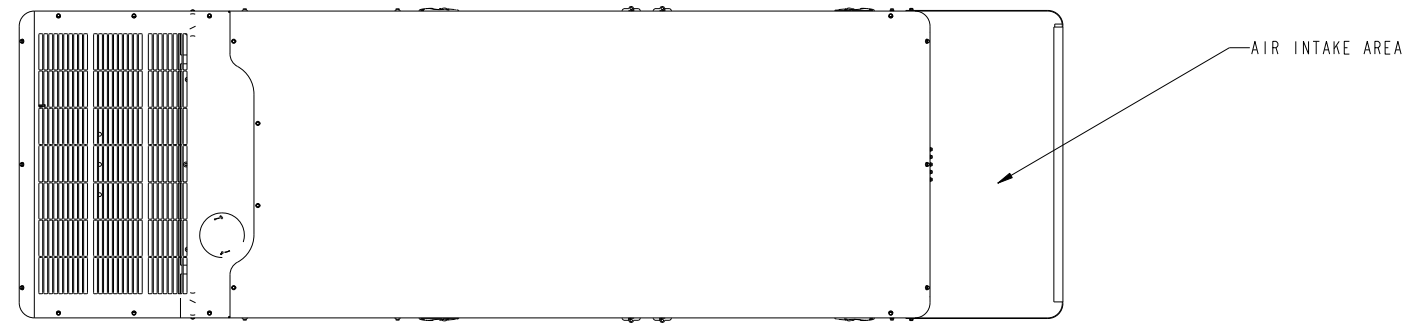


LEFT SIDE VIEW

F231-2 ENCLOSURE CONFIGURATION

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS		SIM 10 NONE	OWN C. GADE		CUMMINS POWER GENERATION	
DO NOT SCALE PRINT		DO NOT SCALE PRINT	CND N. KASIBHOTLA		OUTLINE, ENCLOSURE	
DIM CH X ± 1 .X ± 0.8 .XX ± 0.38 ANG TOL: ± 1.0°	0.00- 4.99 +0.15/-0.08		APVD M. WICKMANN	SITE CODE	PGF	SHEET 1 OF 2
	5.00- 9.99 +0.20/-0.10		DATE 14MAY15			
	10.00-17.49 +0.25/-0.13		ARROW			
17.50-24.99 +0.30/-0.13						REV A

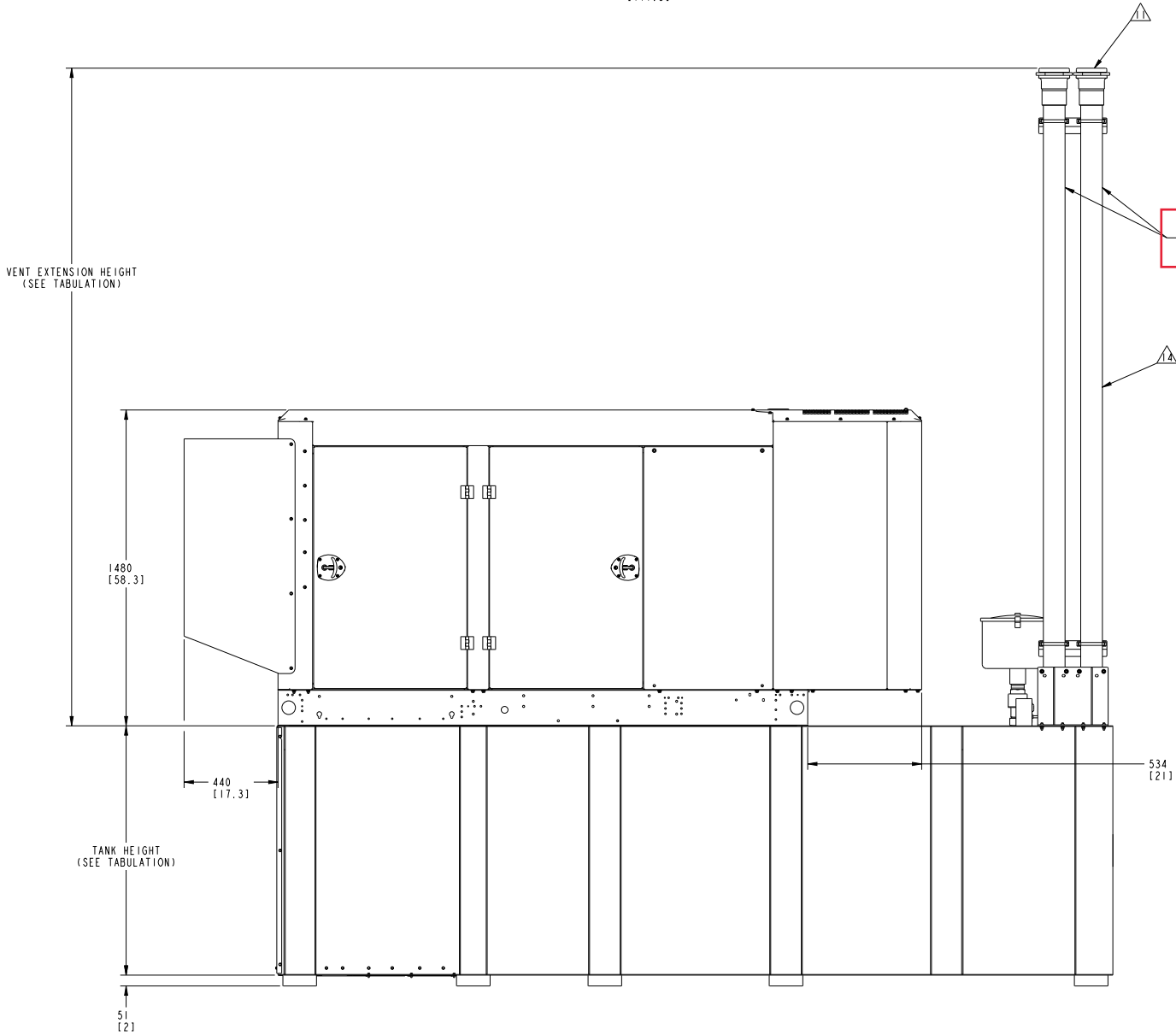
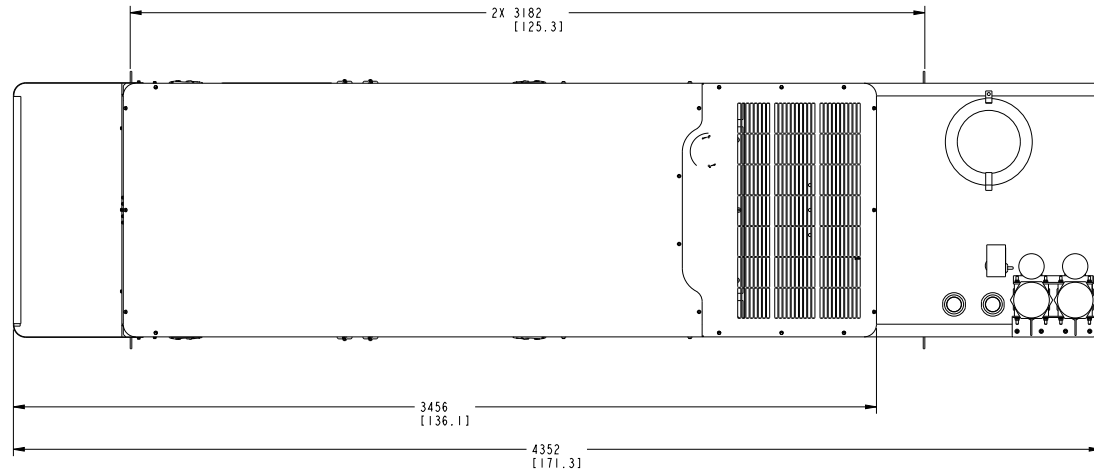
REL NO	LTR	NO	REVISION	DWN	CAD	APVD	DATE
ECO-152551	A	1	PRODUCTION RELEASE	CG	NK	M. WICKMANN	14MAY15



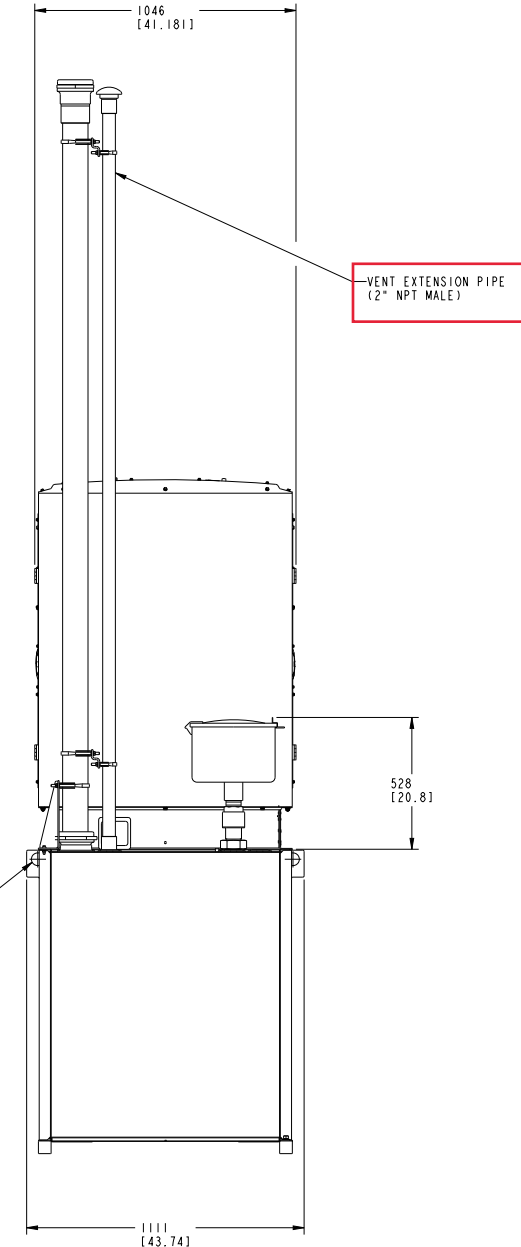
F217-2 ENCLOSURE CONFIGURATION
REFER TO PAGE 1 (F231-2 ENCLOSURE FOR OTHER F217-2 ENCLOSURE DIMENSIONS.)

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS		SIM 10 NONE	DWN C. GADE		CUMMINS POWER GENERATION																				
DO NOT SCALE PRINT			CAD N. KASIBHOTLA		OUTLINE, ENCLOSURE																				
<table border="1"> <tr> <th>DIM</th> <th>TOL</th> <th>ROTT</th> <th>VAL</th> </tr> <tr> <td>X</td> <td>± 1</td> <td></td> <td>0.00- 4.99 +0.15/-0.08</td> </tr> <tr> <td>.X</td> <td>± 0.8</td> <td></td> <td>5.00- 9.99 +0.20/-0.10</td> </tr> <tr> <td>.XX</td> <td>± 0.38</td> <td></td> <td>10.00-17.49 +0.25/-0.13</td> </tr> <tr> <td></td> <td></td> <td></td> <td>17.50-24.99 +0.30/-0.13</td> </tr> </table>	DIM	TOL	ROTT	VAL	X	± 1		0.00- 4.99 +0.15/-0.08	.X	± 0.8		5.00- 9.99 +0.20/-0.10	.XX	± 0.38		10.00-17.49 +0.25/-0.13				17.50-24.99 +0.30/-0.13	DATE 14MAY15	SITE CODE	APVD M. WICKMANN		
DIM	TOL	ROTT	VAL																						
X	± 1		0.00- 4.99 +0.15/-0.08																						
.X	± 0.8		5.00- 9.99 +0.20/-0.10																						
.XX	± 0.38		10.00-17.49 +0.25/-0.13																						
			17.50-24.99 +0.30/-0.13																						
ANG TOL: ± 1.0°	SCALE: ~3/32	<p>CONFIDENTIAL</p> <p>PROPERTY OF CUMMINS POWER GENERATION GROUP</p>	<p>FOR INTERPRETATION OF DIMENSIONS AND TOLERANCING, SEE ASME Y14.5M-1994</p>	FIRST USED ON ARROW	PGF	<table border="1"> <tr> <td>SHEET</td> <td>REV</td> </tr> <tr> <td>2 of 2</td> <td>A</td> </tr> </table>	SHEET	REV	2 of 2	A															
SHEET	REV																								
2 of 2	A																								

REV NO	REV	NO	REVISION	BY	CHK	APPD	DATE
ECO-173968	C	5	ZONE C-2: ADD FLAG NOTE 14 CALL OUT	CJF	MF	M WINGFIELD	06DEC17
		6	ZONE A-3: ADD NOTE "WITH---EXTENSIONS"	CJF	MF	M WINGFIELD	06DEC17



(WITH VENT EXTENSIONS)



UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS		APPD: D HOFMEISTER	CUMMINS POWER GENERATION
DO NOT SCALE PRINT		CHK: D HOFMEISTER	
DATE	SCALE	APPD: M JAWALE	REGIONAL
DATE: 01FEB18	SCALE: 1:8	DATE: 01FEB18	SITE CODE: REGIONAL
ANG TOL: ± 1.0°	SCALE: 1:8	DATE: 01FEB18	PGF: E
PART NAME: A054B564		CAD SHEET: 2 of 4	

REV NO	REV	REVISION	NO	CHK	APPD	DATE
ECO-173968	C	C.JF	MF	M WINGFIELD	06DEC17

D

D

C

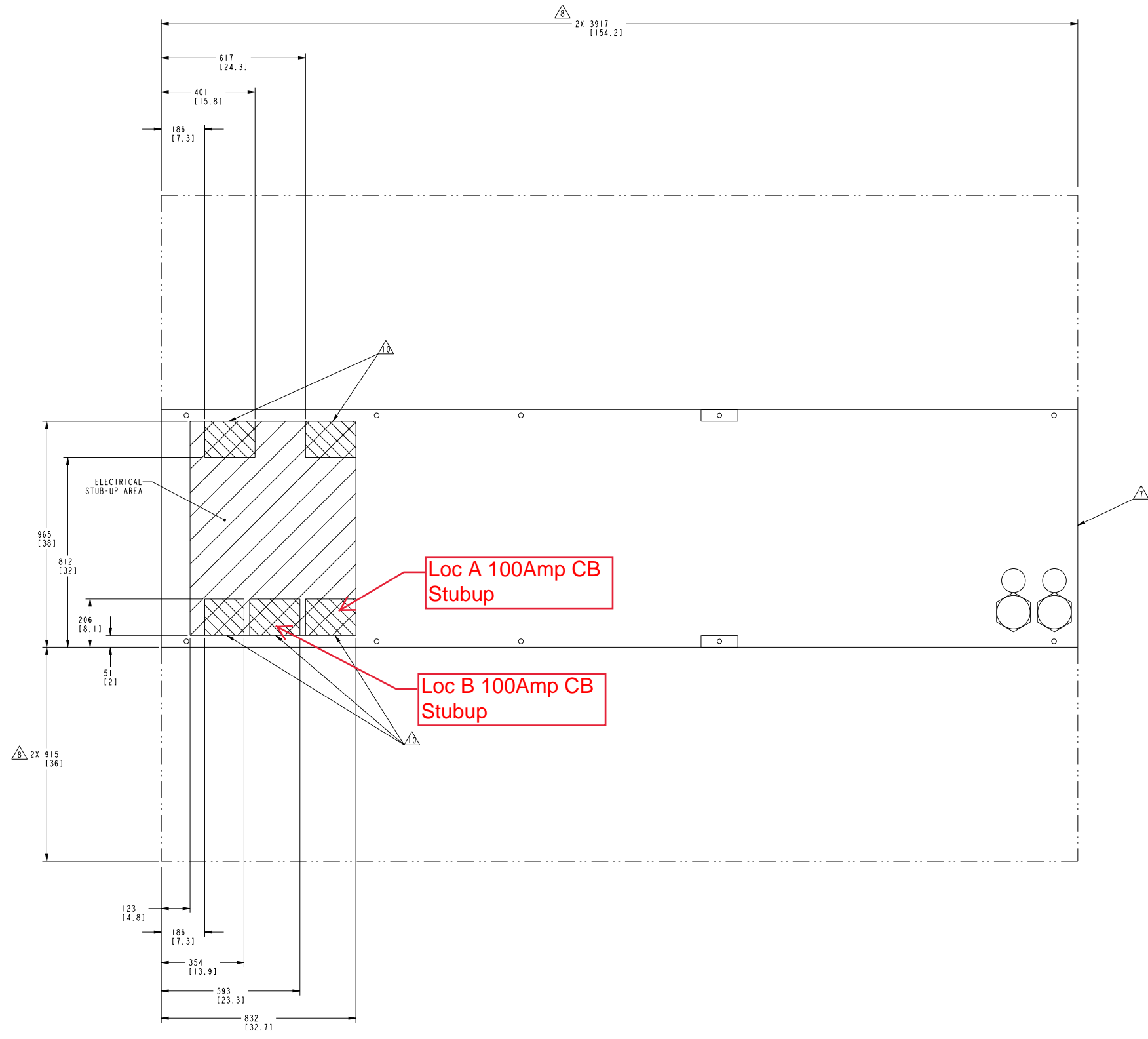
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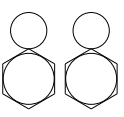
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Loc A 100Amp CB Stubup

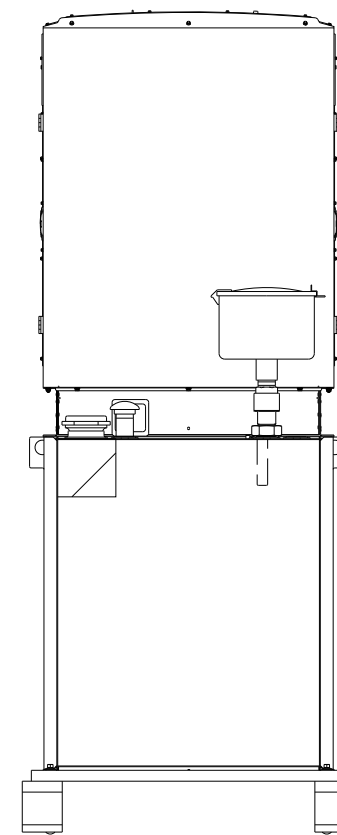
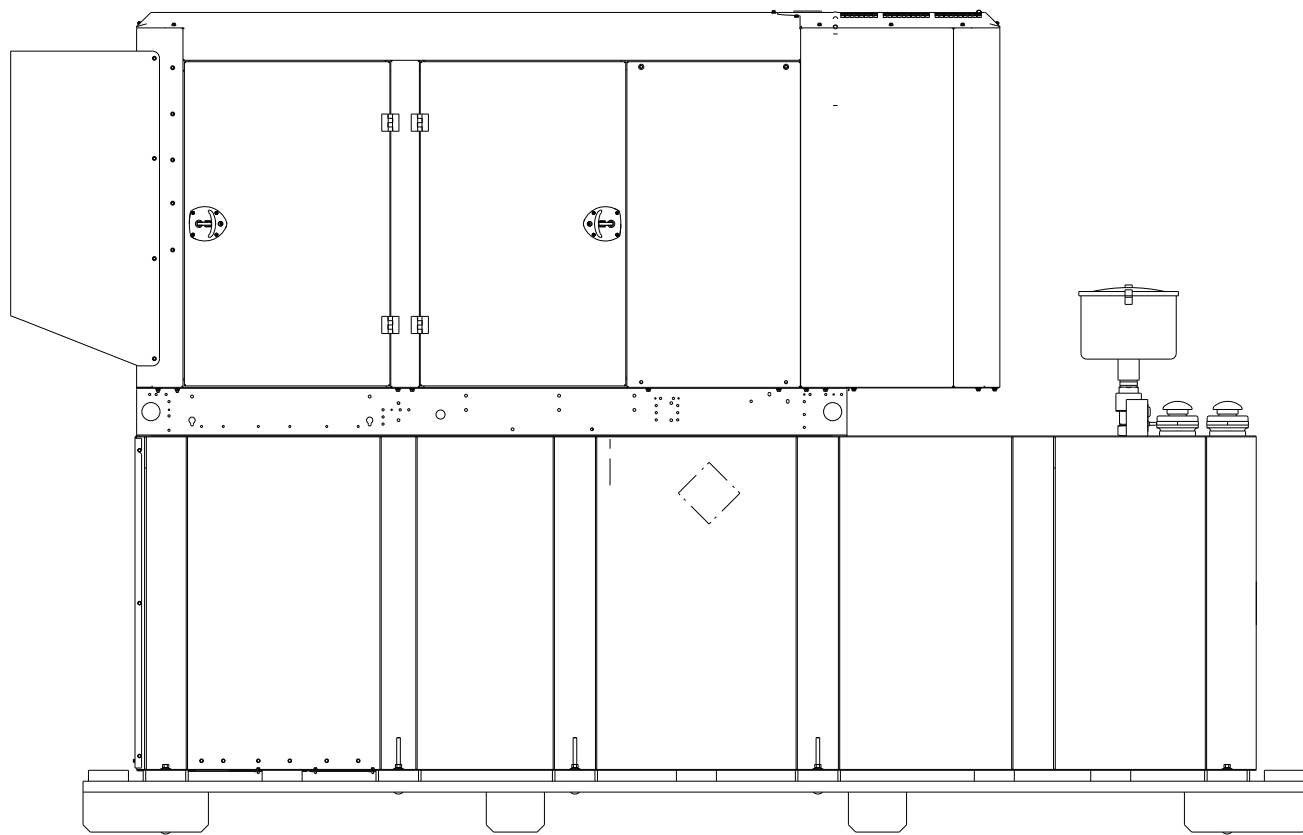
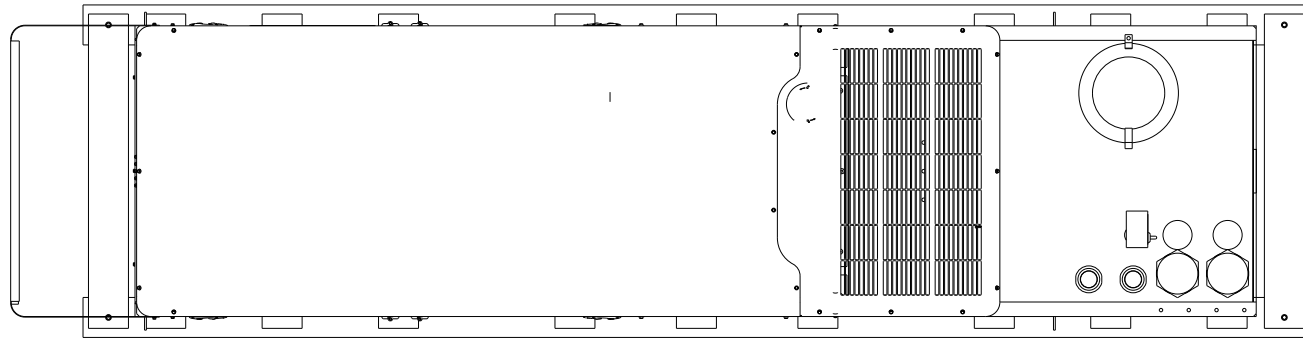
Loc B 100Amp CB Stubup

ELECTRICAL STUB-UP AREA



UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS		DO NOT SCALE PRINT	APP'D D HOFMEISTER	CUMMINS POWER GENERATION
X ± 1	0.00 - 4.99 +0.15/-0.00		CHK'D D HOFMEISTER	OUTLINE, TANK REGIONAL
-4 ± 0.8	5.00 - 9.99 +0.20/-0.10		APP'D M JAWALE	
10 ± 0.8	10.00 - 17.49 +0.25/-0.13		DATE 01FEB18	SITE CODE REGIONAL
15 ± 0.38	17.50 - 24.99 +0.30/-0.13			PGF E A054B564
ANG TOL ± 1.0°	SCALE 1:8	FOR INTERPRETATION, FIRST REFER TO THE DIMENSIONING AND TOLERANCE MANUAL. FOR DIMENSIONS, REFER TO THE DIMENSIONING AND TOLERANCE MANUAL. FOR ANGLES, REFER TO THE DIMENSIONING AND TOLERANCE MANUAL.	FOR INTERPRETATION, FIRST REFER TO THE DIMENSIONING AND TOLERANCE MANUAL. FOR DIMENSIONS, REFER TO THE DIMENSIONING AND TOLERANCE MANUAL. FOR ANGLES, REFER TO THE DIMENSIONING AND TOLERANCE MANUAL.	CAD SHEET 3 of 4

REV NO	REV	NO	REVISION	NO	CHK	APPD	DATE
ECO-173968	C	1	ADD SHEET 4	C.JF	MF	M WINGFIELD	06DEC17



(WITHOUT VENT EXTENSIONS)

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS		DO NOT SCALE PRINT	APP'D D HOFMEISTER	CUMMINS POWER GENERATION REGIONAL
DIM X ± 1 Y ± 0.8 Z ± 0.38	0.00-4.99 +0.15/-0.00 5.00-9.99 +0.25/-0.13 10.00-17.49 +0.25/-0.13 17.50-24.99 +0.20/-0.13		APP'D M JAWALE DATE 01FEB18	
ANG TOL ± 1.0°	SCALE 1:8	THIS DOCUMENT AND ALL INFORMATION FROM HEREON IS UNCLASSIFIED EXCEPT WHERE SHOWN OTHERWISE AND IS TO BE RELEASED TO THE PUBLIC BY THE NATIONAL ARCHIVES AT COLLEGE PARK, MARYLAND, 20740-6001 UNLESS INDICATED OTHERWISE BY THIS DOCUMENT	SITE CODE REGIONAL PGF E A054B564	CUMMINS OUTLINE, TANK REGIONAL A054B564 4 of 4

REL NO	LTR	NO	REVISION	DWN	CAD	APVD	DATE
ECO-159499	A	1	PRODUCTION RELEASE	DAH	DAH	JAWALE	11FEB16

SEISMIC INSTALLATIONS NOTES:

1. THE DESIGN OF POST-INSTALLED ANCHORS IN CONCRETE USED FOR THE COMPONENT ANCHORAGE IS PRE-QUALIFIED FOR SEISMIC APPLICATIONS IN ACCORDANCE WITH "ACI 355.2-07" AND DOCUMENTED IN A REPORT BY A REPUTABLE TESTING AGENCY. (EX. THE EVALUATION SERVICE REPORT ISSUED BY THE INTERNATIONAL CODE COUNCIL)
2. ANCHORS MUST BE INSTALLED TO AN EMBEDMENT DEPTH AS RECOMMENDED IN THE PRE-QUALIFICATION TEST REPORT AS DEFINED IN NOTE 1. FOR "CBC 2013" APPLICATIONS.
3. ANCHORS MUST BE INSTALLED IN MINIMUM 3000 PSI COMPRESSIVE STRENGTH NORMAL WEIGHT STRUCTURAL CONCRETE. CONCRETE AGGREGATE MUST COMPLY WITH "ASTM C33".
4. ANCHORS MUST BE INSTALLED TO THE TORQUE SPECIFICATION AS RECOMMENDED BY THE ANCHOR MANUFACTURER.
5. ANCHORS MUST BE INSTALLED IN LOCATIONS SPECIFIED ON THIS INSTALLATION DRAWING.
6. WASHERS MUST BE INSTALLED AT EACH ANCHOR LOCATION BETWEEN THE ANCHOR HEAD AND EQUIPMENT FOR TENSION LOAD DISTRIBUTION. WASHERS MUST BE TYPE A OR B PLAIN WASHERS MEETING ASME B18.21.1-2009. WASHER SIZE TO MATCH ANCHOR DIAMETER.
7. CONCRETE FLOOR SLAB AND CONCRETE HOUSEKEEPING PADS MUST BE DESIGNED FOR SEISMIC APPLICATIONS IN ACCORDANCE WITH "ACI 318-11".
8. ALL HOUSEKEEPING PAD THICKNESSES MUST BE DESIGNED IN ACCORDANCE WITH THE PRE-QUALIFICATION TEST REPORT AS DEFINED IN NOTE 1 OR A MINIMUM OF 1.5X THE ANCHOR EMBEDMENT DEPTH, WHICHEVER IS LARGEST (UNLESS NOTED OTHERWISE).
9. ALL HOUSEKEEPING PADS MUST BE DOWELLED OR CAST INTO THE BUILDING STRUCTURAL FLOOR SLAB AND DESIGNED FOR SEISMIC APPLICATION PER "ACI 318-11" AND AS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
10. FLOOR MOUNTED EQUIPMENT (WITH OR WITHOUT A HOUSEKEEPING PAD) MUST BE INSTALLED TO A STEEL REINFORCED STRUCTURAL CONCRETE FLOOR THAT IS SEISMICALLY DESIGNED AND APPROVED BY THE ENGINEER OF RECORD TO RESIST ALL LOADS FROM EQUIPMENT BEING ANCHORED TO THE FLOOR.
11. COORDINATE REINFORCEMENT OF SUPPORT STRUCTURE WITH EQUIPMENT ANCHOR LOCATIONS.
12. ATTACHING SEISMIC CERTIFIED EQUIPMENT TO FLOOR OTHER THAN THOSE DESIGNED TO ACCEPT THE SEISMIC LOADS FROM CERTIFIED EQUIPMENT BY THE STRUCTURAL ENGINEER OF RECORD IS PROHIBITED.
13. INSTALLATION ONTO A STEEL ROOF STRUCTURE OR MANUFACTURED STEEL CURB SHALL BE COORDINATED WITH THE STRUCTURAL ENGINEER OF RECORD.
14. CONNECTIONS TO THE EQUIPMENT, INCLUDING BUT NOT LIMITED TO CONDUIT, WIRING FROM CABLE TRAYS, OTHER ELECTRICAL SERVICES OR OTHER CONNECTIONS, ARE THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR AND BEYOND THE SCOPE OF THIS DOCUMENT. FLEXIBLE ATTACHMENTS MUST BE USED FOR SEISMIC CONNECTIONS TO ISOLATED COMPONENTS OR ISOLATED EQUIPMENT. THE FLEXIBLE ATTACHMENT MUST PROVIDE FOR ENOUGH RELATIVE DISPLACEMENT TO REMAIN CONNECTED TO THE EQUIPMENT AND FUNCTIONAL DURING AND AFTER A SEISMIC EVENT.
15. REFER TO GENSET OUTLINE DRAWINGS FOR WEIGHT, CG AND CONFIGURATION SPECIFICS.

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS		SIN TO A051N157	DWN D HOFMEISTER		CUMMINS POWER GENERATION		
DO NOT SCALE PRINT			CAD D HOFMEISTER		INSTALLATION, GENSET		
FOR INTERPRETATION OF DIMENSIONS AND TOLERANCING, SEE ASME Y14.5M-1994			APVD M. JAWALE	SEISMIC REQUIREMENTS			
ANG TOL: ± 1.0°		SCALE: 1/1	DATE 11FEB16	SITE CODE	PGF	D	A054T597
			ARROW				SHEET 1 of 5

REL NO	LTR	NO	REVISION	DN	CD	APVD	DATE
ECO-159499	A	1	PRODUCTION RELEASE.	DAH	DAH	JAWALE	11FEB16

GRADE MOUNTED GENERATOR SETS

CUMMINS GENSET MODEL	CONFIGURATION	ATTACHMENT TO CONCRETE				
		EVALUATION PARAMETERS	CONCRETE ANCHORS	ANCHOR EMBEDMENT	ANCHOR SPACING	DISTANCE TO NEAREST EDGE
C50 D6C C60 D6C C80 D6C C100 D6C C125 D6C	GENERATOR SET WITH OR WITHOUT ENCLOSURE	CBC 2013/IBC 2012 Sds <= 2.5 Ip <= 1.5 ap/Rp <= 2.5/2.0 z/h = 1.0 Ω = 2.5				SEE NOTE

NOTE: TYPE OF ANCHOR, ANCHOR ATTACHMENT SPECIFICS AND MINIMUM SLAB THICKNESS TO BE DESIGNED BY ENGINEER OF RECORD.

GRADE/ROOF MOUNTED GENERATOR SETS

CUMMINS GENSET MODEL	CONFIGURATION	ATTACHMENT TO STEEL	
		EVALUATION PARAMETERS	STEEL BOLTS
C50 D6C C60 D6C C80 D6C C100 D6C C125 D6C	GENERATOR SET WITH OR WITHOUT ENCLOSURE	CBC 2013/IBC 2012 Sds <= 2.5 Ip <= 1.5 ap/Rp <= 2.5/2.0 z/h <= 1.0	(QTY 4) 5/8" DIAMETER ASTM A325N OR A490 BOLTS WITH WASHERS THROUGH THE BASE RAIL MOUNTING HOLES.

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS		SHW TO A051N157	DN D HOFMEISTER		CUMMINS POWER GENERATION	
X ± 1	0.00-4.99 +0.15/-0.08	DO NOT SCALE PRINT	CD D HOFMEISTER		INSTALLATION, GENSET	
.X ± 0.8	5.00-9.99 +0.20/-0.10		APVD M. JAWALE	SEISMIC REQUIREMENTS		
.XX ± 0.38	10.00-17.49 +0.25/-0.13	CONFIDENTIAL	DATE 11FEB16	SITE CODE		
ANG TOL: ± 1.0°	17.50-24.99 +0.30/-0.13	PROPERTY OF CUMMINS POWER GENERATION GROUP	PGF	PGF		
	SCALE: 1/1	FIRST USED ON	ARROW	DATE		
				D	A054T597	
				SHEET	2 of 5	
				REV	A	

REL NO	LTR	NO	REVISION	DNW	CAD	APVD	DATE
ECO-159499	A	1	PRODUCTION RELEASE	DAH	DAH	JAWALE	11FEB16

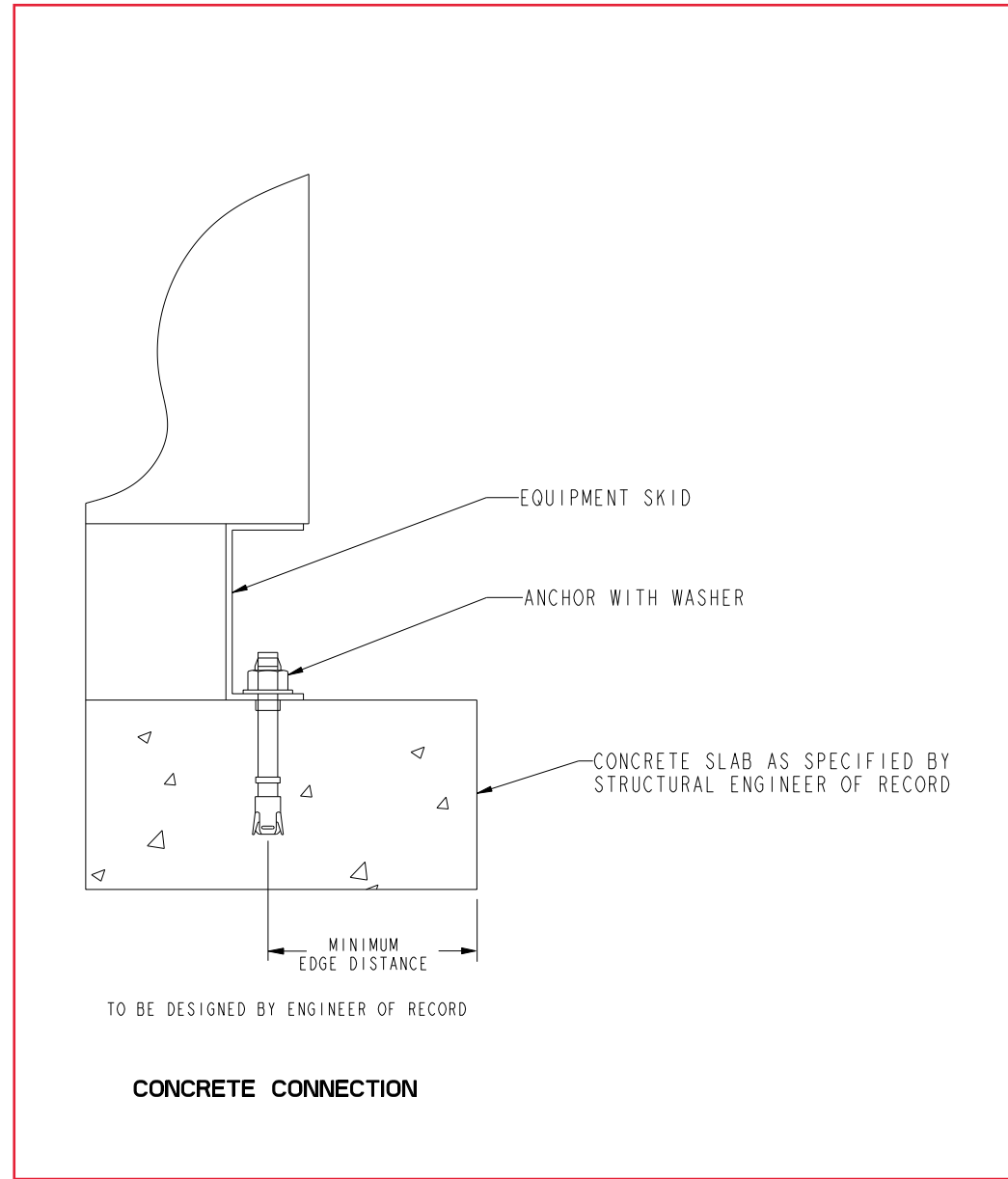
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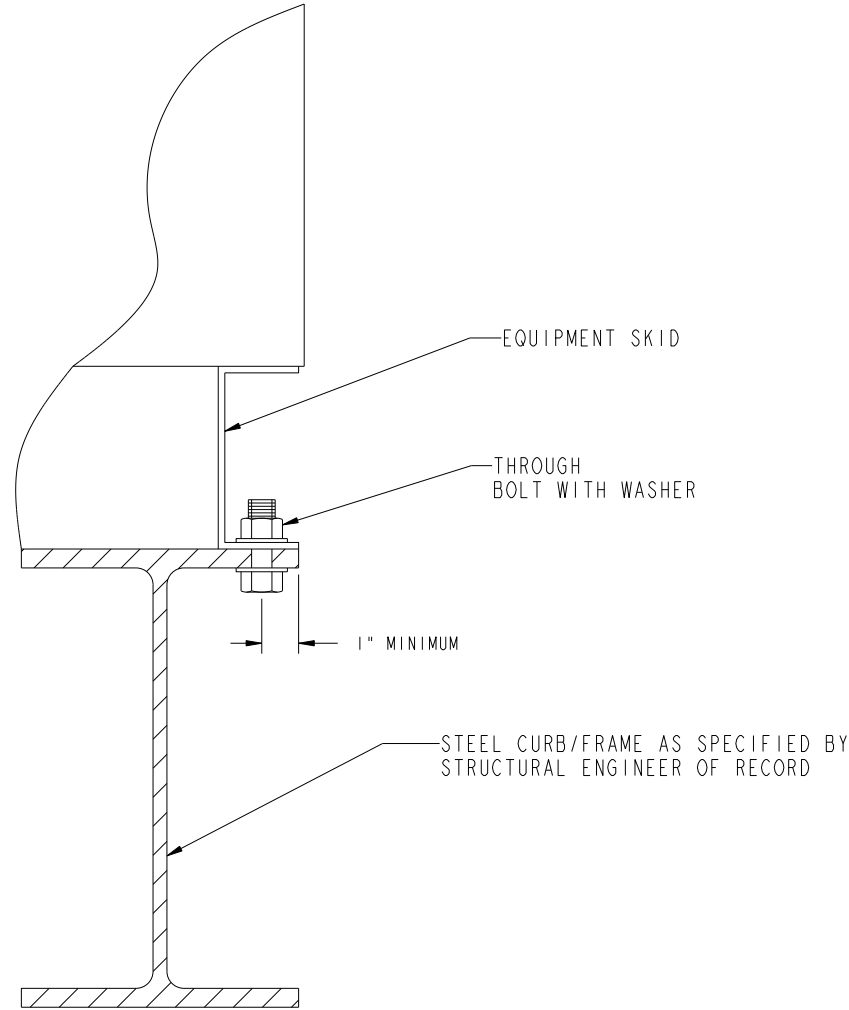
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CONCRETE CONNECTION



STEEL CONNECTION

D

C

←

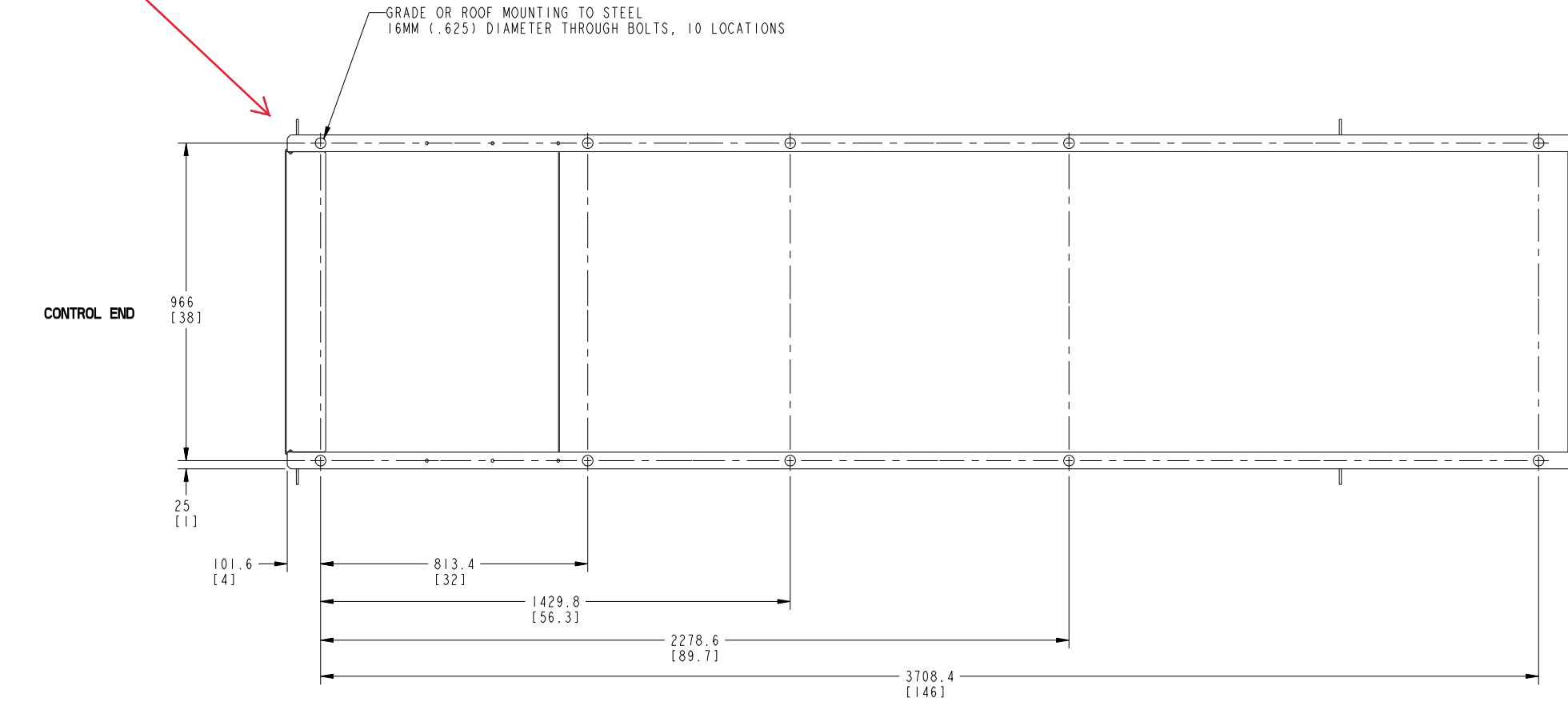
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UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS		SHW TO: A051N157	DNW: D HOFMEISTER		CUMMINS POWER GENERATION																	
DO NOT SCALE PRINT			CAD: D HOFMEISTER		INSTALLATION, GENSET																	
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	Ø	± 1	0.00-4.99	+0.15/-0.08																		
	X	± 0.8	5.00-9.99	+0.20/-0.10																		
.X	± 0.8	10.00-17.49	+0.25/-0.13																			
.XX	± 0.38	17.50-24.99	+0.30/-0.13																			
ANG TOL: ± 1.0°		SCALE: 1/1	DATE: 11FEB16	PGF	<table border="1"> <tr> <td>DRG</td> <td>REV</td> </tr> <tr> <td>D</td> <td>A</td> </tr> </table>	DRG	REV	D	A													
DRG	REV																					
D	A																					
<p>CONFIDENTIAL - PROPERTY OF CUMMINS POWER GENERATION GROUP</p> <p>FOR INTERPRETATION OF DIMENSIONS AND TOLERANCING, SEE ASME Y14.5M-1994</p>		FIRST USED ON ARROW		<table border="1"> <tr> <td>SHEET</td> <td>NO</td> </tr> <tr> <td>4</td> <td>5</td> </tr> </table>		SHEET	NO	4	5													
SHEET	NO																					
4	5																					

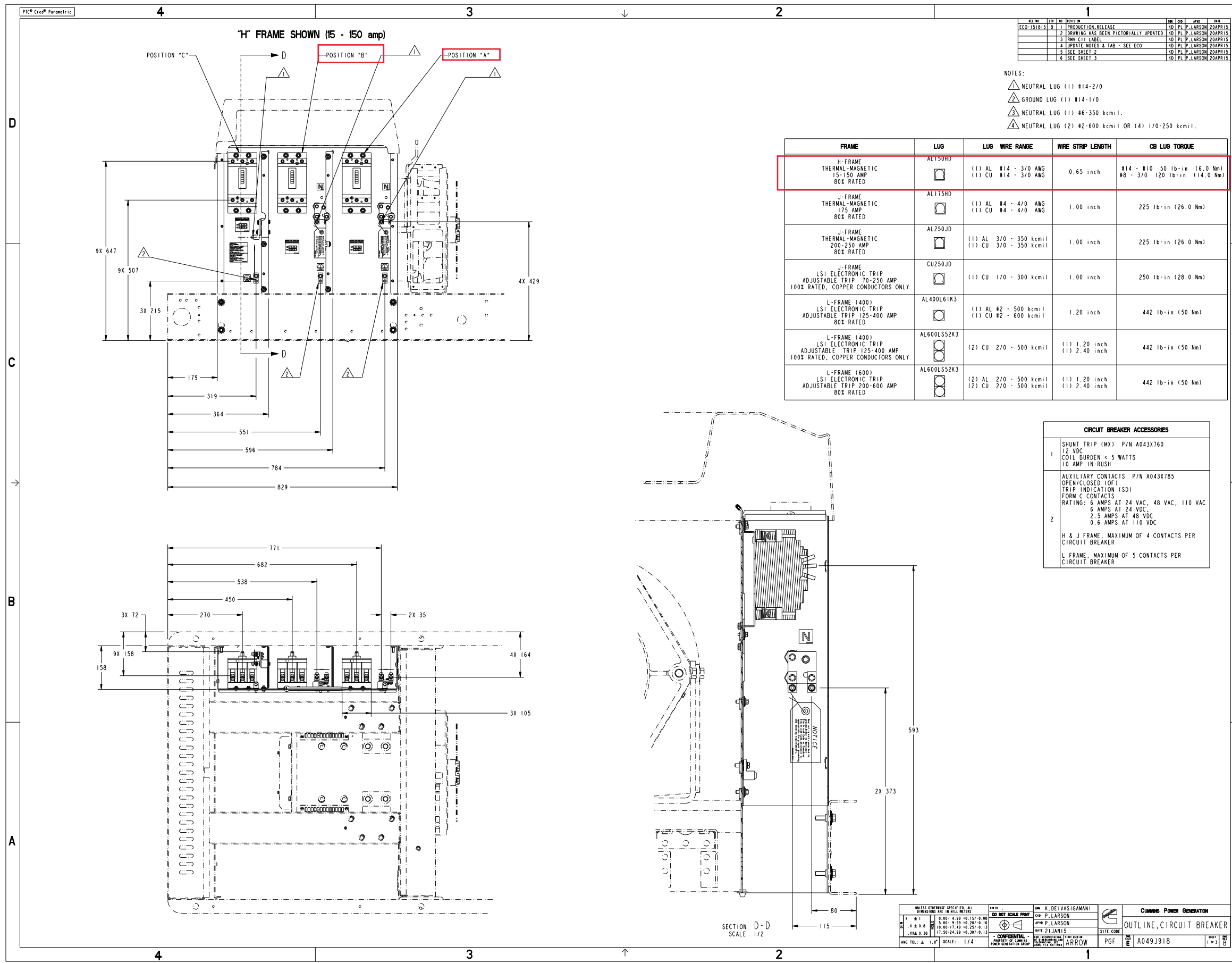
REL NO	LTR	NO	REVISION	DN	CD	APVD	DATE
ECO-159499	A	1	PRODUCTION RELEASE	DAH	DAH	JAWALE	11FEB16

MOUNTING HOLE LOCATIONS FOR FUEL TANK WITH 10 BOLTS TO MOUNTING STRUCTURE



C50 D6C, C60 D6C, C80 D6C, C100 D6C, C125 D6C: FUEL TANKS WITH 10 HOLE ATTACHMENTS

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS		SIN TO A051N157	DN D HOFMEISTER		CUMMINS POWER GENERATION																			
DO NOT SCALE PRINT		DO NOT SCALE PRINT	CD D HOFMEISTER		INSTALLATION, GENSET																			
<table border="1"> <tr> <td>Ø</td> <td>± 1</td> <td>0.00-4.99 +0.15/-0.08</td> </tr> <tr> <td>X</td> <td>± 0.8</td> <td>5.00-9.99 +0.20/-0.10</td> </tr> <tr> <td>.X</td> <td>± 0.8</td> <td>10.00-17.49 +0.25/-0.13</td> </tr> <tr> <td>.XX</td> <td>± 0.38</td> <td>17.50-24.99 +0.30/-0.13</td> </tr> </table>	Ø	± 1	0.00-4.99 +0.15/-0.08	X	± 0.8	5.00-9.99 +0.20/-0.10	.X	± 0.8	10.00-17.49 +0.25/-0.13	.XX	± 0.38	17.50-24.99 +0.30/-0.13	<table border="1"> <tr> <td>HOLE</td> <td></td> <td></td> </tr> </table>	HOLE				<table border="1"> <tr> <td>APVD</td> <td>M. JAWALE</td> </tr> <tr> <td>DATE</td> <td>11FEB16</td> </tr> </table>	APVD	M. JAWALE	DATE	11FEB16	SITE CODE	SEISMIC REQUIREMENTS
Ø	± 1	0.00-4.99 +0.15/-0.08																						
X	± 0.8	5.00-9.99 +0.20/-0.10																						
.X	± 0.8	10.00-17.49 +0.25/-0.13																						
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HOLE																								
APVD	M. JAWALE																							
DATE	11FEB16																							
ANG TOL: ± 1.0°	SCALE: 1/1	<table border="1"> <tr> <td>CONFIDENTIAL</td> <td>FIRST USED ON</td> </tr> <tr> <td>PROPERTY OF CUMMINS POWER GENERATION GROUP</td> <td>ARROW</td> </tr> </table>	CONFIDENTIAL	FIRST USED ON	PROPERTY OF CUMMINS POWER GENERATION GROUP	ARROW	PGF	<table border="1"> <tr> <td>REV</td> <td>D</td> <td>A054T597</td> </tr> </table>	REV	D	A054T597	SHEET 5 OF 5	REV A											
CONFIDENTIAL	FIRST USED ON																							
PROPERTY OF CUMMINS POWER GENERATION GROUP	ARROW																							
REV	D	A054T597																						



REV. NO.	DATE	DESCRIPTION	BY	CHKD.	APP.
ECO-151813	0	1 PRODUCTION RELEASE	RD FL P. LARSON	20APR15	
		2 DRAWING HAS BEEN PICTORIALY UPDATED	RD FL P. LARSON	20APR15	
		3 REV C11 LABEL	RD FL P. LARSON	20APR15	
		4 UPDATE NOTES & TAB - SEE ECO	RD FL P. LARSON	20APR15	
		5 SEE SHEET 2	RD FL P. LARSON	20APR15	
		6 SEE SHEET 3	RD FL P. LARSON	20APR15	

- NOTES:
- ▲ NEUTRAL LUG (1) #14-2/0
 - ▲ GROUND LUG (1) #14-1/0
 - ▲ NEUTRAL LUG (1) #6-350 kcmil.
 - ▲ NEUTRAL LUG (2) #2-600 kcmil OR (4) 1/0-250 kcmil.

FRAME	LUG	LUG WIRE RANGE	WIRE STRIP LENGTH	CB LUG TORQUE
H-FRAME THERMAL-MAGNETIC 15-150 AMP 80% RATED	AL150RD	(1) AL #14 - 3/0 AWG (1) CU #14 - 3/0 AWG	0.65 inch	#14 - #10 50 lb-in (6.0 Nm) #8 - 3/0 120 lb-in (14.0 Nm)
J-FRAME THERMAL-MAGNETIC 175 AMP 80% RATED	AL175HD	(1) AL #4 - 4/0 AWG (1) CU #4 - 4/0 AWG	1.00 inch	225 lb-in (26.0 Nm)
J-FRAME THERMAL-MAGNETIC 200-250 AMP 80% RATED	AL250JD	(1) AL 3/0 - 350 kcmil (1) CU 3/0 - 350 kcmil	1.00 inch	225 lb-in (26.0 Nm)
J-FRAME LSI ELECTRONIC TRIP ADJUSTABLE TRIP 70-250 AMP 100% RATED, COPPER CONDUCTORS ONLY	CU250JD	(1) CU 1/0 - 300 kcmil	1.00 inch	250 lb-in (28.0 Nm)
L-FRAME (400) LSI ELECTRONIC TRIP ADJUSTABLE TRIP 125-400 AMP 80% RATED	AL400L61K3	(1) AL #2 - 500 kcmil (1) CU #2 - 600 kcmil	1.20 inch	442 lb-in (50 Nm)
L-FRAME (400) LSI ELECTRONIC TRIP ADJUSTABLE TRIP 125-400 AMP 100% RATED, COPPER CONDUCTORS ONLY	AL600LS52K3	(2) CU 2/0 - 500 kcmil	(1) 1.20 inch (1) 2.40 inch	442 lb-in (50 Nm)
L-FRAME (600) LSI ELECTRONIC TRIP ADJUSTABLE TRIP 200-600 AMP 80% RATED	AL600LS52K3	(2) AL 2/0 - 500 kcmil (2) CU 2/0 - 500 kcmil	(1) 1.20 inch (1) 2.40 inch	442 lb-in (50 Nm)

CIRCUIT BREAKER ACCESSORIES	
1	SHUNT TRIP (MX) P/N A043X760 12 VDC COIL BURDEN < 5 WATTS 10 AMP 1N-RUSH
2	AUXILIARY CONTACTS P/N A043X785 OPEN/CLOSED (OF) TRIP INDICATION (SD) FORM C CONTACTS RATING: 6 AMPS AT 24 VAC, 48 VAC, 110 VAC 6 AMPS AT 24 VDC, 2.5 AMPS AT 48 VDC 0.6 AMPS AT 110 VDC

H & J FRAME, MAXIMUM OF 4 CONTACTS PER CIRCUIT BREAKER
L FRAME, MAXIMUM OF 5 CONTACTS PER CIRCUIT BREAKER

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS

DO NOT SCALE PRINT

ANG TOL: ± 1.0° SCALE: 1/4

PROPERTY OF CUMMINS POWER GENERATION GROUP

DATE 21 JAN 15

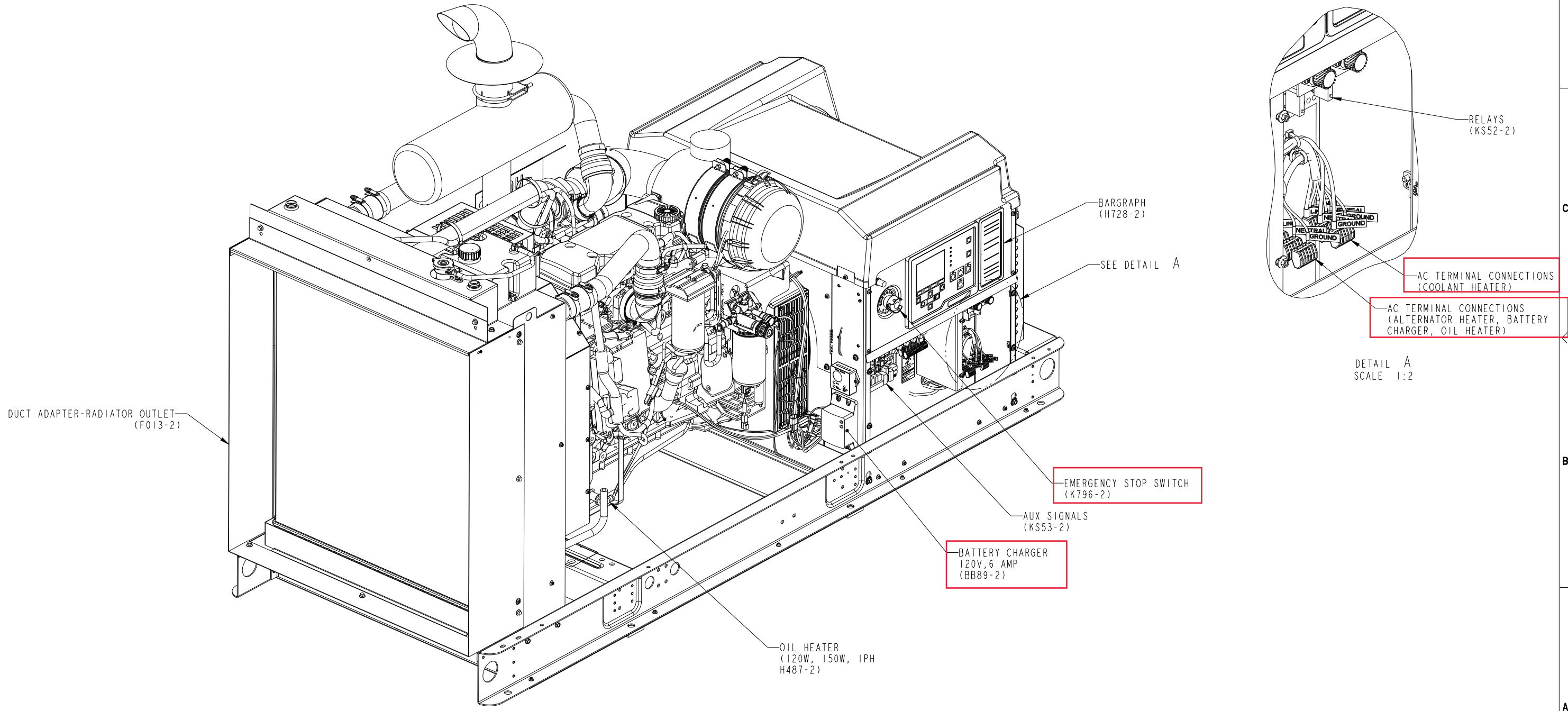
PGF E A049J918

CUMMINS POWER GENERATION
OUTLINE, CIRCUIT BREAKER

REL NO	REV	NO	REVISION	DRN	CKD	APVD	DATE
ECO-168286	B	1	ADD NOTE 1	AGJ	AGJ	JAWALE	27FEB16
		2	ADD SHEET 3	AGJ	AGJ	JAWALE	27FEB16

NOTES:

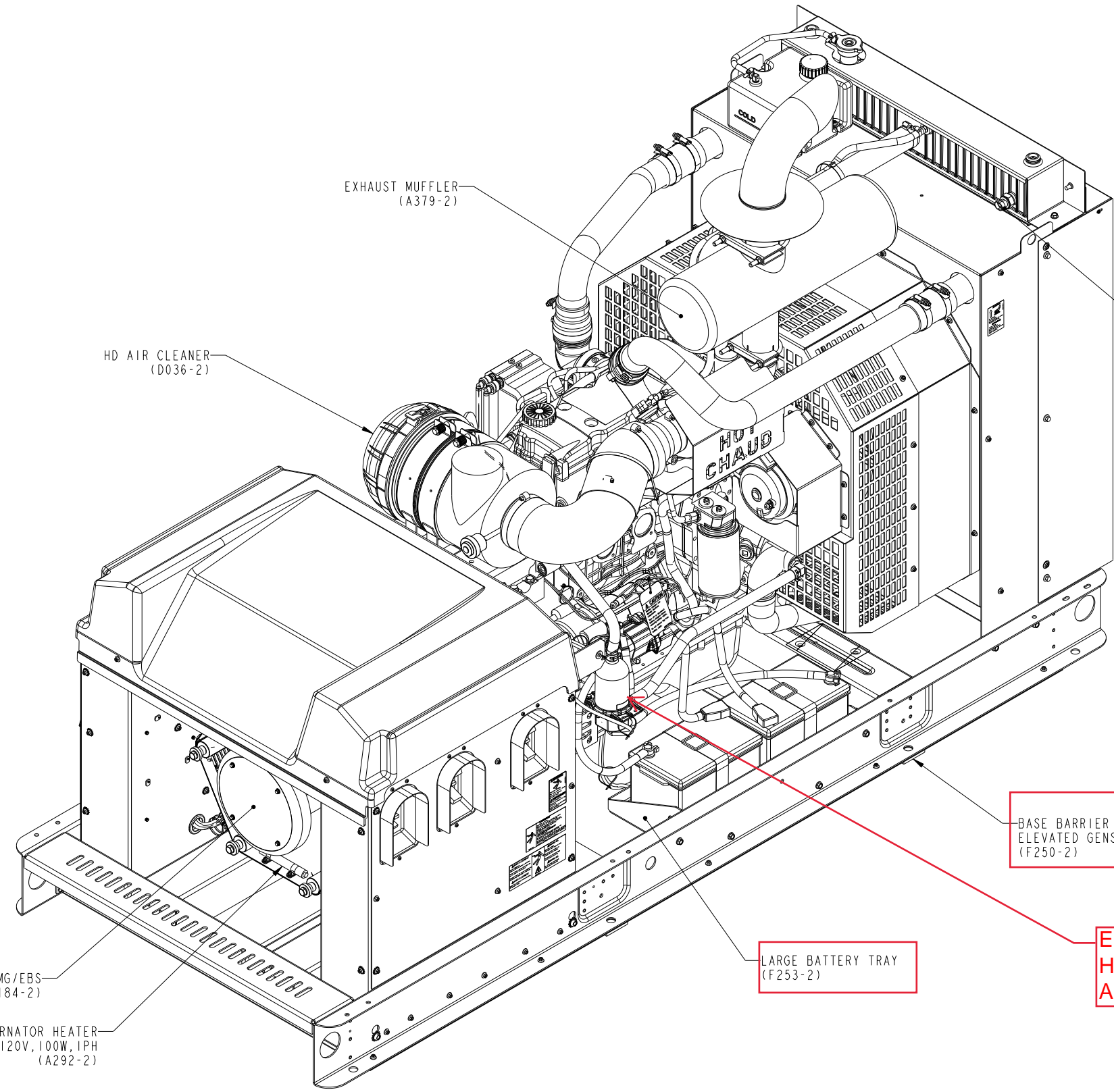
1. DIMENSIONS SHOWN IN [] ARE IN INCHES.



C50 D6C, C60 D6C, C80 D6C, C100 D6C, C125 D6C

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS		SHW TO	DRN D HOFMEISTER	CUMMINS POWER GENERATION	
DO NOT SCALE PRINT			CKD D HOFMEISTER		
DIM	TOLERANCE		APVD M JAWALE	SITE CODE OUTLINE, GENSET OPTIONS	
X ± 1 .X ± 0.8 .XX ± 0.38	0.00- 4.99 +0.15/-0.08 5.00- 9.99 +0.20/-0.10 10.00-17.49 +0.25/-0.13 17.50-24.99 +0.30/-0.13		DATE 17MAR16		
ANG TOL ± 1.0°	SCALE 3:16	THIS DOCUMENT (AND THE INFORMATION SHOWN THEREON) IS CONFIDENTIAL AND PROPRIETARY AND SHALL NOT BE DISCLOSED TO OTHERS IN HARD COPY OR ELECTRONIC FORM, REPRODUCED BY ANY MEANS, OR USED FOR ANY PURPOSE WITHOUT WRITTEN CONSENT OF CUMMINS INC.	FOR INTERPRETATION OF DIMENSIONING AND TOLERANCING, SEE ASME Y14.5-2009	PGF D A054Y899	CAD SHEET 1 of 3

REL NO	REV	NO	REVISION	DRN	CKD	APVD	DATE
ECO-168286	B	-	-----	AGJ	AGJ	JAWALE	27FEB16



EXHAUST MUFFLER (A379-2)

HD AIR CLEANER (D036-2)

LOW COOLANT SHUTDOWN/WARNING (SENSOR) (H389-2/H527-2)

BASE BARRIER ELEVATED GENSET (F250-2)

LARGE BATTERY TRAY (F253-2)

E153 Coolant Heater, Cold Ambient

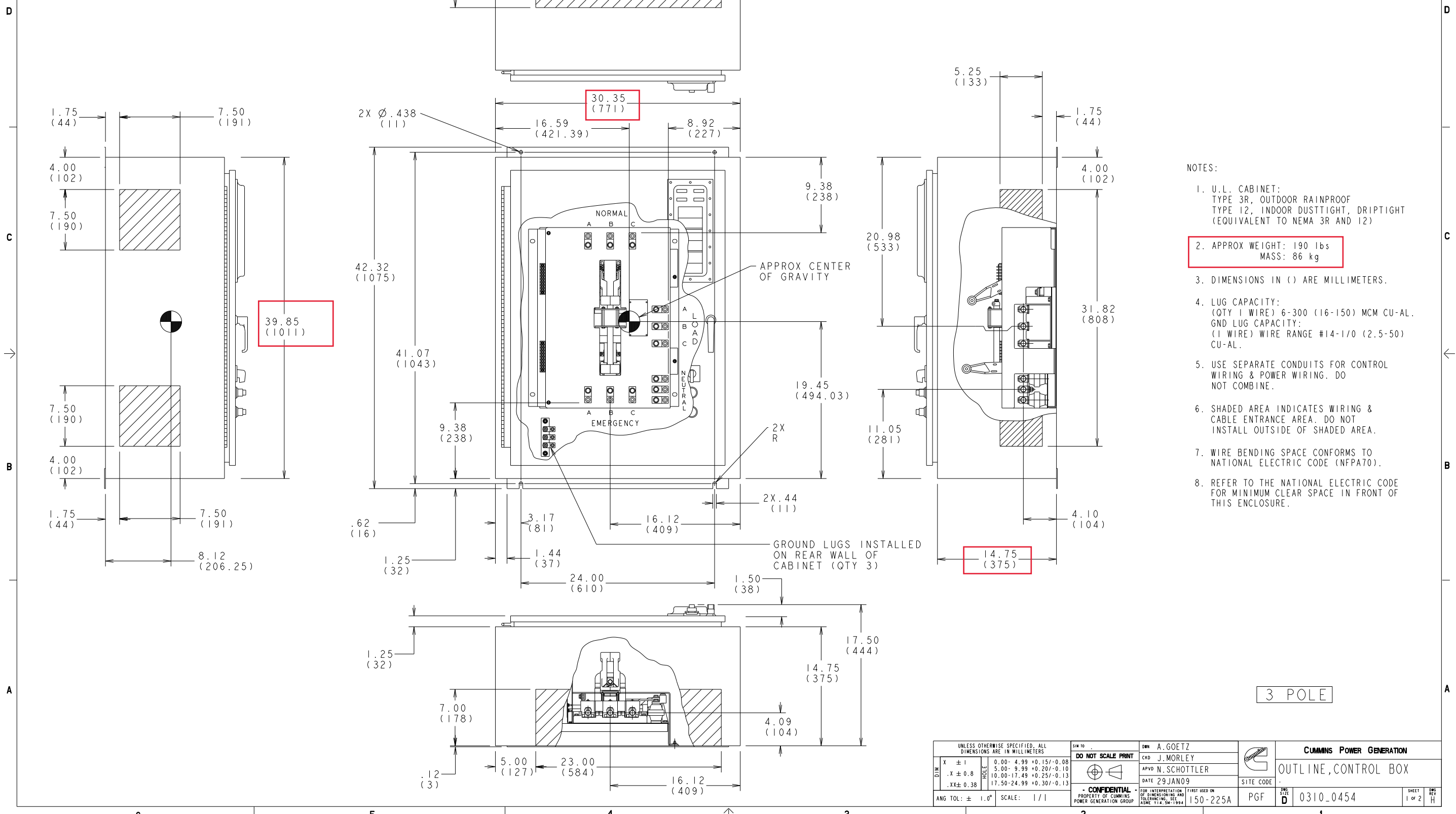
EXCITER/REG-PMG/EBS (B184-2)

ALTERNATOR HEATER 120V, 100W, 1PH (A292-2)

C50 D6C, C60 D6C, C80 D6C, C100 D6C, C125 D6C

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS		SHW TO	DWN D HOFMEISTER	CUMMINS POWER GENERATION
DO NOT SCALE PRINT		CKD D HOFMEISTER	APVD M JAWALE	
DATE 17MAR16	SITE CODE	PGF	AW	OUTLINE, GENSET OPTIONS A054Y899
ANG TOL ± 1.0°	SCALE 3:16	<small>THIS DOCUMENT (AND THE INFORMATION SHOWN THEREON) IS CONFIDENTIAL AND PROPRIETARY AND SHALL NOT BE DISCLOSED TO OTHERS IN HARD COPY OR ELECTRONIC FORM, REPRODUCED BY ANY MEANS, OR USED FOR ANY PURPOSE WITHOUT WRITTEN CONSENT OF CUMMINS INC. © 2016 CUMMINS INC.</small>		<small>FOR INTERPRETATION OF DIMENSIONING AND TOLERANCING, SEE ASME Y14.5-2009</small> FIRST USED ON ARROW

REL NO	LTR	NO	REVISION	DRN	CRD	APVD	DATE
ECO-103287	H	1	REDRAWN IN PRO/E; REVISED NOTES PER ECO	AWG	JM	SCHOTTTLER	29 JAN09



- NOTES:
- U.L. CABINET:
TYPE 3R, OUTDOOR RAINPROOF
TYPE 12, INDOOR DUSTTIGHT, DRIPTIGHT
(EQUIVALENT TO NEMA 3R AND 12)
 - APPROX WEIGHT: 190 lbs
MASS: 86 kg
 - DIMENSIONS IN () ARE MILLIMETERS.
 - LUG CAPACITY:
(QTY 1 WIRE) 6-300 (16-150) MCM CU-AL.
GND LUG CAPACITY:
(1 WIRE) WIRE RANGE #14-1/0 (2.5-50)
CU-AL.
 - USE SEPARATE CONDUITS FOR CONTROL
WIRING & POWER WIRING. DO
NOT COMBINE.
 - SHADED AREA INDICATES WIRING &
CABLE ENTRANCE AREA. DO NOT
INSTALL OUTSIDE OF SHADED AREA.
 - WIRE BENDING SPACE CONFORMS TO
NATIONAL ELECTRIC CODE (NFPA70).
 - REFER TO THE NATIONAL ELECTRIC CODE
FOR MINIMUM CLEAR SPACE IN FRONT OF
THIS ENCLOSURE.

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS		SIM TO		DRN A. GOETZ		CUMMINS POWER GENERATION	
X ± 1	0.00- 4.99 +0.15/-0.08	DO NOT SCALE PRINT		CRD J. MORLEY		OUTLINE, CONTROL BOX	
.X ± 0.8	5.00- 9.99 +0.20/-0.10			APVD N. SCHOTTTLER			
.XX ± 0.38	10.00-17.49 +0.25/-0.13			DATE 29 JAN09			
	17.50-24.99 +0.30/-0.13			SITE CODE			
ANG TOL: ± 1.0°	SCALE: 1/1	- CONFIDENTIAL -		FOR INTERPRETATION OF DIMENSIONS AND TOLERANCING, SEE ASME Y14.5M-1994		PGF	
		PROPERTY OF CUMMINS POWER GENERATION GROUP		FIRST USED ON 150-225A		SHEET 1 OF 2	
				D		0310-0454	

Limited Warranty

Commercial Generating Set

This limited warranty applies to all Cummins Power Generation® branded commercial generating sets and associated accessories (hereinafter referred to as "Product").

This warranty covers any failures of the Product, under normal use and service, which result from a defect in material or factory workmanship.

Warranty Period:

The warranty start date† is the date of initial start up, first rental, demonstration or 18 months after factory ship date, whichever is sooner. See table for details.

Continuous Power (COP) is defined as being the maximum power which the generating set is capable of delivering continuously whilst supplying a constant electrical load when operated for an unlimited number of hours per year. No overload capability is available for this rating.

Prime Power (PRP) is defined as being the maximum power which a generating set is capable of delivering continuously whilst supplying a variable electrical load when operated for an unlimited number of hours per year. The permissible average power output over 24 hours of operation shall not exceed 70% of the PRP. For applications requiring permissible average output higher than stated, a COP rating should be used.

Limited-Time Running Power (LTP) is defined as the maximum power available, under the agreed operating conditions, for which the generating set is capable of delivering for up to 500 hours of operation per year.

Emergency Standby Power (ESP) is defined as the maximum power available during a variable electrical power sequence, under the stated operating conditions, for which a generating set is capable of delivering in the event of a utility power outage or under test conditions for up to 500 hours of operation per year. The permissible average power output over 24 hours of operation shall not exceed 70% of the ESP.

Environmental Protection Agency – Stationary Emergency (EPA-SE) is defined as being the maximum power available during a variable electrical power sequence, under the stated operating conditions, for which a generator set is capable of delivering in the event of a utility power outage or under test conditions and used in strict accordance with the EPA NSPS for stationary engines, 40 CFR part 60, subparts IIII and JJJJ, where a reliable utility must be present. The permissible average power output over 24 hours of operation shall not exceed 70% of the EPA-SE.

Data Center Continuous (DCC) is defined as the maximum power which the generator is capable of delivering continuously to a constant or varying electrical load for unlimited hours in a data center application.

**Base Warranty Coverage Duration
(Whichever occurs first)**

Rating	Months	Max. Hours
COP	12	Unlimited
PRP	12	Unlimited
LTP	12	500 hrs
ESP	24	1000 hrs
EPA-SE	24	Unlimited
DCC	24	Unlimited

† Warranty start date for designated rental and oil and gas model Products is determined to be date of receipt of Product by the end customer.

Cummins Power Generation® Responsibilities:

In the event of a failure of the Product during the warranty period due to defects in material or workmanship, Cummins Power Generation® will only be responsible for the following costs:

- All parts and labor required to repair the Product.
- Reasonable travel expenses to and from the Product site location.
- Maintenance items that are contaminated or damaged by a warrantable failure.

Owner Responsibilities:

The owner will be responsible for the following:

- Notifying Cummins Power Generation® distributor or dealer within 30 days of the discovery of failure.
- Installing, operating, commissioning and maintaining the Product in accordance with Cummins Power Generation®'s published policies and guidelines.
- Providing evidence for date of commissioning.
- Providing sufficient access to and reasonable ability to remove the Product from the installation in the event of a warrantable failure.
- Incremental costs and expenses associated with Product removal and reinstallation resulting from non-standard installations.
- Costs associated with rental of generating sets used to replace the Product being repaired.
- Costs associated with labor overtime and premium shipping requested by the owner.
- All downtime expenses, fines, all applicable taxes, and other losses resulting from a warrantable failure.

Limitations:

This limited warranty does not cover Product failures resulting from:

- Inappropriate use relative to designated power rating.
- Inappropriate use relative to application guidelines.
- Inappropriate use of an EPA-SE application generator set relative to EPA's standards.
- Normal wear and tear.
- Improper and/or unauthorized installation.
- Negligence, accidents or misuse.
- Lack of maintenance or unauthorized repair.
- Noncompliance with any Cummins Power Generation® published guideline or policy.
- Use of improper or contaminated fuels, coolants or lubricants.
- Improper storage before and after commissioning.
- Owner's delay in making Product available after notification of potential Product problem.
- Replacement parts and accessories not authorized by Cummins Power Generation®.
- Use of Battle Short Mode.
- Owner or operator abuse or neglect such as: operation without adequate coolant or lubricants; overfueling; overspeeding; lack of maintenance to lubricating, cooling or air intake systems; late servicing and maintenance; improper storage, starting, warm-up, run-in or shutdown practices, or for progressive damage resulting from a defective shutdown or warning device.

- Damage to parts, fixtures, housings, attachments and accessory items that are not part of the generating set.

This limited warranty does not cover costs resulting from:

- Difficulty in gaining access to the Product.
- Damage to customer property.

A "Data center" is defined as a dedicated facility that house computers and associated equipment for data storage and data handling.

Reliable utility is defined as utility power without routine or regularly scheduled black-outs.

Please contact your local Cummins Power Generation® Distributor for clarification concerning these limitations.

CUMMINS POWER GENERATION® RIGHT TO FAILED COMPONENTS:

Failed components claimed under warranty remain the property of Cummins Power Generation®. Cummins Power Generation® has the right to reclaim any failed component that has been replaced under warranty.

Extended Warranty:

Cummins Power Generation® offers several levels of Extended Warranty Coverage. Please contact your local Cummins Power Generation® Distributor for details.

www.power.cummins.com

THE WARRANTIES SET FORTH HEREIN ARE THE SOLE WARRANTIES MADE BY CUMMINS POWER GENERATION® IN REGARD TO THE PRODUCT. CUMMINS POWER GENERATION® MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, OR OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

IN NO EVENT IS CUMMINS POWER GENERATION® LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

This limited warranty shall be enforced to the maximum extent permitted by applicable law. This limited warranty gives the owner specific rights that may vary from state to state or from jurisdiction to jurisdiction.

Product Model Number: _____
 Product Serial Number: _____
 Date in Service: _____



Limited Warranty

Transfer Switch and Paralleling Systems

This limited warranty applies to all Cummins Power Generation® branded Transfer Switches, Paralleling Systems and associated accessories (hereinafter referred to as "Product").

This warranty covers any failures of the Product, under normal use and service, which result from a defect in material or factory workmanship.

Warranty Period:

The warranty start date is the date of commissioning†, demonstration or 18 months after factory ship date, whichever is sooner.

† Date of commissioning not to exceed date of Generator Set initial start-up.

Transfer Switch Coverage Duration:

The warranty coverage duration for Transfer Switches is defined in the table below for the different product families:

Product Family	Duration
GTEC, LT, LC, RSS, RST, OTEC	▪ 1 Year: Parts, Labor & Travel
PLTO, PLTH, PLTS, PLTE	▪ 2 Years: Parts, Labor & Travel
Other Power Transfer Devices ^{††}	▪ 2 Years: Parts, Labor & Travel
OT, OTPC, BTPC, OHPC, CHPC	▪ Years 0-2: Parts, Labor & Travel ▪ Years 3-5: Parts Only ▪ Years 6-10: Main Contacts Only

^{††} Devices manufactured by Cummins Power Generation that allow power transfer between two power sources.

Paralleling Systems Coverage Duration:

The warranty coverage duration for Paralleling Systems is for a period of 2 Years from the warranty start date.

Cummins Power Generation® Responsibilities:

In the event of a failure of the Product during the warranty period due to defects in material or workmanship, Cummins Power Generation® will only be responsible for the following costs:

- All parts and labor required to repair the Product^{†††}.
- Reasonable travel expenses to and from the Product site location^{†††}.

^{†††} Years 0-2 only for OT, OTPC, BTPC, OHPC & CHPC family of Transfer Switches.

Owner Responsibilities:

The owner will be responsible for the following:

- Notifying Cummins Power Generation® distributor or dealer within 30 days of the discovery of failure.
- Installing, operating, commissioning and maintaining the Product in accordance with Cummins Power Generation®'s published policies and guidelines.
- Providing evidence for date of commissioning.
- Providing sufficient access to and reasonable ability to remove the Product from the installation in the event of a warrantable failure.

In addition, the owner will be responsible for:

- Incremental costs and expenses associated with Product removal and reinstallation resulting from non-standard installations.
- Costs associated with rental of power generating equipment used to replace the Product being repaired.
- Costs associated with labor overtime and premium shipping requested by the owner.
- All downtime expenses, fines, all applicable taxes, and other losses resulting from a warrantable failure.



Limitations:

This limited warranty does not cover Product failures resulting from:

- Inappropriate use relative to designated power rating.
- Inappropriate use relative to application guidelines.
- Non-conformance to applicable industry standards for installation
- Normal wear and tear.
- Improper and/or unauthorized installation.
- Negligence, accidents or misuse.
- Lack of maintenance or unauthorized repair.
- Noncompliance with any Cummins Power Generation® published guideline or policy.
- Improper storage before and after commissioning.
- Owner's delay in making Product available after notification of potential Product problem.
- Use of steel enclosures within 60 miles of the coast of salt water when aluminum or an alternate non-corrosive material enclosure option is available.
- Replacement parts and accessories not authorized by Cummins Power Generation®.
- Owner or operator abuse or neglect such as: late servicing and maintenance and improper storage.
- Damage to parts, fixtures, housings, attachments and accessory items that are not part of the transfer switch or paralleling system.

This limited warranty does not cover costs resulting from:

- Difficulty in gaining access to the Product.
- Repair of cosmetic damage to enclosures.

Please contact your local Cummins Power Generation® Distributor for clarification concerning these limitations.

CUMMINS POWER GENERATION® RIGHT TO FAILED COMPONENTS:

Failed components claimed under warranty remain the property of Cummins Power Generation®. Cummins Power Generation® has the right to reclaim any failed component that has been replaced under warranty.

Extended Warranty:

Cummins Power Generation® offers several levels of Extended Warranty Coverage. Please contact your local Cummins Power Generation® Distributor for details.

www.cumminspower.com

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IN NO EVENT IS CUMMINS POWER GENERATION® LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

This limited warranty shall be enforced to the maximum extent permitted by applicable law. This limited warranty gives the owner specific rights that may vary from state to state or from jurisdiction to jurisdiction.

Product Model Number: _____

Product Serial Number: _____

Date in Service: _____

START- UP AND TESTING

Upon completion of the installation by others, Cummins Sales & Service personnel will perform an installation review to include the following:

- Check all of the installing contractor terminations on the generator set and the transfer switch (es).
- Check all of the mounting hardware and anchors associated with the generator set, its accessories, and the automatic transfer switch (es).
- Check the phase rotation of the generator set and utility.
- Cummins Sales & Service is not responsible for compliance with unpublished regulations or requirements not included in specification.

All of the pertinent data will be recorded on Cummins Sales & Service form TDR01.

Cummins Sales & Service personnel will then fill the engine generator with oil and antifreeze and install the batteries as recommended by the manufacturer.

(Fuel is not included and is to be provided by others.)

- Operate for .5 hour (s) at Building load (Only)
- Conduct a site load test to demonstrate motor starting capabilities using the actual motor loads (if applicable).

All of the pertinent data will be recorded, i.e., voltage, frequency, kilowatts, power factor, current, oil pressure, water temperature and ambient temperature. Recordings will be made every 30 minutes for the duration of the field tests on Cummins Sales & Service form TDR-01.

Cummins Sales & Service personnel will demonstrate all of the alarms and safety shutdowns. The battery charger, jacket water heaters, and all other accessories provided by Cummins Pacific LLC will be demonstrated at this time.

The test results will be forwarded to the contractor within 10 days.

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Air Pollution Control District
San Luis Obispo County

September 12, 2018

Mr. Tony Marraccino
Oceano Community Services District
P.O. Box 599
Oceano, CA 93475

SUBJECT: Issuance of an Air Pollution Control District Authority to Construct
Modification for Backup Power at 1655 Front St., Oceano (Site # 4359)

Dear Mr. Marraccino:

Enclosed, you will find an Air Pollution Control District Authority to Construct for the modification of your existing ATC. ATC 6697 replaces the previous ATC which may be recycled. This action is being taken in response to your application number 6697 received by us on July 11, 2018. You will note that certain conditions have been placed upon your Authority to Construct.

Pursuant to Rule 202 of the District's Rules and Regulations, this Authority to Construct shall expire and the application shall be canceled one (1) year from the date of issuance, if unused. As per District Rule 208, appeals to District actions on permits may be made in writing to the Hearing Board within thirty (30) days of receipt of the permit. Contact this office at the completion of construction so that an engineering inspection of your facility may be scheduled.

Also enclosed, is an Authority to Construct fee invoice in the amount of \$500.00. Please make your check payable to the San Luis Obispo County Air Pollution Control District or visit paydirect.link2gov.com/SLOAPCDWEB to pay online with a credit card (service fees apply). Please pay this amount within thirty (30) calendar days of the invoice date to keep your Authority to Construct valid. If you have any questions, feel free to contact David Whitney at this office at (805) 781-5912.

Very truly yours,

A handwritten signature in blue ink, appearing to read "Gary E. Willey".

GARY E. WILLEY
Air Pollution Control Officer

Enclosures

h:\permits\acl\letters\6697acl.docx



Air Pollution Control District
San Luis Obispo County

AUTHORITY TO CONSTRUCT

AN AUTHORITY TO CONSTRUCT IS GRANTED AS OF: September 12, 2018

THIS AUTHORIZATION DOES NOT IMPLY APPROVAL FROM ANY OTHER PUBLIC AGENCY

TO: Oceano Community Services District
Legal Owner P.O. Box 599
or Operator Oceano, CA 93475

FOR: Diesel fueled emergency generator set for a government center consisting of:

- a. (1) 2018, 176 hp Cummins Model QSB5-G13 diesel engine, EPA Family Number JCEXL0275AAK, Tier 3, S/N TBD, driving a 60 kW electrical generator.

Location: Oceano CSD - Water Yard (standby generator) - 1665 Front St.,
Oceano

Conditions:

1. The APCO shall be notified of the completion of construction within three days. This Authority to Construct will then serve as a temporary Permit to Operate for a period of time not to exceed 90 days.
2. Non-Emergency Operation
 - a. Non-emergency operation shall be limited to maintenance and performance testing only and shall not exceed thirty (30) hours per engine per calendar year. Operation for emissions testing required by the District shall not be limited by this condition.
 - b. The Air Pollution Control Officer (APCO) shall be notified in writing within seven (7) days of exceeding the yearly non-emergency operation limit.
 - c. An emergency is defined as failure of normal electrical power service that is beyond the control of the permit holder and does not include voluntarily disconnecting from utility grid power.

CONDITIONS (continued):

3. Only diesel fuel that meets the California Air Resources Board's specifications for on-road use shall be used to fuel the engine(s) unless otherwise approved by the APCO. Records of the fuel purchases shall be maintained and include a fuel specification sheet that shows compliance with this condition.
4. Visible emissions from the engine shall not exceed Ringlemann No. ½ or ten percent (10%) opacity for periods aggregating more than three (3) minutes in any hour.
5. A non-resettable hour meter for each engine shall be installed and maintained unless an APCO approved alternative tracking procedure is approved.
6. The engine exhaust shall discharge vertically free of obstructions.
7. An operating log for the current calendar year shall be maintained for each engine on a monthly basis. Entries shall also be made for any day that the engine is operated and for any day that the engine receives fuel. The logs shall be retained for at least three (3) years and shall include the following data:
 - a. Operating mode: emergency, maintenance, or District required testing
 - b. Engine hour meter reading at start-up,
 - c. Engine hour reading at shutdown,
 - d. Operating hours for the calendar day,
 - e. Running total calendar year to date operating hours,
 - f. Running total calendar year to date operating hours in maintenance mode,
 - g. Running total calendar year to date operating hours in emergency mode,
 - h. Estimated fuel use for the day in gallons,
 - i. Running total calendar year to date fuel use in gallons,
 - j. Fuel purchased in gallons, and
 - k. Total costs of any engine repair or reconstruction, excluding consumable items associated with standard maintenance activities.
8. Within fourteen (14) days of a request, the following information shall be submitted to the APCO for the previous calendar year:
 - a. maintenance operating hours,
 - b. emergency operating hours,
 - c. District required testing operating hours,
 - d. total engine operating hours,
 - e. total fuel usage,
 - f. copies of all fuel purchase records, and
 - g. total cost of engine repairs to date for each engine.
9. The APCO shall be notified prior to the repair or reconstruction of any diesel engine under permit. Consumable items used for regular maintenance, such as filters, hoses, belts, fluids, and glow plugs, are not considered repairs. In addition, replacement parts costing less than

CONDITIONS (continued):

\$1,000.00 can be omitted from this requirement. This condition is a result of a state regulation on rebuilds or repairs. Extensive repairs could trigger lower allowable emission rates. If lower emission rates apply, they may not be achievable with a simple rebuild.

10. Temporary Engine Replacement: Any engine subject to this permit may be temporarily replaced with another engine if all the requirements listed in sections a. through e. below are satisfied:
 - a. The APCO shall be notified in writing or by fax at (805) 781-1002 within seventy-two (72) hours of a permitted engine being replaced with a qualified temporary engine. The notification shall include the replacement engines make, model, rated horsepower, engine family number, current engine hour meter reading, manufacturer's particulate matter and oxides of nitrogen (NOx) emission rates in grams per horsepower-hour (g/hp-hr) and the reason for the replacement.
 - b. The permitted engine is in need of routine repair or maintenance and is returned to its original service within 180 days of installation of the temporary engine.
 - c. The temporary replacement engine has the same or lower manufacturer rated horsepower and same or lower potential to emit of particulate matter and Oxides of Nitrogen (NOx) as the permitted engine that is being temporarily replaced. Upon written request, the APCO may approve a replacement engine with a larger rated horsepower than the permitted engine if the proposed temporary engine has manufacturer guaranteed emissions less than or equal to the permitted engine or if the engine meets current permitting requirements.
 - d. The temporary replacement engine shall comply with all conditions of this permit, including but not limited to, engine operating hour limits, recordkeeping and reporting requirements.
 - e. The APCO shall be notified in writing or by fax at (805) 781-1002 within 14 days of removal of the temporary engine.
11. This equipment shall be operated and maintained in accordance with the manufacturer's recommendations and the information presented in the application under which this permit was issued.
12. If the APCO determines that the operation of this equipment is causing a public nuisance, the owner/operator shall take immediate action and eliminate the nuisance.
13. The APCO shall be notified in writing before any changes are made to operating procedures, equipment, or materials used which have the potential to increase the emission of any air contaminant.
14. This permit is not transferable to a new owner or location without the APCO's approval. A

CONDITIONS (continued):

change of ownership application shall be submitted to the APCO at least ten (10) working days prior to any change in the person or agency that is responsible for the operation of the equipment described above. An authority to construct application must be submitted and approved by the APCO prior to moving the permitted equipment to a new location.

This Authority to Construct is not a Permit to Operate. Approval or denial of the application for Permit to Operate the above equipment will be made after an inspection to determine if the equipment has been constructed in accordance with the approved plans and specifications and if the equipment can be operated in compliance with all Rules and Regulations of the San Luis Obispo County Air Pollution Control District.

*Please notify **David Whitney** at (805) 781-5912 or at the letterhead address when construction of equipment is complete. This Authority to Construct will expire one (1) year from the date shown, if unused.*



GARY E. WILLEY
Air Pollution Control Officer

Application Number: 6697

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**GEOTECHNICAL ENGINEERING REPORT
OCEANO COMMUNITY SERVICES DISTRICT
REPLACEMENT STANDBY GENERATOR
1687 FRONT STREET
OCEANO, CALIFORNIA**

July 26, 2018

Prepared for

Oceano Community Services District

Prepared by

Earth Systems Pacific
4378 Old Santa Fe Road
San Luis Obispo, CA 93401

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July 26, 2018

FILE NO.: 302307-001

Mr. Paavo Ogren
Oceano Community Services District
P.O. Box 599
Oceano, CA 93475-6730

PROJECT: OCEANO COMMUNITY SERVICES DISTRICT
REPLACEMENT STANDBY GENERATOR
1687 FRONT STREET
OCEANO, CALIFORNIA

SUBJECT: Geotechnical Engineering Report

CONTRACT

REF: Purchase Order #2018-19-02, by Oceano Community Services District, dated July 5, 2018

Dear Mr. Ogren:

As per your authorization of the above referenced purchase order, this geotechnical engineering report has been prepared for use in the development of plans and specifications for the proposed standby generator replacement at 1687 Front Street in Oceano, California. Preliminary geotechnical engineering recommendations for site preparation, grading, utility trenches, foundations, drainage and maintenance, and observation and testing are presented herein. One electronic copy (.pdf format) of this report has been provided to you. Additional electronic copies have been forwarded as indicated below.

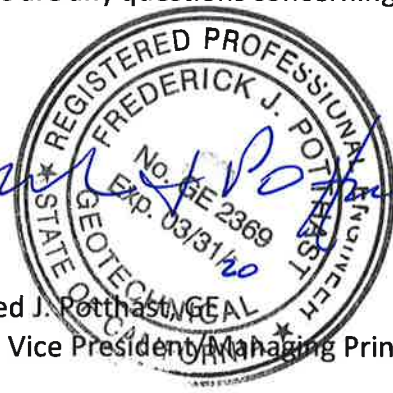
We appreciate the opportunity to have provided professional services for this project and look forward to working with you again in the future. If there are any questions concerning this report, please do not hesitate to contact the undersigned.

Sincerely,
Earth Systems Pacific


Kyle Martinez, PE
Project Engineer
7/26/18




Fred J. Potthast, P.E.
Sr. Vice President / Managing Principal
7/26/18



Copy to: Wilson Engineering, Attn.: Mr. Gary Wilson
Mr. Joshua Moody

Doc. No.: 1807-085.SER/cr



TABLE OF CONTENTS

	<i>Page</i>
COVER LETTER	ii
1.0 INTRODUCTION AND SITE SETTING	1
2.0 SCOPE OF SERVICES	1
3.0 FIELD INVESTIGATION AND LABORATORY ANALYSIS	2
4.0 GENERAL SUBSURFACE PROFILE.....	3
5.0 CONCLUSIONS.....	3
6.0 PRELIMINARY GEOTECHNICAL RECOMMENDATIONS.....	5
Site Preparation	6
Grading	6
Utility Trenches.....	7
Foundations	8
Drainage and Maintenance	9
Observation and Testing.....	10
7.0 CLOSURE	11
TECHNICAL REFERENCE LIST	13

APPENDICES

- APPENDIX A Figure 1 – Site Vicinity Map
 Figure 2 - Exploration Location Map
 Boring Log Legend
 Boring Logs
- APPENDIX B Laboratory Test Results
- APPENDIX C Typical Detail A: Pipe Placed Parallel to Foundations



1.0 INTRODUCTION AND SITE SETTING

The project addressed herein involves the removal and replacement of the existing emergency standby generator at 1687 Front Street in Oceano, California. The generator will be supported by a mat slab foundation. No grading, other than for preparation of the generator pad, and no retaining walls or other improvements are planned as part of the project. The approximate project location is indicated on Figure 1 – Site Vicinity Map, in Appendix A. The new generator will be located behind the existing fire station practice facility at the northwest corner of Front and 13th Streets. The site is relatively flat and is currently occupied by existing utilities, an equipment shed, the existing generator, fuel tank, transformer, and other equipment. The locations and dispositions of existing utility lines on the site are unknown. It is our understand that this project is considered to be an essential facility.

2.0 SCOPE OF SERVICES

The authorized scope of work included a general site reconnaissance, field exploration, laboratory testing, geotechnical analysis of the data gathered, and preparation of this report. The analysis and subsequent recommendations were based on verbal information provided by Mr. Gary Wilson of Wilson Engineering.

This report and recommendations are intended to comply with the considerations of Sections 1803A.1 through 1803A.7, and J104.3, as applicable, of the 2016 California Building Code (CBC) and common geotechnical engineering practice in this area under similar conditions at this time. The test procedures were accomplished in general conformance with the standards noted, as modified by common geotechnical engineering practice in this area under similar conditions at this time.

Preliminary geotechnical recommendations for site preparation, grading, utility trenches, foundations, drainage and maintenance, and observation and testing are presented to guide the development of project plans and specifications. As there may be geotechnical issues yet to be resolved, the geotechnical engineer should be retained to provide consultation as the design progresses, and to review project plans as they near completion to assist in verifying that pertinent geotechnical issues have been addressed and to aid in conformance with the intent of this report.

It is our intent that this report be used exclusively by the client to form the geotechnical basis of the design of the project and in the preparation of plans and specifications. Application beyond this intent is strictly at the user's risk.



This report does not address issues in the domain of contractors such as, but not limited to, site safety, loss of volume due to stripping of the site, shrinkage of soils during compaction, excavatability, dewatering, temporary slope angles, construction means and methods, etc. Analyses of aerial or site geology, or of the soil for corrosivity, radioisotopes, asbestos (either naturally occurring or in man-made products), lead or mold potential, hydrocarbons, or other chemical properties is beyond the scope of this report. Any ancillary features such as flag or light poles, and nonstructural fills are not within our scope and are also not addressed.

In the event that there are any changes in the nature, design, or location of improvements, or if any assumptions used in the preparation of this report prove to be incorrect, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and the conclusions of this report modified or verified by the geotechnical engineer in writing. The criteria presented in this report are considered preliminary until such time as any peer review or review by any jurisdiction has been completed, conditions have been observed by the geotechnical engineer in the field during construction, and the recommendations have been verified as appropriate, or modified by the geotechnical engineer in writing.

3.0 FIELD INVESTIGATION AND LABORATORY ANALYSIS

On July 13, 2018, two exploratory borings were drilled within the planned vicinity of the standby generator to a maximum depth of 7 feet below the existing ground surface (bgs). Due to limited access with truck mounted drilling equipment, the borings were drilled with hand augering equipment. As the exploratory borings were drilled, ring-lined barrel soil samples were obtained, along with bulk soil samples from the auger cuttings. The approximate locations of the borings are shown on Figure 2 - Exploration Location Map, in Appendix A.

The soils were classified in general accordance with the Unified Soil Classification System and ASTM D 2488-17. The logs of the borings are presented in Appendix A, along with the Boring Log Legend. In reviewing the boring logs and legend, the reader should recognize that the legend is intended as a guideline only, and there are a number of conditions that may influence the characteristics observed during drilling. These include, but are not limited to, the presence of cobbles or boulders, cementation, variations in soil moisture, presence of groundwater, and other factors. Consequently, the logger must exercise judgment in interpreting soil characteristics, possibly resulting in soil descriptions that vary from the legend.



One bulk sample was tested for maximum density and optimum moisture content (ASTM D 1557-12). All ring samples were tested for bulk density (ASTM D 2937-17, modified for rings) and moisture (ASTM D 2216-10). The results of the laboratory tests are presented in Appendix B.

4.0 GENERAL SUBSURFACE PROFILE

In the areas explored, the site was surfaced with approximately 1 foot of poorly graded sand fill. The fill was logged as being loose, and containing trace amounts of gravel and debris. Below the fill, medium dense poorly graded Dune Sand was found. The soil was logged during drilling as being slightly moist. Free subsurface water was not encountered in the borings to the maximum depth explored of 7 feet bgs.

5.0 CONCLUSIONS

In our opinion, the site is suitable, from a geotechnical engineering standpoint, for the proposed standby generator, provided the recommendations contained herein are implemented in the design and construction. From a geotechnical engineering standpoint, the primary concerns at the site are the presence of loose fill and the potential for excessive static settlement, the potential for strong ground shaking during a seismic event, the potential for liquefaction and dry sand settlement, and the erodible nature of the site soils.

Static Settlement

Approximately 1 foot of fill material was found in each boring. To our knowledge, there are no records documenting the proper placement or compaction of the fill during its original placement. Therefore, the fill is considered to be “undocumented” and should not be relied upon, in its current state, for support of foundations. As excessive total and differential settlement could occur. The fill was also logged as being loose. Loose soils are also prone to excessive amounts of static total and differential settlement when subjected to additional loads, such as those imposed by new foundations. This can stress and damage foundations and slabs, often resulting in severe cracks and displacement. To reduce the potential for excessive static settlement, it is recommended that the mat slab bear in recompacted soil, as described in the “Grading” Section of this report.

Strong Ground Shaking

The site is in a region of high seismic activity, with the potential for large seismic events that could generate strong ground shaking. A seismic analysis was undertaken to provide seismic acceleration design parameters. The 2010 ASCE 7 method with 2013 updates, available on the



United States Geological Survey Earthquake Hazards Program website (USGS 2018), was used. The project was considered to be an “essential” facility from the perspective of risk category as described by ASCE 7. Site coordinates of 35.1020 degrees north and 120.6165 degrees west as taken from the Google Earth website (Google 2018) were used in the analysis. Based upon the subsurface conditions encountered during our investigation and two previous investigations performed within a 0.2-mile radius, a Site Class D (Stiff soil) was used. The results of the seismic hazard analysis are presented in the “Foundations” section of this report.

Liquefaction and Dry Sand Settlement

The term “liquefaction” refers to a phenomenon that tends to occur in saturated soils of low density that have grain sizes within a certain range, usually fine to medium-grained poorly graded sands, silty sands, and silts. A sufficiently strong earthquake is also required to cause liquefaction. During liquefaction, the energy from the earthquake causes the water pressure within the pores of the soil to increase. The increase in water pressure decreases the friction between the soil grains, allowing the soil grains to move relative to one another. During this state, the soil will behave as a viscous liquid, temporarily losing its ability to fully support foundations and other improvements. The high pressure water will flow through the soil along the path of least resistance. As the pressure is released, the soils typically settle in a process called “dynamic settlement.” Dynamic settlement can cause damage to structures and other surface and subsurface improvements.

Settlement of dry sand soil is a phenomenon that can also occur during an earthquake on sites with loose sandy soils. It essentially occurs due to the sand grains being rearranged to a denser condition as the site shakes, and results in additional dynamic settlement. However, as the name implies, free water is not necessary for dry sand settlement to occur.

Between March 2016 and January 2017, we assessed the potential for dynamic settlement (liquefaction and dry sand settlement) at three different sites; one located approximately 0.5 miles from this project site, and two others about 0.2 miles away. Of the three, the site located 0.5 miles away was determined to have the highest potential for dynamic settlement calculated at 13.5 inches. This site is in close proximity to Arroyo Grande Creek, and free subsurface water was recorded at 3 feet bgs at the time of the investigation. The two sites located 0.2 miles away were assessed as having the potential for 0.75 to 1.75 inches of dynamic settlement. Free subsurface water at these sites ranged from 19.5 to 21.5 feet bgs. Our firm performed a fourth subsurface investigation in January 2013, approximately 280 linear feet from the proposed



generator site; however, an assessment of dynamic settlement was not performed. Free subsurface water was recorded at 14 feet bgs during that investigation.

Based upon the location of this site relative to those previously assessed, we are of the opinion that there is a potential for dynamic settlement to affect this site, along with any existing improvements. Based upon our review and interpretation of the results of the previous sites assessed, we are further of the opinion that total and differential dynamic settlement at this site may be on the order of 6 inches and 3 inches, respectively.

To reduce the effects of dynamic settlement (total and differential), it is recommended that the mat slab supporting the generator be designed with sufficient rigidity, and the site soils be recompacted. Additionally, utilities should be constructed with flexible or articulating connections.

Erosion Potential

The soils are considered *highly* erodible. Caution should be exercised to protect the soil from erosion during and following construction.

6.0 PRELIMINARY GEOTECHNICAL RECOMMENDATIONS

These recommendations are applicable for the proposed guesthouse, and other improvements as described in the “Introduction and Site Setting” section of this report. If improvements not previously mentioned are included, the geotechnical engineer should be contacted for revised recommendations.

Unless otherwise noted, the following definitions are used in these recommendations presented below. Where terms are not defined, definitions commonly used in the construction industry are intended.

- **Foundation Area:** The area within the footprint of the mat slab foundation.
- **Grading Area:** The entire area to be graded, including the foundation area, and any areas where surface improvements will be constructed.
- **Moisture Conditioned:** Soil moisture content adjusted to optimum moisture content, or just above, prior to application of compactive effort.
- **Compacted / Recompacted:** Soils placed in level lifts not exceeding 8 inches in loose thickness and compacted to a minimum of 90 percent of maximum dry density, unless specified otherwise. The standard tests used to establish



maximum dry density and field density should be ASTM D 1557-12 and ASTM D 6938-17a, respectively, or other methods acceptable to the geotechnical engineer and jurisdiction.

Site Preparation

1. The ground surface in the grading area should be prepared for construction by removing the existing generator, foundation, concrete, fill, debris, and other deleterious materials. Any existing utility lines that will not remain in service should be either removed or abandoned. The appropriate method of utility abandonment will depend upon the type and depth of the utility. Recommendations for abandonment can be made as necessary.
2. Voids created by the removal of materials or utilities described above should be called to the attention of the geotechnical engineer. No fill should be placed unless the underlying soil has been observed by the geotechnical engineer.

Grading

1. Following site preparation, the soil in the foundation area should be excavated to a level plane a minimum of 1 foot below planned bottom-of-mat slab elevation. The resulting soil surface should then be moisture conditioned, and recompact to a *minimum of 95 percent of the maximum dry density*.
2. The excavation should then be backfilled with Class 2 Aggregate Base, conforming to the requirements of Section 26 of the Standard Specifications (Caltrans 2015). The aggregate base should be placed in moisture conditioned lifts and compacted to a *minimum of 95 percent of the maximum dry density*.
3. In the remainder of the grading area, the existing soil should be scarified, moisture conditioned, and recompact prior to the placement of any fill or construction of any improvements.
4. Voids created by dislodging rocks and/or debris during excavation should be backfilled and compacted, and the dislodged materials should be removed from the work area.
5. All materials used as fill should be cleaned of all debris and any rocks larger than 3 inches in maximum dimension. When fill material includes rocks, the rocks should be placed in



a sufficient soil matrix to ensure that voids caused by nesting of the rocks will not occur and that the fill can be properly compacted.

6. If the soils are overly moist so that they become unstable, or if the recommended compaction cannot be readily achieved, drying the soil to optimum moisture content, or just above, may be necessary. Placement of gravel layers or geotextiles may also be necessary to help stabilize unstable soils. Soils that are disturbed in any manner should be removed, moisture conditioned, and recompacted.

Utility Trenches

1. Unless otherwise recommended, utility trenches adjacent to foundations should not be excavated within the zone of foundation influence, as shown in Typical Detail A in Appendix C.
2. Utilities that must pass beneath a foundation should be placed with properly compacted utility trench backfill and the foundation should be designed to span the trench.
3. A select, noncorrosive, granular, sand material should be used as bedding and shading immediately around utilities. The site soil may be used for trench backfill above the select material beyond the foundation area. Class 2 Aggregate Base should be utilized as trench backfill within the foundation area.
4. In general, trench backfill should be compacted to a minimum of 90 percent of maximum dry density; however, trench backfill within the foundation area should be compacted to a *minimum of 95 percent of maximum dry density*.
5. Trench backfill should be placed in level lifts, moisture conditioned, and compacted to the minimums noted above.
6. Compaction of trench backfill by jetting or flooding is not recommended except under extraordinary circumstances. However, to aid in *encasing* utility conduits, particularly corrugated drain pipes, and multiple, closely spaced conduits in a single trench, jetting or flooding may be useful. Flooding or jetting should only be attempted with extreme caution, and any jetting operation should be subject to review by the geotechnical engineer.



7. The recommendations of this section are minimums only, and may be superseded by the requirements of the architect/engineer, the recommendations of pipe manufacturers or utility companies, or the requirements of the governing jurisdiction based upon soil corrosivity or other factors.
8. Due to the potential for dynamic settlement at the site, utilities should be constructed with flexible or articulating connections.

Foundations

1. A mat slab foundation may be used for support of the planned generator. The mat may be designed as a “waffle slab foundation”, or a uniform thickness mat foundation. The decision to design the mat to be of uniform thickness or as a “waffle mat slab foundation” is left to the discretion of the architect/engineer.
2. The mat should be constructed on a pad that has been graded in accordance with the recommendations presented in the “Grading” Section above. The mat should be embedded a minimum of 12 inches below lowest adjacent grade around the perimeter of the foundation. The mat foundation should be reinforced per the requirements of the engineer. The mat slab should contain a minimum rebar meeting the criteria of ACI 318, Section 24.4 (ACI 2014).
3. The mat foundation should be designed using maximum allowable bearing capacity of 1,800 psf dead loads plus live loads. A modulus of subgrade reaction (K_{12}) of 200 pci (psi/in) may also be used in the design of the mat foundation.
4. The allowable capacity may be increased by one-third when transient loads such as wind or seismicity are included. Foundations may be designed using the following 2016 CBC seismic parameters:

SEISMIC PARAMETERS

Mapped Spectral Response Acceleration for Site Class B		Site Coefficients for Site Class D		Adjusted MCE Spectral Response Accelerations for Site Class D		Design Spectral Response Accelerations for Site Class D	
Seismic Parameter	Value (g)	Site Coefficient	Value	Seismic Parameter	Value (g)	Seismic Parameter	Value (g)
S_s	1.232	F_a	1.007	S_{MS}	1.241	S_{DS}	0.827



S ₁	0.449	F _v	1.551	S _{M1}	0.697	S _{D1}	0.465
Peak Mean Ground Acceleration (PGA _m) : 0.515 g							
Seismic Design Category = D							

5. Assuming the mat foundation is sufficiently rigid and using the above design parameters, maximum settlement and differential settlement under *static conditions* are expected to be on the order of 1/2-inch and 3/8-inch, respectively. Maximum settlement and differential settlement under *seismic conditions* may be on the order of 6 inches and 3 inches, respectively.
6. In calculating resistance to lateral loads, a passive equivalent fluid pressure of 250 pcf and a coefficient of friction of 0.45 may be utilized in the design. Lateral capacity is based on the assumption that the soil adjacent to the foundation is undisturbed. Passive and friction resistance components of resistance may be combined in the analysis without reduction to either value.
7. The foundation excavation should be observed by the geotechnical engineer during excavation and prior to placement of formwork, reinforcing steel or concrete. Soil in foundation excavation should be lightly moistened and no desiccation cracks should be present prior to concrete placement.

Drainage and Maintenance

1. Unpaved ground surfaces should be graded during construction, and per Section 1804A.4 of the 2016 CBC, should be finish graded to direct surface runoff away from foundations and other improvements at a minimum 5 percent grade for a minimum distance of 10 feet. If this is not practicable due to the terrain, proximity of property lines, etc., swales with improved surfaces, area drains, or other drainage features should be provided to divert drainage away from these areas.
2. Finished surfaces should be sloped to freely drain toward appropriate drainage facilities. Water should not be allowed to stand or pond on or adjacent to foundations or improvements.



3. The on-site soils are *highly* erodible. Stabilization of surface soils, particularly those disturbed during construction, by vegetation or other means *during and following construction* is essential to protect the site from erosion damage. Care should be taken to establish and maintain vegetation.
4. Site improvements, particularly drainage improvements, should be inspected and maintained on a regular basis.
5. To reduce the potential for undermining of foundations and other improvements, all rodent activity should be aggressively controlled and kept to an absolute minimum.

Observation and Testing

1. It must be recognized that the recommendations contained in this report are based on a limited number of borings at the site and rely on continuity of the subsurface conditions encountered.
2. At a minimum, the geotechnical engineer should be retained to provide:
 - Review of grading and foundation plans as they near completion
 - Professional observation during grading
 - Oversight of compaction testing during grading and backfill
 - Oversight of soil special inspection during grading and foundation construction
3. Special inspection of grading should be provided as per Section 1705A.6 and Table 1705A.6 of the 2016 CBC; the special inspector should be under the direction of the geotechnical engineer. Special inspection of the following should be provided by the special inspector:
 - Utility trench backfill
 - Verification of proper overexcavation depth
 - Fill quality, placement, moisture conditioning, and compaction
 - Foundation excavation
4. A program of quality control should be developed prior to the beginning of the project. The contractor or project manager should determine any additional inspection items required by the architect/engineer or the governing jurisdiction.



5. Locations and frequency of compaction tests should be as per the recommendation of the geotechnical engineer at the time of construction. The recommended test locations and frequency may be subject to modification by the geotechnical engineer, based upon soil and moisture conditions encountered, size and type of equipment used by the contractor, the general trend of the results of compaction tests, or other factors.
6. A preconstruction site meeting among the district, the geotechnical engineer, the soil special inspector, the architect/engineer, and contractors is recommended to discuss planned construction procedures and quality control requirements.
7. The geotechnical engineer should be notified at least 48 hours prior to beginning construction operations.

7.0 CLOSURE

Our intent was to perform the investigation in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing in the locality of this project and under similar conditions. No representation, warranty, or guarantee is either expressed or implied. This report is intended for the exclusive use by the client as discussed in the "Scope of Services" section. Application beyond the stated intent is strictly at the user's risk.

This report is valid for conditions as they exist at this time for the type of project described herein. The conclusions and recommendations contained in this report could be rendered invalid, either in whole or in part, due to changes in building codes, regulations, standards of geotechnical or construction practice, changes in physical conditions, or the broadening of knowledge. If Earth Systems Pacific is not retained to provide construction observation and testing services, it shall not be responsible for the interpretation of the information by others or any consequences arising there from.

If changes with respect to project type or location become necessary, if items not addressed in this report are incorporated into plans, or if any of the assumptions used in the preparation of this report are not correct, the geotechnical engineer should be notified for modifications to this report. Any items not specifically addressed in this report should comply with the CBC and the requirements of the governing jurisdiction.

The preliminary recommendations of this geotechnical report are based upon the geotechnical conditions encountered at the site and may be augmented by additional requirements of the



architect/engineer, or by additional recommendations provided by the geotechnical engineer based on conditions exposed at the time of construction.

This document, the data, conclusions, and recommendations contained herein are the property of Earth Systems Pacific. This report shall be used in its entirety, with no individual sections reproduced or used out of context. Copies may be made only by Earth Systems Pacific, the client, and the client's authorized agents for use exclusively on the subject project. Any other use is subject to federal copyright laws and the written approval of Earth Systems Pacific.

Thank you for this opportunity to have been of service. If you have any questions, please feel free to contact this office at your convenience.

End of Text.



TECHNICAL REFERENCE LIST

ACI (American Concrete Institute). 2014. "Building Code Requirements for Structural Concrete." *Document 318-14*.

ASCE (American Society of Civil Engineers). 2013. *Minimum Design Loads for Buildings and other Structures (7-10, third printing), Standards ASCE/SEI 7-10*.

Caltrans (California Department of Transportation). 2015. "Standard Specifications."

Google Earth. 2018. Google Earth [website], retrieved from:
<http://www.google.com/earth/index.html>

USGS (United States Geological Survey). 2018. Earthquake Hazards Program, retrieved from: <http://earthquake.usgs.gov/hazards/designmaps/>

APPENDIX A

Figure 1 – Site Vicinity Map
Figure 2 - Exploration Location Map
Boring Log Legend
Boring Logs



NOT TO SCALE



Earth Systems Pacific
 4378 Old Santa Fe Road, San Luis Obispo, CA 93401
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 (805) 544-3276 • Fax (805) 544-1786

SITE VICINITY MAP
 Oceano Community Services District
 Replacement Standby Generator
 1687 Front Street
 Oceano, California

Date
 July 2018
Project No.
 302307-001

Figure 1
 Addendum

OCEANOCSDGENERATOR072018-maps

NEW AUTOMATIC TRANSFER SWITCH TO REPLACE EXISTING MANUAL TRANSFER SWITCH PER SINGLE LINE ON DRAWING NO. E-171001-04 AND OCSO OFFICE/FIRE STATION DETAIL ON DRAWING NO. E-171001-05

NEW AUTOMATIC TRANSFER SWITCH TO REPLACE EXISTING MANUAL TRANSFER SWITCH PER SINGLE LINE ON DRAWING NO. E-171001-04 AND SHERIFF SUBSTATION DETAIL ON DRAWING NO. E-171001-05

APPROXIMATE LOCATION OF EXISTING 2" CONDUITS

NEAREST RESIDENTIAL BUILDING 150' FROM PROPOSED GENERATOR

CONCRETE WASHOUT PER CASQA W-8

CONCRETE PAD FOR GENERATOR INSTALLED PER STRUCTURAL ENGINEERING DETAILS ON DRAWING NO. S-2

17'x30" MIN. PULL BOX INSTALLED IN NON-TRAFFIC AREA (TYP.)

FRONT STREET

13TH STREET

LEGEND

 Boring Location (Approx.)

BASE MAP PROVIDED BY: WILSON ENGINEERING



NOT TO SCALE



Earth Systems Pacific

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EXPLORATION LOCATION MAP

Oceano Community Services District
 Replacement Standby Generator
 1687 Front Street
 Oceano, California

Date
 July 2018

Project No.
 302307-001

OCEANOCSDGENERATOR072018--maps



Earth Systems Pacific

BORING LOG LEGEND

UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487)

SAMPLE / SUBSURFACE WATER SYMBOLS		GRAPH. SYMBOL	UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487)							
			MAJOR DIVISIONS	GROUP SYMBOL	TYPICAL DESCRIPTIONS	GRAPH. SYMBOL				
CALIFORNIA MODIFIED		■	COARSE GRAINED SOILS MORE THAN HALF OF MATERIAL IS LARGER THAN #200 SIEVE SIZE	GW	WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES					
				GP	POORLY GRADED GRAVELS, OR GRAVEL-SAND MIXTURES, LITTLE OR NO FINES					
				GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES, NON-PLASTIC FINES					
				GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES, PLASTIC FINES					
				SW	WELL GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES					
				SP	POORLY GRADED SANDS OR GRAVELLY SANDS, LITTLE OR NO FINES					
				SM	SILTY SANDS, SAND-SILT MIXTURES, NON-PLASTIC FINES					
				SC	CLAYEY SANDS, SAND-CLAY MIXTURES, PLASTIC FINES					
				STANDARD PENETRATION TEST (SPT)		●	FINE GRAINED SOILS HALF OR MORE OF MATERIAL IS SMALLER THAN #200 SIEVE SIZE	ML	INORGANIC SILTS AND VERY FINE SANDS, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY	
								CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS	
OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY									
MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS									
CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS									
OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS									
SHELBY TUBE		□						PT	PEAT AND OTHER HIGHLY ORGANIC SOILS	
BULK		○								
SUBSURFACE WATER DURING DRILLING		▽								
SUBSURFACE WATER AFTER DRILLING		▽								

OBSERVED MOISTURE CONDITION

DRY	SLIGHTLY MOIST	MOIST	VERY MOIST	WET (SATURATED)
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CONSISTENCY

COARSE GRAINED SOILS			FINE GRAINED SOILS		
BLOWS/FOOT		DESCRIPTIVE TERM	BLOWS/FOOT		DESCRIPTIVE TERM
SPT	CA SAMPLER		SPT	CA SAMPLER	
0-10	0-16	LOOSE	0-2	0-3	VERY SOFT
11-30	17-50	MEDIUM DENSE	3-4	4-7	SOFT
31-50	51-83	DENSE	5-8	8-13	MEDIUM STIFF
OVER 50	OVER 83	VERY DENSE	9-15	14-25	STIFF
			16-30	26-50	VERY STIFF
			OVER 30	OVER 50	HARD

GRAIN SIZES

U.S. STANDARD SERIES SIEVE				CLEAR SQUARE SIEVE OPENING				
# 200	# 40	# 10	# 4	3/4"	3"	12"		
SILT & CLAY		SAND			GRAVEL		COBBLES	BOULDERS
		FINE	MEDIUM	COARSE	FINE	COARSE		

TYPICAL BEDROCK HARDNESS

MAJOR DIVISIONS	TYPICAL DESCRIPTIONS
EXTREMELY HARD	CORE, FRAGMENT, OR EXPOSURE CANNOT BE SCRATCHED WITH KNIFE OR SHARP PICK; CAN ONLY BE CHIPPED WITH REPEATED HEAVY HAMMER BLOWS
VERY HARD	CANNOT BE SCRATCHED WITH KNIFE OR SHARP PICK; CORE OR FRAGMENT BREAKS WITH REPEATED HEAVY HAMMER BLOWS
HARD	CAN BE SCRATCHED WITH KNIFE OR SHARP PICK WITH DIFFICULTY (HEAVY PRESSURE); HEAVY HAMMER BLOW REQUIRED TO BREAK SPECIMEN
MODERATELY HARD	CAN BE GROOVED 1/16 INCH DEEP BY KNIFE OR SHARP PICK WITH MODERATE OR HEAVY PRESSURE; CORE OR FRAGMENT BREAKS WITH LIGHT HAMMER BLOW OR HEAVY MANUAL PRESSURE
SOFT	CAN BE GROOVED OR GOUGED EASILY BY KNIFE OR SHARP PICK WITH LIGHT PRESSURE, CAN BE SCRATCHED WITH FINGERNAIL; BREAKS WITH LIGHT TO MODERATE MANUAL PRESSURE
VERY SOFT	CAN BE READILY INDENTED, GROOVED OR GOUGED WITH FINGERNAIL, OR CARVED WITH KNIFE; BREAKS WITH LIGHT MANUAL PRESSURE

TYPICAL BEDROCK WEATHERING

MAJOR DIVISIONS	TYPICAL DESCRIPTIONS
FRESH	NO DISCOLORATION, NOT OXIDIZED
SLIGHTLY WEATHERED	DISCOLORATION OR OXIDATION IS LIMITED TO SURFACE OF, OR SHORT DISTANCE FROM, FRACTURES; SOME FELDSPAR CRYSTALS ARE DULL
MODERATELY WEATHERED	DISCOLORATION OR OXIDATION EXTENDS FROM FRACTURES, USUALLY THROUGHOUT; Fe-Mg MINERALS ARE "RUSTY", FELDSPAR CRYSTALS ARE "CLOUDY"
INTENSELY WEATHERED	DISCOLORATION OR OXIDATION THROUGHOUT; FELDSPAR AND Fe-Mg MINERALS ARE ALTERED TO CLAY TO SOME EXTENT, OR CHEMICAL ALTERATION PRODUCES IN SITU DISAGGREGATION
DECOMPOSED	DISCOLORATION OR OXIDATION THROUGHOUT, BUT RESISTANT MINERALS SUCH AS QUARTZ MAY BE UNALTERED; FELDSPAR AND Fe-Mg MINERALS ARE COMPLETELY ALTERED TO CLAY

draftingmasters/Boring Log Legend 12/17/14.dwg



LOGGED BY: R. Wagner
 DRILL RIG: Hand Auger
 AUGER TYPE: 3" Solid Stem Auger

PAGE 1 OF 1
 JOB NO.: 302307-001
 DATE: 7/13/18

DEPTH (feet)	USCS CLASS	SYMBOL	SAMPLE DATA				
			INTERVAL (feet)	SAMPLE TYPE	DRY DENSITY (pcf)	MOISTURE (%)	BLOWS PER 6 IN.
OCEANO COMMUNITY SERVICES DISTRICT REPLACEMENT STANDBY GENERATOR 1687 Front Street Oceano, California							
SOIL DESCRIPTION							
0	SP		1.0 - 5.0	○			
1	SP		2.0 - 2.5	■	94.7	3.7	
2			5.0 - 5.5	■	93.5	4.6	
3							
4							
5							
6							
7							
8		End of Boring @ 7.0'					
9		No subsurface water encountered					
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							

LEGEND: ■ Ring Sample ○ Grab Sample □ Shelby Tube Sample ● SPT

NOTE: This log of subsurface conditions is a simplification of actual conditions encountered. It applies at the location and time of drilling. Subsurface conditions may differ at other locations and times.



LOGGED BY: R. Wagner
 DRILL RIG: Hand Auger
 AUGER TYPE: 3" Solid Stem Auger

PAGE 1 OF 1
 JOB NO.: 302307-001
 DATE: 7/13/18

DEPTH (feet)	USCS CLASS	SYMBOL	OCEANO COMMUNITY SERVICES DISTRICT REPLACEMENT STANDBY GENERATOR 1687 Front Street Oceano, California				
			SAMPLE DATA				
SOIL DESCRIPTION			INTERVAL (feet)	SAMPLE TYPE	DRY DENSITY (pcf)	MOISTURE (%)	BLOWS PER 6 IN.
0	SP		POORLY GRADED SAND: light brown, loose, slightly moist, trace gravel and debris (Fill)				
1	SP		POORLY GRADED SAND: yellow brown, medium dense, slightly moist (Dune Sand)	1.5 - 2.0		97.2	4.3
2							
3							
4							
5							
6			End of Boring @ 5.0' No subsurface water encountered				
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							

LEGEND: Ring Sample Grab Sample Shelby Tube Sample SPT

NOTE: This log of subsurface conditions is a simplification of actual conditions encountered. It applies at the location and time of drilling. Subsurface conditions may differ at other locations and times.

APPENDIX B

Laboratory Test Results



Oceano Community Services District
Replacement Standby Generator

302307-001

BULK DENSITY TEST RESULTS

ASTM D 2937-17 (modified for ring liners)

July 19, 2018

BORING NO.	DEPTH feet	MOISTURE CONTENT, %	WET DENSITY, pcf	DRY DENSITY, pcf
1	2.0 - 2.5	3.7	98.2	94.7
1	5.0 - 5.5	4.6	97.8	93.5
1	1.5 - 2.0	4.3	101.4	97.2
2	4.5 - 5.0	5.0	97.6	93.0



Oceano Community Services District
Replacement Standby Generator

302307-001

MOISTURE-DENSITY COMPACTION TEST

ASTM D 1557-12 (Modified)

PROCEDURE USED: B

July 19, 2018

PREPARATION METHOD: Moist

Boring #1 @ 1.0 - 5.0'

RAMMER TYPE: Mechanical

Light Brown Poorly Graded Sand (SP)

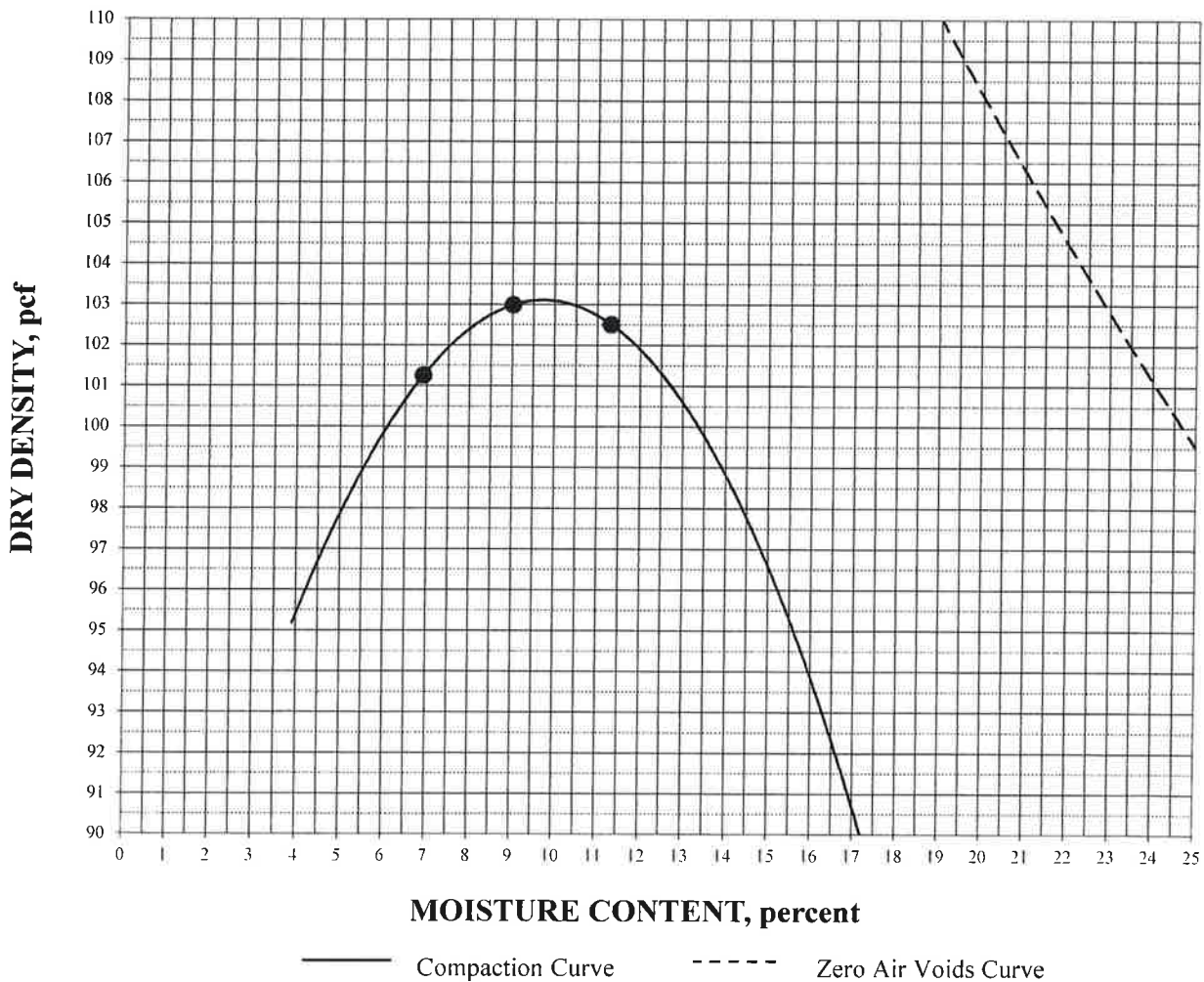
SPECIFIC GRAVITY: 2.65 (assumed)

SIEVE DATA:

Sieve Size	% Retained (Cumulative)
3/4"	0
3/8"	2
#4	2

MAXIMUM DRY DENSITY: 103.1 pcf

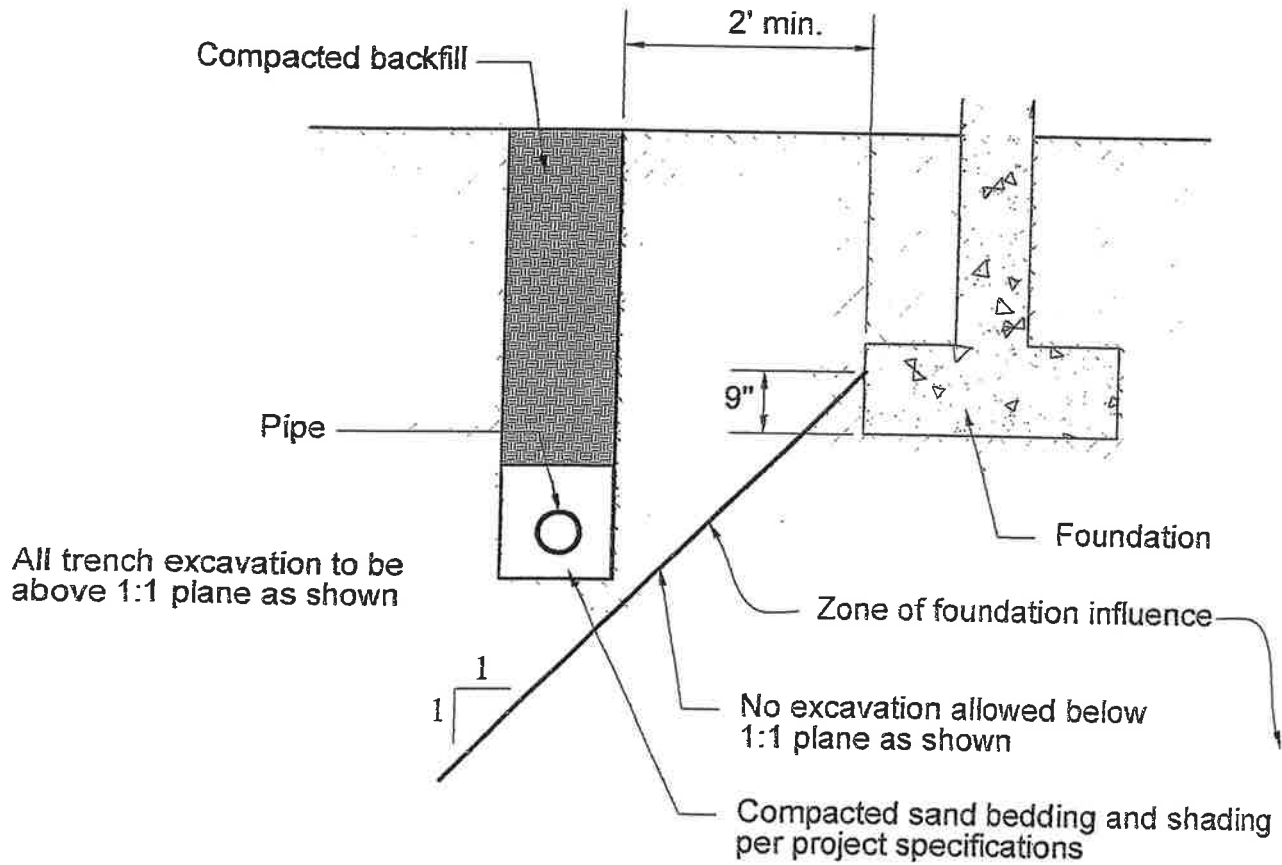
OPTIMUM MOISTURE: 9.7%



APPENDIX C

Typical Detail A: Pipe Placed Parallel to Foundations

TYPICAL DETAIL A PIPE PLACED PARALLEL TO FOUNDATIONS



SCHEMATIC ONLY
NOT TO SCALE



Earth Systems Pacific

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E-mail: esp@earthsystems.com

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August 2, 2018

Mr. Paavo Ogren
Oceano Community Services District
P.O. Box 599
Oceano, CA 93475-6730

FILE NO.: 302307-002

PROJECT: OCEANO COMMUNITY SERVICES DISTRICT
REPLACEMENT STANDBY GENERATOR
1687 FRONT STREET
OCEANO, CALIFORNIA

SUBJECT: Review of Project Plans and Details

- REF:
- 1) Plans and Details, Oceano Community Services District, Replacement Standby Generator, APN: 062-271-026, Oceano, California, by Wilson Engineering, revised May 17, 2018
 - 2) Geotechnical Engineering Report, Oceano Community Services District, Replacement Standby Generator, 1687 Front Street, Oceano, California, by Earth Systems Pacific, Doc. No. 1807-085.SER, dated July 26, 2018

Dear Mr. Ogren:

Per the request of Mr. Gary Wilson of Wilson Engineering, the project plans and details (Ref. No. 1) for the proposed generator replacement project have been reviewed for conformance with the geotechnical factors discussed in the referenced geotechnical engineering report (Ref. No. 2). Factors related to civil or structural engineering, architecture, drafting, and other disciplines are beyond the scope of this review. In performing this review, we attempted to verify that the concepts and recommendations presented in the referenced geotechnical report were generally incorporated into the plans and details.

In accordance with this level of review, the project plans and details were found to be in substantial conformance with the concepts and recommendations presented in the referenced geotechnical engineering report.

We appreciate the opportunity to have provided geotechnical services for this project. If there are any questions concerning this letter, please do not hesitate to contact the undersigned.

Sincerely,

Earth Systems Pacific

Kyle Martinez, PE
Project Engineer

8/2/18



Copy to: Wilson Engineering, Attn.: Mr. Gary Wilson
Doc. No.: 1808-006.LTR/pm