

INVITATION FOR BID

Medium Voltage Metal-Clad Switchgear

16-17/08



PORT OF OAKLAND

PURCHASING DEPARTMENT
530 WATER STREET
OAKLAND, CA 94607



INVITATION FOR BID

Bid No.: 16-17/08 – Medium Voltage Metal-Clad Switchgear

The Port of Oakland ("Port"), Oakland, California, through the Purchasing Department, is hereby soliciting competitive bids for the above-mentioned project. The successful bidder ("Bidder") will be required to furnish all labor, material, equipment, supplies, applicable taxes, insurance, bonding (if applicable), permits, and licenses to complete this project.

General Bid Information

Bid Title	Medium Voltage Metal-Clad Switchgear
Bid Type	Goods
Bid Number	16-17/08
Bid Issued	November 10, 2016
Issuing Department	Project Design & Delivery Maritime – E/M
Optional Pre-bid Meeting	November 29, 2016 at 1:00 p.m. Harbor Facilities 651 Maritime Street (Building D510) Oakland, CA 94607
Scheduled Publication Date	November 11, 2016
Bid Due Date	December 16, 2016 until 2:00 p.m. Bids received after the time and date stated shall be returned unopened to the Bidder. All timely submitted Bids are opened at the Submittal Address 15 minutes after they are due.

Instructions for Submitting Bids

Submittal Address	Port of Oakland—(Second Floor, Purchasing Department) Attn: Nicklaus Sioson 530 Water Street Oakland, CA 94607
Submittal Copies	One (1) Original
Submittal Envelope Requirements	Bids must be <u>sealed</u> and have the following information <u>clearly marked</u> and visible on the outside of the envelope: <ul style="list-style-type: none"> • Bid Number and Title • Name of Your Company • Address • Phone Number
Late Submittals	Bids received after the time and date stated in the Bid Due Date section shall be returned unopened to the Bidder.

How to Obtain Bid Documents

Bid documents may be obtained from the location(s) indicated in the table below:

Location	Address
Physical Location	Port of Oakland Purchasing Department 530 Water Street Oakland, CA 94607 Monday through Friday 9:00 AM to 4:00 PM, tel: (510) 627-1140
Website	http://www.portofoakland.com/business/bids-rfps/ Or navigate to the Port of Oakland's main website at: http://www.portofoakland.com/ , then click on "Bids/RFPs" from the banner on the top of the page, and then scroll down to download the Bid.

Questions about the Bid or Request for Information

Questions and or Requests for Information (RFI) must be submitted in writing and can be submitted by fax or email as follows:

Primary Contact	Nicklaus Sioson Fax: (510) 893-2812 Email: nsioson@portoakland.com
Question/RFI Due Date	December 2, 2016 until 4:00 p.m. Please submit questions as soon as possible. No questions regarding the specifications will be responded to after the above date. All pertinent questions will be responded to and answered in writing no later than the Response Date listed below.
Response Date	December 7, 2016 All pertinent questions will be responded to via addendum faxed (or emailed) to all prospective Bidders and placed on the Port's website. Bidders who did not receive a copy of the addendum should download it from the Port's website. See the "How to Obtain Bid Documents" section for our web address. All addenda must be acknowledged on the Bid Form.

Full Opportunity

The Port's policy prohibits discrimination or preferential treatment because of race, color, religion, sex, national origin, ancestry, age (over 40), physical or mental disability, cancer-related medical condition, a known genetic pre-disposition to a disease or disorder, veteran status, marital status, or sexual orientation. It is the policy of the Port of Oakland to encourage and facilitate full and equitable opportunities for small local businesses to participate in its contracts for the provision of goods and services. It is further the Port's policy that no discrimination shall be permitted in small local business participation in Port contracts or in the subcontracting of Port contracts. The successful Bidder shall comply with the Port's Non-Discrimination and Small Local Business Utilization Policy.

Title VI Solicitation Notice: The Port of Oakland, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby

notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

The Port reserves the right to reject any or all Bids, to waive any irregularities or informalities not affected by law, to evaluate the Bids submitted, and to award the Contract (or Purchase Order) according to the Bid which best serves the interests of the Port.

John Banisadr, Purchasing Manager

Attachments:

Title		Must Be Returned with Your Bid
1	Instruction to Bidders	No
2	Bid Form	Yes
3	Standard Purchase Order Terms and Conditions	No
4	Supplier Insurance Requirements	No
5	Non-Collusion Declaration	Yes
6	City of Oakland City Charter §728 Living Wage Information A. Employer Self-Evaluation for Port of Oakland Living Wage B. Certificate of Compliance—Living Wage	No (Required after award.)
7	Statement of Living Wage Requirements	Yes
8	Statement of Equal Employment Opportunity	Yes

Enclosures

Title		Must Be Returned with Your Bid
A	Product Specification/Scope of Work	No
B	Special Provisions	No
C	AA-4201 Plans	No
D	Section 16342 Medium Voltage Metal-Clad Switchgear	No
E	Section 16195 Electrical Identification	No
F	Reference Drawing – Existing Equipment Pad Detail	No
G	Existing Crane Switchgear Photos	No
H	Detail Bid Form	Yes

**Bid Submission:**

The submission of a Bid shall be considered conclusive evidence that the Bidder has fully investigated and understands all conditions related to the Bid. The Bidder has read and become familiar with all of the Bid Documents, Attachments, Enclosures, and any Contract or Agreements. No claim for adjustment of the provisions of the Agreement shall be honored on the grounds that the Bidder was not fully informed as to its terms or any of these conditions. No verbal interpretation provided to any Bidder as to the meaning or consequence of any portion of the Bid, the Bid Documents or the Contract or Agreement shall be considered binding on the Port. No Bids shall receive consideration by the Port unless made in accordance with the following instructions:

1. **Port's Legal Name and Jurisdiction:** The Port of Oakland (the "Port") is legally known as the **City of Oakland, a Municipal Corporation, Acting by and through its Board of Port Commissioners**. The Port is an independent department of the City of Oakland. The Port has exclusive control and management of all Port facilities and properties. Port facilities and properties consist of marine terminals, a railway intermodal terminal and container storage areas (collectively, the "Seaport"); the Oakland International Airport (the "Airport"); and commercial and industrial land and properties (collectively, "Commercial Real Estate"); and other recreational land, other land, undeveloped land, and water areas, all located in Oakland, CA. The Port issues Purchase Orders under the name Port of Oakland.
2. **Definition of Bidder:** The terms "Bidder", "Consultant", "Contractor", "Respondent", "Seller", "Supplier", and "Vendor" whenever appearing in this Invitation for Bid or any attachments, are used interchangeably to refer to the company or firm submitting a Bid in response to this Invitation for Bid.
3. **Deadline for Receipt of Bids and Multiple Bids:** Bids must be sealed and delivered to the location listed in the Invitation to Bid no later than the time specified in the invitation. The Port will place a clock ("Clock") in a conspicuous location at the place designated for submittal of Bids. For purposes of determining the time that a Bid is submitted, the Clock shall be controlling. The Port suggests that Bids be hand delivered in order to ensure their timely receipt. Any Bids received after the time stated shall not be opened and shall be returned, sealed, to the Bidder. No person, Bidder, firm, or corporation shall be allowed to make or file or be interested in more than one Bid unless alternate Bids are specifically called for. A person, firm, or corporation that has submitted a sub-proposal to a Bidder, or that has quoted prices of materials to a Bidder, is not thereby disqualified from submitting a sub-proposal or quoting prices to other Bidders or make a Prime Bid.
4. **Bidder's Conference:** If applicable, a mandatory bidder's conference (Pre-bid Meeting) will be held on the date specified in the Invitation for Bid, for the purpose of acquainting all prospective Bidders with the bid documents. It is imperative that all prospective Bidders attend this conference. The Pre-bid Meeting is mandatory (when indicated) for any party submitting a Bid. If a Bidder fails to attend the Pre-bid Meeting, any Bid submitted by that Bidder will be rejected and returned unopened by the Port. Following this meeting, a site review may be conducted to acquaint Bidders with the site.
5. **Requests for Information:** Any questions relative to the Bid should be in writing and directed to the designee specified in the Invitation for Bid and by the deadline for receipt of questions.
6. **Bid Information:** The information contained in this Bid is provided for the convenience of the Bidders. The Port does not represent or warrant the accuracy of any financial or statistical information contained in this Bid. In addition, any information contained in any other documents issued by the Port, about the Port, may only be relied upon by a Bidder at its sole risk. It is the responsibility of the Bidder and other interested parties to assure

themselves that the information in this Bid packet is accurate and complete. The Port and the Board of Port Commissioners, and its employees and advisors, will have no liability arising out of the inaccuracy of any such information.

7. Bid Forms: Bids must be made on forms provided by the Port, unless otherwise specified. All items on the form should be filled out. Numbers should be stated in figures and written, and the signatures of all individuals must be in long hand. The completed form should be without interlineations, alterations, or erasures. Discrepancies between multiplication of units of work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of numerals and the correct sum thereof will be resolved in favor of the correct sum. In case of conflict between words and numerals, the words shall govern.
8. Execution of Forms: Each Bid must give the full business address of the Bidder and must be signed by the Bidder with his or her usual signature. Bids by partnerships must furnish the full names of all partners and must be signed in the partnership name by a general partner with authority to bind the partnership in such matters. Bids by corporations must be signed with the legal name of the corporation, followed by the signature and designation of the president, secretary, or other person authorized to bind the corporation in this matter. The name of each person signing shall also be typed or printed below the signature. When requested by the Port, satisfactory evidence of the authority of the officer signing on behalf of the corporation or partnership shall be furnished. A Bidder's failure to properly sign required forms may result in rejection of the Bid. When applicable, Bids must include the Bidder's California State Contractor's license number and expiration date.
9. Joint Venture Agreements: Any Bidder that is a Joint Venture shall include, as part of its Bid, a copy of the Bidder's Joint Venture Agreement, executed and in force, and the Joint Venture agreement may not be modified after the submission to the Port, prior to selection of the Bidder by the Port or thereafter without the written consent of the Port. Any Joint Venture acknowledges that each of the partners of the joint venture is jointly and severally liable under this Agreement, and has provided the Port with a true and accurate copy of the Bidder's Joint Venture Agreement.
10. Bid Bond/Bid Security: If this box ☐ is checked, a Bid Security (or Bid Bond) is required with your Bid. The Bid should be accompanied by a Cashier's Check or Bidder's Bond for an amount not less than ten percent (10%) of the Total Bid Price. The cashier's check shall be made payable to the "Port of Oakland" or Bid Bond shall be made payable to the "City of Oakland, a Municipal Corporation Acting by and through its Board of Port Commissioners ("Port")". The Bid Bond accompanying the Bid shall be secured by an admitted surety company, licensed in the State of California, satisfactory to the Port. The Cashier's Check or Bond shall be given as a guarantee that the Bidder will enter into the Contract (or Purchase Order) if awarded the work, and in the case of refusal or failure to enter into the Contract (or Purchase Order) within twenty (20) calendar days after notification of the award of the Contract (or Purchase Order), the Port shall have the right to award to another Bidder. If the Bidder fails or refuses to timely enter into the Contract (or Purchase Order), the Port reserves the right to declare the Bid Bond forfeited and to pursue all other remedies in law or equity relating to such breach including, but not limited to, seeking recovery of damages for Breach of Contract. Failure to provide Bid Security, or Bid Security in the proper amount, will result in rejection of the Bid.
11. Withdrawal of Bid: Bids may be withdrawn by the Bidders prior to the time fixed for the opening of Bids, but may not be withdrawn after the opening of Bids.
12. Responsible Bidder: A Responsible Bidder is defined as a Bidder who has demonstrated the attribute of trustworthiness, as well as quality, fitness, capacity, and experience to satisfactorily perform the work or provide the goods. The Port may conduct such investigation as the Port deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications, and financial ability of Bidders. The Port shall have the right to communicate directly with Bidder's surety regarding Bidder's guaranty.

The Port will be the sole determinate of whether a Bidder is considered a Responsible Bidder.

13. Evidence of Responsibility: Upon the request of the Port, a Bidder shall submit promptly to the Port satisfactory evidence showing the Bidder's financial resources, the Bidder's experience in the type of work being required (or goods needed) by the Port, the Bidder's organization and workforce available for the performance of the work and any other required evidence of the Bidder's qualifications to perform the proposed work or supply of goods. The Port may consider such evidence before making its decision awarding a Contract (or Purchase Order). Failure to submit evidence of a Bidder's responsibility to perform the proposed work (or goods needed) may result in rejection of the Bid. The Port may check any client reference provided by the Bidder to determine if the Bidder has the experience necessary to provide the goods or perform the services, and to determine the lowest responsive, responsible Bidder.
14. Addenda: Any addenda issued during the time of bidding shall become a part of the drawings and specifications issued to Bidders for the preparation of their Bids, and shall constitute a part of the Contract Documents. All addenda shall be numbered and dated and shall be acknowledged by the Bidder on the Bid Form. No addendum will be issued on such requests received later than five (5) calendar days before the scheduled opening of the Bids.
15. Minor Informalities, Rejection of Bids and Award of Contract: The Port reserves the right to waive any non-substantial or immaterial irregularities in the Bid and the right to accept or reject any and all Bids, or to accept or reject any portion or combination thereof, or award on the basis of Bid Elements or Total Bid Price, when to do so is in its own best interest. If an award is made, the Port will recommend a Contract (or Purchase Order) be awarded within sixty (60) calendar days after opening of Bids to the lowest responsive, responsible Bidder complying with the requirements of the Contract Documents, subject to the Board of Port Commissioner's approval (if required). The time for awarding the Contract (or Purchase Order) may be extended by the Port with the consent of the lowest responsible Bidder. If the Port does not recommend a Contract (or a Purchase Order) to be awarded to the lowest responsive, responsible Bidder, then the Bid will be cancelled.
16. Action by the Board of Port Commissioners: If action by the Board of Port Commissioners is required, the Board of Port Commissioners may approve or reject the Port's recommendation for award with the lowest responsive responsible Bidder, or may reject all Bids. If all Bids are rejected, the Board of Port Commissioners may direct staff to negotiate with any Bidder or call for new Bids.
17. Performance Bond: If this box ☐ is checked and your Bid exceeds \$25,000, a Performance Bond is required prior to issuance of a Contract (or Purchase Order). The successful Bidder shall be required to submit the Performance Bond as specified in the Contract Documents. The required Bond shall be calculated on the maximum Total Bid Price. A Bidder's failure to submit the Bond requested shall result in rejection of their Bid and forfeit of their Bid Security.
18. Execution of Contract: The successful Bidder shall, within twenty (20) calendar days of Notice of Award of the contract, sign and deliver to the Port, without exception, the executed Port Contract (or Purchase Order) along with the Bonds and any evidence of insurance required by the Contract Documents. In the event the Bidder to whom an award is made fails or refuses to execute the Contract (or Purchase Order) within twenty (20) calendar days from the date of receiving notification that the Contract (or Purchase Order) has been awarded to the Bidder, or fails to provide the required bond and evidence of insurance, the Port may declare the Bidder's Bid Security or bond forfeited as damages caused by the failure of the Bidder to enter into the Contract (or Purchase Order), and may award the work to the next lowest responsive, responsible Bidder, or may reject all Bids and, at its sole discretion, call for new Bids.
19. Form of Contract: If this box ☐ is checked, the Bidder selected by the Port will be required to execute, without exception, a Contract in form and substance substantially

similar to that included in the Bidding package. The Contract and other documents are subject to the approval of the Port and its legal counsel.

20. Standard Purchase Order Terms and Conditions: The Port's Standard Purchase Order Terms and Conditions apply to all purchases (unless specifically noted in the Bid package). A copy of the Port's Standard Purchase Order Terms and Conditions is included in this Bid package. By submitting a Bid, Bidder agrees to the Port's Standard Purchase Order Terms and Conditions.
21. Drawings and Specifications: If this box ☐ is checked, each Bidder shall be required to return to the Port all drawings and specifications in an un-mutilated condition and without any marks or annotations. All drawings, specifications and other documents used or prepared during the project shall be the exclusive property of the Port.
22. Taxes: Taxes shall be included in the Total Bid Price at the current Alameda County uniform local sales and use tax rate.
23. Bid Exceptions: All exceptions to the plans and specifications which are taken in response to this Bid must be stated clearly. The taking of Bid exceptions or providing false, incomplete or unresponsive statements may result in the disqualification of the Bid.
24. Discounts: Any discounts which the Bidder desires to provide the Port must be stated clearly on the Bid Form itself so that the Port can calculate properly the net cost of the Bid. Offers of discounts or additional services not delineated on the Bid Form will not be considered by the Port in the determination of the lowest responsive, responsible Bidder.
25. Quantities: The quantities shown are approximate. The Port reserves the right to increase or decrease quantities as desired.
26. Prices: Bidders must quote prices Free on Board (F.O.B). Destination; the Port, unless otherwise noted. Prices should be stated in the units specified and Bidders should quote each item separately.
27. Samples: On request, samples of the products being supplied shall be furnished to the Port at no cost to the Port.
28. Special Brand Names: In describing any item, the use of a manufacturer or special brand, except in those instances where the product is designated to match others in use on a particular public improvement either completed or in the course of completion, does not restrict bidding to that manufacturer or special brand (unless specifically noted), but is intended only to indicate quality and type of item desired. Bidders may furnish any material, product, thing or service of comparable quality or utility. If a Bidder is requesting substitution of "or equal" item, the make and grade of the article on which the Bid is submitted must be stated in the Bid Form and illustrations and catalogue information submitted. The Port has the sole right to make all decisions on products and supplier selection of "or equal" substitutes.
29. Container Costs and Delivery: All costs for containers shall be borne by the Bidder. All products shall conform to the provisions set forth in the Federal, County, State, and City laws for their production, handling, processing and labeling. Packages shall be so constructed to ensure safe transportation to point of delivery.
30. Bid Negotiations: A Bid response to any specific item of this Bid Document with terms such as "negotiable", "will negotiate" or similar, will be considered as non-compliance with that specific term.
31. Purchases by Other Public Agencies, the Port, and Additional Quantities: Bidder agrees to extend identical prices and services under the same terms and conditions to other public agencies and the Port (known as "Piggybacking"). Other public agencies may piggyback on this contract for the goods/services and purchase directly from Bidder without additional competitive processes. Each participating agency will execute its own Contract with the Bidder for its requirement and payment will be made directly by the participating agency.

Following any initial purchase(s) by the Port, additional quantities of the goods/services listed herein, may be purchased to replace or supplement existing purchases.

32. Prevailing Law: In the event of any conflict or ambiguity between these instructions and State or Federal law or regulations, the latter shall prevail. Additionally, all equipment to be supplied or services to be performed under the Bid shall conform to all applicable requirements of Local, State and Federal laws, including, but not limited to, California Labor Code.
33. Governing Law and Venue: The Bid Documents, Specifications and related matters shall be governed by and construed in accordance with the laws of the State of California. Legal actions relating to the Bid Documents, Specifications and related matters shall only be brought in the Federal or State Courts of Alameda County, California, to which jurisdiction Bidder irrevocably submits.
34. Living Wage Policy: On March 5, 2002, the voters in the City of Oakland passed Measure I, adding to the City Charter Section 728 ("§728") entitled "Living Wage and Labor Standards at Port-assisted Businesses." §728 requires Port Aviation and Maritime businesses that meet specified minimum threshold requirements to pay all nonexempt employees a Living Wage rate established by City Ordinance and adjusted annually based on the Consumer Price Index for the San Francisco, Oakland and San Jose area. (See the enclosed §728 for the current living wage rates.) Specifically, §728 applies to Port contractors and financial assistance recipients with the Aviation or Maritime divisions that have contracts worth more than \$50,000 and that employ more than 20 employees who spend more than 25% of their time on Port-related work. §728 also provides covered employers with incentives to provide health benefits to employees, establishes a worker retention policy, requires covered employers to submit quarterly payroll reports and requires covered employers to allow Port representatives access to payroll records in order to monitor compliance and labor organization representatives access to workforces during non-work time and on non-work sites. Covered employers are responsible for complying with the provisions of §728 from the date the covered contract is entered into. When a Contract (or Purchase Order) is awarded, the Bidder will be required to fill out the following forms included in the Bid packet:
- Employer Self-Evaluation for Port of Oakland Living Wage Form
 - Certificate of Compliance—Living Wage

Do not include these forms with your Bid. Only after a Contract (or Purchase Order) is issued does the successful Bidder need to return these forms to the Social Responsibility Division. Bidders shall acknowledge the Port's Living Wage Policy and compliance by submitting the "Statement Living Wage Requirements" (included in the Bid packet) with their Bid.

For more information on the Living Wage Policy, see the enclosed forms or call Connie Ng-Wong in the Port of Oakland's Social Responsibility Division at (510) 627-1390.

35. Non-Discrimination Policy: The Port of Oakland prohibits discrimination or preferential treatment because of race, color, religion, sex, national origin, ancestry, age (over 40), physical or mental disability, cancer-related medical condition, a known genetic predisposition to a disease or disorder, veteran status, marital status, or sexual orientation. Each Bidder must adhere to the Port's Non-Discrimination Policy by providing the enclosed "Statement of Equal Employment Opportunity" with their Bid.

In addition, the Port has a Non-Discrimination and Small Local Business Utilization Policy to encourage the use of small and local business. The entire Non-Discrimination and Small Local Business Utilization Policy is available at:

http://www.portofoakland.com/pdf/responsibility/ndslbu_policy.pdf. A copy of the Port-certified Small and Local Business Enterprises can also be downloaded at: <http://www.portofoakland.com/srd/>.

36. Examination of Work Site: If applicable, before submitting a Bid, Bidders shall visit the site of the proposed work and shall fully inform themselves of all conditions in and about the work site, the building or buildings, if any, and any work that may have been done thereon. However, no Bidder shall visit the site without prior authorization by the Port.
37. Licenses: Each Bidder, and their subcontractors, if any, must possess all appropriate and required licenses (including a California Contractor's License, if applicable) or other permits to perform the work or provide the goods as identified in this Bid packet. Upon request, each Bidder shall furnish the Port with evidence demonstrating possession of the required licenses or permits. Failure to submit such evidence to the Port's satisfaction may result in rejection of the Bid.
38. Public Records Act: Per the Public Records Act (Gov. Code 6250 et seq.), the Port may be obligated to make available to the public the submitted Bids and all correspondence and written questions submitted during the Bid process. Any trade secrets or proprietary financial information, which a Bidder believes should be exempted from disclosure, shall be specifically identified and marked as such. Blanket-type identification by designating whole pages or sections shall not be permitted and shall be invalid. The specific information must be clearly identified as such. The Port reserves the right to independently determine whether any document is subject to disclosure and to make such information available to the extent required by applicable law, without any restriction.
39. Protest Procedures: Any Bidder that has timely submitted a responsive bid that contends or claims that the Port's proposed award of the subject contract fails to comply with the Port's rules and regulations or with law must file a protest in accordance with the provisions set forth below:
1. Any protest must be submitted in writing to John Betterton, Secretary of the Board, and received by the Port no later than 5:00 p.m. by the third (3rd) business day following the date of Bid opening.
 2. The protest must include the name, address and telephone number of the person representing the protesting party.
 3. The initial protest document must contain a complete statement of the basis for the protest, including in detail, all grounds for protest including referencing the specific portion of the solicitation document that forms the basis for the protest, and including without limitation all facts, supporting documentation, legal authorities and argument in support of the grounds for the protest. Any matters not set forth in the written protest shall be deemed waived. All factual contentions must be supported by competent, admissible and credible evidence.
 4. The party filing a protest must also transmit a copy of the initial protest document (and any attached documentation) concurrently to all other Bidders and any other parties that have requested such notice at the time of the filing of the protest.
- Any protest not conforming to the foregoing shall be rejected by the Port without recourse.
40. Conflicts of Interest: By submitting a Bid, the Bidder represents that it is familiar with Section 1090 and Section 87100 et seq. of the California Government Code and that it does not know of any facts that constitute a violation of said sections in connection with its Bid. Bidder also represents that its Bid has completely disclosed to the Port all facts bearing upon any possible interests, direct or indirect, which Bidder believes any member of the Port, or other officer, agent or employee of the Port or any department presently has, or will have, in any agreement arising from this Bid, or in the performance thereof, or in any portion of the profits there under. Willful failure to make such disclosure, if any, shall constitute ground for rejection of the Bid or termination of any agreement by the Port for cause. Bidder agrees that if it enters into a Contract (or Purchase Order) with the Port, it will comply with all applicable conflict of interest codes adopted by the City of Oakland and Port of Oakland and their reporting requirements.

41. Bidder's Relationship: The Bidder's relationship to the Port shall be that of independent contractor and shall not be deemed to be that of an officer, agent, or employee of the Port.

End of Section

**Bid No.: 16-17/08 – Medium Voltage Metal-Clad Switchgear**

The undersigned having carefully examined the location of the proposed work, the local conditions of the place where the work or services is to be done, the Invitation for Bid, the Instructions to Bidders, the Standard Purchase Order Terms and Conditions, the Supplier Insurance Requirements, all Bid Documents, including the Specifications and all of the contract documents for this project, and any Attachments, Addenda, Enclosures, and the Port of Oakland's sample Contract (if applicable), proposes to perform the work or provide the goods, including all of its component parts, and to furnish any and all required labor, materials, equipment, insurance, permit, bonding, transportation and services required for this project or delivery of goods and services in strict conformity with the Plans and Specifications prepared, including any Addenda, within the time specified for the lump sum price (including all taxes) of:

Total Bid Price (Including all Taxes)

Total Bid Price of: \$_____ (Numeric amount)

_____ (Written amount)

Written amount prevails if any discrepancy exists.

Agreement Terms

1. If awarded the Contract (or Purchase Order), the undersigned hereby agrees to sign said Contract (or Purchase Order), and furnish the necessary Performance Bond (if applicable), and Insurance within twenty (20) calendar days after the Notice of the Award of this Contract (or Purchase Order) and agrees to commence work within ten (10) calendar days after any verbal or written Notice to Proceed is issued by the Port.
2. The undersigned has checked carefully all the above figures and understands that the Port will not be responsible for any errors or omissions on the part of the undersigned in making up this Bid.
3. The Port of Oakland reserves the right to reject any or all Bids, to waive any irregularities or informalities not affected by law, to evaluate the Bids submitted and to award the Contract (or Purchase Order) according to the Bid which best serves the interests of the Port.
4. All pages of this Bid Form must be completed and signed in ink. The Bid will be awarded to the lowest responsive, responsible Bidder(s).

Bidder's Name: _____ Initials: _____

BID FORM (Page 2 of 3)

Bid No.: 16-17/08 - Medium Voltage Metal-Clad Switchgear

Bid Bond/Bid Security

If applicable (see the Instructions to Bidders), each Bid shall be accompanied by a cashier's check payable to the "Port of Oakland", or a Bidder's bond executed by an admitted surety insurer, licensed to do business in the State of California as a surety, made payable to the "City of Oakland, a Municipal Corporation Acting by and through its Board of Port Commissioners ("Port")" in an amount not less than ten percent (10%) of the maximum amount of the Total Bid Price. The check or Bid Bond shall be given as a guarantee that the Bidder to whom the Contract (or Purchase Order) is awarded shall execute the contract documents and shall provide the required Performance Bond as specified therein within twenty (20) calendar days after the Notification of the Award of the Contract (or Purchase Order).

Amount – Bidders must enclose an amount of not less than ten (10) percent of the entire Bid as either:

_____ Cashier's Check Number: _____

Issuing Bank: _____

Amount: \$ _____

_____ Bidder's Bond Surety Company: _____

Addenda Acknowledgement

The following addenda are acknowledged in this Bid: _____
(Indicate the addenda numbers that you received.)

Bidder's Name: _____ Initials: _____

BID FORM (Page 3 of 3)

Bid No.: 16-17/08 - Medium Voltage Metal-Clad Switchgear

Client References

In order for the Port to determine if your firm is a Responsible Bidder (see the Instructions to Bidders), Bidder is to provide the names, addresses, and contact information for three (3) current client references. Please make sure all contact information is current. By providing such information you authorize the Port to contact such clients.

Line	Company Name and Contact	Address	Phone and Email
1			
2			
3			

Bidder Information and Signatures

Bidder's Company Name: _____

Contact Person (print name and title): _____

Address: _____

Telephone: _____ Fax: _____

Cell: _____ Email: _____

Contractor License # (if applicable): _____ Expiration Date: _____

Signature (*): _____

(If Corporation by Chairman, President or VP. If Partnership by Partner.)

Printed Name: _____ Date: _____

Attested By (*): _____

(If Corporation, by Chairman, President, Vice President, Secretary, or Treasurer. If Partnership, by Partner.)

Printed Name: _____ Date: _____

* NOTE: If the Bidder is a corporation, set forth the legal name of the corporation together with the signature(s) of the officer or officers authorized to sign Contracts on behalf of the corporation. If the Bidder is a partnership, set forth the name of the firm together with the signature(s) of the partner or partners authorized to sign Contracts on behalf of the partnership.



PORT OF OAKLAND

STANDARD PURCHASE ORDER TERMS AND CONDITIONS

The Port of Oakland uses Purchase Orders for all purchases. Phone orders are not valid and may be subject to non-payment. In these Terms and Conditions, "the Purchase Order" refers to each Purchase Order subject to these Terms and Conditions.

A courtesy copy of these *Terms and Conditions* may be provided to Supplier at the same time as a Purchase Order, but if ever there is a conflict between the courtesy copy and the then current *Terms and Conditions* posted on the Port's website, THE WEBSITE VERSION SHALL CONTROL, however, any writing issued or signed by the Port clearly marked as "additional" or "supplemental" *Terms and Conditions* or *Insurance Requirements* shall control over any conflicting terms of the website version of those documents.

1. **THE PORT.** The Port is legally known as the City of Oakland, a Municipal Corporation, Acting by and through its Board of Port Commissioners. The Port is an independent department of the City of Oakland and issues Purchase Orders under the name "Port of Oakland." The Port has exclusive control and management of all Port facilities and properties located in Oakland, CA (including but not limited to marine terminals, a railway intermodal terminal, and container storage areas; the Oakland International Airport; and office, retail and other developed property and undeveloped land), and no other agency or department of the City of Oakland may issue Purchase Orders with respect to these facilities and properties.

2. **SUPPLIER.** Supplier (sometimes referred to on the Port's website or in other materials related to the Purchase Order as "seller", "lessor", "vendor", "contractor", "respondent", "consultant", "service provider" or by similar terms) is an independent contractor and not an officer, employee or agent of the Port. Supplier shall provide the goods or services described on the Purchase Order (the "**Work**") using its own qualified employees or using only qualified subcontractors approved in writing by the Port. Supplier, and not the Port, shall be solely responsible for paying all compensation (including benefits), making all withholdings, paying all taxes and ensuring compliance with all laws regarding the employment of such employees or engagement of such subcontractors. Supplier may not change its subcontractors or assign, delegate or transfer, voluntarily, involuntarily or by operation of law, any of its rights or obligations under the Purchase Order (other than its interest in receivables as part of a bona fide third-party financing arrangement), without the prior written consent of the Port.

3. **PERFORMANCE AND QUALITY.** Supplier shall supply or perform the Work and represents and warrants that the Work performed or supplied is (i) as specified in the Purchase Order, (ii) in a good and workmanlike manner, (iii) in conformity to all applicable specifications, and (iv) in compliance with all Applicable Law (as defined below). Supplier further represents and warrants that all goods sold under the Purchase Order are new (unless otherwise specifically stated in the Purchase Order), merchantable and fit for the particular purpose specified by the Port, and all services provided under the Purchase Order conform to the standard of practice of persons specializing in performing services of similar nature and complexity. Nothing in the Purchase Order shall be construed to limit or exclude any warranties implied by law. Supplier hereby assigns to the Port all of the Supplier's rights under manufacturers', subcontractors' or other warranties or indemnities with respect to the Work.

4. INVOICING AND PAYMENT. All payments require a written invoice from Supplier in a form acceptable to the Port. Supplier must issue all invoices directly to the "Bill To" address set forth in the Purchase Order. Each invoice must indicate thereon whether it constitutes a "Partial Billing" or "Final Billing". Each invoice is subject to review and verification by the Port. The time for payment of invoices (and for calculating any net discounts) shall run from the date on which proper, correct and complete invoices are received by the Port. Payment for all Work shall be made by the Port within thirty (30) days of receipt of satisfactory Work by the Port, and an itemized, proper, correct and complete invoice from Supplier. Any amounts due to the Port from Supplier may be set off against any amounts due to Supplier from the Port, whether or not under the Purchase Order.

5. DELIVERY. Supplier shall package and ship all Work consisting of goods to the Purchase Order "Ship To" address at Supplier's sole cost and expense. Packing slips must specify the quantity and description of goods shipped, the related Purchase Order number and must accompany each shipment. Supplier shall be responsible for delivery and shall prepay all related shipping costs and add them to the invoice. All goods are to be shipped F.O.B. destination: Port of Oakland, and risk of loss and title to goods shall remain with Supplier until the Port takes physical possession of the goods. The Port may change the address for shipment prior to shipment by Supplier. Goods must be suitably packed to assure against damage from weather or transportation, and in accordance with instructions of the Port.

6. REMEDIES. If Supplier breaches the Purchase Order, the Port may exercise any right or remedy available under the California Commercial Code or any other Applicable Law. Without limiting those rights and remedies, the Port may also do any of the following, in the Port's sole discretion: (i) require Supplier to repair or replace any Work, and if Supplier fails or refuses to do so, repair or replace the same at Supplier's expense; (ii) reject any delivery of non-conforming or defective Work and return the same for credit or replacement at Supplier's sole cost and risk; or (iii) cancel any outstanding deliveries and treat such breach by Supplier as Supplier's repudiation of the Purchase Order. Supplier's becoming the subject of bankruptcy or insolvency proceedings shall constitute a breach of the Purchase Order by Supplier. If the Port breaches the Purchase Order, Supplier's exclusive remedy shall be recovery of any goods shipped and the payment of the price payable for Work delivered prior to the breach. No limitation or exclusion by Supplier of any right or remedy available to the Port shall be effective unless expressly and specifically agreed to by the Port in writing. Under no circumstances shall the Port be responsible for consequential, punitive or incidental damages.

7. LAWS, REGULATIONS, PERMITS. Supplier shall comply with all applicable laws, ordinances, rules, regulations, codes, professional standards, permits, and/or land use restrictions or limitations of any governmental authority at any time applicable to Supplier, the Work or the Purchase Order ("**Applicable Law**"). Supplier shall obtain and maintain in full force and effect all professional, contracting and other permits and licenses required to undertake or supply the Work.

8. ADA. Without limiting Supplier's obligations to comply with Applicable Laws generally, Supplier hereby warrants that all Work complies with the accessibility requirements of the American with Disabilities Act of 1990, other similar state and federal laws and their implementing regulations, as applicable. Supplier agrees to promptly respond to and resolve any complaint regarding accessibility of the Work which is brought to its attention. Supplier further agrees to indemnify, defend and hold harmless the Port and all of its officers, commissioners, agents, departments, officials, representatives and employees using the Work from any loss, liability or claim arising out of its failure to comply with these accessibility requirements.

9. NON-DISCRIMINATION. Without limiting Supplier's obligation to comply with Applicable

Laws generally, Supplier shall not discriminate against any employee or applicant for employment, nor against any subcontractor or applicant for a subcontractor contract, because of race, color, religion, sex, national origin, ancestry, age (over forty (40)), physical or mental disability, cancer-related medical condition, a known genetic pre-disposition to a disease or disorder, veteran status, marital status, or sexual orientation.

10. WORK PRODUCT, ROYALTIES, PATENTS. Any interest (including copyright or other interests in intellectual property) of Supplier in studies, reports, memoranda, computational sheets, designs, drawings, specifications or any other documents (including electronic media) or work product prepared by or on behalf of Supplier in connection with the Work (collectively, the "**Work Product**"), whether or not embodied therein, constitutes a work for hire and is the property of the Port. Supplier shall pay all royalties and license fees necessary for or relating to the Work and shall defend all suits of claims for infringement of any patents or other intellectual property rights and shall indemnify the Port and hold it harmless from liability or loss on account thereof.

11. INSURANCE. Supplier shall maintain all insurance required under Applicable Law or commonly maintained by similarly situated, responsible businesses and in all events will maintain insurance of the types and in the amounts applicable to Supplier and the Work as required by the Port's *Supplier Insurance Requirements* posted from time to time on the Port's website (<http://www.portofoakland.com/>) and can be accessed by clicking on "Full Menu" (or the menu icon from your mobile device), then under the Business heading, click on "Purchasing and Accounts Payable", and scroll down to find the "Supplier Insurance Requirements (PDF)" to download the document, or alternatively type in the below link into your browser:

http://www.portofoakland.com/files/PDF/supplier_insurance.pdf

A courtesy copy of the Port's *Supplier Insurance Requirements* may be delivered to Supplier at the same time as the Purchase Order. (In the event of any conflict between any courtesy copy of the *Insurance Requirements*, and the version of the *Insurance Requirements* posted to the Port's website, the website version shall control). The type, scope and amounts of the required insurance may be increased should the scope of Work, in the opinion of the Port, warrant such increase, and Supplier shall obtain such insurance when so directed by the Port. If any portion of the Work is to be performed outside the United States, Supplier must contact the Port Risk Management Department regarding appropriate insurance. At the Port's request, Supplier shall file with the Port certificates evidencing the insurance maintained by Supplier and failure to do so shall constitute a material breach of the Purchase Order.

12. TAXES. Unless otherwise provided for in the Purchase Order, Supplier shall pay all taxes levied upon the Purchase Order or the Work performed or supplied pursuant hereto without additional compensation, regardless of which party has liability for such tax under Applicable Law, and any deficiency, interest or penalty asserted with respect thereto. The Port shall pay only California sales and use tax and Alameda County uniform local sales and use tax. Supplier must separately itemize all sales and use taxes on its invoices.

13. BOOKS AND RECORDS. Supplier shall maintain all documents and records prepared by or furnished to Supplier in connection with the Purchase Order and backup for all costs for which the Port was directly or indirectly invoiced during the course of supplying or performing the Work for at least three (3) years following delivery of final payment by the Port, provided that all records relating to environmental consulting services and hazardous materials in, on or adjacent to the Port's property shall be maintained indefinitely. Supplier agrees that its books and records and facilities, or so much thereof as may be engaged in the performance of the Purchase Order, are

subject to inspection and audit at all reasonable times by any authorized representative of the Port. Supplier agrees to waive, to the greatest extent permitted by Applicable Law, the defense of laches, statute of limitations, or any other defense based upon the Port's failure to timely file an action with regard to any matter arising out of the Purchase Order.

14. WAIVER AND HOLD HARMLESS. Supplier waives any and all claims, causes of action and rights to recovery, in law or in equity, against the Port for losses, liabilities, damages or injuries of any nature or kind, including injuries to Supplier's employees or subcontractors, regardless of whether such losses, damages, liabilities or injuries are covered by insurance. This provision is intended to waive fully, for the benefit of the Port, any rights or claims that might provide a right of subrogation in favor of any insurer providing insurance with respect to the Purchase Order. To the fullest extent permitted by Applicable Law (including, without limitation, California Civil Code Section 2782), Supplier shall defend (with legal counsel chosen or approved by the Port), indemnify and hold the Port and all of its officers, Commissioners, agents, departments, officials, representatives and employees harmless from and against any and all claims, loss, or liability of every kind, nature and description that arise from or relate to, directly or indirectly, in whole or in part: (i) the Work under the Purchase Order, or any part thereof; or (ii) any act or omission of Supplier, its employees, subcontractors or representatives.

15. CHANGES. The Purchase Order may not be modified, supplemented, or terminated without the Port's prior written approval. The Port may make changes to the Purchase Order at any time, and Supplier agrees to accept such changes. If such changes result in additional costs, the Port shall make an equitable adjustment to the purchase price at Supplier's request, provided that Supplier itemizes and justifies to the Port's satisfaction in writing the adjustment requested within five (5) days of delivery of the change notification.

16. SUSPENSION OR TERMINATION. Supplier must continue to perform the Work under the Purchase Order throughout the course of any dispute, and Supplier's failure to continue Work during a dispute shall itself constitute a material breach of the Purchase Order. The Port may, with or without cause, direct Supplier to suspend, delay or interrupt the execution of any Work, in whole or in part, for such periods of time as the Port may determine in its discretion; any such directives must be in writing. The Port may, at any time, terminate the Purchase Order for its own convenience with the Port's liability limited to the services or goods received by the Port prior to delivery of the Port's termination notice. Upon any termination, Supplier shall assign to the Port in the manner, at times and to the extent directed by the Port, all right, title, and interest of Supplier under procurement orders and subcontracts relating to Work so terminated and shall transfer title and possession to the Port of Work Product, completed and uncompleted designs and specifications, Work in process, completed Work, supplies, and other material produced or fabricated as part of, or acquired in connection with performance of the Work terminated by the notice of termination.

17. CONFIDENTIALITY AND PUBLICITY. All data, information, reports, plans, designs and other documents (collectively, the "**Confidential Information**") received from the Port or its employees, agents or representatives or generated by Supplier in connection with the Work are privileged and confidential and shall remain the sole and exclusive property of the Port. Supplier shall not disclose the identity of the Port, nor distribute or disclose Confidential Information to any third party, without express written authorization from the Port. All Confidential Information shall be deemed confidential and Supplier shall take all reasonable precautions to prevent its disclosure to unauthorized persons. Any publicity or press releases with respect to the Work or the Purchase Order shall be under the Port's sole discretion and control.

18. COVENANT AGAINST CONTINGENT FEES. Supplier warrants that no person or agency has been employed or retained to solicit or obtain the Contract upon an agreement or understanding for a contingent fee, except a bona fide employee or agency. For breach or violation of this warranty, the Port, at its option, may annul the Contract or deduct from the contract price or otherwise recover from Supplier the full amount of the contingent fee. As used in this Section, "bona fide agency" means an established commercial or selling agency, maintained by Supplier for the purpose of securing business, that neither exerts nor proposes to exert improper influence to solicit or obtain Port contracts nor holds itself out as being able to obtain any Port contract or contracts through improper influence. As used in this Section, "bona fide employee" means a person, employed by Supplier and subject to Supplier's supervision and control as to time, place, and manner of performance, who neither exerts nor proposes to exert improper influence to solicit or obtain Port contracts nor holds itself out as being able to obtain any Port contract or contracts through improper influence. As used in this Section, "contingent fee" means any commission, percentage, brokerage, or other fee that is contingent upon the success that a person or concern has in securing a Port contract. As used in this Section, "improper influence" means any influence that induces or tends to induce a Port Commissioner, employee or officer to give consideration or to act regarding a Port contract on any basis other than the merits of the matter.

19. FEDERAL AIP GRANT COMPLIANCE. By executing this Contract, Supplier agrees and certifies that Supplier will comply with the FAA Airport Improvement Program (AIP) provisions set forth below (Sections 20 through 24) and Supplier shall also include each of these provisions in all of its contracts and subcontracts related to this Contract. For purposes of Sections 19 through 24, Supplier is sometimes hereinafter referred to as "Contractor" and Port is sometimes hereinafter referred to as "Sponsor".

20. GENERAL CIVIL RIGHTS PROVISIONS. The Contractor agrees to comply with pertinent statutes, Executive Orders and such rules as are promulgated to ensure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or disability be excluded from participating in any activity conducted with or benefiting from Federal assistance. This provision binds the Contractor and subtier contractors from the bid solicitation period through the completion of the Contract. This provision is in addition to that required of Title VI of the Civil Rights Act of 1964.

21. COMPLIANCE WITH NONDISCRIMINATION REQUIREMENTS. During the performance of this Contract, the contractor, for itself, its assignees, and successors in interest (hereinafter collectively referred to as the "Contractor") agrees as follows:

21.1 COMPLIANCE WITH REGULATIONS. The Contractor (hereinafter includes any and all consultants) will comply with the Title VI List of Pertinent Nondiscrimination Acts and Authorities, as they may be amended from time to time, which are herein incorporated by reference and made a part of this Contract.

21.2 NON-DISCRIMINATION. The Contractor, with regard to the work performed by it during the Contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor will not participate directly or indirectly in the discrimination prohibited by the Nondiscrimination Acts and Authorities, including employment practices when the Contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

21.3 SOLICITATIONS FOR SUBCONTRACTS, INCLUDING PROCUREMENTS OF MATERIALS AND EQUIPMENT. In all solicitations, either by competitive bidding, or

negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the Contractor's obligations under this Contract and the Nondiscrimination Acts and Authorities on the grounds of race, color, or national origin.

21.4 INFORMATION AND REPORTS. The Contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the sponsor or the Federal Aviation Administration to be pertinent to ascertain compliance with such Nondiscrimination Acts and Authorities and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the Contractor will so certify to the sponsor or the Federal Aviation Administration, as appropriate, and will set forth what efforts it has made to obtain the information.

21.5 SANCTIONS FOR NONCOMPLIANCE. In the event of a Contractor's noncompliance with the Non-discrimination provisions of this Contract, the Sponsor will impose such contract sanctions as it or the Federal Aviation Administration may determine to be appropriate, including, but not limited to:

- a. Withholding payments to the Contractor under the Contract until the Contractor complies; and/or
- b. Cancelling, terminating, or suspending a Contract, in whole or in part.

21.6 INCORPORATION OF PROVISIONS. The Contractor will include the provisions of Sections 21.1 through 21.6 in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The Contractor will take action with respect to any subcontract or procurement as the Sponsor or the Federal Aviation Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the Contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the Contractor may request the Sponsor to enter into any litigation to protect the interests of the Sponsor. In addition, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

22. TITLE VI LIST OF PERTINENT NONDISCRIMINATION ACTS AND AUTHORITIES. During the performance of this Contract, the Contractor, agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252) (prohibits discrimination on the basis of race, color, national origin);
- 49 CFR Part 21 (Non-discrimination In Federally-Assisted Programs of The Department of Transportation—Effectuation of Title VI of The Civil Rights Act of 1964);
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);

- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq.*), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq.*), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, the Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act of 1990, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 – 12189) as implemented by Department of Transportation regulations at 49 CFR Parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 *et seq.*).

23. FAIR LABOR STANDARDS ACT. This Contract incorporates by reference the provisions of 29 U.S.C. §201, *et seq* (the Federal Fair Labor Standards Act (FLSA)), and its implementing regulations, with the same force and effect as if given in full text. The FLSA sets minimum wage, overtime pay, recordkeeping and child labor standards for full and part time workers. Supplier has full responsibility to monitor compliance to the referenced statute and regulation. Supplier must address any claims or disputes that arise from this requirement directly with the US Department of Labor – Wage and Hour Division.

24. OCCUPATIONAL SAFETY AND HEALTH ACT. This Contract incorporates by reference the requirements of 29 CFR Part 1910 with the same force and effect as if given in full text. Supplier must provide a work environment that is free from recognized hazards that may cause death or serious physical harm to the employee. Supplier retains full responsibility to monitor its compliance and its subcontractor's compliance with the applicable requirements of the Occupational Safety and Health Act of 1970 (29 U.S.C. §651, et seq; 29 CFR Part 1910). S must address any claims or disputes that pertain to a referenced requirement directly with the U.S. Department of Labor – Occupational Safety and Health Administration.

25. GOVERNING LAW AND VENUE. The Purchase Order shall be governed by California law. Legal actions relating to the Purchase Order shall only be brought in the federal or state courts of Alameda County, California, to which jurisdiction Supplier irrevocably submits.

26. GENERAL. All correspondence and notices directed to the Port, other than invoices (which are to be delivered to the "Bill To" address set forth in the Purchase Order) must be in writing and delivered to Port of Oakland, Board of Port Commissioners, P.O. Box 2064, Oakland, CA 94604. The Purchase Order is for the sole benefit of the Port and Supplier, and their respective permitted successors and assigns, and nothing in the Purchase Order, express or implied, is intended to confer upon any other person any right, benefit or remedy of any nature whatsoever under or by reason of the Purchase Order. Time is of the essence in Supplier's performance of Supplier's obligations under the Purchase Order. The making or approval of any payment and any inspections, reviews, approvals or oral statements by or on behalf of the Port, or of certification by any governmental entity, in no way limits Supplier's obligations under the Purchase Order.



PORT OF OAKLAND

Supplier Insurance Requirements

During any period Supplier performs the Work, and for such additional time as described below, Supplier shall maintain the following insurance with the following provisions:

1. Commercial General Liability Insurance

- **When Required:** All Suppliers performing Work.
- **Coverage:** Standard ISO Commercial General Liability form.
- **Limits:** \$1,000,000 per occurrence; \$2,000,000 annual general aggregate; \$2,000,000 products and completed operations aggregate; \$1,000,000 each offense for personal and advertising injury.
- **Deductible/Self-Insured Retention:** Not more than \$25,000 per occurrence unless otherwise approved by Port Risk Management.
- **Additional Insured:** The City of Oakland, a Municipal Corporation, Acting by and through its Board of Port Commissioners, Port of Oakland, its commissioners, officers, agents and employees.
- Cross liability/separation of insureds.
- Waiver of subrogation in favor of additional insured.
- If the Work involves construction activities, completed operations coverage must remain in force until at least 5 years after completion and acceptance of the Work.
- If the Work involves the sale of liquor, liquor legal liability insurance.
- If the Work involves construction or demolition work within 50 feet of railroad property, Railroad Protective Liability insurance in the name of the applicable railroad company with limits of at least \$2,000,000 per occurrence or as required by the applicable railroad company.

2. Business Automobile Liability Insurance

- **When Required:** All Suppliers performing Work.
- **Coverage:** Standard ISO Business Automobile Liability form for all owned (if any), non-owned and hired automobiles.
- **Limits:** \$1,000,000 each accident, except \$5,000,000 for vehicles operating in the South Field, the Aviation Operating Area ("**AOA**"), or any active airfields of the Oakland International Airport.
- **Deductible/Self-Insured Retention:** Not more than \$25,000 per accident unless otherwise approved by Port Risk Management.
- **Additional Insured:** The City of Oakland, a Municipal Corporation, Acting by and through its Board of Port Commissioners, Port of Oakland, its commissioners, officers, agents and employees.
- Waiver of subrogation in favor of additional insured.
- If the Work involves the parking or storage of vehicles, Garagekeeper's Liability insurance.
- If the Work involves valet parking, Valet Liability insurance.

3. Workers' Compensation and Employer's Liability Insurance

- **When Required:** All Suppliers performing Work.
- **Coverage:** Statutory Workers' Compensation and Side B Employer's Liability form.
- **Limits:** Statutory for workers' compensation and \$1,000,000 per accident, \$1,000,000 bodily injury each employee, and \$1,000,000 policy limit for bodily injury by disease, for Employer's Liability.

Bid 16-17/08, Attachment 4, Supplier Insurance Requirements, Page 1 of 4

- **Deductible/Self-Insured Retention:** Not more than \$25,000 per occurrence for Employer's Liability unless otherwise approved by Port Risk Management.
- If Work is performed in or around water (whether in the Port maritime area or elsewhere), U.S. Longshoremen and Harbor Workers Act coverage and, if applicable, Jones Act and Marine Employer's Liability coverage.
- Waiver of subrogation in favor of the City of Oakland, a Municipal Corporation, Acting by and through its Board of Port Commissioners, Port of Oakland, its commissioners, officers, agents and employees.

4. Professional "Errors and Omissions" Liability Insurance

- **When Required:** If the Work involves consulting, temporary staffing, design or technology services.
- **Coverage:** For errors and omissions arising out of the Work.
- **Limits:** \$1,000,000 per claim and annual aggregate.
- **Deductible/Self-Insured Retention:** Not more than \$25,000 per claim unless otherwise approved by Port Risk Management.
- **Additional Term:** 2 years after completion and acceptance of the Work.
- If Work involves software or technology services, Technology Liability coverage, including coverage for privacy liability.
- If the Work involves outsourced internet services, Network and Media Liability coverage.

5. Contractor's Pollution Legal Liability Insurance

- **When Required:** If the Work involves any construction activities, or any grading, excavating, underground utilities, piping, trenching, or any Work below the surface of the ground, or involves the hauling or disposal of hazardous or regulated materials.
- **Coverage:** Contractor's Pollution Legal Liability occurrence or claims made form.
- **Limits:** \$1,000,000 per occurrence and \$2,000,000 annual aggregate.
- **Deductible/Self-Insured Retention:** Not more than \$100,000 per occurrence unless otherwise approved by Port Risk Management.
- **Additional Insured:** The City of Oakland, a Municipal Corporation, Acting by and through its Board of Port Commissioners, Port of Oakland, its commissioners, officers, agents and employees.
- Waiver of subrogation in favor of additional insured.
- **Additional Term if Claims Made Form:** 2 years following completion and acceptance of the Work.
- **Definition of "Covered Operations":** All Work performed by Supplier or its contractors or subcontractors.

6. Aviation Insurance

- **When Required:** If Supplier or its subcontractors utilize aircraft in the Work.
- **Coverage:** Aviation Public Liability and Passenger Liability forms.
- **Limits:** \$1,000,000 combined single limit per accident for use of aircraft with up to 4 seats; such limit shall be \$5,000,000 for use of aircraft with 5 or more seats. However, use of jet aircraft of any size will need to be referred to Risk Management to determine amount of insurance required.
- **Deductible/Self-Insured Retention:** Not more than \$25,000 per accident unless otherwise approved by Port Risk Management.
- **Additional Insured:** The City of Oakland, a Municipal Corporation, Acting by and through its Board of Port Commissioners, Port of Oakland, its commissioners, officers, agents and employees.

7. Protection and Indemnity Insurance

- **When Required:** If Supplier or its subcontractors utilize watercraft/vessels in the Work.
- **Coverage:** Liability for bodily injury and property damage including wreck removal and liability to crew, and SP-23 clause or equivalent, including collision liability.
- **Limits:** \$1,000,000 per person on board the watercraft for bodily injury and property damage, but no less than \$5,000,000 for watercraft of a length of 30 feet to 39 feet and no less than \$10,000,000 for watercraft 40 feet and over; any passenger services watercraft will need to be referred to Risk Management to determine amount of insurance required.
- **Deductible/Self-Insured Retention:** Not more than \$25,000 per occurrence unless otherwise approved by Port Risk Management.
- **Additional Insured:** The City of Oakland, a Municipal Corporation, Acting by and through its Board of Port Commissioners, Port of Oakland, its commissioners, officers, agents and employees.
- Waiver of subrogation in favor of additional insured.
- Deletion of any language that limits coverage to additional insured in the event the Limitation of Liability Statute applies.

8. Builder's Risk/Equipment Installation Insurance.

- **When Required:** If Work involves new construction of buildings or facilities, or the renovation of existing buildings or facilities.
- **Coverage:** "All risk" or "special form" perils, earthquake and terrorism, including risks from testing of equipment, and delayed completion coverage for soft costs.
- **Limits:** Full replacement cost value of the construction, covering the entire Work, including all materials and equipment that are or will be incorporated into the construction, or stored at the construction site or offsite, and including materials or equipment in the course of transportation.
- **Deductible/Self-Insured Retention:** Not more than \$25,000 per occurrence unless otherwise approved by Port Risk Management.
- **Term:** Until final completion and acceptance of the Work and for 2 years for delayed completion coverage.
- **Additional Insured and Loss Payee:** The City of Oakland, a Municipal Corporation, Acting by the through its Board of Port Commissioners.
- Waiver of subrogation in favor of additional insured and its commissioners, officers, agents and employees.
- Primary and non-contributory with any insurance, retention or self-insurance of the Port.

Other Insurance Requirements:

- **Notice of Cancellation.** Supplier or Supplier's agent must provide 30-days prior written notice to the Port Risk Management Department of any insurance policy cancellation, except 10-days prior written notice for non-payment of premium.
- **Proof of Insurance/Insurer Rating.** Supplier must deliver to the Port Risk Management Department, prior to the commencement of the Work, certificates of insurance evidencing all required insurance and additional insured status for the Port. All required insurance shall be provided by insurance companies with current A.M.

Best ratings of A- VII or better. Please send certificates and other required information to:

Port of Oakland
Attn: Risk Management Dept.
530 Water Street
Oakland, Ca 94607
Fax: (510) 627-1626
Email: risktransfer@portoakland.com

Conversion to OCIP. The Port reserves the right to include the Purchase Order in an Owner Controlled Insurance Program ("OCIP") and/or a Professional Liability Insurance Program ("PLIP"), upon written notice to Supplier. In that event, Supplier agrees to comply with all requirements of the OCIP and/or PLIP.



Non Collusion Declaration

Bid No.: 16-17/08 - Medium Voltage Metal-Clad Switchgear

(To Be Executed by Bidder and Submitted with the Bid)

I, _____, declare as follows:

That I am the _____ of _____, the party making the attached Bid; that the attached Bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the Bid is genuine and not collusive or sham; that the Bidder has not directly or indirectly induced or solicited any other Bidder to put in a false or sham Bid, or that anyone shall refrain from Bidding; that the Bidder has not in any manner, directly or indirectly, sought by agreement, communication, or to fix any overhead, profit, or cost element of the Bid price, or that of any other Bidder, or to secure any advantage against the public body awarding the Contract (or Purchase Order) of anyone interested in the proposed contract; that all statements contained in the Bid are true; and further, that 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, or paid, and will not pay, any fee to any corporation, partnership, company, association, organization, Bid depository, or to any member or agent thereof to effectuate a collusive or sham Bid.

Any person executing this declaration on behalf of a proposer 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.

Executed this _____ day of _____, 201__, at
_____, California

Signature



PORT OF OAKLAND

City of Oakland City Charter § 728 Living Wage Information

EMPLOYERS SUBJECT TO §728 OF THE CITY CHARTER MUST COMPLY WITH THE FOLLOWING REQUIREMENTS:

- 1) Pay all non-exempt employees the living wage rates (As of July 1, 2016, \$14.86 without health benefits or \$12.93 with health benefits). Port Ordinance No. 3666, as amended also requires that covered businesses provide employees at least twelve compensated days off per year, including holidays.
- 2) Pay at least \$1.93 per hour worked toward the provision of health care benefits for employees and/or their dependents, if the employer claims credit for health benefits.
- 3) **Provide written notification to each current and new employee, at time of hire, of his or her rights to receive the benefits under the provisions of these regulations.** The notification shall be provided in English, Spanish and other languages spoken by a significant number of the employees, and shall be posted prominently in communal areas at the work site. A copy of said notification is available from the Port Division of Social Responsibility.
- 4) Provide all employees earning less than \$12/hour notification in English, Spanish, and any other language spoken by a significant number of employees of their right to advance Earned Income Credit payments.
- 5) **Maintain a list of the name, address, date of hire, occupation classification, rate of pay, benefits paid for each of its employees, and compensated time off - and submit this list to the Port's Social Responsibility Division, Attention: Connie Ng-Wong, Living Wage Compliance Officer, by March 31st, June 30th, September 30th, and December 31st of each year.** If a covered employer has obtained a waiver from the Port Board of Directors, then the employer must still submit an annual payroll report covering each of its employees by December 31st of each year. Failure to provide the list within five days of the due date will result in a penalty of \$500 per day. Covered employers shall maintain payrolls and basic records for all employees and shall preserve them for a period of at least three years after the close of the compliance period.
- 6) Require subcontractors, tenants and subtenants, or licensees who are covered by these requirements to comply with the provisions of these regulations. **Covered employers shall be responsible for including language committing the subcontractor's, tenant's or licensee's agreement to comply, in the contract with the subcontractor.** Covered employers shall submit a copy of such subcontracts or other such agreements to the Port Division of Social Responsibility.
- 7) Permit authorized Port representatives access to work sites and, with employee consent, relevant payroll records for the purpose of monitoring compliance with these regulations, investigating employee complaints of non-compliance and evaluating the operation and effects of these regulations, including the production for inspection and copying of its payroll records for any or all of its employees for the applicable compliance period. Permit a representative of the labor organizations in its industry to have access to its workforce at the Port during non-working time and in non-work areas to ensure compliance.

Employers who fail to submit documents, declarations or information required to demonstrate compliance with these regulations shall be deemed noncompliant or non-responsive and subject to the remedies as set forth in §728.



COVERED BUSINESS CHECKLIST WRITE YES/NO ANSWER IN APPROPRIATE BOX:

1. ☐ Is the Business entering into a contract, tenancy agreement or subordinate agreement (such as, subcontract, subtenancy, or sublicense) with the Port? *If no, go on to question 2. If yes, go to question 3.*
2. ☐ Has the Business amended an existing contract, tenancy agreement or subordinate agreement at any time since April 2002? *If no to 1 and 2, stop here: the business is not covered. If yes, go to question 3.*
3. ☐ Is the contract with Aviation or Maritime divisions for a value of greater than \$50,000 over the life of the contract (over the next five years if contract is for less than a year and expected to be renewed or extended)? *If no, stop here; the contract is not covered. If yes, go to question 4.*
4. ☐ Is the contract for service other than the delivery of products, equipment or commodities? *If no, stop here: the business is not covered. If yes, go to question 5.*
5. ☐ Does the Business employ more than 20 employees who spend at least 10 hours per week (4 hours per week if part time employees) working under the contract with the Port or on Port property? Indicate the number of employees that are employed by the Contractor _____. *If no, stop here the business is not covered. If yes, go to question 6, exemptions for specified employees of a covered employer.*

All employees of a covered employer are required to be provided compensation and other benefits as provided under §728 of the Charter, except for specified employees exempt under the following exemptions. The following questions should be answered for each employee.

6. ☐ *Does the employee work less than 25% of his/her time (10 hours per week for full time employee) under the contract with the Port? If yes, stop here; the specified employee is exempt. If no, go to question 7.*
7. ☐ *Is the employee under 21 years of age, employed by a government agency or nonprofit for after school or summer employment, or as a trainee for 90 days or less? If yes, stop here; the specified employee is exempt. If no, go to question 8.*
8. ☐ *Has the Business obtained a waiver that covers the employee? If yes, stop here; the specified employee is exempt. If no, go to question 9.*
9. ☐ *Is the employee participating in a bona-fide temporary job-training program in which a significant part of the compensation consists of acquiring specialized*

knowledge, abilities or skills in a recognized trade? If yes, stop here; the specified employee is exempt. If no, go to question 10.

10. ☐ *Is the employee a volunteer who is not compensated other than for incidental expenses or stipends? If yes, stop here; the specified employee is exempt. If no, go to question 11.*
11. ☐ *Is the employee working for the Business less than 20 hours per week for a period of 6 months or less? If yes, stop here the specified employee is exempt. If no, go to question 12.*
12. ☐ *Of the remaining employees (employees for which no exemption applies as indicated by your answers to questions 6 through 11), are there 20 or fewer non-exempt employees working for the employer under the Port Contract? If yes, stop here; each of the remaining specified employee(s) is/are exempt. If no, each of the remaining specified employee(s) is covered by §728.*

The undersigned authorized representative of Contractor hereby certifies under penalty of perjury that all of the information on this form is true and accurate.

_____ Company Name	_____ Signature of Authorized Representative
_____ Address	_____ Type or Print Name & Title
_____ Area Code and Phone	_____ Email Address
_____ Name of Primary Contact	_____ Date
_____ Project Name (Be Specific)	

Submit Completed Checklist To:

Connie Ng-Wong

Port of Oakland

Social Responsibility Division

530 Water Street

Oakland, CA 94607

Phone: (510) 627-1390 Fax: (510) 451-1656

Email: cng-wong@portoakland.com



PORT OF OAKLAND

Certificate of Compliance – Living Wage

The City of Oakland Living Wage Charter §728 ("§728") and Port Ordinance No. 3666 ("Ordinance 3666") as amended, provide that certain employers that enter into a contract, lease, license (or a subcontract, sublease, sublicense, or other agreement) with the Port for \$50,000 or more over the term of the contract and certain recipients of Port financial assistance for \$50,000 or more shall pay a prescribed minimum level of compensation to their covered employees ("Employees").

The undersigned ("Contractor") submits this certificate under penalty of perjury and as a condition of payment of its invoice(s) for service provided under the _____ agreement between the Port and Contractor.

- 1) Contractor hereby certifies that it is in compliance with §728 and Ordinance 3666 with respect to all non-exempt Employees of Contractor engaged in Port-related employment or work on Port property.
- 2) Contractor hereby acknowledges that the Port is relying on Contractor's certification of compliance with §728 and Ordinance 3666 as a condition of payment of Contractor's invoice(s).
- 3) Contractor understands that it may be subject to fines or penalties for noncompliance with §728 and Ordinance 3666 up to and including potential fines of \$500 per day until Contractor complies.
- 4) Contractor hereby certifies that claims, records and statements relating to Contractor's compliance with §728 and Ordinance 3666 are true and accurate, that such claims, records and statements are made with the knowledge that the Port will rely on such claims, records and statements, and that such claims, records and statements are submitted to the Port for the express benefit of Contractor's employees engaged in Port-related employment or work on Port property.

Please check the appropriate box and sign below

- ☐ Contractor hereby certifies its compliance with all of its obligations under §728 and Ordinance 3666;
- ☐ Contractor hereby certifies that all Employees of Contractor working under Contractor's contract with the Port are compensated at wage rate(s) greater than \$12.00 per hour;
- ☐ Contractor hereby certifies that it is not currently covered by §728 or Ordinance 3666. Contractor further certifies that should §728 or Ordinance 3666 become applicable, Contractor will comply with all of its Living Wage obligations.

All terms used herein and not defined shall have the meaning ascribed to such terms in §728 and Ordinance 3666.

The undersigned authorized representative of Contractor hereby certifies under penalty of perjury that all of the information on this form is true and accurate.

_____ Company Name	_____ Signature of Authorized Representative
_____ Address	_____ Type or Print Name & Title
_____ Phone and Email	_____ Date
_____ Project Name (Be Specific)	

Submit to: Connie Ng-Wong, Port of Oakland, Social Responsibility Division, 530 Water Street, Oakland, CA 94607. Email: cng-wong@portoakland.com



PORT OF OAKLAND

Statement of Living Wage Requirements

Bid No.: 16-17/08 - Medium Voltage Metal-Clad Switchgear

I hereby certify that _____ (Legal Name of Bidder/Respondent/Supplier/Consultant/Contractor), has reviewed the Living Wage Requirements, included in this Bid packet and will comply with said Requirement. Upon execution of an Agreement, the selected Bidder will be required to complete the Employer Self-Evaluation for Port of Oakland Form and Certificate of Compliance – Living Wage Form included in this Bid packet, and submit them to the Social Responsibility Division.

I declare under penalty of perjury under the laws of the State of California that the information I have provided herein is true and correct.

Signature

Print Name

Title

Date



PORT OF OAKLAND

Statement of Equal Employment Opportunity

Bid No.: 16-17/08 - Medium Voltage Metal-Clad Switchgear

I hereby certify that _____ (Legal Name of Bidder/Supplier/Consultant/Contractor), will not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, ancestry, age (over 40), physical or mental disability, cancer-related medical condition, a known genetic pre-disposition to a disease or disorder, veteran status, marital status, or sexual orientation.

I declare under penalty of perjury under the laws of the State of California that the information I have provided herein is true and correct and is of my own personal knowledge.

Signature

Print Name

Title

Date

**Bid No.: 16-17/08 – Medium Voltage Metal-Clad Switchgear**

The Port of Oakland (sometimes referred to herein as "Buyer") is soliciting competitive bids to supply two Switchgear assemblies (for Berth 23 Crane Switchgear and Berth 24 Crane Switchgear). The Port has standardized on specific Switchgear components as defined in the Plans and Specifications to match existing equipment and will not accept alternative or comparable brand product. Please quote all products without making any substitutions to the product brand and model number unless otherwise noted. Refer to the following attachments for equipment details and requirements:

- I. AA-4201 Plans
- II. Section 16342 Medium Voltage Metal-Clad Switchgear
- III. Section 16195 Electrical Identification
- IV. Reference drawing for existing equipment pad detail
- V. Existing Crane Switchgear Photos

The Port intends to lock in pricing through this invitation for bid process and (if awarded) will issue a Purchase Order to purchase all equipment from one supplier.

The Port will conduct an **optional pre-bid meeting** at **Harbor Facilities, 651 Maritime Street, Building D-510, Oakland CA 94607 at 1:00 p.m. on November 29, 2016** to give potential bidders an opportunity to assess existing site and equipment conditions for coordination of new switchgear designs including bus arrangements, layouts and dimensions. The existing Berth 23 and Berth 24 Crane Switchgear will be de-energized and grounded to provide rear compartment access. **This will be the only site visit allowed to gain access to the equipment. Therefore, all field measurements must be obtained during this site visit.** Bidders shall bring their own measuring tools. Personal protective equipment including hard hat, eye protection, high visibility clothing, and steel-toed safety shoes will be required.

Bidders that will be attending the optional pre-bid meeting must provide notice to the Port by 2:00 p.m. on November 23, 2016 to allow for coordination of crane operations and scheduling the shutdown of facilities. Contact Nicklaus Sioson at nsioson@portoakland.com to confirm attendance.

A. Product Specification

Item	Description	Quantity
1.	Berth 23 Crane Switchgear, NEMA 3R outdoor, 15kV metal-clad switchgear assembly, complete with draw-out circuit breaker and additional components and functions. Note: Refer to Plans and Specifications for requirements.	1
2.	Berth 24 Crane Switchgear, NEMA 3R outdoor, 15kV metal-clad switchgear assembly, complete with draw-out circuit breaker and additional components and functions. Note: Refer to Plans and Specifications for requirements.	1

B. Submittal Requirements

This Bid calls for specific submittal requirements listed on section 16342 (Enclosure D) and 16195 (Enclosure E) of the equipment details and requirements. Bidders are required to submit requested information on Section 16342 (Enclosure D) ,1.05 Submittals, item A "Submit with Bid", with their bid

submission. Failure to provide required documentation may result in bid being deemed non-responsive. All other documents will be required after contract award as stated on the submittal requirements.

C. Additional Materials

This bid requires bidder to furnish extra materials listed on section 16342 (Enclosure D), 1.06 Additional Materials. Bidder must write in the total cost of all additional materials (see detail bid form, item 3) and provide complete list of materials and cost breakdown on a separate sheet for reference.

D. Warranty Information

The Switchgear Manufacturer must provide warranties against defects in material, workmanship, and operation. Please refer to Section 16342 (Enclosure D), 1.07 Warranty, for complete details.

E. Installation

This Bid does not include installation of equipment.

F. Start-Up Services

Provide a qualified technician for on-site equipment start-up services. The technician must certify that the equipment has been installed, adjusted and tested in accordance with the manufacturer's recommendations. The cost of this technician must be included in your bid price for the switchgears or in the other charges section.

G. Delivery

Delivery on schedule is required no later than 14 weeks after the Purchase Order is awarded. All shipments shall be made FOB Destination. If you are able to meet the equipment delivery time frame, then write in 14 weeks in the space provided; otherwise, indicate the number of week after receipt of a Purchase Order will the equipment be delivered. The applicable delivery schedule information will be considered in the evaluation of the lowest responsible, responsive bidder.

Point of Contact:	Matthew Leong (Port Associate Engineer)
Office Number:	(510) 627-1107
Ship to address:	Port of Oakland – Harbor Facilities 651 Maritime St, Oakland CA 94607

**Bid No.: 16-17/08 – Medium Voltage Metal-Clad Switchgear****1. Goods and Special Services to be Provided**

- 1.1 The Purchase Order describes the Goods and Special Services and other services to be provided in connection therewith by the Seller. Seller's obligation to provide the Goods and to perform the Special Services and other services in connection therewith includes but is not limited to, the provision of all labor, equipment, materials, engineering, design, testing and any other work or services or costs of any type necessary to accomplish the following:
- Manufacture and deliver to Port all Goods and accessories in conformance with the Project Specifications Plans.
 - Perform all testing and quality control to demonstrate compliance with specified quality requirements prior to delivery of any of the Goods to the point of delivery.
 - Provide all Shop Drawings and submittals in conformance with the Project Specifications Plans.
 - Design, manufacture, test and deliver (including off-loading to the site of storage at the point of delivery at the Port) the Goods and accessories in conformance with the Project Specifications Plans.
 - Provide an Operation Maintenance Manual for the Goods in conformance with the Project Specifications Plans and assist the Owner and the Installer in the interpretation of such manual as is reasonably necessary for the operation and maintenance of the Goods.
- 1.2 Seller shall provide the Goods and perform the Special Services in full compliance with all applicable laws, codes and standards (both public and private), including but not limited to, the standards included and warranties and manufacturer's recommendations pertaining to individual items of equipment or systems.

2. Contract Price and Payment

- 2.1 The Contract Price is all inclusive and includes all costs for the design, manufacture, testing and delivery of the Goods and performance of the Special Services; all costs, including but not limited to, federal, state, and local taxes for materials and equipment, and labor furnished by Seller, its subcontractors, subconsultants, engineers, testing agents, and sellers or otherwise arising out of Seller's provision of the Goods or performance of the Special Services, including any increases in any such taxes during the term of this Agreement; and any duties, fees, and royalties imposed with respect to any materials and equipment, labor or services. The taxes covered hereby include (but are not limited to) occupational, sales, use, excise, unemployment, FICA, and income taxes, customs, duties, and any and all other taxes on any item or service that is part of the Goods or the Special Services, whether such taxes are normally included in the price of such item or service or are normally stated separately. Notwithstanding the foregoing, each party shall bear such state or local inventory, real property, personal property or fixtures taxes as may be properly assessed against it by applicable taxing authorities.

3. Seller's Representations and Warranties

In order to induce the Port to enter into this Agreement, Seller makes the following representations and warranties:

- 3.1 Seller is familiar with all federal, state and local laws and regulations (including, without limitation, all applicable standards described in the Specifications) that in any manner may affect

the cost, progress or performance of furnishing the Goods and Special Services, or which relate to any aspect of the means, methods, techniques, sequences or procedures of manufacturing and testing to be employed by Seller and safety precautions and programs incident thereto.

- 3.2 Seller has the expertise, design, manufacturing and testing capabilities, and financial capabilities to perform and complete all obligations.
- 3.3 Seller is and will be at all times be fully qualified and capable of providing the Goods and performing the Special Services in conformity with the requirements of the Procurement Documents, and possesses or will timely obtain all necessary licenses and/or permits required to provide the Goods and perform the Special Services.
- 3.4 The Goods required to be provided by Seller shall be delivered free and clear of all liens, rights of conditional sellers, encumbrances, and claims of laborers or materialman, and in conformance with the requirements in the Purchase Agreement. Title will pass upon delivery and not shipment.

4. Miscellaneous

- 4.1 In entering into a public contract or a subcontract to supply goods, services or materials pursuant to a public contract, the Seller or subcontractor offers and agrees to assign to the awarding body all rights, title and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. § 15) or under the Cartwright Act, (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the Port tenders final payment to the Seller, without further acknowledgment by the parties.
- 4.2 Port shall have the right to review Seller's design during all phases of design (including schematic, design development and fabrication) including, but not limited to, drawings, specifications, shop drawings, samples and submittals. Such review, approval and other action shall not relieve Seller of its responsibility for a complete design complying with the requirements of the Procurement Documents; but rather, such review shall be in furtherance of the Port's monitoring and accepting the design as developed and issued by the Seller, consistent with these Procurement Documents. Seller's responsibility to manufacture and test the Goods and perform the Special Services in conformance with the Purchase Agreement shall be absolute.



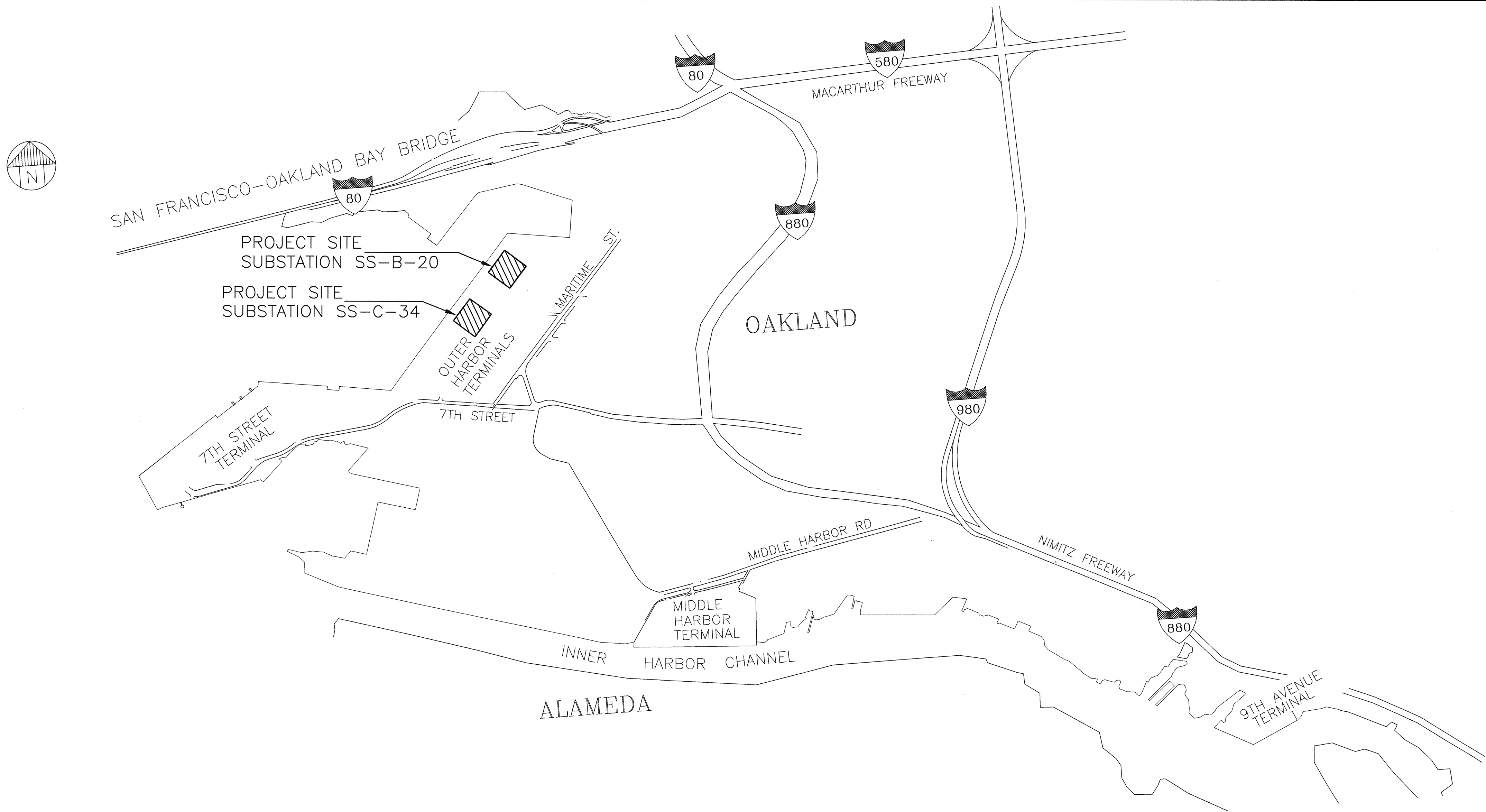
PORT OF OAKLAND

AA-4201 Plans

Bid No.: 16-17/08 – Medium Voltage Metal-Clad Switchgear

AA-4201 Plans

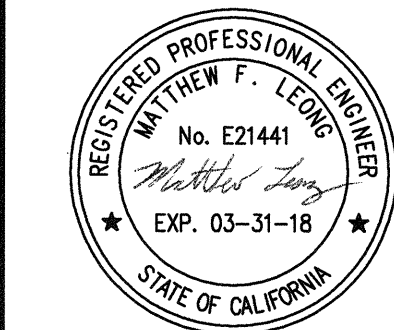
BERTH 23 AND BERTH 24
CRANE SWITCHGEAR REPLACEMENT
OUTER HARBOR
OAKLAND, CALIFORNIA



VICINITY MAP
NTS

INDEX OF SHEETS

DWG #	DESCRIPTION
E1	COVER SHEET AND SHEET INDEX
E2	SYMBOLS, LEGEND AND NOTES
E3	OUTER HARBOR SINGLE LINE DIAGRAM
E4	SITE PLANS SUBSTATION SS-B-20
E5	SITE PLANS SUBSTATION SS-C-34
E6	BERTH 23 CRANE SWGR SINGLE LINE
E7	BERTH 24 CRANE SWGR SINGLE LINE
E8	BERTH 23 CRANE SWGR ELEVATION
E9	BERTH 24 CRANE SWGR ELEVATION
E10	BERTH 23 CRANE SWGR SCHEMATICS
E11	BERTH 24 CRANE SWGR SCHEMATICS
E12	NAMEPLATE SCHEDULE



CAUTION: THIS PLAN MAY BE REDUCED

0 1" 2" ORIGINAL SCALE

NO.	REVISIONS	DATE	REV'D	APP'D
1	ISSUED FOR PERMITTING	03/29/16		
2	ISSUED FOR BIDDING	04/29/16		
3	ISSUED FOR CONSTRUCTION	05/29/16		
4	ISSUED FOR AS-BUILT	06/29/16		

REFERENCES:
PLANS
FIELD BOOKS
"PORT OF OAKLAND DATUM"
IS 3.20' BELOW N.G.V.D. '29
CAUTION:
CHECK TRACING FOR LATEST REVISIONS

DRAWN	M. LEONG
DESIGNED	M. LEONG E 21441 REG. ENGINEER NO.
CHECKED	W. YEOMAN E 17698 REG. ENGINEER NO.

PORT OF OAKLAND
530 WATER ST. OAKLAND, CALIFORNIA

CHIEF ENGINEER	C 43841
APPROVED	42009
RECOMMENDED	E 17400

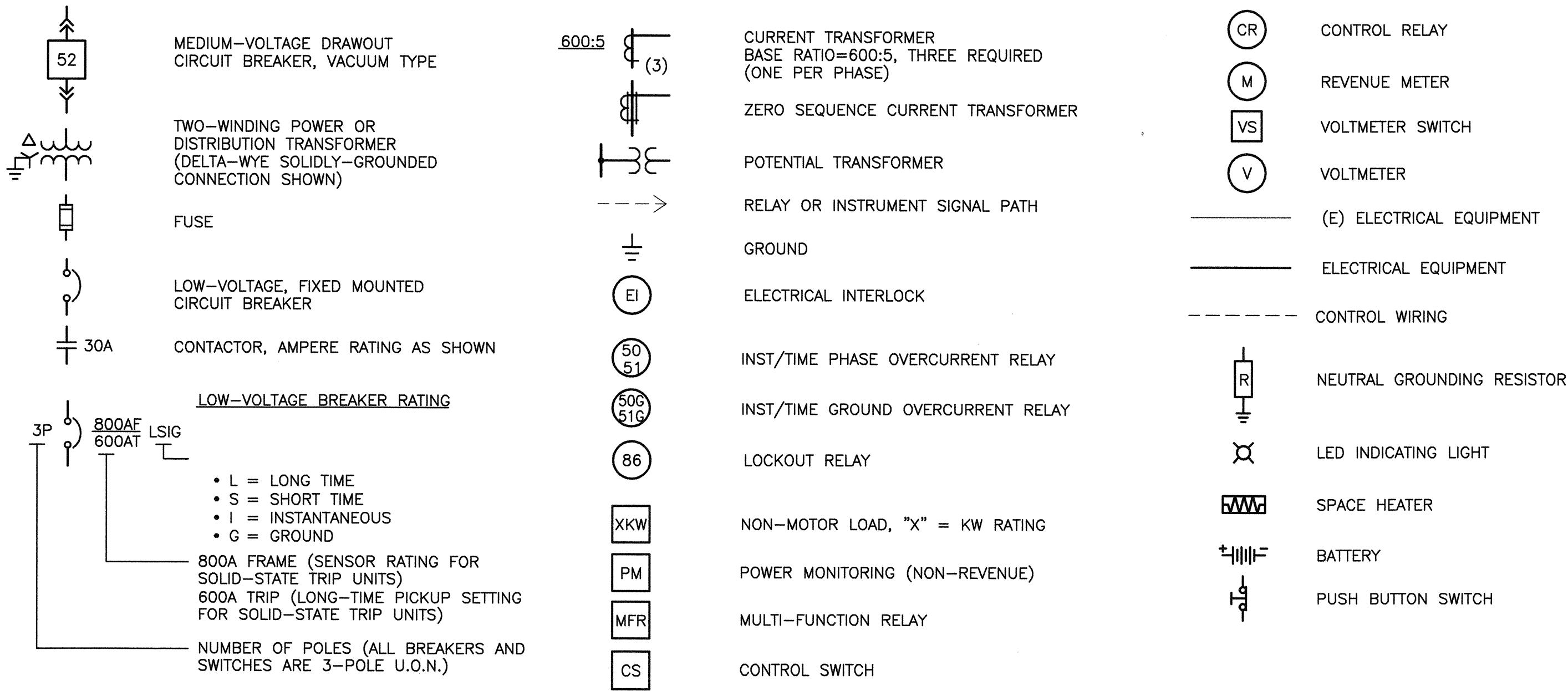
OUTER HARBOR
BERTH 23 AND BERTH 24
CRANE SWITCHGEAR REPLACEMENT
COVER SHEET AND SHEET INDEX

DATE:	10-31-16
SCALE:	NONE
SHEET:	1 OF 12 SHEETS
E1	AA-4201

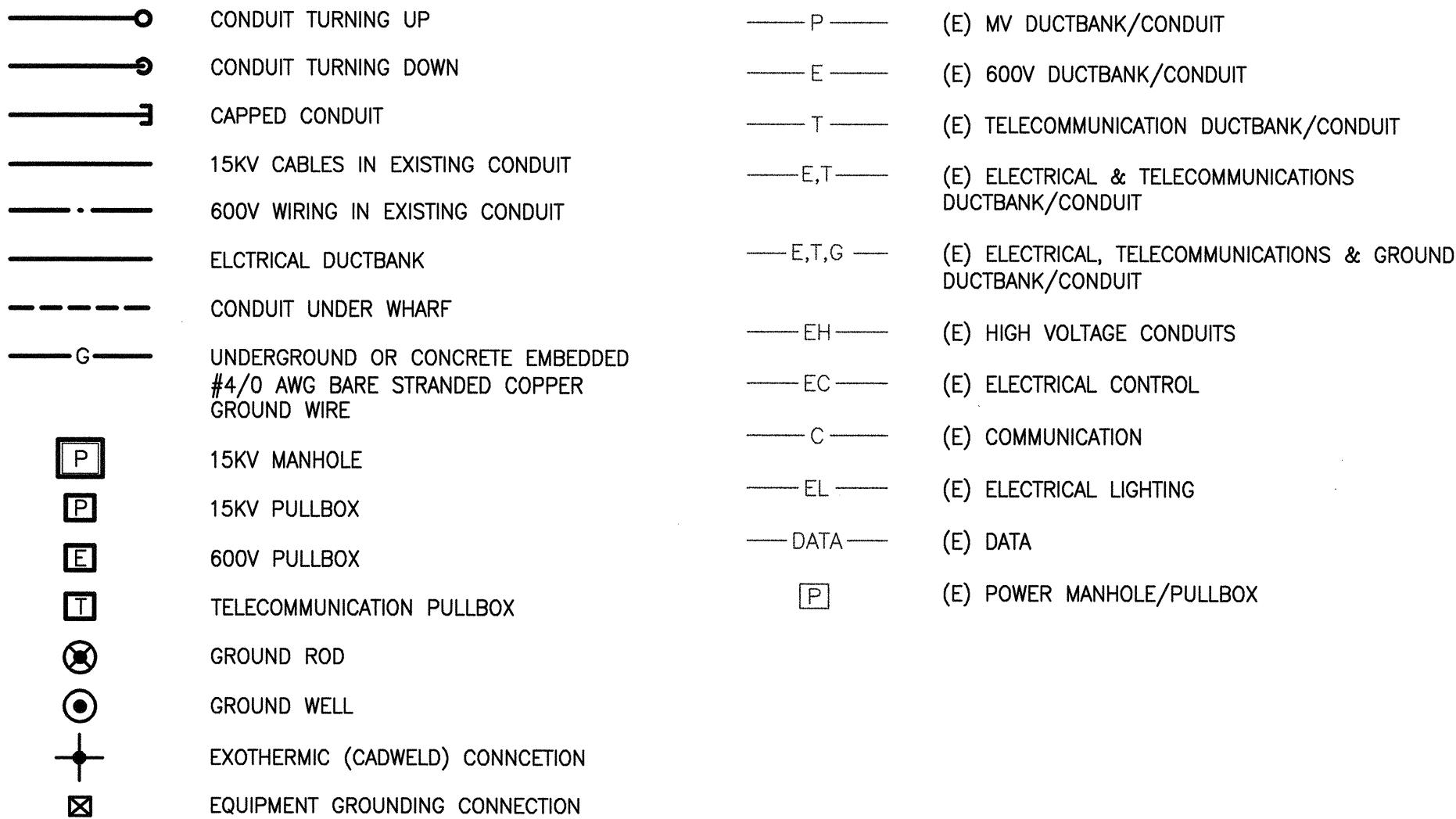
10-31-16 13:14:00 N:\PDDM2\Projects_2\B 20-26\ZZZM000027 - Berth 20-24 Electrical Rehabilitation\4-Design\CAD\Berth 23 and Berth 24 Crane Switchgear Replacement.dwg Printed by mleong

SYMBOLS & LEGENDS

SINGLE-LINE DIAGRAMS AND SCHEMATICS



PLANS



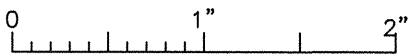
ABBREVIATIONS

A	AMPERE OR AMBER	MIN	MINIMUM
AA	AIR INSULATED AIR COOLED	MPC	MINI-POWER CENTER
AC	ALTERNATING CURRENT	MR	MULTI-RATIO
AFF	ABOVE FINISHED FLOOR	MTG	MOUNTING
AFG	ABOVE FINISHED GRADE	MV	MEDIUM VOLTAGE
AL	ALUMINUM	MVA	MEGAVOLT AMPERE
AM	AMMETER	NC	NORMALLY-CLOSED
AS	AMMETER SWITCH	NEC	NEGATIVE
ATC	AIR TERMINAL CHAMBER	NEUT	NEUTRAL
AUX	AUXILIARY	NGR	NOT IN CONTRACT
AWG	AMERICAN WIRE GAUGE	NO	NEUTRAL GROUNDING RESISTOR
BAT	BATTERY	NTS	NORMALLY-OPEN
BKR	BREAKER	OA	NOT TO SCALE
C	CONDUCTOR OR CONDUIT	OC	BASE TRANSFORMER RATING
CAT5	CATEGORY 5 CABLE	OL	OVERCURRENT
CB	CIRCUIT BREAKER	O.D.	OUTSIDE DIAMETER
CDF	CONTROLLED DENSITY FILLED	OL	OVERLOAD ELEMENT
CHGR	CHARGER	P	POLE
CIS	CRANE INTERCHANGE SWITCHGEAR	P2C	PERMISSIVE TO CLOSED
CKT	CIRCUIT	PB	PULLBOX OR PANELBOARD
C.O.	CONDUIT ONLY	PG&E	PACIFIC GAS AND ELECTRIC
COMM	COMMUNICATION	PH	PHASE OR PULLHOLE
CP	CONTROL PANEL	PLC	PROGRAMMABLE LOGIC CONTROLLER
CPT	CONTROL POWER TRANSFORMER	PM	POWER MONITOR
CR	CONTROL RELAY	PNL	PANEL
CS	CONTROL SWITCH	POS	POSITIVE
CT	CURRENT TRANSFORMER	PRI	PRIMARY
CTD	CAPACITOR TRIP DEVICE	PS	PUSHBUTTON STATION
DC	DIRECT CURRENT	PT	POTENTIAL TRANSFORMER
DISC	DISCONNECT	PVC	POLYVINYL CHLORIDE
DR	DOUBLE-RATIO	PWR	POWER
DRCT	DUAL-RATIO CURRENT TRANSFORMER	REC	RECEPTACLE
DIA	DIAMETER	REQD	REQUIRED
DWG(S)	DRAWING(S)	RGS	RIGID GALVANIZED STEEL (CONDUIT)
(E)	EXISTING	SCH	SCHEDULE
EA	EACH	SEC	SECONDARY
ELEC	ELECTRICAL	SHT	SHEET
EMER	EMERGENCY	SN	SOLID NEUTRAL
E-STOP	EMERGENCY STOP	SP	SPARE
FDN	FOUNDATION	SPO	SHORE POWER OUTLET
FDR	FEEDER	ST	SINGLE-THROW OR SHUNT TRIP
FE	FIRE EXTINGUISHER	STA	STATION
FLA	FULL LOAD AMPERES	STL	STEEL
FM	FREQUENCY METER	SUBSTA	SUBSTATION
FT	FEET	SW	SWITCH
FUT	FUTURE	SWGR	SWITCHGEAR
G	GREEN	SYNC	SYNCHRONOUS
GALV	GALVANIZED		
GFI	GROUND FAULT CIRCUIT INTERRUPTER	T	TELECOMMUNICATIONS
GND	GROUND	TB	TERMINAL BOX OR TERMINAL BLOCK
GPS	GLOBAL POSITIONING SYSTEM	TDOD	TIME DELAY ON DE-ENERGIZATION
HGR	HANGER	TDOE	TIME DELAY ON ENERGIZATION
HOA	HAND-OFF-AUTOMATIC	TEL	TELEPHONE/TELECOMMUNICATIONS
HMI	HUMAN MACHINE INTERFACE	TERM	TERMINAL
HTR	HEATER	TOC	TOP OF CONCRETE
HV	HIGH-VOLTAGE	TSP	TWISTED-SHIELDED PAIR
HZ	HERTZ (CYCLES PER SECOND)	(TYP)	TYPICAL
ID	INSIDE DIAMETER	UG	UNDERGROUND
IN	INCH	U.O.N.	UNLESS OTHERWISE NOTED
JB	JUNCTION BOX	UTP	UNSHIELDED TWISTED PAIR
KA	KILOAMP	UV	UNDER VOLTAGE
KCMIL	THOUSAND CIRCULAR MILS	V	VOLT
KV	KILOVOLT	VA	VOLT AMPERE
KVA	KILOVOLT AMPERE	VAC	VACUUM
KVAR	KILOVOLT AMPERE REACTIVE	VM	VOLTMETER
KW	KILOWATT	VS	VOLTMETER SWITCH
LED	LIGHT EMITTING DIODE	W	WATT
LO	LOCK OUT	WP	WEATHERPROOF
LV	LOW-VOLTAGE	XFMR	TRANSFORMER
MAX	MAXIMUM		
MCB	MAIN CIRCUIT BREAKER		
MCCB	MOLDED CASE CIRCUIT BREAKER		
MM	THOUSAND CIRCULAR MILS		
MCP	MOTOR CIRCUIT PROTECTOR		
MECH	MECHANICAL		
MFR	MULTI-FUNCTION RELAY		
MH	MANHOLE		

GENERAL NOTES

- GENERAL NOTES APPLY TO ALL DRAWINGS
1. SWITCHGEAR MANUFACTURER SHALL BE RESPONSIBLE FOR THE FINAL VERIFICATION OF EXISTING CONDITIONS AND COORDINATION OF HIS WORK WITH THE EXISTING CONDITIONS. ALL DISCREPANCIES OR POTENTIAL PROBLEMS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO FABRICATION OF SWITCHGEAR.
 2. IN CASE OF DIFFERENCE BETWEEN CODES, SPECIFICATIONS, STATE LAWS, LOCAL ORDINANCES, INDUSTRY STANDARDS, UTILITY COMPANY REGULATIONS, AND CONTRACT DOCUMENTS, THE MOST STRINGENT SHALL GOVERN. PROMPTLY NOTIFY THE PORT IN WRITING OF ANY SUCH DIFFERENCE.
 3. ALL MATERIALS AND EQUIPMENT FURNISHED SHALL BE NEW, FREE FROM DEFECTS AND SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE BY THE PORT. SHOULD ANY PROBLEMS DEVELOP DURING THE PERIOD DUE TO FAULTY WORKMANSHIP OR MATERIAL AND LABOR IT SHALL BE CORRECTED WITHOUT COST TO THE PORT.
 4. ELECTRICAL EQUIPMENT DIMENSIONS AND FEATURES SHOWN ARE REPRESENTATIVE OF SPECIFIED EQUIPMENT BUT VARY ACCORDING TO MANUFACTURER. IN GENERAL, THE DIMENSIONS SHOWN INDICATE THE LARGEST ANTICIPATED DIMENSIONS. SWITCHGEAR MANUFACTURER SHALL COORDINATE EQUIPMENT DIMENSIONS IN ORDER TO STAY WITHIN THE FOOTPRINT SHOWN. IF THE SPECIFIED FOOTPRINT MUST BE EXCEEDED, NOTIFY ENGINEER.
 5. COORDINATE ANY SITE VISITS FOR FIELD MEASUREMENTS WITH ENGINEER. PROVIDE 2 WEEKS NOTICE PRIOR TO VISIT.

CAUTION: THIS PLAN MAY BE REDUCED



ORIGINAL SCALE

REFERENCES:

PLANS	NO.	REVISIONS	DATE	REV'D	APP'D
FIELD BOOKS					
"PORT OF OAKLAND DATUM" IS 3.20' BELOW N.G.V.D. '29					
CAUTION: CHECK TRACING FOR LATEST REVISIONS					

DRAWN	M. LEONG
DESIGNED	M. LEONG E 21441 REG. ENGINEER NO.
CHECKED	W. YEOMAN E 17698 REG. ENGINEER NO.



CHIEF ENGINEER	C 43841
APPROVED	C 42009 REG. ENGINEER NO.
RECOMMENDED	E 17400 REG. ENGINEER NO.

OUTER HARBOR

**BERTH 23 AND BERTH 24
CRANE SWITCHGEAR REPLACEMENT**

SYMBOLS, LEGEND AND NOTES



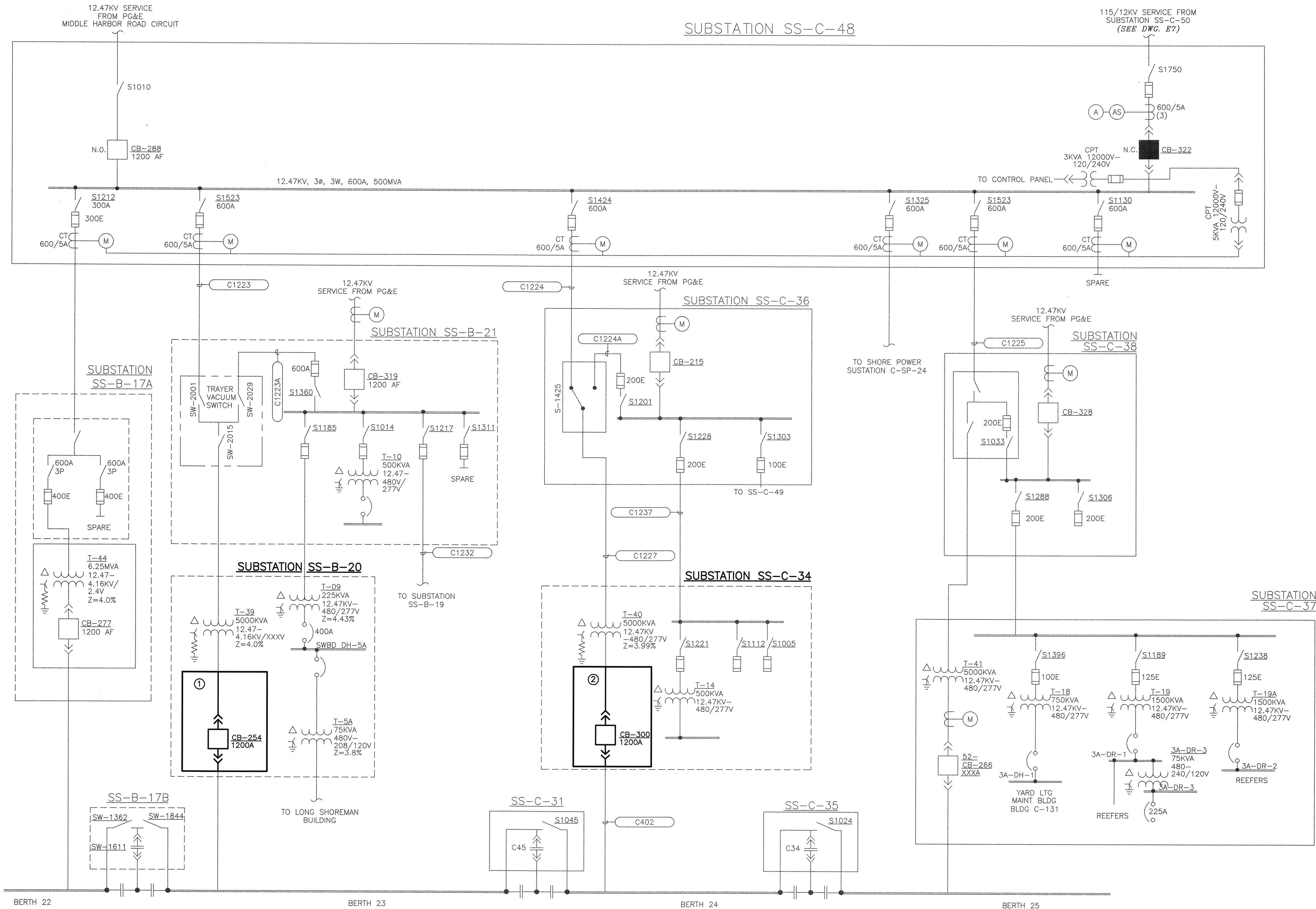
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SCALE: NONE

SHEET: 2 OF 12 SHEETS

E2 AA-4201

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DRAWING GENERAL NOTES

1. FUSE AND BREAKER SIZING, RELAYING, METERING AND CONTROLS ARE OMITTED FOR CLARITY. SEE SPECIFIC EQUIPMENT SINGLE LINE DIAGRAMS FOR DETAILS.

SHEET NOTES

- ① REFER TO THE RESPECTIVE PLANS AND SCHEMATICS FOR BERTH 23 CRANE SWITCHGEAR LINEUP.
② REFER TO THE RESPECTIVE PLANS AND SCHEMATICS FOR BERTH 24 CRANE SWITCHGEAR LINEUP.

REFERENCES:

PLANS
FIELD BOOKS
"PORT OF OAKLAND DATUM" IS 3.20' BELOW N.G.V.D. "29"
CAUTION: CHECK TRACING FOR LATEST REVISIONS

NO.	REVISIONS	DATE	REV'D	APP'D

DRAWN	M. LEONG
DESIGNED	M. LEONG E 21441 REG. ENGINEER NO.
CHECKED	W. YEOMAN E 17698 REG. ENGINEER NO.

PORT OF OAKLAND
530 WATER ST. OAKLAND, CALIFORNIA

CAUTION: THIS PLAN MAY BE REDUCED

0 1" 2" ORIGINAL SCALE

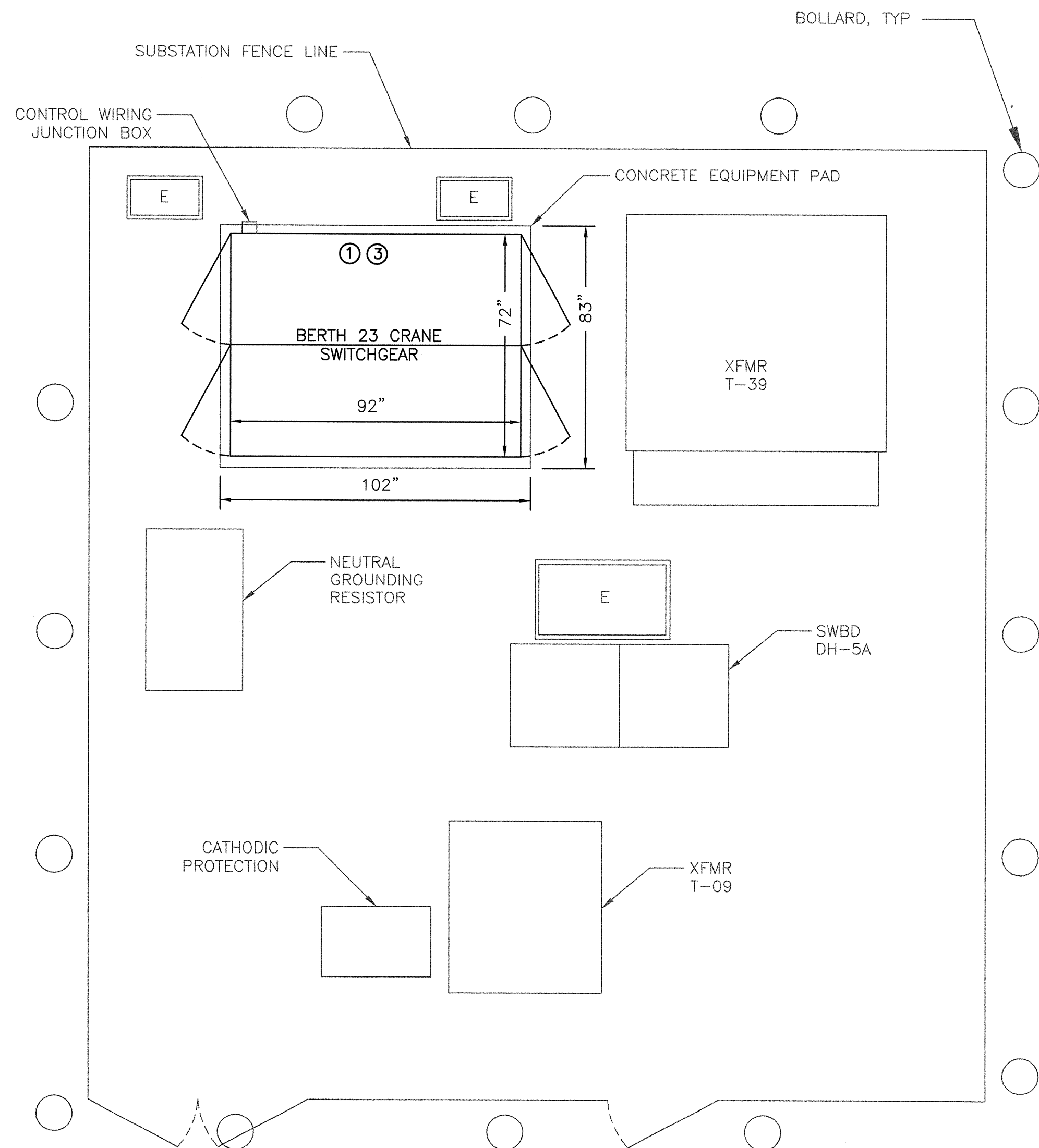
CHIEF ENGINEER	Chris Chan E 43841 REG. ENGINEER NO.
APPROVED	Matthew Leong E 42009 REG. ENGINEER NO.
RECOMMENDED	Matthew Leong E 17400 REG. ENGINEER NO.

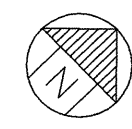
OUTER HARBOR
BERTH 23 AND BERTH 24 CRANE SWITCHGEAR REPLACEMENT
OUTER HARBOR SINGLE LINE DIAGRAM

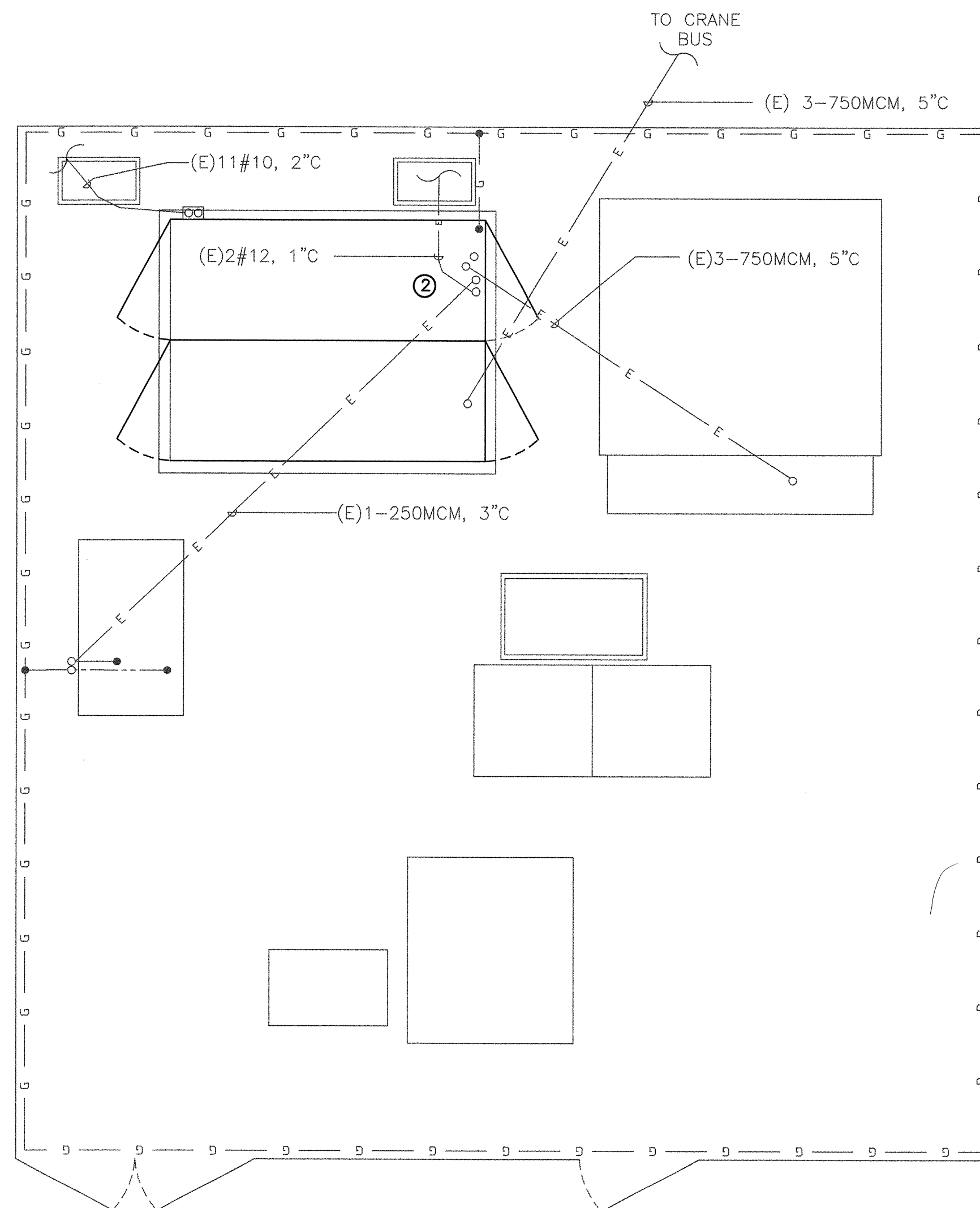
REGISTERED PROFESSIONAL ENGINEER
MATTHEW F. LEONG
No. E21441
EXP. 03-31-18
STATE OF CALIFORNIA

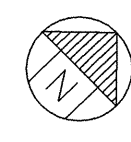
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E3	AA-4201

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 **SUBSTATION SS-B-20 EQUIPMENT LAYOUT**
NTS



 **SUBSTATION SS-B-20 CONDUIT LAYOUT**
NTS

DRAWING GENERAL NOTES

1. THE DIMENSIONS SHOWN INDICATE THE LARGEST ANTICIPATED DIMENSIONS. SWITCHGEAR MANUFACTURER SHALL COORDINATE EQUIPMENT DIMENSIONS IN ORDER TO STAY WITHIN THE FOOTPRINT SHOWN AND NOT CONFLICT WITH EXISTING INFRASTRUCTURE.
2. ALL UNDERGROUND UTILITIES NOT RELEVANT TO BERTH 23 CRANE SWITCHGEAR ARE OMITTED FOR CLARITY.

SHEET NOTES

- ① PROVIDE (N) SWITCHGEAR. REFER TO SINGLE LINE DIAGRAM, SCHEMATICS AND SPECIFICATIONS.
- ② (E) CONDUIT STUB-UP LOCATIONS SHOWN ARE APPROXIMATE. SWITCHGEAR MANUFACTURER SHALL VERIFY AND SIZE CABLE ENTRY BOTTOM COMPARTMENT APPROPRIATELY.
- ③ SWITCHGEAR MANUFACTURER SHALL COORDINATE EQUIPMENT DIMENSIONS IN ORDER TO STAY WITHIN THE (E) EQUIPMENT PAD FOOTPRINT AND NOT CONFLICT WITH EXISTING INFRASTRUCTURE.

REFERENCES:	
PLANS	
FIELD BOOKS	
DATE	"PORT OF OAKLAND DATUM"
	IS 3.20' BELOW N.G.V.D. '29
CAUTION:	
CHECK TRACING FOR LATEST REVISIONS	

NO.	REVISIONS	DATE	REV'D	APP'D

DRAWN	M. LEONG
DESIGNED	M. LEONG E 21441 REG. ENGINEER NO.
CHECKED	W. YEOMAN E 17698 REG. ENGINEER NO.

PORT OF OAKLAND
 530 WATER ST. OAKLAND, CALIFORNIA

CAUTION: THIS PLAN MAY BE REDUCED

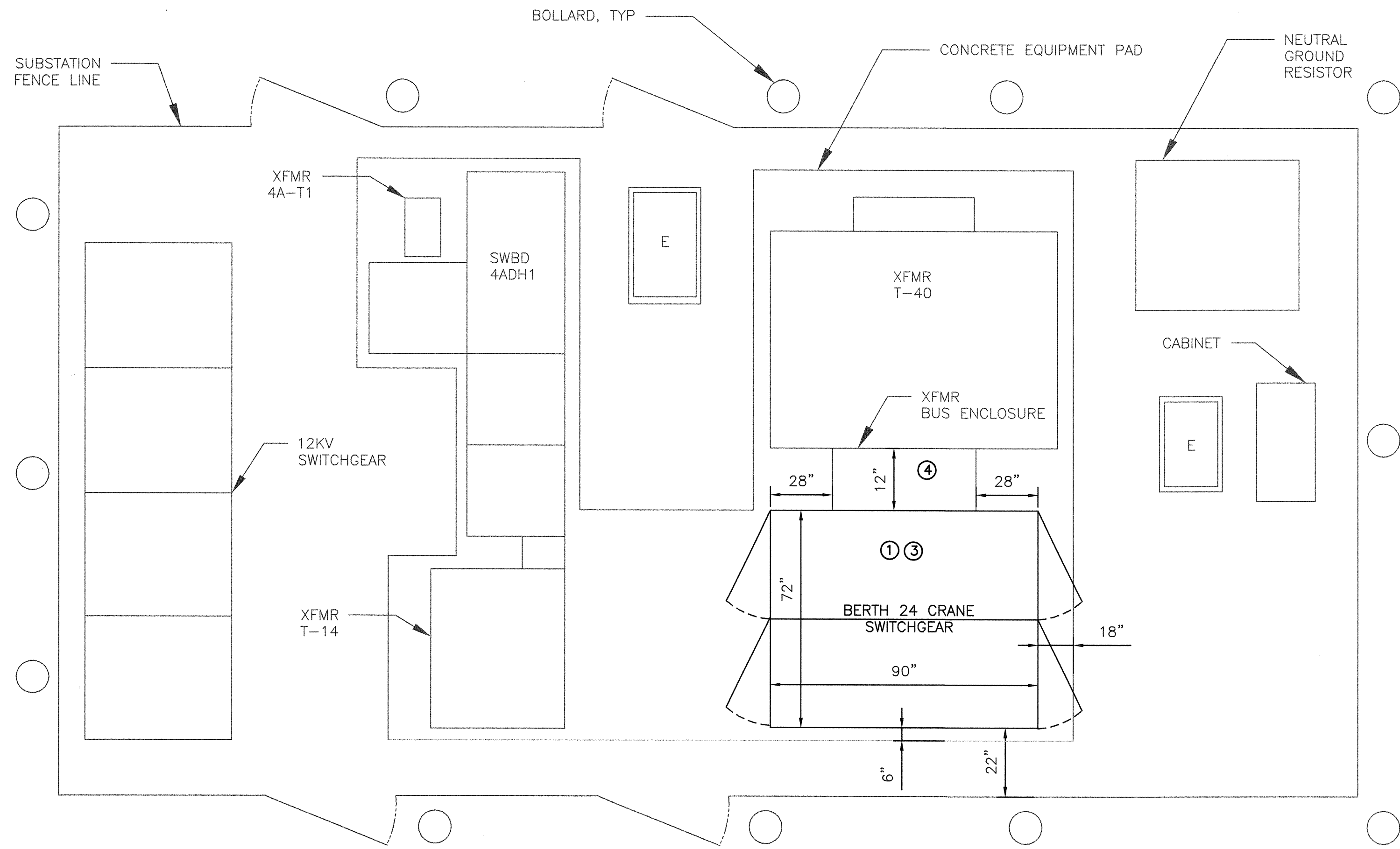
0 1" 2" ORIGINAL SCALE

CHIEF ENGINEER	Chris Chan C 43841 REG. ENGINEER NO.
APPROVED	Matthew F. Leong E 21441 REG. ENGINEER NO.
RECOMMENDED	Matthew F. Leong E 17400 REG. ENGINEER NO.

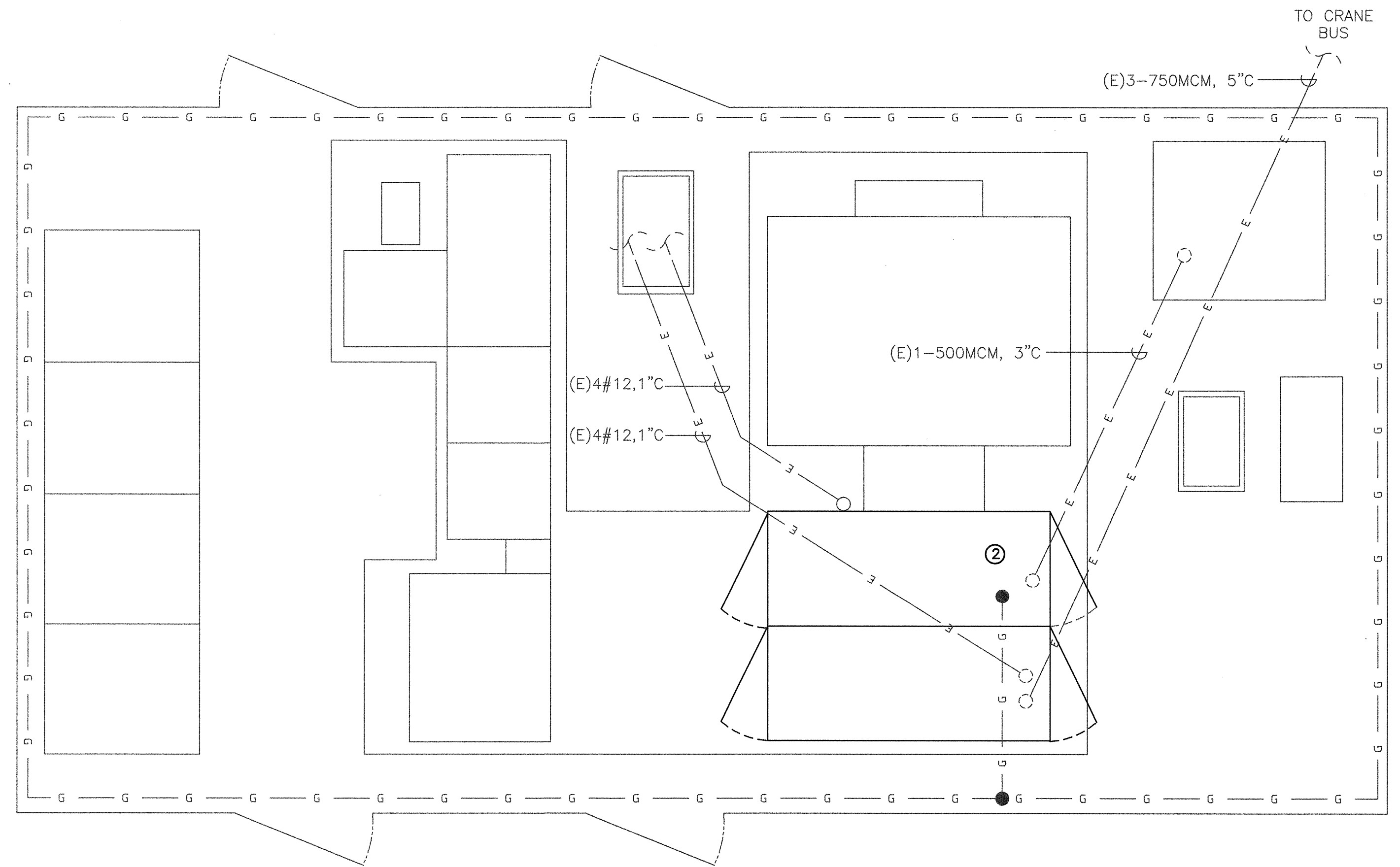
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BERTH 23 AND BERTH 24 CRANE SWITCHGEAR REPLACEMENT		SCALE: NONE
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E4	AA-4201	



10-31-16 9:50:05 N:\PDM2\Projects_2\B 20-26\ZZM000027 - Berth 20-24 Electrical Rehabilitation\4-Design\CAD\Berth 23 and Berth 24 Crane Switchgear Replacement.dwg Printed by mlong



SUBSTATION SS-C-34 EQUIPMENT LAYOUT
NTS



SUBSTATION SS-C-34 CONDUIT LAYOUT
NTS

DRAWING GENERAL NOTES

1. THE DIMENSIONS SHOWN INDICATE THE LARGEST ANTICIPATED DIMENSIONS. SWITCHGEAR MANUFACTURER SHALL COORDINATE EQUIPMENT DIMENSIONS IN ORDER TO STAY WITHIN THE FOOTPRINT SHOWN AND NOT CONFLICT WITH EXISTING INFRASTRUCTURE.
2. ALL UNDERGROUND UTILITIES NOT RELEVANT TO BERTH 24 CRANE SWITCHGEAR ARE OMITTED FOR CLARITY.

SHEET NOTES

- 1 PROVIDE (N) SWITCHGEAR. REFER TO SINGLE LINE DIAGRAM, SCHEMATICS, AND SPECIFICATIONS.
- 2 (E) CONDUIT STUB-UP LOCATIONS SHOWN ARE APPROXIMATE. SWITCHGEAR MANUFACTURER SHALL VERIFY AND SIZE CABLE ENTRY BOTTOM COMPARTMENT APPROPRIATELY.
- 3 SWITCHGEAR MANUFACTURER SHALL COORDINATE EQUIPMENT DIMENSIONS IN ORDER TO STAY WITHIN THE (E) EQUIPMENT PAD FOOTPRINT AND NOT CONFLICT WITH EXISTING INFRASTRUCTURE. THE (N) SWITCHGEAR SHALL BE COMPATIBLE WITH (E) XFMR T-40 SECONDARY BUS CONNECTIONS AND THROAT ENCLOSURE. NO MODIFICATIONS TO (E) XFMR T-40 ENCLOSURES SHALL BE REQUIRED.
- 4 SWITCHGEAR ENCLOSURE SHALL BE FABRICATED TO COUPLE DIRECTLY WITH (E) BUS THROAT AND PROVIDE GASKETED SEAL. COORDINATE ANY SITE VISITS REQUIRED FOR FIELD MEASUREMENTS WITH ENGINEER.

CAUTION: THIS PLAN MAY BE REDUCED

0 1" 2" ORIGINAL SCALE

REFERENCES:
PLANS
FIELD BOOKS

"PORT OF OAKLAND DATUM"
IS 3.20' BELOW N.G.V.D., '29

CAUTION:
CHECK TRACING FOR LATEST REVISIONS

NO.	REVISIONS	DATE	REV'D	APP'D

DRAWN M. LEONG
DESIGNED M. LEONG E 21441
REG. ENGINEER NO.
E 17698
CHECKED W. YEOMAN
REG. ENGINEER NO.

PORT OF OAKLAND
530 WATER ST. OAKLAND, CALIFORNIA

CHIEF ENGINEER
APPROVED
RECOMMENDED
C 43841
REG. ENGINEER NO.
42009
REG. ENGINEER NO.
E 17400
REG. ENGINEER NO.

OUTER HARBOR
BERTH 23 AND BERTH 24
CRANE SWITCHGEAR REPLACEMENT
SITE PLANS SUBSTATION SS-C-34



DATE: 10-31-16
SCALE: NONE
SHEET: 5 OF 12 SHEETS
E5 AA-4201

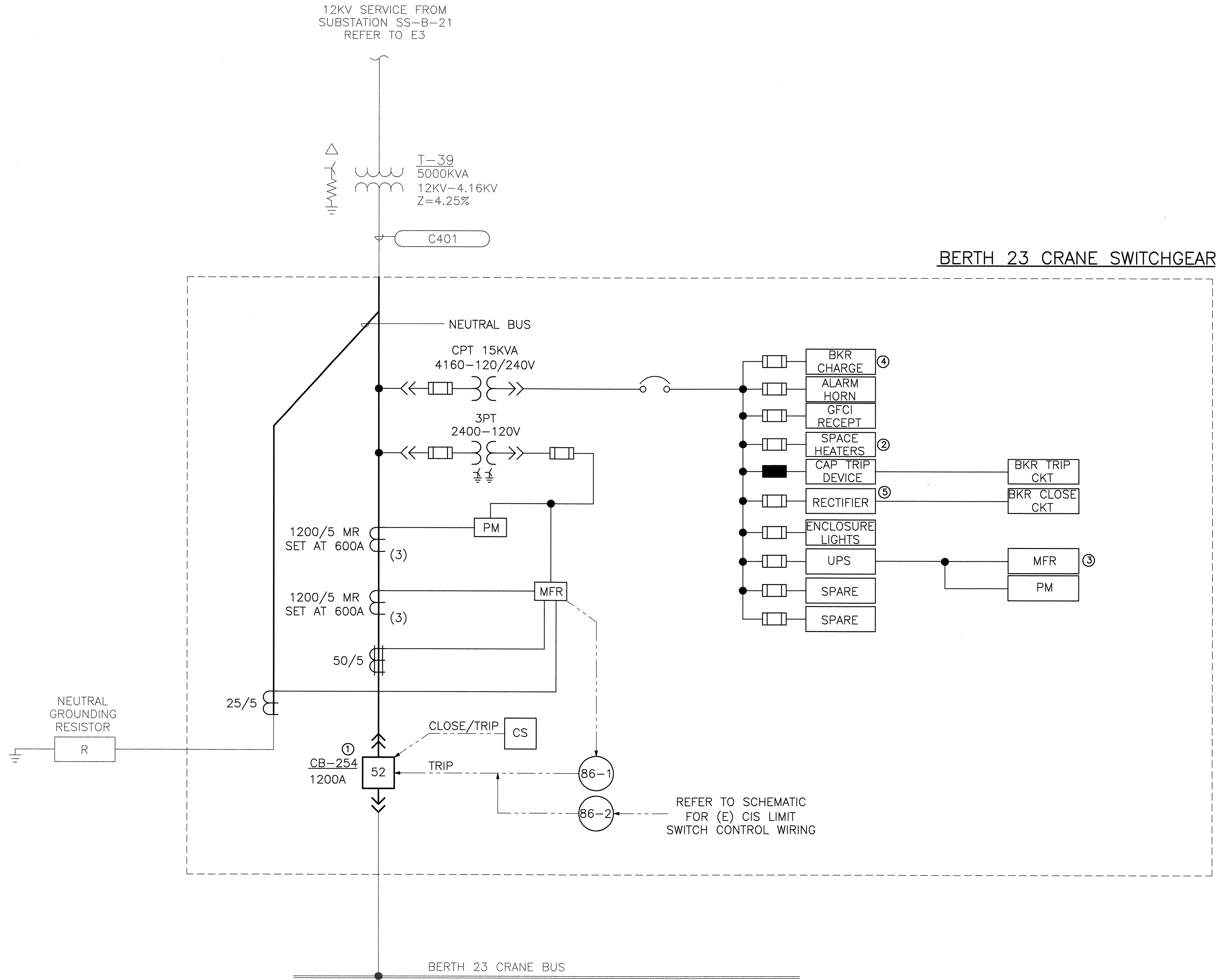
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DRAWING GENERAL NOTES

1. REFER TO SPECIFICATIONS FOR SWITCHGEAR REQUIREMENTS.

SHEET NOTES

- ① CIRCUIT BREAKER SHALL BE SQUARE D, VR, 15KV, 1200A, 125VDC CONTROL, P/N VR-15050-12.
- ② SPACE HEATER, WATTAGE & VOLTAGE AS SIZED BY SWITCHGEAR MANUFACTURER. PROVIDE AMMETER AND TEST PUSHBUTTON.
- ③ GENERAL ELECTRIC F60 RELAY. REFER TO SPECIFICATIONS.
- ④ CIRCUIT BREAKER CHARGING MOTOR SHALL BE RATED FOR INPUT VOLTAGE OF 125VDC/120VAC
- ⑤ 120VAC-125VDC, 300W RECTIFIER FOR BREAKER CLOSE CIRCUIT. REFER TO SPECIFICATIONS.



CAUTION: THIS PLAN MAY BE REDUCED

0 1" 2" ORIGINAL SCALE

REFERENCES:

PLANS
FIELD BOOKS
"PORT OF OAKLAND DATUM"
IS 3.20' BELOW N.G.V.D. '29

CAUTION:
CHECK TRACING FOR LATEST REVISIONS

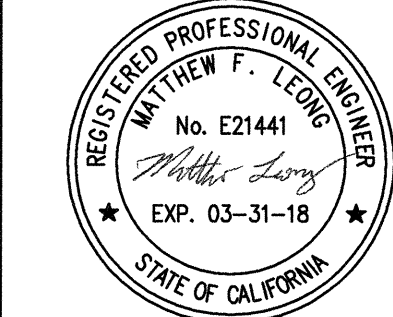
NO.	REVISIONS	DATE	REV'D	APP'D

DRAWN M. LEONG
DESIGNED M. LEONG E 21441
REG. ENGINEER NO. E 17698
CHECKED W. YEOMAN
REG. ENGINEER NO.

PORT OF OAKLAND
530 WATER ST. OAKLAND, CALIFORNIA

CHIEF ENGINEER
APPROVED
RECOMMENDED

OUTER HARBOR
BERTH 23 AND BERTH 24
CRANE SWITCHGEAR REPLACEMENT
BERTH 23 CRANE SWGR SINGLE LINE



DATE: 10-31-16
SCALE: NONE
SHEET: 6 OF 12 SHEETS
E6 AA-4201

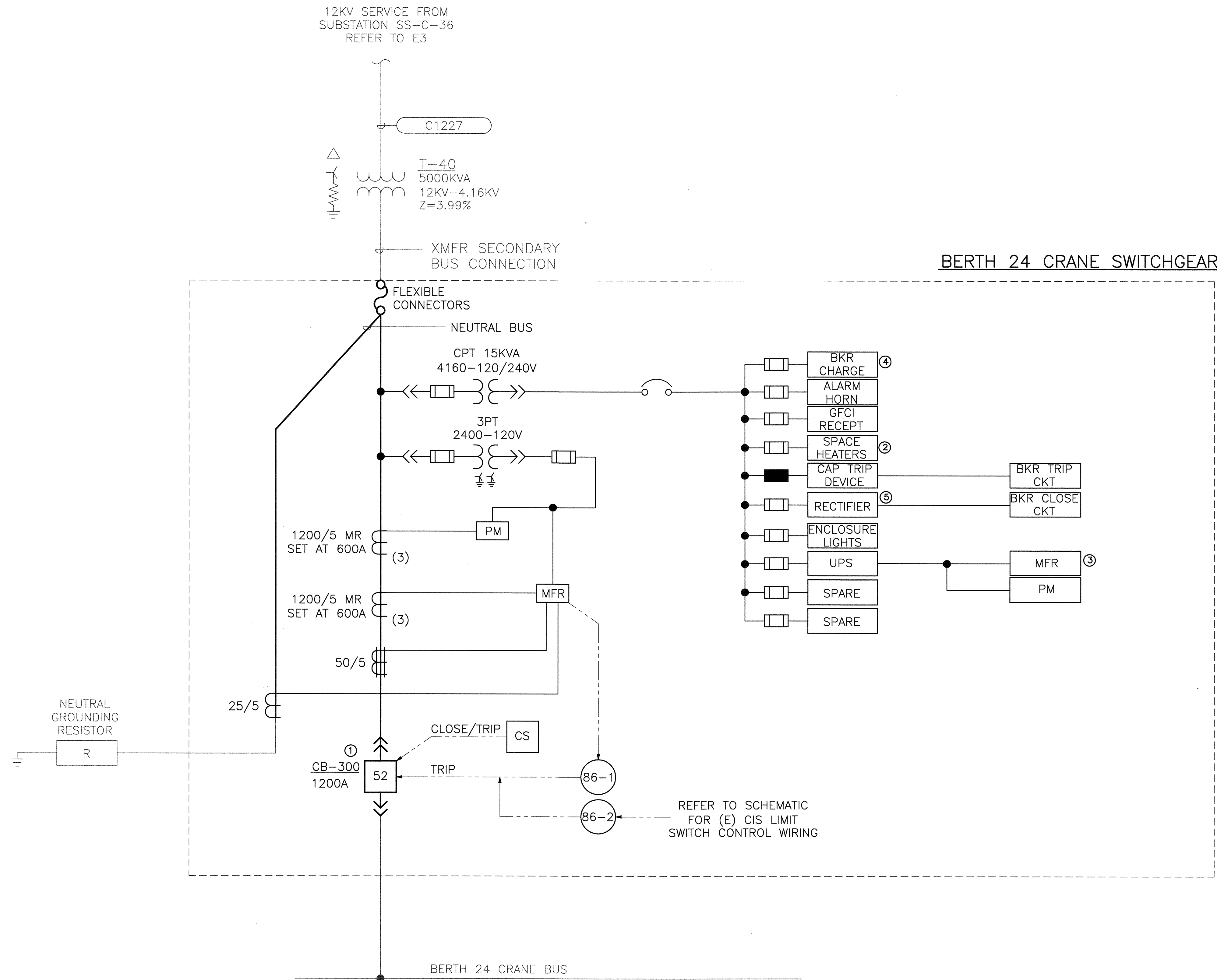
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DRAWING GENERAL NOTES

1. REFER TO SPECIFICATIONS FOR SWITCHGEAR REQUIREMENTS.

SHEET NOTES

- ① CIRCUIT BREAKER SHALL BE SQUARE D, VR, 15KV, 1200A, 125VDC CONTROL, P/N VR-15050-12.
- ② SPACE HEATER, WATTAGE & VOLTAGE AS SIZED BY SWITCHGEAR MANUFACTURER. PROVIDE AMMETER AND TEST PUSHBUTTON.
- ③ GENERAL ELECTRIC F60 RELAY. REFER TO SPECIFICATIONS.
- ④ CIRCUIT BREAKER CHARGING MOTOR SHALL BE RATED FOR INPUT VOLTAGE OF 125VDC/120VAC
- ⑤ 120VAC-125VDC, 300W RECTIFIER FOR BREAKER CLOSE CIRCUIT. REFER TO SPECIFICATIONS.



CAUTION: THIS PLAN MAY BE REDUCED

0 1" 2" ORIGINAL SCALE

REFERENCES:

PLANS
FIELD BOOKS
"PORT OF OAKLAND DATUM"
IS 3.20' BELOW N.G.V.D. '29

CAUTION:
CHECK TRACING FOR LATEST REVISIONS

NO.	REVISIONS	DATE	REV'D	APP'D

DRAWN M. LEONG
DESIGNED M. LEONG E 21441
CHECKED W. YEOMAN E 17698

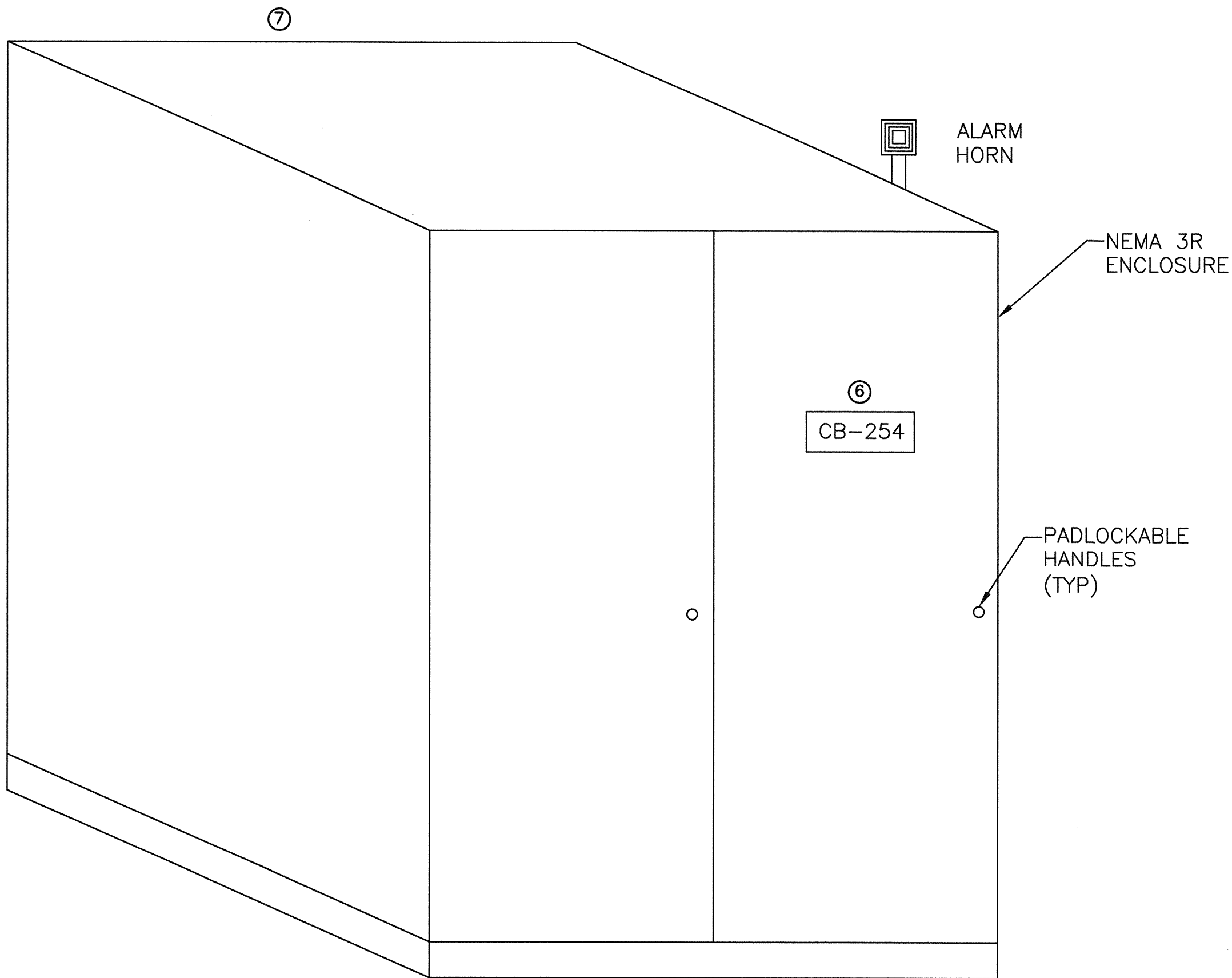
PORT OF OAKLAND
530 WATER ST. OAKLAND, CALIFORNIA

CHIEF ENGINEER
APPROVED
RECOMMENDED

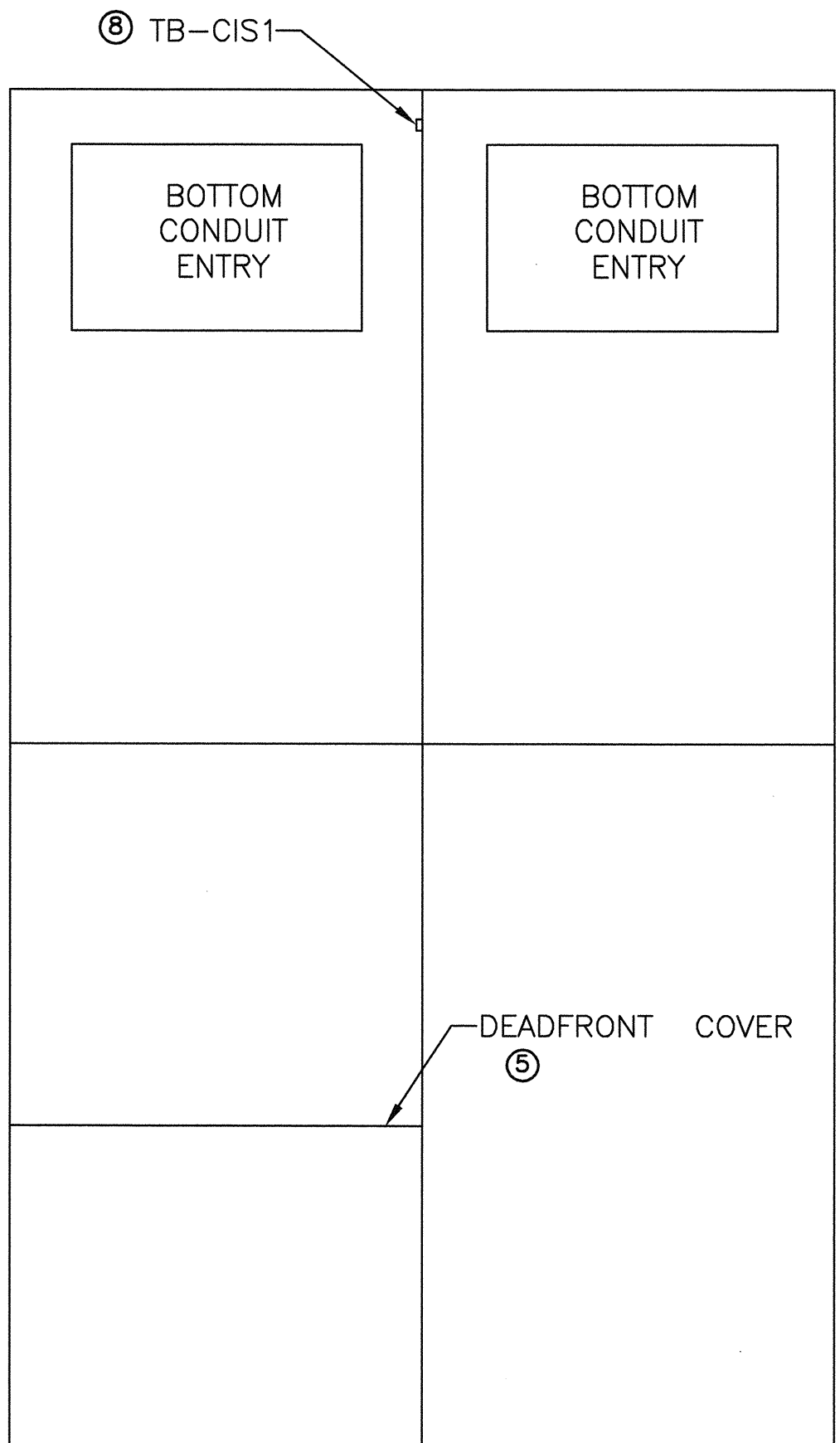
OUTER HARBOR	DATE: 10-31-16
BERTH 23 AND BERTH 24 CRANE SWITCHGEAR REPLACEMENT	SCALE: NONE
BERTH 24 CRANE SWGR SINGLE LINE	SHEET: 7 OF 12 SHEETS
E7	AA-4201



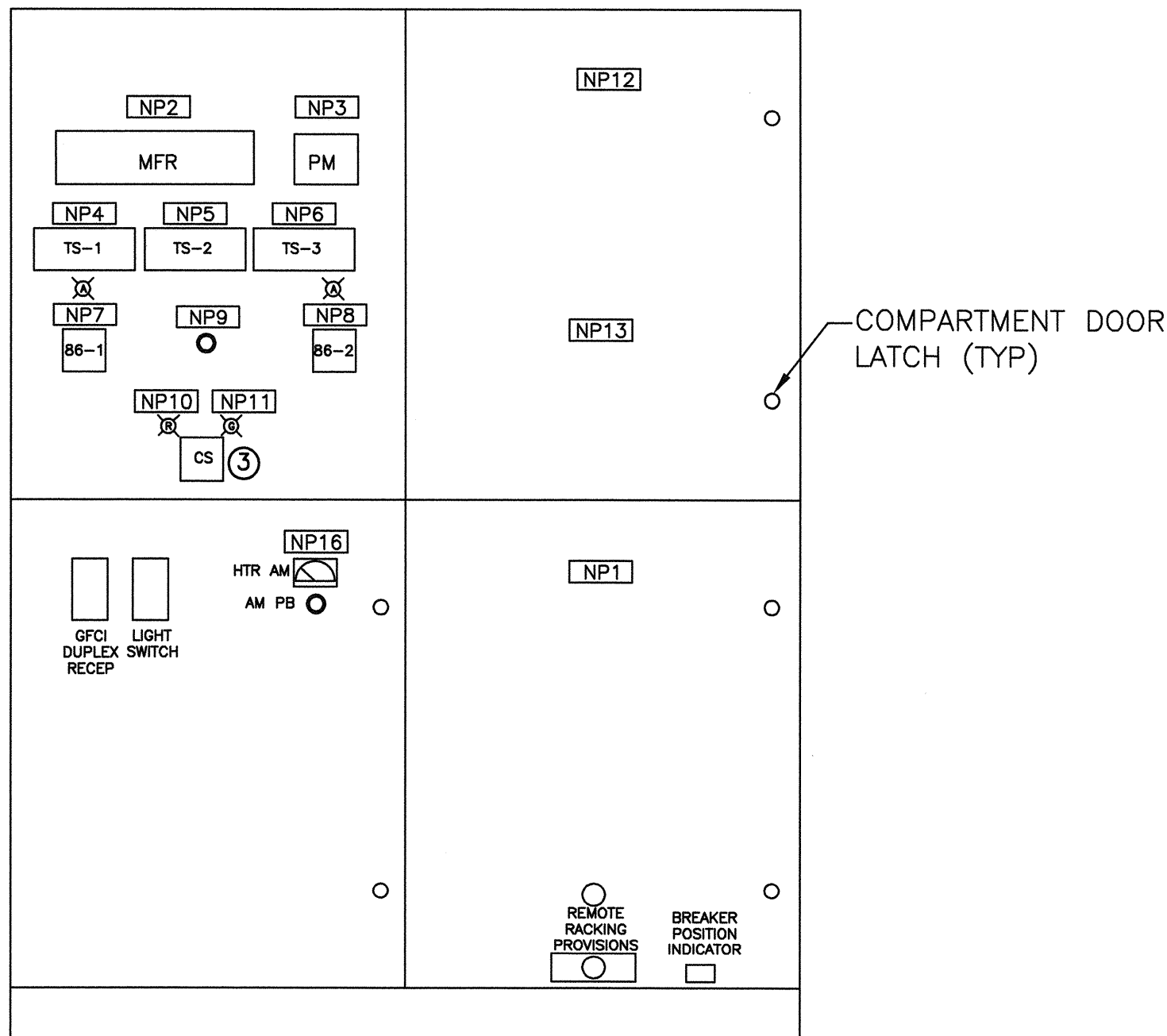
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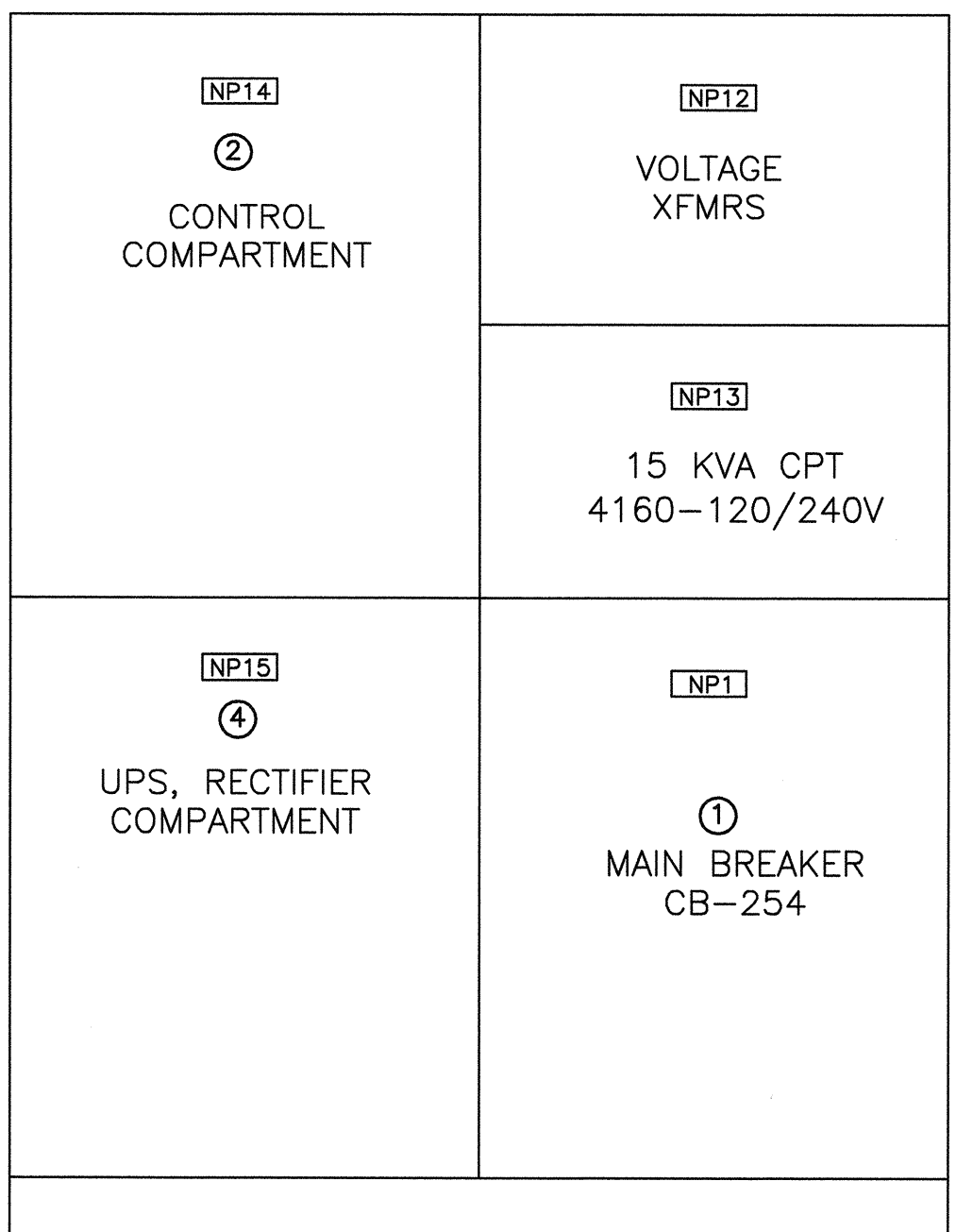
BERTH 23 CRANE SWGR EXTERIOR VIEW
NTS



BERTH 23 CRANE SWGR PLAN VIEW
NTS



BERTH 23 CRANE SWGR FRONT VIEW
(EXTERIOR ENCLOSURE DOORS OPEN)
NTS



BERTH 23 CRANE SWGR FRONT VIEW
(INTERIOR DOORS OPEN)
NTS

DRAWING GENERAL NOTES

1. REFER TO SPECIFICATIONS FOR SWITCHGEAR REQUIREMENTS.
2. EQUIPMENT DIMENSIONS ARE NOT SHOWN ON THIS DRAWING. REFER TO PLANS FOR DIMENSION REQUIREMENTS.
3. SWITCHGEAR MANUFACTURER SHALL COORDINATE EQUIPMENT DIMENSIONS TO FIT WITHIN THE (E) EQUIPMENT PAD FOOTPRINT AND NOT CONFLICT WITH EXISTING INFRASTRUCTURE.

SHEET NOTES

- ① MAIN BREAKER SHALL BE DRAWOUT TYPE. SQUARE D, VR, 15KV, 1200A, 125VDC CONTROL, P/N VR-15050-12. PROVIDE BREAKER RAILS AND RAMPS TO WITHDRAW BREAKER TO GROUND LEVEL.
- ② CONTROL COMPARTMENT SHALL INCLUDE MOUNTED FUSE BLOCKS, TERMINAL BLOCKS, TIME DELAY RELAYS, CONTROL RELAYS, CAPACITOR TRIP DEVICES.
- ③ INDICATING LIGHTS FOR BREAKER POSITION SHALL BE MOUNTED TO NOT INTERFERE WITH CONTROL SWITCH ACTUATOR. REFER TO SPECIFICATION FOR ACTUATOR DETAILS.
- ④ MOUNT STANDALONE UPS AND AC-DC RECTIFIER IN LOWER COMPARTMENT.
- ⑤ PROVIDE DEADFRONT COVER AS ADDITIONAL PROTECTIVE BARRIER FROM HIGH VOLTAGE COMPARTMENT TO BE USED FOR MOUNTING WIRING AND CONTROL DEVICES.
- ⑥ PROVIDE OUTDOOR IDENTIFICATION LABEL. REFER TO SPECIFICATION 16195 SECTION 2.04 FOR REQUIREMENTS.
- ⑦ REAR DOORS SHALL HAVE PADLOCKABLE HANDLES AND INFRARED VIEWING WINDOWS.
- ⑧ MOUNT TERMINAL BLOCK TB-CIS1 ON VERTICAL SECTION 1 INTERIOR WALL 6" AFF.

CAUTION: THIS PLAN MAY BE REDUCED

0 1" 2" ORIGINAL SCALE

REFERENCES:

PLANS
FIELD BOOKS
"PORT OF OAKLAND DATUM"
IS 3.20' BELOW N.G.V.D. '29

CAUTION:
CHECK TRACING FOR LATEST REVISIONS

NO.	REVISIONS	DATE	REV'D	APP'D

DRAWN M. LEONG
DESIGNED M. LEONG E 21441
CHECKED W. YEOMAN E 17698
REG. ENGINEER NO.

PORT OF OAKLAND
530 WATER ST. OAKLAND, CALIFORNIA

CHIEF ENGINEER
APPROVED
RECOMMENDED
REG. ENGINEER NO. C 43841
REG. ENGINEER NO. 42009
REG. ENGINEER NO. E 17400
REG. ENGINEER NO.

OUTER HARBOR

BERTH 23 AND BERTH 24
CRANE SWITCHGEAR REPLACEMENT
BERTH 23 CRANE SWGR ELEVATION

DATE: 10-31-16

SCALE: NONE

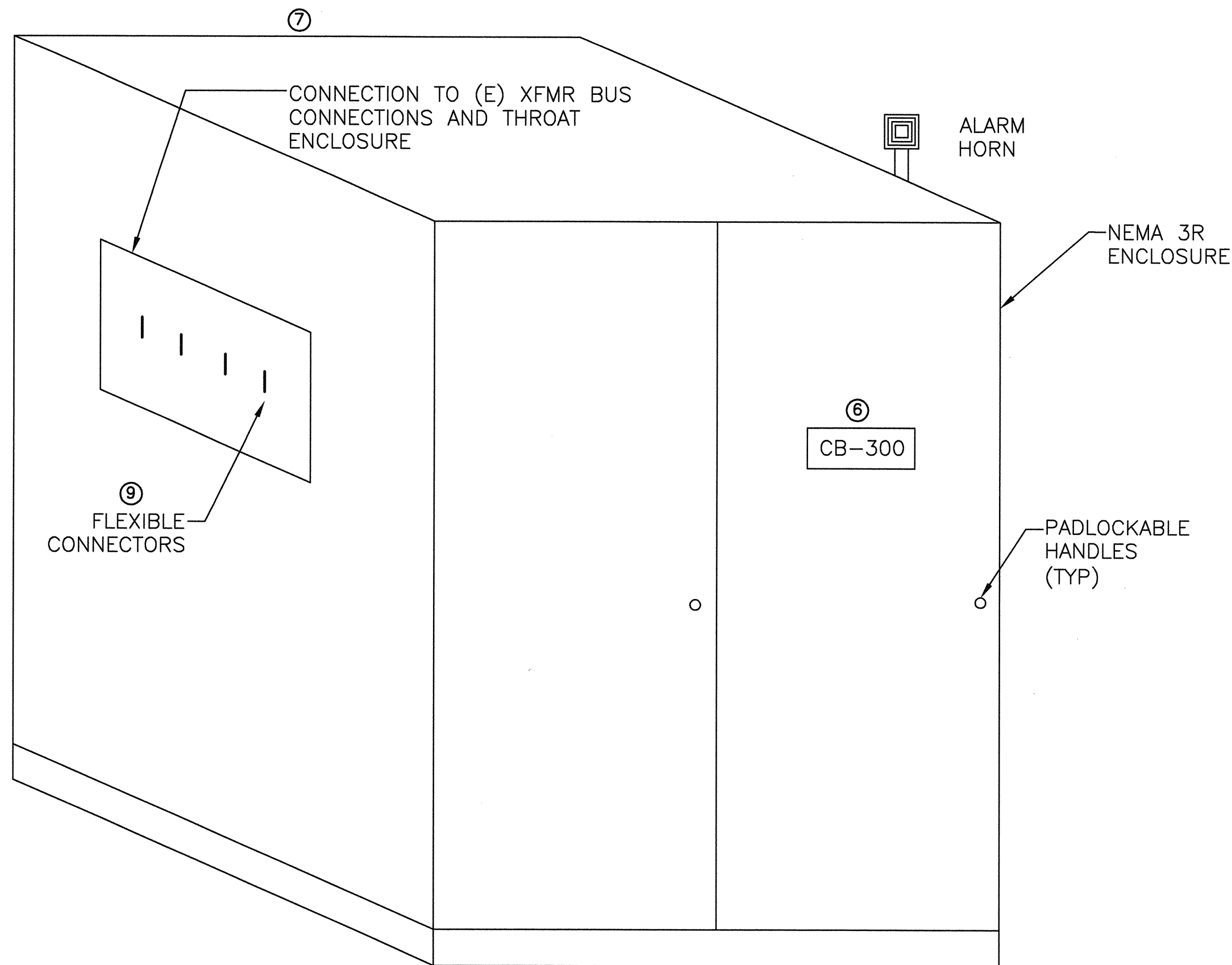
SHEET: 8 OF 12 SHEETS

E8

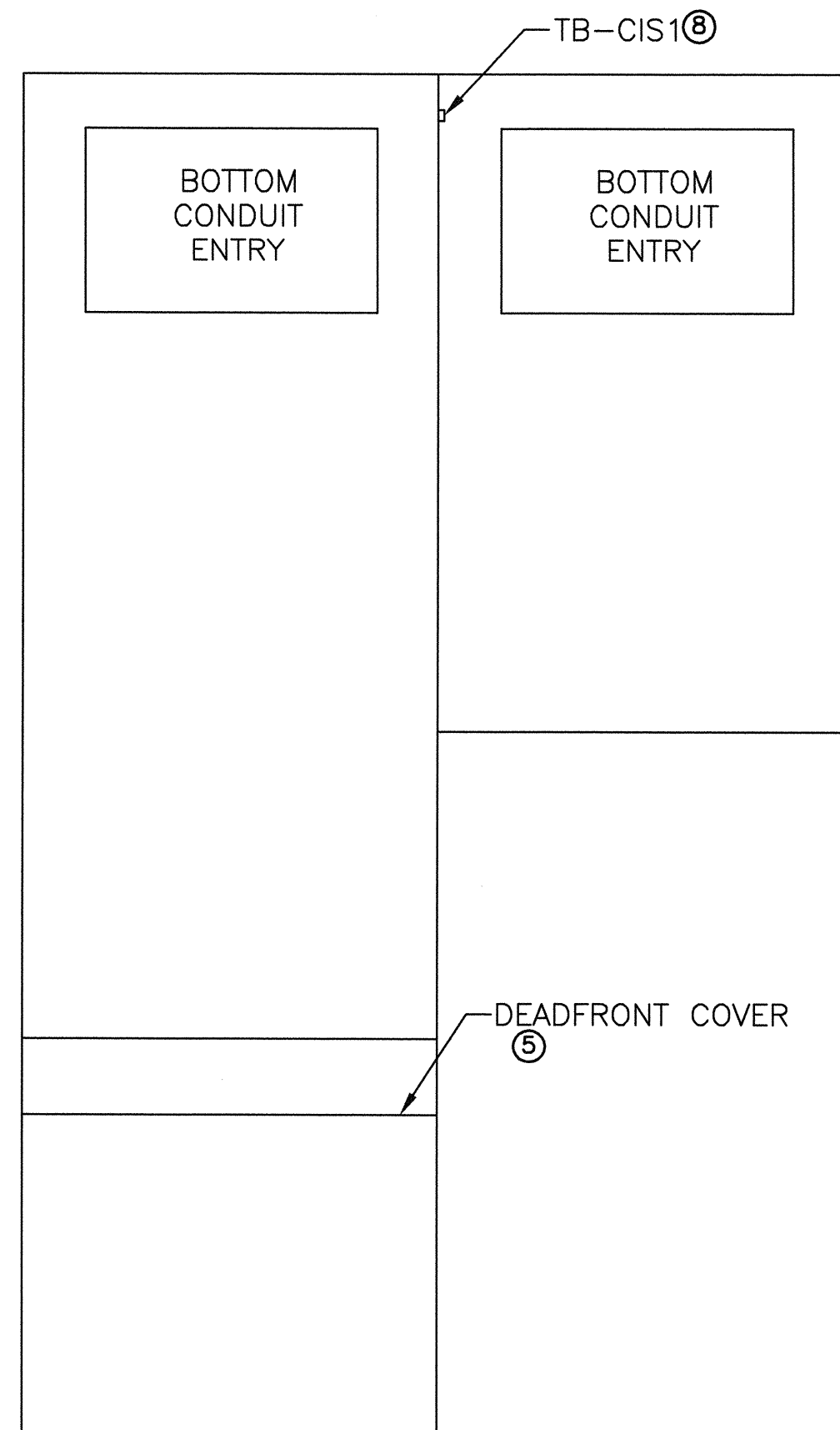
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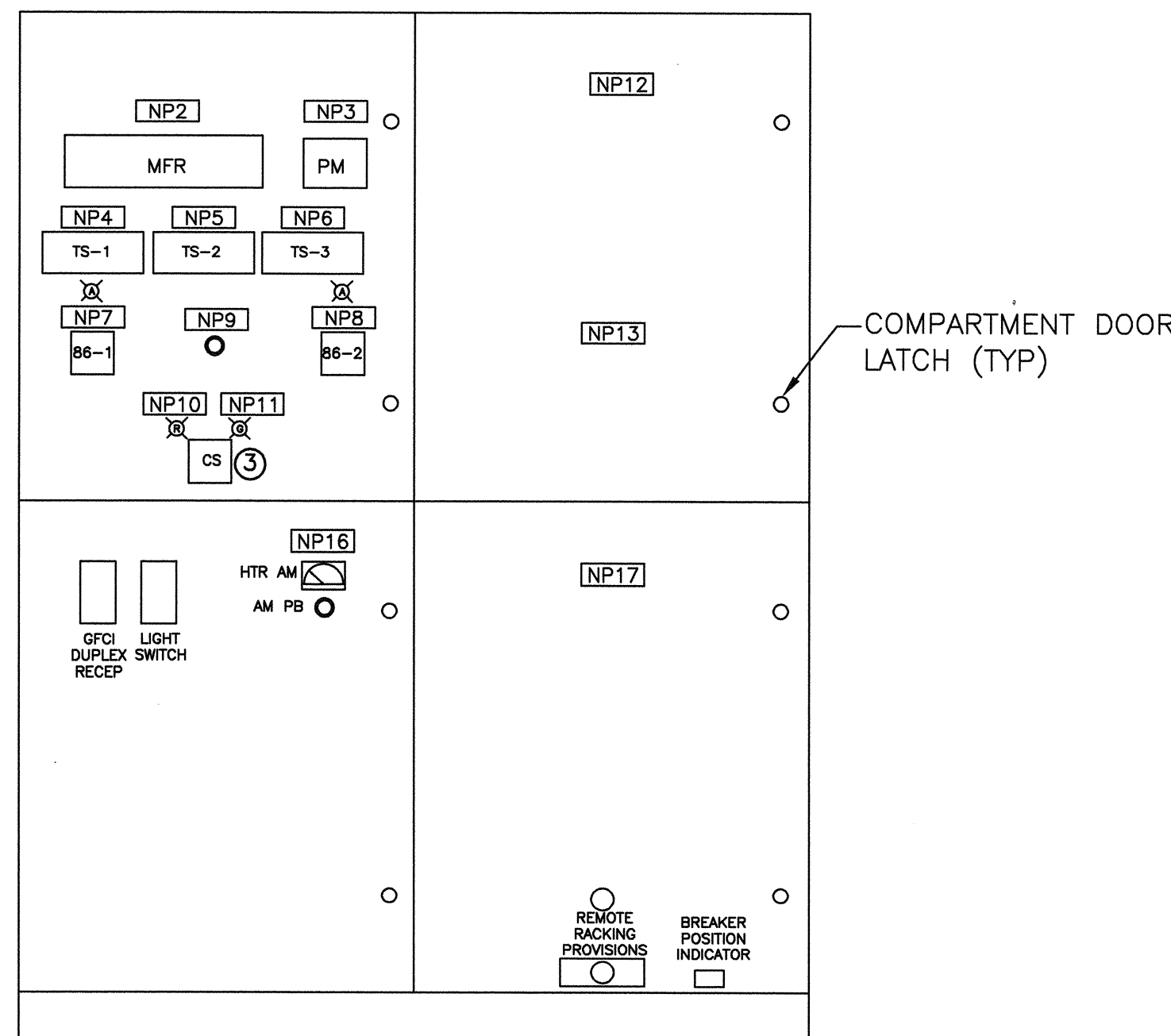
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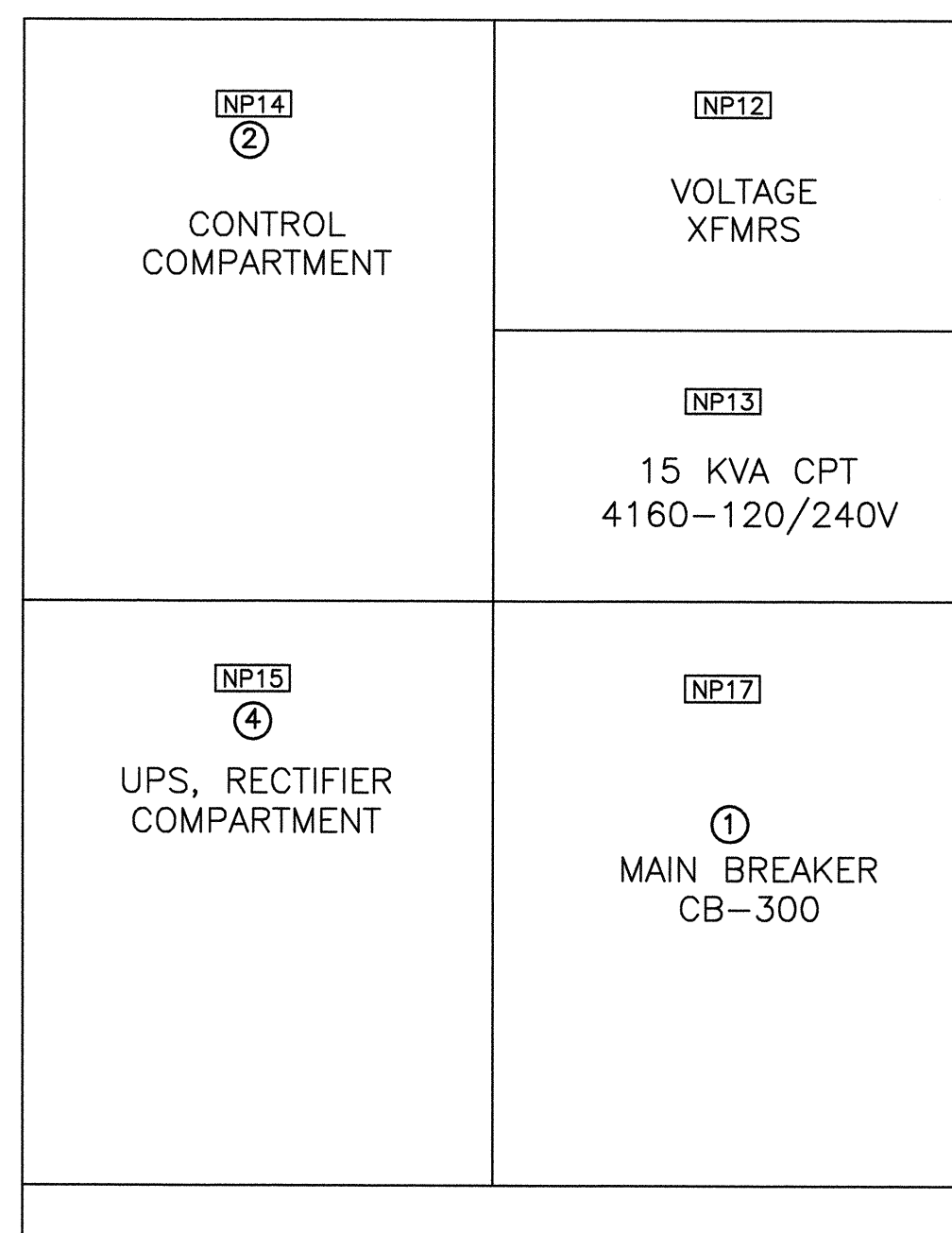
BERTH 24 CRANE SWGR EXTERIOR VIEW
NTS



BERTH 24 CRANE SWGR PLAN VIEW
NTS



BERTH 24 CRANE SWGR FRONT VIEW
(EXTERIOR ENCLOSURE DOORS OPEN)
NTS



BERTH 24 CRANE SWGR FRONT VIEW
(INTERIOR DOORS OPEN)
NTS

DRAWING GENERAL NOTES

- REFER TO SPECIFICATIONS FOR SWITCHGEAR REQUIREMENTS
- EQUIPMENT DIMENSIONS ARE NOT SHOWN ON THIS DRAWING. REFER TO PLANS FOR DIMENSION REQUIREMENTS.
- SWITCHGEAR MANUFACTURER SHALL COORDINATE EQUIPMENT DIMENSIONS TO FIT WITHIN THE (E) EQUIPMENT PAD FOOTPRINT AND NOT CONFLICT WITH EXISTING INFRASTRUCTURE. THE (N) SWITCHGEAR SHALL BE COMPATIBLE WITH (E) XFMR T-40 SECONDARY BUS CONNECTIONS AND THROAT ENCLOSURE. NO MODIFICATIONS TO (E) XFMR T-40 BUS OR ENCLOSURES SHALL BE REQUIRED. THE (N) SWITCHGEAR ENCLOSURE SHALL BE FABRICATED TO COUPLE DIRECTLY WITH (E) BUS THROAT ENCLOSURE AND PROVIDE GASKETED SEAL WITH BOLTED CONNECTIONS. COORDINATE ANY SITE VISITS REQUIRED FOR FIELD MEASUREMENTS WITH ENGINEER.

SHEET NOTES

- MAIN BREAKER SHALL BE DRAWOUT TYPE. SQUARE D, VR, 15KV, 1200A, 125VDC CONTROL, P/N VR-15050-12. PROVIDE BREAKER RAILS AND RAMPS TO WITHDRAW BREAKER TO GROUND LEVEL.
- CONTROL COMPARTMENT SHALL INCLUDE MOUNTED FUSE BLOCKS, TERMINAL BLOCKS, TIME DELAY RELAYS, CONTROL RELAYS, CAPACITOR TRIP DEVICES.
- INDICATING LIGHTS FOR BREAKER POSITION SHALL BE MOUNTED TO NOT INTERFERE WITH CONTROL SWITCH ACTUATOR. REFER TO SPECIFICATION FOR ACTUATOR DETAILS.
- MOUNT STANDALONE UPS AND AC-DC RECTIFIER IN LOWER COMPARTMENT.
- PROVIDE DEADFRONT COVER AS ADDITIONAL PROTECTIVE BARRIER FROM HIGH VOLTAGE COMPARTMENT TO BE USED FOR MOUNTING WIRING AND CONTROL DEVICES.
- PROVIDE OUTDOOR IDENTIFICATION LABEL. REFER TO SPECIFICATION 16195 SECTION 2.04 FOR REQUIREMENTS.
- REAR DOORS SHALL HAVE PADLOCKABLE HANDLES AND INFRARED VIEWING WINDOWS.
- MOUNT TERMINAL BLOCK TB-CIS1 ON VERTICAL SECTION 2 INTERIOR WALL 6" AFF.
- PROVIDE BRAIDED FLEXIBLE COPPER CONNECTORS OF SUFFICIENT RATING, SIZE, QUANTITY, LENGTH AND MATCHING BOLT PATTERN TO CONNECT NEW SWITCHGEAR BUS TO EXISTING TRANSFORMER PHASE AND NEUTRAL BUS.



CAUTION: THIS PLAN MAY BE REDUCED

0 1" 2" ORIGINAL SCALE

REFERENCES:

PLANS
FIELD BOOKS
"PORT OF OAKLAND DATUM"
IS 3.20' BELOW N.G.V.D. '29

CAUTION:
CHECK TRACING FOR LATEST REVISIONS

NO.	REVISIONS	DATE	REV'D	APP'D

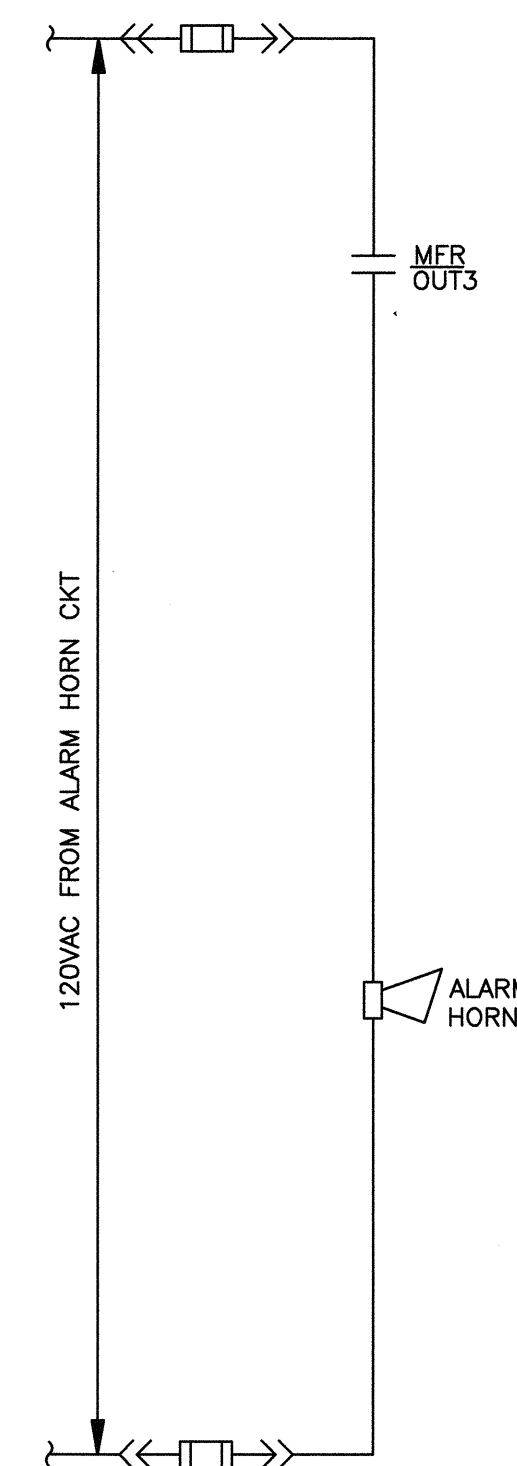
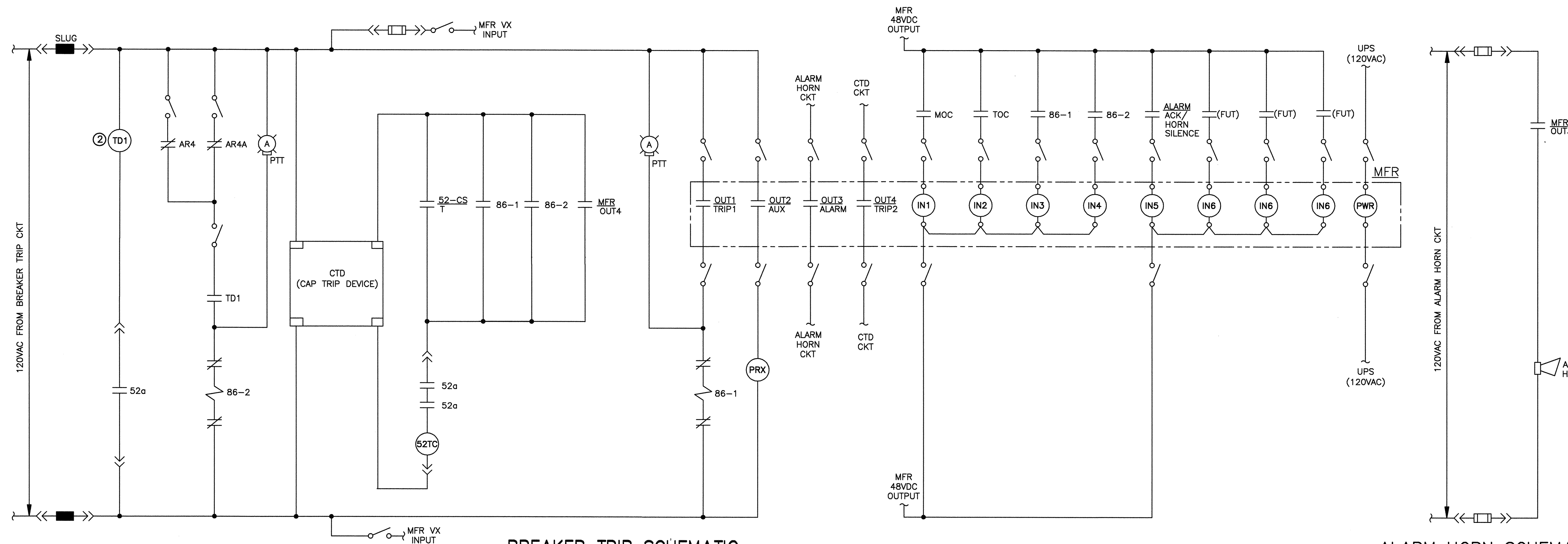
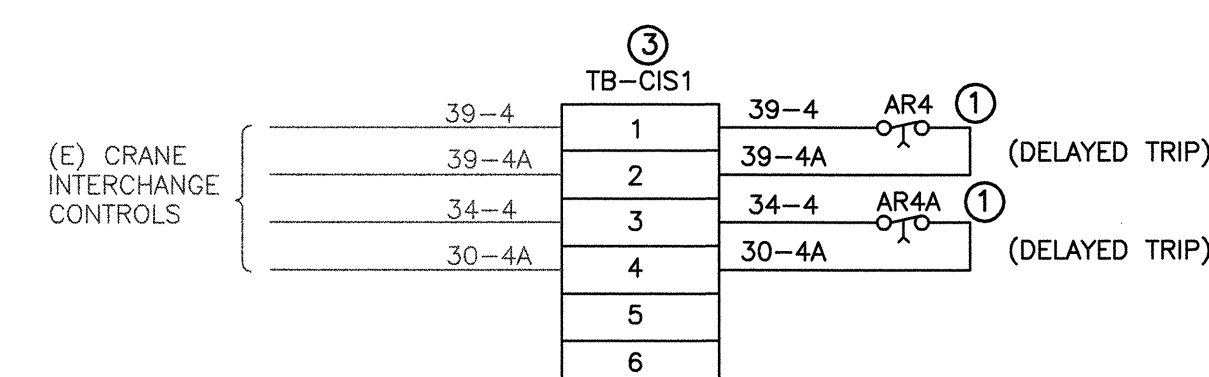
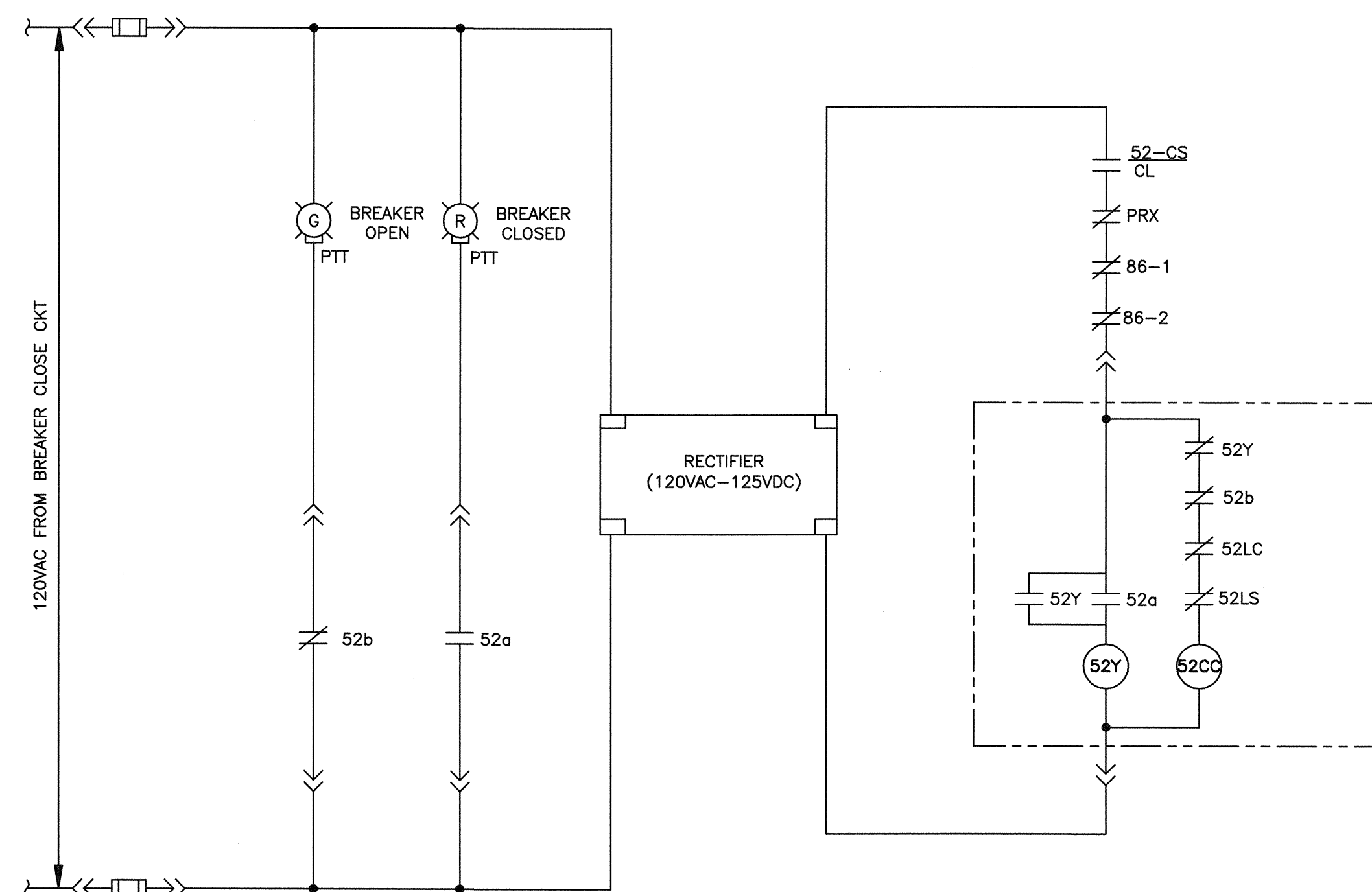
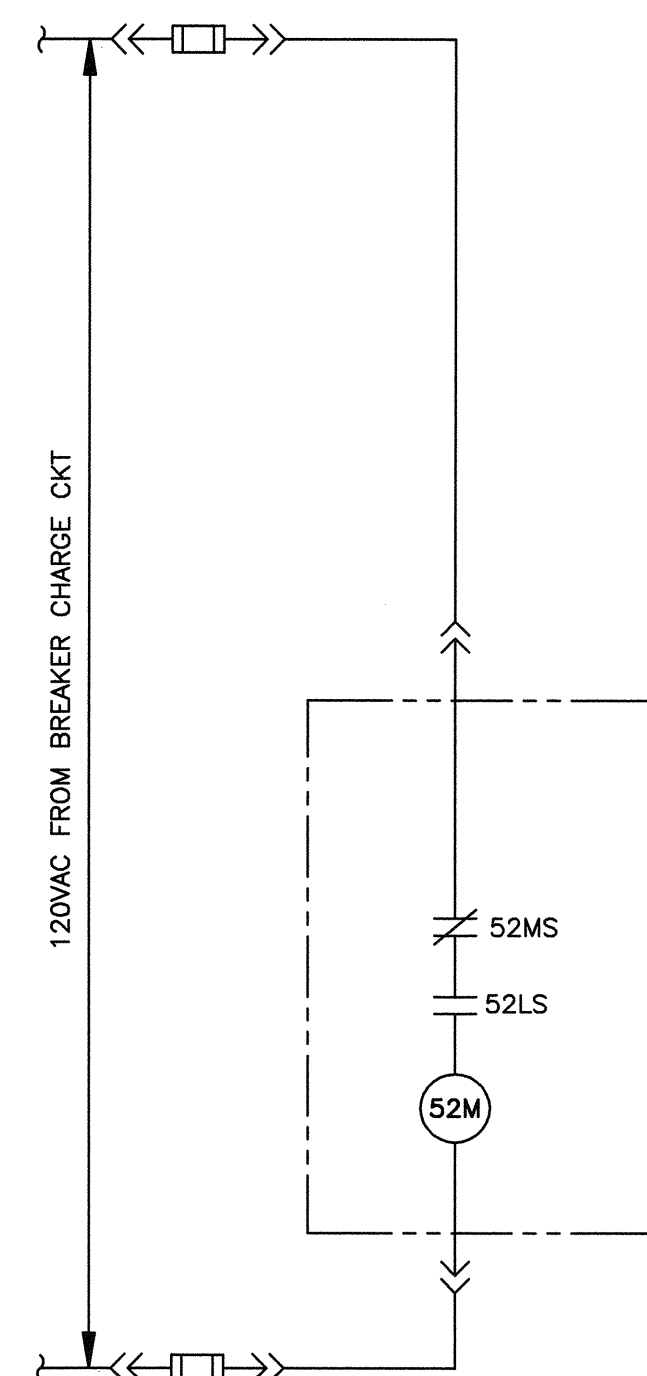
DRAWN M. LEONG
DESIGNED M. LEONG E 21441
CHECKED W. YEOMAN E 17698

PORT OF OAKLAND
530 WATER ST. OAKLAND, CALIFORNIA

CHIEF ENGINEER
APPROVED
RECOMMENDED

OUTER HARBOR
BERTH 23 AND BERTH 24
CRANE SWITCHGEAR REPLACEMENT
BERTH 24 CRANE SWGR ELEVATION

DATE: 10-31-16
SCALE: NONE
SHEET: 9 OF 12 SHEETS
E9 AA-4201



E11	AA-4201
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PRINT DATE 10-31-16 13:15:43 N:\PDDM2\Projects_2\B 20-26\ZZZM000027 - Berth 20-24 Electrical Rehabilitation\4-Design\CAD\Berth 23 and Berth 24 Crane Switchgear Replacement.dwg Printed by mleong

NAMEPLATE SCHEDULE				
NP#	LINE 1 TEXT	LINE 2 TEXT	NP SIZE	TEXT SIZE
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2	MULTI-FUNCTION	RELAY (MFR)	1"X3"	1/4"
3	POWER METER		1"X3"	1/4"
4	TEST SWITCH	TS-1	1"X3"	1/4"
5	TEST SWITCH	TS-2	1"X3"	1/4"
6	TEST SWITCH	TS-3	1"X3"	1/4"
7	86-1 MFR	LOCKOUT	1"X3"	1/4"
8	86-2 CIS LIMIT SW	LOCKOUT	1"X3"	1/4"
9	ALARM ACK /	HORN SILENCE	1"X3"	1/4"
10	BREAKER	CLOSED	1"X3"	1/4"
11	BREAKER	OPEN	1"X3"	1/4"
12	VOLTAGE	XFMR	1"X3"	1/4"
13	CONTROL POWER	XFMR 15KVA	1"X3"	1/4"
14	CONTROL	COMPARTMENT	1"X3"	1/4"
15	UPS, RECTIFIER	COMPARTMENT	1"X3"	1/4"
16	SPACE HEATER	MONITOR	1"X3"	1/4"
17	CB-300		1"X3"	1/4"

DRAWING GENERAL NOTES

1. REFER TO SPECIFICATIONS FOR NAMEPLATE REQUIREMENTS.

REFERENCES:	NO.	REVISIONS	DATE	REV'D	APP'D
PLANS					
FIELD BOOKS					
"PORT OF OAKLAND DATUM" IS 3.20' BELOW N.G.V.D. '29					
CAUTION: CHECK TRACING FOR LATEST REVISIONS					

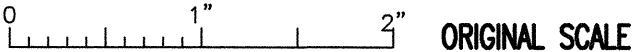
DRAWN	M. LEONG	
DESIGNED	M. LEONG	E 21441 REG. ENGINEER NO.
CHECKED	W. YEOMAN	E 17698 REG. ENGINEER NO.



PORT OF OAKLAND

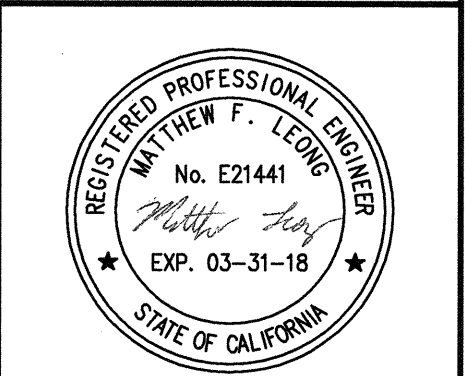
530 WATER ST. OAKLAND, CALIFORNIA

CAUTION: THIS PLAN MAY BE REDUCED



CHIEF ENGINEER	C 43841 REG. ENGINEER NO.
APPROVED	42009 REG. ENGINEER NO.
RECOMMENDED	E 17400 REG. ENGINEER NO.

OUTER HARBOR	DATE: 10-31-16
BERTH 23 AND BERTH 24 CRANE SWITCHGEAR REPLACEMENT	SCALE: NONE
NAMEPLATE SCHEDULE	SHEET: 12 OF 12 SHEETS
E12	AA-4201





PORT OF OAKLAND

Section 16342
Medium Voltage Metal –Clad Switchgear

Bid No.: 16-17/08 – Medium Voltage Metal-Clad Switchgear

Section 16342

Medium Voltage Metal-Clad Switchgear

SECTION 16342

MEDIUM VOLTAGE METAL-CLAD SWITCHGEAR

PART 1 - GENERAL

1.01 SUMMARY

This Section includes the technical requirements for the design, fabrication, testing, and delivery of NEMA 3R outdoor, metal-clad switchgear assemblies, including draw-out circuit breaker sections complete with vacuum circuit breakers and all components and functions described herein.

1.02 RELATED SECTIONS

A. Section 16195, *Electrical Identification*

1.03 SYSTEM REQUIREMENTS

Metal-Clad switchgear must be integrated with existing site conditions including equipment pads, conduits, power cables, control wires, transformer secondary bus connections and transformer secondary throat enclosure as shown in Plans. The Switchgear Manufacturer shall coordinate equipment dimensions to fit within the footprint of existing equipment pads and not conflict with existing infrastructure.

1.04 REFERENCES

The following references are incorporated into the requirements of the Work as described herein.

A. Institute of Electrical and Electronic Engineers (IEEE):

1. 693, *IEEE Recommended Practices for Seismic Design of Substations*
2. C37.04, *Standard Rating Structure for AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis*
3. C37.11, *Standard Requirements for Electrical Control for AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis*
4. C37.20.2, *Standard for Metal-Clad and Station-Type Cubicle Switchgear*

B. National Electrical Manufacturers Association (NEMA):

1. C29.1, *Test Methods for Electrical Power Insulators*
2. C29.10, *Wet Process Porcelain Insulators - Indoor Apparatus Type*
3. ICS 6, *Industrial Control and Systems: Enclosures*
4. SG 4, *Alternating-Current High-Voltage Circuit Breakers*

C. State of California.

1. California Building Standards Code (CBC)

2. California Electric Code (CEC)

D. American National Standards Institute (ANSI) Z535, *Safety Alerting Standards*

1.05 SUBMITTALS

A. Submit With Bid

1. Submit Switchgear Product Data, Outline Drawings, Switchgear and Related Equipment Drawings and other information listed below.
 - a. Provide product data for switchgear and related equipment, including features, accessories, characteristics, and ratings for individual components, switchgear breakers, CTs, PTs, CPTs, protective relays, power meters, control relays, time delay relays, lockout relays, test switches, uninterruptable power sources, rectifiers, terminal blocks, indicating lights, alarm horns, capacitor trip devices, pushbuttons, etc.
 - b. Provide outline drawings that show the following information and details –
 - i. Location and dimensions of switchgear cubicles and components of the NEMA 3R switchgear assembly, conduit entry locations, cable and bus termination details.
 - ii. Overall dimensions of NEMA 3R switchgear assembly.
 - c. Provide tabulation of all switchgear components with features and ratings. Also include all additional materials outlined in Section 1.06.

B. Submit After Bid Award

1. Submit Switchgear Product Data, Outline Drawings, Switchgear and Related Equipment Drawings, Wiring Diagrams, and other information listed below. Do not begin fabrication until written approval by Engineer is received).
 - a. Provide product data for switchgear and related equipment, including features, accessories, characteristics, and ratings for individual components, switchgear breakers, CTs, PTs, CPTs, protective relays, power meters, control relays, time delay relays, lockout relays, test switches, uninterruptable power sources, rectifiers, terminal blocks, indicating lights, alarm horns, capacitor trip devices, pushbuttons, etc.
 - b. Provide outline drawings that show the following information and details –
 - i. Location and dimensions and identification of switchgear cubicles and components of the NEMA 3R switchgear assembly, and conduit entry locations, cable and bus termination details.

- ii. Overall dimensions of NEMA 3R switchgear assembly.
 - iii. Weight of fully assembled and operational NEMA 3R switchgear assembly.
- c. Provide Switchgear and Related Equipment Shop Drawings. The drawings must include dimensioned plans, elevations, sections, details, required clearances, and noted service space around equipment. All structural drawings must bear the seal of a Structural Professional Engineer currently licensed in the State of California. Show method of field assembly and location and size of each field connection, including the following:
 - i. Single-Line, Three-Line, Control Elementary drawings.
 - ii. Tabulation of installed devices with features and ratings.
 - iii. Outline and general arrangement drawing showing dimensions, shipping sections, and weights of each assembled section.
 - iv. Drawing of cable and bus termination compartments showing preferred locations for conduits and indicating space available for cable terminations.
 - v. Floor plan drawing showing locations for anchor bolts.
 - vi. Current ratings of buses.
 - vii. Short-time and short-circuit ratings of switchgear assembly.
 - viii. Nameplate legends.
 - ix. Location of terminal blocks to be used for field wiring and for connections to the control system.
- d. Provide Wiring Diagrams. For switchgear and related equipment, show, at minimum -
 - i. Power, signal, and control wiring.
 - ii. Three-line diagrams of current and voltage secondary circuits showing device terminal numbers and internal diagrams.
 - iii. Schematic control diagrams.
 - iv. Point to point wiring diagrams showing connections of component devices and equipment including field terminations for related equipment

- e. Provide the Manufacturer Seismic Qualification Certification. Submit certification that switchgear, accessories, and components will withstand seismic forces defined in Article 2.03, *Seismic Requirements* including the following -
 - i. Indicate whether the "withstand" certification is based on actual test of assembled components or on calculation. The term "withstand" means "the unit will remain in place without separation of any parts from the device when subjected to the seismic forces specified and the unit will be fully operational after the seismic event."
 - ii. Include dimensioned plans of the equipment unit, identify the center of gravity, and locate and describe mounting and anchorage provisions.
 - iii. Detailed description of equipment anchorage devices and anchor requirements on which the certification is based and anchorage installation requirements.
2. At least two weeks prior to Factory Acceptance Testing (FAT), submit the following Pre-FAT Information -
 - a. The most recent point-to-point diagram for use during factory acceptance testing.
 - b. The protective relay configuration files for all protective relays.
 - c. Test procedure for review and approval.
3. At time of shipment, for each switchgear assembly, submit Switchgear Time of Shipment Test Reports.

The Switchgear Manufacturer must submit the supplier's certified factory test reports for all specified tests and IEEE and NEMA required tests at time of shipment. All testing must comply with the latest NETA acceptance testing procedure. These test reports must include, but not necessarily be limited to:

 - a. Material Test Reports: IEEE and NEMA prescribed factory tests for each switchgear and related equipment according to Part 2 "Source Quality Control" Article.
 - b. Quality-control test reports: Certified test reports confirming complete IEEE and NEMA series test results.
4. Due at time of shipment of the first switchgear assembly, submit a Switchgear and other Equipment Sample Warranties meeting the requirements of Article 1.07 of this Section.

5. Due at time of shipment, for each switchgear assembly, submit Switchgear Manuals and Accessories, including the following:
 - a. Instruction Manuals: Furnish three complete sets of instruction manuals, including parts lists, for the circuit breakers and all devices and equipment furnished. The manual must give complete and detailed instructions for erection, installation, and adjustment. Provide one instruction manual located in a pocket attached to the inside of the NEMA 3R switchgear assembly, and two manuals with final documentation.
 - b. Operation and Maintenance Manuals and Data: Provide two hard copies and two DVDs with .pdf copies with each switchgear shipped. Include the following:
 - i. Manufacturer's written instructions: Include instructions for testing and adjusting circuit breakers, overcurrent protective devices, and switchgear components.
 - ii. Time-current curves: Include curves for selectable ranges for each type of overcurrent protective device.
 - iii. Setting Files: Include multi-function protection relay setting files in hard copy printout and recordable CD format.
 - iv. Software: Provide all required programming software (i.e. Multi-function Protection Relay etc.) installation disks with licenses and all necessary drivers.

1.06 ADDITIONAL MATERIALS

Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

- A. Fuses: Furnish three of each type and rating used for each switchgear assembly. Include spares for transformers, control power circuits, and fusible devices.
- B. Capacitor Trip Devices: Furnish one for each switchgear assembly.
- C. Lockout Relay: Furnish one for each switchgear assembly.
- D. Protection Relay GE F60-J00-HKH-F8L-H6E-MXX-PXX-UXX-WRH: Furnish one total for entire order.
- E. AC-DC Rectifier: Furnish one total for entire order.
- F. Maintenance Tools: Furnish tools and miscellaneous items required for switchgear test, inspection, maintenance, and operation. Include the following for each switchgear assembly:
 1. Fuse-handling tool for each different fuse size used.

2. Racking handle to move circuit breaker manually between connected and disconnected positions.
 3. Motor driven, remote, racking operator shall be provided for racking the breaker in and out of the cubicle.
- G. Control Switch Actuator: Portable device designed to remotely operate breaker control switch. Device shall include a handheld controller, 50 ft control cable, actuator device and hard carrying case. The unit shall be battery powered. Martek Chicken Switch CS-01 or approved equal.

1.07 WARRANTY

The Switchgear Manufacturer must provide warranties against defects in material, workmanship, and operation as follows:

- A. Switchgear enclosures for coating adhesion and integrity as per ASTM Standards under normal operating conditions for a period of 20 years.
- B. A minimum of 12 months from final acceptance by the Port for all other products listed under PART 2 of this Section.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Unless stated otherwise below, the following manufacturers are acceptable:
 1. ABB
 2. IEM
 3. Powell
 4. Powercon
 5. Siemens
 6. Eaton Corporation; Cutler-Hammer Products
 7. General Electric Company
 8. Schneider Electric; Square D Products
 9. MCM Engineering II, Inc.
 10. Approved Equal.

2.02 PERFORMANCE CRITERIA

Switchgear must have the following ratings:

- A. kV, nominal 15kV.
- B. kV, maximum - 15kV.

- C. kV, BIL - 95kV.
- D. Power frequency - 60 Hertz
- E. Power frequency withstand - 36kV, 1-minute test
- F. Main bus continuous, amperes - 1200A.
- G. Short-circuit ratings -
 - 1. Amperes, RMS symmetrical maximum: 23kA.
 - 2. MVA three-phase symmetrical at rated nominal voltage: 500.
 - 3. Duty-cycle fault-closing amperes, RMS asymmetrical: 37kA.
 - 4. Momentary Current Ratings: Equal to the circuit breaker close and latch rating.
 - 5. System Grounding: Low resistance

2.03 SEISMIC REQUIREMENTS

The Manufacturer must provide equipment and anchor bolt design with certification to meet the building code and IEEE 693, per Earthquake Design Criteria for project site as listed below. The Manufacturer must provide seismic calculations prepared by California Registered Professional Engineer to establish anchor bolt requirements.

The existing equipment pad details will be provided to perform such calculations. Refer to reference drawing provided.

<u>EARTHQUAKE DESIGN CRITERIA</u>	<u>DATA</u>	
Occupancy Category	III	
Seismic Importance factor	I = 1.0	
Location (Latitude / Longitude)	37.89049 Lat	-122.326981 Lon
Seismic design Category	D	
Site Coefficients	FA = 1.0	FV=1.5
Mapped Spectral Response Accelerations	SS = 1.5	S1 = 0.90
Spectral Response Coefficients	SDS = 1.000	SD1 = 0.600

2.04 OUTDOOR NON-WALK-IN ENCLOSURE

- A. Enclosure must be of outdoor non-walk-in construction - Enclosure and switchgear must be completely factory-built, assembled, wired, and tested. All equipment and components must be new and suitable for continuous operation in a marine environment.

- B. Cubicles are to be designed to allow front and rear access and must not require the routing of line side or load side connections in front of the compartments.
- C. Switchgear enclosure must be rated for outdoor application with ventilated construction. Enclosure must have full-height, gasketed, pad-lockable doors with 3-point latches.
- D. The enclosure must be weatherproofed by gaskets and sealing the end covers, rear and front covers and other locations to prevent entrance of moisture.
- E. The entire assembly must be UL or NRTL labeled as a complete assembly.
- F. Materials and Construction:
 - 1. All facets of construction through coating and weatherproofing must be performed indoors, protected from outdoor weather conditions. Construction of the equipment out-of-doors is not acceptable.
 - 2. All permanent components must consist of materials that do not freely support combustion. Use of wood or any other materials that freely support combustion is not allowed as permanent components.
- G. Switchgear Low Voltage Circuits
 - 1. All low voltage electrical circuit components must be UL listed and recognized devices.
 - 2. All low voltage circuits must be functionally tested by the manufacturer prior to completion. The Manufacturer must provide certification that all systems have satisfactorily completed functional testing.
 - 3. Fuse protection
 - a. Control power circuits, heater circuits, and voltage transformer-secondary circuits shall be equipped with individual fuse protection, unitized by function. Enclosed pull-type fuse holders with insulating cover shall be used for control and voltage transformer circuits.
 - b. Individual fuse blocks or holders shall be identified by nameplates as to function, rating, type and voltage, such as the following: "RECTIFIER INPUT, 20A, 120VAC".
 - 4. Provide enclosure interior work lighting in each vertical section of the switchgear assembly controlled by manual light switch. Lights must be mounted on top of center of each section. Light fixture shall be fluorescent type, rated for 120VAC operation. SIMKAR MINI, HOFFMAN PANELITE, or Approved Equal. Lights shall be controlled from a single light switch. Light switch specification grade 20A 125V.
 - 5. Duplex receptacles are to be specification grade 20A 125V ivory GFCI duplex type, located as shown on Plans.

6. Wire type- "THHN/THWN"
 - a. Power wiring #12 AWG minimum (sized as required by the electrical code by manufacturer).
 - b. Switchgear internal wiring must be type SIS.
 - c. Ground conductors must have continuous outer finish that is green or green with yellow stripes.
7. Wiring circuits-Provided by Manufacturer:
 - a. AC wiring to enclosure interior lighting
 - b. AC wiring to receptacles
 - c. AC wiring to switchgear enclosure space heaters
 - d. AC wiring to circuit breaker charging circuits
 - e. DC wiring to circuit breaker control
 - f. DC wiring to circuit breaker tripping circuits
 - g. AC wiring to multi-function relay

H. Infrared Viewing Windows

1. Provide infrared viewing windows in each medium voltage cable entrance compartment. More than one view port may need to be in each location to allow viewing of all equipment in that section. The Manufacturer shall determine the proper location for installation of the view ports based on the switchgear layout and viewing window of the view port.
2. 4-inch diameter, outdoor rated, FLUKE or Approved Equal.

2.05 MATERIALS AND EQUIPMENT- SWITCHGEAR

- A. Switchgear units must be arranged as shown on project Plans.
- B. The switchgear assembly must be metal-clad construction with power bus, draw-out circuit breaker sections, cable termination and auxiliary compartments. Instrument transformers, relays, control wiring, accessory devices and connections must be provided as described herein and as shown on the Plans.
- C. Construction stationary structure:
 1. In establishing requirements for the enclosure design, consideration must be given to all relevant factors such as controlled access; tamper resistance; corrosion resistance; protection from ingress of rodents, insects, and weeds; and the possibility of arcing faults within the enclosure.
 - a. The switchgear line-up must be comprised of the required number of metal-clad sections assembled together to form a rigid self-supporting structure with barriers of painted steel between units.

- b. Each metal-clad section must consist of the required number of substructures; segregated by grounded metal barriers into separate compartments for incoming connections, outgoing connections, circuit breakers, instrument transformers, main bus, instruments and relays.
- c. The switchgear manufacturer must minimize the footprint of the proposed switchgear lineup by stacking PT/CPT and circuit breakers into one section.
- d. The enclosure dimensions shown on the Plans reflect anticipated equipment dimensions. Should actual equipment dimensions differ from those shown, the Switchgear Manufacturer must make appropriate changes to the enclosure dimensions.

2. Doors and panels:

- a. Each circuit breaker, auxiliary section and voltage transformer compartment must be provided with a formed, hinged, front door with handle, 3-point latch and provisions for padlocking. Each door must be furnished with a stop to hold the door in the open position. Circuit breaker and instrument transformer compartment doors must not hinder withdrawal of the element from the compartment when the door is open and door-stop set.
- b. Switchgear mimic bus diagram must be permanently affixed to the front of the switchgear as per Section 16195, *Electrical Identification*.
- c. No energized parts are to be within normal reach of the opened doorway. Energized bare parts, including, but not limited to, protective relays, lockout relays, test switches and LEDs, mounted on doors must be guarded where the door must be opened for maintenance of equipment.
- d. Relays, instruments, meters, and secondary control devices must be mounted on formed front-hinged doors provided with handle lockable latch, and stop to hold panel in the open position. Equipment mounted on the door must be isolated by grounded metal barriers from all primary circuit elements.
- e. Access to main bus, incoming service connections, feeder cable terminations, current transformers, bushings, and other stationary devices must be provided with gasketed, hinged, bolted doors. Filters must be provided at ventilation louvers. All rear doors must have hasps or vault handles and provision for padlocks and 3-point latching system.

3. Circuit breaker compartments:

- a. Circuit breaker compartment must be designed to house a draw-out type circuit breaker element. Welded horizontal guide rails must be provided for rolling circuit breakers into designated positions and completely out of the compartment to ground level.

- b. Circuit breakers must be dead-front construction equipped with an integral steel-front panel. The breaker front panel shall effectively close the breaker compartment opening when in the connected position.
- c. The circuit breaker compartment must be closed-door-draw-out design, to allow the breaker to be racked between positions with the front door closed for safety. Breaker position indicator must be viewable from the front with the compartment door closed and latched.
- d. A manually operated jackscrew racking mechanism must be provided in each breaker compartment to move the breaker between the Connected and Test/Disconnected positions.
- e. A motor driven, remote, racking operator must be provided for racking the breaker in and out of the cubicle. Motor drive mounting hardware must be installed for use of the remote drive at each circuit breaker compartment.
- f. Provide self-coupling primary and secondary contacts at each circuit breaker compartment.
- g. Automatic shutters must be provided in the compartment to prevent accidental contact with the stationary primary disconnecting contacts when the circuit breaker element is withdrawn from the connected position.
- h. A ground bus must extend into the compartment to automatically ground the circuit breaker frame in the Connected and Test positions. The ground bus must maintain grounding of the circuit breaker frame during the transition between all positions.
- i. Means must be provided for positively holding the circuit breaker element in place when it is in either the Connected or Test/Disconnected position within the compartment. Mechanical interlocks must also prevent incorrect movement of a closed circuit breaker to or from the designated positions within the compartment, and prevent electrical closing of the circuit breaker within the compartment unless it is in the Connected or Test position.
- j. Provision must be made for padlocking the circuit breaker element in the Test/Disconnected position with a 1/4 inch diameter x 1 inch shackle padlock. Circuit breaker positions must be clearly identified.
- k. Circuit breaker compartments must only permit the interchange of circuit breaker removable elements of the same type and rating.

4. Voltage transformer compartment: Draw-out type with roll-out trays designed to house the specified transformer assembly. All connections to roll-out voltage transformer trays must be rigid bus bars insulated to full voltage rating of switchgear assembly. The compartment door must be furnished with interlock to prevent access to the transformer and primary fuses unless they are disconnected from the primary circuit. Means must be provided to prevent accidental access to the stationary primary contacts when the transformer and fuses are not in the connected position.
 5. Main bus:
 - a. The main three-phase bus must be comprised of tin plated electrical grade copper. The bus must be fully insulated over its entire length with flame-retardant, non-hygroscopic, track-resistant insulation. All bus connections, including bus taps and circuit breaker tap connections, must be tin-plated copper, with current density equal to 1000A per sq. in. (155a.cm²) of cross-section.
 - b. The main bus and connections must be braced to withstand the mechanical stresses associated with rated short-circuit momentary currents without deformation or damage to supports.
 - c. Bus compartments with metal-enclosed sections must be isolated to metal-clad switchgear standards and all bus bars within the metal-enclosed sections must be insulated per metal-clad standards.
 6. Ground bus: A tin plated copper ground bus, not less than 2-inches x 1/4 inch, must extend the length of the switchgear sections. All joints in the ground bus must be made with a minimum of two bolts. Station ground connection points must be located in each end section. Ground bus assembly must be capable of withstanding rated momentary fault current without damage.
 7. Neutral bus: A tin plated copper neutral bus must be fully insulated over its entire length with flame-retardant, non-hygroscopic, track-resistant insulation.
 8. Furnish nameplates for each device as indicated in Plans. Nameplates must be black letters on white background. Include a master nameplate that indicates equipment ratings, manufacturer's name, shop order number and general information.
 - a. Nameplates must be provided for all devices (such as voltage transformers, protective relays, control relays, control switches, test switches, meters, and fuses).
- D. Medium-voltage AC circuit breakers:
1. Circuit breakers must comply with requirements given in IEEE C37.04 and C37.11, and NEMA SG 4.

2. Type: The circuit breakers must be indoor, three-pole, draw-out type, with sealed vacuum, universal AC/DC motor-charged spring-operated mechanisms. Opening and closing speed must be independent of the operator or of control voltage within the rated control voltage range. Circuit breakers of the same rating must be physically and electrically interchangeable.
3. Ratings: The circuit breakers must be rated on a symmetrical current basis and have the following ratings and required related capabilities and defined in IEEE C37.04:
 - a. Nominal operating voltage, RMS: as shown on the Plans.
 - b. Rated maximum voltage, RMS: 15kV.
 - c. Insulation Withstand, Crest: 95 kV
 - d. Rated continuous current at 60 Hz amperes, RMS: 1200A
 - e. Nominal MVA Class: 500
 - f. Required symmetrical current interrupting capability at nominal operating voltage (12.47 kV), RMS, minimum: 25kA.
 - g. Required closing and latching capability, RMS, minimum: 65kA.
 - h. Rated interrupting time, cycles, maximum: 3.
 - i. Rated permissible tripping delay, seconds: 2.
4. Acceptable products include:
 - a. Square-D, VR-15050-12, no substitutions allowed
5. Insulation structure: Materials used for circuit breaker insulation must be of a type that is noncombustible, non-hygroscopic and tracking resistant. The mechanical strength and physical characteristics of the insulation structure must match the stresses imposed by the circuit breaker required closing and latching current capability.
6. Removable assembly:
 - a. The circuit breaker removable elements must be truck-mounted with pull-bar or handles suitable for manual removal and insertion of the element out of and into the stationary compartment.
 - b. The removable element must be provided with a fully interlocked, manually-operated racking mechanism to move the circuit breaker between the Test/Disconnected, and Connected positions. A clearly-visible position indicator must be provided.
 - c. Inserting a circuit breaker of incorrect rating in a circuit breaker compartment must not be possible.
 - d. The removable element frame must be provided with a full front metal shield to prevent access to any live primary bus or load terminals when the circuit breaker is in the "Connected" position.

- e. The circuit breaker removable element's primary disconnecting contacts must be provided with heavy-duty, self-aligning, spring-loaded, silver-plated, copper disconnect fingers that engage with the line- and load-side stationary disconnecting contacts.
 - f. The circuit breaker interrupters must be provided with means for determining contact wear without dismantling.
 - g. Control wiring connections, from circuit breaker compartment to the removable element, must have provisions for maintaining or automatically reinstating circuit continuity when the removable element is moved between the Connected and Test positions. Suitable means must be provided for simultaneous disconnection of control wiring connections when the removable element is fully withdrawn from the compartment.
 - h. Circuit breaker auxiliary contacts must be used instead of cell-mounted mechanism operated contacts for each breaker. The auxiliary contacts must be wired through the automatic secondary disconnect system. A 12-contact (6-"a", 6-"b") truck operated contact actuator and switch assembly must be provided to indicate when the breaker is in the fully connected position, for each breaker. Provide 25% spare contacts and wired to terminal blocks for easy access and future use.
7. Operating mechanism:
- a. The circuit breaker operating mechanism must be of the motor-charged, spring-operated type. The design of the mechanism must prevent overcharging and ensure that the release of stored energy for closing the circuit breaker main contacts is prevented unless the mechanism has been fully charged. The design must be mechanically trip-free. Energy storage must be sufficient for an opening-closing-opening operation at the maximum symmetrical current interrupting capability of the circuit breakers.
 - b. The spring-operated mechanism must be automatically recharged within 15 seconds after each circuit breaker closing operation. The mechanism must have provisions for manually charging the closing springs.
 - c. The stored-energy mechanism must be provided with a mechanical indicator to show the Charged and Discharged status of the closing springs. An interlock must be provided to prevent the complete withdrawal of the circuit breaker removable element from the stationary compartment when the mechanism is in a fully charged state; or alternatively, automatically discharge the stored energy when the removable element is withdrawn from or inserted into the compartment.
 - d. Each mechanism must be provided with four-digit, non-resettable mechanical register type operation counter to record each circuit breaker close/open cycle.

- e. The mechanism must be provided with Open and Close mechanical control pushbuttons, mounted on the removable element escutcheon plate, for test purposes and for use in emergency. The mechanism must also be furnished with an easily readable mechanical position indicator, mounted on the removable element, to indicate the "Open" and "Closed" positions of the main moving contacts.
8. Circuit breaker control:

The circuit breakers must be designed for local electrical operation at 125 volts DC nominal control power supply.
9. Control Relays

The control relays shall be heavy duty industrial, din-rail mount, with contacts minimum rating 600VAC, 20amps, Allen-Bradley or approved equal.
10. Circuit Breaker Control Switches:
 - a. Breaker control Switches must be located as shown on the Plans.
 - b. Breaker control switch shall be mounted in a position such that the Control Switch Actuator described in Section 1.06 can be mounted and operated free from any obstructions.
 - c. Acceptable products: Electroschwitch Series 24 or Approved Equal
 - d. Breaker control switch at the breaker section is not required, except for the associated LED lights (Green and Red LEDs).
11. Cell Switches:
 - a. Both truck-operated cell(TOC) switch and mechanism-operated cell(MOC) switch must be provided, and need to be readily accessible. They must be mounted at the front of the circuit breaker cell.
 - b. A minimum of five (5) N.O. and five (5) N.C. MOC and TOC switch contacts must be provided. All spare contacts must be wired to terminal blocks readily accessible within the breaker compartment
12. Capacitor Trip Devices

The capacitor trip devices must have provisions for battery back-up, with input surge protection and continuous short circuit protection, General Electric CTDB-6, or Approved Equal.
- E. Control Power Transformer: Control Power transformer must be as shown on the Plans.
 1. CPTs must be drawout disconnecting type.

2. The primary of all CPTs must be protected with current limiting fuses, one set for each single-phase or three-phase CPT.
 3. The secondary circuit of each CPT must have a main breaker that is mechanically interlocked with the CPT compartment so that the CPT compartment cannot be opened until the main breaker is opened.
 4. Acceptable manufacturers include:
 1. ABB
 2. Cutler-Hammer
 3. ITI
 4. Siemens
 5. Square-D
 6. Approved Equal
- F. Current Transformers: CT ratings must be in accordance with IEEE, C57.13 and C37.20.2 and must have an accuracy class of C200 for window type and T200 for bar type, minimum. The CT winding must terminate in a screw type terminal on the CT housing and must be wired to shorting terminal blocks. CTs for metering purposes must be bar type, and for all other purposes must be window type, or as shown on the Plans. CTs must be multi-ratio, dual ratio, or fixed ratio, and set as indicated on the Plans.
- Acceptable manufacturers include:
1. ABB
 2. Cutler-Hammer
 3. ITI
 4. Siemens
 5. Square-D
 6. Approved Equal
- G. Voltage Transformers: Voltage transformers must be draw-out type with ratings and accuracy in accordance with IEEE C57.13. PTs must have fused primary and secondary.
- Acceptable manufacturers include:
1. ABB
 2. Cutler-Hammer
 3. ITI
 4. Siemens
 5. Square-D
 6. Approved Equal

H. Relays and instruments: Switchgear assembly must have protective relays with status indication and event history. A trip and lock out IEEE Device 86 must be provided for trip signals to the circuit breaker. Circuit breaker protection and control must comply with the requirements of the single-line diagram and as identified herein.

1. Protective relays must be solid-state microprocessor-based multi-functional type providing monitoring, control, and automation that operate from the secondary of current and voltage transformers. Protective relays must be true RMS sensing of each phase and ground. Relay self-checking functions must be included.
2. Provide relays as indicated on Plans for each circuit breaker. Relays must have power ride-through modules. All relays must have panel mounted voltage and current test blocks.
 - a. Ground element must be capable of being utilized in residual, zero sequence, or ground source connection schemes, or deactivated.
 - b. Device curves and settings must be independently field selectable and programmable with or without load.
 - c. The relay must store five of the latest 15-cycle events, and event summaries for the latest 20 events. The latest event must be stored in nonvolatile memory.
 - d. Instantaneous, demand and peak demand currents must be displayed on the front panel.
 - e. The relay must be capable of withstanding operating temperatures ranging from -40° to +85°C (-40° to +185°F).
 - f. Relay Alarm and/or Trip contacts must not change state if power is lost or an undervoltage occurs. These contacts must only cause a trip upon detection of an overcurrent or fault condition based upon programmed settings.
 - g. The relay must be suitable for operating on control power with a nominal input voltage of 120 volts AC. The power source will be from an uninterruptible power supply.
 - h. Acceptable products:
 - i. General Electric, Multilin F60, GE F60-J00-HKH-F8L-H6E-MXX-PXX-UXX-WRH, no substitutions allowed

I. Test Switches

1. Provide test switches that will completely isolate all Protection Relays from power, inputs, outputs, current signals and potential signals and all Power Meters from current signals and potential signals. Current switches must have make-before-break current short circuit feature. Test switches must be grouped by function and have black handles. ABB FT-1 or Approved Equal.
2. Provide nameplate under each test switch to identify purpose and device connection. Nameplate must be red with white text.

J. Uninterruptible Power Supply (UPS)

1. UPS must provide voltage regulation, battery backup and AC surge suppression.
2. Standalone upright tower unit with minimum 6 outlets.
3. Rated 120V, 60Hz supporting maximum load of at least 1050VA for 7 minutes and a minimum of 525VA for 23 minutes.
4. UL1778 Certification
5. Acceptable products:
 - a. Triplite OMNISMART 1050
 - b. Approved Equal

K. Power Meter

1. Power meter must be ANSI C12.20 compliant, measuring voltage, current, power, frequency, power factor and energy
2. Panel mounted with LED screen for displaying values
3. Acceptable manufacturers include:
 - a. Electro Industries/GaugeTech (Shark)
 - b. General Electric
 - c. Schneider
 - d. Approved Equal

L. LED Indicating Lights

1. Indicating lights shall be LED type, separate from other devices and provided for each electrically operated circuit breaker and lockout relay. Green indicating lights shall indicate the breaker open position. Red indicating light shall indicate the breaker closed position. Amber indicating lights shall be provided to monitor lockout relay coils for continuity and presence of control power.
2. Ratings: 120VAC input or as shown in drawings.
3. 30mm diameter, flush button, press-to-test feature
4. Acceptable Products: Cutler Hammer 10250T Series, Allen-Bradley 800H, or equal.

M. Pushbuttons

1. Corrosion resistant, heavy-duty, and water-tight/oil-tight

2. Momentary, flush button, black, non-illuminated, 30mm diameter, NEMA Type 4/13 rated, momentary contact, flush head, 1 N.O. and 1 N.C. contacts
3. Acceptable Products: Cutler Hammer 10250T Series, Allen-Bradley 800T/H, or Approved equal.

N. Time Delay Relays

1. Off-Delay (time delay begins upon de-energization of coil)
 - a. Coil voltage 120VAC, two Form C contacts, 0.5 to 5 second range in linear increments
 - b. Agastat 7022AB or Approved Equal
2. On-Delay (time delay begins upon energization of coil)
 - a. Coil voltage: 120VAC, two Form C contacts, 1.5 to 15 second range in linear increments
 - b. Agastat 7012AC or Approved Equal

O. Alarm Horn

1. Alarm horns shall be completely assembled plug-in units with adjustable output between 88 to 113dB at 1 meter distance.
2. NEMA 4X rated enclosure, operating voltage 120VAC
3. Edwards Signaling 876 Series or Approved Equal

P. Each switchgear section shall have space heaters with space heater monitoring ammeters, sheaths and guards.

1. Space heaters of high-temperature chrome steel shall be provided to maintain temperature in accordance with manufacturer's tolerances inside the enclosure.
2. Each heater shall be rated 300W at 240VAC, for use at half voltage for long life, capable of providing 75 watts for each heater equipment unit.
3. Four heaters shall be mounted in each section, for a total of 300 watts per vertical section.
4. Space heaters shall be located at the lowest portion of each space to be heated and shall be easily accessible for replacement.
5. Space heater monitoring ammeters must be miniature-type, 2% accuracy class, and mounted semi-flush. The ammeter full scale shall be selected so the ammeter operates between 50% and 90% of full scale with the space heaters energized. External zero adjustments shall be provided.

6. Each group of space heaters shall have branch circuit protection, be monitored by its own ammeter, and have a series connected momentary, normally closed pushbutton. When operated, the pushbutton shall de-energize the heater circuit to check ammeter movement.
7. Space heater supply circuits shall be wired to accessible terminal block to allow Customer temporary power connection.

Q. AC-DC Rectifier

1. 120VAC-125VDC, 300W rectifier shall be ABSOPULSE PFC65-U/125F3T-S8373 or Approved equal.
2. Base plate shall be provided for adequate conduction cooling.
3. Device shall have input surge and undervoltage protection and be internally fused.

R. Grounding Studs

1. Provide grounding stud connection with pull-off rubber covers at all medium voltage cable entrance compartments.
2. Four grounding studs must be provided in each location – one for each phase bus and one for the ground bus.
3. Grounding studs must be arranged to not interfere with the installation or removal of cables located in the same compartment.

S. A permanent "DANGER HIGH VOLTAGE KEEP OUT" sign shall be attached to each exterior door.

T. Finish

1. All steel structure members shall be cleaned, rinsed, and phosphatized prior to painting.
2. The switchgear shall be painted with an electrostatically applied polyester powder with final baked on average thickness between 1.5 and 2.0 mils and meet NEMA and IEEE requirements for outdoor equipment.
3. All exterior surfaces of the switchgear assembly shall be given final finish coats of ANSI 61 gray (as per ANSI Z535) as standard.
4. Finish shall have a minimum pencil hardness of 2H as tested per ASTM D3363 and shall pass the ASTM B117 Salt spray test for a minimum of 1000 hours.
5. Touch-up materials - with complete instructions - shall be included with each shipment section of metal-enclosed switchgear for touch-up in the field.

2.06 SOURCE QUALITY CONTROL

- A. Before shipment of equipment, perform the following tests and prepare test reports:
 - 1. Production tests on completed switchgear assembly according to IEEE C37.71.
 - 2. All switchgear, protection, control, monitoring and alarm functions on switchgear, protection relays, shall be thoroughly tested and demonstrated to the Port for the Port's acceptance.
- B. Prepare equipment for shipment.
 - 1. Provide suitable crating, blocking, and supports so equipment will withstand expected domestic shipping and handling shocks and vibration.
 - 2. Weatherproof equipment for shipment. Close connection openings to prevent entrance of foreign material during shipment and storage.

PART 3 - EXECUTION

3.01 START-UP-SERVICES

The switchgear manufacturer or the assembler of the manufactured parts must provide a qualified technician for equipment start-up services, under the direction of the Port after equipment is installed. The technician must certify that the equipment has been installed, adjusted and tested in accordance with the manufacturer's recommendations.

END OF SECTION



PORT OF OAKLAND

**Section 16195
Electrical Identification**

Bid No.: 16-17/08 – Medium Voltage Metal-Clad Switchgear

Section 16195 Electrical Identification

SECTION 16195

ELECTRICAL IDENTIFICATION

PART 1 - GENERAL

1.01 SUMMARY

This Section includes the requirements for furnishing and installing signs, labels, and other electrical identification devices, as indicated on the Plans and as required to complete the Work.

1.02 SUBMITTALS

The Switchgear Manufacturer shall submit product data and one sample for each of the following:

- A. Nameplates
- B. Wire/Cable tags
- C. Outdoor Electrical Equipment Identification Markers
- D. Conduit tags

PART 2 - PRODUCTS

2.01 NAMEPLATES

- A. Nameplate designations shall:
 - 1. For the manufacturer's nameplate, include the equipment design rating of current, voltage, kVA, bus bracing rating, and other information as applicable.
 - 2. For equipment nameplates designating the system usage and purpose, clearly indicate the system nominal voltage, equipment rating for kVA, amperes, panel designation and circuit number, and identity of the equipment.
 - 3. For distribution boards and panel boards, identify as per the electrical Plans including the identification of feeder distribution board and circuit number, and all branch-circuit load descriptions.
- B. Nameplates shall be:
 - 1. Melamine plastic with a matte finish and square corners
 - 2. 0.125-inch thick
 - 3. White with black center core

- a. Accurately align lettering into the core
 - b. Lettering shall be normal block style unless otherwise noted
4. A minimum size of 1.0 inch by 2.5 inches, except that wiring device nameplates shall be 0.5 inch by 1.5 inch.

C. Letter Size shall be:

- 1. 0.25 inch letters for identifying individual equipment and loads.
- 2. 0.50 inch for identifying grouped equipment and loads.

2.02 LOW VOLTAGE WIRE TAGS

A. Low voltage cable wire tags shall be:

- 1. Made of heat-shrinkable, flame-retardant, crosslinked polyolefin wire tag. Thermoplastic or wraparound tags are not acceptable.
- 2. Rated at a dielectric strength of 500 V/mil minimum and a temperature range from -30 degrees to 105 degrees.
- 3. Printed using a nine or twenty-four pin dot matrix printer.
- 4. Raychem ShrinkMark, Brady Permasleeve, or approved equal.

B. The tag legends shall:

- 1. For power and lighting circuits - Include branch-circuit or feeder number indicated on Plans.
- 2. For Control Circuits - Include the control wire number indicated on schematic or interconnection diagrams on shop drawings.

2.03 OUTDOOR ELECTRICAL EQUIPMENT IDENTIFICATION MARKERS

The Switchgear Manufacturer shall provide pressure-sensitive markers for outdoor switchgear.

- A. The Marker description shall be the equipment number shown on the Plans.
- B. The letter size shall be 2.5 inches high, black characters on a yellow background, reflective, fade resistant, and UV protected. The markers shall be of the self-adhesive type, installed on smooth, clean and dry surfaces.

2.04 ADHESIVE TAPE

Adhesive tape used in place of screws or rivets, where allowed, shall be M VHB RP Series tape or approved equal.

PART 3 - EXECUTION

3.01 PREPARATION

The Switchgear Manufacturer shall degrease and clean surfaces to receive nameplates and labels.

3.02 NAMEPLATES

The Switchgear Manufacturer shall:

- A. Provide laminated plastic nameplates for all electrical equipment and devices including, but not limited to, the following:
 - 1. Enclosures for switchgear, medium voltage controllers, transformers, low voltage switchgear, distribution boards, panels, panelboards, busways, pull boxes, junction boxes, and cabinets.
 - 2. Enclosures for all separately enclosed devices including, but not limited to, disconnect switches, circuit breakers, contactors, time switches, control stations and relays.
 - 3. All receptacles and lighting switches.
 - 4. Special systems, such as, but not limited to, telephone, warning and signal systems. Identification shall be at each equipment rack, terminal cabinet, control panel and pull box.
 - 5. Devices mounted within and part of an equipment including circuit breakers, switches, control devices, control transformers, relays, indication devices and instruments, fuses, terminal blocks.
- B. Provide nameplates indicating the number, location, and designation of nameplates as indicated on the plans and stated in these specifications. Install the nameplates parallel to equipment lines. Ensure that the position of fasteners does not interfere with equipment or wiring clearances.
 - 1. Fasten nameplates to enclosures with a minimum of two sheet-metal screws or two rivets.
 - 2. Affix nameplates to cast enclosures using industrial z-part epoxy adhesive.

3.03 MIMIC BUS

The Switchgear Manufacturer shall attach the mimic bus to electrical switchgear using 3M VHB RP Series tape as per the manufacturer's recommendations.

END OF SECTION

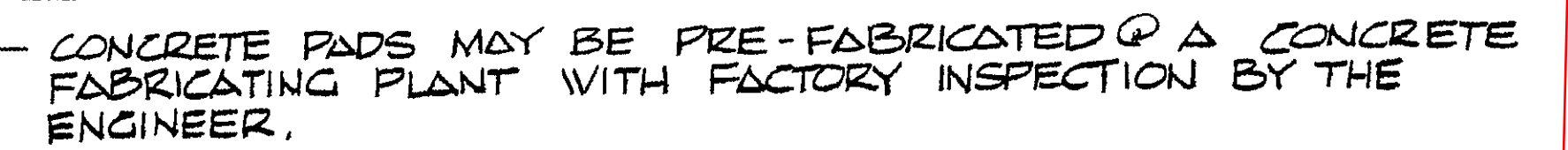


PORT OF OAKLAND

**Reference Drawing
Existing Equipment Pad Detail**

Bid No.: 16-17/08 – Medium Voltage Metal-Clad Switchgear

Reference Drawing Existing Equipment Pad Detail



CONTRACTOR SHALL PROVIDE
A SUITABLE MOUNTING BRACKET
FOR MOUNTING FUEL ISLAND
LUMINAIRE

FUEL ISLAND LUMINAIRE ———
WESTINGHOUSE #OV-15
120 V. 1/250 WATT
CLEAR HIGH PRESSURE SODIUM LAMP
w/ PHOTOCELL
3" CALV. STEEL POLE ———

DRILL & TAP POLE FOR
3/4" PLASTIC BUSHED
NIPPLE.

W.P. FS BOX @ +12" -

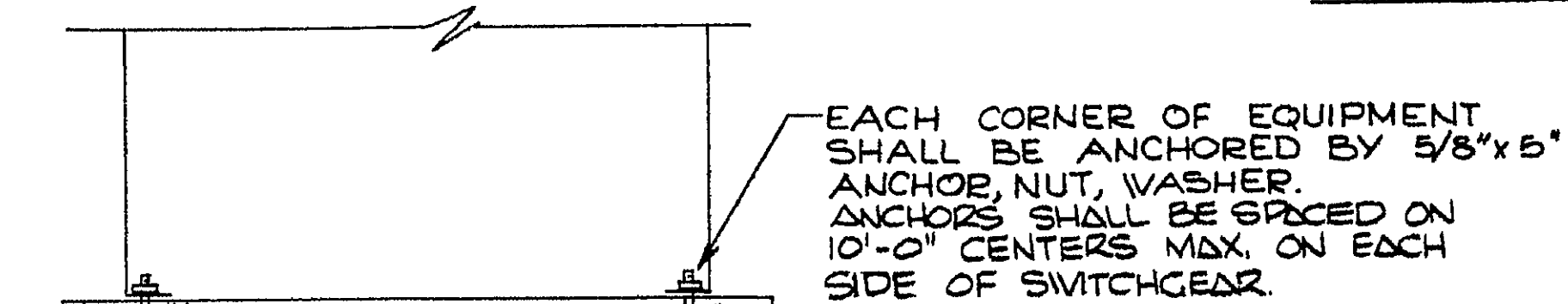
15'-0"

5'-0"

12"

FOR CONDUIT & WIRE REQUIREMENTS SEE E-45

DETAIL
FUEL ISLAND
LUMINAIRE
N.T.S.



REFERENCES

PLANS

FIELD BOOKS

"PORT OF OAKLAND DATUM"
IS 3.20' BELOW MEAN SEA LEVEL

INTERCHANGE SWITCHGEAR ENCLOSURE Δ
@ BERTH 4

WILLIAMS ENGINEERING CO.
CONSULTING ELECTRICAL ENGINEERS
780 West Grand Avenue
832-6696 Oakland, CA 94612
Project No. 75-27

GRAPHIC SCALE



PORT OF OAKLAND

Existing Crane Switchgear Photos

Bid No.: 16-17/08 – Medium Voltage Metal-Clad Switchgear

Existing Crane Switchgear Photos

I. Berth 23 Crane Switchgear

A. Existing Berth 23 Crane Switchgear (Front)



B. Existing Berth 23 Crane Switchgear (Rear)



C. Existing Berth 23 Crane Switchgear Conduit Entry (Rear of Vertical Section 1)



D. Existing Berth 23 Crane Switchgear Conduit Entry (Rear of Vertical Section 2)



II. Berth 24 Crane Switchgear

A. Existing Berth 24 Crane Switchgear (Front)



B. Existing Berth 24 Crane Switchgear (Rear)



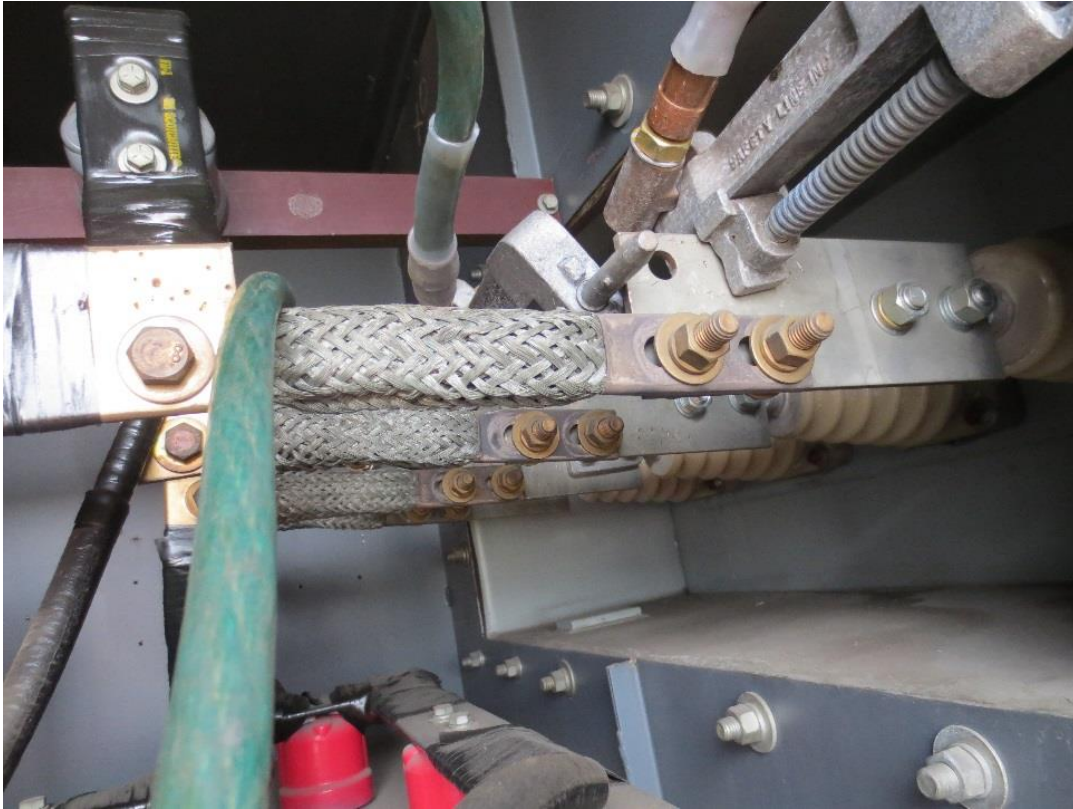
C. Existing Berth 24 Crane Switchgear Conduit Entry (Rear of Vertical Section 1)



D. Existing Berth 24 Crane Switchgear Conduit Entry (Rear of Vertical Section 2)



E. Existing Transformer Connection to Berth 24 Crane Switchgear (Rear of Vertical Section 1)



**Bid No.: 16-17/08 – Medium Voltage Metal-Clad Switchgear****Note:** This Detail Bid Form must be completed, signed, and returned with your bid.

Item	Description	Taxable	QTY	Total Price
1	Berth 23 Crane Switchgear, NEMA 3R outdoor, 15kV metal-clad switchgear assembly, complete with draw-out circuit breaker and additional components and functions. Note: Refer to Plans and Specifications for requirements.	Yes	1	\$
2	Berth 24 Crane Switchgear, NEMA 3R outdoor, 15kV metal-clad switchgear assembly, complete with draw-out circuit breaker and additional components and functions. Note: Refer to Plans and Specifications for requirements.	Yes	1	\$
3	Additional Materials – Refer to Section 16342 (Enclosure D), 1.06 Additional Materials Note: Use a separate sheet to list all additional materials and cost breakdown	Yes		\$
4	Other Charges: Please Specify: _____	<input type="checkbox"/> YES <input type="checkbox"/> NO		\$
Subtotal				\$
Delivery and Shipping Charges (Taxable <input type="checkbox"/> YES <input type="checkbox"/> NO)				\$
Other Charges or Fees: Please Specify: _____ (Taxable <input type="checkbox"/> YES <input type="checkbox"/> NO)				\$
Sales Tax for Taxable items only (Alameda County at 9.50%)				\$
(Write this figure in the Total Bid Price on the Bid Form, Attachment 2) Total Bid Price				\$

DELIVERY SCHEDULE: _____ Delivery on schedule is required no later than 14 weeks after the Purchase Order is awarded. All shipments shall be made FOB Destination. If you are able to meet the equipment delivery time frame, then write in 14 weeks in the space provided; otherwise, indicate the number of week after receipt of a Purchase Order will the equipment be delivered.

By submitting a bid, Bidder hereby certifies and has included the following information (check box below):

- ☐ YES ☐ NO Bidder is an authorized reseller/dealer/manufacture/assembler
- ☐ YES ☐ NO Bidder has read and reviewed all enclosures and its requirements prior to submitting a bid.
- ☐ YES ☐ NO Bidder has included required information listed on section 16342, 1.05 Submittals, item A "Submit with Bid".
- ☐ YES ☐ NO Bidder agrees to provide all additional required information listed on section 16342, 1.05 Submittals, item B "Submit After with Bid" and Section 16195, 1.02 Submittals, after contract award.
- ☐ YES ☐ NO Bidder will provide a qualified technician for equipment start-up services under the direction of the Port after equipment is installed.

Bidder's Name: _____ **Title:** _____
Company: _____ **Date:** _____

