# Table of Contents

NOTICE TO CONTRACTORS ................................................................. NTC1-NTC2  
CONSTRUCTION CONTRACT ................................................................. C1-C4  
PROPOSAL FORM .................................................................................. P1-P11  
PERFORMANCE BOND ........................................................................... B-1  
LABOR AND MATERIALS BOND ............................................................. B-2  

SPECIAL PROVISIONS- SECTION “A” GENERAL CONDITIONS .......................................................... 1  
  1. LOCATION .................................................................................. 1  
  2. DESCRIPTION OF WORK .............................................................. 1  
  3. DEFINITIONS AND TERMS ............................................................ 1  
  4. CONTRACT DOCUMENTS .................................................................. 2  
  5. CONTRACTOR LICENSE .................................................................. 2  
  6. DIFFERING SITE CONDITIONS ....................................................... 2  
  7. BEGINNING OF WORK, TIME OF COMPLETION AND LIQUIDATED DAMAGES .................... 3  
  8. QUALITY ASSURANCE .................................................................... 4  
  9. PROMPT PAYMENT OF FUNDS WITHHELD TO SUBCONTRACTORS ......................... 4  
 10. SUBCONTRACTING ......................................................................... 4  
 11. PREVAILING WAGES ...................................................................... 4  
 12. CERTIFIED PAYROLL RECORDS ..................................................... 5  
 13. BIDDING REQUIREMENTS AND CONDITIONS ..................................... 5  
 14. CONTRACT AWARD AND EXECUTION (Bonds) ..................................... 5  
 15. SCOPE OF WORK ............................................................................ 6  
 16. CHANGE ORDERS .......................................................................... 6  
 17. CONTROL OF THE WORK ............................................................... 6  
 18. LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC ....................... 7  
 19. PROSECUTION AND PROGRESS ...................................................... 10  
 20. TERMINATION FOR CONVENIENCE OF THE COUNTY ......................... 11  
 21. MEASUREMENT AND PAYMENT ..................................................... 12  
 22. MISCELLANEOUS PROVISIONS ...................................................... 23  
 23. OWNER’S RIGHT TO DO WORK ....................................................... 24  
 24. EQUAL OPPORTUNITY EMPLOYMENT ............................................. 24  
 25. COUNTY POLICIES ON WASTE, HARASSMENT, DRUG/ALCOHOL-FREE, VIOLENCE-FREE WORKPLACE ................................................................................................................. 25  
 26. REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR ........ 26  
 27. SUPERVISION AND CONSTRUCTION PROCEDURES .................................. 26  
 28. DEFECTIVE AND NONCOMPLIANT WORK ....................................... 27  
 29. AUDITS/ACCOUNTING/RECORDS .................................................... 27  
 30. INTERPRETATION; VENUE ................................................................ 28
SPECIAL PROVISIONS- SECTION “A”
GENERAL CONDITIONS

1. LOCATION

The project will be commenced at the following Napa County facility:

- 1535 Airport Boulevard, Napa CA 94558

2. DESCRIPTION OF WORK

The Napa County Sheriff Facility has two 90 Ton, 25,000 CFM Energy Labs C104102-FCH-I air handling units that have been in service since 2005 that now require repairs to the evaporative (evap) condensers and some spare parts. The work in general consists of, removing the evap condenser and steel adapter frame they set on, constructing new adapter frames out of stainless steel, reinforcing of the original structure and disassembly of the evaporative condenser to accommodate replacing the heat exchangers and fan assemblies with new components during the winter of 2022/2023. A spare supply fan, return fan and exhaust fan variable frequency drive, refrigeration compressor and water circulation pump shall also be supplied to the County as part of the project but not installed. For further information refer to the remainder of this specification and also the plans. Please note that all personnel working on the construction of the project will be required to pass a Live Scan fingerprint and background check.

3. DEFINITIONS AND TERMS

The following terms when used in these Special Provisions or in the Standard Specifications shall have the following meanings when used in this Contract:

Contractor. The person or entity described as "Contractor" in the preamble to this Contract.

County. Napa County, a political subdivision of the State of California.

Days. As used in these special provisions, days shall mean working days.

Department of Transportation. The Board of Supervisors of Napa County, State of California, acting by and through its Director of Public Works.

Department. The Napa County Department of Public Works.

Director of Transportation. The Napa County Public Works Director.

Engineer or County Engineer. The Napa County Public Works Director, acting either directly or through properly authorized agents, such agents acting within the scope of the particular duties entrusted to them.
Laboratory. The established laboratory of the Materials and Research licensed and certified by the Department of Transportation of the State of California or laboratories authorized by the Engineer to test materials and work involved in the contract.

Owner. Napa County.

State of California, Napa County.

Transportation Building, Napa County Administration Building, 1195 Third Street, Suite 101, Napa, California 94559.

State Highway Engineer. The Napa County Public Works Director, acting either directly or through properly authorized agents, such agents acting within the scope of the particular duties entrusted to them.

Standard Specifications. The 2018 edition of the Standard Specifications of the State of California, Department of Transportation. Any reference therein to the State of California or a State agency, office or officer shall be interpreted to refer to the County or its corresponding agency, office or officer acting under this contract.

4. CONTRACT DOCUMENTS
The Contract Documents shall include the Notice to Contractors, Proposal Form, bonds, these special provisions, the Standard Specifications of the State of California and the Standard Plans of the State of California, Department of Transportation, dated 2018 insofar as same may apply, and pertinent portions of other documents included by reference thereto in the Special Provisions or the Contract pages.

5. CONTRACTOR LICENSE
The Contractor must be properly licensed as a contractor from contract award through Contract acceptance (Public Contract Code § 10164).

6. DIFFERING SITE CONDITIONS
23 CFR 635.109 is made a part of this contract and incorporated herein by reference.

a. Contractor's Notification
Promptly notify the County’s Engineer if you find either of the following conditions:
   1. Physical conditions differing materially from either of the following:
      • Contract documents
      • Job site examination
   2. Physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the work provided for in the Contract

Include details explaining the information you relied on and the material differences you discovered.
If you fail to promptly notify the Engineer, you waive the differing site condition claim for the period between your discovery of the differing site condition and your notification to the Engineer.

If you disturb the site after discovery and before the Engineer's investigation, you waive the differing site condition claim.

b. **Engineer's Investigation and Decision (Standard Specifications 4-1.06C)**
   
   Upon your notification, the Engineer investigates job site conditions and:
   
   1. Notifies you whether to resume affected work;
   2. Decides whether the condition differs materially and is cause for an adjustment of time, payment, or both.

7. **BEGINNING OF WORK, TIME OF COMPLETION AND LIQUIDATED DAMAGES**

   Attention is directed to all of the provisions of Section 8, “Prosecution and Progress,” of the Standard Specifications and these Special Provisions. The contractor after receiving notice that the contract has been executed and approved and shall diligently prosecute the same completion of all work in the Plans and Specifications according. Due to the long lead-time in procuring the items and scheduling around climatic conditions, the time of completion is as follows:

**Submittals:**

The Contractor shall within **three (3) working days** after receiving notice that the contract has been executed and approved by the County (Notice to Proceed) provide submittal for the schedule.

The Contractor shall within **ten (10) working days** after receiving notice that the contract has been executed and approved by the County (Notice to Proceed) provide submittals for the water cooled condenser heat exchanger coils. Note that this will require a site visit for Contractor to verify coil dimensions.

The Contractor shall within **twenty (20) working days** after receiving notice that the contract has been executed and approved by the County (Notice to Proceed) provide submittals for the variable frequency drives, water pump and compressor.

**Evaporative Condenser Work:**

The Contractor shall order the heat exchangers, fan assemblies and required gaskets within **Five (5) working days** following receipt of the an approved submittal for each component.

The Contractor shall begin work on the removal and repair of the evaporative condensers no earlier than December 1, 2022 and no later than January 31, 2022 without prior permission from the County or the assumption that equivalent supplemental cooling will need to be provided. The rebuilt evaporative condensers shall be installed and functional within **Ten (10) working** after start of work which commences with their removal. This work must be coordinated and scheduled with the County.
**Spare Parts:**
The Contractor shall order spare parts within **five (5) working days** following receipt of an approved submittal for each component.

Attention is directed to the provisions of Section 8-1.10, “Liquidated Damages,” of the Standard Specifications and these Special Provisions. The Contractor shall pay to Napa County the sum of **NINETEEN HUNDRED DOLLARS ($1,900)** per day for each and every calendar day delay in finishing the work in excess of the number of working days prescribed above and any extension of time granted.

8. **QUALITY ASSURANCE**

The County uses a Quality Assurance Program (QAP) to ensure a material is produced to comply with the Contract.

You may examine the records and reports of tests the County performs if they are available at the job site.

Schedule work to allow time for QAP.

9. **PROMPT PAYMENT OF FUNDS WITHHELD TO SUBCONTRACTORS**

The County shall hold retainage from the prime contractor and shall make prompt and regular incremental acceptances of portions, as determined by the County, of the contract work, and pay retainage to the prime contractor based on these acceptances. The prime contractor, or subcontractor, shall return all monies withheld in retention from a subcontractor within 30 days after receiving payment for work satisfactorily completed and accepted including incremental acceptances of portions of the contract work by the County. Federal law (49 CFR26.29) requires that any delay or postponement of payment over 30 days may take place only for good cause and with the County’s prior written approval. Any violation of this provision shall subject the violating prime contractor or subcontractor to the penalties, sanctions and other remedies specified in Section 7108.5 of the Business and Professions Code. These requirements shall not be construed to limit or impair any contractual, administrative, or judicial remedies otherwise available to the prime contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the prime contractor, deficient subcontract performance, or noncompliance by a subcontractor.

10. **SUBCONTRACTING**

Attention is directed to Section 5-1.13, “Subcontracting,” of the Standard Specifications.

11. **PREVAILING WAGES**

The Project is a “public works” as defined in the California Labor Code. The Contractor shall comply with all State prevailing wage requirements, including but not limited to, those set forth in Exhibit “A” at the end of these General Conditions, California Prevailing Wage Requirements.
12. **CERTIFIED PAYROLL RECORDS**

Special Attention is directed to the provisions of Section 7-1.02K(3), “Certified Payroll Records,” of the Standard Specifications. A copy of all payrolls shall be submitted weekly to the Engineer. Payrolls shall contain the full name, address and social security number of each employee, his correct classification, rate of pay, daily and weekly number of hours worked, itemized deductions made and actual wages paid. They shall also indicate apprentices and ratio of apprentices to journeymen. The employee's address and social security number need only appear on the first payroll on which his name appears. The payroll shall be accompanied by a "Statement of Compliance" signed by the employer or his agent indicating that the payrolls are correct and complete and that the wage rates contained therein are not less than those required by the contract. The "Statement of Compliance" shall be on forms furnished by the Department or on any form with identical wording. The Contractor shall be responsible for the submission of copies of payrolls of all subcontractors. Failure to submit will delay processing of progress payments.

13. **BIDDING REQUIREMENTS AND CONDITIONS**

Attention is directed to Section 2, “Bidding,” of the Standard Specifications and these Special Provisions.

(a) **Examination of Site.** Each bidder shall have examined the site of the work before bidding so he shall have full knowledge of all facilities and difficulties affecting the work which may not be particularly described herein. No variation or allowance from the contract sum will be made because of lack of such examination or knowledge.

(b) **State Contract Act.** The State Contract Act is not applicable to contracts involving political subdivisions of the State of California. Pre-qualification of bidders will not be required.

(c) **Joint Venture.** If two or more Bidders desire to bid jointly on a single project or desire to combine their assets for so doing, they must file an affidavit of joint venture with the County Engineer, and such affidavit of joint venture will be valid only for the specific project for which it is filed. If such affidavit of joint venture is not filed as aforesaid and approved by the Engineer prior to the time for opening bids on the specific projects for which it is submitted, a joint bid submitted by the said Bidders will be disregarded.

(d) **Registered and Qualified – California Labor Code § 1771.1.** A contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in this chapter, unless currently registered and qualified to perform public work pursuant to Section 1725.5. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded.

14. **CONTRACT AWARD AND EXECUTION (Bonds)**

Attention is directed to Section 3, “Contract Award and Execution,” of the Standard Specifications, contract bonds. In-lieu of the bonds specified under Section 3-1.05 of the Standard
Specifications, the successful bidder shall furnish a faithful Performance Bond as required by Section 20129 of the Public Contract Code in an amount equal to one hundred percent (100%) of the contract price of the work contemplated and the laborer's and material man's payment bond as required by Section 8182 of the Civil Code in an amount equal to one hundred percent (100%) of the contract price of the work contemplated.

If the County awards the contract, the award is made to the lowest responsive and responsible contractor. Additional details are set forth in the proposal form. The contractor shall ensure that the bid is valid for 60 days from bid opening.

15. **SCOPE OF WORK**

Attention is directed to Section 4, “Scope of Work,” of the Standard Specifications.

The intent of the plans and specifications is to cover the entire project ready for use when completed. The Contractor shall accomplish complete installation of facilities, and any other required items to make the unit complete. All units, facilities, etc., shall be in operating condition to the approval of the Engineer. The quantities and items listed in the proposal form and contract form are given as a basis for the comparison of bid and the Board of Supervisors does not, expressly or by implication, agree that the actual amount of work will correspond therewith, but reserves the right to increase or decrease the amount of any class or portion of the work, or to omit portions of the work as may be deemed necessary or expedient by the Engineer.

16. **CHANGE ORDERS**

(a) **Limitations Where Contract Price Changes are Involved.**

i. Overhead and Profit for the Contractor. The Contractor's overhead and profit on the cost of subcontracts shall be a sum not exceeding ten percent (10%) of such costs. The Contractor's overhead and profit on the costs of work performed by the Contractor shall be a sum not exceeding fifteen percent (15%) of such costs. Overhead and profit shall not be applied to the cost of taxes and insurance by Contractor or Subcontractors or to credits. No processing or similar fees may be charged by the Contractor in connection with the Modification.

ii. Bond Premiums. The actual rate of bond premiums as paid on the total cost (including taxes) will be allowed, but with no markup for profit and overhead.

iii. Taxes. State and city sales taxes should be indicated.

(b) **Procedure.** Attention is directed to Section 4-1.05 of the Standard Specifications.

(c) **Authorized Representative / Limits.** No Change Order shall be valid or binding against COUNTY unless such Change Order has been executed in writing by (1) COUNTY’s Director of Public Works consistent with the authority granted to him by the Board of Supervisors pursuant to the limitations set forth under Napa County Resolution No. 2011-18 and Public Contract Code Section 20142, or (2) by the Board of Supervisors.

17. **CONTROL OF THE WORK**

Attention is directed to Section 5 of the Standard Specifications and these Special provisions. After contract approval, submit documents and direct questions in writing to the Engineer.
(a) **Contract Components.** A component in one contract part applies as if appearing in each. The parts are complementary and describe and provide for a complete work.

If a discrepancy is found or confusion arises, request correction or clarification in writing. Any deviations from the approved Plans and Specifications shall be approved by the Engineer and all changes shall be by written permission only.

(b) **Acceptance of Contract.** Attention is directed to Section 5-1.46, “Final Inspection and Contract Acceptance,” of the Standard Specifications and these Special provisions. Acceptance will consist of the execution and filing with the County Recorder of a Notice of Completion as defined in Civil Code Section 8182. Should it become necessary due to developed conditions to occupy any portion of the work before the contract is fully completed, such occupancy shall not constitute acceptance.

18. **LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC**

Attention is directed to Section 7 of the Standard Specifications and these Special Provisions.

Comply with laws, regulations, orders, and decrees applicable to the project. Immediately report to the Engineer in writing any discrepancy or inconsistency between the contract and a law, regulation, order, and decree.

(a) **Prevailing Wages.** See Section 21 and 22 of these Special Provisions.

(b) **Public Convenience and Public Safety.**

Attention is directed to Section 7-1.03 and Section 7.1.04 of the Standard Specifications and these Special Provisions.

(1) **Safety Devices.** Furnishing and maintenance of safety devices shall be the responsibility of the Contractor at all times. The Contractor shall respond promptly to correct improper conditions or inoperative devices. Failure to inspect and maintain all necessary safety devices in proper operating condition when in use, or failure to respond promptly to notification of improperly operating equipment, will be sufficient cause for suspension of the contract until such defects are corrected or termination as otherwise provided in this Contract.

(2) **Material Safety Data Sheets (MSDS)** – The Contractor shall provide MSDS for each product used on site upon request by the Engineer.

(3) **Safety Standards; Suspension of Contract for Unsafe Equipment.** The Contractor shall comply with all the applicable provisions of the United States Department of Labor Occupational Safety and Health Act (OSHA), State of California Division of Industrial Safety, Title 8, Safety Orders (Cal-OSHA), the Federal Aviation Administration (FAA) and any other applicable codes and regulations. If, in the opinion of the Engineer, any operation or piece of equipment that is observed by the Engineer appears to be unsafe, the Engineer may immediately halt that portion of the work until the hazard is corrected to the satisfaction of the Engineer and no time extension or additional compensation shall be granted for the time lost due to said halting of the work.
(c) **Hold Harmless/Indemnification.** To the full extent permitted by law, Contractor shall hold harmless, defend at its own expense, and indemnify COUNTY and the officers, agents, employees and volunteers of County from any and all liability, claims, losses, damages or expenses, including reasonable attorney's fees, for personal injury (including death) or damage to property, arising from all acts or omissions to act of Contractor or its officers, agents, employees, volunteers, contractors and subcontractors in rendering services under this Agreement, excluding, however, such liability, claims, losses, damages or expenses arising from the sole negligence or willful acts of County or its officers, agents, employees or volunteers. Each party shall notify the other party immediately in writing of any claim or damage related to activities performed under this Agreement. The parties shall cooperate with each other in the investigation and disposition of any claim arising out of the activities under this Agreement, providing that nothing shall require either party to disclose any documents, records or communications that are protected under peer review privilege, attorney-client privilege, or attorney work product privilege.

(d) **Insurance.** Contractor shall obtain and maintain in full force and effect throughout the term of this Agreement, and thereafter as to matters occurring during the term of this Agreement, the following insurance coverage:

1. **Workers' Compensation insurance.** To the extent required by law during the term of this Agreement, CONTRACTOR shall provide workers' compensation insurance for the performance of any of CONTRACTOR's duties under this Agreement, including but not limited to, coverage for workers' compensation and employer's liability and a waiver of subrogation against COUNTY and the Construction Management consultant, and shall provide COUNTY with certification of all such coverages upon request by COUNTY’s Risk Manager.

2. **Liability insurance.** CONTRACTOR shall obtain and maintain in full force and effect during the term of this Agreement the following liability insurance coverages, issued by a company admitted to do business in California and having an A.M. Best rating of A:VII or better or equivalent self-insurance:

   (i) **General Liability.** Commercial or comprehensive general liability [CGL] insurance coverage (personal injury and property damage) of not less than TWO MILLION DOLLARS ($2,000,000) per occurrence and FIVE MILLION DOLLARS ($5,000,000) aggregate, covering liability or claims for any personal injury, including death, to any person and/or damage to the property of any person arising from the acts or omissions of Contractor or any officer, agent, or employee of Contractor under this Agreement. If a crane is used, the contractor or subcontractor shall provide Commercial or comprehensive general liability [CGL] insurance coverage (personal injury and property damage) of not less than FIVE MILLION DOLLARS ($5,000,000) per occurrence and TEN MILLION DOLLARS ($10,000,000) aggregate, covering liability or claims for any personal injury, including death, to any person and/or damage to the property of any person arising from the acts or omissions of Contractor or any officer, agent, or employee of Contractor under this Agreement.

   (ii) **Comprehensive Automobile Liability Insurance.** Comprehensive automobile
liability insurance (Bodily Injury and Property Damage) on owned, hired, leased and non-owned vehicles used in conjunction with CONTRACTOR’s business of not less than ONE MILLION DOLLARS ($1,000,000) combined single limit per occurrence. If the coverage includes an aggregate limit, the aggregate limit shall be no less than twice the occurrence limit.

(3) **Certificates.** All insurance coverages referenced in (2), above, shall be evidenced by one or more certificates of coverage or, with the consent of COUNTY’s Risk Manager demonstrated by other evidence of coverage acceptable to COUNTY’s Risk Manager, which shall be filed by CONTRACTOR with the DEPARTMENT OF PUBLIC WORKS prior to commencement of performance of any of Contractor’s duties; shall reference this Agreement by its COUNTY number or title and department; shall be kept current during the term of this Agreement; shall provide that COUNTY shall be given no less than thirty (30) days prior written notice of any non-renewal, cancellation, other termination, or material change, except that only ten (10) days prior written notice shall be required where the cause of non-renewal or cancellation is non-payment of premium; and shall provide that the inclusion of more than one insured shall not operate to impair the rights of one insured against another insured, the coverage afforded applying as though separate policies had been issued to each insured, but the inclusion of more than one insured shall not operate to increase the limits of the company's liability. For the commercial general liability insurance coverage referenced in (2)(i), and, where the vehicles are covered by a commercial policy rather than a personal policy, for the comprehensive automobile liability insurance coverage referenced in (2)(ii) CONTRACTOR shall also file with the evidence of coverage and endorsement from the insurance provider naming COUNTY, their officers, employees, agents and volunteers as well as the STATE OF CALIFORNIA as additional insureds and waiving subrogation, and the certificate or other evidence of coverage shall provide that if the same policy applies to activities of CONTRACTOR not covered by this Agreement then the limits in the applicable certificate relating to the additional insured coverage of COUNTY shall pertain only to liability for activities of CONTRACTOR under this Agreement, and that the insurance provided is primary coverage to COUNTY with respect to any insurance or self-insurance programs maintained by COUNTY. The additional insured endorsements for the general liability coverage shall use Insurance Services Office (ISO) Form No. CG 20 09 11 85 or CG 20 10 11 85, or equivalent including (if used together) CG 2010 10 01 and CG 2037 10 01; but shall not use the following forms: CG 20 10 10 93 or 03 94. Upon request of COUNTY’s Risk Manager, CONTRACTOR shall provide or arrange for the insured to provide within thirty (30) days of the request, certified copies of the actual insurance policies or relevant portions thereof.

(4) **Deductibles/Retentions.** Any deductibles or self-insured retentions shall be declared to, and be approved by, COUNTY’s Risk Manager, which approval shall not be denied unless the COUNTY’s Risk Manager determines that the deductibles or self-insured retentions are unreasonably large in relation to compensation payable under this Agreement and the risks of liability associated with the activities required of CONTRACTOR by this Agreement. At the option of and upon request by COUNTY’s Risk Manager if the Risk Manager determines that such deductibles or retentions are unreasonably high, either the insurer shall reduce or eliminate such deductibles or self-insurance retentions as respects COUNTY, its officers, employees, agents and volunteers or CONTRACTOR shall procure
a bond guaranteeing payment of losses and related investigations, claims administration and defense expenses.

19. **PROSECUTION AND PROGRESS**

Attention is directed to Section 8, “Prosecution and Progress,” of the Standard Specifications, and these Special Provisions.

(a) **Preconstruction Meeting**

Prior to the commencement of work at the site, a Preconstruction meeting will be held at a mutually agreed time and place which shall be attended by the Contractor, its Superintendent, and its subcontractors as appropriate.

The conference is required to familiarize all authorized persons involved with policies, regulations and procedures and to discuss construction operations and methods in order to avoid any misunderstanding or conflicts during construction.

Unless previously submitted to the Engineer, the Contractor shall bring to the preconstruction meeting six (6) copies each of the following:

1. Draft Construction Schedule.
2. Procurement schedule of major equipment and materials and items requiring long lead time.
4. Letter of Responsibility designating emergency contacts for the Contractor after business hours.

(b) **Progress Meetings**

The Contractor shall schedule and hold regular on site progress meetings at least weekly during construction and at other times as requested by Engineer. The Contractor, Engineer, Inspector, and all subcontractors active on the site shall be represented at each meeting. The Contractor or Engineer may at its discretion request attendance by the Contractor's suppliers, manufacturer's, and other subcontractors.

The County shall provide for keeping and distribution of the minutes. The purpose of the meetings will be to review the progress of the Work, maintain coordination of efforts, discuss changes in scheduling, and resolve other problems which may develop.

(c) **Construction Schedule and Progress Schedule**

The contractor, promptly after being awarded the contract or upon receiving notice of intent to award, shall prepare and submit a baseline construction schedule for the work. The baseline schedule shall not exceed the number of contract working days. The baseline schedule must include the entire scope of work and demonstrate how the contractor plans to complete all work contemplated and shall provide for expeditious and practicable execution of the work.

The Contractor shall also incorporate all required permit conditions and other coordination into the schedule.
The contractor shall correct any new non-compliant work and defective work within the contract working days at no additional cost to the county.

The progress schedule shall be revised at appropriate intervals as required by the conditions of the work and project or when requested in writing by the Engineer. The Contractor shall perform the work in general accordance with the most recent schedules submitted to the Engineer.

(d) Schedule of Submittals
A schedule of submittals shall be provided to the Engineer at the preconstruction meeting. The Contractor shall keep the submittal schedule up to date and ensure that it coordinates with the construction schedule, with adequate time for the Engineer to review the submittals and be in accordance with the working days section of this document.

(e) Termination of Contract. Attention is directed Section 8-1.13 of the Standard Specifications and these Special provisions.

Whenever, in the opinion of the Board of Supervisors the said work is neglected by the Contractor, or the same is not prosecuted with the diligence and force specified, meant and intended in and by the terms of this contract, it shall be lawful for the Board of Supervisors to make a requisition upon the Contractor for such additional specific force or such additional specific material to be brought into the work under this contract or to remove improper material from the grounds, and its due and faithful fulfillment requires; of which action of the Board of Supervisors due notice in writing of not less than five days shall be served upon the Contractor or his agent having charge of the work; and if the Contractor fails to comply with such requisition within five days, it shall be lawful for the Board of Supervisors to employ upon such work the additional force or supply the materials as specifically required as aforesaid; and the amount paid for such additional force or material shall be charged against the Contractor and be deducted from his next or subsequent estimate and payment, or the same or any part thereof not so deducted may be recovered from the Contractor or his sureties.

Moreover, if the Contractor fails to comply with such requisition within five days, the Board of Supervisors may declare the contract terminated and may itself proceed to complete the work herein specified or may engage any other person or persons to do the same. Upon the completion of such work, the said Board of Supervisors through its proper office or officers shall cause a statement to be made of the default of the Contractor as aforesaid, and in completing the work itself or by any other person or persons. Should the amount in such statement be more than the amount would have been due the Contractor upon the completion of the work by him, the difference shall be paid by the Contractor to Napa County.

20. TERMINATION FOR CONVENIENCE OF THE COUNTY
Notwithstanding any other provision of this Agreement, County may, at any time, and without cause, terminate this Agreement in whole or in part, upon not less than seven (7) days' written notice to CONTRACTOR. Such termination shall be effected by delivery to Contractor of a notice of termination specifying the effective date of the termination and the extent of the work to be terminated. Contractor shall immediately stop work in accordance with the notice and
comply with any other direction as may be specified in the notice or as provided subsequently by County. County shall pay Contractor for the work completed prior to the effective date of the termination, and such payment shall be Contractor's sole remedy under this Agreement. Under no circumstances will Contractor be entitled to anticipatory or unearned profits, consequential damages, or other damages of any sort as a result of a termination or partial termination under this paragraph. Contractor shall insert in all subcontracts that the subcontractor shall stop work on the date of and to the extent specified in a notice of termination, and shall require subcontractors to insert the same condition in any lower tier subcontracts.

21. MEASUREMENT AND PAYMENT

Attention is directed to Section 9, “Payment,” of the Standard Specifications and this Special Provisions.

Payment for the various items of the Bid Sheets, as further specified herein, shall include all compensation to be received by the Contractor for furnishing all tools, equipment, supplies, and manufactured articles, and for all labor, operations, and incidentals appurtenant to the items of work being described, as necessary to complete the various items of work as specified and shown on the Drawings, including all appurtenances thereto, and including all costs of compliance with the regulations of public agencies having jurisdiction, including Safety and Health Requirements of the California Division of Industrial Safety. No separate payment will be made for any item that is not specifically set forth in the Bid Sheet(s), and all costs therefor shall be included in the prices named in the Bid Sheet(s) for the various appurtenant items of work.

All pay line items will be paid for at the unit prices named in the Bid Sheet(s) for the respective items of work. The quantities of work or material stated as unit price items on the Bid Sheet(s) are supplied only to give an indication of the general scope of the Work; the County does not expressly nor by implication agree that the actual amount of work or material will correspond therewith, and reserves the right after award to increase or decrease the quantity of any unit price of any major item of work by an amount up to and including 25 percent of any major bid item, without a change in the unit price, and shall have the right to delete any bid item in its entirety, or to add additional bid items up to and including an aggregate total amount not to exceed 25 percent of the contract price.

Section 9-1.07 “Payment adjustments for price index fluctuations,” is deleted.

(a) Force Account. Attention is directed Section 9-1.04 of the Standard Specifications and these Special Provisions.

Equipment rental rates shall be those rental rates applicable on contracts advertised by the State of California, Department of Transportation on the date of call for bids on this contract.

(b) Progress Payments. Attention is directed Section 9-1.16 of the Standard Specifications and these Special Provisions.
In lieu of Section 9-1.16 F Retentions, the County will retain 5 percent (5%) of the value of all work done and 5 percent (5%) of the value of the materials so estimated to have been furnished and delivered and unused or furnished and stored as aforesaid as part security for the fulfillment of the contract by the Contractor to the extent not inconsistent with Public Contract Code Section 20104.50; all such retentions being subject to the following statutory requirements:

Public Contract Code Section 7107. Retention proceeds; withholding disbursement

(a) This section is applicable with respect to all contracts entered into on or after January 1, 1993 relating to the construction of any public work of improvement.

(b) The retention proceeds withheld from any payment by the public entity from the original contractor, or by the original contractor from any subcontractor, shall be subject to this section.

(c) Within 60 days after the date of completion of the work of improvement, the retention withheld by the public entity shall be released. In the event of a dispute between the public entity and the original contractor, the public entity may withhold from the final payment an amount not to exceed 150 percent of the disputed amount. For purposes of this subdivision, "completion" means any of the following:

   (1) The occupation, beneficial use, and enjoyment of a work of improvement, excluding any operation only for testing, startup, or commissioning, by the public agency, or its agent, accompanied by cessation of labor on the work of improvement.

   (2) The acceptance by the public agency, or its agent, of the work of improvement.

   (3) After the commencement of a work of improvement, a cessation of labor on the work of improvement for a continuous period of 100 days or more, due to factors beyond the control of the contractor.

   (4) After the commencement of a work of improvement, a cessation of labor on the work of improvement for a continuous period of 30 days or more, if the public agency files for record a notice of cessation or a notice of completion.

(d) Subject to subdivision (e), within 10 days from the time that all or any portion of the retention proceeds are received by the original contractor, the original contractor shall pay each of its subcontractors from whom retention has been withheld, each subcontractor's share of the retention received. However, if a retention payment received by the original contractor is specifically designated for a particular subcontractor, payment of the retention shall be made to the designated subcontractor, if the payment is consistent with the terms of the subcontract.

(e) The original contractor may withhold from a subcontractor its portion of the retention proceeds if a bona fide dispute exists between the subcontractor and the original contractor. The amount withheld from the retention payment shall not exceed 150 percent of the estimated value of the disputed amount.

(f) In the event that retention payments are not made within the time periods required by this section, the public entity or original contractor withholding the unpaid amounts shall be subject to a charge of 2 percent per month on the improperly withheld amount, in lieu of any interest otherwise due. Additionally, in any action for the collection of funds wrongfully withheld, the prevailing party shall be entitled to attorney's fees and costs.
(g) If a state agency retains an amount greater than 125 percent of the estimated value of the work yet to be completed pursuant to Section 10261 of the Public Contract Code, the state agency shall distribute undisputed retention proceeds in accordance with subdivision (c). However, notwithstanding subdivision (c), if a state agency retains an amount equal to or less than 125 percent of the estimated value of the work yet to be completed, the state agency shall have 90 days in which to release undisputed retentions.

(h) Any attempted waiver of the provisions of this section shall be void as against the public policy of this state.

Public Contract Code Section 22300. Performance retentions; provision for substitute security; escrow agreement

(a) Provisions shall be included in any invitation for bid and in any contract documents to permit the substitution of securities for any moneys withheld by a public agency to ensure performance under a contract; however, substitution of securities provisions shall not be required in contracts in which there will be financing provided by the Farmers Home Administration of the United States Department of Agriculture pursuant to the Consolidated Farm and Rural Development Act (> 7 U.S.C. Sec. 1921 et seq.), and where federal regulations or policies, or both, do not allow the substitution of securities. At the request and expense of the contractor, securities equivalent to the amount withheld shall be deposited with the public agency, or with a state or federally chartered bank in this state as the escrow agent, who shall then pay those moneys to the contractor. Upon satisfactory completion of the contract, the securities shall be returned to the contractor.

(b) Alternatively, the contractor may request and the owner shall make payment of retentions earned directly to the escrow agent at the expense of the contractor. At the expense of the contractor, the contractor may direct the investment of the payments into securities and the contractor shall receive the interest earned on the investments upon the same terms provided for in this section for securities deposited by the contractor. Upon satisfactory completion of the contract, the contractor shall receive from the escrow agent all securities, interest, and payments received by the escrow agent from the owner, pursuant to the terms of this section.

(c) Securities eligible for investment under this section shall include those listed in > Section 16430 of the Government Code, bank or savings and loan certificates of deposit, interest-bearing demand deposit accounts, standby letters of credit, or any other security mutually agreed to by the contractor and the public agency. The contractor shall be the beneficial owner of any securities substituted for moneys withheld and shall receive any interest thereon. Failure to include these provisions in bid and contract documents shall void any provisions for performance retentions in a public agency contract. For purposes of this section, the term "public agency" shall include, but shall not be limited to, chartered cities.

(d) (1) Any contractor who elects to receive interest on moneys withheld in retention by a public agency shall, at the request of any subcontractor, make that option available to the subcontractor regarding any moneys withheld in retention by the contractor from the subcontractor. If the contractor elects to receive interest on any moneys withheld in retention by a public agency, then the subcontractor shall receive the identical rate of interest received by the contractor on any retention moneys withheld from the subcontractor by the contractor, less any actual pro rata costs associated with
administering and calculating that interest. In the event that the interest rate is a fluctuating rate, the rate for the subcontractor shall be determined by calculating the interest rate paid during the time that retentions were withheld from the subcontractor. If the contractor elects to substitute securities in lieu of retention, then, by mutual consent of the contractor and subcontractor, the subcontractor may substitute securities in exchange for the release of moneys held in retention by the contractor.

(2) This subdivision shall apply only to those subcontractors performing more than five percent of the contractor's total bid.

(3) No contractor shall require any subcontractor to waive any provision of this section.

(e) The Legislature hereby declares that the provisions of this section are of statewide concern and are necessary to encourage full participation by contractors and subcontractors in public contract procedures.

(f) The escrow agreement used hereunder shall be null, void, and unenforceable unless it is substantially similar to the following form:

ESCROW AGREEMENT FOR SECURITY DEPOSITS IN LIEU OF RETENTION

This Escrow Agreement is made and entered into by and between:

whose address is hereinafter called "Owner,"

whose address is hereinafter called "Contractor" and

whose address is hereinafter called "Escrow Agent."

For the consideration hereinafter set forth, the Owner, Contractor, and Escrow Agent agree as follows:

(1) Pursuant to Section 22300 of the Public Contract Code of the State of California, Contractor has the option to deposit securities with Escrow Agent as a substitute for retention earnings required to be withheld by Owner pursuant to the Construction Contract entered into between the Owner and Contractor for _______ in the amount of ________ dated ________ (hereinafter referred to as the "Contract"). Alternatively, on written request of the Contractor, the Owner shall make payments of the retention earnings directly to the Escrow Agent. When the Contractor deposits the securities as a substitute for Contract earnings, the Escrow Agent shall notify the Owner within 10 days of the deposit. The market value of the securities at the time of the substitution shall be at least equal to the cash amount then required to be withheld as retention under the terms of the Contract between the Owner and Contractor. Securities shall be held in the name of ________, and shall designate the Contractor as the beneficial owner.

(2) The Owner shall make progress payments to the Contractor for those funds which otherwise would be withheld from progress payments pursuant to the Contract provisions, provided that the Escrow Agent holds securities in the form and amount specified above.

(3) When the Owner makes payment of retentions earned directly to the Escrow Agent, the Escrow Agent shall hold them for the benefit of the Contractor until the time that the escrow created under this contract is terminated. The Contractor may direct
the investment of the payments into securities. All terms and conditions of this agreement and the rights and responsibilities of the parties shall be equally applicable and binding when the Owner pays the Escrow Agent directly.

(4) Contractor shall be responsible for paying all fees for the expenses incurred by Escrow Agent in administering the Escrow Account and all expenses of the Owner. These expenses and payment terms shall be determined by the Owner, Contractor, and Escrow Agent.

(5) The interest earned on the securities or the money market accounts held in escrow and all interest earned on that interest shall be for the sole account of Contractor and shall be subject to withdrawal by Contractor at any time and from time to time without notice to the Owner.

(6) Contractor shall have the right to withdraw all or any part of the principal in the Escrow Account only by written notice to Escrow Agent accompanied by written authorization from the Owner to the Escrow Agent that Owner consents to the withdrawal of the amount sought to be withdrawn by Contractor.

(7) The Owner shall have a right to draw upon the securities in the event of default by the Contractor. Upon seven days' written notice to the Escrow Agent from the owner of the default, the Escrow Agent shall immediately convert the securities to cash and shall distribute the cash as instructed by the Owner.

(8) Upon receipt of written notification from the Owner certifying that the Contract is final and complete, and that the Contractor has complied with all requirements and procedures applicable to the Contract, Escrow Agent shall release to Contractor all securities and interest on deposit less escrow fees and charges of the Escrow Account. The escrow shall be closed immediately upon disbursement of all moneys and securities on deposit and payments of fees and charges.

(9) Escrow Agent shall rely on the written notifications from the Owner and the Contractor pursuant to Sections (5) to (8), inclusive, of this Agreement and the Owner and Contractor shall hold Escrow Agent harmless from Escrow Agent's release and disbursement of the securities and interest as set forth above.

(10) The names of the persons who are authorized to give written notice or to receive written notice on behalf of the Owner and on behalf of Contractor in connection with the foregoing, and exemplars of their respective signatures are as follows:

On behalf of Owner:

Title

Name

Signature

Address

On behalf of Contractor:

Title

Name

Signature

Address

On behalf of Escrow Agent:

Title

Name
At the time the Escrow Account is opened, the Owner and Contractor shall deliver to the Escrow Agent a fully executed counterpart of this Agreement.

IN WITNESS WHEREOF, the parties have executed this Agreement by their proper officers on the date first set forth above.

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“Owner”          “Contractor”

Title  
Title  

Name  
Name  

Signature  
Signature  
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Public Contract Code Section 20104.50  Timely progress payments; legislative intent; interest; payment requests

(a) (1) It is the intent of the Legislature in enacting this section to require all local governments to pay their contractors on time so that these contractors can meet their own obligations. In requiring prompt payment by all local governments, the Legislature hereby finds and declares that the prompt payment of outstanding receipts is not merely a municipal affair, but is, instead, a matter of statewide concern.

(2) It is the intent of the Legislature in enacting this article to fully occupy the field of public policy relating to the prompt payment of local governments' outstanding receipts. The Legislature finds and declares that all government officials, including those in local government, must set a standard of prompt payment that any business in the private sector which may contract for services should look towards for guidance.

(b) Any local agency which fails to make any progress payment within 30 days after receipt of an undisputed and properly submitted payment request from a contractor on a construction contract shall pay interest to the contractor equivalent to the legal rate set forth in subdivision (a) of Section 685.010 of the Code of Civil Procedure.

(c) Upon receipt of a payment request, each local agency shall act in accordance with both of the following:

(1) Each payment request shall be reviewed by the local agency as soon as practicable after receipt for the purpose of determining that the payment request is a proper payment request.

(2) Any payment request determined not to be a proper payment request suitable for payment shall be returned to the contractor as soon as practicable, but not later than seven days, after receipt. A request returned pursuant to this paragraph shall be accompanied by a document setting forth in writing the reasons why the payment request is not proper.
(d) The number of days available to a local agency to make a payment without incurring interest pursuant to this section shall be reduced by the number of days by which a local agency exceeds the seven-day return requirement set forth in paragraph (2) of subdivision (c).

(e) For purposes of this article:

1. A "local agency" includes, but is not limited to, a city, including a charter city, a county, and a city and county, and is any public entity subject to this part.

2. A "progress payment" includes all payments due contractors, except that portion of the final payment designated by the contract as retention earnings.

3. A payment request shall be considered properly executed if funds are available for payment of the payment request, and payment is not delayed due to an audit inquiry by the financial officer of the local agency.

(f) Each local agency shall require that this article, or summary thereof, be set forth in the terms of any contract subject to this article.

(c) Claims. All claims under this contract shall be subject to the following statutory requirements:

Public Contract Code Section 9204. Claim resolution process for claim by contractor in connection with public works project.

(a) The Legislature finds and declares that it is in the best interests of the state and its citizens to ensure that all construction business performed on a public works project in the state that is complete and not in dispute is paid in full and in a timely manner.

(b) Notwithstanding any other law, including, but not limited to, Article 7.1 (commencing with Section 10240) of Chapter 1 of Part 2, Chapter 10 (commencing with Section 19100) of Part 2, and Article 1.5 (commencing with Section 20104) of Chapter 1 of Part 3, this section shall apply to any claim by a contractor in connection with a public works project.

(c) For purposes of this section:

1. "Claim" means a separate demand by a contractor sent by registered mail or certified mail with return receipt requested, for one or more of the following:
   A. A time extension, including, without limitation, for relief from damages or penalties for delay assessed by a public entity under a contract for a public works project.
   B. Payment by the public entity of money or damages arising from work done by, or on behalf of, the contractor pursuant to the contract for a public works project and payment for which is not otherwise expressly provided or to which the claimant is not otherwise entitled.
   C. Payment of an amount that is disputed by the public entity.

2. "Contractor" means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who has entered into a direct contract with a public entity for a public works project.

3. "Public entity" means, without limitation, except as provided in subparagraph (B), a state agency, department, office, division, bureau, board, or commission, the California State University, the University of California, a city, including a charter city, county, including a charter county, city and county, including a charter city and county, district, special district, public authority, political subdivision, public corporation, or nonprofit transit corporation wholly owned by a public agency and formed to carry out the purposes of the public agency.

(B) "Public entity" shall not include the following:
(i) The Department of Water Resources as to any project under the jurisdiction of that department.

(ii) The Department of Transportation as to any project under the jurisdiction of that department.

(iii) The Department of Parks and Recreation as to any project under the jurisdiction of that department.

(iv) The Department of Corrections and Rehabilitation with respect to any project under its jurisdiction pursuant to Chapter 11 (commencing with Section 7000) of Title 7 of Part 3 of the Penal Code.

(v) The Military Department as to any project under the jurisdiction of that department.

(vi) The Department of General Services as to all other projects.

(vii) The High-Speed Rail Authority.

(4) "Public works project" means the erection, construction, alteration, repair, or improvement of any public structure, building, road, or other public improvement of any kind.

(5) "Subcontractor" means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who either is in direct contract with a contractor or is a lower tier subcontractor.

(d) (1) (A) Upon receipt of a claim pursuant to this section, the public entity to which the claim applies shall conduct a reasonable review of the claim and, within a period not to exceed 45 days, shall provide the claimant a written statement identifying what portion of the claim is disputed and what portion is undisputed. Upon receipt of a claim, a public entity and a contractor may, by mutual agreement, extend the time period provided in this subdivision.

(B) The claimant shall furnish reasonable documentation to support the claim.

(C) If the public entity needs approval from its governing body to provide the claimant 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, the public entity 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 claimant a written statement identifying the disputed portion and the undisputed portion.

(D) Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. If the public entity fails to issue a written statement, paragraph (3) shall apply.

(2) (A) If the claimant disputes the public entity's written response, or if the public entity fails to respond to a claim issued pursuant to this section within the time prescribed, the claimant may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the public entity shall schedule a meet and confer conference within 30 days for settlement of the dispute.

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

(C) 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.

(D) Unless otherwise agreed to by the public entity 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.

(E) This section does not preclude a public entity from requiring arbitration of disputes under private arbitration or the Public Works Contract Arbitration Program, if mediation under this section does not resolve the parties' dispute.

(3) Failure by the public entity to respond to a claim from a contractor within the time periods described in this subdivision or to otherwise meet the time requirements of this section shall result in the claim being deemed rejected in its entirety. A claim that is denied by reason of the public entity's failure to have responded to a claim, or its failure to otherwise meet the time requirements of this section, shall not constitute an adverse finding with regard to the merits of the claim or the responsibility or qualifications of the claimant.

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

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

(e) The text of this section or a summary of it shall be set forth in the plans or specifications for any public works project that may give rise to a claim under this section.

(f) A waiver of the rights granted by this section is void and contrary to public policy, provided, however, that (1) upon receipt of a claim, the parties may mutually agree to waive, in writing, mediation and proceed directly to the commencement of a civil action or binding arbitration, as applicable; and (2) a public entity may prescribe reasonable change order, claim, and dispute resolution procedures and requirements in addition to the provisions of this section, so long as the contractual provisions do
not conflict with or otherwise impair the timeframes and procedures set forth in this section.

(g) This section applies to contracts entered into on or after January 1, 2017.

(h) Nothing in this section shall impose liability upon a public entity that makes loans or grants available through a competitive application process, for the failure of an awardee to meet its contractual obligations.

(i) This section shall remain in effect only until January 1, 2020, and as of that date is repealed, unless a later enacted statute, that is enacted before January 1, 2020, deletes or extends that date.

Public Contract Code Section 20104 Application of article; provisions included in plans and specifications

(a) (1) This article applies to all public works claims of three hundred seventy-five thousand dollars ($375,000) or less which arise between a contractor and a local agency.

(2) This article shall not apply to any claims resulting from a contract between a contractor and a public agency when the public agency has elected to resolve any disputes pursuant to Article 7.1 (commencing with Section 10240) of Chapter 1 of Part 2.

(b) (1) “Public work” means “public works contract” as defined in Section 1101 but does not include any work or improvement contracted for by the state or the Regents of the University of California.

(2) “Claim” means a separate demand by the contractor 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 for a public work and payment of which is not otherwise expressly provided for or the claimant is not otherwise entitled to, or (C) an amount the payment of which is disputed by the local agency.

(c) The provisions of this article or a summary thereof shall be set forth in the plans or specifications for any work which may give rise to a claim under this article.

(d) This article applies only to contracts entered into on or after January 1, 1991.

Public Contract Code Section 20104.2 Claims; requirements, tort claims excluded

For any claim subject to this article, the following requirements apply:

(a) The claim shall be in writing and include the documents necessary to substantiate the claim.

Claims must be filed on or before the date of final payment. Nothing in this subdivision is intended to extend the time limit or supersede notice requirements otherwise provided by contract for the filing of claims.

(b) (1) For claims of less than fifty thousand dollars ($50,000), the local agency shall respond in writing to any written claim within 45 days of receipt of the claim or may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses to the claim the local agency may have against the claimant.

(2) If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of the local agency and the claimant.

(3) The local agency’s written response to the claim, as further documented, shall be submitted to the claimant within 15 days after receipt of the further documentation, or within a period of time no greater than that taken by the claimant in producing the additional information whichever is greater.
(c) (1) For claims of over fifty thousand dollars ($50,000) and less than or equal to 
three hundred seventy-five thousand dollars ($375,000), the local agency shall 
respond in writing to all written claim within 60 days of receipt of the claim, or may 
request in writing, within 30 days of receipt of the claim, any additional 
documentation supporting the claim or relating to defenses to the claim the local 
agency may have against the claimant.
(2) If additional information is thereafter required, it shall be requested and provided 
pursuant to this subdivision, upon mutual agreement of the local agency and the 
claimant.
(3) The local agency's written response to the claim, as further documented, shall be 
submitted to the claimant within 30 days after receipt of the further documentation. 
or within a period of time no greater than that taken by the claimant in producing the 
additional information or requested documentation, whichever is greater.
(d) If the claimant disputes the local agency's written response, or the local agency fails 
to respond within the time prescribed, the claimant may so notify the local agency, in 
writing, either within 15 days of receipt of the local agency’s response or within 15 
days of the local agency’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 a demand, the local agency shall schedule a meet and confer 
conference within 30 days for settlement of the dispute.
(e) Following the meet and confer conference, if the claim or any portion remains in 
dispute, the claimant may file a claim as provided in 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 claimant submits his or her written claim pursuant to subdivision (a) 
until the time that claim is denied as a result of the meet and confer process, 
including any period of time utilized by the meet and confer process.
(f) This article does not apply to tort claims and nothing in this article is intended nor 
shall be construed to change the time periods for filing tort claims or actions 
specified by 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.

Public Contract Code Section 20104.4 Civil action procedures; mediation and 
arbitration; trial de novo: witness
The following procedures are established for all civil actions filed to resolve claims 
subject to this article:
(a) 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. The process shall provide for the selection 
within 15 days by both parties of a disinterested third person as mediator, shall be 
commenced 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 or by stipulation of parties. If the parties fail to select a 
mediator within the 15-day period, any party may petition the court to appoint the 
mediator.
(b) (1) 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 1141.11 of that code. The Civil 
Discovery Act of (Article 3 (commencing with Section 2016) of Chapter 3 of Title 3
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.

(2) Notwithstanding any other provision of law, upon stipulation of parties, arbitrators appointed for purposes of this article shall be experienced in construction law, and, upon stipulation of the parties, mediators and arbitrators shall be paid necessary and reasonable hourly rates of pay not to exceed their customary rate, and such fees and expenses shall be paid equally by the parties, except in the case of arbitration where the arbitrator, for good cause, determines a different division. In no event shall these fees or expenses be paid by state or county funds.

(3) In addition to Chapter 2.5 (commencing with Section 1141.10) Title 3 of Part 3 of the Code of Civil Procedure, any party who receiving an arbitration award requests a trial de novo but does obtain a more favorable judgment shall, in addition to payment of costs and fees under that chapter, pay the attorney's fees of the other arising out of the trial de novo.

(c) The court may, upon request by any party, order any witnesses participate in the mediation or arbitration process.

Public Contract Code Section 20104.6 Payment of portion of claim which is undisputed; of interest on arbitration award or judgment

(a) No local agency shall fail to pay money as to any portion of a claim which is undisputed except as otherwise provided in the contract.

(b) In any suit filed under Section 20104.4, the local agency shall pay interest at the legal rate on any arbitration award or judgment. The interest shall begin to accrue on the date the suit is filed in a court of law.

(d) Final Payment. Payment will be made in accordance with the provisions of Section 9-1.17 of the Standard Specifications provided however that in no event will the final payment be made within 35 calendar days after the filing of Notice of Completion.

22. MISCELLANEOUS PROVISIONS

(a) Licenses and Permits. Any and all licenses and permits required shall be provided by the Contractor and he shall abide by any and all Federal, State and County laws and rules affecting the work and shall maintain all required protection for property, employees and the public and insurance in connection with same, for all of which he shall bear necessary expense.

(b) Building Laws, etc. The Contractor shall conform to and abide by all County and State Building, Labor, Sanitary and Electrical Codes, Ordinances, Laws, Rules and Regulations. Such laws and regulations shall be considered a part of this Exhibit "A" as if set forth herein in full and the work and materials shall be in accordance therewith.

(c) Guarantees. All work performed and equipment or material furnished shall be guaranteed for one (1) year from date of acceptance against any inherent or developed defects of materials or workmanship in manufacture or installations. All guarantees normally provided by manufacturers of equipment or material installed under this project shall be furnished to County and shall remain in force for their normal life.
(d) **Ownership of Plans and Specifications.** All drawings, specifications and copies thereof provided to Contractor by the County shall remain the property of the County and they shall not be used by the Contractor or its subcontractors on other work.

(e) **Addenda.** Any addenda or notices issued during the time of bidding and forming a part of the documents provided to the Bidder for the preparation of the contractor’s bid, shall be covered in the bid and shall be made a part of the contract. The Bidder shall acknowledge receipt of addenda in the space provided in the Proposal.

Should a bidder find apparent discrepancies in the drawings or documents, or should he be in doubts to their meaning, he should at once notify the County of Napa, Public Works Department, which will send a written instruction to all bidders. Napa County will not be responsible for oral instructions.

23. **OWNER'S RIGHT TO DO WORK**

Napa County as Owner reserves the right to let other contracts in connection with this work. The Contractor shall afford other contractors on the job site reasonable opportunity for introduction and storage of their materials and execution of their work and shall properly connect and coordinate his work with theirs.

If any part of the Contractor's work depends for proper execution or results upon work of any other Contractor, the Contractor shall inspect and promptly report to the Engineer any defects in such work that render it unsuitable for proper execution and results. His failure to so inspect and report shall constitute his acceptance of other Contractors' work as fit and proper for reception of his work, except as to defects which may develop in other Contractors' work after execution of his work.

To insure proper execution of his subsequent work, the Contractor shall measure and inspect work already in place and shall at once report to the Engineer any discrepancy between executed work and contract documents.

The Contractor shall ascertain to his own satisfaction the scope of the project and nature of any other contracts that have been or may be awarded by owner in prosecution of the project to the end that the Contractor may perform this contract in the light of such other contracts, if any. Nothing herein contained shall be interpreted as granting to the Contractor exclusive occupancy at the site of project. The Contractor shall not cause any unnecessary hindrance or delay to any other Contractors working on project. If simultaneous execution of any contract for the project is likely to cause interference with performance of some other contract or contracts, the owner shall decide which Contractor shall cease work temporarily and which Contractor then shall continue or whether work can be coordinated so that the Contractors may proceed simultaneously.

24. **EQUAL OPPORTUNITY EMPLOYMENT**

During the performance of the Contract, the Contractor shall comply with all applicable laws, ordinances, regulations, and codes, including but not limited to, the following:
(a) **Non-Discrimination.** During the performance of the work required by the Contract, the Contractor and its subcontractors shall not deny the benefits thereof to any person on the basis of sex, race, color, ancestry, religion or religious creed, national origin or ethnic group identification, sexual orientation, marital status, age (over 40), mental disability, physical disability or medical condition (including cancer, HIV and AIDS), nor shall they discriminate unlawfully against any employee or applicant for employment because of sex, race, color, ancestry, religion or religious creed, national origin or ethnic group identification, sexual orientation, marital status, age (over 40), mental disability, physical disability or medical condition (including cancer, HIV and AIDS), or use of family care leave. The Contractor shall ensure that the evaluation and treatment of employees and applicants for employment are free of such discrimination or harassment. In addition to the foregoing general obligations, the Contractor shall comply with the provisions of the Fair Employment and Housing Act (Government Code section 12900, et seq.), the regulations promulgated thereunder (Title 2, California Code of Regulations, section 7285.0, et seq.), the provisions of Article 9.5, Chapter 1, Part 1, Division 3, Title 2 of the Government Code (sections 11135-11139.5) and any state or local regulations adopted to implement any of the foregoing, as such statutes and regulations may be amended from time to time. To the extent this Contract subcontracts to the Contractor work required of the County by the State of California pursuant to agreement between the County and the State, the applicable regulations of the Fair Employment and Housing Commission implementing Government Code section 12990 (a) through (f), set forth in Chapter 5 of Division 4 of Title 2 of the California Code of regulations are expressly incorporated into this Agreement by reference and made a part hereof as if set forth in full, and the Contractor and any of its subcontractors shall give written notice of their obligations thereunder to labor organizations with which they have collective bargaining or other agreements.

(b) **Documentation of Right to Work.** The Contractor shall abide by the requirements of the Immigration and Control Reform Act pertaining to assuring that all newly-hired employees of the Contractor performing any of the work under the Contract have a legal right to work in the United States of America, that all required documentation of such right to work is inspected, and that INS Form 1-9 (as it may be amended from time to time) is completed and on file for each employee. The Contractor shall make the required documentation available upon request to the County for inspection.

(c) **Inclusion in Subcontracts.** To the extent any of the work to be performed by Contractor under the Contract is subcontracted to a third party, the Contractor shall include the provisions of (a) and (b), above, in all such subcontracts as obligations of the subcontractor.

25. **COUNTY POLICIES ON WASTE, HARASSMENT, DRUG/ALCOHOL-FREE, VIOLENCE-FREE WORKPLACE.**

Contractor hereby agrees to comply, and require its employees and subcontractors to comply, with the following policies, copies of which are on file with the Clerk of the Board of Supervisors and incorporated by reference herein. Contractor also agrees that it shall not engage in any activities, or permit its officers, agents and employees to do so, during the performance of any of the services required under this Agreement, which would interfere with compliance or induce violation of these policies by COUNTY employees or contractors.

(b) County of Napa “Policy for Maintaining a Harassment and Discrimination Free Work Environment” revised effective June 20, 2017.

(c) County of Napa Drug and Alcohol Policy adopted by resolution of the Board of Supervisors on June 25, 1991 and subsequently revised effective May 1, 2009.

(d) Napa County Information Technology Use and Security Policy adopted by resolution of the Board of Supervisors on April 17, 2001. To this end, all employees and subcontractors of CONTRACTOR whose performance of services under this Agreement requires access to any portion of the COUNTY computer network shall sign and have on file with COUNTY’s ITS Department prior to receiving such access the certification attached to said Policy.

(e) Napa County Workplace Violence Policy, adopted by the BOS effective May 23, 1995 and subsequently revised effective November 2, 2004, which is located in Napa County Policy Manual Part I, Section 37U.

26. REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR.

Before starting each portion of the work, the Contractor shall carefully study and compare the Contract Documents relative to that portion of the work, shall take field measurements of any existing conditions related to that portion of the work and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating construction by the contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, any errors, inconsistencies, or omissions discovered by the contractor shall be reported promptly to the Engineer as a request for information in such form as the Engineer may require.

Any design errors or omissions noted by the Contractor during this review shall be reported promptly to the Engineer, but it is recognized that the Contractor’s review is made in the Contractor’s capacity as a contractor and not as a licensed design professional unless otherwise specifically provided in the Contract Documents. The Contractor is not required to ascertain that the contract Documents are in accordance with applicable laws, statutes, ordinances, building codes, and rules and regulations, but any nonconformity discovered by or made known to the contractor shall be reported promptly to the Engineer.

27. SUPERVISION AND CONSTRUCTION PROCEDURES

(a) Supervision and Direction of Work. The Contractor shall supervise and direct the work, using the contractor’s best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the work under the contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures. If the Contractor determines that such means, methods, techniques, sequences or
procedures may not be safe, the Contractor shall give timely written notice to the Engineer and shall not proceed with that portion of the work without further written instructions from the Engineer. If the Contractor is then instructed to proceed with the required means, methods, techniques, sequences or procedures without acceptance of changes proposed by the Contractor, the Owner shall be solely responsible for any resulting loss or damage.

(b) **Responsibility of Work.** The Contractor shall be responsible to the Owner for acts and omissions of the Contractor’s employees, subcontractors, and their agents and employees, and other persons or entities performing portions of the work for or on behalf of the Contractor or any of its subcontractors.

(c) **Subsequent Work.** The Contractor shall be responsible for inspection of portions of work already performed to determine that such portions are in proper condition to receive subsequent work.

(d) **Superintendent.** The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor. Important communications shall be confirmed in writing. Other communications shall be similarly confirmed on written request in each case.

28. **DEFECTIVE AND NONCOMPLIANT WORK**

Attention is directed to Section 5-1.30 Noncompliant and Unauthorized work and Section 5-1.39 Damage Repair and Restoration of the Standard Specifications

Per Section 5-1.30 Noncompliant and Unauthorized work of the Standard Specifications, the contractor shall correct or remove and replace work that does not comply with the Contract at contractor’s cost. County will reduce payment for non-compliant work left in place until the work has been corrected. If the contractor fails to comply promptly with an order under section 5-1.30, the County may correct, remove, or replace noncompliant or unauthorized work. The County will deduct the cost of this work from the contract.

Per Section 5-1.39 Damage Repair and Restoration of the Standard Specifications, before Contract acceptance, the contractor shall restore damaged work to the same state of completion as before the damage. The County does not adjust payment for repair or restoration that the Engineer determines was caused by the contractor’s failure to construct the work under the Contract or protect the work.

The contractor shall submit a repair or restoration work plan and scheduled for the approval of the Engineer prior to proceeding with work. The submittal must comply with the requirements in Section 4 Submittal Procedures of this Special Provisions.

29. **AUDITS/ACCOUNTING/RECORDS**

The Contractor shall maintain financial accounts, documents, and records (collectively, “records”) relating to this agreement, in accordance with the guidelines of “Generally Accepted
Accounting Principles” (“GAAP”) published by the American Institute of Certified Public Accountants. The records shall include, without limitation, evidence sufficient to reflect properly the amount, receipt, deposit, and disbursement of all funds related to the construction of the project, and the use, management, operation and maintenance of the real property. Time and effort reports are also required. The Contractor shall maintain adequate supporting records in a manner that permits tracing from the request for disbursement forms to the accounting records and to the supporting documentation.

Additionally, the County or its agents may review, obtain, and copy all records relating to performance of the agreement. The grantee shall provide the County or their agents with any relevant information requested and shall permit the County or their agents access to the Contractor’s premises upon reasonable notice, during normal business hours, to interview employees and inspect and copy books, records, accounts, and other material that may be relevant to a matter under investigation for the purpose of determining compliance with this agreement and any applicable laws and regulations.

The Contractor shall retain the required records for a minimum of three years following the later of final disbursement by the County, and the final year to which the particular records pertain. The records shall be subject to examination and audit by the County and the Bureau of State Audits during the retention periods.

If the Contractor retains any subcontractors to accomplish any of the work of this agreement, the Contractor shall first enter into an agreement with each subcontractor requiring the subcontractor to meet the terms of this section and to make the terms applicable to all subcontractors.

30. INTERPRETATION; VENUE.

(a) Interpretation. The headings used herein are for reference only. The terms of the Agreement are set out in the text under the headings. This Agreement shall be governed by the laws of the State of California without regard to the choice of law or conflicts.

(b) Venue. This Agreement is made in Napa County, California. The venue for any legal action in state court filed by either party to this Agreement for the purpose of interpreting or enforcing any provision of this Agreement shall be in the Superior Court of California, County of Napa, a unified court. The venue for any legal action in federal court filed by either party to this Agreement for the purpose of interpreting or enforcing any provision of this Agreement lying within the jurisdiction of the federal courts shall be the Northern District of California. The appropriate venue for arbitration, mediation or similar legal proceedings under this Agreement shall be Napa County, California; however, nothing in this sentence shall obligate either party to submit to mediation or arbitration any dispute arising under this Agreement.

31. SECTIONS OF THE 2018 SPECIAL PROVISIONS NOT APPLICABLE.

Section 5-1.09 “Partnersing” and all of its subparts and Section 5-1.43 “Potential Claims and Dispute Resolution” and all its subparts are hereby removed in their entirety and shall have no application apply to this Agreement.
32. **FORCE MAJEURE**

In the event the work is delayed due to causes which are outside the control of both parties and their subcontractors, consultants and employees, and could not be avoided by the exercise of due care, which may include, but is not limited to, delays by regulating agencies, wars, floods, adverse weather conditions, labor disputes, unusual delay in transportation, epidemics abroad, earthquakes, fires, terrorism, the COVID-19 pandemic or other incidence of disease or illness that reaches outbreak, epidemic and/or pandemic proportions or otherwise affects the area in which the Project is located and the Contractor’s labor or supply chain, unusual delay in deliveries, riots, civil commotion or other unavoidable casualties, and other acts of God, both parties will be entitled to an extension in their time for performance equivalent to the length of delay. Neither party will be entitled to compensation from the other for *force majeure* events.

33. **COVID-19**

Some or all of the work may be performed during a state of emergency due to the COVID-19 pandemic. Minimizing the risk of transmission among workers is essential. Contractor shall take reasonable efforts to follow these guidelines to increase hygiene on the jobsite:

(a) Add sanitary facilities (toilet and hand washing stations with soap and hand sanitizer provided). Workers should both wash their hands with soap for twenty seconds and use hand sanitizer often.

(b) Perform deep cleaning on jobsites including disinfecting handrails, doorknobs, equipment handles and tools on an accelerated basis.

(c) Instead of having group safety meetings, and to keep the suggested social distance, hold smaller individual safety meetings at the jobsite maintaining social distancing guidelines.

(d) Keep separation of at least 6 feet as feasible while on the job and always during rest and break periods and lunches; there should not be any group gatherings.

(e) Ask workers to consider bringing a lunch made at home and stay away from congested lunch trucks and coffee shops. Ask workers to try and go directly from work to home and vice versa with as little contact with the general public as possible.

(f) Ensure workers wear and utilize all safety equipment available on the jobsite. Contractors should provide all protective equipment as available.

(g) Instruct sick workers to stay at home.

(h) Remind workers not shake hands when greeting others.

(i) Remind workers not to touch their eyes, nose, or mouth with unwashed hands.
Exhibit “A”
CALIFORNIA PREVAILING WAGE REQUIREMENTS

Pursuant to California Labor Code sections 1720 and 1771, construction, alteration, demolition, installation, repair and maintenance work performed under this Agreement is subject to State prevailing wage laws. State prevailing wage laws require certain provisions be included in all contracts for public works. The Contractor and any subcontractors shall comply with State prevailing wage laws including, but not limited to, the requirements listed below.

1. Compliance with Prevailing Wage Requirements. Pursuant to sections 1720 through 1861 of the California Labor Code, the Contractor and all subcontractors shall ensure that all workers who perform work under this Agreement are paid not less than the prevailing rate of per diem wages as determined by the Director of the California Department of Industrial Relations (DIR). This includes work performed during the design, site assessment, feasibility study, and other preconstruction phases of construction including, but not limited to, inspection and land surveying work, regardless of whether any further construction work is conducted, and work performed during the post-construction phases of construction, including, but not limited to, all cleanup work at the jobsite.

1.1. Copies of such prevailing rate of per diem wages are on file at the Napa County Public Works Department and are available for inspection to any interested party on request. Copies of the prevailing rate of per diem wages also may be found at http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm. The Contractor and all subcontractors shall post a copy of the prevailing rate of per diem wages determination at each job site and shall make them available to any interested party upon request.

1.2. The wage rates determined by the DIR refer to expiration dates. If the published wage rate does not refer to a predetermined wage rate to be paid after the expiration date, then the published rate of wage shall be in effect for the life of this Agreement. If the published wage rate refers to a predetermined wage rate to become effective upon expiration of the published wage rate and the predetermined wage rate is on file with the DIR, such predetermined wage rate shall become effective on the date following the expiration date and shall apply to this Agreement in the same manner as if it had been published in said publication. If the predetermined wage rate refers to one or more additional expiration dates with additional predetermined wage rates, which expiration dates occur during the life of this Agreement, each successive predetermined wage rate shall apply to this Agreement on the date following the expiration date of the previous wage rate. If the last of such predetermined wage rates expires during the life of this Agreement, such wage rate shall apply to the balance of the Agreement.

2. Penalties for Violations. The Contractor and all subcontractors shall comply with California Labor Code section 1775 in the event a worker is paid less than the prevailing wage rate for the work or craft in which the worker is employed. This shall be in addition to any other applicable penalties allowed under California Labor Code sections 1720 through 1861.

3. Payroll Records. The Contractor and all subcontractors shall comply with California Labor Code section 1776, which generally requires keeping accurate payroll records, verifying and certifying payroll records, and making them available for inspection. The Contractor shall require its subcontractors to also comply with section 1776. The Contractor and all subcontractors shall furnish records specified in California Labor Code section 1776 on a monthly basis, both to the County and directly to the Labor
Commissioner in the manner required by California Labor Code section 1771.4. The Contractor shall ensure its subcontractors prepare and submit payroll records to the County and the DIR as required by this section.

3.1. If the Contractor or a subcontractor is exempt from the DIR registration requirement pursuant to section 9.4 below, then the Contractor or such subcontractor is not required to furnish payroll records directly to the Labor Commissioner but shall retain the records for at least three years after completion of the work, pursuant to California Labor Code section 1771.4(a)(4).

3.2. The County may require the Contractor and its subcontractors to prepare and submit records specified in section 1776 to the County and the Labor Commissioner on a weekly basis, at no additional cost to the County.

4. Apprentices. The Contractor and all subcontractors shall comply with California Labor Code sections 1777.5, 1777.6 and 1777.7 concerning the employment and wages of apprentices. The Contractor is responsible for compliance with this section for all apprenticeable occupations pursuant to California Labor Code section 1777.5(n).

5. Working Hours. The Contractor and all subcontractors shall comply with California Labor Code sections 1810 through 1815, including but not limited to: (i) restrict working hours on public works contracts to eight hours a day and forty hours a week, unless all hours worked in excess of 8 hours per day are compensated at not less than 1½ times the basic rate of pay; and (ii) specify penalties to be imposed on contractors and subcontractors of $25 per worker per day for each day the worker works more than 8 hours per day and 40 hours per week in violation of California Labor Code sections 1810 through 1815.

6. Required Provisions for Subcontracts. The Contractor shall include, at a minimum, a copy of the following provisions in any contract they enter into with a subcontractor: California Labor Code sections 1771, 1771.1, 1775, 1776, 1777.5, 1810, 1813, 1815, 1860 and 1861.

7. Labor Code Section 1861 Certification. In accordance with California Labor Code section 3700, the Contractor is required to secure the payment of compensation of its employees. By signing the Agreement, to which this is an exhibit, the Contractor certifies that:

“I am aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for workers’ compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this Agreement.”

8. Compliance Monitoring and Enforcement. This project is subject to compliance monitoring and enforcement by the DIR. The County must withhold contract payments from the Contractor as directed by the DIR, pursuant to California Labor Code section 1727.
9. **Contractor and Subcontractor Registration Requirements.** The Contractor and all subcontractors shall not be qualified to bid on, be listed in a bid or proposal, subject to the requirements of section 4104 of the California Public Contract Code, or engage in the performance of any contract for public work, unless currently registered and qualified to perform public work pursuant to California Labor Code section 1725.5. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by section 7029.1 of the California Business and Professions code or by sections 10164 or 20103.5 of the California Public Contract Code, provided the Contractor is registered to perform public work pursuant to section 1725.5 at the time the contract is awarded.

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

9.2. By submitting a bid or proposal to the County, the Contractor is certifying that he or she has verified that all subcontractors used on this project are registered with the DIR in compliance with California Labor Code sections 1771.1 and 1725.5, and the Contractor shall provide proof of registration for themselves and all listed subcontractors to the County at the time of the bid or proposal due date or upon request.

9.3. The County may ask the Contractor for the most current list of subcontractors (regardless of tier), along with their DIR registration numbers, utilized on this project at any time during performance of this Agreement, and the Contractor shall provide the list within ten (10) working days of the County’s request.

9.4. This section shall not apply to work performed on a public works project of twenty-five thousand dollars ($25,000) or less when the project is for construction, alteration, demolition, installation, or repair work or to work performed on a public works project of fifteen thousand dollars ($15,000) or less when the project is for maintenance work, pursuant to California Labor Code sections 1725.5(f) and 1771.1(n).

10. **Stop Order.** Where a contractor or subcontractor engages in the performance of any public work contract without having been registered in violation of California Labor Code sections 1725.5 or 1771.1, the Labor Commissioner must issue and serve a stop order prohibiting the use of the unregistered contractor or subcontractor on ALL public works until the unregistered contractor or subcontractor is registered. Failure to observe a stop order is a misdemeanor.
SPECIAL PROVISIONS - SECTION ‘B’
GENERAL REQUIREMENTS

1. GENERAL REQUIREMENTS

(a) LAYOUT OF WORK – The Contractor shall lay out the work as directed by the Engineer in the field.

(b) MATERIAL SAFETY DATA SHEETS (MSDS) – The Contractor shall provide MSDS for each product used on site.

(c) DAMAGES – The Contractor shall be responsible for any damages to existing facilities, utilities and roads due to causes attributable to the work, and all such damaged facilities, utilities and roads shall be repaired when directed by the Engineer and as required to place them in as good as condition as existed before commencement of the work.

(d) PUBLIC SAFETY – The Contractor shall at all times conduct his work in accordance with Construction Safety Orders of the Division of Industrial Safety, State of California, to insure the least possible obstruction to traffic and inconvenience to the general public, and adequate protection of persons and property in the vicinity of the work.

No access way shall be closed to the public without first obtaining permission from the Engineer.

The Contractor shall furnish, erect and maintain all lights, signs, barricades and barriers necessary to give adequate warning to the public at all times and shall provide such guards as may be necessary to prevent accidents and avoid damage and injury.

Should the Contractor fail to provide public safety as specified or if, in the opinion of the Engineer, the warning devices furnished by the Contractor are not adequate, the County may place any warning lights or barricades or take any necessary action to protect or warn the public of any dangerous condition connected with the Contractor’s operations and the Contractor shall be liable to the County for all costs incurred plus 100%.

Nothing in this section shall be construed to impose tort liability on the County or Engineer. Full compensation for conforming to the requirements of this section shall be considered as included in the contract prices paid for the various contract items of work and no additional compensation will be allowed.

(e) COOPERATION – The Contractor shall cooperate with the occupants of the existing facilities adjacent to the project and coordinate the work in such a manner as to minimize the disruption to the existing facilities.

Full compensation for conforming to the requirements of this section shall be considered as included in the contract prices paid for the various contract items of work and no additional compensation will be allowed.
(f) **SCHEDULE OF WORK** – The Contractor shall not obstruct the access to any other driveway within the project area without prior permission.

(g) **SAFETY** – The Contractor shall comply with all the applicable provisions of the United States Department of Labor Occupational Safety and Health Act (OSHA), State of California Division of Industrial Safety, Title 8, Safety Orders (Cal-OSHA) and any other applicable codes and regulations.

If, in the opinion of the Engineer, any operation or piece of equipment that is observed by the Engineer appears to be unsafe, the Engineer may immediately halt that portion of the work until the hazard is corrected to the satisfaction of the Engineer and no time extension or additional compensation shall be granted for the time lost due to said halting of the work.

(h) **PRE-CONSTRUCTION CONFERENCE** – Prior to the commencement of any work of any kind, the Contractor, or his authorized agent or representative shall attend a pre-construction conference with representatives of the Napa County Engineer. The conference is required to familiarize all authorized persons involved with policies, regulations and procedures and to discuss construction operations and methods in order to avoid any misunderstanding or conflicts during construction.

(i) **DISPOSITION OF REMOVED MATERIALS** – Attention is directed to section, the Contractor shall be responsible for the disposal of all surplus excavation materials off the site. The Contractor shall not dispose of any materials from demolition or removal by sale, gift or in any manner whatsoever, to the general public at the site. Disposal operations shall comply with all applicable laws and ordinances and must be approved by the Engineer.

(j) **CLEAN UP** – Clean up shall be performed to prevent accidents to personnel, protect all work in place, and to effect completion of the project in an orderly manner. Excess debris shall be removed from the work area immediately so as not to clutter the existing facilities. Access to all other properties within the project area shall be unobstructed and passable between the hours of 7:00 p.m. and 7:00 a.m. weekdays, on weekends and holidays, and whenever work is not actively in progress.

(k) **EQUIPMENT** – Standard construction equipment shall be used and shall be maintained in a safe and satisfactory condition at all times and in compliance with the latest provisions of the CAL/OSHA regulations. All trucks and other heavy equipment shall be well maintained and in proper working order and in compliance with all applicable laws and regulations.

(l) **WORKING HOURS REQUIREMENTS** – Normal work week shall be Monday through Friday 7:00 a.m. to 4:00 p.m. unless otherwise approved by the Engineer.

(m) **SCOPE** – Contractor shall take into account all costs associated with the improvements as discussed in the technical specifications, when preparing the bid and shall take into account the working hour restrictions.

(n) **LIVESCAN** – All workers shall pass a Livescan administered at the Sheriff’s facility.
SPECIAL PROVISIONS - SECTION ‘C’
TECHNICAL SPECIFICATIONS

11500 - Measurement & Payment
15050 – Mechanical General Requirements
15100 – Building Services Piping
15140 – Supports & Anchors
16000 - Electrical
SECTION 01 15 00
MEASUREMENT AND PAYMENT, PW 22-08

PART 1 - GENERAL

1.01 GENERAL

A. Unless otherwise specified in other individual sections of these specifications, quantities of work shall be determined from measurements or dimensions in horizontal planes.

B. Units of measurement shall be in accordance with U.S. Standard Measures.

C. See the Special Provisions related to progress payments and payment schedule to the contractor.

1.02 PAYMENT PROVISIONS

The contractor shall provide unit price information on the Unit Price Bid Summary Sheet.

PART 2 - MATERIALS

2.01 The measurement and payment items are listed below:

The payments to the Contractor are based on the following items. It is the intent that the scope of the description of the following items encompasses the entire scope of the work as shown on the plans and described in the specifications. The bid amounts shall be for complete in place installations.

The Contractor is reminded that written permission to dispose of any material must be obtained and delivered to the Engineer in advance of any disposal activities. Failure to do so shall result in the contractor accepting all liabilities for the material.

BASE BID ITEMS

Item 1: Mobilization Bonds, Insurance, etc…- Measurement for this item shall be on a lump sum basis and covers the cost for the contractor to mobilize, obtain bonds and insurance and also complete work shown on the plans but not covered by the other bid items in this section.

Item 2: Evaporative Condenser Repair- Measurement for this item shall be on a lump sum basis. This work covers all contractor costs for materials, equipment and labor
needed to remove, rebuild and replace both evaporative condensers including gaskets, all heat exchanger tube bundle assemblies (Energy Lab Part# HE-WO-EC090-6DN3), all four condenser motor/fan assemblies and reconnecting. This item also includes the structural improvements and the adapter frames construction and installation.

**Item 3:** Spare Circulation Pump- Aquasistemas HVAC & Fire, Motorpump, 54F Standard Fitted 2.5x2.5 BN-Carbon Seal, 6.00 Impeller Diameter, 1.5 HP TEFC Pump

**Item 4:** Spare Supply Fan VFD- 1 EACH, ABB, ACH550+VCR-045A-4+F267

**Item 5:** Spare Return Fan VFD- 1 EACH, ABB, ACH401600632

**Item 6:** Spare Condenser Fan VFD - 1 EACH, ABB, ACH401600532

**Item 7:** Spare Screw Compressor - 1 EACH, COPELAND SCA2-400E-FWD

**Item 8:** Allowance - Measurement for this item shall be on a lump sum basis. This allowance of $10,000 is not a guaranteed amount that will be paid out and is only for use on a time and material basis on work preapproved by the County. The intent for this item is to reserve funding for unforeseen conditions and only to be used for such.

**END OF SECTION 01150**
1.01 GENERAL

A. The items mentioned within this specification refer to all Mechanical Sections.

B. The Mechanical Contractor shall be the “Prime Contractor” and “Mechanical Contractor”. Therefore the term “Contractor”, “Electrical Contractor” or “Controls Contractor” also includes the Mechanical Contractor, as the Prime Contractor for the execution of this contract. What is called for by one is deemed to be called for the other as well.

1.02 SCOPE

A. The work includes, but is not necessarily limited to the furnishing of all labor, materials, equipment and services necessary for the repair of the two 90 Ton, 25,000 CFM Energy Labs C104102-FCH-I air handling units. The work in general consists of, removing the evaporative condenser and steel adapter frame they set, constructing new adapter frames out of stainless steel, reinforcing of the original structure and disassembly of the evaporative condenser to accommodate replacing the heat exchangers and fan assemblies with new components. Refrigeration reclaim, and the recharging, in addition to all associated work such as disconnecting and reconnecting electrical and water lines.

B. All cutting, patching, painting, roof repairs, controls, utilities, electrical structural, training, permitting, and all other associated work shall be included within the mechanical contract. No additional work that is part of the contract intent per the drawings and specifications shall be charged to the client. The mechanical contractor is fully responsible to complete the intent of the drawings and specification. The mechanical contractor shall field review the project related areas prior to bidding.

C. Consult all other Sections to determine the extent and character of this work specified elsewhere. The mechanical contractor upon commencing work shall have equipment ordered. The mechanical contractor shall accomplish this task by fully coordinating his work with all other disciplines.

D. Specifically refer to the following:

- Section 15100 Building Services Piping
- Section 15140 Supports & Anchors
- Section 16000 Electrical

E. Make all connection to equipment requiring removal, service, and installation from systems installed under this Section.
SECTION 15050
MECHANICAL GENERAL REQUIREMENTS

F. Startup and testing shall be completed after the repairs to confirm proper operation of condenser fans, water pumps and also correct refrigerant charge.

1.03 COORDINATION

A. Before submitting a bid for the mechanical work, the Contractor shall become familiar with the plans, specifications, and coordination required among all trades.

1.04 BUILDING LAWS

A. Mechanical work shall conform to all requirements prescribed by governmental bodies having jurisdiction in accordance with the California Building Code, National Electrical Code, California Electrical Code, California Plumbing Code, California Mechanical Code, NBFU, NFPA and California State Code Title 8, Title 21 and Title 24 Energy Conservation Standards.

B. Any part of the design that fails to comply with such requirements shall be called to the attention of the Engineer prior to submitting bid.

C. Any direct conflict between the applicable codes and the Drawings or Specifications, the more stringent requirements shall be met. Rulings and interpretations of enforcing agencies shall be considered as part of the regulations.

D. After the Contract is awarded, minor changes or additions required by the aforementioned authorities, even though such work is not shown on Drawings or covered in the Specifications, shall be included at the Contractor’s expense.

E. The contractor shall obtain and pay for all permits and fees. The Contractor shall arrange for all required inspections.

1.05 PERMITS

A. The contractor shall obtain and arrange for all required permits and inspections. The contractor shall pay for all permits.

1.06 UTILITY CONNECTIONS

A. The Contractor shall connect to all existing utilities, including any additions, revisions, and extension of the existing utilities to the new equipment. The Contractor shall also provide new shut off valves, disconnects, and fuses as required for the connections.

PART 2 – PRODUCTS
2.01 MATERIALS

A. All materials used shall be new as listed in subheadings and indicated on Drawings. Contractor shall inspect and immediately remove defective materials from the site.

B. All electrical materials shall bear the label of, or be listed by, Edison Testing Laboratories, or the Underwriters’ Laboratories, unless the material is of type for which label or listing service is not required by the code enforcing agency.

C. Substitutions:
   1. No substitute materials or equipment may be installed without the written approval of the Engineer.
   2. If the use of substitute materials or equipment requires changes in associated materials and equipment, the Contractor shall submit detail shop drawings and installation instructions of substitute materials and equipment to Engineer for approval. Such submittals shall address all changes required for the substituted items. No substitutions of equipment shall be permitted that do not conform to basic design concepts.
   3. All additional costs, whether Architectural, Structural, Mechanical, Electrical, or Plumbing, incurred by the substitution of materials or equipment, or installation thereof, shall be borne by the Contractor who substitutes the materials or equipment in place of the items specified. The Contractor shall credit the owner for all savings gained from the substitution of materials or equipment, including labor and material costs.

D. Quality of Materials: Pipe fittings, hardware and equipment may be taken from stock but the Contractor will be required to submit manufacturer’s certificates identifying the material and equipment furnished as conforming to these Specifications and such codes and standards as apply to the equipment specified. Any material on the site that cannot be identified by the manufacturer’s mark shall be removed from the site at Engineer’s request.

2.02 SUBMITTALS

A. The review of submittals and approval thereof by the Engineer does not relieve the Contractor from compliance with the provisions and intent of these specifications.

B. The engineer shall review submittals up to three times. If after the third time, the submittal is not approved, the specified equipment, with no exceptions or revisions, shall be provided.

C. Material List: List of the items of material and equipment that the Contractor proposes to use shall be submitted to the Engineer with the number of copies and within the time indicated.
D. Shop Drawings and Product Data

1. Submit six (2) copies of all required shop drawings, product data, etc…, at one time.

2. Each submittal item shall be identified by manufacturer, brand and trade name, number, size, rating and whatever other data as necessary to properly identify and check the materials and equipment. The words “As SPECIFIED” will not be considered sufficient information.

3. Each submittal shall bear the Contractor’s stamp and mark indication that he has reviewed and approved the submittal.

4. Each submitted item will refer to the Specification Section and paragraph in which the item is specified.

5. Accessories, controls, finish, etc. that are not required to be submitted or identified with the submitted equipment shall be furnished and installed as specified.

6. Submittals shall be all-inclusive with all items requiring submittals being submitted at the same time; individual submittals will not be accepted.

7. Orders for all equipment shall be placed in time to prevent any delay in construction schedule or completion of project. If any materials or equipment are not ordered in time, additional charges made by equipment manufacturers to complete their equipment in time to meet construction schedule, together with any special handling charges, shall be borne by the Contractor.

PART 3 – EXECUTION

3.01 DRAWINGS

A. The Drawings show the general arrangement and selected location of the piping, ductwork, and designed base equipment. Work shall be installed in accordance with the Drawings, except for changes required by conflicts with the work of other trades or the structure. Any changes shall be at the expense of the contractor unless approved as a change order. The Contractor shall provide for the support, expansion and pitch of any rearranged piping in conformance with the intent of the Drawings, Specifications and codes.

B. Mechanical Drawings are diagrammatic and are intended to show the approximate location of equipment and piping. Dimensions given on the plans in figures shall take precedence over scaled dimensions. All dimensions shall be field verified by the Mechanical Contractor.

C. The exact location of apparatus, equipment and piping shall be ascertained from the Engineer or Engineer’s representative in the field and work shall be laid out accordingly. Should the Contractor fail to ascertain such locations, the work shall be changed at Contractor’s own expense when requested by the Engineer. The engineer reserves the right to make minor changes in the location of piping and equipment up to the time of installation without additional cost.
SECTION 15050
MECHANICAL GENERAL REQUIREMENTS

D. It is the intention of the drawings and specifications that, where certain mechanical items such as unions, expansion joints and other mechanical components are not shown, but where such items are required by the nature of the work, they shall be furnished and installed without additional cost.

E. The mechanical drawings and specifications are intended to supplement each other. Any material or labor called for in one shall be furnished, even though not specifically mentioned in the other.

F. Pipe and duct sizes shown are the minimum allowable and shall be increased in size if required by code, or wherever necessary to meet unusual conditions.

G. The Mechanical Contractor shall secure the equipment with the same number and grade of fasteners as removed.

3.02 AS-BUILT RECORDS

A. As-Built record drawings shall be maintained at all times showing the exact location of equipment, ductwork, control panels, piping mains, branches, valves, etc. installed under all Sections. Have these drawings readily available for reference. Provide the owner with a copy of the final As-Builts.

B. Inspector’s Approval: Where a mechanical inspector working full time would be employed by the Owner, the As-Built information required during the course of construction shall have the inspector’s approval.

3.03 DAMAGE

A. Damages to the building, roof, site, premises, and equipment that may be caused by work under this Section shall be repaired by the Mechanical Contractor without change in the contract cost.

B. All damage to any part of the building or premises caused by leaks or breaks in pipe, or malfunctions of equipment specified under this Section shall be repaired by the Mechanical Contractor without change in the contract cost until the warranty period expiration date.

3.04 COMPLETE WORKING INSTALLATION

A. Drawings and Specifications do not undertake to list every item that must be installed. When an item is necessary for the satisfactory operation of the equipment, or is required by the equipment manufacturer, the Contractor shall furnish without change in Contract cost.

3.05 STORAGE
SECTION 15050
MECHANICAL GENERAL REQUIREMENTS

A. The Mechanical Contractor shall provide safe and proper protection with adequate storage of all materials, equipment, and tools that are required for this project.

3.06 DISPOSAL, INSTALLATION, AND REFRIGERATION RECLAIM

A. The mechanical contractor shall disassemble, remove and dispose of the existing equipment and provide the required refrigeration reclaim for equipment containing refrigeration gases.

B. The Mechanical Contractor shall arrange for street permits, storage, and traffic management required when removing and replacing equipment.

3.07 SCHEDULING OF WORK TO BE PERFORMED

A. The Mechanical Contractor shall schedule all work in close coordination with the owner’s representative. The project is to be completed in the shortest time frame possible once the condensing units are shut down for removal and repair. Air handling section of the unit shall continue even when the condensing sections are disabled.

3.08 QUALITY OF WORK

A. The quality of work shall be of a standard generally accepted in the respective trade. Only experienced, competent and properly equipped workers shall be used. The Mechanical Contractor shall remove and replace all work, equipment, and materials that fall below the implied standard of the drawings and specification as directed by the Engineer.

B. Systems shall be worked into a complete and integrated arrangement with like elements arranged to make a near appearing and finished piece of work with adequate head room and passageway free from obstructions. Only workmen that are experienced in the respective trades as defined by the scope of work shall be the installers for the trade-associated equipment and materials.

3.09 ELECTRICAL REQUIREMENTS – CONTROLS AND COORDINATION WITH ELECTRICAL CONTRACTOR

A. The Mechanical Contractor shall coordinate with the Electrical Contractor and Controls Contractor on furnishing and installing of controls, motors, starters, etc. Coordinate means informing Electrical Contractor of items requiring electrical connection, providing copies of submittal data, installation data, scheduling work to insure efficient progress and promptly supplying those items to be installed by Electrical Contractor. The Electrical Contractor shall provide all conduit and exposed cabling for low voltage control systems.
SECTION 15050
MECHANICAL GENERAL REQUIREMENTS

B. The specific requirements for electrical power and/or devices for each and every piece of mechanical and plumbing equipment requiring electrical service supplied and/or installed under this Contract shall be coordinated and verified with the Mechanical Drawings. In addition to the Mechanical Sections of these Specifications and with the manufacturers of the mechanical and plumbing equipment supplied. This shall include the voltage, phase, amperage, wiring, and conduit requirements, exact location and disconnect type, control and/or connection required. Any changes from the Drawings and Specifications required as a result of this coordination shall be part of this Contract.

C. Unless an item is otherwise noted within the construction documents, the Electrical Contractor shall furnish and install the following for all mechanical equipment:

1. Power wiring and conduit.
2. Manual line voltage controls, i.e., manual starters and disconnects not supplied by the Mechanical Contractor, and all connections to equipment.
3. Electrical conduit for the low voltage control wiring.

D. The work under this Section shall include furnishing and installing all controls on low [and line] voltage, including thermostats, auxiliary switches, relay wiring, interlock wiring and equipment controls panels and transformers, unless specifically indicated as part of other work. Materials and methods of the control installation shall be in accordance with the Electrical Specifications.

E. The Electrical Contractor shall review all wiring connections to equipment supplied by the Mechanical Contractor and verify that these connections are correct before permitting any connection to the equipment.

3.10 ELECTRICAL EQUIPMENT ROOM PRECAUTIONS

A. No piping, ducts or equipment or Architectural appurtenances shall be permitted to be installed in, enter or pass through the electrical rooms or spaces described in NEC 110-16. The area where no ducts or equipment can be installed shall extend 25 feet upward from the floor or to the structural ceiling.

3.11 STRUCTURAL CUTTING AND REPARING

A. Cutting not shown shall not be done without the Engineer’s approval. Cutting of structural members or fittings shall not be done without the prior written consent of the Structural Engineer.

B. Where the cutting of paving, walls, slabs, ceilings, etc; is necessary for the installation of the mechanical work. It shall be done under the direction of this
SECTION 15050
MECHANICAL GENERAL REQUIREMENTS

Section. Damage caused by this cutting shall be repaired to match original and adjacent surfaces without additional expense to the Owner.

3.12 VIBRATION CONTROL

A. Mechanical Balance: Fans, pumps, motors and drives shall be operated at normal speed within specified maximum limits

B. Field Tests: If requested, test equipment to determine compliance with specified requirements. Measure vibration displacement and velocity in vertical direction relative to floor. Make measurements on bearing housings (not end caps), or other heavy structural element directly connected to bearing housing at each end of equipment.

3.13 ACCESSIBILITY

A. General: Valves, damper operators, filters, thermometers, pressure gauges, clean-out fittings and indicating equipment or specialties requiring reading, adjusting, inspection, repairing, removal and replacements, shall be conveniently and accessibly located. Thermometers and gauges shall be installed in a location and at an angle that can be easily read from the floor.

B. Equipment Spaces: Provide aisles between equipment and ducts, electrical gear, etc. for complete service and inspection of equipment. Maintain minimum 6’-6” headroom in all access aisles. Maintain 36” clearance at all electrical service panels. Provide minimum clearances at electrical equipment per NEC.

3.14 TESTING

A. Test all piping, equipment and systems that have been affected by the repair. Notify inspection authorities prior to the test so that they may be witnessed. Protect all personnel and equipment during testing. Where Specifications do not cover specific points of methods, conform to manufacturer’s specifications.

3.15 REPAIRED EQUIPMENT

A. All equipment shall be accurately set and leveled. Supports shall be neatly placed and properly fastened. All equipment shall be fastened in place with bolts secured to structure.

B. Keep all openings closed with plugs or caps to prevent entrance of foreign matter. Protect all piping, ductwork, fixtures and equipment against dirt, water, chemical or mechanical damage, both before and after installation. Any equipment or
apparatus damaged prior to final acceptance shall be restored to original condition or replaced at the Engineer’s discretion, and at no additional cost to the Owner.

C. Start-Up: Condenser equipment shall be adjusted, lubricated, aligned, etc. prior to start-up. Inspect each piece of equipment prior to start-up. Start each piece of equipment in accordance with manufacturer’s directions and warranty requirements.

D. Finish: Protect all equipment and material. Any visible rust or corrosion below the adapter frame shall be removed and coated prior to installation of new condenser. All damaged factory-painted finishes shall be cleaned and painted.

3.16 MANUFACTURER’S DIRECTIONS

A. Materials and equipment shall be installed in accordance with manufacturer’s application and recommendations, requirements and instructions, and in accordance with Contract Documents. Where manufacturer’s instructions differ from those indicated for specified, they shall be brought to Engineer’s attention for resolution prior to equipment ordering and installation.

B. Where requirements indicated in Contract Documents exceed manufacturer’s requirements, Contract Documents shall govern.

3.17 CLEAN-UP

A. During the course of work under this Section, all rubbish, debris, surplus materials, tools and the like resulting from this work shall be removed from work area and shall be disposed of off-sit at the end of each working day. The Owner’s premises shall be left clean and in a condition acceptable to the Engineer.

A. Clean all work installed under this Contract to the satisfaction of Owner and submit documentation that each system has been cleaned and results witnessed by Engineer’s representative.

3.18 FINAL INSPECTION

A. The Contractor shall furnish the Engineer with certificates of final inspection and approval from the inspection authorities having jurisdiction.

3.19 GUARANTEE

A. The Contractor shall guarantee the quality of all work and the quality of equipment and materials in accordance with the provisions of the General Conditions and Special Conditions. Should any defects occur during this period, the Contractor
shall promptly repair or replace defective items as directed by the Engineer without cost to the Owner.

3.20 SITE VISITS BY ENGINEER

A. Mechanical Engineer’s responsibility shall be limited to normal field observation services only, consisting of office consultation, site visits and reports to the owner’s representative. All costs incurred by the Engineer for additional site visits or office work required to complete the project as the result of incomplete coordination or supervision by the Contractor, or by the mechanical sub-contractor shall be paid for by the Contractor.

END OF SECTION 15050
PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Pipe hangers and supports.
   2. Pipe and pipe fittings.
   3. Valves.
   4. Piping specialties.
   5. Plumbing drainage specialties.
   6. Plumbing supply specialties.

1.2 SUBMITTALS

A. Product Data:
   1. Pipe Hangers and Supports: Submit manufacturers catalog data including load carrying capacity.
   2. Valves: Submit manufacturers catalog information with valve data and ratings for each service.
   3. Plumbing drainage specialties: Submit manufacturers catalog information with sizes, capacities, rough-in requirements, service sizes, and finishes.
   4. Plumbing supply specialties: Submit manufacturers catalog information with sizes, capacities, rough-in requirements, service sizes, and finishes.

B. Pipe Hangers and Supports: Design data, indicate pipe sizes, load carrying capacity of trapeze, multiple pipe, and riser support hangers.

C. Manufacturer’s Installation Instructions: Submit installation instructions for material and equipment.

D. Manufacturer’s Certificate: Certify products meet or exceed specified requirements.

1.3 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: Submit spare parts lists and maintenance procedures.

PART 2 – PRODUCTS

2.1 PIPE HANGERS AND SUPPORTS

A. Plumbing Piping – Equipment Drain and Natural Gas:
   1. Install all necessary pipe hangers and supports to be spaced at a minimum of 5 feet. Roof support blocking shall be Erico (caddy) pipe per #PP-50, #PP-150, #PP-300, or as specified in construction details.
2.2 PIPES AND TUBES

A. Natural Gas Piping, above Grade:
   1. Steel Pipe: ASTM A53/A53M, Grade B, Schedule 40 galvanized, with malleable iron or forged steel galvanized fittings, screwed or welded.
   2. Copper Tubing: ASTM B88, Type K, annealed with wrought copper fittings and compression joints.

B. Equipment Drains and Overflows:
   1. Copper Tubing: ASTM B88, Type M or L, hard drawn, cast brass, wrought copper or mechanically extracted fittings, lead free solder joints.

2.3 VALVES

A. Ball Valves:
   1. Up to 2 inches: Bronze or stainless steel one piece body, chrome plated brass ball, teflon seats and stuffing box ring, lever handle, solder or threaded ends. Red & White 5044F or equivalent.
   2. Approved Manufacturers: Provide valves as from the following:
      a. Conbraco (Apollo)
      b. Grinnell
      c. Nibco
      d. Powell
      e. Stockham
      f. Watts
      g. Red-White

B. Plug Valves:
   1. Up to 2 inches: Bronze body, bronze tapered plug, non-lubricated, Teflon packing, threaded ends.

2.4 PIPING SPECIALTIES

A. Flanges, Unions, and Couplings:
   1. Pipe Size 2 inches and under: Malleable iron unions for threaded ferrous piping; bronze unions for copper pipe, soldered joints.
   2. Dielectric Connections: Union with galvanized or plated steel threaded end, copper solder end, water impervious isolation barrier.

B. Flexible Connectors:
   1. Corrugated stainless steel hose with single layer of stainless steel exterior braiding, minimum 9 inches long with copper tube ends; for maximum working pressure 500 psig or as specified in construction details.
PART 3 – EXECUTION

3.1 PREPARATION

A. Ream pipe and tube ends. Remove burrs. Bevel plain end ferrous pipe.
B. Remove scale and dirt, on inside and outside piping before assembly.
C. Prepare piping connections to equipment with flanges or unions.

3.2 INSTALLATION - PIPING SYSTEMS

A. Install dielectric connections wherever joining dissimilar metals.
B. Install unions downstream of valves and at equipment or apparatus connections.
C. Route piping parallel to building structure and maintain gradient.
D. Install piping to maintain headroom. Group piping to conserve space. Group piping whenever practical at common elevations.
E. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected equipment.
F. Provide clearance in hangers and from structure and other equipment for installation of insulation and access to valves and fittings.
G. Sleeve pipe passing through roofs, partitions, walls and floors.
H. Install piping system allowing clearance for access to valves and fittings.
I. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the work, and isolating parts of completed system.

3.3 INSTALLATION - VALVES

A. Install valves with stems upright or horizontal, not inverted.
B. Install ball or plug valves for shut-off and to isolate equipment.

3.4 INSTALLATION - PLUMBING DRAINAGE PIPING

A. Establish invert elevations, slopes for drainage to 1/4 inch per foot minimum. Maintain gradients.
B. Test drainage piping in accordance with local code requirements.
3.5 INSTALLATION - FUEL PIPING

A. Install natural gas piping in accordance with ASME B31.4.
B. Install natural gas piping in accordance with NFPA 54.
C. Provide clearance for installation of dirt legs and access to valves and fittings.
D. Test natural gas piping in accordance with NFPA 54.
E. All gas piping on roof shall be painted with rust-inhibiting paint.

3.6 INSTALLATION - PIPE HANGERS AND SUPPORTS

A. Prime coat exposed steel hangers and supports. Hangers and supports located in crawl spaces, pipe shafts, and suspended ceiling spaces are not considered exposed.

END OF SECTION 15100
SECTION 15140
SUPPORTS AND ANCHORS

PART 1 – GENERAL

1.01 SUMMARY
A. This section covers the supplying of piping supports and anchors.

1.02 DEFINITIONS
A. Terminology used in this section is defined in Manufacturers Standardization Society of the Valve and Fittings Industry, Inc. (MSS) SP-90, 'Guidelines on Terminology for Pipe Hangers and Supports'.

1.03 SUBMITTALS
A. General: Submit the following to the engineer:
   1. With bid proposal, provide six (6) copies of manufacturer's catalog cut sheets showing compliance with this specification.
   2. After bid acceptance provide six (6) originals of the following:
      a. Product data, including installation instructions for each type of support. Submit pipe support appendix showing manufacturer's figure number, size, location, and features for each required pipe support.
      b. Product certificates signed by the manufacturer of hangers and supports certifying that their products meet the specified requirements.
      c. Coordination shop drawings from manufacturer showing model number, overall dimensions, performance data, within two weeks of receipt of purchase order.
      d. Certified shop drawings from manufacturer detailing dimensions, and performance data, within one month of receipt of purchase order.
      e. Maintenance data for supports for inclusion in Operating and Maintenance Manual specified in Division 1 and Division 15 Section "Basic Mechanical Requirements."

1.04 ACCEPTANCE
A. Manufacturer's: Minimum requirements listed within are generally based on Grinnell Corp., Grinnell Supply Sales Co. Products submitted by alternate manufacturers shall be of similar design and in compliance with the appendix's that are part of Section 15140. Provide products by one of the following:
   1. Erico
   2. B-Line
   3. Grinnell Corp
   4. Mason Industries

B. Manufactured Units: Support components shall be factory fabricated of materials,
SECTION 15140
SUPPORTS AND ANCHORS

design, and manufacturer complying with MSS SP-58. For protection against moderate corrosive conditions, all parts of the base support shall be galvanized per ASTM Specification A-153, except the spring, which is neoprene coated.

PART 2 – EXECUTION

2.01 EXAMINATION

A. Examine sub-states and conditions under which supports and anchors are to be installed. Do not proceed with installing until unsatisfactory conditions have been corrected.

2.02 INSTALLATION OF HANGERS AND SUPPORTS

A. General: Install supports, clamps and attachments to support piping properly from building structure; comply with MSS SP-69 and SP-89. Install supports with maximum spacing complying with MSS SP-69.

2.03 METAL FABRICATION

A. Cut, drill, and fit miscellaneous metal fabrications for pipe supports.

B. Fit exposed connections together to form hairline joints. Field weld connections that cannot be shop welded because of shipping size limitations.

C. Field Welding: Comply with American Welding Society (AWS) D1.1 for procedures of manual shielded metal-arc welding, appearance and quality of welds made, methods used in correcting welding work, and the following:

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove welding flux immediately.
4. Finish welds at exposed connections so that no roughness shows after finishing, and so that contours welded surfaces to match adjacent contours.

2.04 ADJUSTING

A. Touch-Up Painting: Immediately after erection of supports, clean field welds and abraded areas of shop paint and paint exposed areas with same material as used for shop painting to comply with Steel Structures Painting Council (SSPC)-PA-1 requirements for touch-up of field painted surfaces. Apply by brush or spray to provide a minimum dry film thickness of 2.0 mils.

B. No work shall be done by manufacturer prior to the engineer's approval of certified shop drawings.

END OF SECTION 15140
PART 1 – GENERAL

1.01 INCORPORATED DOCUMENTS

A. All portions of the General conditions, Supplementary General Conditions, Division I, and Addenda etc., issued relation to same are a part of this Section and shall apply as though repeated herein.

B. Except as modified by the requirements herein, the electrical system shall conform to the applicable requirements of the following codes, regulations, standards and rules. Nothing contained herein shall be construed as permitting work that is contrary to these requirements.


2. Wherever the Specifications or Drawings call for material, workmanship arrangement or construction of a superior quality than is required by the above rules and regulations, the Specifications take precedence. Should there be any direct conflict between the rules and regulations and this Specification, the rules and regulations govern.

3. Provide, without any extra charge, any additional material and labor when required by the compliance with these rules and regulations, though the work may not be mentioned in these particular Specifications or shown on the Drawings. No change orders will be allowed for any misinterpretation of the requirements of these documents.

4. Comply with the manufacturer’s instructions in all cases where the manufacturer’s of equipment used in the Contract furnish information and/or instruction not shown in the Specifications.

C. Definitions:

In order to achieve simplicity in these specifications and drawings, repetitive words and phrases not contributing to clarity have been omitted.

1. “Listed”: Equipment is “listed” if of a kind mentioned in a list which:

   a. Is published by a nationally recognized laboratory which makes periodic inspection of production of such equipment.

   b. States that such equipment meets nationally recognized standards or has been tested and found sage for use in a specified manner.
2. “Labeled”: Equipment is labeled if:
   a. It embodies a valid label, symbol, or other identifying mark of a nationally recognized testing laboratory such as Underwriters Laboratories, Inc.
   b. The laboratory makes periodic inspections of the production of such equipment.
   c. The labeling indicates compliance with nationally recognized standards or tests to determine safe use in a specified manner.

3. “Certified”: Equipment is “certified” if:
   a. Equipment has been tested and found by a nationally recognized testing laboratory to meet nationally recognized standards or to be safe for use in a specified manner.
   b. Production is periodically inspected by a nationally recognized testing laboratory.
   c. It bears a label, tag, or other record of certification.

4. “Nationally Recognized Testing Laboratory”: A testing laboratory which is approved, in accordance with regulations, by the Secretary of Labor.


6. “The Engineer”: Refers to Professional Electrical Engineer or equivalent.

7. “Provide”: Construed to mean furnish (supply), install and connect complete and ready for safe and regular operation or particular work referred to unless otherwise noted.

8. “Furnish”: Construed to mean purchase, procure, acquire and deliver compete with related accessories to project site.

9. “Install”: Construed to mean to physically erect and mount the item(s) with related accessories in-place.

10. “Connect”: Construed to mean make final electrical connections for a complete operation piece of equipment with related accessories.

11. “As directed”: As told by the Owner or their authorized representative.

12. “Work”: Labor, materials, equipment, apparatus, controls, accessories, and other items required for proper and complete installation.

14. “Concealed”: Embedded in or below masonry or other construction, installed in furred spaces, within partitions, above suspended ceilings, in trenches, or in enclosures.

15. “Exposed”: Not installed underground or “concealed” as defined above.

16. “Indicated”, “shown”, or “noted”: As indicated, shown or noted on drawings or specifications.

1.02 DESCRIPTION

A. It is the intention of this Specification to provide minimum standards for electrical construction. A California licensed electrical contractor shall take responsible charge of the electrical work and verify that the existing building service and new electrical connection meets applicable codes before connecting the new HVAC unit.

1.03 RELATED WORK SPECIFIED IN OTHER SECTIONS:

A. Access door for electrical, by General Contractor.

B. Painting except for factory finished items or touch-up on factory finished items.

1.04 WORKMANSHIP

A. Workmanship shall be in accordance with the best practice of the trade and subject to the approval of the Owner.

B. The work under this Section shall include competent direction and first-class mechanics to make the installation and complete the work in conformity with the intent of the plans and specifications.

1.05 SUPERVISION

A. The Contractor shall personally or through and authorized and competent representative constantly supervise the work from beginning to completion and final acceptance. During its progress, the work shall be subject to inspection by representatives of the Owner. At such times the Contractor shall promptly furnish any required information.

1.06 LICENSES, PERMITS, FEES, AND INSPECTIONS

A. Provide, secure, and pay for all permits, licenses, fees and inspections required to begin, perform, and complete work under this section and as per GENERAL CONDITIONS.
1.07 INSPECTIONS, TESTS AND CERTIFICATES

B. Arrange and pay for all inspections, tests and certificates required for completion and approval of the work.

C. Inspect and make necessary tests which the Owner may request to insure that the electrical equipment is installed correctly and that the wiring systems are free of all shorts, grounds, and faulty connections and have insulating resistance between conductors and ground of not less than the requirements of the National Electric Code.

1.08 SAFETY

A. In accordance with generally accepted construction practices and general contractor specific safety procedures, the Contractor will be solely and completely responsible for conditions of the job site, including safety of all persons and property during performance of the work. This requirement will be applied continuously and not be limited to normal working hours.

1.09 PROTECTION OF EQUIPMENT

A. The Contractor shall be responsible for damage to any of his work before final acceptance. Securely cover all openings into conduits and cover all apparatus equipment both before and after being set into place to prevent obstructions in the conduits and breakage or disfigurement of the equipment.

B. Should the equipment become damaged or disfigured, it shall be restored to its original condition and finished before final acceptance at no expense to the Owner.

1.10 STORAGE OF TOOLS AND EQUIPMENT

A. The Contractor shall provide all temporary storerooms and shops required at the site for the safe and proper storage of materials, tools, etc., for his work. These rooms shall be constructed only in locations approved by the Owner and must in no way interfere with the proper installation and completion of other work and shall be removed under this Section within three days after having been notified by the Owner that such removal is necessary.

1.11 CLOSING IN OF UNINSPECTED WORK

A. Work under this Section shall not be enclosed or covered up until it has been inspected, tested, and approved by the Owner or authorized representative and governmental authorities having jurisdiction over the work. If any of the work is enclosed or covered up before such inspection and test, it shall be uncovered, inspected, tested, and all necessary repairs made with matching materials to restore the work to its original condition. All costs for the above work will be at the expense of the Contractor.
1.12 CUTTING AND PATCHING

A. Any cutting necessary for the installation of the work under this Section shall be done after having secured approval from the Owner. All patching shall be done to the satisfaction of the Owner.

B. Cutting of wood joists and boring or canning of holes through structural members shall be done only with the express permission of the Owner for each specific instance.

1.13 GUARANTEE

A. Per GENERAL CONDITIONS

B. In addition, furnish written guarantee that all systems are functioning properly and that all materials and workmanship are free from defects.

1.14 CLEANING EQUIPMENT AND PREMISES

A. The premises and all parts of the building shall be kept free from any accumulations of dirt, waste, materials, or rubbish caused by work under this Section. Remove such accumulations from the premises when directed.

B. All exposed equipment and piping to be painted shall be thoroughly cleaned of cement, rust, plaster, grease, and oil.

C. Thoroughly clean all equipment upon completion of the installation.

1.15 PRELIMINARY OPERATIONS

A. Should the Owner request that any portion of the systems or equipment installed under this Section be operated previous to the final completion and acceptance of the work, such operation shall be with the consent and under the direct supervision of the Contractor.

B. Such preliminary operation shall not be construed as an acceptance of any of the work of this Contract.

1.16 FIRE PREVENTION

A. All operations under the contract shall be so performed that no fire hazards are needlessly created or permitted to exist, and particular care shall be exercised with regard to the disposition of waste materials, the nature and quantity of which might create or increase a fire hazard.
SECTION 16000
ELECTRICAL

1.17 MATERIAL SUBSTITUTION

A. Where materials, equipment, apparatus, or other products are specified by manufacturer, brand name, type, or catalog number, such designation is to establish standards of desired quality and style and shall be the basis of the bid. Material so specified shall be furnished under the Contract unless a change is authorized in writing. Acceptance or rejection of the proposed substitutions shall be subject to approval of the Owner. If requested by the Owner, the Contractor shall submit for inspection samples of both the specified and proposed substitute items.

1.18 EXAMINATION OF SITE

A. Examine the site premises and all related plans and specifications prior to bidding, to determine the conditions under which the work is to be performed. No allowances will be made for extra expense incurred due to failure to examine the premises or to discover site conditions which affect the work.

1.19 DRAWINGS AND MEASUREMENTS

A. The drawings are diagrammatic and are for the assistance and guidance of this section. The exact locations, distances, elevations, etc., will be governed by the buildings and by the actual field conditions.

B. Drawings shall be followed as closely as actual construction of the buildings and work of other trades will permit. Any changes from the drawings necessary to make the work conform with the buildings as they are actually constructed or fit the work of other trades or to conform to the rules of inspecting bodies having jurisdiction shall be made at no cost to the Owner.

C. Verify all measurements at the building for the correctness of all dimensions. No extra compensation will be allowed for any differences between actual dimensions and those shown or scaled on the plans.

D. Obtain from other sections, all information regarding centers of walls. Partitions, locations of electrical motors, and other work in order that work under this Section may be placed in the correct locations.

1.20 CONFERENCE WITH OWNER’S

A. Confer with Owner’s representative to confirm exact locations, mounting, heights and arrangements of all finish work prior to roughing-in. Minor relocations and rearrangements of the work requested at this time shall be included at no additional cost to Owner.
1.24 QUALIFICATIONS OF WORKMEN

A. Use only qualified, thoroughly trained workmen for the work of this section. In accepting or rejection of the finished work, no allowances will be made by Owner for lack of skill on the part of the workmen.

1.25 QUALITY ASSURANCE

A. Acceptable Manufacturers: Where multiple listing occurs, the Contractor may select equal products of any one of the manufacturers named. Acceptance of manufacturers proposed to be used, but not named, shall be obtained in accordance with requirements of Division No. 1, and this Section.

1. Material and equipment shall be ETL or UL listed, labeled or certified where such standards have been established. Equipment and material covered by ETL or UL will be accepted provided equipment and material is listed, labeled, certified or otherwise determined to meet safety requirements of a nationally recognized testing laboratory. Equipment of a class which no nationally recognized testing laboratory accepts, certifies, lists, labels, or determines to be safe will be considered, if inspected or tested in accordance with national industrial standards, such as NEMA, IPCEA or ANSI. Evidence of compliance shall include certified test reports and definitive shop drawings.

2. Materials and equipment furnished shall be of current production by manufacturers regularly engaged in manufacturing of such items, for which replacement parts shall be available. Items not meeting this requirement but which otherwise meets technical specifications and merits of which can be established through reliable test reports or physical examination of representative samples, will be considered.

3. When more than one unit of the same class of equipment or material is required, such units shall be the products of a single manufacturer.

B. Acceptance tests as herein specified are defined as those tests and inspections required to determine that equipment involved may be energized for final operations tests. Final acceptance will not only depend on equipment dependability, as determined by subject tests, but will also depend on complete operational tests on electrical equipment to show that equipment will perform functions for which it was designed. These specifications intend that workmanship, methods, inspections, and materials used in erection and installation of subject shall conform to accepted engineering practices, IEEE Standards, the NEC, and more specifically these specifications for electrical work and manufacturer’s instructions.
C. Demonstration of Complete Electrical System:

1. Contractor shall be responsible for notifying local authority having jurisdiction in order that local inspection may be carried out at the proper stage.

1.26 SUBMITTALS

A. The following submission items shall be delivered to the Owner for review. These items must be presented in a timely manner and in this prescribed sequence in order to insure an orderly transfer of information and review time and cause no delay in the work of this Section or in the work of any other contractor. Refer to Supplementary Conditions for number of copies to be submitted.

1. Material list within 15 days after award of contract. Submit 3 copies. All re-submittals, changes and acceptances must be completed within the next 30 days.

2. Shop drawings, product data, and samples in accordance with Division 1 within 30 days. Submit the number of copies which the contractor requires, plus two copies which will be retained by the Owner. Submit the number of samples as requested. All re-submittals, changes and acceptances must be competed within the next 45 days.

3. Operation/Maintenance Manual within 30 days after owner has been issued Certificate of Occupancy.

4. Record drawings with 30 days after completion of the project. All corrections, changes and final acceptance within the next 30 days.

5. Each required submittal shall be complete. If not complete the review of a partial submittal is requested subsequent submittal reviews shall be paid for by the contractor.

1.27 MATERIAL PRODUCT LIST

A. Submit a list of material with manufacturer’s names that are intended to be used on this project. This submittal shall be made within the time set forth in Paragraph “A”, Section 1.26.

B. Each submittal shall be accompanied by a cover letter or shall bear a stamp stating that the submittal has been reviewed by the contractor and is in compliance with the requirements of the Contract Documents. Cover letters shall list in full the items and data submitted.

C. Submittals shall consist of detailed shop drawings, specifications, “catalog cuts”, and data sheets containing physical and dimensional information, performance data, electrical characteristics, materials used in fabrication, material finish, and shall
clearly indicate those optional accessories which are included and those which are excluded.

D. The list shall include, but not be limited to these major items:

1. Wire
2. Conduit/Raceway
3. Fittings
4. Open-type and enclosed thermal-magnetic molded-case circuit breakers.

E. Contractor’s Options:

1. For products specified only by reference standard, select any product meeting that standard.
2. For products specified by naming several products or manufacture’s, select any one of the products or manufacturers named, which complies with the specifications.
3. For products specified by naming one or more products or manufacturers and “or equal”, contractor must submit a request as for substitutions for any product or manufacturer not specifically named.
4. For products specified by naming only one product and manufacturer, there is no option.
5. Engineer and Owner shall be the judge of the acceptability of the proposed substitution.

1.28 SHOP DRAWINGS

A. Shop Drawings are drawings, diagrams, schedules and other data specifically prepared for the work by the contractor or any subcontractor, manufacturer, supplier or distributor to illustrate some portion of the work in this section.

B. Identify details on Shop Drawings by reference to sheet and detail numbers of Contract Drawings and/or specific reference sections and paragraphs of the specifications.

C. This submittal shall be made within the time set forth in Paragraph “A” Section 1.26.

D. Contractor Responsibilities:

1. Review shop drawings, prior to submission to the Owner. Stamp and date upon completion of review.
SECTION 16000
ELECTRICAL

2. Determine and Verify:
   a. Field measurements
   b. Field construction criteria
   c. Catalog numbers and similar data
   d. Conformance with specifications

3. Coordinate each submittal with requirements of the work and of the contract documents

4. Notify the engineer in writing, at the time of submission, of any deviations in the submittals from requirements of the contract documents.

E. Resubmission Requirements:
   1. Make any corrections or changes in the submittals required by the Owner and re-submit.
   2. Shop drawings and/or Product Data:
      a. Revise initial drawings or data, and re-submit as specified for the initial submittal.
      b. Indicate any changes which have been made other than those requested by the Architect.
   3. Samples: Submit new samples as required for initial submittal.

F. Record Drawings: Provide and maintain from the start of electrical construction a complete set of electrical contract drawings to be used solely for annotation the as installed condition. The following information is required to be drawn upon said drawings on a daily basis:
   1. All Changes, revisions and deviations from the original drawings and specifications.
   2. Exact location, sizes and kinds of materials noted if different than that which is shown on the originals.

The record drawing set of contract drawings shall be used only for this purpose; separate from the drawings normally used in the construction process.

The drawings will be kept on a daily basis: failure to do so will be grounds for withholding final payment. The drawings shall be available at all times for inspectors at the job site.
At the completion of the project the contractor shall provide one set of reproducible electrical drawings (or the original tracings) on which this information from the field drawings shall be transferred.

These permanent reproducibles and the field drawings shall be delivered to the owner within 30 days after completion of project prior to receipt of final acceptance and payment.

1.29 GUARANTEE

A. All work done and materials installed under these plans and specifications shall be repaired or replaced as may be necessary for any defective work, material or part which may show itself within one (1) years of the date of final payment if, in the opinion of the owner, said defect is due to imperfections of workmanship or material. This guarantee must be submitted in writing and accepted by the owner before the date of final payment. On failure to comply with the above guarantee within a reasonable time after notification is given, owner may proceed to have the repairs made at the contractor’s expense.

B. Nothing in the above paragraph shall be construed to contradict the requirements of the General Conditions, and Addenda etc. issued by the owner relating to this projects guarantee’s.

1.30 NAMEPLATES AND SCHEDULES

A. Nameplates shall be made of 1/16” thick engraving laminated plastic with 1/4” letters machine engraved through black facing to white core. Provide nameplates for apparatus used for the control of electrical equipment, and breakers in switchboard.

1.31 GROUNDING

A. All electrical equipment shall be grounded in accordance with the National Electrical Code and all local codes and requirements.

B. Provide green copper ground wire in all conduits from ground bus in each switchboard or panelboard to ground connections in all electrical and mechanical equipment. Sizes per Code.

1.32 DAMAGE AND RESTORATION

A. The Contractor shall be responsible for damages to his work during construction and until expiration of the guarantee period, effects of normal usage excepted. Repair all damage due to faulty workmanship, material, equipment, leaking pipes, or other like causes. All damaged portions of the building, existing or new, surface or improvements, furnishings, equipment, or material shall be restored to its original condition.
PART 2 – PRODUCTS

2.01 FITTINGS

A. Wire and Cable

1. Manufacturers: Rome, General Cable or Anaconda or equivalent.

2. Conductors: Soft-drawn copper with 600 volt insulation: #12 AWG minimum. (Use #10AWG minimum for branch circuit runs over 100’). All wire and cable shall be copper. No aluminum will be allowed. (No substitutions).

3. Insulation types:
   a. #8 AWG and smaller TW, THWN, XHHW or THHN as required. Stranded for #8 and larger, Stranded may be used for #10 and smaller. (Use THHN where permitted in raceways with more than 6 conductors for derating purposes unless a larger wire is indicated and the use of THHN is not necessary).
   b. #6 AWG or larger – THW, RHW, XHHW, THWN, THNN or as noted.
   c. Exterior-subject to wet conditions, THWN or XHHW 600 volt.

4. Splicing insulation: Scotch Brand #33 electrical tape. All splices in boxes in contact with earth shall be Scotch Scotchcast; or for in line splicing, Scotch PST Cold Shrink Connection Insulators.

B. Lugs and Connectors

1. #8 AWG and Larger: Thomas and Betts “Loch-Tite” or Burndy “Quicklug”. Split-bolt type with plastic caps.

2. #6 AWG and smaller: Scotch “Scotchlok” with insulator, Thomas and Betts, “Sta-kon” with insulator or Buchanan, Series 2002 with insulator.

3. Cable Taps #1 AWG and larger: OZ type PT/PTC.

4. Wet locations splices for power cables shall be moisture proof and installed with the following Scotch Cast Kits, 3M Company:
   a. Branch circuits #12 to #6 gauge, Scotchlok Connector Seal Packs #3576, #3577, or #3578.
   b. Four (4) layers of protective taping shall be applied, Scotch #33 @1/2 lap, One layer of Scotchkote waterseal shall be applied.
5. Provide ground rods where required, 1” in diameter by 10 feet long by Copperweld.

C. Plates:

1. Provide metal cover plates, noncombustible, mar-resistant thermosetting 0.100” thick and of plain style by P&S, Sierra Series or equal. Devices shall match the plates.

2. On cast boxes: Aluminum plates with rounded or beveled edges. Crouse Hinds.

3. Watertight plates: Shall be gasketed with threaded hub and mating threaded watertight plug housing. Crouse Hinds or Appleton.

D. Junction and Pull Boxes: Use standard outlet boxes where possible. If not possible, use code-gage, sheet steel box with screwed-on cover to suit. Paint one (1) coat primer and two (2) coats of ASA #49 gray baked enamel. Attach junction box covers with cadmium-plated machine screws at 6” o.c. maximum. For indoor installation the box shall be NEMA type 1. For outdoor installation, the box shall be NEMA type 3R.

E. Enclosed or open-type circuit breakers:

1. Molded case, quicklag bolt-on quick-make/quick break thermal magnetic, with on and off, tripped positions.

2. Breaker identification: Provide a permanently fixed number of each circuit breaker either engraved or stamped in the panel front or napped into the body of the circuit breaker. Stick-on numbers are not acceptable.

3. Engraved nameplates: enclosed circuit breaker used for operation and control of circuits, appliances and equipment shall be identified in white letters on a black background.

4. Provide lock off provisions on breakers as required by Code. If handle ties and provision for lock-offs are not compatible, install multiple pole breakers for the applicable circuit breakers.

5. Molded case circuit breakers installed in the panelboards shall meet the requirements of NEC Article 348-16© with regards to the limits of loading in a panelboard.

PART 3 – EXECUTION

3.01 SURFACE CONDITIONS
Prior to the work of this Section, carefully inspect the installed work of other trades and verify that all such work is complete to the point where this installation may commence. Verify that the completed electrical installation will be in strict accordance with all pertinent codes and regulations, will conform with the manufacturer’s recommendations for installation of the electrical items involved, and will conform with the original design. In the event of discrepancy, immediately notify the Architect and proceed as directed.

3.02 COORDINATION

A. Coordinate the installation of electrical materials with the schedules for work of other trades, and properly locate and size all openings, chases, cutting sleeves, etc., sufficiently in advance to prevent delay of the work.

B. Existing site conditions, locations and services and all requirements of the serving utilities shall be coordinated with the drawings and specifications. These conditions and requirements shall be included under this Section of the work.

C. Become thoroughly familiar with the architectural, structural, plumbing and mechanical drawings (existing or new) and adjust work to conform with the conditions shown on these drawings and with the work as installed by other trades. Obtain necessary information from the other trades regarding the location of piping, ductwork, and equipment requiring electrical service so that the conduits, circuit breakers and junction boxes can be properly located. No extra compensation allowed for extra work resulting from lack of coordination with others or failure to verify locations and measurements on the job. Repair all damages to premises due to untimely installation.

D. Conflicts within or between the drawings and specifications shall be referred to the Engineer for clarification before the work is installed. Contractor shall bear costs of delay due to unresolved conflicts.

3.03 GENERAL INSTALLATION REQUIREMENTS

A. Comply with the standards and the installation instructions of the manufacturers of all materials and equipment used, where dimensions or specific installation and operating instructions are not provided in the drawings or specifications. Conflicts between the manufacturer’s recommendations and the drawings or specifications shall be brought to the attention of the Engineer prior to bid opening and resolved before the project is deemed acceptable.

B. Circuiting: Branch circuit wiring and arrangements of home runs have been designed based upon information available. Deviations may be permitted if accepted by the Engineer.

C. Supports: Fabricate supports for conduits and electrical equipment of structural steel, or where applicable of structural systems such as “Unistrut” or Kin-Line, Inc.
D. Painting: All equipment and conduit supports, fabricated of structural steel, shall receive shop coat of “Pabco” No. 7356 zinc-dust, zinc-oxide metal primer. After erection and welding is completed, all structural steel supports shall be given a touch-up coat of paint specified for shop painting. All welds, bolts and spots where shop coating is damaged or removed shall be touched up to match shop coat.

E. Welding: Welding shall be done by the electric ARC process by welders which are fully qualified for this work. Where brackets are welded to structural steel, the prime coat of paint on the steel shall be scraped away from the area in which the welding is to be done.

3.04 INSTALLATION OF EQUIPMENT

A. Mount and attach all electrical equipment to structure in accordance with NECA standards. Securely fasten all equipment to withstand seismic acceleration.

B. Maintain minimum clearances as required by code and the utility company.

3.05 INSTALLATION OF ELECTRICAL EQUIPMENT

A. Installation of raceways and fittings

1. General:
   a. Conceal all conduit in wall and ceiling spaces unless otherwise indicated on drawings. Provide sleeves and chases where raceways pass through floors or walls. Keep raceways within furring lines established on the drawings unless shown exposed. Avoid obstruction of openings, passageways and required clearances. Route conduits to avoid conflicts with ducts, piping, light fixtures, etc. Locate all additional openings and spaces required and coordinate in time to avoid unnecessary cutting.
   b. Where conduit is allowed to be exposed, install parallel with, or at right angles to, structural members, walls, and lines of the building. Parallel raceways shall run straight and true with offsets uniform and symmetrical. Follow same routing criteria for cable with “J” hooks.
   c. Ream all conduits after cutting.
   d. All conduits shall clear hot water pipes by at least 3” perpendicular and 12” parallel.
   e. Keep ends of all conduit closed with approved conduit seals during construction. Immediately prior to pulling cables, draw a
SECTION 16000
ELECTRICAL

swab through all conduits to force our water and foreign materials. Use conduit unions where union joints are required. Do not use running threads.

f. No wire pulled in conduit without insulated throat connectors or bushings being in-place

g. Electrical equipment ground continuity shall be maintained in all metallic conduits, or a ground wire installed within the conduit.

2. Connections:

a. Raceway termination at boxes and cabinets shall be secured with locknuts and insulated bushings.

b. Expansion or deflection fittings: OZ type DX where required at expansion, separation or vibration isolating joints. Refer to Structural Drawings where such joints in the structure occur.

B. Groundings:

1. All raceways, devices, junction boxes, motors and equipment enclosures shall be permanently and effectively grounded, in accordance with NEC, California Title 24 and local codes.

a. Connection of ground wires; Use ground clamps for connection to water pipe. For other ground connections use a weld by “Thermite” of Cadweld or other method acceptable to local inspector. Ground connection points shall be accessible.

b. Ground claps and lugs per code and local requirements by T&B or Burndy.

c. Where it is not possible to effectively ground panel boxes, the conduit shall be bonded around the boxes with #10 wire and grounding bushings.

d. Ground Gas and water piping per NEC 250-80.

e. Equipment ground continuity shall be maintained. Use bonding jumpers at boxes and equipment enclosures, etc., including all feeders.

2. Receptacles bonded in accord with Article E250-74 of Title 24, State of California Administrative Code.

3. All ground wire copper only, color coded green.

4. All grounding shall be in strict compliance with City requirements.
C. Installation of Conductors and Wiring Devices:

1. Conductor tagging:
   a. Tag conductors at enclosed circuit breakers, motor controls and junction boxes with pre-marked plastic type, Brady “Quicklables”. Tag circuits to agree with panel directory circuit number. Tag circuits which pass through other devices, i.e., “E-12 Exterior Circuit breaker”, etc.

3.06 FIELD QUALITY CONTROL

A. General:

Arrange for and conduct all tests and reviews required by codes, ordinances and these specifications. Provide all equipment and personnel necessary to conduct the tests and reviews. Notify the Owner four (4) working days in advance so that the inspector may be present.

B. Tests:

1. Cable Tests: Test all cable (not branch circuit wiring) as it is installed, after splicing and termination, with a Megger. Replace conductors for which measured resistance is below the minimum established by the NEC. Test all circuits for proper neutral connections.

2. Ground and short tests: Test for grounds and shorts at: Panels, individual branch circuits, feeders and main switch board.

3.07 CLEANING AND ADJUSTMENTS:

A. Cleaning:

1. Upon completion of the work of this section, thoroughly clean all exposed portions of electrical installation, removing all traces of soil, grease, oil, paint and other foreign matter using only the type cleaner recommended by the manufacturers.

2. Equipment:
   a. For items with factory finish, remove all plaster, rust, dirt, wire ends and other debris from inside equipment before installing in panels. Clean and polish all finished surfaces. Parts with damage to factory finish shall be returned to the factory for refinishing.

3. Removal of rubbish:
SECTION 16000
ELECTRICAL

a. Remove from the site all packing cartons, scrap or surplus materials and other rubbish, incidental to the work under this section and leave the premises in a condition acceptable to the Owner. Insofar as possible, rubbish shall be removed as produced during the progress of the work.

B. Adjustments:

1. Adjust apparatus and equipment as required so that it operates in accordance with the requirements of this Section and with applicable manufacturer’s instructions.

3.08 PROJECT COMPLETION:

A. Prior to completion, thoroughly familiarize with all aspects of operation and maintenance of the electrical systems.

B. Submit the following in accordance with Supplementary Conditions:

1. Certificates of inspection and approval when required by all authorities having jurisdiction.

2. Voltage check report.

3. Operation/Maintenance Manual: Retain until completion of the work all portable and detachable portions of the installation such as: instruction books, wiring and connection diagrams, service manuals, keys, catalog sheets, etc. Upon completion of the installation and as a condition of its acceptance, compile a Manual and deliver to Owner. The Manual shall contain:

   a. Copy of all conductor termination torque values (Manufacturer’s Recommendations) and statement that all terminations were made in compliance with these values.

   b. Identification, readable from outside the cover, stating: “Electrical installation, by (name of Company).

   c. Typewritten index near front of Manual, furnishing immediate information as to location in the Manual of all emergency data for the installation.

   d. Complete instructions regarding the operations and maintenance of all equipment involved.

   e. Complete nomenclature of all replaceable parts, their part numbers, current cost and name and address of the nearest vendor of replacement parts.
f. Copy of all guarantees and warranties issued on the installation, showing all dates of expiration.

END OF SECTION 16000