

CONSTRUCTION CONTRACT

WWTP TRANSFORMER REPLACEMENT – PROJECT NO. CP240031

1. Parties and Date.

This Contract is made and entered into this _____ day of _____, _____ by and between the City of Merced, a California Charter Municipal Corporation of the State of California (“City”) and Clyde G. Steagall, Inc., a California Corporation with its principal place of business at 6030 King Road, Loomis, CA 95650 (“Contractor”). City and Contractor are sometimes individually referred to as “Party” and collectively as “Parties” in this Contract.

2. Recitals.

2.1 City. City is a California Charter Municipal Corporation organized under the laws of the State of California, with power to contract for services necessary to achieve its purpose.

2.2 Contractor. Contractor desires to perform and assume responsibility for the provision of certain construction services required by the City on the terms and conditions set forth in this Contract. Contractor represents that it is duly licensed and experienced in providing services such as installation and repairs of electrical wire and equipment which generate, transmit, transform or utilize electrical energy for any purpose. The following license classifications are required for this Project: **Class C-10**

2.3 Project. City desires to engage Contractor to render such services for the WWTP TRANSFORMER REPLACEMENT – Project No. CP240031 as set forth in this Contract.

2.4 Project Documents & Certifications. Contractor has obtained, and delivers concurrently herewith, a performance bond, a payment bond, and all insurance documentation, as required by the Contract.

3. Terms

3.1 Incorporation of Documents. This Contract includes and hereby incorporates in full by reference the following documents, including all exhibits, drawings, specifications and documents therein, and attachments and addenda thereto:

- Services/Schedule (Exhibit “A”)
- Plans and Specifications (Exhibit “B”)
- Special Conditions (Exhibit “C”)
- Contractor’s Certificate Regarding Workers’ Compensation (Exhibit “D”)
- Public Works Contractor Registration Certification (Exhibit “E”)
- Payment and Performance Bonds (Exhibit “F”)
- Addenda
- Change Orders executed by the City
- Latest Edition of the Standard Specifications for Public Works Construction (Green Book), Excluding Sections 1-9

- Notice Inviting Bids, if any
- Instructions to Bidders, if any
- Contractor's Bid

3.2 Contractor's Basic Obligation; Scope of Work. Contractor promises and agrees, at its own cost and expense, to furnish to the City all labor, materials, tools, equipment, services, and incidental and customary work necessary to fully and adequately complete the Project, including all structures and facilities necessary for the Project or described in the Contract (hereinafter sometimes referred to as the "Work"), for a Total Contract Price as specified pursuant to this Contract. All Work shall be subject to, and performed in accordance with the above referenced documents, as well as the exhibits attached hereto and incorporated herein by reference. The plans and specifications for the Work are further described in Exhibit "B" attached hereto and incorporated herein by this reference. Special Conditions, if any, relating to the Work are described in Exhibit "C" attached hereto and incorporated herein by this reference.

3.2.1 Change in Scope of Work. Any change in the scope of the Work, method of performance, nature of materials or price thereof, or any other matter materially affecting the performance or nature of the Work shall not be paid for or accepted unless such change, addition or deletion is approved in writing by a valid change order executed by the City. Should Contractor request a change order due to unforeseen circumstances affecting the performance of the Work, such request shall be made within five (5) business days of the date such circumstances are discovered or shall waive its right to request a change order due to such circumstances. If the Parties cannot agree on any change in price required by such change in the Work, the City may direct the Contractor to proceed with the performance of the change on a time and materials basis.

3.2.2 Substitutions/"Or Equal". Pursuant to Public Contract Code Section 3400(b), the City may make a finding that designates certain products, things, or services by specific brand or trade name. Unless specifically designated in this Contract, whenever any material, process, or article is indicated or specified by grade, patent, or proprietary name or by name of manufacturer, such Specifications shall be deemed to be used for the purpose of facilitating the description of the material, process or article desired and shall be deemed to be followed by the words "or equal."

Contractor may, unless otherwise stated, offer for substitution any material, process or article which shall be substantially equal or better in every respect to that so indicated or specified in this Contract. However, the City may have adopted certain uniform standards for certain materials, processes and articles. Contractor shall submit requests, together with substantiating data, for substitution of any "or equal" material, process or article no later than thirty-five (35) days after award of the Contract. To facilitate the construction schedule and sequencing, some requests may need to be submitted before thirty-five (35) days after award of Contract. Provisions regarding submission of "or equal" requests shall not in any way authorize an extension of time for performance of this Contract. If a proposed "or equal" substitution request is rejected, Contractor shall be responsible for providing the specified material, process or article. The burden of proof as to the equality of any material, process or article shall rest with Contractor.

The City has the complete and sole discretion to determine if a material, process or article is an "or equal" material, process or article that may be substituted. Data required to substantiate requests for substitutions of an "or equal" material, process or article data shall include a signed affidavit from Contractor stating that, and describing how, the substituted "or equal" material, process or article is equivalent to that specified in every way except as listed on the affidavit. Substantiating data shall include any and all illustrations, specifications, and other relevant data including catalog information which describes the requested substituted "or equal" material, process or article, and substantiates that it is an "or equal" to the material, process or article. The substantiating data must also include information regarding the durability and lifecycle cost of the requested

substituted "or equal" material, process or article. Failure to submit all the required substantiating data, including the signed affidavit, to the City in a timely fashion will result in the rejection of the proposed substitution.

Contractor shall bear all of the City's costs associated with the review of substitution requests. Contractor shall be responsible for all costs related to a substituted "or equal" material, process or article. Contractor is directed to the Special Conditions (if any) to review any findings made pursuant to Public Contract Code section 3400.

3.3 Period of Performance and Liquidated Damages. Contractor shall perform and complete all Work under this Contract within **30 working days**, beginning the effective date of the Notice to Proceed ("Contract Time"). Contractor shall perform its Work in strict accordance with any completion schedule, construction schedule or project milestones developed by the City. Such schedules or milestones may be included as part of Exhibits "A" or "B" attached hereto or may be provided separately in writing to Contractor. Contractor agrees that if such Work is not completed within the aforementioned Contract Time and/or pursuant to any such completion schedule, construction schedule or project milestones developed pursuant to provisions of the Contract, it is understood, acknowledged and agreed that the City will suffer damage. Pursuant to Government Code Section 53069.85, Contractor shall pay to the City as fixed and liquidated damages the sum of **\$500 per day** for each and every calendar day of delay beyond the Contract Time or beyond any completion schedule, construction schedule or Project milestones established pursuant to the Contract.

3.4 Standard of Performance; Performance of Employees. Contractor shall perform all Work under this Contract in a skillful and workmanlike manner, and consistent with the standards generally recognized as being employed by professionals in the same discipline in the State of California. Contractor represents and maintains that it is skilled in the professional calling necessary to perform the Work. Contractor warrants that all employees and subcontractors shall have sufficient skill and experience to perform the Work assigned to them. Finally, Contractor represents that it, its employees and subcontractors have all licenses, permits, qualifications and approvals of whatever nature that are legally required to perform the Work, including any required business license, and that such licenses and approvals shall be maintained throughout the term of this Contract. As provided for in the indemnification provisions of this Contract, Contractor shall perform, at its own cost and expense and without reimbursement from the City, any work necessary to correct errors or omissions which are caused by Contractor's failure to comply with the standard of care provided for herein. Any employee who is determined by the City to be uncooperative, incompetent, a threat to the safety of persons or the Work, or any employee who fails or refuses to perform the Work in a manner acceptable to the City, shall be promptly removed from the Project by Contractor and shall not be re-employed on the Work.

3.5 Control and Payment of Subordinates; Contractual Relationship. City retains Contractor on an independent contractor basis and Contractor is not an employee of City. Any additional personnel performing the work governed by this Contract on behalf of Contractor shall at all times be under Contractor's exclusive direction and control. Contractor shall pay all wages, salaries, and other amounts due such personnel in connection with their performance under this Contract and as required by law. Contractor shall be responsible for all reports and obligations respecting such additional personnel, including, but not limited to: social security taxes, income tax withholding, unemployment insurance, and workers' compensation insurance.

3.6 City's Basic Obligation. City agrees to engage and does hereby engage Contractor as an independent contractor to furnish all materials and to perform all Work according to the terms and conditions herein contained for the sum set forth above. Except as otherwise provided in the Contract, the City shall pay to Contractor, as full consideration for the satisfactory performance by Contractor of the services and obligations required by this Contract, the below-referenced compensation in accordance with compensation provisions set forth in the Contract.

3.7 Compensation and Payment.

3.7.1 Amount of Compensation. As consideration for performance of the Work required herein, City agrees to pay Contractor the Total Contract Price of Six Hundred Six Thousand Five Hundred Nineteen Dollars (\$ 606,519.00) ("Total Contract Price") provided that such amount shall be subject to adjustment pursuant to the applicable terms of this Contract or written change orders approved and signed in advance by the City.

3.7.2 Payment of Compensation. If the Work is scheduled for completion in thirty (30) or less calendar days, City will arrange for payment of the Total Contract Price upon completion and approval by City of the Work. If the Work is scheduled for completion in more than thirty (30) calendar days, City will pay Contractor on a monthly basis as provided for herein. On or before the fifth (5th) day of each month, Contractor shall submit to the City an itemized application for payment in the format supplied by the City indicating the amount of Work completed since commencement of the Work or since the last progress payment. These applications shall be supported by evidence which is required by this Contract and such other documentation as the City may require. The Contractor shall certify that the Work for which payment is requested has been done and that the materials listed are stored where indicated. Contractor may be required to furnish a detailed schedule of values upon request of the City and in such detail and form as the City shall request, showing the quantities, unit prices, overhead, profit, and all other expenses involved in order to provide a basis for determining the amount of progress payments.

3.7.3 Prompt Payment. City shall review and pay all progress payment requests in accordance with the provisions set forth in Section 20104.50 of the California Public Contract Code. However, no progress payments will be made for Work not completed in accordance with this Contract. Contractor shall comply with all applicable laws, rules and regulations relating to the proper payment of its employees, subcontractors, suppliers, or others.

3.7.4 Contract Retentions. From each approved progress estimate, five percent (5%) will be deducted and retained by the City, and the remainder will be paid to Contractor. All Contract retention shall be released and paid to Contractor and subcontractors pursuant to California Public Contract Code Section 7107.

3.7.5 Other Retentions. In addition to Contract retentions, the City may deduct from each progress payment an amount necessary to protect City from loss because of: (1) liquidated damages which have accrued as of the date of the application for payment; (2) any sums expended by the City in performing any of Contractor's obligations under the Contract which Contractor has failed to perform or has performed inadequately; (3) defective Work not remedied; (4) stop notices as allowed by state law; (5) reasonable doubt that the Work can be completed for the unpaid balance of the Total Contract Price or within the scheduled completion date; (6) unsatisfactory prosecution of the Work by Contractor; (7) unauthorized deviations from the Contract; (8) failure of Contractor to maintain or submit on a timely basis proper and sufficient documentation as required by the Contract or by City during the prosecution of the Work; (9) erroneous or false estimates by Contractor of the value of the Work performed; (10) any sums representing expenses, losses, or damages as determined by the City, incurred by the City for which Contractor is liable under the Contract; and (11) any other sums which the City is entitled to recover from Contractor under the terms of the Contract or pursuant to state law, including Section 1727 of the California Labor Code. The failure by the City to deduct any of these sums from a progress payment shall not constitute a waiver of the City's right to such sums.

3.7.6 Substitutions for Contract Retentions. In accordance with California Public Contract Code Section 22300, the City will permit the substitution of securities for any monies withheld by the City to ensure performance under the Contract. At the request and expense of Contractor, securities equivalent to the amount withheld shall be deposited with the City, or with a state or federally chartered bank in California as the escrow agent, and thereafter the City shall then pay such monies to Contractor as they come due. Upon satisfactory completion of the Contract, the securities shall be returned to Contractor. For purposes of this Section and Section 22300 of the Public Contract Code, the term "satisfactory completion of the contract" shall

mean the time the City has issued written final acceptance of the Work and filed a Notice of Completion as required by law and provisions of this Contract. Contractor shall be the beneficial owner of any securities substituted for monies withheld and shall receive any interest thereon. The escrow agreement used for the purposes of this Section shall be in the form provided by the City.

3.7.7 Title to Work. As security for partial, progress, or other payments, title to Work for which such payments are made shall pass to the City at the time of payment. To the extent that title has not previously been vested in the City by reason of payments, full title shall pass to the City at delivery of the Work at the destination and time specified in this Contract. Such transferred title shall in each case be good, free and clear from any and all security interests, liens, or other encumbrances. Contractor promises and agrees that it will not pledge, hypothecate, or otherwise encumber the items in any manner that would result in any lien, security interest, charge, or claim upon or against said items. Such transfer of title shall not imply acceptance by the City, nor relieve Contractor from the responsibility to strictly comply with the Contract and shall not relieve Contractor of responsibility for any loss of or damage to items.

3.7.8 Labor and Material Releases. Contractor shall furnish City with labor and material releases from all subcontractors performing work on, or furnishing materials for, the Work governed by this Contract prior to final payment by City.

3.7.9 Prevailing Wages. Contractor is aware of the requirements of California Labor Code Section 1720 et seq., and 1770 et seq., as well as California Code of Regulations, Title 8, Section 16000 et seq., ("Prevailing Wage Laws"), which require the payment of prevailing wage rates and the performance of other requirements on "public works" and "maintenance" projects. Since the Services are being performed as part of an applicable "public works" or "maintenance" project, as defined by the Prevailing Wage Laws, and since the total compensation is \$1,000 or more, Contractor agrees to fully comply with such Prevailing Wage Laws. City shall provide Contractor with a copy of the prevailing rates of per diem wages in effect at the commencement of this Contract upon request. Contractor shall make copies of the prevailing rates of per diem wages for each craft, classification or type of worker needed to execute the Services available to interested parties upon request and shall post copies at Contractor's principal place of business and at the project site. Contractor shall defend, indemnify and hold the City, its officials, officers, employees and agents free and harmless from any claim or liability arising out of any failure or alleged failure to comply with the Prevailing Wage Laws. Contractor and any subcontractor shall forfeit a penalty of up to \$200 per calendar day or portion thereof for each worker paid less than the prevailing wage rates.

3.7.10 Apprenticeable Crafts. When Contractor employs workmen in an apprenticeable craft or trade, Contractor shall comply with the provisions of Section 1777.5 of the California Labor Code with respect to the employment of properly registered apprentices upon public works. The primary responsibility for compliance with said section for all apprenticeable occupations shall be with Contractor. The Contractor or any subcontractor that is determined by the Labor Commissioner to have knowingly violated Section 1777.5 shall forfeit as a civil penalty an amount not exceeding \$100 for each full calendar day of noncompliance, or such greater amount as provided by law.

3.7.11 Hours of Work. Contractor is advised that eight (8) hours labor constitutes a legal day's work. Pursuant to Section 1813 of the California Labor Code, Contractor shall forfeit a penalty of \$25.00 per worker for each day that each worker is permitted to work more than eight (8) hours in any one calendar day and forty (40) hours in any one calendar week, except when payment for overtime is made at not less than one and one-half (1-1/2) times the basic rate for that worker.

3.7.12 Payroll Records. Contractor and each subcontractor shall keep an accurate payroll record, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages

paid to each journeyman, apprentice, worker, or other employee employed by him or her in connection with the public work. The payroll records shall be certified and shall be available for inspection at all reasonable hours at the principal office of Contractor in the manner provided in Labor Code section 1776. In the event of noncompliance with the requirements of this section, Contractor shall have 10 days in which to comply subsequent to receipt of written notice specifying in what respects such Contractor must comply with this section. Should noncompliance still be evident after such 10-day period, Contractor shall, as a penalty to City, forfeit not more than \$100.00 for each calendar day or portion thereof, for each worker, until strict compliance is effectuated. The amount of the forfeiture is to be determined by the Labor Commissioner. A contractor who is found to have violated the provisions of law regarding wages on Public Works with the intent to defraud shall be ineligible to bid on Public Works contracts for a period of one to three years as determined by the Labor Commissioner. Upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, such penalties shall be withheld from progress payments then due. The responsibility for compliance with this section is on Contractor. The requirement to submit certified payroll records directly to the Labor Commissioner under Labor Code section 1771.4 shall not apply to work performed on a public works project that is exempt pursuant to the small project exemption specified in Labor Code Section 1771.4.

3.7.13 Contractor and Subcontractor Registration. Pursuant to Labor Code sections 1725.5 and 1771.1, all contractors and subcontractors that wish to bid on, be listed in a bid proposal, or enter into a contract to perform public work must be registered with the Department of Industrial Relations. No bid will be accepted nor any contract entered into without proof of the contractor's and subcontractors' current registration with the Department of Industrial Relations to perform public work. Contractor is directed to review, fill out and execute the Public Works Contractor Registration Certification attached hereto as Exhibit "E" prior to contract execution. Notwithstanding the foregoing, the contractor registration requirements mandated by Labor Code Sections 1725.5 and 1771.1 shall not apply to work performed on a public works project that is exempt pursuant to the small project exemption specified in Labor Code Sections 1725.5 and 1771.1.

3.7.14 Labor Compliance; Stop Orders. This Project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. It shall be the Contractor's sole responsibility to evaluate and pay the cost of complying with all labor compliance requirements under this Contract and applicable law. Any stop orders issued by the Department of Industrial Relations against Contractor or any subcontractor that affect Contractor's performance of Work, including any delay, shall be Contractor's sole responsibility. Any delay arising out of or resulting from such stop orders shall be considered Contractor caused delay subject to any applicable liquidated damages and shall not be compensable by the City. Contractor shall defend, indemnify and hold the City, its officials, officers, employees and agents free and harmless from any claim or liability arising out of stop orders issued by the Department of Industrial Relations against Contractor or any subcontractor.

3.8 Performance of Work; Jobsite Obligations.

3.8.1 Water Quality Management and Compliance.

3.8.1.1 Water Quality Management and Compliance. Contractor shall keep itself and all subcontractors, staff, and employees fully informed of and in compliance with all local, state and federal laws, rules and regulations that may impact, or be implicated by the performance of the Work including, without limitation, all applicable provisions of the Federal Water Pollution Control Act (33 U.S.C. §§ 1300); the California Porter-Cologne Water Quality Control Act (Cal Water Code §§ 13000-14950); local ordinances regulating discharges of storm water; and any and all regulations, policies, or permits issued

pursuant to any such authority regulating the discharge of pollutants, as that term is used in the Porter-Cologne Water Quality Control Act, to any ground or surface water in the State.

3.8.1.2 Compliance with the Statewide Construction General Permit. Contractor shall comply with all conditions of the most recent iteration of the National Pollutant Discharge Elimination System General Permit for Storm Water Discharges Associated with Construction Activity, issued by the California State Water Resources Control Board ("Permit"). It shall be Contractor's sole responsibility to file a Notice of Intent and procure coverage under the Permit for all construction activity which results in the disturbance of more than one acre of total land area or which is part of a larger common area of development or sale. Prior to initiating work, Contractor shall be solely responsible for preparing and implementing a Storm Water Pollution Prevention Plan (SWPPP) as required by the Permit. Contractor shall be responsible for procuring, implementing and complying with the provisions of the Permit and the SWPPP, including the standard provisions, and monitoring and reporting requirements as required by the Permit. The Permit requires the SWPPP to be a "living document" that changes as necessary to meet the conditions and requirements of the job site as it progresses through different phases of construction and is subject to different weather conditions. It shall be Contractor's sole responsibility to update the SWPPP as necessary to address conditions at the project site.

3.8.1.3 Other Water Quality Rules Regulations and Policies. Contractor shall comply with the lawful requirements of any applicable municipality, drainage City, or local agency regarding discharges of storm water to separate storm drain systems or other watercourses under their jurisdiction, including applicable requirements in municipal storm water management programs.

3.8.1.4 Cost of Compliance. Storm, surface, nuisance, or other waters may be encountered at various times during construction of The Work. Therefore, the Contractor, by submitting a Bid, hereby acknowledges that it has investigated the risk arising from such waters, has prepared its Bid accordingly, and assumes any and all risks and liabilities arising therefrom.

3.8.1.5 Liability for Non-Compliance. Failure to comply with the Permit is a violation of federal and state law. Pursuant to the indemnification provisions of this Contract, Contractor hereby agrees to defend, indemnify and hold harmless the City and its officials, officers, employees, volunteers and agents for any alleged violations. In addition, City may seek damages from Contractor for any delay in completing the Work in accordance with the Contract, if such delay is caused by or related to Contractor's failure to comply with the Permit.

3.8.1.6 Reservation of Right to Defend. City reserves the right to defend any enforcement action brought against the City for Contractor's failure to comply with the Permit or any other relevant water quality law, regulation, or policy. Pursuant to the indemnification provisions of this Contract, Contractor hereby agrees to be bound by, and to reimburse the City for the costs (including the City's attorney's fees) associated with, any settlement reached between the City and the relevant enforcement entity.

3.8.1.7 Training. In addition to the standard of performance requirements set forth in paragraph 3.4, Contractor warrants that all employees and subcontractors shall have sufficient skill and experience to perform the Work assigned to them without impacting water quality in violation of the laws, regulations and policies described in paragraph 3.8.1. Contractor further warrants that it, its employees and subcontractors will receive adequate training, as determined by City, regarding the requirements of the laws, regulations and policies described in paragraph 3.8.1 as they may relate to the Work provided under this Agreement. Upon request, City will provide the Contractor with a list of training programs that meet the requirements of this paragraph.

3.8.2 Safety. Contractor shall execute and maintain its work so as to avoid injury or damage to any person or property. Contractor shall comply with the requirements of the specifications relating to safety measures applicable in particular operations or kinds of work. In carrying out its Work, Contractor shall at all times be in compliance with all applicable local, state and federal laws, rules and regulations, and shall exercise all necessary precautions for the safety of employees appropriate to the nature of the Work and the conditions under which the Work is to be performed. Safety precautions as applicable shall include, but shall not be limited to, adequate life protection and lifesaving equipment; adequate illumination for underground and night operations; instructions in accident prevention for all employees, such as machinery guards, safe walkways, scaffolds, ladders, bridges, gang planks, confined space procedures, trenching and shoring, fall protection and other safety devices, equipment and wearing apparel as are necessary or lawfully required to prevent accidents or injuries; and adequate facilities for the proper inspection and maintenance of all safety measures. Furthermore, Contractor shall prominently display the names and telephone numbers of at least two medical doctors practicing in the vicinity of the Project, as well as the telephone number of the local ambulance service, adjacent to all telephones at the Project site.

3.8.3 Laws and Regulations. Contractor shall keep itself fully informed of and in compliance with all local, state and federal laws, rules and regulations in any manner affecting the performance of the Contract or the Work, including all Cal/OSHA requirements, and shall give all notices required by law. Contractor shall be liable for all violations of such laws and regulations in connection with Work. If Contractor observes that the drawings or specifications are at variance with any law, rule or regulation, it shall promptly notify the City in writing. Any necessary changes shall be made by written change order. If Contractor performs any work knowing it to be contrary to such laws, rules and regulations and without giving written notice to the City, Contractor shall be solely responsible for all costs arising therefrom. City is a public entity of the State of California subject to certain provisions of the Health & Safety Code, Government Code, Public Contract Code, and Labor Code of the State. It is stipulated and agreed that all provisions of the law applicable to the public contracts of a municipality are a part of this Contract to the same extent as though set forth herein and will be complied with. Contractor shall defend, indemnify and hold City, its officials, officers, employees and agents free and harmless, pursuant to the indemnification provisions of this Contract, from any claim or liability arising out of any failure or alleged failure to comply with such laws, rules or regulations.

3.8.4 Permits and Licenses. Contractor shall be responsible for securing City permits and licenses necessary to perform the Work described herein, including, but not limited to, any required business license. While Contractor will not be charged a fee for any City permits, Contractor shall pay the City's business license fee, if any. Any ineligible contractor or subcontractor pursuant to Labor Code Sections 1777.1 and 1777.7 may not perform work on this Project.

3.8.5 Trenching Work. If the Total Contract Price exceeds \$25,000 and if the Work governed by this Contract entails excavation of any trench or trenches five (5) feet or more in depth, Contractor shall comply with all applicable provisions of the California Labor Code, including Section 6705. To this end, Contractor shall submit for City's review and approval a detailed plan showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during the excavation of such trench or trenches. If such plan varies from the shoring system standards, the plan shall be prepared by a registered civil or structural engineer.

3.8.6 Hazardous Materials and Differing Conditions. As required by California Public Contract Code Section 7104, if this Contract involves digging trenches or other excavations that extend deeper than four (4) feet below the surface, Contractor shall promptly, and prior to disturbance of any conditions, notify City of: (1) any material discovered in excavation that Contractor believes to be a hazardous waste that is required to be removed to a Class I, Class II or Class III disposal site; (2) subsurface or latent physical conditions at the site differing from those indicated by City; and (3) unknown physical conditions of an unusual nature at the site, significantly different from those ordinarily encountered in such contract work. Upon notification, City shall

promptly investigate the conditions to determine whether a change order is appropriate. In the event of a dispute, Contractor shall not be excused from any scheduled completion date and shall proceed with all Work to be performed under the Contract, but shall retain all rights provided by the Contract or by law for making protests and resolving the dispute.

3.8.7 Underground Utility Facilities. To the extent required by Section 4215 of the California Government Code, City shall compensate Contractor for the costs of: (1) locating and repairing damage to underground utility facilities not caused by the failure of Contractor to exercise reasonable care; (2) removing or relocating underground utility facilities not indicated in the construction drawings; and (3) equipment necessarily idled during such work. Contractor shall not be assessed liquidated damages for delay caused by failure of City to provide for removal or relocation of such utility facilities.

3.8.8 Air Quality. Contractor must fully comply with all applicable laws, rules and regulations in furnishing or using equipment and/or providing services, including, but not limited to, emissions limits and permitting requirements imposed by the California Air Resources Board (CARB). Although CARB limits and requirements are more broad, Contractor shall specifically be aware of their application to "portable equipment", which definition is considered by CARB to include any item of equipment with a fuel-powered engine. Contractor shall indemnify City against any fines or penalties imposed by CARB, or any other governmental or regulatory agency for violations of applicable laws, rules and/or regulations by Contractor, its subcontractors, or others for whom Contractor is responsible under its indemnity obligations provided for in this Agreement.

3.8.9 State Recycling Mandates. Contractor shall comply with State Recycling Mandates. Any recyclable materials/debris collected by the contractor that can be feasibly diverted via reuse or recycling must be hauled by the appropriate handler for reuse or recycling.

3.9 Completion of Work. When Contractor determines that it has completed the Work required herein, Contractor shall so notify City in writing and shall furnish all labor and material releases required by this Contract. City shall thereupon inspect the Work. If the Work is not acceptable to the City, the City shall indicate to Contractor in writing the specific portions or items of Work which are unsatisfactory or incomplete. Once Contractor determines that it has completed the incomplete or unsatisfactory Work, Contractor may request a reinspection by the City. Once the Work is acceptable to City, City shall pay to Contractor the Total Contract Price remaining to be paid, less any amount which City may be authorized or directed by law to retain. Payment of retention proceeds due to Contractor shall be made in accordance with Section 7107 of the California Public Contract Code.

3.10 Claims; Government Code Claim Compliance.

3.10.1 Intent. Effective January 1, 1991, Section 20104 et seq., of the California Public Contract Code prescribes a process utilizing informal conferences, non-binding judicial supervised mediation, and judicial arbitration to resolve disputes on construction claims of \$375,000 or less. Effective January 1, 2017, Section 9204 of the Public Contract Code prescribes a process for negotiation and mediation to resolve disputes on construction claims. The intent of this Section is to implement Sections 20104 et seq. and Section 9204 of the California Public Contract Code. This Section shall be construed to be consistent with said statutes.

3.10.2 Claims. For purposes of this Section, "Claim" means a separate demand by the Contractor, after a change order duly requested in accordance with the terms of this Contract has been denied by the City, for (A) a time extension, (B) payment of money or damages arising from Work done by or on behalf of the Contractor pursuant to the Contract, or (C) an amount the payment of which is disputed by the City. Claims governed by this Section may not be filed unless and until the Contractor completes all procedures for giving notice of delay or change and for the requesting of a time extension or change order, including but not

necessarily limited to the change order procedures contained herein, and Contractor's request for a change has been denied in whole or in part. Claims governed by this Section must be filed no later than fourteen (14) days after a request for change has been denied in whole or in part or after any other event giving rise to the Claim. The Claim shall be submitted in writing to the City and shall include on its first page the following in 16 point capital font: "THIS IS A CLAIM." Furthermore, the claim shall include the documents necessary to substantiate the claim. Nothing in this Section is intended to extend the time limit or supersede notice requirements otherwise provided by contract for the filing of claims, including all requirements pertaining to compensation or payment for extra Work, disputed Work, and/or changed conditions. Failure to follow such contractual requirements shall bar any claims or subsequent lawsuits for compensation or payment thereon.

3.10.3 Supporting Documentation. The Contractor shall submit all claims in the following format:

3.10.3.1 Summary of claim merit and price, reference Contract Document provisions pursuant to which the claim is made

- 3.10.3.2 List of documents relating to claim:
- (A) Specifications
 - (B) Drawings
 - (C) Clarifications (Requests for Information)
 - (D) Schedules
 - (E) Other

3.10.3.3 Chronology of events and correspondence

3.10.3.4 Analysis of claim merit

3.10.3.5 Analysis of claim cost

3.10.3.6 Time impact analysis in CPM format

3.10.3.7 If Contractor's claim is based in whole or in part on an allegation of errors or omissions in the Drawings or Specifications for the Project, Contractor shall provide a summary of the percentage of the claim subject to design errors or omissions and shall obtain a certificate of merit in support of the claim of design errors and omissions.

3.10.3.8 Cover letter and certification of validity of the claim, including any claims from subcontractors of any tier, in accordance with Government Code section 12650 *et seq.*

3.10.4 City's Response. Upon receipt of a claim pursuant to this Section, City shall conduct a reasonable review of the claim and, within a period not to exceed 45 days, shall provide the Contractor a written statement identifying what portion of the claim is disputed and what portion is undisputed. Any payment due on an undisputed portion of the claim will be processed and made within 60 days after the public entity issues its written statement.

3.10.4.1 If City needs approval from its governing body to provide the Contractor a written statement identifying the disputed portion and the undisputed portion of the claim, and the governing body does not meet within the 45 days or within the mutually agreed to extension of time following receipt of a claim sent by registered mail or certified mail, return receipt requested, City shall have up to three days following

the next duly publicly noticed meeting of the governing body after the 45-day period, or extension, expires to provide the Contractor a written statement identifying the disputed portion and the undisputed portion.

3.10.4.2 Within 30 days of receipt of a claim, City may request in writing additional documentation supporting the claim or relating to defenses or claims City may have against the Contractor. If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of City and the Contractor.

3.10.4.3 City's written response to the claim, as further documented, shall be submitted to the Contractor within 30 days (if the claim is less than \$50,000, within 15 days) after receipt of the further documentation, or within a period of time no greater than that taken by the Contractor in producing the additional information or requested documentation, whichever is greater.

3.10.5 Meet and Confer. If the Contractor disputes City's written response, or City fails to respond within the time prescribed, the Contractor may so notify City, in writing, either within 15 days of receipt of City's response or within 15 days of City's failure to respond within the time prescribed, respectively, and demand an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand, City shall schedule a meet and confer conference within 30 days for settlement of the dispute.

3.10.6 Mediation. Within 10 business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, City shall provide the Contractor a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after City issues its written statement. Any disputed portion of the claim, as identified by the Contractor in writing, shall be submitted to nonbinding mediation, with City and the Contractor sharing the associated costs equally. City and Contractor shall mutually agree to a mediator within 10 business days after the disputed portion of the claim has been identified in writing, unless the parties agree to select a mediator at a later time.

3.10.6.1 If the Parties cannot agree upon a mediator, each Party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each Party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator.

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

3.10.6.3 Unless otherwise agreed to by City and the Contractor in writing, the mediation conducted pursuant to this section shall excuse any further obligation under Section 20104.4 to mediate after litigation has been commenced.

3.10.6.4 The mediation shall be held no earlier than the date the Contractor completes the Work or the date that the Contractor last performs Work, whichever is earlier. All unresolved claims shall be considered jointly in a single mediation, unless a new unrelated claim arises after mediation is completed.

3.10.7 Procedures After Mediation. If following the mediation, the claim or any portion remains in dispute, the Contractor must file a claim pursuant to Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code. For purposes of those provisions, the running of the period of time within which a claim must be filed shall be tolled from the

time the Contractor submits his or her written claim pursuant to subdivision (a) until the time the claim is denied, including any period of time utilized by the meet and confer conference or mediation.

3.10.8 Civil Actions. The following procedures are established for all civil actions filed to resolve claims subject to this Section:

3.10.8.1 Within 60 days, but no earlier than 30 days, following the filing or responsive pleadings, the court shall submit the matter to non-binding mediation unless waived by mutual stipulation of both parties or unless mediation was held prior to commencement of the action in accordance with Public Contract Code section 9204 and the terms of these procedures.. The mediation process shall provide for the selection within 15 days by both parties of a disinterested third person as mediator, shall be commenced within 30 days of the submittal, and shall be concluded within 15 days from the commencement of the mediation unless a time requirement is extended upon a good cause showing to the court.

3.10.8.2 If the matter remains in dispute, the case shall be submitted to judicial arbitration pursuant to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of Part 3 of the Code of Civil Procedure, notwithstanding Section 1114.11 of that code. The Civil Discovery Act of 1986 (Article 3 (commencing with Section 2016) of Chapter 3 of Title 3 of Part 4 of the Code of Civil Procedure) shall apply to any proceeding brought under this subdivision consistent with the rules pertaining to judicial arbitration.

3.10.8.3 In addition to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of Part 3 of the Code of Civil Procedure, (A) arbitrators shall, when possible, be experienced in construction law, and (B) any party appealing an arbitration award who does not obtain a more favorable judgment shall, in addition to payment of costs and fees under that chapter, also pay the attorney's fees on appeal of the other party.

3.10.9 Government Code Claims. In addition to any and all contract requirements pertaining to notices of and requests for compensation or payment for extra work, disputed work, claims and/or changed conditions, Contractor must comply with the claim procedures set forth in Government Code sections 900 et seq. prior to filing any lawsuit against the City. Such Government Code claims and any subsequent lawsuit based upon the Government Code claims shall be limited to those matters that remain unresolved after all procedures pertaining to extra work, disputed work, claims, and/or changed conditions have been followed by Contractor. If no such Government Code claim is submitted, or if any prerequisite contractual requirements are not otherwise satisfied as specified herein, Contractor shall be barred from bringing and maintaining a valid lawsuit against the City. A Government Code claim must be filed no earlier than the date the work is completed or the date the Contractor last performs work on the Project, whichever occurs first. A Government Code claim shall be inclusive of all unresolved claims unless a new unrelated claim arises after the Government Code claim is submitted.

3.10.10 Non-Waiver. City's failure to respond to a claim from the Contractor within the time periods described in this Section or to otherwise meet the time requirements of this Section shall result in the claim being deemed rejected in its entirety. City's failure to respond shall not waive City's rights to any subsequent procedures for the resolution of disputed claims.

3.11 Loss and Damage. Except as may otherwise be limited by law, Contractor shall be responsible for all loss and damage which may arise out of the nature of the Work agreed to herein, or from the action of the elements, or from any unforeseen difficulties which may arise or be encountered in the prosecution of the Work until the same is fully completed and accepted by City.

3.12 Indemnification.

3.12.1 Scope of Indemnity. To the fullest extent permitted by law, Contractor shall defend, indemnify and hold the City, its officials, employees, agents and authorized volunteers free and harmless from any and all claims, demands, causes of action, suits, actions, proceedings, costs, expenses, liability, judgments, awards, decrees, settlements, loss, damage or injury of any kind, in law or equity, to property or persons, including wrongful death, (collectively, "Claims") in any manner arising out of, pertaining to, or incident to any alleged acts, errors or omissions, or willful misconduct of Contractor, its officials, officers, employees, subcontractors, consultants or agents in connection with the performance of the Contractor's services, the Project or this Agreement, including without limitation the payment of all consequential damages, expert witness fees and attorneys' fees and other related costs and expenses. Notwithstanding the foregoing, to the extent required by Civil Code section 2782, Contractor's indemnity obligation shall not apply to liability for damages for death or bodily injury to persons, injury to property, or any other loss, damage or expense arising from the sole or active negligence or willful misconduct of the City or the City's agents, servants, or independent contractors who are directly responsible to the City, or for defects in design furnished by those persons.

3.12.2 Additional Indemnity Obligations. Contractor shall defend, with counsel of City's choosing and at Contractor's own cost, expense and risk, any and all Claims covered by this section that may be brought or instituted against City or its officials, employees, agents and authorized volunteers. In addition, Contractor shall pay and satisfy any judgment, award or decree that may be rendered against City or its officials, employees, agents and authorized volunteers as part of any such claim, suit, action or other proceeding. Contractor shall also reimburse City for the cost of any settlement paid by City or its officials, employees, agents and authorized volunteers as part of any such claim, suit, action or other proceeding. Such reimbursement shall include payment for City's attorney's fees and costs, including expert witness fees. Contractor shall reimburse City and its officials, employees, agents and authorized volunteers, for any and all legal expenses and costs incurred by each of them in connection therewith or in enforcing the indemnity herein provided. Contractor's obligation to indemnify shall not be restricted to insurance proceeds, if any, received by the City, its officials, employees, agents and authorized volunteers.

3.13 Insurance.

3.13.1 Time for Compliance. Contractor shall not commence Work under this Contract until it has provided evidence satisfactory to the City that it has secured all insurance required under this section. In addition, Contractor shall not allow any subcontractor to commence work on any subcontract until it has provided evidence satisfactory to the City that the subcontractor has secured all insurance required under this section. Failure to provide and maintain all required insurance shall be grounds for the City to terminate this Contract for cause.

3.13.2 Minimum Requirements. Contractor shall, at its expense, procure and maintain for the duration of the Contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the Work hereunder by Contractor, its agents, representatives, employees or subcontractors. Contractor shall also require all of its subcontractors to procure and maintain the same insurance for the duration of the Contract. Such insurance shall meet at least the following minimum levels of coverage:

3.13.2.1 Minimum Scope of Insurance. Coverage shall be at least as broad as the latest version of the following: (1) *General Liability*: Insurance Services Office Commercial General Liability coverage (occurrence form CG 00 01) OR Insurance Services Office Owners and Contractors Protective Liability Coverage Form (CG 00 09 11 88) (coverage for operations of designated contractor); (2) *Automobile Liability*: Insurance Services Office Business Auto Coverage form number CA 00 01, code 1 (any auto); and (3) *Workers' Compensation and Employer's Liability*: Workers' Compensation insurance as required by the State of California and Employer's Liability Insurance. Policies shall not contain exclusions contrary to this Contract.

3.13.2.2 Minimum Limits of Insurance. Contractor shall maintain limits no less than: (1) *General Liability*: \$5,000,000 per occurrence and \$5,000,000 aggregate for bodily injury, personal injury and property damage; (2) *Automobile Liability*: \$5,000,000 per accident for bodily injury and property damage; and (3) *Workers' Compensation and Employer's Liability*: Workers' compensation limits as required by the Labor Code of the State of California. Employer's Liability limits of \$1,000,000 each accident, policy limit bodily injury or disease, and each employee bodily injury or disease. Defense costs shall be available in addition to the limits. Notwithstanding the minimum limits specified herein, any available coverage shall be provided to the parties required to be named as additional insureds pursuant to this Contract.

3.13.3 Insurance Endorsements. The insurance policies shall contain the following provisions, or Contractor shall provide endorsements (amendments) on forms supplied or approved by the City to add the following provisions to the insurance policies:

3.13.3.1 General Liability. (1) Such policy shall give the City, its officials, employees, agents and authorized volunteers additional insured status using ISO endorsements CG20 10 10 01 plus CG20 37 10 01, or endorsements providing the exact same coverage, with respect to the Work or operations performed by or on behalf of Contractor, including materials, parts or equipment furnished in connection with such work; (2) all policies shall waive or shall permit Contractor to waive all rights of subrogation which may be obtained by the Contractor or any insurer by virtue of payment of any loss or any coverage provided to any person named as an additional insured pursuant to this Contract, and Contractor agrees to waive all such rights of subrogation; and (3) the insurance coverage shall be primary insurance as respects the City, its officials, employees, agents and authorized volunteers, or if excess, shall stand in an unbroken chain of coverage excess of Contractor's scheduled underlying coverage. Any insurance or self-insurance maintained by the City, its officials, employees, agents and authorized volunteers shall be excess of Contractor's insurance and shall not be called upon to contribute with it.

3.13.3.2 Automobile Liability. (1) Such policy shall give the City, its officials, employees, agents and authorized volunteers additional insured status with respect to the ownership, operation, maintenance, use, loading or unloading of any auto owned, leased, hired or borrowed by Contractor or for which Contractor is responsible; (2) all policies shall waive or shall permit Contractor to waive all rights of subrogation which may be obtained by the Contractor or any insurer by virtue of payment of any loss or any coverage provided to any person named as an additional insured pursuant to this Contract, and Contractor agrees to waive all such rights of subrogation; and (3) the insurance coverage shall be primary insurance as respects the City, its officials, employees, agents and authorized volunteers, or if excess, shall stand in an unbroken chain of coverage excess of Contractor's scheduled underlying coverage. Any insurance or self-insurance maintained by the City, its officials, employees, agents and authorized volunteers shall be excess of Contractor's insurance and shall not be called upon to contribute with it in any way.

3.13.3.3 Workers' Compensation and Employer's Liability Coverage. The insurer shall agree to waive all rights of subrogation against the City, its officials, employees, agents and authorized volunteers for losses paid under the terms of the insurance policy which arise from work performed by Contractor.

3.13.3.4 All Coverages. Each insurance policy required by this Contract shall be endorsed to state that: (1) coverage shall not be suspended, voided, reduced or canceled except after thirty (30) days prior written notice by certified mail, return receipt requested, has been given to the City; and (2) any failure to comply with reporting or other provisions of the policies, including breaches of warranties, shall not affect coverage provided to the City, its officials, employees, agents and authorized volunteers.

3.13.4 Separation of Insureds; No Special Limitations. All insurance required by this Section shall contain standard separation of insureds provisions. In addition, such insurance shall not contain any special limitations on the scope of protection afforded to the City, its officials, employees, agents and authorized volunteers.

3.13.5 Deductibles and Self-Insurance Retentions. Any deductibles or self-insured retentions must be declared to and approved by the City. Contractor shall guarantee that, at the option of the City, either: (1) the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the City, its officials, employees, agents and authorized volunteers; or (2) the Contractor shall procure a bond or other financial guarantee acceptable to the City guaranteeing payment of losses and related investigation costs, claims and administrative and defense expenses.

3.13.6 Acceptability of Insurers. Insurance is to be placed with insurers with a current A.M. Best's rating no less than A:VII, licensed to do business in California, and satisfactory to the City. Exception may be made for the State Compensation Insurance Fund when not specifically rated.

3.13.7 Verification of Coverage. Contractor shall furnish City with original certificates of insurance and endorsements effecting coverage required by this Contract on forms satisfactory to the City. The certificates and endorsements for each insurance policy shall be signed by a person authorized by that insurer to bind coverage on its behalf, and shall be on forms supplied or approved by the City. All certificates and endorsements must be received and approved by the City before work commences. The City reserves the right to require complete, certified copies of all required insurance policies, at any time.

3.13.8 Subcontractors. All subcontractors shall meet the requirements of this Section before commencing Work. Contractor shall furnish separate certificates and endorsements for each subcontractor. Subcontractor policies of General Liability insurance shall name the City, its officials, employees, agents and authorized volunteers as additional insureds using form ISO 20 38 04 13 or endorsements providing the exact same coverage. All coverages for subcontractors shall be subject to all of the requirements stated herein except as otherwise agreed to by the City in writing.

3.13.9 Reporting of Claims. Contractor shall report to the City, in addition to Contractor's insurer, any and all insurance claims submitted by Contractor in connection with the Work under this Contract.

3.14 Bond Requirements.

3.14.1 Payment Bond. If required by law or otherwise specifically requested by City in Exhibit "C" attached hereto and incorporated herein by reference, Contractor shall execute and provide to City concurrently with this Contract a Payment Bond in an amount required by the City and in a form provided or approved by the City. If such bond is required, no payment will be made to Contractor until the bond has been received and approved by the City.

3.14.2 Performance Bond. If specifically requested by City in Exhibit "C" attached hereto and incorporated herein by reference, Contractor shall execute and provide to City concurrently with this Contract a Performance Bond in an amount required by the City and in a form provided or approved by the City. If such bond is required, no payment will be made to Contractor until the bond has been received and approved by the City.

3.14.3 Bond Provisions. Should, in City's sole opinion, any bond become insufficient or any surety be found to be unsatisfactory, Contractor shall renew or replace the effected bond within (ten) 10 days of receiving notice from City. In the event the surety or Contractor intends to reduce or cancel any required bond, at least thirty (30) days prior written notice shall be given to the City, and Contractor shall post acceptable

replacement bonds at least ten (10) days prior to expiration of the original bonds. No further payments shall be deemed due or will be made under this Contract until any replacement bonds required by this Section are accepted by the City. To the extent, if any, that the Total Contract Price is increased in accordance with the Contract, Contractor shall, upon request of the City, cause the amount of the bond to be increased accordingly and shall promptly deliver satisfactory evidence of such increase to the City. If Contractor fails to furnish any required bond, the City may terminate the Contract for cause.

3.14.4 Surety Qualifications. Only bonds executed by an admitted surety insurer, as defined in California Code of Civil Procedure Section 995.120, shall be accepted. If a California-admitted surety insurer issuing bonds does not meet these requirements, the insurer will be considered qualified if it is in conformance with Section 995.660 of the California Code of Civil Procedure, and proof of such is provided to the City.

3.15 Warranty. Contractor warrants all Work under the Contract (which for purposes of this Section shall be deemed to include unauthorized work which has not been removed and any non-conforming materials incorporated into the Work) to be of good quality and free from any defective or faulty material and workmanship. Contractor agrees that for a period of one year (or the period of time specified elsewhere in the Contract or in any guarantee or warranty provided by any manufacturer or supplier of equipment or materials incorporated into the Work, whichever is later) after the date of final acceptance, Contractor shall within ten (10) days after being notified in writing by the City of any defect in the Work or non-conformance of the Work to the Contract, commence and prosecute with due diligence all Work necessary to fulfill the terms of the warranty at its sole cost and expense. Contractor shall act sooner as requested by the City in response to an emergency. In addition, Contractor shall, at its sole cost and expense, repair and replace any portions of the Work (or work of other contractors) damaged by its defective Work or which becomes damaged in the course of repairing or replacing defective Work. For any Work so corrected, Contractor's obligation hereunder to correct defective Work shall be reinstated for an additional one year period, commencing with the date of acceptance of such corrected Work. Contractor shall perform such tests as the City may require to verify that any corrective actions, including, without limitation, redesign, repairs, and replacements comply with the requirements of the Contract. All costs associated with such corrective actions and testing, including the removal, replacement, and reinstatement of equipment and materials necessary to gain access, shall be the sole responsibility of Contractor. All warranties and guarantees of subcontractors, suppliers and manufacturers with respect to any portion of the Work, whether express or implied, are deemed to be obtained by Contractor for the benefit of the City, regardless of whether or not such warranties and guarantees have been transferred or assigned to the City by separate agreement and Contractor agrees to enforce such warranties and guarantees, if necessary, on behalf of the City. In the event that Contractor fails to perform its obligations under this Section, or under any other warranty or guaranty under this Contract, to the reasonable satisfaction of the City, the City shall have the right to correct and replace any defective or non-conforming Work and any work damaged by such work or the replacement or correction thereof at Contractor's sole expense. Contractor shall be obligated to fully reimburse the City for any expenses incurred hereunder upon demand.

3.16 Employee/Labor Certifications.

3.16.1 Contractor's Labor Certification. By its signature hereunder, Contractor certifies that he is aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for Worker's Compensation or to undertake self-insurance in accordance with the provisions of that Code, and agrees to comply with such provisions before commencing the performance of the Work. A certification form for this purpose, which is attached to this Contract as Exhibit "D" and incorporated herein by reference, shall be executed simultaneously with this Contract.

3.16.2 Equal Opportunity Employment. Contractor represents that it is an equal opportunity employer and that it shall not discriminate against any employee or applicant for employment because of race, religion, color, national origin, ancestry, sex, age or other interests protected by the State or Federal

Constitutions. Such non-discrimination shall include, but not be limited to, all activities related to initial employment, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff or termination.

3.16.3 Verification of Employment Eligibility. By executing this Contract, Contractor verifies that it fully complies with all requirements and restrictions of state and federal law respecting the employment of undocumented aliens, including, but not limited to, the Immigration Reform and Control Act of 1986, as may be amended from time to time, and shall require all subcontractors and sub-subcontractors to comply with the same.

3.17 General Provisions.

3.17.1 City's Representative. The City hereby designates the General Manager, or his or her designee, to act as its representative for the performance of this Contract ("City's Representative"). City's Representative shall have the power to act on behalf of the City for all purposes under this Contract. Contractor shall not accept direction or orders from any person other than the City's Representative or his or her designee.

3.17.2 Contractor's Representative. Before starting the Work, Contractor shall submit in writing the name, qualifications and experience of its proposed representative who shall be subject to the review and approval of the City ("Contractor's Representative"). Following approval by the City, Contractor's Representative shall have full authority to represent and act on behalf of Contractor for all purposes under this Contract. Contractor's Representative shall supervise and direct the Work, using his best skill and attention, and shall be responsible for all construction means, methods, techniques, sequences and procedures and for the satisfactory coordination of all portions of the Work under this Contract. Contractor's Representative shall devote full time to the Project and either he or his designee, who shall be acceptable to the City, shall be present at the Work site at all times that any Work is in progress and at any time that any employee or subcontractor of Contractor is present at the Work site. Arrangements for responsible supervision, acceptable to the City, shall be made for emergency Work which may be required. Should Contractor desire to change its Contractor's Representative, Contractor shall provide the information specified above and obtain the City's written approval.

3.17.3 Termination. This Contract may be terminated by City at any time, either with or without cause, by giving Contractor three (3) days advance written notice. In the event of termination by City for any reason other than the fault of Contractor, City shall pay Contractor for all Work performed up to that time as provided herein. In the event of breach of the Contract by Contractor, City may terminate the Contract immediately without notice, may reduce payment to Contractor in the amount necessary to offset City's resulting damages, and may pursue any other available recourse against Contractor. Contractor may not terminate this Contract except for cause. In the event this Contract is terminated in whole or in part as provided, City may procure, upon such terms and in such manner as it may determine appropriate, services similar to those terminated. Further, if this Contract is terminated as provided, City may require Contractor to provide all finished or unfinished documents, data, diagrams, drawings, materials or other matter prepared or built by Contractor in connection with its performance of this Contract.

3.17.4 Contract Interpretation. Should any question arise regarding the meaning or import of any of the provisions of this Contract or written or oral instructions from City, the matter shall be referred to City's Representative, whose decision

3.17.5 Anti-Trust Claims. This provision shall be operative if this Contract is applicable to California Public Contract Code Section 7103.5. In entering into this Contract to supply goods, services or materials, Contractor hereby offers and agrees to assign to the City 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. Section 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 Contract. This assignment

shall be made and become effective at the time the City tender final payment to Contractor, without further acknowledgment by the Parties.

3.17.6 Notices. All notices hereunder and communications regarding interpretation of the terms of the Contract or changes thereto shall be provided by the mailing thereof by registered or certified mail, return receipt requested, postage prepaid and addressed as follows:

CONTRACTOR:

CLYDE G. STEAGALL, INC., 6030 KING RD, LOOMIS, CA 95650
[INSERT CONTRACTOR NAME AND ADDRESS]

MIKE STEAGALL, PRESIDENT
[INSERT CONTRACTOR REP. NAME AND TITLE]

CITY:

City of Merced
2525 "O" Street
Merced, California 95340
Attn: Mr. Rick Maddox, PE
City Engineer

Any notice so given shall be considered received by the other Party three (3) days after deposit in the U.S. Mail as stated above and addressed to the Party at the above address. Actual notice shall be deemed adequate notice on the date actual notice occurred, regardless of the method of service.

3.17.7 Time of Essence. Time is of the essence in the performance of this Contract.

3.17.8 Assignment Forbidden. Contractor shall not, either voluntarily or by action of law, assign or transfer this Contract or any obligation, right, title or interest assumed by Contractor herein without the prior written consent of City. If Contractor attempts an assignment or transfer of this Contract or any obligation, right, title or interest herein, City may, at its option, terminate and revoke the Contract and shall thereupon be relieved from any and all obligations to Contractor or its assignee or transferee.

3.17.9 No Third Party Beneficiaries. There are no intended third party beneficiaries of any right or obligation assumed by the Parties.

3.17.10 Governing Laws; Venue. This Agreement shall be interpreted in accordance with the laws of the State of California. If any action is brought to interpret or enforce any term of this Agreement, the action shall be brought in a state or federal court situated in the County of Merced, State of California.

3.17.11 Counterparts. This Contract may be executed in counterparts, each of which shall constitute an original.

3.17.12 Successors. The Parties do for themselves, their heirs, executors, administrators, successors, and assigns agree to the full performance of all of the provisions contained in this Contract.

3.17.13 [Reserved]

3.17.14 Solicitation. Contractor maintains and warrants that it has not employed nor retained any company or person, other than a bona fide employee working solely for Contractor, to solicit or secure this Contract. Further, Contractor warrants that it has not paid nor has it agreed to pay any company or person, other than a bona fide employee working solely for Contractor, any fee, commission, percentage, brokerage fee, gift or other consideration contingent upon or resulting from the award or making of this Contract. For breach or violation of this warranty, City shall have the right to terminate this Contract without liability.

3.17.15 Conflict of Interest. Contractor maintains and warrants that it has not employed nor retained any company or person, other than a bona fide employee working solely for Contractor, to solicit or secure this Agreement. Further, Contractor warrants that it has not paid nor has it agreed to pay any company or person, other than a bona fide employee working solely for Contractor, any fee, commission, percentage, brokerage fee, gift or other consideration contingent upon or resulting from the award or making of this Agreement. For breach or violation of this warranty, City shall have the right to rescind this Agreement without liability. For the term of this Contract, no official, officer or employee of City, during the term of his or her service with City, shall have any direct interest in this Contract, or obtain any present or anticipated material benefit arising therefrom. In addition, Contractor agrees to file, or to cause its employees or subcontractors to file, a Statement of Economic Interest with the City's Filing Officer as required under state law in the performance of the Work.

3.17.16 Certification of License.

3.17.16.1 Contractor certifies that as of the date of execution of this Contract, Contractor has a current contractor's license of the classification indicated below under Contractor's signature.

3.17.16.2 Contractors are required by law to be licensed and regulated by the Contractors' State License Board which has jurisdiction to investigate complaints against contractors if a complaint regarding a patent act or omission is filed within four (4) years of the date of the alleged violation. A complaint regarding a latent act or omission pertaining to structural defects must be filed within ten (10) years of the date of the alleged violation. Any questions concerning a contractor may be referred to the Registrar, Contractors' State License Board, P.O. Box 26000, Sacramento, California 95826.

3.17.17 Authority to Enter Contract. Each Party warrants that the individuals who have signed this Contract have the legal power, right and authority to make this Contract and bind each respective Party.

3.17.18 Entire Contract; Modification. This Contract contains the entire agreement of the Parties with respect to the subject matter hereof, and supersedes all prior negotiations, understandings or agreements. This Contract may only be modified by a writing signed by both Parties.

3.17.19 Non-Waiver. None of the provisions of this Agreement shall be considered waived by either party, unless such waiver is specifically specified in writing.

3.17.20 City's Right to Employ Other Contractors. City reserves right to employ other contractors in connection with this Project or other projects.

[SIGNATURES ON NEXT PAGE]

**SIGNATURE PAGE FOR CONSTRUCTION CONTRACT
BETWEEN THE CITY OF MERCED
AND CLYDE G. STEAGALL, INC.**

IN WITNESS WHEREOF, the Parties have entered into this Agreement as of the _____ day of _____, 2023.

CITY OF MERCED

CLYDE G. STEAGALL, INC.

By: _____
D. Scott McBride
City Manager

By: Mike Steagall

Printed Name: Mike Steagall

ATTEST:

Title: President

By: _____
Deputy City Clerk

Address: 6030 King Road, P.O. Box 350

(SEAL)

Loomis, CA 95650

Phone: (916) 652-1700

Fax: (916) 652-1702

Email: michele@cgsteagall.com

Taxpayer ID No.: 94-2597752

Vendor No.: N/A

ACCOUNT DATA:

Project No.: **CP240031**

Project Account Number(s) / Amount:

APPROVED AS TO FORM:

By: _____
Finance Officer Verification

By: _____
City Attorney

EXHIBIT “A” - SERVICES / SCHEDULE

The work to be performed includes, but is not limited to, the replacement in kind of three 1,000kVA, 12.47kV(delta), 277/480V(wye), 3 phase, 4 wire sub-station style transformers in kind on the existing pad with new ground rod and #1/0 copper ground.

Such other items or details, not mentioned above, that are required by the Drawings and Technical Specifications Plans, City of Merced Standard Specifications and Typical Details, and the Special Conditions shall be performed, placed, constructed, or installed.

The project is located at the City of Merced WWTP at 1961 Gove Road, Merced, CA.

It is anticipated that the transformers will have an extended date for delivery. Proposal should include projected dates for having the equipment on site. The Contract Time shall be thirty (30) working days after the agreed upon date for transformers to be on site, and liquidated damages for delay shall accrue. See the Agreement and Contract Documents for details.

BID SCHEDULE

ITEM NO.	ITEM	UNIT OF MEASURE	ESTIMATED QUANTITY	UNIT PRICE (IN FIGURES)	ITEM TOTAL (IN FIGURES)
1	Replace Transformer "XFMER-TU1" and associated wiring to transformer	LS	1		175,173-
2	Replace Transformer "XFMER-TU2A" and associated wiring to transformer	LS	1		175,173-
3	Replace Transformer "XFMER-TU2B" And associated wiring to transformer	LS	1		175,173-
4	Ground Rod & #1/0 copper ground	EA	3	2,000-	6,000-
5	Temporary power during construction	LS	1		75,000-
TOTAL BID					602,519.00

EXHIBIT “B” - DRAWINGS AND TECHNICAL SPECIFICATIONS

SECTION 26 05 00 – COMMON WORK RESULTS FOR ELECTRICAL

PART 1 – GENERAL

1.01 SUMMARY

A. Section includes

1. Provide all labor, materials and equipment necessary to complete the installation required for the items specified under Division 26.

B. Related work under this section

1. Labor and materials required to furnish and install the electrical systems in a complete and operational fashion.
2. Carpentry, masonry, steel and concrete materials and labor required for construction of proper stands, bases and supports for electrical materials and equipment.
3. Cutting and patching of holes required by installation including flashing and counter-flashing of roof and exterior wall penetrations.
4. Excavating, pumping and backfilling required for installation.
5. Repair of damage to the premises resulting from construction activities under this Section to Owner’s satisfaction.
6. Removal of work debris from construction activities to Owner’s satisfaction.
7. Testing and cleaning of equipment installed.

C. Related sections

1. Where items specified in other Division 26 sections conflict with the requirements of this Section, the most stringent requirement shall govern.
2. The requirements of this Section apply to all Division 26 work, as applicable.
3. Consult all other sections, determine the extent and nature of related work and properly coordinate work specified herein with that specified elsewhere to provide a complete and working installation.
 - a. The General Conditions and General Requirements, Division 1, are a part of and are to apply to all the work of this Division.

1.02 SCOPE OF WORK

- ##### A. Contractor to replace in kind (3) 1,000kVA, 12.47kV(delta), 277/480V(wye), 3 phase, 4 wire sub-station style transformers in kind on the existing pad with new ground rod and #1/0 copper ground. These transformers are noted as following:

1. Transformer “XFMER-TU1”
2. Transformer “XFMER-TU2A”
3. Transformer “XFMER-TU2B”

- ##### B. Contractor to replace medium voltage cable through existing conduit pathways on site. The following to be included within bid:

1. Feeder to Transformer “XFMER-TU1” shall be (3) #2 15kV MV-105 EPR 133% shielded conductor with #1/0 bare copper ground with terminations at both ends to “MSGA”. Total linear feet is approximately 465 feet.
 2. Feeder to Transformer “XFMER-TU2A” shall be (3) #2 15kV MV-105 EPR 133% shielded conductor with #1/0 bare copper ground with terminations at both ends to “MSGA”. Total linear feet is approximately 495 feet.
 3. Feeder to Transformer “XFMER-TU2b” shall be (3) #2 15kV MV-105 EPR 133% shielded conductor with #1/0 bare copper ground with terminations at both ends to “MSGA”. Total linear feet is approximately 505 feet.
- C. The existing secondary conductors are anticipated to remain in place and terminated onto new transformer’s secondary spades. Contractor and manufacturer shall coordinate spade height as to not require any splicing/altering of existing conductors.
- D. Temporary power provisions:
1. Contractor to provide a 750kW temporary diesel generator with required fueling for a minimum of 24 hours at full load. Contractor to be responsible for coordinating delivery and one move duration project duration.
 2. At Transformer “XFMER-TU1” the contractor shall provide 100 linear feet of 4 sets of 3 #4/0 Type W generator cord with cam-locks connectors per phase & 1 #4/0 Type W ground and neutral. Set the generator long setting to 1440A maximum. Contractor to safe-off existing secondary conductors in Switchboard #1. For purposes of bidding all switchover work to be performed off hours.
 3. At Transformers “XFMER-TU2A” and “XFMER-TU2B” it is assumed that the tie breaker within Switchboard #2 will be utilized during the transformer switch out. However, as a precaution the City request the contractor shall provide 100 linear feet of 4 sets of 3 #4/0 Type W generator cord with cam-locks connectors per phase & 1 #4/0 Type W ground and neutral to connect in the event the tie breaker is not used or fails. Set the generator long setting to 1440A maximum. Contractor to safe-off existing secondary conductors in Switchboard #2. For purposes of bidding all switchover work to be performed off hours and is assumed to be for two outages.

1.03 REFERENCES

- A. Comply with the latest edition of the following applicable specifications and standards except as otherwise shown or specified:
1. CCR –California Code of Regulations
 - a. Title 8 –Industrial Relations; Division 1 –Department of Industrial Relations
 - 1) Chapter 3.2 -California Occupational Safety and Health Regulations (CAL/OSHA)
 - 2) Chapter 4 –Division of Industrial Safety
 - a) Subchapter 4 -Construction Safety Orders (CSO)
 - b) Subchapter 5 -Electrical Safety Orders (ESO)
 - b. Title 24 –California Building Standards

- 1) Part 1 -Building Standards Administrative Code
 - 2) Part 2 -California Building Code (CBC); International Building Code (IBC) with California amendments
 - 3) Part 3 -California Electrical Code(CEC); NFPA 70 National Electrical Code (NEC) with California amendments
 - 4) Part 4 -California Mechanical Code (MEC); IAPMO Uniform Mechanical Code (UMC) with California amendments
 - 5) Part 5 -California Plumbing Code; IAPMO Uniform Plumbing Code (UPC) with California amendments
 - 6) Part 6 -California Energy Code
 - 7) Part 7 -California Elevator Safety Construction Code
 - 8) Part 9 -California Fire Code; WFCFA Uniform Fire Code (UFC) with California amendments
 - 9) Part 12 -California Reference Standards Code
2. CPUC –California Public Utilities Commission
 - a. GO-95; Rules for Overhead Electric Line Construction
 - b. GO-128; Rules for Construction of Underground Electric Supply and Communication Systems
 3. IEEE –Institute of Electrical and Electronic Engineers
 - a. C2; National Electrical Safety Code (NESC)
 4. NECA –National Electrical Contractors Association
 - a. 1; Standard Practices for Good Workmanship in Electrical Contracting
 - b. 4090; Manual of Labor Units
 5. All applicable local municipal codes and ordinances.
 6. Applicable rules and regulations of local utility companies.

1.04 SUBMITTALS

A. Product data

1. Prior to commencement of work and within 35 days after award of Contract, submit in ample time for approval in accordance with Division 1 a complete list of furnished equipment, material and shop drawings, including all substitutions. Partial or incomplete lists of materials will not be considered. Substitutions will be considered thereafter.
 - a. Where it is in the best interest of Owner, Engineer may give written consent to a submittal received after expiration of designated time limits or for an additional re-submittal.

B. Closeout submittal

1. Furnish three complete sets of maintenance and operating instructions bound in a binder and indexed to Owner. Start compiling data upon approval of materials

and equipment. Final inspection will not be made until Engineer approves binders. Refer also to Division 1 for additional requirements.

2. Provide one of each tool required for proper equipment operation and maintenance provided under this Section. All tools shall be delivered to the Owner at project completion.
3. Provide two keys to Owner for each lock furnished under Division 26.
4. Record drawings
 - a. Upon completion of Work, furnish Engineer with complete sets of plans (not marked blueprints) upon which shall be shown all work installed under Contract, which are not in accordance with the Construction Documents. Refer to Division 1 requirements.
 - b. All symbols and designations used in preparing Record Drawings shall match those used in Construction Documents.

1.05 SUBSTITUTIONS

- A. If it is desired to make a substitution, the Contractor shall clearly identify each substitution on the submittal, and to submit complete information or catalog data to shown equality of equipment or material offered to that specified. Substitutions will be interpreted to be all manufacturers other than those specifically listed by model or catalog number within these Specifications and Drawings. No substitution will be allowed unless identified, requested and approved in writing. Materials of equal merit and appearance, in the opinion of the Engineer, will be approved for use. Architect and Engineer reserve the right to require originally specified items at no additional costs to Owner. Only one request for substitutions will be considered on each item of material or equipment.
- B. Acceptance of a substitute is not to be considered a release from the Specifications. Correct any deficiencies in an item, even though approved at the Contractor's expense.
- C. Responsibility for installation of approved substitution is included herein. Make any changes required for installation of approved substituted equipment without additional costs.
- D. Failure to comply with any of the requirements of the above will necessitate that the specified materials be submitted and supplied.

1.06 CHANGE ORDER PROPOSALS

- A. Shall comply with the requirements set forth by the General Conditions
- B. All change order proposals and requests, both additive and deductive, shall be accompanied by a detailed materials and labor breakdown for each specific task and/or item.
 1. All change order proposals and change orders, both additive and deductive, shall be based upon and be accompanied by a detailed materials and labor breakdown for each specific task and/or item. The breakdown shall include actual materials costs plus overhead and profit, as well as labor units base upon the most recent NECA Manual of Labor Units (NECA Index #4090) or equivalent

publication for each specific task and item. Labor costs shall be computed as outlined within the General Conditions, based upon the NECA labor tables for each task required. Materials costs shall include actual Contractor invoice plus no more than 15% markup. The Owner and Contractor agree to the above change order cost procedure, for both additive and deductive change orders.

1.07 QUALITY ASSURANCE

- A. References to codes, standards, specifications and recommendations of technical societies, trade organizations and governmental agencies shall mean that latest edition of such publications adopted and published prior to bid submittal. Such codes or standards shall be considered a part of this Specification as though fully repeated herein.
- B. Work and materials shall be in full accordance with the latest rules and regulations of applicable state or local laws or regulations and standards of following:
 - 1. National Fire Protection Association (NFPA)
 - 2. California Electrical Code (CEC)
 - 3. California Occupational Safety Health Act (Cal-OSHA)
 - 4. California State Fire Marshall (CSFM)
 - 5. California Code of Regulations (CCR)
 - 6. Electrical Safety Orders, CAC Title 8 (ESO)
 - 7. California Public Utilities Commissions, General Order 95 (GO-95)
 - 8. Applicable rules and regulations of local utility companies.
 - 9. NECA 1-2000, Standard Practices for Good Workmanship in Electrical Contracting
- C. All electrical equipment and material furnished under Division 26 shall conform to all CEC/NEC requirements and bear the Underwriters' Laboratories (UL) label where applicable.
- D. Nothing in the Construction Documents shall be construed to permit work not conforming to these Codes. Whenever the indicated material, workmanship, arrangement or construction is of high quality or capacity than that required by the above rules and regulations, the Construction Documents shall take precedence. Should there be any direct conflict between the rules and regulations and Construction Documents, the rules shall govern.
- E. All electrical equipment and material furnished under this Section shall conform to NEMA and ASTM standards, NEC/CEC and bear the Underwriters' Laboratories (UL) label where such label is applicable.
- F. All electrical work shall conform to manufacturer's written instruction, and the NECA Standard Practices for Good Workmanship in Electrical Contracting and all published recommended practices at the time of project. The Contractor shall use the requirements within the Specifications whenever they exceed NECA guidelines.
- G. Follow manufacturer's direction where these direction cover points not included with the Construction Documents.

1.08 DELIVERY, STORAGE AND HANDLING

- A. Packing, shipping, handling and unloading
 - 1. Damage to the equipment delivered to the site or in transit to the job shall be the responsibility of the Electrical Contractor.
 - 2. Equipment and material delivery of shall be scheduled as required for timely, expeditious progress of work.
- B. Storage and protection of job equipment is the responsibility Contractor.
- C. Comply with Division 1 requirements with regards to waste management and disposal.

1.09 PROJECT CONDITIONS

- A. Discrepancies
 - 1. In the event of discrepancies with the Contract Documents, Engineer shall be notified with sufficient time as stated within Division 1 to allow the issuing of an addendum prior to the bid opening.
 - 2. If, in the event that time does not permit notification of clarification of discrepancies prior to the bid opening, the following shall apply:
 - a. The drawings govern in matters of quantity and specifications govern in matters of quality.
 - b. In the event of conflict within the drawings and specifications involving quantities or quality, the greater quantity or higher quality shall apply. Such discrepancies shall be noted and clarified within the contractor's bid. No additional allowances will be made because of errors, ambiguities or omissions which reasonably should have been discovered during the bid preparation.
- B. Verify all power and communication utilities' requirements prior to commencement of any utility work. Make proper adjustments to the construction to satisfy the serving utility.
- C. Information shown relative to services is based upon available records and data, but shall be regarded as approximate only. Make minor deviations found necessary to conform to actual locations and conditions without extra cost. Verify locations and elevations of utilities prior to commencement of excavation for new underground installation.
- D. Exercise extreme care in excavating near existing utilities to avoid any damage thereto; be responsible for any damage caused by such operations. Contact all utility companies to obtain exact locations prior to commencement of construction.
- E. The electrical plans indicate the general layout and arrangement; the architectural drawings and field conditions shall determine exact locations. Field verify all conditions and modify as required to satisfy design intent. Maintain all required working clearances.
- F. Fees, permits and utility services

1. Obtain and pay for all permits and service charges required for the installation of this work. Arrange for required inspections and secure approvals from authorities having jurisdiction. Arrange for all utility connections and pay charges incurred including excess service charges if any.
 2. Extra charges imposed by the electrical and communication utility companies shall be included in the bid, if available. Unless otherwise stated, these charges will be assumed to included in the bid.
- G. Provide and maintain temporary construction power. The General Contractor or Owner will pay for electric energy charges; refer to Division 1 for details. Should the Electrical Contractor be the prime contractor, the Electrical Contractor shall pay for energy charges unless negotiated with Owner.

1.10 SEQUENCING

- A. Coordinate work within phasing plans as provided by the Owner.

1.11 WARRANTY

- A. Furnish one-year minimum guarantee in accordance with and in form required under Division 1. Repair or replace as may be necessary any defective work, material, or part without cost to the Owner, include repair or replacement of other work, furnishing, equipment or premises caused by such repair or replacement of defective work.

PART 2 -PRODUCTS

2.01 MATERIALS

- A. Materials mentioned herein or on Drawings require that the items be provided and of quality noted or an approved equal. All materials shall be new, full weight, standard in all respects and in first-class condition. Insofar as possible, all materials used shall be of the same brand or manufacturer throughout for each class of material or equipment.
- B. Trade names or catalog numbers stated herein indicates grade or quality of material desired. Materials, where applicable, shall UL labeled and in accordance with NEMA standards.
- C. Dimensions, sizes and capacities shown are a minimum. Do not make changes without written permission of Engineer

PART 3 -EXECUTION

3.01 EXAMINATION

- A. Examine Construction Documents and Site; be familiar with types of construction where electrical installation is involved. Note carefully other sections of Specifications with their individual cross-references, standard details, etc.
- B. Any electrical work or materials shown either in Construction Documents, but not mentioned herein, or vice versa, shall be executed the same as if mentioned herein,

in a workmanlike manner in accordance with all published NECA Standards of Installation.

- C. Coordinate work with other crafts to avoid conflicts, and check all outlet locations with Architectural and Mechanical drawings and specifications. Make minor adjustments without additional cost to Owner.
- D. Engineer will make clarifications and rulings concerning any obvious discrepancies or omissions in work prior and after bidding. Perform all work involved in correcting obvious errors or omissions after award of contract as directed by Engineer at Contractor's expense.
- E. Examine site dimensions and locations against Drawings and become informed of all conditions under which work is to be done before submitting proposals. No allowance will be made for extra expense due to error.
- F. Layouts of equipment, accessories and wiring systems are diagrammatic (not pictorial), but shall be followed as closely as possible. Construction Documents are for assistance and guidance, and exact locations, distance, levels, etc., will be governed by construction; accept same with this understanding.

3.02 PREPARATION

- A. Seal all exterior wall penetrations in an approved watertight manner and to the satisfaction of Engineer and Architect.
- B. Channels, joiners, hangers, caps, nuts and bolts and associated parts shall be plated electrolytically with zinc followed immediately thereafter by treating freshly deposited zinc surfaces with chromic acid to obtain a surface which will not form a white deposit on surface for an average of 120 hours when subjected to a standard salt spray cabinet test, or shall be hot dipped galvanized

3.03 INSTALLATION

- A. Equipment identification
 - 1. Properly identify panelboards, remote control switches, push buttons, terminal boxes, etc. with a descriptive nameplate. Make nameplate with 3/32" laminated plastic with black background and white letters. Machine engraved letters 1/8" high for equipment in device box(es) and 1/4" high for panelboards, terminal cabinets or larger items. Punched strip type nameplates and cardholders in any form are not acceptable. Fasten nameplates with oval head machine screws, tapped into front cover/panel.
- B. Working spaces
 - 1. Provide adequate working space around electrical equipment in compliance with Article 4 of Electrical Safety Orders and CEC/NEC 110.26. In general provide 78" of headroom and 30" wide minimum clear workspace in front of panelboards and controls. In addition to the above, provide the following minimum working clearances:
 - a. 0V – 150V (line-to-ground) provide 36" minimum clear distance.
 - b. 151V – 600V (line-to-ground) provide 42" minimum clear distance.
- C. Equipment supports

1. Anchor all electrical equipment to structure. Support systems shall be adequate to withstand seismic forces per CBC.

D. Excavating and backfilling

1. Excavate and backfill as required for installation of Work. Restore all surfaces, roadways, walks, curbs, walls existing underground installations, etc., cut by installations to original condition in an acceptable manner. Maintain all warning signs, barricades, flares and lanterns as required by ESO and local ordinances.
2. Dig trenches straight and true to line and grade, with bottom clear of any rock points. Support conduit for entire length on undisturbed original earth. Minimum conduit depth of pipe crown shall be 24" below finished or natural grade, unless otherwise noted.

E. Forming, cutting and patching

1. In new construction, General Contractor shall provide any special forming, recesses, chased, etc., and provide wood blocking, backing and grounds as necessary for the proper installation of electrical work. Be responsible for notifying General Contractor that such provision is necessary; layout work and check to see that it suits his requirements.
 - a. Provide metal backing plates, anchor plates and such that are required for anchorage of electrical work under Division 26; securely weld or bolt to metal framing. Wood blocking or backing will not be permitted in combination with metal framing.
2. Be responsible for proper placement of pipe sleeves, hangers, inserts and supports for this Work.

F. Concrete work

1. Provide concrete work related solely to electrical work. Concrete work, including forming and reinforcing steel installed for all electrical work, shall comply with all applicable requirements of Division 3, or in accordance with the State of California Standard Specifications issued by the Department of Transportation (CALTRANS).

3.04 REPAIR/RESTORATION

- A. Cutting, patching and repairing of existing construction to permit installation of work under Division 26 is the responsibility of Contractor. Repair or replace all damage to existing work in kind to Owner's satisfaction.
- B. Obtain Engineer's approval prior to performing any cutting or patching of concrete, masonry, wood or steel structure within building.

3.05 FIELD QUALITY CONTROL

A. Inspection of work

1. Working parts shall be readily accessible for inspection, repair and renewal. The right is reserved to make reasonable changes in equipment location shown on Drawings prior to rough in without additional costs to the Owner.

2. During construction all work will be subject to observation by the Engineer and his representatives. Assist in ascertaining any information that maybe required.
 3. Do not allow or cause any work installed hereunder to be covered up or enclosed before it has been inspected and approved. Should any work be enclosed or covered prior to approval, uncover work, and after it has been inspected and approved, restore work of all others to the condition in which it was found at the time of cutting, all without additional costs to Owner.
- B. Furnish all testing equipment as maybe required.
 - C. Test all wiring and connections for continuity and grounds; where such tests indicate faulty insulation or other defects, locate, repair and re-test.

3.06 CLEANING

- A. Repair or replace all broken, damaged or otherwise defective parts without additional cost to Owner, and leave entire work in a condition satisfactory to Engineer. At completion, carefully clean and adjust all equipment, fixtures and trim installed as part of this work; leave systems and equipment in satisfactory operating condition.
- B. Clean out and remove from the site all surplus materials and debris resulting from this work; this includes surplus excavated materials.

3.07 DEMONSTRATION

- A. At project completion, Contractor shall allot a period of not less than 8 hours for instruction of operating and maintenance personnel in the use of all systems installed under this Section. This time is in addition to any instruction time stated in the Specifications of other sections for other equipment (i.e., fire alarm, security, intercom, etc.). All personnel shall be instructed at one time, the Contractor shall make all necessary arrangements with manufacturer's representatives as may be required. Contractor, if any, for the above services shall pay all costs.

3.08 PROTECTION

- A. In performance of work, protect work of other trades as well as work under this Section from damage.
- B. Protect electrical equipment, stored and installed, from dust, water or other damage.

End of Section 26 05 00

SECTION 26 05 16

MEDIUM-VOLTAGE CABLES, SPLICES AND TERMINATIONS

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Medium-voltage cables, splices and terminations.
 - 2. Single conductor 15,000 volt shielded copper power cable insulated with ozone and discharge resistant flexible, rubber like thermosetting dielectric for medium- voltage applications, suitable for use in wet and dry locations in conduit and underground ducts.

1.2 SUBMITTALS

- A. Submit a complete material list.

1.3 QUALITY ASSURANCE

- A. The cable manufacturer shall have a minimum of 15 years manufacturing EPR insulated cables.
- B. Cables shall be tested for corona discharge and shall comply with AEIC requirements. A copy of the original x-y plot showing discharge levels shall be included as part of the certified test reports. Submit test report for Architect/Engineer review prior to installation.

1.4 WARRANTY

- A. The manufacturer shall provide a five year material warranty.

PART 2 PRODUCTS

2.1 CABLE

- A. Medium-voltage cable shall be furnished where line-to-line operating voltage exceeds 600 volts. Cable shall be 15 KV, single conductor, 133 percent insulation level, ethylene propylene rubber insulated, shielded, PVC jacket Type MV-105.
- B. Conductors shall be Class B stranded annealed, uncoated copper.
- C. Insulation system conductor screens, insulation and insulation screens shall be capable of continuous operation at conductor temperatures of 105 degrees C. and emergency overload temperatures of 140 degrees C.
- D. Cables shall be identified indicating manufacturer, size, insulation type, voltage rating, year manufactured, and UL, or other Nationally Recognized Testing Laboratory designations.

2.2 STANDARDS

- A. Cables shall conform to the following standards where applicable:
 - 1. Insulated Cable Engineers Association (ICEA).
 - 2. Institute of Electrical and Electronic Engineers (IEEE).
 - 3. California Electrical Code (CEC).
 - 4. Underwriters' Laboratories (UL).
 - 5. Association of Edison Illuminating Companies (AEIC).
- B. Reels of furnished cable shall be newly manufactured of not more than 12 months old, and shall bear tags containing name of manufacturer, CEC designation, and year of manufacture.

PART 3 EXECUTION

3.1 CABLE INSTALLATION

- A. Installation of cable, including joints, splices, taps, bends, connections, terminations, and method of pulling cable into conduit shall be performed in accordance with manufacturer's recommendations. Install splices, taps and terminations in a manner recommended by cable manufacturer. Stress cones shall be installed on cable at joints, splices, and terminations as recommended by manufacturer of cable. Minimum bending radius of cable shall be in strict accordance with recommendations of manufacturer. Certified Cable Splicer with minimum experience of five years required. Pulling compound shall be environmentally safe.
- B. Cables shall be identified at points of termination and points where conduit run is broken, as to phase leg and feeder designation, with markers. This requirement applies at man-holes, switchboards, pull boxes, and like items. Markers shall be E-Z Code, Brady Perma-Code, or equal. ID tags shall be water proof and one inch in size.
- C. After cable is installed and connected, but with all equipment disconnected from cable system, each cable shall be subjected to a high potential DC test in presence of the Inspector. Notify the Inspector not less than two working days in advance of proposed time for test. Hi-Pot test shall be NETA Acceptance Values.
- D. Test shall be performed with equipment specifically designed for this type of test and in a manner recommended by cable manufacturer. Copies of test report shall be submitted to the Architect for review. Test voltage shall be raised gradually in steps to final voltage recommended by ICEA, which shall be applied for five minutes. Current readings shall be taken at each step after leakage current has stabilized and readings shall be plotted on graph paper. If breakdown is indicated during test by a sudden increase in current, discontinue tests and provide required repairs and replacements necessary to correct defective Work.
- E. Provide new cable to replace entire length of each cable run not meeting minimum requirements of test. Perform splices and terminations necessary for replacement of cable. Repair and/or replace splices and terminations test results indicate to be defective Work.

3.2 CABLE TERMINATIONS

- A. Provide termination kits capable of proper termination of 15 KV class single conductor cables. Kits shall meet Class I requirements and be design proof tested in accordance with IEEE 48-2009. Kits shall accommodate common forms of cable shielding/construction without the need for special adapters or accessories, and shall accommodate a range of cable sizes. Kits shall be capable of proper installation on out-of-round cable in accordance with ICEA and AEIC standards. Kits shall accommodate commercially available environmentally sealed connectors.
- B. Terminations for single conductor shielded cables shall consist of heat shrinkable stress control and other required non-tracking insulation tubing or tapes. Kits shall also contain high relative permittivity stress relief mastic for insulation shield cutback treatment with a heat-activated sealant for environmental sealing.
- C. Demonstrate actual field experience and suitable accelerated and real-time testing of weathering resistance. Test reports, which verify device stability with time, temperature, and electrical stress variations, shall be submitted for review.

3.3 CABLE SPLICES

- A Splices shall be factory engineered kits that rebuild the cable insulation to that of the cable. Splices shall contain necessary components to reinstate the cable's primary insulation, metallic shielding and grounding systems, and an outer jacket.
- B. Splices shall be capable of passing the electrical test requirements of IEEE-404-2006 and water immersion tests of ANSI/IEEE 386-2006. (NETA Specification)
- C. Splices shall be of uniform cross-section, heat shrinkable polymeric construction utilizing an impedance layer stress control tube and high dielectric strength insulating layers. Outer insulating layer shall be bonded to a conducting layer for shielding. The splice shall be re- jacketed with a heat shrinkable adhesive-lined sleeve to provide a waterproof seal, or factory approved taping kit such as Scotch 5717, or equal.
- D. Splices shall accommodate a range of cable sizes and be completely independent of cable manufacturer tolerances. Splices shall be capable of being properly installed on out of round cable in accordance with ICEA and AEIC standards. Kits shall accommodate commercially available connectors.
- E Splices, which consist of three or more cables, shall be performed with 600 AMP Elastamold T Bodies, Hubbell, Cooper or equal. The splice shall be capable of removing or adding a conductor and restoring the connection in an electrically safe and waterproof condition. Installation of 200 AMP T Bodies is not permitted.

3.4 CLEANUP

- A Remove rubbish, debris and waste materials and legally dispose of off the Project site.

3.5 PROTECTION

- A Protect the Work of this section until Substantial Completion.

End of Section 26 05 16

SECTION 26 05 26
GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 — GENERAL

1.01 SUMMARY

A. Section includes

1. Provide all labor, materials and equipment necessary to complete the installation required for the item specified under this Section, including but not limited to power system grounding

B. Related sections

1. Where items specified in other Division 26 sections conflict with the requirements of this Section, the most stringent requirement shall govern.
2. The requirements of this Section apply to all Division 26 work, as applicable.
3. Consult all other sections, determine the extent and character of related work and properly coordinate work specified herein with that specified elsewhere to produce a complete installation.

1.02 REFERENCES

A. Comply with the latest edition of the following applicable specifications and standards except as otherwise shown or specified:

1. CCR –California Code of Regulations, Title 24
 - a. Part 3 -California Electrical Code(CEC); NFPA 70 National Electrical Code (NEC) with California amendments
2. IEEE –Institute of Electrical and Electronic Engineers
 - a. 142; Recommend Practices for Grounding of Industrial and Commercial Power Systems
3. NFPA –National Fire Protection Association
 - a. 780; Lightning Protection Code
4. UL –Underwriters Laboratories, Inc.
 - a. 467; Grounding and Bonding Equipment

1.03 SYSTEM DESCRIPTION

- A. This Section provides for the grounding and bonding of all electrical and communication apparatus, machinery, appliances, components, fittings and accessories where required to provide a permanent, continuous, low impedance, grounded electrical system.
- B. Ground the electrical service system neutral at service entrance equipment as shown on the Drawings.
- C. Ground each separately derived system, as defined in CEC/NEC 250-5(d) and on the Drawings, unless specifically noted otherwise.

- D. Except as otherwise indicated, the complete electrical installation including the neutral conductor, equipment and metallic raceways, boxes and cabinets shall be completely and effectively grounded in accordance with all CEC/NEC requirements, whether or not such connections are specifically shown or specified.

1.04 SUBMITTALS

- A. Submit manufacturer's data for equipment and materials specified within this Section in accordance to Section 26 05 00.

1.05 QUALITY ASSURANCE

- A. All materials, equipment and parts comprising the materials specified herein shall be new and unused, bearing UL labels where applicable.

PART 2 — PRODUCTS

2.01 CONCRETE ENCASED GROUNDING ELECTRODE (UFER GROUND)

- A. #3/0 AWG minimum bare stranded copper conductor.

2.02 DRIVEN (GROUND) RODS

- A. Copper clad steel, minimum ¾" diameter by 10'-0" length, sectional type with copper alloy couplings and carbon steel driving stud; Weaver, Cadweld or equal.

2.03 INSULATED GROUNDING BUSHINGS

- A. Plated malleable iron body with 150°C molded plastic insulated throat and lay-in ground lug; OZ/Gedney BLG, Thomas & Betts #TIGB series or equal.

2.04 CONNECTION TO PIPE

- A. Cable to pipe connections; OZ/Gedney G-100B series, Thomas & Betts #290X series or equal.

2.05 CONNECTIONS TO STRUCTURAL STEEL, GROUND RODS OR SPICES

- A. Where required by the Drawings, grounding conductors shall be spliced together, connected to ground rods or connected to structural steel using exothermic welds, Cadweld or equal, or high pressure compression type connectors, Cadweld, Thomas & Betts or equal.

2.06 BONDING JUMPERS

- A. OZ/Gedney Type BJ, Thomas & Betts #3840 series or equal.

2.07 GROUND CONDUCTOR

- A. Ground conductor shall be code size UL labeled, Type THWN insulated copper wire, green in color.

PART 3 -EXECUTION

3.01 INSTALLATION

A. Grounding electrodes

1. Concrete encased grounding electrode (Ufer ground)

- a. Provide a #3/O AWG minimum bare copper conductor encased along the bottom of concrete foundation, footing or trench which is in direct contact with the earth and where there is no impervious waterproofing membrane between the footing and soil. The electrode shall extend through a horizontal length of 30' minimum and shall be encased in not less than 2" or more than 5" of concrete separating it from surrounding soil. The electrode shall emerge from the concrete slab through a protective non-metallic sleeve and shall be extended to BGB or as shown on Drawings.

2. Supplementary grounding electrode (ground ring, grid and driven rod)

- a. Provide as shown driven ground rod(s). Interconnect ground rod with structural steel and adjacent rods with code size bare copper conductor. Ground rods shall be space no less than 6'-0" on centers from any other electrode or electrodes of another electrical system.

3. Separately derived electrical system grounding electrode

- a. Ground each separately derived system per CEC/NEC 250-26 or as shown on Drawings, whichever is greater.

4. Metal underground water pipe

- a. Contractor shall install an accessible grounding electrode conductor from the main incoming cold water line to BGB. The electrode conductor shall be sized per CEC/NEC Table 250-94 or as shown on Drawings, whichever is greater.

B. Grounding electrode conductor

1. Provide grounding electrode conductors per CEC/NEC Table 250-94 or as shown on Drawings, whichever is greater.

C. Power system grounding

1. Connect the following items using code size copper grounding conductors to BGB or as shown on Drawings:
 - a. Concrete encased electrode (Ufer ground)
 - b. Ground rod(s)
 - c. Incoming cold and fire water pipes
 - d. Gas pipe
 - e. Structural steel
 - f. Distribution transformer secondary

D. Equipment Bonding/Grounding

1. Provide a code sized copper ground conductor, whether indicated or noted on the drawings, in each of the following:
 - a. All power distribution conduits and ducts
 - b. Distribution feeders
 - c. Motor and equipment branch circuits\
 - d. Device branch circuits
2. Provide a separate grounding bus at distribution panelboards, loadcenters, switchboards and motor control centers. Connect all metallic enclosed equipment so that with maximum fault current flowing, shall be maintained at not more than 35V above ground.
3. Metallic conduits terminating in concentric, eccentric or oversized knockouts at panelboards, cabinets, gutters, etc. shall have grounding bushings and bonding jumpers installed interconnecting all such conduits.
4. Provide bonding jumpers across expansion and deflection coupling in conduit runs, pipe connections to water meters and metallic cold water dielectric couplings.
5. Provide ground wire in flexible conduit connected at each end via grounding bushing.
6. Provide bonding jumpers across all cable tray joints.
7. Bond each end of metallic conduit longer than 36" in length to grounding conductor using a #6 AWG pigtail.

3.02 FIELD QUALITY CONTROL

- A. Contractor using test equipment expressly designed for that purpose shall perform all ground resistance tests in conformance with IEEE guidelines. Contractor shall submit typewritten records of measured resistance values to Engineer for review and approval prior to energizing the system.
- B. Obtain and record ground resistance measurements both from electrical equipment ground bus to the ground electrode and from the ground electrode to earth. Furnish and install additional bonding and add grounding electrodes as required to comply with the following resistance limits:
 1. Resistance from ground bus to ground electrode and to earth shall not exceed 5 ohms unless otherwise noted.
 2. Resistance from the farthest panelboard, loadcenter, switchboard or motor control center ground bus to the ground electrode and to earth shall not exceed 20 ohms maximum.
- C. Inspection
 1. The Engineer or Inspector prior to encasement, burial or concealment thereto shall review the grounding electrode and connections.

End of Section 26 05 26

SECTION 26 12 00

DISTRIBUTION LIQUID FILLED TRANSFORMERS

PART 1 – GENERAL

1.1 SUMMARY

A. Section includes

1. Provide all labor, materials and equipment necessary to complete the installation required for the items specified under this Section, including but not limited to transformers.

B. Related sections

1. Where items specified in other Division 26 sections conflict with the requirements of this Section, the most stringent requirement shall govern.
 - a. 26 05 00 – Grounding and Bonding for Electrical Systems
2. The requirements of this Section apply to all Division 26 work, as applicable.
3. Consult all other sections, determine the extent and character of related work and properly coordinate work specified herein with that specified elsewhere to produce a complete installation.

1.2 REFERENCES

A. Comply with the latest edition of the following applicable specifications and standards except as otherwise shown or specified:

1. ANSI - American National Standards Institute
 - a. C37.47; Specifications for Distribution Fuse Disconnecting Switches, Fuse Supports, and Current-Limiting Fuses
 - b. C57.12.00; Standard General Requirements for Liquid-Immersed Distribution, Power, and Regulating Transformers
 - c. C57.12.34; Requirements for Pad-Mounted, Compartmental-Type, Self-Cooled, Three- Phase Distribution Transformers, 2,500 kVA and Smaller: High Voltage, 34,500 GrdY/19,900 Volts and Below; Low Voltage, 480 Volts and Below.
 - d. C57.12.28; Switchgear and Transformers, Pad-Mounted Equipment - Enclosure Integrity
 - e. C57.12.90; Standard Test Code for Liquid-Immersed Distribution Power, and Regulating Transformers and Guide for Short-Circuit Testing of Distribution and Power Transformers
 - f. C57.13; Requirements for Instrument Transformers
 - g. ANSI/IEEE 386; Separable Insulated Connector Systems for Power Distribution Systems Above 600 V
2. CCR –California Code of Regulations, Title 24
 - a. Part 3 -California Electrical Code(CEC); NFPA 70 National Electrical Code (NEC) with California amendments

1.3 SUBMITTALS

- A. Submit manufacturer's data for materials specified within this Section in accordance to Section 26 05 00.
- B. Submit shop drawings indicating outline dimensions, connection and support points, weight, specified ratings and materials.
- C. Submit product data indicating standard model design tests and options.

1.4 QUALITY ASSURANCE

- A. All materials, equipment and parts comprising the materials specified herein shall be new and unused, bearing UL labels where applicable.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Store in a warm, dry location with uniform temperature. Protect unit if handled in inclement weather (i.e., rain, sleet, snow, etc.). Cover ventilating opening to keep out dust and foreign materials prior to startup.
- B. Handle transformer using only lifting eyes and brackets provided for that purpose; see manufacturer's installation instructions.

PART 2 – PRODUCTS

2.1 FLUID-FILLED PAD-MOUNTED TRANSFORMERS

A. Manufacturers

- 1. ABB or approved equal.

B. General

- 1. The transformer(s) shall be compartment type, self-cooled, for mounting on a pad and shall comply with the latest applicable standards.
- 2. The average temperature rise of the windings, measured by the resistance method, shall be 65° C when the transformer is operated at rated kVA output. The transformer shall be capable of being operated at rated load in a 30° C average, 40° C maximum ambient, as defined by IEEE C57.12.00 without loss of service life expectancy.
- 3. Coolant and insulating fluid shall be less flammable seed-oil based fluid.
- 4. The high and low voltage compartments shall be located opposite ends of the transformer (i.e., sub-station style).
- 5. The following accessories shall be provided as standard on all transformers:
 - a. Nameplate in low voltage compartment.
 - b. 1" upper filter press and filling plug
 - c. 1" Drain valve with sampling device.
 - d. Lightning arrester mounting provisions.

- e. Tap changer with silver-plated stationary and movable contacts, for de-energized operation only, which is externally operable and pad lockable. The front of both compartments shall be removable to allow the transformer to be rolled or skidded into position over conduit stubs. ANSI tank grounding provisions shall be furnished in both compartments.
 - f. Dial type thermometer.
 - g. Magnetic liquid-level gauge.
 - h. Pressure vacuum gauge.
 - i. Pressure relief valve.
 - j. Pentahead bolts for compartment doors.
6. The transformer(s) shall be rated, self cooled, voltage, phase, wire per the Drawings with two 2-1/2% full capacity above normal and two 2-1/2% below normal taps. Impedance shall be manufacturer's standard impedance, $\pm 7-1/2\%$. Basic impulse level of the primary winding shall be as specified in IEEE C57.12.00 for comparable kV class.
 7. The transformer shall be of sealed-tank construction of sufficient strength to withstand a pressure of 7 psi without permanent distortion. The cover shall be welded and the handhole fastenings tamper resistant. The transformer shall remain effectively sealed for a top oil temperature range of -5°C to 105°C . When required, cooling panels will be provided on the back and sides of the tank. Lifting eyes and jacking provisions will be provided.
 8. Coils shall be wound with copper conductors.
 9. All cores to be constructed of high grade, grain-oriented, non-aging silicon steel with high magnetic permeability, and low hysteresis and eddy current losses. Magnetic flux is to be kept well below the saturation point.
 10. The high voltage terminations and equipment shall be live front.
 11. The low voltage bushings (<600V) shall be molded polymer, and provided with blade- type spade terminals with NEMA standard hole spacing arranged for vertical take-off. The low voltage neutral shall be an insulated bushing, grounded to the tank by a removable ground strap.
 12. Provide bayonet type liquid immersed fuses that are externally replaceable with a hot- stick without opening the transformer tank.
 13. Surge Protection - Provide three distribution class lightning arresters for surge protection per primary voltage shown on Drawings. Arresters are to be mounted in the high voltage compartment.
 14. Transformer shall be UL listed.
 15. Transformer shall be FM labeled.
 16. Tests shall be conducted in accordance with the provisions of IEEE C57.12.90 and shall include, as a minimum, the following tests:
 - 1) Ratio
 - 2) Polarity
 - 3) Phase Rotation
 - 4) No-Load Loss
 - 5) Excitation Current
 - 6) Impedance Voltage
 - 7) Load Loss
 - 8) Applied Potential
 - 9) Induced Potential
 - 10) QC Impulse Test

PART 3 – EXECUTION

3.1 EXAMINATION

- C. Examine transformer to provide adequate clearances for installation.
- D. Check that concrete pads are level and free of irregularities for floor mounted installations.
- E. Begin work only after unsatisfactory conditions are corrected.

3.2 INSTALLATION

- A. Read and follow manufacturer's bulletin included with unit prior to installation.
- B. Transformers shall be spaced a minimum of 36" from adjacent structures measured from edge of pad
- C. Mount to resist seismic forces and brace to 0.56g. Submit calculations and mounting details for review and approval.
- D. Grounding
 - 1. Provide a dual rated four-barrel solderless grounding lug with a 5/8"-11 threaded hole. Drill transformer enclosure with 11/16" bit and attach lug to enclosure using a torque bolt and T&B Dragon Tooth transition washer with the following connections:
 - a. Primary feeder ground
 - b. Secondary feeder ground
 - c. Grounding electrode per CEC/NEC 250-30.
 - d. Main bond jumper to neutral (when present)

3.3 FIELD QUALITY CONTROL

- A. Check for damage and tight connections prior to energizing transformer.
- B. Measure primary and secondary voltages, and make appropriate tap adjustments to within 2% of rated voltage.

3.4 CLEANING

- A. Touch up scratched or marred surfaces to match original finish.

END OF SECTION

SECTION 26 05 00
COMMON WORK RESULTS FOR ELECTRICAL

PART 1 — GENERAL

1.10 SUMMARY

A. Section includes

1. Provide all labor, materials and equipment necessary to complete the installation required for the items specified under Division 26.

B. Related work under this section

1. Labor and materials required to furnish and install the electrical systems in a complete and operational fashion.
2. Carpentry, masonry, steel and concrete materials and labor required for construction of proper stands, bases and supports for electrical materials and equipment.
3. Cutting and patching of holes required by installation including flashing and counter-flashing of roof and exterior wall penetrations.
4. Excavating, pumping and backfilling required for installation.
5. Repair of damage to the premises resulting from construction activities under this Section to Owner's satisfaction.
6. Removal of work debris from construction activities to Owner's satisfaction.
7. Testing and cleaning of equipment installed.

C. Related sections

1. Where items specified in other Division 26 sections conflict with the requirements of this Section, the most stringent requirement shall govern.
2. The requirements of this Section apply to all Division 26 work, as applicable.
3. Consult all other sections, determine the extent and nature of related work and properly coordinate work specified herein with that specified elsewhere to provide a complete and working installation.
 - a. The General Conditions and General Requirements, Division 1, are a part of and are to apply to all the work of this Division.

1.11 SCOPE OF WORK

- A. Contractor to replace in kind (3) 1,000kVA, 12.47kV(delta), 277/480V(wye), 3 phase, 4 wire sub-station style transformers in kind on the existing pad with new ground rod and #1/0 copper ground. These transformers are noted as following:
 1. Transformer "XFMER-TU1"
 2. Transformer "XFMER-TU2A"
 3. Transformer "XFMER-TU2B"
- B. Contractor to replace medium voltage cable through existing conduit pathways on site. The following to be included within bid:

1. Feeder to Transformer “XFMER-TU1” shall be (3) #2 15kV MV-105 EPR 133% shielded conductor with #1/0 bare copper ground with terminations at both ends to “MSGA”. Total linear feet is approximately 465 feet.
 2. Feeder to Transformer “XFMER-TU2A” shall be (3) #2 15kV MV-105 EPR 133% shielded conductor with #1/0 bare copper ground with terminations at both ends to “MSGA”. Total linear feet is approximately 495 feet.
 3. Feeder to Transformer “XFMER-TU2b” shall be (3) #2 15kV MV-105 EPR 133% shielded conductor with #1/0 bare copper ground with terminations at both ends to “MSGA”. Total linear feet is approximately 505 feet.
- C. The existing secondary conductors are anticipated to remain in place and terminated onto new transformer’s secondary spades. Contractor and manufacturer shall coordinate spade height as to not require any splicing/altering of existing conductors.
- D. Temporary power provisions:
1. Contractor to provide a 750kW temporary diesel generator with required fueling for a minimum of 24 hours at full load. Contractor to be responsible for coordinating delivery and one move duration project duration.
 2. At Transformer “XFMER-TU1” the contractor shall provide 100 linear feet of 4 sets of 3 #4/0 Type W generator cord with cam-locks connectors per phase & 1 #4/0 Type W ground and neutral. Set the generator long setting to 1440A maximum. Contractor to safe-off existing secondary conductors in Switchboard #1. For purposes of bidding all switchover work to be performed off hours.
 3. At Transformers “XFMER-TU2A” and “XFMER-TU2B” it is assumed that the tie breaker within Switchboard #2 will be utilized during the transformer switch out. However, as a precaution the City request the contractor shall provide 100 linear feet of 4 sets of 3 #4/0 Type W generator cord with cam-locks connectors per phase & 1 #4/0 Type W ground and neutral to connect in the event the tie breaker is not used or fails. Set the generator long setting to 1440A maximum. Contractor to safe-off existing secondary conductors in Switchboard #2. For purposes of bidding all switchover work to be performed off hours and is assumed to be for two outages.

1.12 REFERENCES

- A. Comply with the latest edition of the following applicable specifications and standards except as otherwise shown or specified:
1. CCR –California Code of Regulations
 - a. Title 8 –Industrial Relations; Division 1 –Department of Industrial Relations
 - 1) Chapter 3.2 -California Occupational Safety and Health Regulations (CAL/OSHA)
 - 2) Chapter 4 –Division of Industrial Safety
 - a) Subchapter 4 -Construction Safety Orders (CSO)
 - b) Subchapter 5 -Electrical Safety Orders (ESO)
 - b. Title 24 –California Building Standards

- 1) Part 1 -Building Standards Administrative Code
 - 2) Part 2 -California Building Code (CBC); International Building Code (IBC) with California amendments
 - 3) Part 3 -California Electrical Code(CEC); NFPA 70 National Electrical Code (NEC) with California amendments
 - 4) Part 4 -California Mechanical Code (MEC); IAPMO Uniform Mechanical Code (UMC) with California amendments
 - 5) Part 5 -California Plumbing Code; IAPMO Uniform Plumbing Code (UPC) with California amendments
 - 6) Part 6 -California Energy Code
 - 7) Part 7 -California Elevator Safety Construction Code
 - 8) Part 9 -California Fire Code; WFCFA Uniform Fire Code (UFC) with California amendments
 - 9) Part 12 -California Reference Standards Code
2. CPUC –California Public Utilities Commission
 - a. GO-95; Rules for Overhead Electric Line Construction
 - b. GO-128; Rules for Construction of Underground Electric Supply and Communication Systems
 3. IEEE –Institute of Electrical and Electronic Engineers
 - a. C2; National Electrical Safety Code (NESC)
 4. NECA –National Electrical Contractors Association
 - a. 1; Standard Practices for Good Workmanship in Electrical Contracting
 - b. 4090; Manual of Labor Units
 5. All applicable local municipal codes and ordinances.
 6. Applicable rules and regulations of local utility companies.

1.13 SUBMITTALS

A. Product data

1. Prior to commencement of work and within 35 days after award of Contract, submit in ample time for approval in accordance with Division 1 a complete list of furnished equipment, material and shop drawings, including all substitutions. Partial or incomplete lists of materials will not be considered. Substitutions will be considered thereafter.
 - a. Where it is in the best interest of Owner, Engineer may give written consent to a submittal received after expiration of designated time limits or for an additional re-submittal.

B. Closeout submittal

1. Furnish three complete sets of maintenance and operating instructions bound in a binder and indexed to Owner. Start compiling data upon approval of materials

and equipment. Final inspection will not be made until Engineer approves binders. Refer also to Division 1 for additional requirements.

2. Provide one of each tool required for proper equipment operation and maintenance provided under this Section. All tools shall be delivered to the Owner at project completion.
3. Provide two keys to Owner for each lock furnished under Division 26.
4. Record drawings
 - a. Upon completion of Work, furnish Engineer with complete sets of plans (not marked blueprints) upon which shall be shown all work installed under Contract, which are not in accordance with the Construction Documents. Refer to Division 1 requirements.
 - b. All symbols and designations used in preparing Record Drawings shall match those used in Construction Documents.

1.14 SUBSTITUTIONS

- A. If it is desired to make a substitution, the Contractor shall clearly identify each substitution on the submittal, and to submit complete information or catalog data to shown equality of equipment or material offered to that specified. Substitutions will be interpreted to be all manufacturers other than those specifically listed by model or catalog number within these Specifications and Drawings. No substitution will be allowed unless identified, requested and approved in writing. Materials of equal merit and appearance, in the opinion of the Engineer, will be approved for use. Architect and Engineer reserve the right to require originally specified items at no additional costs to Owner. Only one request for substitutions will be considered on each item of material or equipment.
- B. Acceptance of a substitute is not to be considered a release from the Specifications. Correct any deficiencies in an item, even though approved at the Contractor's expense.
- C. Responsibility for installation of approved substitution is included herein. Make any changes required for installation of approved substituted equipment without additional costs.
- D. Failure to comply with any of the requirements of the above will necessitate that the specified materials be submitted and supplied.

1.15 CHANGE ORDER PROPOSALS

- A. Shall comply with the requirements set forth by the General Conditions
- B. All change order proposals and requests, both additive and deductive, shall be accompanied by a detailed materials and labor breakdown for each specific task and/or item.
 1. All change order proposals and change orders, both additive and deductive, shall be based upon and be accompanied by a detailed materials and labor breakdown for each specific task and/or item. The breakdown shall include actual materials costs plus overhead and profit, as well as labor units base upon the most recent NECA Manual of Labor Units (NECA Index #4090) or equivalent

publication for each specific task and item. Labor costs shall be computed as outlined within the General Conditions, based upon the NECA labor tables for each task required. Materials costs shall include actual Contractor invoice plus no more than 15% markup. The Owner and Contractor agree to the above change order cost procedure, for both additive and deductive change orders.

1.16 QUALITY ASSURANCE

- A. References to codes, standards, specifications and recommendations of technical societies, trade organizations and governmental agencies shall mean that latest edition of such publications adopted and published prior to bid submittal. Such codes or standards shall be considered a part of this Specification as though fully repeated herein.
- B. Work and materials shall be in full accordance with the latest rules and regulations of applicable state or local laws or regulations and standards of following:
 - 1. National Fire Protection Association (NFPA)
 - 2. California Electrical Code (CEC)
 - 3. California Occupational Safety Health Act (Cal-OSHA)
 - 4. California State Fire Marshall (CSFM)
 - 5. California Code of Regulations (CCR)
 - 6. Electrical Safety Orders, CAC Title 8 (ESO)
 - 7. California Public Utilities Commissions, General Order 95 (GO-95)
 - 8. Applicable rules and regulations of local utility companies.
 - 9. NECA 1-2000, Standard Practices for Good Workmanship in Electrical Contracting
- C. All electrical equipment and material furnished under Division 26 shall conform to all CEC/NEC requirements and bear the Underwriters' Laboratories (UL) label where applicable.
- D. Nothing in the Construction Documents shall be construed to permit work not conforming to these Codes. Whenever the indicated material, workmanship, arrangement or construction is of high quality or capacity than that required by the above rules and regulations, the Construction Documents shall take precedence. Should there be any direct conflict between the rules and regulations and Construction Documents, the rules shall govern.
- E. All electrical equipment and material furnished under this Section shall conform to NEMA and ASTM standards, NEC/CEC and bear the Underwriters' Laboratories (UL) label where such label is applicable.
- F. All electrical work shall conform to manufacturer's written instruction, and the NECA Standard Practices for Good Workmanship in Electrical Contracting and all published recommended practices at the time of project. The Contractor shall use the requirements within the Specifications whenever they exceed NECA guidelines.
- G. Follow manufacturer's direction where these direction cover points not included with the Construction Documents.

1.17 DELIVERY, STORAGE AND HANDLING

- A. Packing, shipping, handling and unloading
 - 1. Damage to the equipment delivered to the site or in transit to the job shall be the responsibility of the Electrical Contractor.
 - 2. Equipment and material delivery of shall be scheduled as required for timely, expeditious progress of work.
- B. Storage and protection of job equipment is the responsibility Contractor.
- C. Comply with Division 1 requirements with regards to waste management and disposal.

1.18 PROJECT CONDITIONS

- A. Discrepancies
 - 1. In the event of discrepancies with the Contract Documents, Engineer shall be notified with sufficient time as stated within Division 1 to allow the issuing of an addendum prior to the bid opening.
 - 2. If, in the event that time does not permit notification of clarification of discrepancies prior to the bid opening, the following shall apply:
 - a. The drawings govern in matters of quantity and specifications govern in matters of quality.
 - b. In the event of conflict within the drawings and specifications involving quantities or quality, the greater quantity or higher quality shall apply. Such discrepancies shall be noted and clarified within the contractor's bid. No additional allowances will be made because of errors, ambiguities or omissions which reasonably should have been discovered during the bid preparation.
- B. Verify all power and communication utilities' requirements prior to commencement of any utility work. Make proper adjustments to the construction to satisfy the serving utility.
- C. Information shown relative to services is based upon available records and data, but shall be regarded as approximate only. Make minor deviations found necessary to conform to actual locations and conditions without extra cost. Verify locations and elevations of utilities prior to commencement of excavation for new underground installation.
- D. Exercise extreme care in excavating near existing utilities to avoid any damage thereto; be responsible for any damage caused by such operations. Contact all utility companies to obtain exact locations prior to commencement of construction.
- E. The electrical plans indicate the general layout and arrangement; the architectural drawings and field conditions shall determine exact locations. Field verify all conditions and modify as required to satisfy design intent. Maintain all required working clearances.
- F. Fees, permits and utility services

1. Obtain and pay for all permits and service charges required for the installation of this work. Arrange for required inspections and secure approvals from authorities having jurisdiction. Arrange for all utility connections and pay charges incurred including excess service charges if any.
 2. Extra charges imposed by the electrical and communication utility companies shall be included in the bid, if available. Unless otherwise stated, these charges will be assumed to included in the bid.
- G. Provide and maintain temporary construction power. The General Contractor or Owner will pay for electric energy charges; refer to Division 1 for details. Should the Electrical Contractor be the prime contractor, the Electrical Contractor shall pay for energy charges unless negotiated with Owner.

1.12 SEQUENCING

- A. Coordinate work within phasing plans as provided by the Owner.

1.13 WARRANTY

- A. Furnish one-year minimum guarantee in accordance with and in form required under Division 1. Repair or replace as may be necessary any defective work, material, or part without cost to the Owner, include repair or replacement of other work, furnishing, equipment or premises caused by such repair or replacement of defective work.

PART 2 -PRODUCTS

2.02 MATERIALS

- A. Materials mentioned herein or on Drawings require that the items be provided and of quality noted or an approved equal. All materials shall be new, full weight, standard in all respects and in first-class condition. Insofar as possible, all materials used shall be of the same brand or manufacturer throughout for each class of material or equipment.
- B. Trade names or catalog numbers stated herein indicate grade or quality of material desired. Materials, where applicable, shall be UL labeled and in accordance with NEMA standards.
- C. Dimensions, sizes and capacities shown are a minimum. Do not make changes without written permission of Engineer

PART 3 -EXECUTION

3.09 EXAMINATION

- A. Examine Construction Documents and Site; be familiar with types of construction where electrical installation is involved. Note carefully other sections of Specifications with their individual cross-references, standard details, etc.
- B. Any electrical work or materials shown either in Construction Documents, but not mentioned herein, or vice versa, shall be executed the same as if mentioned herein,

in a workmanlike manner in accordance with all published NECA Standards of Installation.

- C. Coordinate work with other crafts to avoid conflicts, and check all outlet locations with Architectural and Mechanical drawings and specifications. Make minor adjustments without additional cost to Owner.
- D. Engineer will make clarifications and rulings concerning any obvious discrepancies or omissions in work prior and after bidding. Perform all work involved in correcting obvious errors or omissions after award of contract as directed by Engineer at Contractor's expense.
- E. Examine site dimensions and locations against Drawings and become informed of all conditions under which work is to be done before submitting proposals. No allowance will be made for extra expense due to error.
- F. Layouts of equipment, accessories and wiring systems are diagrammatic (not pictorial), but shall be followed as closely as possible. Construction Documents are for assistance and guidance, and exact locations, distance, levels, etc., will be governed by construction; accept same with this understanding.

3.10 PREPARATION

- A. Seal all exterior wall penetrations in an approved watertight manner and to the satisfaction of Engineer and Architect.
- B. Channels, joiners, hangers, caps, nuts and bolts and associated parts shall be plated electrolytically with zinc followed immediately thereafter by treating freshly deposited zinc surfaces with chromic acid to obtain a surface which will not form a white deposit on surface for an average of 120 hours when subjected to a standard salt spray cabinet test, or shall be hot dipped galvanized

3.11 INSTALLATION

- A. Equipment identification
 - 1. Properly identify panelboards, remote control switches, push buttons, terminal boxes, etc. with a descriptive nameplate. Make nameplate with 3/32" laminated plastic with black background and white letters. Machine engraved letters 1/8" high for equipment in device box(es) and 1/4" high for panelboards, terminal cabinets or larger items. Punched strip type nameplates and cardholders in any form are not acceptable. Fasten nameplates with oval head machine screws, tapped into front cover/panel.
- B. Working spaces
 - 1. Provide adequate working space around electrical equipment in compliance with Article 4 of Electrical Safety Orders and CEC/NEC 110.26. In general provide 78" of headroom and 30" wide minimum clear workspace in front of panelboards and controls. In addition to the above, provide the following minimum working clearances:
 - a. 0V – 150V (line-to-ground) provide 36" minimum clear distance.
 - b. 151V – 600V (line-to-ground) provide 42" minimum clear distance.
- C. Equipment supports

1. Anchor all electrical equipment to structure. Support systems shall be adequate to withstand seismic forces per CBC.

D. Excavating and backfilling

1. Excavate and backfill as required for installation of Work. Restore all surfaces, roadways, walks, curbs, walls existing underground installations, etc., cut by installations to original condition in an acceptable manner. Maintain all warning signs, barricades, flares and lanterns as required by ESO and local ordinances.
2. Dig trenches straight and true to line and grade, with bottom clear of any rock points. Support conduit for entire length on undisturbed original earth. Minimum conduit depth of pipe crown shall be 24" below finished or natural grade, unless otherwise noted.

E. Forming, cutting and patching

1. In new construction, General Contractor shall provide any special forming, recesses, chased, etc., and provide wood blocking, backing and grounds as necessary for the proper installation of electrical work. Be responsible for notifying General Contractor that such provision is necessary; layout work and check to see that it suits his requirements.
 - a. Provide metal backing plates, anchor plates and such that are required for anchorage of electrical work under Division 26; securely weld or bolt to metal framing. Wood blocking or backing will not be permitted in combination with metal framing.
2. Be responsible for proper placement of pipe sleeves, hangers, inserts and supports for this Work.

F. Concrete work

1. Provide concrete work related solely to electrical work. Concrete work, including forming and reinforcing steel installed for all electrical work, shall comply with all applicable requirements of Division 3, or in accordance with the State of California Standard Specifications issued by the Department of Transportation (CALTRANS).

3.12 REPAIR/RESTORATION

- A. Cutting, patching and repairing of existing construction to permit installation of work under Division 26 is the responsibility of Contractor. Repair or replace all damage to existing work in kind to Owner's satisfaction.
- B. Obtain Engineer's approval prior to performing any cutting or patching of concrete, masonry, wood or steel structure within building.

3.13 FIELD QUALITY CONTROL

A. Inspection of work

1. Working parts shall be readily accessible for inspection, repair and renewal. The right is reserved to make reasonable changes in equipment location shown on Drawings prior to rough in without additional costs to the Owner.

2. During construction all work will be subject to observation by the Engineer and his representatives. Assist in ascertaining any information that maybe required.
 3. Do not allow or cause any work installed hereunder to be covered up or enclosed before it has been inspected and approved. Should any work be enclosed or covered prior to approval, uncover work, and after it has been inspected and approved, restore work of all others to the condition in which it was found at the time of cutting, all without additional costs to Owner.
- B. Furnish all testing equipment as maybe required.
 - C. Test all wiring and connections for continuity and grounds; where such tests indicate faulty insulation or other defects, locate, repair and re-test.

3.14 CLEANING

- A. Repair or replace all broken, damaged or otherwise defective parts without additional cost to Owner, and leave entire work in a condition satisfactory to Engineer. At completion, carefully clean and adjust all equipment, fixtures and trim installed as part of this work; leave systems and equipment in satisfactory operating condition.
- B. Clean out and remove from the site all surplus materials and debris resulting from this work; this includes surplus excavated materials.

3.15 DEMONSTRATION

- A. At project completion, Contractor shall allot a period of not less than 8 hours for instruction of operating and maintenance personnel in the use of all systems installed under this Section. This time is in addition to any instruction time stated in the Specifications of other sections for other equipment (i.e., fire alarm, security, intercom, etc.). All personnel shall be instructed at one time, the Contractor shall make all necessary arrangements with manufacturer's representatives as may be required. Contractor, if any, for the above services shall pay all costs.

3.16 PROTECTION

- A. In performance of work, protect work of other trades as well as work under this Section from damage.
- B. Protect electrical equipment, stored and installed, from dust, water or other damage.

End of Section 26 05 00

SECTION 26 05 16

MEDIUM-VOLTAGE CABLES, SPLICES AND TERMINATIONS

PART 1 GENERAL

1.5 SUMMARY

- A. Section Includes:
 - 1. Medium-voltage cables, splices and terminations.
 - 2. Single conductor 15,000 volt shielded copper power cable insulated with ozone and discharge resistant flexible, rubber like thermosetting dielectric for medium- voltage applications, suitable for use in wet and dry locations in conduit and underground ducts.

1.6 SUBMITTALS

- A. Submit a complete material list.

1.7 QUALITY ASSURANCE

- A. The cable manufacturer shall have a minimum of 15 years manufacturing EPR insulated cables.
- B. Cables shall be tested for corona discharge and shall comply with AEIC requirements. A copy of the original x-y plot showing discharge levels shall be included as part of the certified test reports. Submit test report for Architect/Engineer review prior to installation.

1.8 WARRANTY

- A. The manufacturer shall provide a five year material warranty.

PART 2 PRODUCTS

2.3 CABLE

- A. Medium-voltage cable shall be furnished where line-to-line operating voltage exceeds 600 volts. Cable shall be 15 KV, single conductor, 133 percent insulation level, ethylene propylene rubber insulated, shielded, PVC jacket Type MV-105.
- B. Conductors shall be Class B stranded annealed, uncoated copper.
- C. Insulation system conductor screens, insulation and insulation screens shall be capable of continuous operation at conductor temperatures of 105 degrees C. and emergency overload temperatures of 140 degrees C.
- D. Cables shall be identified indicating manufacturer, size, insulation type, voltage rating, year manufactured, and UL, or other Nationally Recognized Testing Laboratory designations.

2.4 STANDARDS

- A. Cables shall conform to the following standards where applicable:
 - 1. Insulated Cable Engineers Association (ICEA).
 - 2. Institute of Electrical and Electronic Engineers (IEEE).
 - 3. California Electrical Code (CEC).
 - 4. Underwriters' Laboratories (UL).
 - 5. Association of Edison Illuminating Companies (AEIC).
- B. Reels of furnished cable shall be newly manufactured of not more than 12 months old, and shall bear tags containing name of manufacturer, CEC designation, and year of manufacture.

PART 3 EXECUTION

3.6 CABLE INSTALLATION

- A. Installation of cable, including joints, splices, taps, bends, connections, terminations, and method of pulling cable into conduit shall be performed in accordance with manufacturer's recommendations. Install splices, taps and terminations in a manner recommended by cable manufacturer. Stress cones shall be installed on cable at joints, splices, and terminations as recommended by manufacturer of cable. Minimum bending radius of cable shall be in strict accordance with recommendations of manufacturer. Certified Cable Splicer with minimum experience of five years required. Pulling compound shall be environmentally safe.
- B. Cables shall be identified at points of termination and points where conduit run is broken, as to phase leg and feeder designation, with markers. This requirement applies at man-holes, switchboards, pull boxes, and like items. Markers shall be E-Z Code, Brady Perma-Code, or equal. ID tags shall be water proof and one inch in size.
- C. After cable is installed and connected, but with all equipment disconnected from cable system, each cable shall be subjected to a high potential DC test in presence of the Inspector. Notify the Inspector not less than two working days in advance of proposed time for test. Hi-Pot test shall be NETA Acceptance Values.
- D. Test shall be performed with equipment specifically designed for this type of test and in a manner recommended by cable manufacturer. Copies of test report shall be submitted to the Architect for review. Test voltage shall be raised gradually in steps to final voltage recommended by ICEA, which shall be applied for five minutes. Current readings shall be taken at each step after leakage current has stabilized and readings shall be plotted on graph paper. If breakdown is indicated during test by a sudden increase in current, discontinue tests and provide required repairs and replacements necessary to correct defective Work.
- E. Provide new cable to replace entire length of each cable run not meeting minimum requirements of test. Perform splices and terminations necessary for replacement of cable. Repair and/or replace splices and terminations test results indicate to be defective Work.

3.7 CABLE TERMINATIONS

- A. Provide termination kits capable of proper termination of 15 KV class single conductor cables. Kits shall meet Class I requirements and be design proof tested in accordance with IEEE 48-2009. Kits shall accommodate common forms of cable shielding/construction without the need for special adapters or accessories, and shall accommodate a range of cable sizes. Kits shall be capable of proper installation on out-of-round cable in accordance with ICEA and AEIC standards. Kits shall accommodate commercially available environmentally sealed connectors.
- B. Terminations for single conductor shielded cables shall consist of heat shrinkable stress control and other required non-tracking insulation tubing or tapes. Kits shall also contain high relative permittivity stress relief mastic for insulation shield cutback treatment with a heat-activated sealant for environmental sealing.
- C. Demonstrate actual field experience and suitable accelerated and real-time testing of weathering resistance. Test reports, which verify device stability with time, temperature, and electrical stress variations, shall be submitted for review.

3.8 CABLE SPLICES

- A Splices shall be factory engineered kits that rebuild the cable insulation to that of the cable. Splices shall contain necessary components to reinstate the cable's primary insulation, metallic shielding and grounding systems, and an outer jacket.
- B. Splices shall be capable of passing the electrical test requirements of IEEE-404-2006 and water immersion tests of ANSI/IEEE 386-2006. (NETA Specification)
- C. Splices shall be of uniform cross-section, heat shrinkable polymeric construction utilizing an impedance layer stress control tube and high dielectric strength insulating layers. Outer insulating layer shall be bonded to a conducting layer for shielding. The splice shall be re- jacketed with a heat shrinkable adhesive-lined sleeve to provide a waterproof seal, or factory approved taping kit such as Scotch 5717, or equal.
- D. Splices shall accommodate a range of cable sizes and be completely independent of cable manufacturer tolerances. Splices shall be capable of being properly installed on out of round cable in accordance with ICEA and AEIC standards. Kits shall accommodate commercially available connectors.
- E Splices, which consist of three or more cables, shall be performed with 600 AMP Elastamold T Bodies, Hubbell, Cooper or equal. The splice shall be capable of removing or adding a conductor and restoring the connection in an electrically safe and waterproof condition. Installation of 200 AMP T Bodies is not permitted.

3.9 CLEANUP

- A Remove rubbish, debris and waste materials and legally dispose of off the Project site.

3.10 PROTECTION

- A Protect the Work of this section until Substantial Completion.

End of Section 26 05 16

SECTION 26 05 26
GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 — GENERAL

1.06 SUMMARY

A. Section includes

1. Provide all labor, materials and equipment necessary to complete the installation required for the item specified under this Section, including but not limited to power system grounding

B. Related sections

1. Where items specified in other Division 26 sections conflict with the requirements of this Section, the most stringent requirement shall govern.
2. The requirements of this Section apply to all Division 26 work, as applicable.
3. Consult all other sections, determine the extent and character of related work and properly coordinate work specified herein with that specified elsewhere to produce a complete installation.

1.07 REFERENCES

A. Comply with the latest edition of the following applicable specifications and standards except as otherwise shown or specified:

1. CCR –California Code of Regulations, Title 24
 - a. Part 3 -California Electrical Code(CEC); NFPA 70 National Electrical Code (NEC) with California amendments
2. IEEE –Institute of Electrical and Electronic Engineers
 - a. 142; Recommend Practices for Grounding of Industrial and Commercial Power Systems
3. NFPA –National Fire Protection Association
 - a. 780; Lightning Protection Code
4. UL –Underwriters Laboratories, Inc.
 - a. 467; Grounding and Bonding Equipment

1.08 SYSTEM DESCRIPTION

- A. This Section provides for the grounding and bonding of all electrical and communication apparatus, machinery, appliances, components, fittings and accessories where required to provide a permanent, continuous, low impedance, grounded electrical system.
- B. Ground the electrical service system neutral at service entrance equipment as shown on the Drawings.
- C. Ground each separately derived system, as defined in CEC/NEC 250-5(d) and on the Drawings, unless specifically noted otherwise.

- D. Except as otherwise indicated, the complete electrical installation including the neutral conductor, equipment and metallic raceways, boxes and cabinets shall be completely and effectively grounded in accordance with all CEC/NEC requirements, whether or not such connections are specifically shown or specified.

1.09 SUBMITTALS

- A. Submit manufacturer's data for equipment and materials specified within this Section in accordance to Section 26 05 00.

1.10 QUALITY ASSURANCE

- A. All materials, equipment and parts comprising the materials specified herein shall be new and unused, bearing UL labels where applicable.

PART 2 — PRODUCTS

2.08 CONCRETE ENCASED GROUNDING ELECTRODE (UFER GROUND)

- A. #3/O AWG minimum bare stranded copper conductor.

2.09 DRIVEN (GROUND) RODS

- A. Copper clad steel, minimum ¾" diameter by 10'-0" length, sectional type with copper alloy couplings and carbon steel driving stud; Weaver, Cadweld or equal.

2.10 INSULATED GROUNDING BUSHINGS

- A. Plated malleable iron body with 150°C molded plastic insulated throat and lay-in ground lug; OZ/Gedney BLG, Thomas & Betts #TIGB series or equal.

2.11 CONNECTION TO PIPE

- A. Cable to pipe connections; OZ/Gedney G-100B series, Thomas & Betts #290X series or equal.

2.12 CONNECTIONS TO STRUCTURAL STEEL, GROUND RODS OR SPICES

- A. Where required by the Drawings, grounding conductors shall be spliced together, connected to ground rods or connected to structural steel using exothermic welds, Cadweld or equal, or high pressure compression type connectors, Cadweld, Thomas & Betts or equal.

2.13 BONDING JUMPERS

- A. OZ/Gedney Type BJ, Thomas & Betts #3840 series or equal.

2.14 GROUND CONDUCTOR

- A. Ground conductor shall be code size UL labeled, Type THWN insulated copper wire, green in color.

PART 3 -EXECUTION

3.03 INSTALLATION

A. Grounding electrodes

1. Concrete encased grounding electrode (Ufer ground)
 - a. Provide a #3/O AWG minimum bare copper conductor encased along the bottom of concrete foundation, footing or trench which is in direct contact with the earth and where there is no impervious waterproofing membrane between the footing and soil. The electrode shall extend through a horizontal length of 30' minimum and shall be encased in not less than 2" or more than 5" of concrete separating it from surrounding soil. The electrode shall emerge from the concrete slab through a protective non-metallic sleeve and shall be extended to BGB or as shown on Drawings.
2. Supplementary grounding electrode (ground ring, grid and driven rod)
 - a. Provide as shown driven ground rod(s). Interconnect ground rod with structural steel and adjacent rods with code size bare copper conductor. Ground rods shall be space no less than 6'-0" on centers from any other electrode or electrodes of another electrical system.
3. Separately derived electrical system grounding electrode
 - a. Ground each separately derived system per CEC/NEC 250-26 or as shown on Drawings, whichever is greater.
4. Metal underground water pipe
 - a. Contractor shall install an accessible grounding electrode conductor from the main incoming cold water line to BGB. The electrode conductor shall be sized per CEC/NEC Table 250-94 or as shown on Drawings, whichever is greater.

B. Grounding electrode conductor

1. Provide grounding electrode conductors per CEC/NEC Table 250-94 or as shown on Drawings, whichever is greater.

C. Power system grounding

1. Connect the following items using code size copper grounding conductors to BGB or as shown on Drawings:
 - a. Concrete encased electrode (Ufer ground)
 - b. Ground rod(s)
 - c. Incoming cold and fire water pipes
 - d. Gas pipe
 - e. Structural steel
 - f. Distribution transformer secondary

D. Equipment Bonding/Grounding

1. Provide a code sized copper ground conductor, whether indicated or noted on the drawings, in each of the following:
 - a. All power distribution conduits and ducts
 - b. Distribution feeders
 - c. Motor and equipment branch circuits\
 - d. Device branch circuits
2. Provide a separate grounding bus at distribution panelboards, loadcenters, switchboards and motor control centers. Connect all metallic enclosed equipment so that with maximum fault current flowing, shall be maintained at not more than 35V above ground.
3. Metallic conduits terminating in concentric, eccentric or oversized knockouts at panelboards, cabinets, gutters, etc. shall have grounding bushings and bonding jumpers installed interconnecting all such conduits.
4. Provide bonding jumpers across expansion and deflection coupling in conduit runs, pipe connections to water meters and metallic cold water dielectric couplings.
5. Provide ground wire in flexible conduit connected at each end via grounding bushing.
6. Provide bonding jumpers across all cable tray joints.
7. Bond each end of metallic conduit longer than 36" in length to grounding conductor using a #6 AWG pigtail.

3.04 FIELD QUALITY CONTROL

- A. Contractor using test equipment expressly designed for that purpose shall perform all ground resistance tests in conformance with IEEE guidelines. Contractor shall submit typewritten records of measured resistance values to Engineer for review and approval prior to energizing the system.
- B. Obtain and record ground resistance measurements both from electrical equipment ground bus to the ground electrode and from the ground electrode to earth. Furnish and install additional bonding and add grounding electrodes as required to comply with the following resistance limits:
 1. Resistance from ground bus to ground electrode and to earth shall not exceed 5 ohms unless otherwise noted.
 2. Resistance from the farthest panelboard, loadcenter, switchboard or motor control center ground bus to the ground electrode and to earth shall not exceed 20 ohms maximum.
- C. Inspection
 1. The Engineer or Inspector prior to encasement, burial or concealment thereto shall review the grounding electrode and connections.

End of Section 26 05 26

SECTION 26 12 00

DISTRIBUTION LIQUID FILLED TRANSFORMERS

PART 1 – GENERAL

1.6 SUMMARY

A. Section includes

1. Provide all labor, materials and equipment necessary to complete the installation required for the items specified under this Section, including but not limited to transformers.

B. Related sections

1. Where items specified in other Division 26 sections conflict with the requirements of this Section, the most stringent requirement shall govern.
 - a. 26 05 00 – Grounding and Bonding for Electrical Systems
2. The requirements of this Section apply to all Division 26 work, as applicable.
3. Consult all other sections, determine the extent and character of related work and properly coordinate work specified herein with that specified elsewhere to produce a complete installation.

1.7 REFERENCES

A. Comply with the latest edition of the following applicable specifications and standards except as otherwise shown or specified:

1. ANSI - American National Standards Institute
 - a. C37.47; Specifications for Distribution Fuse Disconnecting Switches, Fuse Supports, and Current-Limiting Fuses
 - b. C57.12.00; Standard General Requirements for Liquid-Immersed Distribution, Power, and Regulating Transformers
 - c. C57.12.34; Requirements for Pad-Mounted, Compartmental-Type, Self-Cooled, Three-Phase Distribution Transformers, 2,500 kVA and Smaller: High Voltage, 34,500 GrdY/19,900 Volts and Below; Low Voltage, 480 Volts and Below.
 - d. C57.12.28; Switchgear and Transformers, Pad-Mounted Equipment - Enclosure Integrity
 - e. C57.12.90; Standard Test Code for Liquid-Immersed Distribution Power, and Regulating Transformers and Guide for Short-Circuit Testing of Distribution and Power Transformers
 - f. C57.13; Requirements for Instrument Transformers
 - g. ANSI/IEEE 386; Separable Insulated Connector Systems for Power Distribution Systems Above 600 V
2. CCR –California Code of Regulations, Title 24
 - a. Part 3 -California Electrical Code (CEC); NFPA 70 National Electrical Code (NEC) with California amendments

1.8 SUBMITTALS

- A. Submit manufacturer's data for materials specified within this Section in accordance to Section 26 05 00.
- B. Submit shop drawings indicating outline dimensions, connection and support points, weight, specified ratings and materials.
- C. Submit product data indicating standard model design tests and options.

1.9 QUALITY ASSURANCE

- A. All materials, equipment and parts comprising the materials specified herein shall be new and unused, bearing UL labels where applicable.

1.10 DELIVERY, STORAGE AND HANDLING

- A. Store in a warm, dry location with uniform temperature. Protect unit if handled in inclement weather (i.e., rain, sleet, snow, etc.). Cover ventilating opening to keep out dust and foreign materials prior to startup.
- B. Handle transformer using only lifting eyes and brackets provided for that purpose; see manufacturer's installation instructions.

PART 2 – PRODUCTS

2.2 FLUID-FILLED PAD-MOUNTED TRANSFORMERS

A. Manufacturers

- 1. ABB or approved equal.

B. General

- 1. The transformer(s) shall be substation style, self-cooled, for mounting on a pad and shall comply with the latest applicable standards.
- 2. The average temperature rise of the windings, measured by the resistance method, shall be 65° C when the transformer is operated at rated kVA output. The transformer shall be capable of being operated at rated load in a 30° C average, 40° C maximum ambient, as defined by IEEE C57.12.00 without loss of service life expectancy.
- 3. Coolant and insulating fluid shall be less flammable seed-oil based fluid.
- 4. The high and low voltage compartments shall be located opposite ends of the transformer (i.e., sub-station style).
- 5. The following accessories shall be provided as standard on all transformers:
 - a. Nameplate in low voltage compartment.
 - b. 1" upper filter press and filling plug
 - c. 1" Drain valve with sampling device.
 - d. Lightning arrester mounting provisions.
 - e. Tap changer with silver-plated stationary and movable contacts, for de-energized operation only, which is externally operable and pad lockable.

- f. The front of both compartments shall be removable to allow the transformer to be rolled or skidded into position over conduit stubs. ANSI tank grounding provisions shall be furnished in both compartments.
 - g. Dial type thermometer.
 - h. Magnetic liquid-level gauge.
 - i. Pressure vacuum gauge.
 - j. Pressure relief valve.
 - k. Pentahead bolts for compartment doors.
6. The transformer(s) shall be rated, self cooled, voltage, phase, wire per the Drawings with two 2-1/2% full capacity above normal and two 2-1/2% below normal taps. Impedance shall be manufacturer's standard impedance, $\pm 7\frac{1}{2}\%$. Basic impulse level of the primary winding shall be as specified in IEEE C57.12.00 for comparable kV class.
 7. The transformer shall be of sealed-tank construction of sufficient strength to withstand a pressure of 7 psi without permanent distortion. The cover shall be welded and the handhole fastenings tamper resistant. The transformer shall remain effectively sealed for a top oil temperature range of -5°C to 105°C . When required, cooling panels will be provided on the back and sides of the tank. Lifting eyes and jacking provisions will be provided.
 8. Coils shall be wound with aluminum conductors.
 9. All cores to be constructed of high grade, grain-oriented, non-aging silicon steel with high magnetic permeability, and low hysteresis and eddy current losses. Magnetic flux is to be kept well below the saturation point.
 10. The high voltage terminations and equipment shall be live front.
 11. The low voltage bushings (<600V) shall be molded polymer, and provided with blade- type spade terminals with NEMA standard hole spacing arranged for vertical take-off. The low voltage neutral shall be an insulated bushing, grounded to the tank by a removable ground strap.
 12. Provide bayonet type liquid immersed fuses that are externally replaceable with a hot- stick without opening the transformer tank.
 13. Surge Protection - Provide three distribution class lightning arresters for surge protection per primary voltage shown on Drawings. Arresters are to be mounted in the high voltage compartment.
 14. Transformer shall be UL listed.
 15. Transformer shall be FM labeled.
 16. Tests shall be conducted in accordance with the provisions of IEEE C57.12.90 and shall include, as a minimum, the following tests:
 - 11) Ratio
 - 12) Polarity
 - 13) Phase Rotation
 - 14) No-Load Loss
 - 15) Excitation Current
 - 16) Impedance Voltage
 - 17) Load Loss
 - 18) Applied Potential
 - 19) Induced Potential
 - 20) QC Impulse Test

PART 3 – EXECUTION

3.5 EXAMINATION

- C. Examine transformer to provide adequate clearances for installation.
- D. Check that concrete pads are level and free of irregularities for floor mounted installations.
- E. Begin work only after unsatisfactory conditions are corrected.

3.6 INSTALLATION

- A. Read and follow manufacturer's bulletin included with unit prior to installation.
- B. Transformers shall be spaced a minimum of 36" from adjacent structures measured from edge of pad
- C. Mount to resist seismic forces and brace to 0.56g. Submit calculations and mounting details for review and approval.
- D. Grounding
 - 1. Provide a dual rated four-barrel solderless grounding lug with a 5/8"-11 threaded hole. Drill transformer enclosure with 11/16" bit and attach lug to enclosure using a torque bolt and T&B Dragon Tooth transition washer with the following connections:
 - a. Primary feeder ground
 - b. Secondary feeder ground
 - c. Grounding electrode per CEC/NEC 250-30.
 - d. Main bond jumper to neutral (when present)

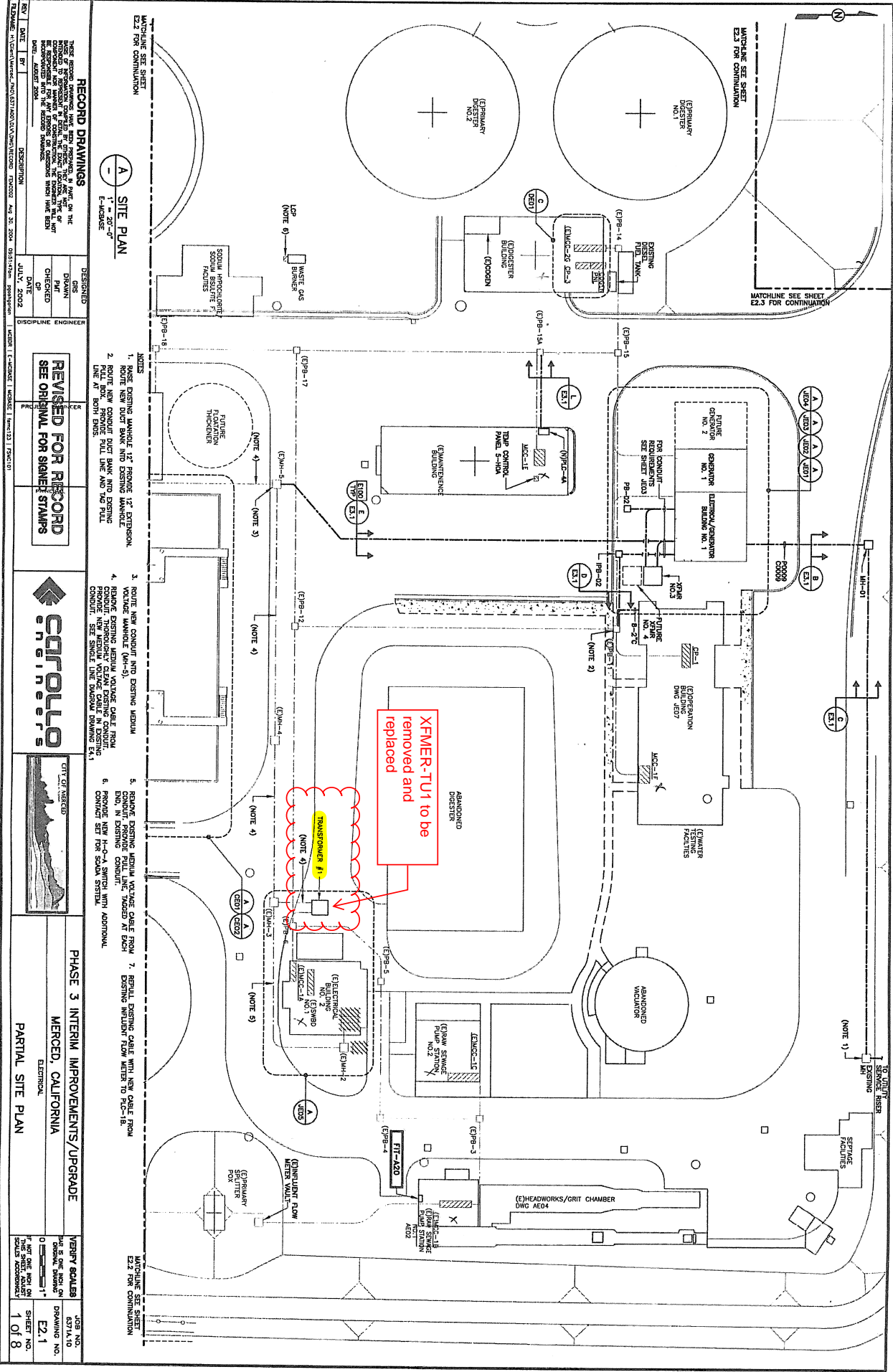
3.7 FIELD QUALITY CONTROL

- A. Check for damage and tight connections prior to energizing transformer.
- B. Measure primary and secondary voltages, and make appropriate tap adjustments to within 2% of rated voltage.

3.8 CLEANING

- A. Touch up scratched or marred surfaces to match original finish.

END OF SECTION



- NOTES**
1. RAISE EXISTING MANHOLE 12" PROVIDE 12" EXPANSION.
 2. ROUTE NEW DUCT BANK INTO EXISTING MANHOLE.
 3. ROUTE NEW CONDUIT INTO EXISTING MANHOLE.
 4. RAISE DUCT BANK PROVIDE NEW MEDIUM VOLTAGE CABLE IN EXISTING CONDUIT. PROVIDE NEW MEDIUM VOLTAGE CABLE IN EXISTING CONDUIT. SEE SHEET E2 FOR DUCT BANK DRAWING EX-1.
 5. REMOVE EXISTING MEDIUM VOLTAGE CABLE FROM CONDUIT. PROVIDE NEW MEDIUM VOLTAGE CABLE IN EXISTING CONDUIT. PROVIDE NEW H-0-A SWITCH WITH ADDITIONAL CONDUIT SET FOR SOLA SYSTEM.
 6. PROVIDE NEW H-0-A SWITCH WITH ADDITIONAL CONDUIT SET FOR SOLA SYSTEM.
 7. REPAIR EXISTING CABLE WITH NEW CABLE FROM EXISTING MANHOLE FROM METER TO PFC-1B.
 8. PROVIDE NEW H-0-A SWITCH WITH ADDITIONAL CONDUIT SET FOR SOLA SYSTEM.

(A) SITE PLAN
 1" = 20'-0"
 E-MANAGER

LANDLINE SEE SHEET E2.2 FOR CONTINUATION

LANDLINE SEE SHEET E2.3 FOR CONTINUATION

RECORD DRAWINGS

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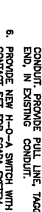
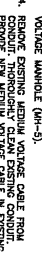
PHASE 3 INTERIM IMPROVEMENTS/UPGRADE
 MERCED, CALIFORNIA
 ELECTRICAL
 PARTIAL SITE PLAN

DESIGNED
 OHS
 DRAWN
 CHECKED
 DATE

DISCIPLINE ENGINEER

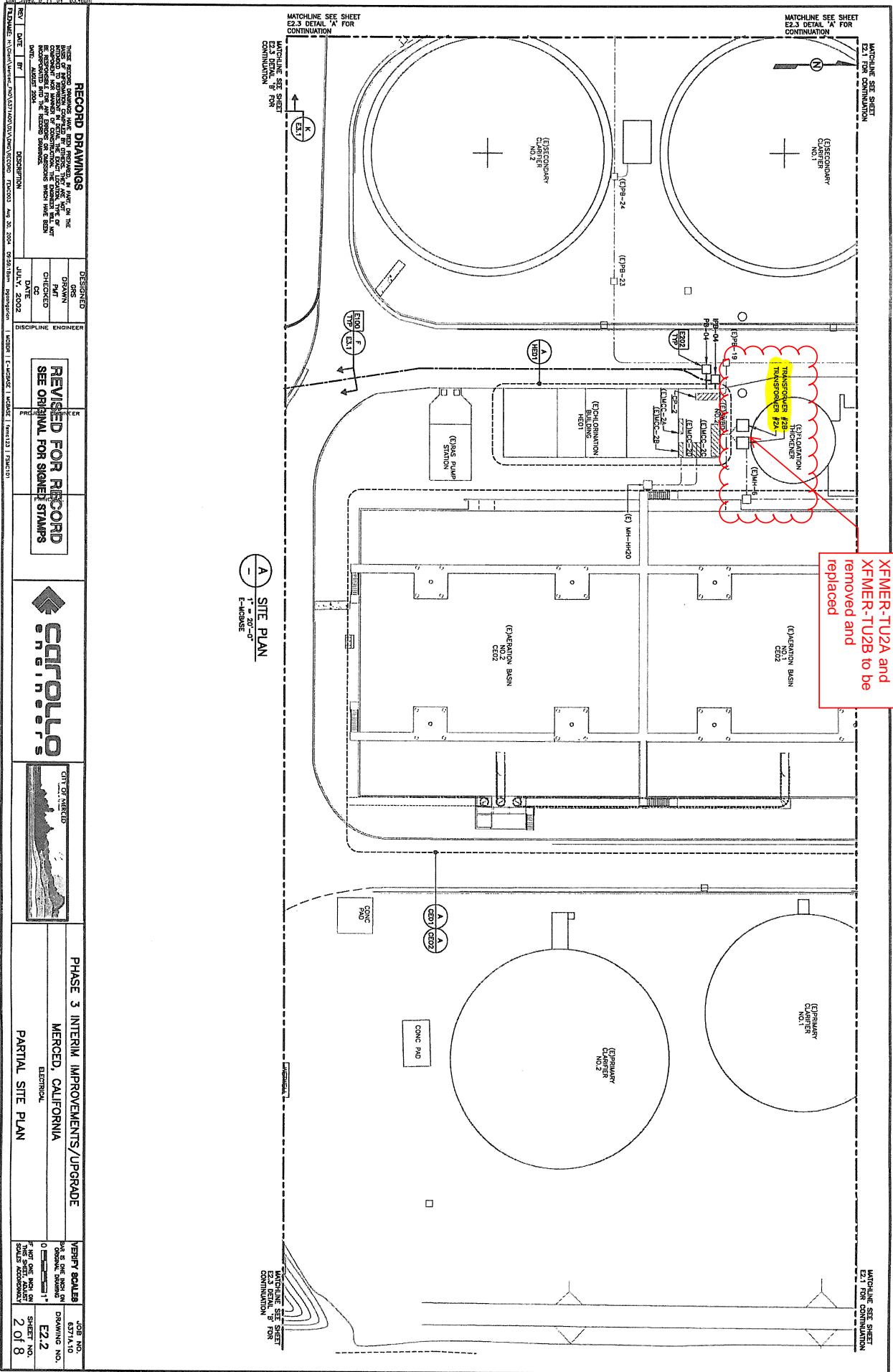
REVISOR

REVISED FOR RECORD
 SEE ORIGINAL FOR STAMP



PHASE 3 INTERIM IMPROVEMENTS/UPGRADE
 MERCED, CALIFORNIA
 ELECTRICAL
 PARTIAL SITE PLAN

VERIFY DIMENSIONS
 DATE 5/16/10
 DRAWING NO. E2.1
 SHEET NO. 1 of 8



XFMR-TU2A and XFMR-TU2B to be removed and replaced

A SITE PLAN
E-449458

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DESIGNED BY: [Blank]
 DRAWN BY: [Blank]
 CHECKED BY: [Blank]
 DATE: JULY, 2002

**REVISED FOR RECORD
SEE ORIGINAL FOR SIGNER STAMPS**

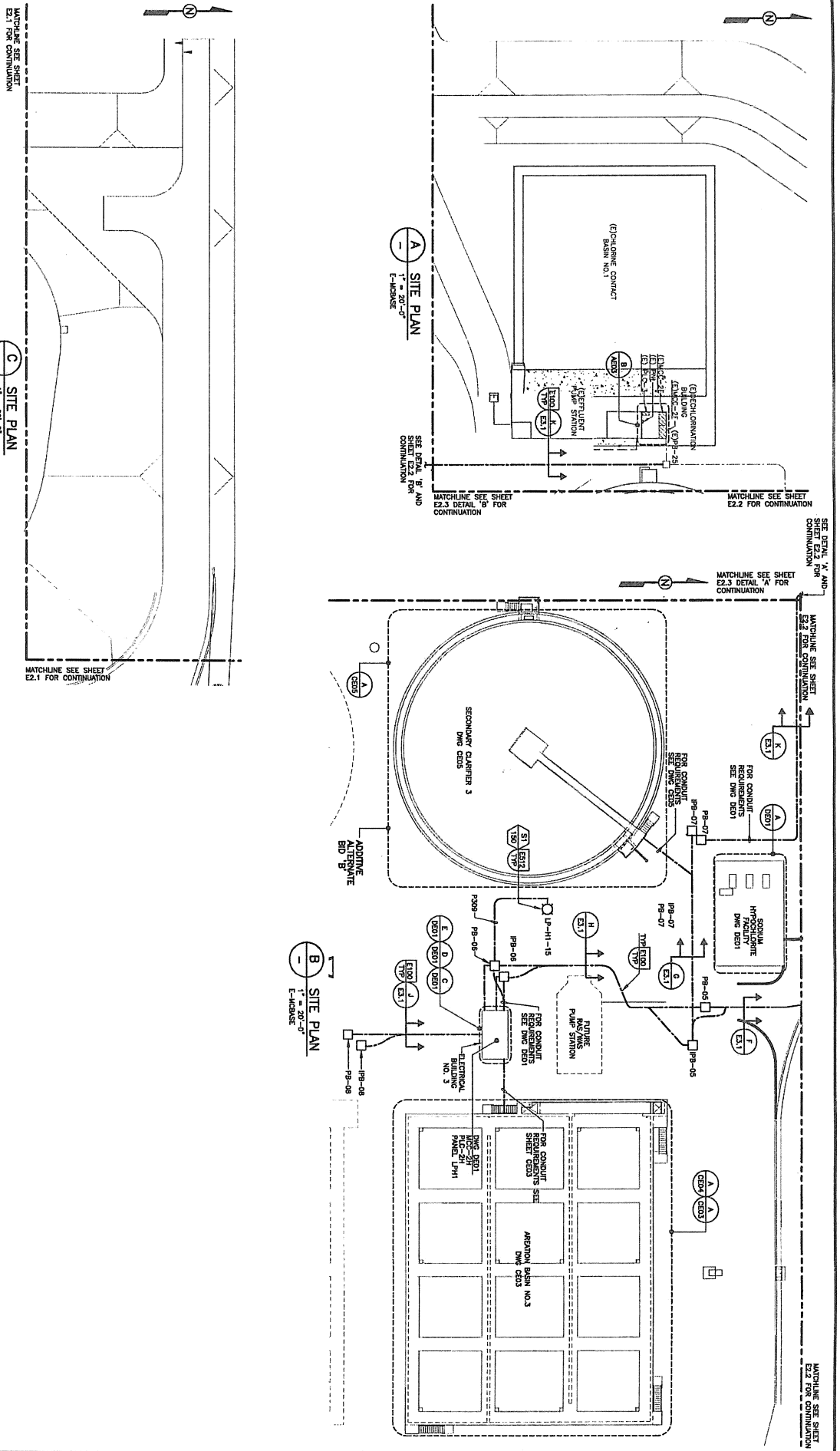


PHASE 3 INTERIM IMPROVEMENTS/UPGRADE
 MERCED, CALIFORNIA
 ELECTRICAL
 PARTIAL SITE PLAN

VERIFY SCALES
 1" = 10' OR 1" = 20'
 DRAWING NO. E2.2
 SHEET NO. 2 OF 8

REV	DATE	BY	DESCRIPTION

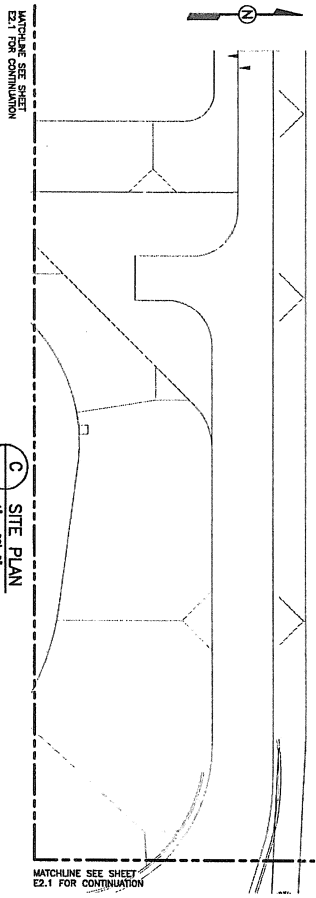
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 LICENSE NO. [Blank]
 PROJECT NO. [Blank]
 SHEET NO. [Blank]



A SITE PLAN
1" = 20'-0"
E-WASBGE

B SITE PLAN
1" = 20'-0"
E-WASBGE

C SITE PLAN
1" = 20'-0"
E-WASBGE



RECORD DRAWINGS

THESE RECORD DRAWINGS HAVE BEEN PREPARED BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND TO THE BEST OF MY KNOWLEDGE AND BELIEF THEY COMPLY WITH ALL CITY, COUNTY AND STATE REQUIREMENTS AND ALL APPLICABLE CODES WHICH HAVE BEEN IN EFFECT AT THE TIME THESE RECORD DRAWINGS WERE PREPARED.

DATE: JULY, 2002

DESIGNED: [Blank]
DRAWN: [Blank]
CHECKED: [Blank]
DATE: [Blank]

DISCIPLINE ENGINEER: [Blank]

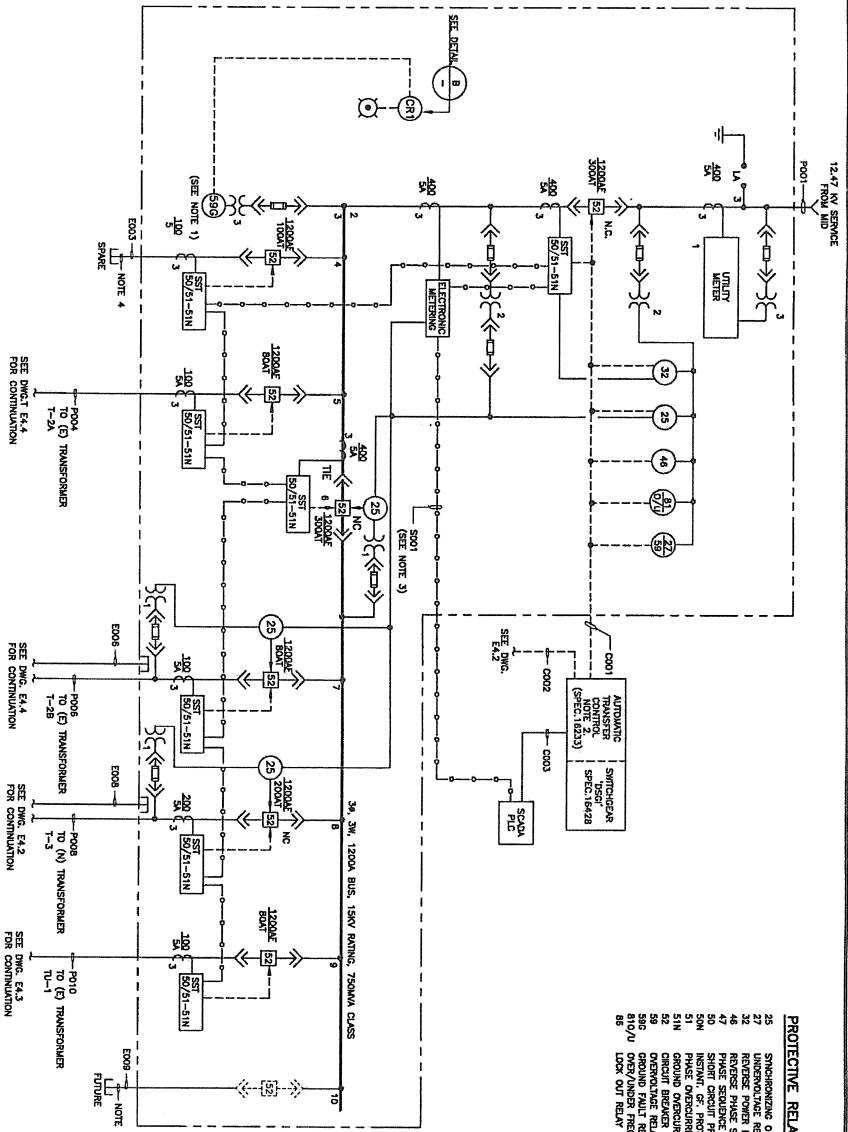
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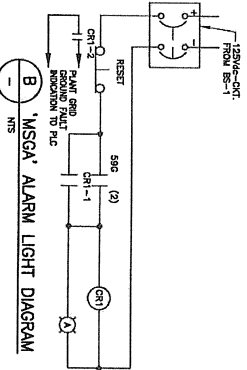
PHASE 3 INTERIM IMPROVEMENTS/UPGRADE

MERCED, CALIFORNIA
ELECTRICAL
PARTIAL SITE PLAN

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SCALE	DRAWING NO.	SHEET NO.	
1" = 20'-0"	E2.3	3 of 8	



A 12.47KV SWITCHGEAR 'MSGA' - SINGLE LINE DIAGRAM
N/S



C 12.47KV DISTRIBUTION SWITCHGEAR - MSGA
(SEE DWG. A03)
N/S



B 'MSGA' ALARM LIGHT DIAGRAM
N/S

- NOTES:
1. GROUND FAULT RELAYS FOR PROTECTION OF
 2. 12.47KV FEED BUS.
 3. POWER SIGNALS TO SQA0A PLC
 4. PROVIDE 1-5°C ROOM PRIMARY SWITCHGEAR TO (C)M-C-05.

RECORD DRAWINGS

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DESIGNED	DESIGNED	DATE	11/11/2023
CHECKED	CHECKED	DATE	11/11/2023
DATE	DATE		
DATE	DATE		

DISCIPLINE ENGINEER

REVISOR FOR RECORD

SEE ORIGINAL FOR SIGNER'S STAMPS

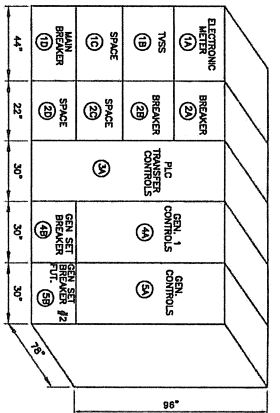
CCIROLO
engineers

CITY OF MERCED
MERCED, CALIFORNIA

PHASE 3 INTERIM IMPROVEMENTS/UPGRADE
ELECTRICAL
SINGLE LINE SWITCHGEAR 'MSGA'

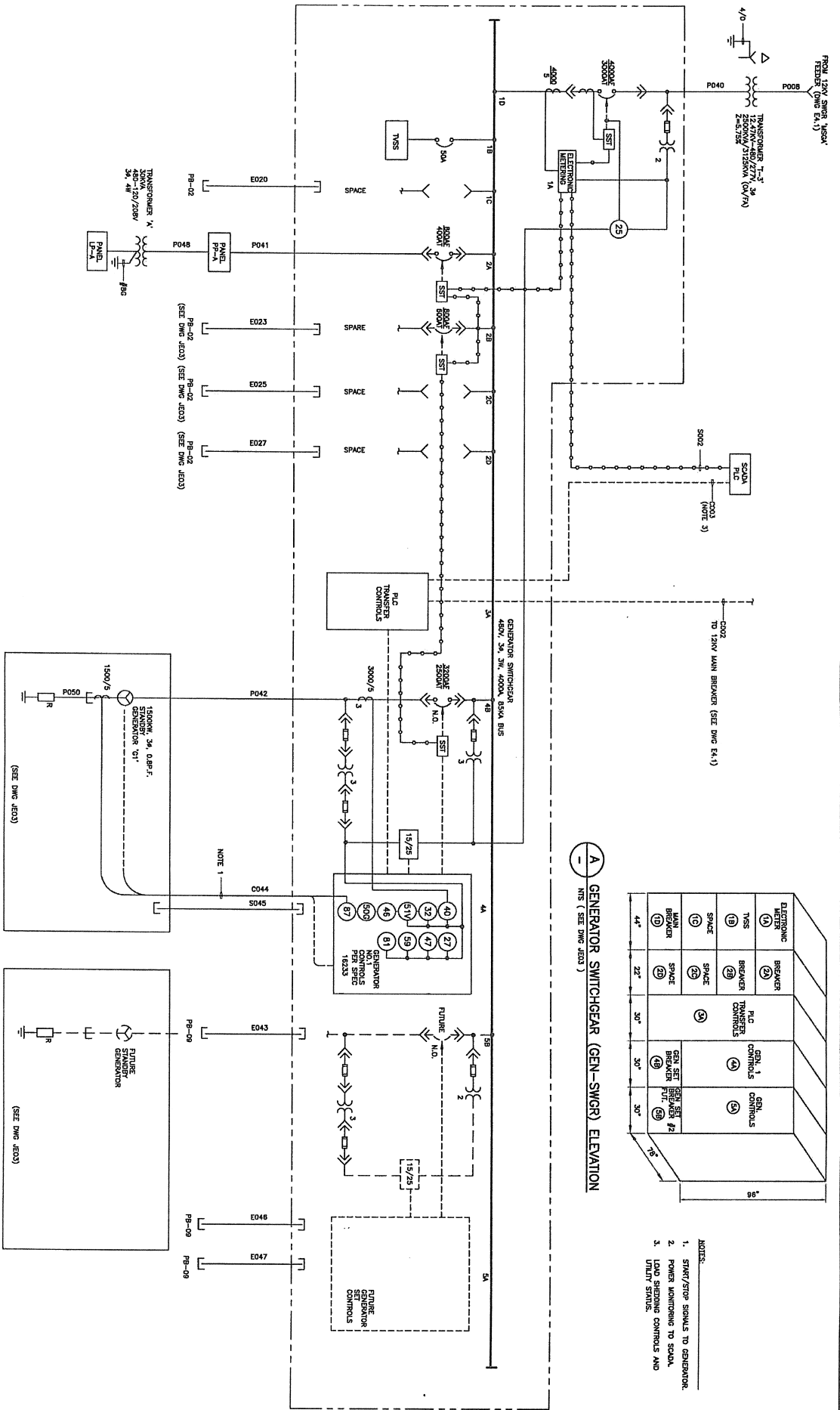
MEDIUM VOLTAGE SWITCHGEAR 'MSGA'

JOB NO.	5371A.10
DRAWING NO.	EA.1
SHEET NO.	4 OF 8

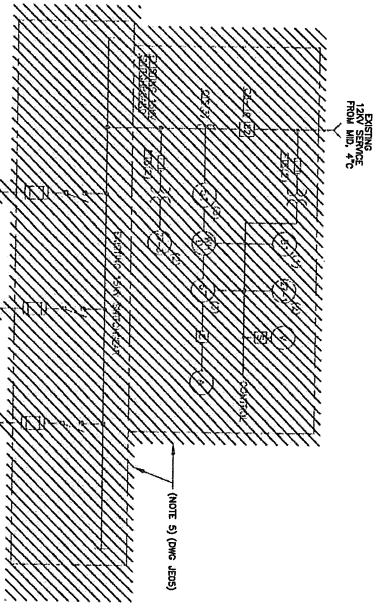


A GENERATOR SWITCHGEAR (GEN-SWGR) ELEVATION
 (SEE DWG 4203)

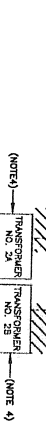
- NOTES:
- START/STOP SIGNALS TO GENERATOR.
 - POWER MONITORING TO SCADA.
 - LOAD SHEDDING CONTROLS AND UTILITY STATUS.



RECORD DRAWINGS THIS RECORD DRAWING HAS BEEN PREPARED BY THE DESIGNER AND THE CONTRACTOR HAS REVIEWED AND APPROVED THE SAME. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE ACCURACY OF THE INFORMATION PROVIDED HEREON. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED HEREON.		DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____ DATE: _____ DISCIPLINE ENGINEER	
REVISED FOR RECORD SEE ORIGINAL FOR SIGNER'S STAMPS		carroll ENGINEERS CITY OF MERCED MERCED, CALIFORNIA ELECTRICAL SINGLE LINE DIAGRAM GENERATOR SWITCHGEAR GEN-SWGR	
JOB NO. 6371A.10 DRAWING NO. E4.2 SHEET NO. 5 OF 8	HENRY GOALES DATE: 07/11/2002 ORIGINAL DRAWING DATE: 07/11/2002 CHECKED BY: _____	JULY 11, 2002 DISCIPLINE ENGINEER	JULY 11, 2002 DISCIPLINE ENGINEER

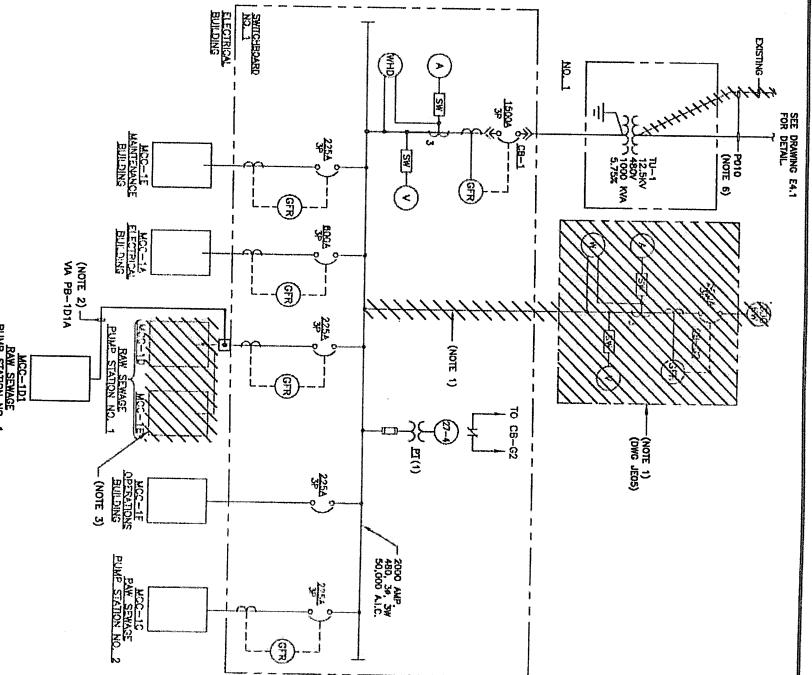


B EXISTING 12KV SWITCHGEAR - SINGLE LINE DIAGRAM



- NOTES:
1. DISCONNECT AND REMOVE EXISTING ROOM STANDBY GENERATOR AND RELATED FEEDER CONDUIT MAINS CONDUCTORS. SEE SHEET E4.1 FOR ADDITIONAL WORK.
 2. PROVIDE J-BOX AT EXISTING FEEDER ENTRANCE TO LOCATION AND EXISTING FEEDER CONDUITS AT J-BOX. PROVIDE 3" x 4" x 1/2" GALV. STEEL J-BOX. SEE SINGLE SHEET E4.1 AND E4.9 AND FLOOR PLANS. PROVIDE 1/2" x 1/2" x 1/4" GALV. STEEL J-BOX. SEE SINGLE SHEET E4.1 AND E4.9 AND FLOOR PLANS.
 3. DISCONNECT AND REMOVE EXISTING MCC-117 AND MCC-118. PROVIDE NEW MCC-101. SEE SINGLE LINE DIAGRAM FOR LOCATION AND FLOOR PLANS.
 4. REPAIR/REPLACE EXISTING TRANSFORMER AND PERFORM INSULATION TEST AFTER COMPLETION OF ABOVE WORK.
 5. UPON COMPLETION OF NEW SWITCHGEAR, DISCONNECT EXISTING UTILITY LATER SECTION, CONDUCTORS, CONDUITS AND FEEDER CONDUITS. DISCONNECT AND REMOVE EXISTING FEEDER CONDUITS, CONDUITS, OTHER POWER RELATED EQUIPMENT FOR OWNER. AND DISCONNECT AND REMOVE EXISTING FEEDER CONDUITS. DISCONNECT AND REMOVE EXISTING FEEDER CONDUITS. DISCONNECT AND REMOVE EXISTING FEEDER CONDUITS. DISCONNECT AND REMOVE EXISTING FEEDER CONDUITS.
 6. DISCONNECT AND REMOVE EXISTING 12KV FEEDER CONDUITS AND FEEDER CONDUITS. DISCONNECT AND REMOVE EXISTING FEEDER CONDUITS. DISCONNECT AND REMOVE EXISTING FEEDER CONDUITS. DISCONNECT AND REMOVE EXISTING FEEDER CONDUITS.

A EXISTING SWITCHBOARD NO. 1 SINGLE LINE DIAGRAM



RECORD DRAWINGS

THIS RECORD DRAWING HAS BEEN PREPARED BY ME OR BY AN ENGINEER OR ARCHITECT UNDER MY CLOSE PERSONAL SUPERVISION AND TO THE BEST OF MY KNOWLEDGE AND BELIEF IT ACCURATELY REPRESENTS THE WORK SHOWN THEREON. I AM NOT PROVIDING ANY WARRANTY OR GUARANTEE FOR THE ACCURACY OF THE INFORMATION CONTAINED HEREIN. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR OBTAINING ALL NECESSARY INFORMATION FROM THE APPROPRIATE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY INFORMATION FROM THE APPROPRIATE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY INFORMATION FROM THE APPROPRIATE AGENCIES.

DESIGNED BY: [Signature]
 CHECKED BY: [Signature]
 DATE: JULY 2002

DISCIPLINE ENGINEER: [Signature]

REVISED FOR RECORD
 SEE ORIGINAL FOR SIGNATURE STAMPS



PHASE 3 INTERIM IMPROVEMENTS/UPGRADE
 MERCED, CALIFORNIA
 ELECTRICAL
 (E) SINGLE LINE DIAGRAM SWITCHGEAR

JOB NO. 63714.10
 DRAWING NO. E4.3
 SHEET NO. 6 OF 8

RECORD DRAWINGS

THIS RECORD DRAWING HAS BEEN PREPARED BY ME OR BY THE PERSONS UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE AND BELIEF IT ACCURATELY REPRESENTS THE WORK DESCRIBED THEREIN. I AM NOT PROVIDING ANY WARRANTY OR GUARANTEE FOR THE ACCURACY OF THIS RECORD DRAWING. I AM NOT PROVIDING ANY SERVICE OR CONSULTING SERVICE IN CONNECTION WITH THIS RECORD DRAWING.

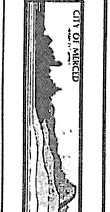
DATE: AUGUST 2004

DESIGNED: _____
 DRAWN: _____
 CHECKED: _____
 DATE: JULY 1, 2002

DISCIPLINE ENGINEER: _____

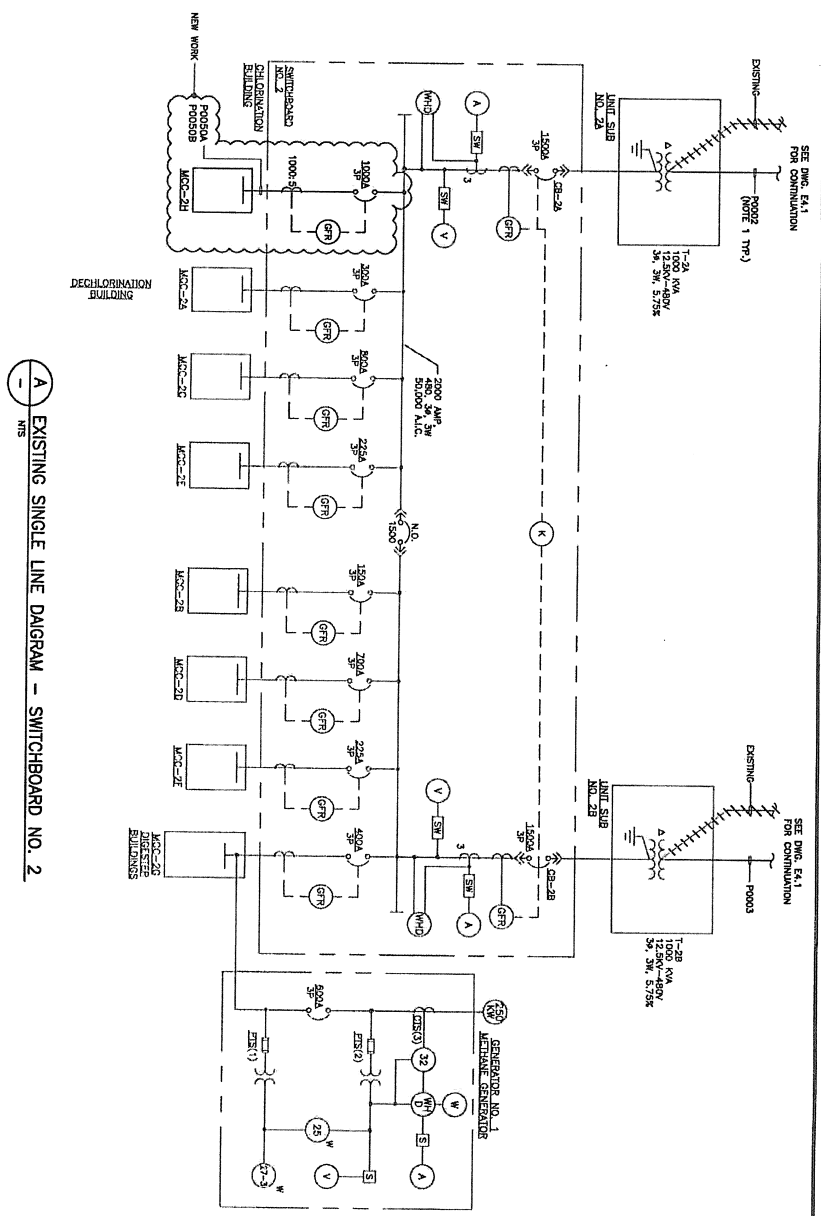
PROJECT NO.: _____

REVISED FOR RECORD
 SEE ORIGINAL FOR SIGNATURE STAMPS



PHASE 3 INTERIM IMPROVEMENTS/UPGRADE
 MERCED, CALIFORNIA
 ELECTRICAL
 EXISTING SINGLE LINE DIAGRAM
 SWITCHBOARD NO. 2

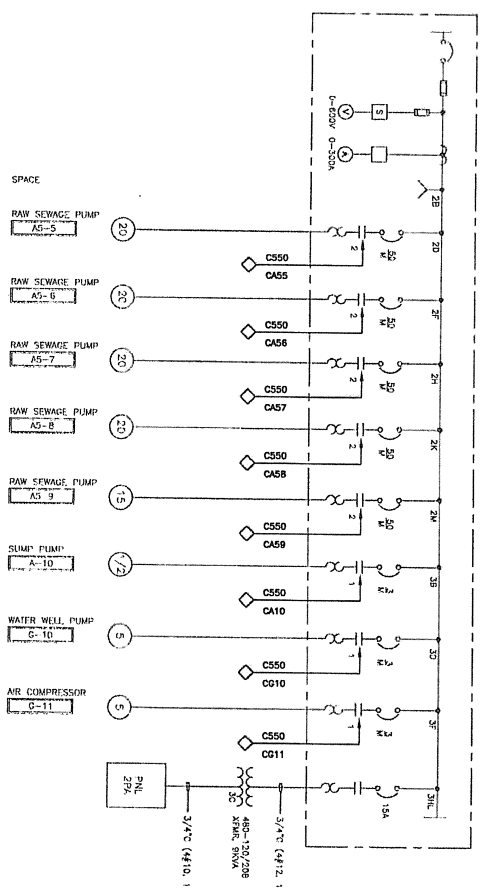
VERIFY SCALES
 1" = 100' OR AS SHOWN ON ORIGINAL DRAWING
 1" = 100' OR AS SHOWN ON ORIGINAL DRAWING
 SHEET NO. 7 OF 8



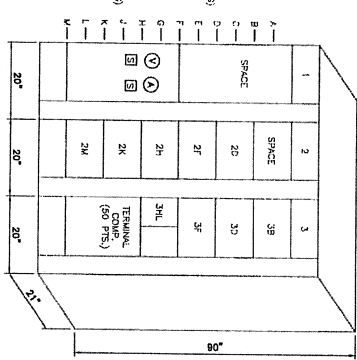
(A) EXISTING SINGLE LINE DIAGRAM - SWITCHBOARD NO. 2

- NOTES:
- DISCONNECT AND REMOVE EXISTING 12KV FEEDER FROM SW-2B AND REMOVE 12KV FEEDER TO TRANSFORMERS NO. 21 AND NO. 22. THOROUGHLY CLEAN, INSULATE AND RE-USE EXISTING CONDUIT.

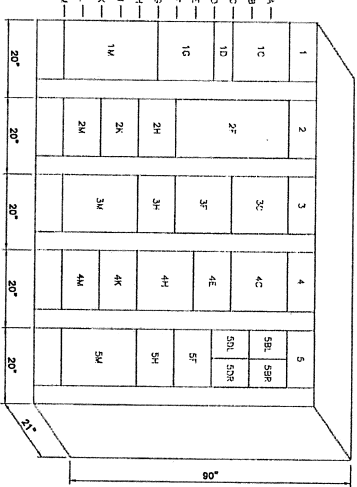
(C) (E) SINGLE LINE DIAGRAM - MCC-1C



(D) (E) MCC-1C FRONT ELEVATION



(B) (E) MCC-2B FRONT ELEVATION



(A) (E) SINGLE LINE DIAGRAM - MCC-2B

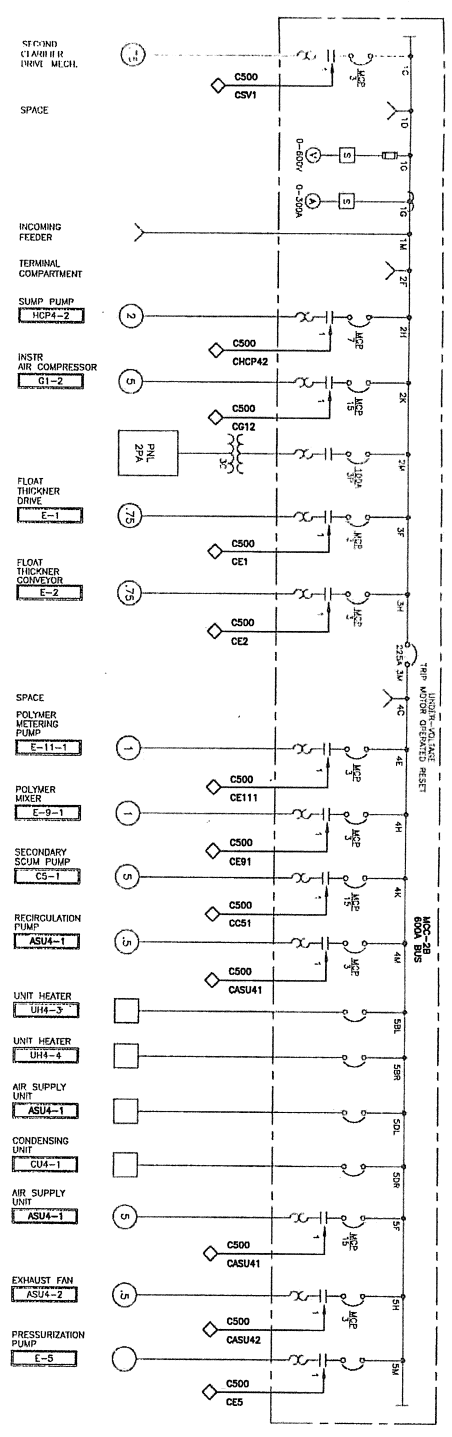


EXHIBIT “C” – SPECIAL CONDITIONS

ARTICLE 1 BONDS

Within ten (10) calendar days from the date the Contractor is notified of award of the Contract, the Contractor shall deliver to the City four identical counterparts of the Performance Bond and Payment Bond on the forms supplied by the City and included as Exhibit “F” to the Contract. Failure to do so may, in the sole discretion of City, result in the forfeiture of Contractor’s bid security. The surety supplying the bond must be an admitted surety insurer, as defined in Code of Civil Procedure Section 995.120, authorized to do business as such in the State of California and satisfactory to the City. The Performance Bond and the Payment Bond shall be for one hundred percent (100%) of the Total Contract Price.

U.S. DEPARTMENT OF THE TREASURY
CORONAVIRUS STATE FISCAL RECOVERY FUND
AWARD TERMS AND CONDITIONS

1 Use of Funds

- a. Recipient understands and agrees that the funds disbursed under this award may only be used in compliance with sections 602(c) and 603(c) of the Social Security Act (the Act) and Treasury's regulations implementing that section and guidance.
- b. Recipient will determine prior to engaging in any project using this assistance that it has the institutional, managerial, and financial capability to ensure proper planning, management, and completion of such project.

2 Period of Performance The period of performance for this award begins on the date hereof and ends on December 31, 2026. As set forth in Treasury's implementing regulations, Recipient may use award funds to cover eligible costs incurred during the period that begins on March 5, 2021 and ends on December 31, 2024.

3 Reporting. Recipient agrees to comply with any reporting obligations established by Treasury, as it relates to this award.

4. Maintenance of and Access to Records

- a. Recipient shall maintain records and financial documents sufficient to evidence compliance with sections 602(c) and 603(c), Treasury's regulations implementing those sections, and guidance regarding the eligible uses of funds.
- b. The Treasury Office of Inspector General and the Government Accountability Office, or their authorized representatives, shall have the right of access to records (electronic and otherwise) of Recipient in order to conduct audits or other investigations.
- c. Records shall be maintained by Recipient for a period of five (5) years after all funds have been expended or returned to Treasury, whichever is later.

5. Pre-award Costs Pre-award costs, as defined in 2 C.F.R. § 200.458, may not be paid with funding from this award

6. Administrative Costs. Recipient may use funds provided under this award to cover both direct and indirect costs.

7. Cost Sharing Cost sharing or matching funds are not required to be provided by Recipient.

8. Conflicts of Interest Recipient understands and agrees it must maintain a conflict of interest policy consistent with 2 C.F.R. § 200.318(c) and that such conflict of interest policy is applicable to each activity funded under this award. Recipient and subrecipients must disclose in writing to Treasury or the pass-through entity, as appropriate, any potential conflict of interest affecting the awarded funds in accordance with 2 C.F.R. § 200.112.

9 Compliance with Applicable Law and Regulations

- a. Recipient agrees to comply with the requirements of sections 602 and 603 of the Act, regulations adopted by Treasury pursuant to sections 602(l) and 603(l) of the Act, and guidance issued by Treasury regarding the foregoing. Recipient also agrees to comply with all other applicable federal statutes, regulations, and executive orders, and Recipient shall provide for such compliance by other parties in any agreements it enters into with other parties relating to this award.
- b. Federal regulations applicable to this award include, without limitation, the following:
 - i. Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, 2 C.F.R. Part 200, other than such provisions as Treasury may determine are inapplicable to this Award and subject to such exceptions as may be otherwise provided by Treasury. Subpart F Audit Requirements of the Uniform Guidance, implementing the Single Audit Act, shall apply to this award.
 - ii. Universal Identifier and System for Award Management (SAM), 2 C.F.R. Part 25, pursuant to which the award term set forth in Appendix A to 2 C.F.R. Part 25 is hereby incorporated by reference.
 - iii. Reporting Subaward and Executive Compensation Information, 2 C.F.R. Part 170, pursuant to which the award term set forth in Appendix A to 2 C.F.R. Part 170 is hereby incorporated by reference.
 - iv. OMB Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement), 2 C.F.R.

Pan 180, including the requirement to include a term or condition in all lower tier covered transactions (contracts and subcontracts described in 2 C.F.R. Part 180, subpart B) that the award is subject to 2 C.F.R. Part 180 and Treasury's implementing regulation at 31 C.F.R. Pan 19.

- v. Recipient Integrity and Performance Matters, pursuant to which the award term set forth in 2 C.F.R. Part 200, Appendix XII to Part 200 is hereby incorporated by reference.
 - vi. Governmentwide Requirements for Drug-Free Workplace, 31 C.F.R. Part 20.
 - vii. New Restrictions on Lobbying, 31 C.F.R. Part 21,
 - viii. Uniform Relocation Assistance and Real Property Acquisitions Act of 1970 (42 U.S.C. §§ 4601-4655) and implementing regulations.
 - ix. Generally applicable federal environmental laws and regulations.
- c. Statutes and regulations prohibiting discrimination applicable to this award, include, without limitation, the following:
- i. Title VI of the Civil Rights Act of 1964 (42 U.S.C. §§ 2000d et seq.) and Treasury's implementing regulations at 31 C.F.R. Part 22, which prohibit discrimination on the basis of race, color, or national origin under programs or activities receiving federal financial assistance;
 - ii. The Fair Housing Act, Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§ 3601 et seq.), which prohibits discrimination in housing on the basis of race, color, religion, national origin, sex, familial status, or disability.
 - iii. Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. § 794), which prohibits discrimination on the basis of disability under any program or activity receiving federal financial assistance;
 - iv. The Age Discrimination Act of 1975, as amended (42 U.S.C. §§ 6101 et seq.), and Treasury's implementing regulations at 31 C.F.R. Part 23, which prohibit discrimination on the basis of age in programs or activities receiving federal financial assistance; and
 - v. Title II of the Americans with Disabilities Act of 1990, as amended (42 U.S.C. §§ 12101 et seq.), which prohibits discrimination on the basis of disability under programs, activities, and services provided or made available by state and local governments or instrumentalities or agencies thereto.

10 Remedial Actions In the event of Recipient's noncompliance with sections 602 and 603 of the Act, other applicable laws, Treasury's implementing regulations, guidance, or any reporting or other program requirements, Treasury may impose additional conditions on the receipt of a subsequent tranche of future award funds, if any, or take other available remedies as set forth in 2 C.F.R. § 200.339. In the case of a violation of sections 602(c) or 603(c) of the Act regarding the use of funds, previous payments shall be subject to recoupment as provided in sections 602(e) and 603(e) of the Act,

11 Hatch Act Recipient agrees to comply, as applicable, with requirements of the Hatch Act (5 U.S.C. §§ 1501 -1508 and 7324-7328), which limit certain political activities of State or local government employees whose principal employment is in connection with an activity financed in whole or in part by this federal assistance.

12 False Statements Recipient understands that making false statements or claims in connection with this award is a violation of federal law and may result in criminal, civil, or administrative sanctions, including fines, imprisonment, civil damages and penalties, debarment from participating in federal awards or contracts, and/or any other remedy available by law.

13 Publications Any publications produced with funds from this award must display the following language: "This project [is being] [was] supported, in whole or in part, by federal award number [enter project FAJN] awarded to City of Merced by the U.S. Department of the Treasury."

14 Debts Owed the Federal Government

- a. Any funds paid to Recipient (1) in excess of the amount to which Recipient is finally determined to be authorized to retain under the terms of this award; (2) that are determined by the Treasury Office of Inspector General to have been misused; or (3) that are determined by Treasury to be subject to a repayment obligation pursuant to sections 602(e) and 603(e) of the Act and have not been repaid by Recipient shall constitute a debt to the federal government.
- b. Any debts determined to be owed the federal government must be paid promptly by Recipient. A debt is

delinquent if it has not been paid by the date specified in Treasury's initial written demand for payment, unless other satisfactory arrangements have been made or if the Recipient knowingly or improperly retains funds that are a debt as defined in paragraph 14(a). Treasury will take any actions available to it to collect such a debt.

15. Disclaimer

- a. The United States expressly disclaims any and all responsibility or liability to Recipient or third persons for the actions of Recipient or third persons resulting in death, bodily injury, property damages, or any other losses resulting in any way from the performance of this award or any other losses resulting in any way from the performance of this award or any contract, or subcontract under this award.
- b. The acceptance of this award by Recipient does not in any way establish an agency relationship between the United States and Recipient.

16. Protections for Whistleblowers

- a. In accordance with 41 U.S.C. § 4712. Recipient may not discharge, demote, or otherwise discriminate against an employee in reprisal for disclosing to any of the list of persons or entities provided below, information that the employee reasonably believes is evidence of gross mismanagement of a federal contract or grant, a gross waste of federal funds, an abuse of authority relating to a federal contract or grant, a substantial and specific danger to public health or safety, or a violation of law, rule, or regulation related to a federal contract (including the competition for or negotiation of a contract) or grant.
- b. The list of persons and entities referenced in the paragraph above includes the following:
 - i. A member of Congress or a representative of a committee of Congress;
 - ii. An Inspector General;
 - iii. The Government Accountability Office;
 - iv. A Treasury employee responsible for contract or grant oversight or management;
 - v. An authorized official of the Department of Justice or other law enforcement agency;
 - vi. A court or grand jury; or
 - vii. A management official or other employee of Recipient, contractor, or subcontractor who has the responsibility to investigate, discover, or address misconduct.
- c. Recipient shall inform its employees in writing of the rights and remedies provided under this section, in the predominant native language of the workforce.

17. Increasing Seat Belt Use in the United States Pursuant to Executive Order 13043, 62 FR 19217 (Apr. 18, 1997), Recipient should encourage its contractors to adopt and enforce on-the-job seat belt policies and programs for their employees when operating company-owned, rented or personally owned vehicles.

18. Reducing Text Messaging While Driving Pursuant to Executive Order 13513, 74 FR 51225 (Oct. 6, 2009), Recipient should encourage its employees, subrecipients, and contractors to adopt and enforce policies that ban text messaging while driving, and Recipient should establish workplace safety policies to decrease accidents caused by distracted drivers.

ASSURANCE OF COMPLIANCE WITH CIVIL RIGHTS REQUIREMENTS

ASSURANCE OF COMPLIANCE WITH TITLE VI OF THE CIVIL RIGHTS ACT OF 1964

As a condition of receipt of federal financial assistance from the Department of the Treasury, the City of Merced (hereinafter referred to as "the Recipient") provides the assurances stated herein. The federal financial assistance may include federal grants, loans and contracts to provide assistance to the recipient's beneficiaries, the use or rent of Federal land or property at below market value, Federal training, a loan of Federal personnel, subsidies, and other arrangements with the intention of providing assistance. Federal financial assistance does not encompass contracts of guarantee or insurance, regulated programs, licenses, procurement contracts by the Federal government at market value, or programs that provide direct benefits. This assurance applies to all federal financial assistance from or funds made available through the Department of the Treasury, including any assistance that the Recipient may request in the future.

The Civil Rights Restoration Act of 1987 provides that the provisions of this assurance apply to all of the recipient's programs, services and activities, so long as any portion of the recipient's program(s) is federally assisted in the manner proscribed above.

1. Recipient ensures its current and future compliance with Title VI of the Civil Rights Act of 1964, as amended, which prohibits exclusion from participation, denial of the benefits of, or subjection to discrimination under programs and activities receiving federal funds, of any person in the United States on the ground of race, color, or national origin (42 U.S.C. § 2000d et seq.), as implemented by the Department of the Treasury Title VI regulations at 31 CFR Part 22 and other pertinent executive orders such as Executive Order 13166; directives; circulars; policies; memoranda and/or guidance documents.
2. Recipient acknowledges that Executive Order 13166, "Improving Access to Services for Persons with Limited English Proficiency," seeks to improve access to federally assisted programs and activities for individuals who, because of national origin, have Limited English proficiency (LEP). Recipient understands that denying a person access to its programs, services, and activities because of LEP is a form of national origin discrimination prohibited under Title VI of the Civil Rights Act of 1964 and the Department of the Treasury's implementing regulations. Accordingly, Recipient shall initiate reasonable steps, or comply with the Department of the Treasury's directives, to ensure that LEP persons have meaningful access to its programs, services, and activities. Recipient understands and agrees that meaningful access may entail providing language assistance services, including oral interpretation and written translation where necessary, to ensure effective communication in the Recipient's programs, services, and activities.
3. Recipient agrees to consider the need for language services for LEP persons during development of applicable budgets and when conducting programs, services and activities. As a resource, the Department of the Treasury has published its LEP guidance at 70 FR 6067. For more information on LEP, please visit <http://www.lep.gov>
4. Recipient acknowledges and agrees that compliance with this assurance constitutes a condition of continued receipt of federal financial assistance and is binding upon Recipient and Recipient's successors, transferees and assignees for the period in which such assistance is provided.
5. Recipient acknowledges and agrees that it must require any sub-grantees, contractors, subcontractors, successors, transferees, and assignees to comply with assurances 1 through 4 above, and agrees to incorporate the following language in every contract or agreement subject to Title VI and its regulations between the Recipient and the Recipient's sub-grantees, contractors, subcontractors, successors, transferees, and assignees:

The sub-grantee, contractor, subcontractor, successor, transferee, and assignee shall comply with Title VI of the Civil Rights Act of 1964, which prohibits recipients of federal financial assistance from excluding from a program or activity, denying benefits of, or otherwise

discriminating against a person on the basis of race, color, or national origin (42 U.S.C. ,§ 2000d et seq.), as implemented by the Department of the Treasury's Title VI regulations, 31 CFR Part 22, which are herein incorporated by reference and made a part of this contract (or agreement). Title W also includes protection for persons with "Limited English Proficiency" in any program or activity receiving federal financial assistance. 42 U.S.C. § 2000d et seq., as implemented by the Department of the Treasury 's Title VI regulations. 31 CFR Part 22. and herein incorporated by reference and made a part of this contract or agreement.

6. Recipient understands and agrees that if any real property or structure is provided or improved with the aid of federal financial assistance by the Department of the Treasury, this assurance obligates the Recipient, or in the case of a subsequent transfer, the transferee, for the period during which the real property or structure is used for a purpose for which the federal financial assistance is extended or for another purpose involving the provision of similar services or benefits. If a personal property is provided, this assurance obligates the Recipient for the period during which it retains ownership or possession of the property.
- 7 Recipient shall cooperate in any enforcement or compliance review activities by the Department of the Treasury of the aforementioned obligations. Enforcement may include investigation, arbitration, mediation, litigation, and monitoring of any settlement agreements that may result from these actions. That is, the Recipient shall comply with information requests, on-site compliance reviews, and reporting requirements.
- 8 Recipient shall maintain a complaint log and inform the Department of the Treasury of any complaints of discrimination on the grounds of race, color, or national origin, and limited English proficiency covered by Title VI of the Civil Rights Act of 1964 and implementing regulations and provide, upon request, a list of all such reviews or proceedings based on the complaint, pending or completed, including outcome. Recipient also must inform the Department of the Treasury if Recipient has received no complaints under Title VI..
9. Recipient must provide documentation of an administrative agency's or court's findings of non-compliance of Title VI and efforts to address the non-compliance, including any voluntary compliance or other agreements between the Recipient and the administrative agency that made the finding. If the Recipient settles a case or matter alleging such discrimination, the Recipient must provide documentation of the settlement. If Recipient has not been the subject of any court or administrative agency finding of discrimination, please so state.
10. If the Recipient makes sub-awards to other agencies or other entities, the Recipient is responsible for ensuring that sub-recipients also comply with Title VI and other applicable authorities covered in this document State agencies that make sub-awards must have in place standard grant assurances and review procedures to demonstrate that that they are effectively monitoring the civil rights compliance of sub-recipients.

The United States of America has the right to seek judicial enforcement of the terms of this assurances document and nothing in this document alters or limits the federal enforcement measures that the United States may take in order to address violations of this document or applicable federal law.

Under penalty of perjury, the undersigned official(s) certifies that he/she has read and understood its obligations as herein described, that any information submitted in conjunction with this assurance document is accurate and complete, and that the Recipient is in compliance with the aforementioned nondiscrimination requirements.

Clyde G. Steagall, Inc.

Recipient

Signature of Authorized Official:

NOV. 4, 2024
Date


EXHIBIT "D" – CERTIFICATION LABOR CODE SECTION 1861

I, the undersigned Contractor, am aware of the provisions of Section 3700, et seq., of the California Labor Code which require every employer to be insured against liability for Worker's Compensation or to undertake self-insurance in accordance with the provisions of the Code, and I, the undersigned Contractor, agree to and will comply with such provisions before commencing the performance of the Work on this Contract.

Clyde G. Steagall, Inc.

[INSERT CONTRACTOR NAME]

By:


Signature

MIKE STEAGALL
Name (Print)

PRESIDENT
Title (Print)

EXHIBIT "E" – PUBLIC WORKS CONTRACTOR REGISTRATION CERTIFICATION

Pursuant to Labor Code sections 1725.5 and 1771.1, all contractors and subcontractors that wish to bid on, be listed in a bid proposal, or enter into a contract to perform public work must be registered with the Department of Industrial Relations. See <http://www.dir.ca.gov/PublicWorks/PublicWorks.html> for additional information.

No bid will be accepted nor any contract entered into without proof of the contractor's and subcontractors' current registration with the Department of Industrial Relations to perform public work.

Contractor hereby certifies that it is aware of the registration requirements set forth in Labor Code sections 1725.5 and 1771.1 and is currently registered as a contractor with the Department of Industrial Relations.¹

Name of Contractor: Clyde G. Steagall, Inc.

DIR Registration Number: 1000001630

DIR Registration Expiration: 6/30/27

Small Project Exemption: Yes or No

Unless Contractor is exempt pursuant to the small project exemption, Contractor further acknowledges:

Contractor shall maintain a current DIR registration for the duration of the project.

- Contractor shall include the requirements of Labor Code sections 1725.5 and 1771.1 in its contract with subcontractors and ensure that all subcontractors are registered at the time of bid opening and maintain registration status for the duration of the project.
- Failure to submit this form or comply with any of the above requirements may result in a finding that the bid is non-responsive.

Name of Contractor Clyde G. Steagall, Inc.

Signature 

Name and Title MIKE STEAGALL

Dated NOV. 4, 2024

¹ If the Project is exempt from the contractor registration requirements pursuant to the small project exemption under Labor Code Sections 1725.5 and 1771.1, please mark "Yes" in response to "Small Project Exemption."

EXHIBIT “F” – PAYMENT AND PERFORMANCE BONDS

PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS:

THAT WHEREAS, the City of Merced (hereinafter referred to as "City") has awarded to _____, (hereinafter referred to as the "Contractor") _____ an agreement for _____ (hereinafter referred to as the "Project").

WHEREAS, the work to be performed by the Contractor is more particularly set forth in the Contract Documents for the Project dated _____, (hereinafter referred to as "Contract Documents"), the terms and conditions of which are expressly incorporated herein by reference; and

WHEREAS, the Contractor is required by said Contract Documents to perform the terms thereof and to furnish a bond for the faithful performance of said Contract Documents.

NOW, THEREFORE, we, _____, the undersigned Contractor and _____ as Surety, a corporation organized and duly authorized to transact business under the laws of the State of California, are held and firmly bound unto the City in the sum of _____ DOLLARS, (\$_____), said sum being not less than one hundred percent (100%) of the total amount of the Contract, for which amount well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that, if the Contractor, his or its heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions and agreements in the Contract Documents and any alteration thereof made as therein provided, on its part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their intent and meaning; and shall faithfully fulfill all obligations including the one-year guarantee of all materials and workmanship; and shall indemnify and save harmless the City, its officers and agents, as stipulated in said Contract Documents, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect.

As a condition precedent to the satisfactory completion of the Contract Documents, unless otherwise provided for in the Contract Documents, the above obligation shall hold good for a period of one (1) year after the acceptance of the work by City, during which time if Contractor shall fail to make full, complete, and satisfactory repair and replacements and totally protect the City from loss or damage resulting from or caused by defective materials or faulty workmanship, Surety shall undertake and faithfully fulfill all such obligations. The obligations of Surety hereunder shall continue so long as any obligation of Contractor remains. Nothing herein shall limit the City's rights or the Contractor or Surety's obligations under the Contract, law or equity, including, but not limited to, California Code of Civil Procedure section 337.15.

Whenever Contractor shall be, and is declared by the City to be, in default under the Contract Documents, the Surety shall remedy the default pursuant to the Contract Documents, or shall promptly, at the City's option:

- (1) Take over and complete the Project in accordance with all terms and conditions in the Contract Documents; or
- (2) Obtain a bid or bids for completing the Project in accordance with all terms and conditions in the Contract Documents and upon determination by Surety of the lowest responsive and responsible bidder, arrange for a Contract between such bidder, the Surety and the City, and make available as work progresses sufficient funds to pay the cost of completion of the Project, less the balance of the contract price, including other costs and damages for which Surety may be liable. The term "balance of the contract price" as used in this paragraph shall mean the total amount payable to Contractor by the City under the Contract and any modification thereto, less any amount previously paid by the City to the Contractor and any other set offs pursuant to the Contract Documents.
- (3) Permit the City to complete the Project in any manner consistent with local, California and federal law and make available as work progresses sufficient funds to pay the cost of completion of the Project, less the balance of the contract price, including other costs and damages for which Surety may be liable. The term "balance of the contract price" as used in this paragraph shall mean the total amount payable to Contractor by the City under the Contract and any modification thereto, less any amount previously paid by the City to the Contractor and any other set offs pursuant to the Contract Documents.

Surety expressly agrees that the City may reject any contractor or subcontractor which may be proposed by Surety in fulfillment of its obligations in the event of default by the Contractor.

Surety shall not utilize Contractor in completing the Project nor shall Surety accept a bid from Contractor for completion of the Project if the City, when declaring the Contractor in default, notifies Surety of the City's objection to Contractor's further participation in the completion of the Project.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract Documents or to the Project to be performed thereunder shall in any way affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract Documents or to the Project, including but not limited to the provisions of sections 2819 and 2845 of the California Civil Code.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 20__).

(Corporate Seal)

Contractor/ Principal

By _____

Title _____

Surety

(Corporate Seal)

By _____

Attorney-in-Fact

Signatures of those signing for the Contractor and Surety must be notarized and evidence of corporate authority attached.

(Attach Attorney-in-Fact Certificate)

Title _____

The rate of premium on this bond is _____ per thousand. The total amount of premium charges, \$_____.

(The above must be filled in by corporate attorney.)

THIS IS A REQUIRED FORM

Any claims under this bond may be addressed to:

(Name and Address of Surety)

(Name and Address of Agent or Representative for service of process in California, if different from above)

(Telephone number of Surety and Agent or Representative for service of process in California)

NOTE: A copy of the Power-of-Attorney authorizing the person signing on behalf of the Surety to do so must be attached hereto.

Notary Acknowledgment

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

STATE OF CALIFORNIA
 COUNTY OF _____

On _____, 20____, before me, _____, Notary Public, personally appeared _____, who proved to me on the basis of satisfactory

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

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

WITNESS my hand and official seal.

Signature of Notary Public _____

OPTIONAL

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

CAPACITY CLAIMED BY SIGNER

- Individual
- Corporate Officer

 Title(s)

- Partner(s)
 - Limited
 - General
- Attorney-In-Fact
- Trustee(s)
- Guardian/Conservator
- Other:

Signer is representing:
 Name Of Person(s) Or Entity(ies)

DESCRIPTION OF ATTACHED DOCUMENT

 Title or Type of Document

 Number of Pages

 Date of Document

 Signer(s) Other Than Named Above

Notary Acknowledgment

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STATE OF CALIFORNIA
 COUNTY OF _____

On _____, 20____, before me, _____, Notary Public, personally appeared _____, who proved to me on the basis of satisfactory

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

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

WITNESS my hand and official seal.

Signature of Notary Public _____

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- Partner(s) Limited
- General
- Attorney-In-Fact
- Trustee(s)
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- Other:

Signer is representing:
 Name Of Person(s) Or Entity(ies)

DESCRIPTION OF ATTACHED DOCUMENT

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 Signer(s) Other Than Named Above

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS That

WHEREAS, the City of Merced (hereinafter designated as the "City"), by action taken or a resolution passed _____, 20____ has awarded to _____ hereinafter designated as the "Principal," a contract for the work described as follows:

_____ (the "Project"); and

WHEREAS, the work to be performed by the Principal is more particularly set forth in the Contract Documents for the Project dated _____ ("Contract Documents"), the terms and conditions of which are expressly incorporated by reference; and

WHEREAS, said Principal is required to furnish a bond in connection with said contract; providing that if said Principal or any of its Subcontractors shall fail to pay for any materials, provisions, provender, equipment, or other supplies used in, upon, for or about the performance of the work contracted to be done, or for any work or labor done thereon of any kind, or for amounts due under the Unemployment Insurance Code or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department from the wages of employees of said Principal and its Subcontractors with respect to such work or labor the Surety on this bond will pay for the same to the extent hereinafter set forth.

NOW THEREFORE, we, the Principal and _____ as Surety, are held and firmly bound unto the City in the penal sum of _____ Dollars (\$_____) lawful money of the United States of America, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if said Principal, his or its subcontractors, heirs, executors, administrators, successors or assigns, shall fail to pay any of the persons named in Section 9100 of the Civil Code, fail to pay for any materials, provisions or other supplies, used in, upon, for or about the performance of the work contracted to be done, or for any work or labor thereon of any kind, or amounts due under the Unemployment Insurance Code with respect to work or labor performed under the contract, or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department or Franchise Tax Board from the wages of employees of the contractor and his subcontractors pursuant to Section 18663 of the Revenue and Taxation Code, with respect to such work and labor the Surety or Sureties will pay for the same, in an amount not exceeding the sum herein above specified.

This bond shall inure to the benefit of any of the persons named in Section 9100 of the Civil Code so as to give a right of action to such persons or their assigns in any suit brought upon this bond.

It is further stipulated and agreed that the Surety on this bond shall not be exonerated or released from the obligation of this bond by any change, extension of time for performance, addition, alteration or modification in, to, or of any contract, plans, specifications, or agreement pertaining or relating to any scheme or work of improvement herein above described, or pertaining or relating to the furnishing of labor, materials, or equipment therefore, nor by any change or modification of any terms of payment or extension of the time for any payment pertaining or relating to any scheme or work of improvement herein above described, nor by any rescission or

attempted rescission of the contract, agreement or bond, nor by any conditions precedent or subsequent in the bond attempting to limit the right of recovery of claimants otherwise entitled to recover under any such contract or agreement or under the bond, nor by any fraud practiced by any person other than the claimant seeking to recover on the bond and that this bond be construed most strongly against the Surety and in favor of all persons for whose benefit such bond is given, and under no circumstances shall Surety be released from liability to those for whose benefit such bond has been given, by reason of any breach of contract between the owner or City and original contractor or on the part of any obligee named in such bond, but the sole conditions of recovery shall be that claimant is a person described in Section 9100 of the Civil Code, and has not been paid the full amount of his claim and that Surety does hereby waive notice of any such change, extension of time, addition, alteration or modification herein mentioned and the provisions of sections 2819 and 2845 of the California Civil Code.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 20__.

(Corporate Seal)

Contractor/ Principal

By _____

Title _____

(Corporate Seal)

Surety

By _____
Attorney-in-Fact

Title _____

Signatures of those signing for the Contractor and Surety must be notarized and evidence of corporate authority attached. A Power-of-Attorney authorizing the person signing on behalf of the Surety to do so must be attached hereto.

NOTE: A copy of the Power-of-Attorney authorizing the person signing on behalf of the Surety to do so must be attached hereto.

Notary Acknowledgment

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

STATE OF CALIFORNIA
 COUNTY OF _____

On _____, 20____, before me, _____, Notary Public, personally appeared _____, who proved to me on the basis of satisfactory

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

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

WITNESS my hand and official seal.

Signature of Notary Public _____

OPTIONAL

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

CAPACITY CLAIMED BY SIGNER

- Individual
- Corporate Officer

_____ Title(s)

- Partner(s) Limited
- General

- Attorney-In-Fact
- Trustee(s)
- Guardian/Conservator
- Other:

Signer is representing:
 Name Of Person(s) Or Entity(ies)

DESCRIPTION OF ATTACHED DOCUMENT

_____ Title or Type of Document

_____ Number of Pages

_____ Date of Document

_____ Signer(s) Other Than Named Above

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STATE OF CALIFORNIA
COUNTY OF _____

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

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

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Signature of Notary Public

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- Corporate Officer

Title(s)

Title or Type of Document

- Partner(s) Limited
- General

Number of Pages

- Attorney-In-Fact
- Trustee(s)
- Guardian/Conservator
- Other:

Date of Document

Signer is representing:
Name Of Person(s) Or Entity(ies)

Signer(s) Other Than Named Above

APPENDIX

October 24, 2024

CITY OF MERCED
ENGINEERING DEPARTMENT
678 W. 18th Street, Merced, CA 95340

ADDENDUM NO. 1

To **ALL PROSPECTIVE BIDDERS**
Under Specifications for the Construction of the

WWTP Transformer Replacement
PROJECT NUMBER CP 240031

For which bids are to be received by the City of Merced Purchasing Agent, at the Purchasing Conference Room, at 2525 "O" St., Merced, CA 95340, until 2:00 PM on Thursday, October 31, 2024


The following revision to the Specifications shall be made:

Item 1: SPECIFICATIONS: Revised: SAMPLE CONTRACT DOCUMENTS, paragraph 3.3 "Period of Performance and Liquidated Damages" revise last sentence in paragraph to the following:

Pursuant to Government Code Section 53069.85, Contractor shall pay to the City as fixed and liquidated damages the sum of \$500 per day for each and every calendar day of delay beyond the Contract Time or beyond any completion schedule, construction schedule or Project milestones established pursuant to the Contract.

Item 2: SPECIFICATIONS: Revised: Exhibit "B", SECTION 26 12 00, paragraph 2.1.B.1 to read "The transformer(s) shall be *substation style*, self-cooled, for mounting on a pad and shall comply with the latest applicable standards.

Item 3: SPECIFICATIONS: Revised: Exhibit "B", SECTION 26 12 00, paragraph 2.1.B.8 to read "Coils shall be wound with *aluminum* conductors."

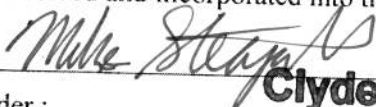

Richard Maddox, P.E.
Interim City Engineer

Clyde G. Steagall, Inc.

Name of Bidder or Firm: _____

THIS ADDENDUM MUST BE SIGNED AND RETURNED WITH BID PROPOSAL.

ADDENDUM NO. 1 has been received and incorporated into the bid proposal.

Received By: 
Date : 10/25/24 Plan holder : Clyde G. Steagall, Inc.

NOTE: RECEIPT OF THIS ADDENDUM MUST ALSO BE ACKNOWLEDGED IN THE CONTRACTOR'S BID PROPOSAL.

CITY OF MERCED STANDARD DESIGNS

**THE FOLLOWING STANDARDS ARE FOR REFERENCE ONLY
REFER TO THE CITY OF MERCED WEBSITE FOR THE COMPLETE LISTING OF
STANDARD DETAILS**

<https://www.cityofmerced.org/departments/engineering/standard-designs/>

STATE GENERAL PREVAILING WAGE RATES

General prevailing wage determination
Made by the Director of Industrial Relations

Pursuant to California Labor Code part 7,
Chapter 1, article 2, sections 1770, 1773, and 1773.1

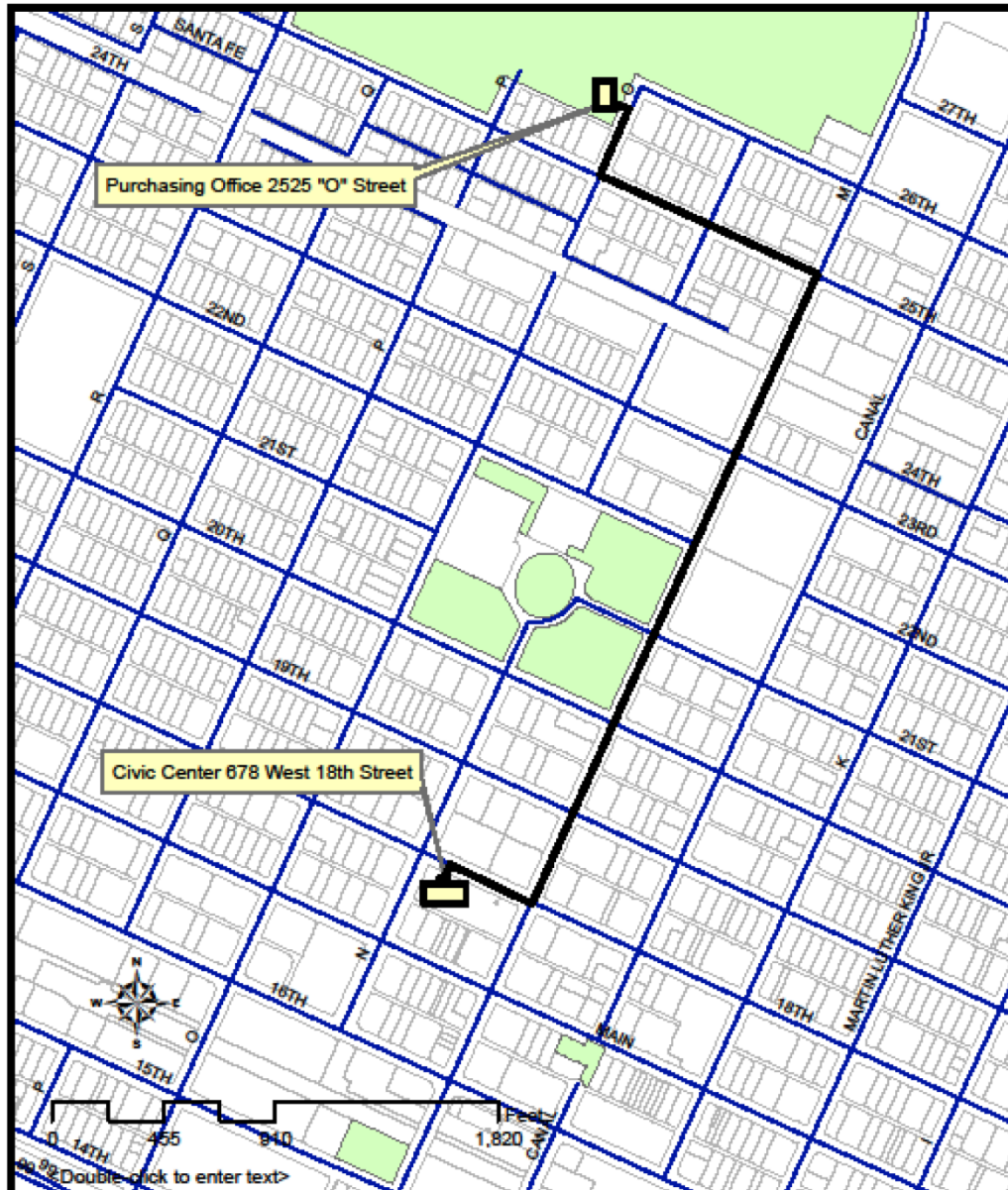
State of California Department of Industrial Relations Website:

<http://www.dir.ca.gov/OPRL/PWD/index.htm>

LOCATION MAP

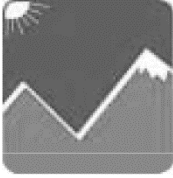
PUCHASING DEPARTMENT DRIVING DIRECTIONS

DRIVING DIRECTIONS CIVIC CENTER TO PURCHASING OFFICE



DIRECTIONS: **DRIVE NORTH ON "M" STREET**
 TURN LEFT ON WEST 25TH STREET
 TURN RIGHT ON "O" STREET

REGULATION VIII – FUGITIVE PM10 PROHIBITIONS



San Joaquin Valley
Air Pollution Control District

COMPLIANCE ASSISTANCE BULLETIN August 2006

Regulation VIII – Fugitive PM10 Prohibitions Requirements on Paved and Unpaved Public Roads

District Rule 8061 (*Paved and Unpaved Roads*) of Regulation VIII (*Fugitive PM10 Prohibitions*) specifies the design criteria for constructing new or modifying existing paved roads and the types of control measures required for limiting fugitive dust emissions from unpaved roads and shoulders. Several compliance dates and deadlines described in the rule apply specifically to city, county, and state agencies. The purpose of this bulletin is to summarize the new requirements for public agencies that own or maintain paved and unpaved roads. The entire rule may be found at www.valleyair.org/rules/1ruleslist.htm - reg8.

- **Constructing New Unpaved Roads:** Effective October 1, 2004, constructing a new unpaved road is prohibited in all urban areas unless the unpaved road is used for a temporary activity that does not exceed six months of use over a consecutive three-year period. Temporary activities may include construction access roads, special events, or traffic detours. The unpaved surface must be maintained in a stabilized condition at all times in order to control fugitive emissions.
- **PM10-Efficient Street Sweepers:** These requirements apply to the routine cleaning of existing paved public roads within urban areas. Effective July 1, 2005, an agency or its contractor may only purchase PM10-efficient street sweepers for their fleets and at least one sweeper must be placed into service by July 1, 2008. PM10-efficient street sweepers are to be used along routine street sweeper routes, which have been predetermined and prioritized by the agency as having paved curbs with the greatest actual or potential for dirt and silt loading. If an agency cannot meet these provisions due to budgetary constraints, a statement of financial hardship must be submitted to the District and the USEPA for review and approval.
- **Cleaning Paved Roads after a Storm Event:** Within 24 hours of discovery, the agency or contractor responsible for maintaining the roadway must remove the accumulated mud and dirt from the paved road or restrict vehicles from traveling over the mud and dirt until the materials can be removed. This requirement applies if the accumulated mud and dirt is a result of wind or water erosion and runoff, is at least one inch thick, and covers an area of at least 50 square feet. Cleanup may be performed manually with a shovel and broom, or with a conventional or PM10-efficient street sweeper, but must be performed in a manner that minimizes fugitive dust. Using a blowing device or a dry rotary brush or broom is prohibited. Redirecting traffic is one way to restrict vehicles from traveling over the mud and dirt. Upon agency notification, the District may approve an extension of the 24-hour cleanup requirement if restricting vehicles is deemed unsafe and removing the mud and dirt is not possible within 72 hours because crews are not available over a weekend or holiday.

Northern Region Office
4800 Enterprise Way
Modesto, CA 95356-8718
(209) 557-6400 ♦ FAX (209) 557-6475

Central Region Office
1990 East Gettysburg Avenue
Fresno, CA 93726-0244
(559) 230-6000 ♦ FAX (559) 230-6062

Southern Region Office
2700 "M" Street, Suite 275
Bakersfield, CA 93301-2373
(661) 326-6900 ♦ FAX (661) 326-6985

- **Posting Speed Limit Signs on Unpaved Roads:** Effective October 1, 2005, public agencies must establish a maximum speed limit of 25 miles per hour for the unpaved roads under their jurisdictions. This requirement applies to the unpaved road segments where vehicle traffic reaches or exceeds 26 annual average daily trips (AADT). At a minimum, agencies are to post at least one speed limit sign in each direction for every mile of unpaved road located within an urban area, and one sign in each direction for every two miles of unpaved road within a rural area. For example, an unpaved road located within an urban area that is ½ mile long and exceeds 26 AADT requires at least one sign posted in each direction. The unpaved surface must be maintained in a stabilized condition at all times in order to control fugitive emissions.
- **Paving Existing Unpaved Roads and Paving or Stabilizing Unpaved Shoulders:** On January 1, 2005, agencies provided the District with a report listing each unpaved road located within an urban area and each paved road with unpaved shoulders within urban and rural areas. On July 1, 2005, agencies provided a report listing each unpaved road located within a rural area. These reports include the length in miles and the AADT for each subject road and unpaved shoulder within the agency's jurisdiction.

As of January 1, 2005, agencies are to pave an annual average of 20 percent of the unpaved roads listed in their urban area unpaved road report, thereby paving 100 percent of these unpaved roads by January 1, 2010. This requirement does not apply to rural unpaved roads.

In urban areas, agencies are to pave or stabilize at least four-feet of unpaved shoulders on at least 50 percent of the existing paved roadways having the highest AADT. In rural areas, this is required on at least 25 percent of the existing paved roadways with the highest AADT. Compliance with these provisions must be complete by January 1, 2010.

If an agency cannot meet these provisions due to budgetary constraints, a statement of financial hardship must be submitted to the District and the USEPA for review and approval.

- **Incremental Progress Reports:** Due on April 1 of each year, from 2006 through 2010, agencies must report their incremental progress to the District by reporting the total miles of urban unpaved roads that were paved over the previous calendar year, the total miles of unpaved shoulders that were paved or stabilized over the previous calendar year, and the percentage of cumulative miles treated relative to the original reports.

For more information please contact the Compliance Department of the District office nearest to you. Information on Regulation VIII is available on the District's website at:

www.valleyair.org



COMPLIANCE ASSISTANCE BULLETIN
April 2007

Fugitive Dust Control at Construction Sites: New Requirements

Regulation VIII, Fugitive PM10 Prohibitions, of the District's Rules and Regulations apply to many activities that generate fugitive dust, and particularly to construction sites.

Fugitive dust is emitted into the air by activities that disturb the soil, such as earthmoving and vehicular/equipment traffic on unpaved surfaces. Windblown dust is also of concern where soil has been disturbed at construction sites.

The District adopted Regulation VIII in 1993 and its most recent amendments became effective on October 1, 2004. This is a basic summary of the regulation's requirements as they apply to construction sites.

These regulations affect all workers at a regulated construction site, including everyone from the landowner to the subcontractors. Violations of Regulation VIII are subject to enforcement action including fines.

Visible Dust Emissions (VDE) may not exceed 20% opacity during periods when soil is being disturbed by equipment or by wind at any time. Visible Dust Emissions opacity of 20% means dust that would obstruct an observer's view of an object by 20%. District inspectors are state certified to evaluate visible emissions. Dust control may be achieved by applying water before/during earthwork and onto unpaved traffic areas, phasing work to limit dust, and setting up wind fences to limit wind blown dust.

Soil Stabilization is required at regulated construction sites after normal working hours and on weekends and holidays. This requirement also applies to inactive construction areas such as phased projects where disturbed land is left unattended. Applying water to form a visible crust on the soil and restricting vehicle access are often effective for short-term stabilization of disturbed surface areas. Long-term methods including applying dust suppressants and establishing vegetative cover.

Carryout and Trackout occur when materials from emptied or loaded vehicles falls onto a paved surface or shoulder of a public road or when materials adhere to vehicle tires and are deposited onto a paved surface or shoulder of a public road. Should either occur, the material must be cleaned up at least daily, and immediately if it extends more than 50 feet from the exit point onto a paved road. The appropriate clean-up methods require the complete removal and cleanup of mud and dirt from the paved surface and shoulder. Using a blower device or dry sweeping with any mechanical device other than a PM10-efficient street sweeper is a violation. Larger construction sites, or sites with a high amount of traffic on one or more days, must prevent carryout and trackout from occurring by installing gravel pads, grizzlies, wheel washers, paved interior roads, or a combination thereof at each exit point from the site. In many cases, cleaning up trackout with water is also prohibited as it may lead to plugged storm drains. Prevention is the best method.

Unpaved Access and Haul Roads, as well as unpaved vehicle and equipment traffic areas at construction sites must have dust control. Speed limit signs limiting vehicle speed to 15 mph or less at construction sites must be posted every 500 feet on uncontrolled and unpaved roads.

Northern Region Office
4800 Enterprise Way
Modesto, CA 95356-8718
(209) 557-6400 ♦ FAX (209) 557-6475

Central Region Office
1990 East Gettysburg Avenue
Fresno, CA 93726-0244
(559) 230-6000 ♦ FAX (559) 230-6062

Southern Region Office
2700 "M" Street, Suite 275
Bakersfield, CA 93301-2373
(661) 326-6900 ♦ FAX (661) 326-6985

Storage Piles and Bulk Materials have handling, storage, and transportation requirements that include applying water when handling materials, wetting or covering stored materials, and installing wind barriers to limit VDE. Also, limiting vehicle speeds, loading haul trucks with a freeboard of six inches or greater along with applying water to the top of the load, and covering the cargo compartments are effective measures for reducing VDE and carryout from vehicles transporting bulk materials.

Demolition activities require the application of water to the exterior of the buildings and to unpaved surfaces where materials may fall. A Dust Control Plan will be required for large demolition projects. Consider all structures slated for demolition as possibly being regulated due to potential asbestos, per District Rule 4002 - *National Emission Standards for Hazardous Air Pollutants*. Contact the District well before starting because a 10 working-day notice will likely be required before a demolition can begin.

Dust Control Plans identify the dust sources and describe the dust control measures that will be implemented before, during, and after any dust generating activity for the duration of the project. Owners or operators are required to submit plans to the District at least 30 days prior to commencing the work for the following:

- Residential developments of ten or more acres of disturbed surface area.
- Non-residential developments of five or more acres of disturbed surface area.
- The relocation of more than 2,500 cubic yards per day of materials on at least three days.

Operations may not commence until the District has approved the Dust Control Plan. A copy of the plan must be on site and available to workers and District employees. **All work on the site is subject to the requirements of the approved dust control plan. A failure to abide by the plan by anyone on site may be subject to enforcement action.**

Owners or operators of construction projects that are at least one acre in size and where a Dust Control Plan is not required, must provide written notification to the District at least 48 hours in advance of any earthmoving activity.

Record Keeping is required to document compliance with the rules and must be kept for each day any dust control measure is used. The District has developed record forms for water application, street sweeping, and “permanent” controls such as applying long term dust palliatives, vegetation, ground cover materials, paving, or other durable materials. Records must be kept for one year after the end of dust generating activities (Title V sources must keep records for five years).

Exemptions exist for several activities. Those occurring above 3,000 feet in elevation are exempt from all Regulation VIII requirements. Further, Rule 8021 – *Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities* exempts the following construction and earthmoving activities:

- Blasting activities permitted by California Division of Industrial Safety.
- Maintenance or remodeling of existing buildings provided the addition is less than 50% of the size of the existing building or less than 10,000 square feet (due to asbestos concerns, contact the District at least two weeks ahead of time).
- Additions to single family dwellings.
- The disking of weeds and vegetation for fire prevention on sites smaller than ½ acre.
- Spreading of daily landfill cover to preserve public health and safety and to comply with California Integrated Waste Management Board requirements.

Nuisances are prohibited at all times because District Rule 4102 – *Nuisance* applies to all construction sources of fugitive dust, whether or not they are exempt from Regulation VIII. It is important to monitor dust-generating activities and implement appropriate dust control measures to limit the public's exposure to fugitive dust.

For more information please contact the Compliance Division of the District office nearest to you. Information on Regulation VIII, where you may obtain copies of record keeping forms, the Dust Control Plan template, and the Construction Notification form, is available on the District's website at:

www.valleyair.org, under Compliance Assistance/Dust Control.