

THE BOARD OF SUPERVISORS OF THE COUNTY OF STANISLAUS  
ACTION AGENDA SUMMARY

DEPT: General Services Agency

BOARD AGENDA # \*B-8

Urgent  Routine

AGENDA DATE April 28, 2015

CEO Concurs with Recommendation YES  NO   
(Information Attached)

4/5 Vote Required YES  NO

SUBJECT:

Approval to Award a Contract to Bay City Boiler & Engineering Co., Inc. for Boiler Repair and Refurbishment at 830 Scenic Drive, Modesto

STAFF RECOMMENDATIONS:

1. Award a contract to Bay City Boiler & Engineering Co., Inc. for boiler repair and refurbishment at the Health Services Agency, 830 Scenic Drive, Modesto, in the amount of \$222,672.
2. Authorize the Purchasing Agent to execute the contract with Bay City Boiler & Engineering Co., Inc. and to sign any necessary documents on behalf of the County.
3. Authorize the Purchasing Agent to execute change orders in accordance with Public Contract Code Section 20142.

FISCAL IMPACT:

The total amount of the proposed contract is \$222,672. Funds to support this project are available in the Deferred Maintenance program and have been included in the Plant Acquisition budget approved by the Board as part of the Fiscal Year 2014-2015 Final Budget. There are sufficient funds in the Plant Acquisition budget to support the Deferred Maintenance program.

BOARD ACTION AS FOLLOWS:

No. 2015-184

On motion of Supervisor De Martini, Seconded by Supervisor Chiesa

and approved by the following vote,

Ayes: Supervisors: O'Brien, Chiesa, Monteith, De Martini, and Chairman Withrow

Noes: Supervisors: None

Excused or Absent: Supervisors: None

Abstaining: Supervisor: None

1) X Approved as recommended

2) \_\_\_\_\_ Denied

3) \_\_\_\_\_ Approved as amended

4) \_\_\_\_\_ Other:

MOTION:



ATTEST: CHRISTINE FERRARO TALLMAN, Clerk

File No.

**DISCUSSION:**

Stanislaus County Health Services Agency, (HSA), located at 830 Scenic Drive in Modesto, California currently has two Apache steam boilers, model number 9-5-1500, which were installed on campus in 1978 and 1979. These boilers provide heat for 70% of the campus.

Boiler Unit 1 no longer meets San Joaquin Valley Air Pollution Control District, (ACPD) NOx emission requirements and may no longer be utilized in its current state, unless pre-approved by the San Joaquin Valley Air Pollution Control District on an emergency basis. The County could be subject to fines for the use of Boiler Unit 1, even on an emergency basis.

General Services Agency (GSA) – Facilities Maintenance has determined that installation of a new burner assembly and a control head in Boiler Unit 1 would bring Boiler Unit 1 back into compliance. Upon completion of the project, the County will apply for re-permitting the boiler with the ACPD.

Boiler Unit 2 is currently in use and provides heating for most of the HSA Campus. Boiler Unit 2 currently has a John Zinc brand burner assembly, which will remain in place and act as back-up for Boiler Unit 1, should there be issues in the future. Cost to refurbish Boiler Unit 2 is higher than refurbishing Boiler Unit 1, and is not necessary, at this time. The selected Contractor will provide all material and labor to clean and recondition this boiler as per the scope of work listed below.

High-pressure Boilers #3 and #5 provide steam for the sterilization unit in the hospital. Without sterilization, HSA is unable to necessary laboratory testing. Both units need to be re-tubed and brought back into manufacturer's specifications. Only one high-pressure boiler will run at any one time while the other unit will remain as a backup.

The Deaerator (DA) tank is utilized by the boilers to remove all air from the system, which causes corrosion/rust damage. There are several leaks in these tanks, which shall be identified and repaired by the Contractor.

The County has experienced ongoing issues with these boilers, requiring frequent maintenance and unplanned repairs. Even minor adjustments to the boilers require regular attention from FMD staff. If approved, the new boilers will meet current ACPD requirements for performance and energy efficiency, and will reduce the emission of greenhouse gases.

GSA posted Invitation for Bid #15-11 MP Boiler Project for County's Health Services Agency ("Bid") on March 5, 2015, which was downloaded by 7 vendors. On March 12, 2015, a mandatory pre-conference was held, with three vendors in attendance. When bidding closed March 30, 2015, the GSA received responses from two bidders:

Approval to Award a Contract to Bay City Boiler & Engineering Co., Inc. for Boiler Repair and Refurbishment at 830 Scenic Drive, Modesto  
Page 3

<b>Vendor</b>	<b>Bid Amount</b>
Bay City Boiler & Engineering Co., Inc.	\$222,672
California Boiler of Huntington Beach, CA	\$260,119

Bay City Boiler & Engineering Co., Inc. is the lowest responsive, responsible bidder. On April 1, 2015, GSA issues a Notice of Intended Award to Bay City Boiler & Engineering Co., Inc. and Notices of Non-Award to the other bidder. No letters of protest were received during the five-day protest period of the bid process.

All demolition, new materials, and construction, including electrical, plumbing modifications, and incidental materials, will be provided, installed and guaranteed by Bay City Boiler. Project management will be performed by GSA. All work is to be completed within thirty working days.

The proposed agreement with Bay City Boiler & Engineering Co., Inc. will be effective with Board approval, and completion is anticipated on/or before June 10, 2015. If approved, the contract award will provide HSA with an updated boiler system that will provide the staff and hospital with an efficient heating and hot water system.

This project is exempt from the California Environmental Quality Act (CEQA) under Title 14, Section 15301 (operation, repair, maintenance or minor alteration of existing structures or facilities) of the California Code of Regulations.

**POLICY ISSUE:**

Approval to award this agreement supports the Board's priority of Efficient Delivery of Public Services by providing cost-effective heating and hot water service to the HSA.

**STAFFING:**

Existing GSA staff will assist with project management and coordination of this deferred maintenance project.

**CONTACT:**

Keith Boggs, GSA Director/Purchasing Agent. (209) 652-1514  
Scott Shook, Facilities Maintenance Manager. (209) 652-0480

**ATTACHMENT:**

Agreement

**AGREEMENT**  
**(Public Works of Improvement)**

This Agreement, made this \_\_\_\_\_, 2014, by and between BAY CITY BOILER & ENGINEERING CO., INC., a California Corporation, (the "Contractor") and the COUNTY OF STANISLAUS (the "County").

ARTICLE I

The Contractor will provide all the materials, tools, equipment and labor to perform all the work necessary to complete in a good workmanlike manner:

**BID NAME: Boiler Project for County's HSA**  
**BID NO. #15-11 MP**

As set forth in the Bid of the Contractor and in accordance with the above-noted Invitation for Bid and related Notice to Bidders, Information for Bidders, General Conditions, plans and specifications, bonds, addenda, and any documents particularly required or provided, all of which are attached hereto and made a part hereof. All of the foregoing documents, together with this Agreement, comprise the contract.

ARTICLE II

All of the work included in this contract shall be performed under the direction of the County, and in conformity with the true construction and meaning of the Contract, as determined solely by the County.

ARTICLE III

No alterations in the work shall be made except upon written order of the County. The amount to be paid by the County or to be deducted from the Contract price by virtue of such alterations shall be stated in said order and shall be approved in writing by the County and the Contractor.

Changes, additions, and alterations in the work, which do not exceed \$500.00, may be ordered in writing by the Purchasing Agent of the County of Stanislaus. All other changes, additions, or alterations in the work shall be by order of the Stanislaus County Purchasing Division of the County of Stanislaus.

ARTICLE IV

The Contractor shall commence the work within **ten (10) working** days after the date specified in the Notice to Proceed given with respect to each project identified in Article V below, and shall prosecute said work in a prompt, diligent and workmanlike manner. The Contractor shall complete all work within

**Sixty (60) Working Days.**

of the date of the Notice to Proceed issued for such Project, unless extension or suspension of the work is agreed to in writing by the County. Time is of the essence in this Agreement.

ARTICLE V

The County agrees to pay and the Contractor agrees to accept in full payment for the work:

**BID NAME ESTIMATE**

<b>PROJECT</b>	<b>UNIT OF MEASURE</b>	<b>NORMAL HRS BASE PRICE</b>	<b>PROJECT TOTAL</b>
1	830 Scenic Drive – Boiler Project Complete project scope of work: <b>NORMAL BUSINESS HOURS</b>	1 EA.	\$222,672.00

CONTRACT TOTAL      \$222,672.00

The County shall pay to the Contractor in due course and at the usual time for payment of County obligations after the last day of each month, ninety-five percent (95%) of the cost of the work completed and material properly stored on the job site, which cost shall be determined by the County. A final payment of five percent (5%) of the contract price shall be due the Contractor 35 days after acceptance of the work, provided that the Contractor

furnishes to the County satisfactory evidence that all obligations for labor and materials have been satisfactorily fulfilled within the said 35 day period, and further provided that no payment shall be construed to be an acceptance of defective work or improper materials.

Except as otherwise prohibited by law, the Contractor may elect to receive all payments due under the contract pursuant to Section 2.15 of the General Conditions of the contract documents without any retention. If the Contractor so elects, he shall deposit with the County securities with a value equal to the monies, which would otherwise be withheld by the County. Said securities shall be as provided in Section 22300 of the Public Contract Code and shall be approved by the County as to both sufficiency and form.

#### ARTICLE VI

Prior to commencing the work, the Contractor shall file a bond issued by a surety company, approved by the County, and in the form acceptable to the County in the amount of one hundred percent (100%) of the contract price for the faithful payment and satisfaction of all lawful claims of all persons for labor and materials furnished in the prosecution of the contract work. Prior to commencing the work, the Contractor shall file a bond issued by a surety company, approved by the County, and in the form acceptable to the County in the amount of one hundred percent (100%) of the contract price to guarantee the faithful performance of the contract.

#### ARTICLE VII

The Contractor shall take out, and maintain during the life of the contract, insurance policies as described in Section 2.16 of the General Conditions of the contract documents.

#### ARTICLE VIII

The Contractor shall indemnify, defend, and save harmless Stanislaus County and all officers and employees thereof connected with the work from all claims, suits or actions of every name, kind and description, brought forth or on account of injuries to or death of any person, including, but not limited to, workmen and the public, or damage to property resulting from the performance of the contract, except as otherwise provided by statute. The duty of the Contractor to indemnify and save harmless includes the duties to defend as set forth in Section 2778 of the Civil Code. The Contractor waives any and all rights to any type of express or implied indemnity against the County, its officers or employees.

#### ARTICLE IX

When the work is completed and ready for final inspection, the Contractor shall notify the County which shall make such final inspection within five (5) days after notice.

If the County shall approve the work and find that the work is complete and ready for acceptance and shall accept the same, the final payment of the contract price shall be due as provided in Article V, hereof.

#### ARTICLE X

The Contractor shall comply with all the provisions of state and local laws relating to contracts for the prosecution of public works, and Sections 2.13, 2.18, 2.19, 2.20, 2.21, and 2.22 of the General Conditions are hereby referred to and incorporated herein as if fully set forth. Pursuant to law, the County has ascertained the general prevailing rate of per diem wages in the locality of the work for each craft or type of workman required for performance of the contract, which rates are as stated in the Invitation to Bidders, and the Contractor shall be required to pay not less than said prevailing rates.

#### ARTICLE XI

Whenever any act is directed to be done or notice directed to be given by or to the County hereof, the same may be done or given by or to the Director of the Department of Public Works.

#### ARTICLE XII

The Contractor shall not assign the contract or sublet it as a whole without the written consent of the County, nor shall the Contractor assign any monies due or to become due to him hereunder without the previous written consent of the County. This contract shall be binding upon the parties hereto, their heirs, successors, assigns, subcontractors, and legal representatives.



# CALIFORNIA ALL PURPOSE ACKNOWLEDGMENT

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

STATE OF CALIFORNIA }

COUNTY OF ALAMEDA }

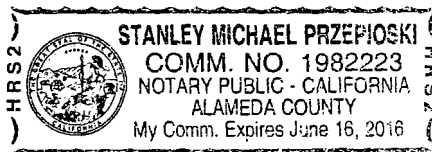
On April 15, 2015 before me, Stanley Michael Przepioski, Notary Public,

personally appeared Peter Ellery

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

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

WITNESS my hand and official seal.



Signature: \_\_\_\_\_ (Seal)

A handwritten signature in black ink, appearing to be "Stanley Michael Przepioski".

OPTIONAL \_\_\_\_\_

Description of Attached Document

Title or Type of Document: Assignment Number of Pages: \_\_\_\_\_

Document Date: \_\_\_\_\_ Other: \_\_\_\_\_

Print: Peter Ellery

Signature: A handwritten signature in black ink, appearing to be "Peter Ellery".

**STANISLAUS COUNTY GSA PURCHASING DIVISION  
FOR GSA FACILITIES MAINTENANCE DIVISION  
Bid #15-11 MP**

**PART 1 – TECHNICAL SPECIFICATIONS**

**Replacement of Boiler Burner Assembly and Low NOx Upgrade/ High Pressure Boiler Re-tube**

**1.1 Scope of Work –**

Stanislaus County Health Services Agency, (HSA), located at 830 Scenic Drive in Modesto, California, currently has two **Apache Steam Boilers, Model 9-5-1500**, which were installed on campus in 1978 and 1979 and provide heat for most of the campus.

Boiler unit 1 is shut down. This boiler has an existing PowerFlame burner assembly. As part of the scope of this job, boiler #1 will be cleaned and a new **Powerflame or equivalent burner assembly and control head** will be installed in this boiler. The successful bidder is required to apply for, acquire, and follow all AQMD requirements (ie. authority to construct re-commissioning, and final permitting). The County will require that any proposed substitution with relation to the equipment that is the basis for design at least meets the basis for designs NOx emissions.

**General Scope:**

Stanislaus County Scenic Ave HSA

**Boiler #1 – Power Flame Burner Name Plate:**

Contractor shall:

- Assist Stanislaus County with paperwork in attaining operating permits for boiler #1, fill out the paperwork with the San Joaquin Valley Air Pollution Control District, and pay permit application fees as part of this scope of work.
- Open and inspect the fire side and water side of boiler #1
- Clean any deposits found on water side, brush fire side tubes, and inspect for leaks. Advise the County of any further repairs needed to operate at that point.
- Close fire side and water side with new gaskets, fill boiler, perform hydrostatic pressure test, and perform limit trip tests.
- Remove and dispose of existing Powerflame burner and controls.
- Cap off existing amber oil fuel lines (these lines are no longer utilized).
- Install new totalizing, non-resettable gas flow meter on natural gas fuel line.
- Install new Powerflame natural gas ultra-low NOx burner, control panel, and O2 probe (or equivalent).
- Start-up and tune burner to best emissions output.

**Boiler #2 (Boiler that is currently in use)**

Contractor shall:

- Assist Stanislaus County with paperwork in updating operating permits for boiler #2, fill out the paperwork with the San Joaquin Valley Air Pollution Control District (SJVAPCD), and pay permit application fees as part of this scope of work.
- Open and inspect the fire side and water side of boiler #2.
- Clean any deposits found on water side, brush fireside tubes, inspect for leaks, and advise the County of any further repairs needed to operate at that point.
- Close fire side and water side with new gaskets, fill boiler, and perform hydrostatic pressure and limit-trip tests.
- Fire boiler #2 on natural gas and tune to best emissions. It is anticipated that during the shutdown and replacement of boiler #1 that H.S.A will run boiler #2 to meet building demand.

**Boiler #3 & Boiler #5**

Boilers #3 and 5 are Bryan Flexible tube boilers, Model FN-400S

Contractor shall:



- Assist Stanislaus County with paperwork in attaining operating permits for boilers #3 and 5.
- Fill out the paperwork with the San Joaquin Valley Air Pollution Control District and pay permit application fees as part of this scope of work. (NOTE: This may not be necessary due to the size of these boilers. Contractor shall verify).
- Re-tube both boilers #3 and #5.
- Tune and replace any parts as needed with the associated flame assembly.
- Fill boiler and perform hydrostatic pressure and limit-trip tests.
- Fire boilers #3 and 5 on natural gas and tune to best emissions.
- Repair high-pressure feed line from boiler to sterilizer as shown during bid walk.

#### DA Tank

The DA tank is a silver colored tank that is utilized by the boilers to remove all air. It also is where we currently add boiler chemicals. Model: **Kewanee Boiler Deaerator Tank, Model-6D5E, Serial # 79-K10426 M.O.P -75 PSI G 175 PSI G at 377 Degrees**

Contractor shall:

- Inspect tank and identify any areas where there are leaks.
- Tighten all fittings.
- Where leaks cannot be eliminated due to the tightening of fittings, replace pipes/ unions/ valves until a water tight assembly can be achieved.
- Fill tank and perform hydrostatic pressure and limit-trip tests.

#### Additional Job Specific Requirements:

1. Sub-contract 3<sup>rd</sup>-party source test for confirmation of emissions for SJVAPCD.
2. Shut down boiler #2 and place into wet-lay-up condition. (The intent is to be able to utilize this boiler in an emergency situation if Boiler #1 goes down. This process to occur AFTER Boiler #1 is brought online.)
3. Perform monthly emissions monitoring and combustion tuning on boiler #1 for twenty-four (24) months.
4. Contract shall include a two-year service agreement, which will incorporate a minimum of one major PM service annually. Where applicable, annual NOX testing will be included with two year service.
5. Check and adjust boiler chemicals during the two-year (24-month) warranty period. The County will supply the chemicals. Contractor shall provide monthly reports.
6. Replace three (3) cold-water 3-way valves and accessory gate valves in basement. These will be shown during the job walk.
7. Contract includes connection of the new boiler assembly to the existing natural gas service. All natural gas pipe installations will be properly tested for leaks prior to cut-over. Permits and testing shall comply with current codes. If necessary, contractor will coordinate with the local utility company. Contractor shall furnish and install new natural gas shut-off valve.
8. Contract shall include all necessary electrical connections to the new equipment. All electrical work shall comply with current code requirements and shall be installed adequately to meet code requirements for an outside environment.
9. Contractor shall extend and connect as necessary all hot and cold domestic water piping with all necessary valves, fittings, etc. and shall properly support and anchor all water lines according to current code requirements. Contractor shall utilize dielectric couplers where ever necessary.
10. Contractor will be responsible for extending, re-installing, and calibrating any existing and new EMS controls.
11. The County Project Manager will oversee daily construction progress and meet with the Contractor's Project Manager to review project schedule, and for any needed coordination.
12. Contractor will be responsible for draining the existing boiler. System shall be cleaned, and checked for contaminants before cutting the system over.
13. Contract shall include start up, operator, and maintenance training not to exceed four (4) hours, and shall include a minimum two-year warranty on materials and labor.
14. Where applicable, Contractor shall galvanize exposed metal fabrications. Where this is not practical, Contractor shall prime and paint metal fabrications. County Project Manager shall approve all finishes before Contractor proceeds.
15. Contract shall include demo and haul off of old equipment and materials.
16. Working hours shall be 7:00 A.M. to 5:00 P.M., Monday through Friday. It is anticipated that

the Contractor may need to work weekends and after hours in order to keep the boiler units functional. Contractor's employees may be required to pass background checks by the County.

17. The work shall include any and all required electrical upgrades to conform with the installation of the new boiler firing assembly. This work may be sub-contracted; however, Contractor must disclose this at the time of bid.

## 1.2 Equipment Specifications:

Specification for S.T. Johnson Company Power Flame approved substitution as referenced in Addendum #2.

### A. General Requirements

1. The burner and installation shall meet all applicable code requirements.

### B. Low-NOx Burner Description

1. The burner(s) shall be NOXmatic Ultra Low Nox Burner S.T. Johnson Company Power Flame Type NM300A15V. Each burner shall have a maximum fired duty of 12,600 MBTU/hr. Gas pressure at the burner gas train supply connection shall be a minimum of 2.0 PSI.
2. NOx emissions shall be guaranteed to be less than or equal to (7) ppm, corrected to 3% O<sub>2</sub>. CO emissions shall be guaranteed to be less than or equal to 50 ppm, over the full range of burner operation.
3. The burner shall operate without flue gas recirculation (FGR), with natural gas as the main fuel. The burner manufacturer shall have a minimum of fifteen (15) burners in operation for over one (1) year that have met the emission requirements stated above. The manufacturer will be required to furnish source test reports for each of these existing installed and operational burners.
4. Burner turndown from maximum heat input shall be a minimum of 3:1.
5. The entire combustion head shall be constructed using high temperature stainless steel. The exposed non-firing surfaces shall be protected using high temperature insulation. The surface stabilized combustion head shall use a knitted fiber matrix material (woven material will not be accepted) utilizing an ultra-thin, high temperature resistant stainless steel fiber. The fiber matrix material shall be knitted in a manner to create 3-dimensional loops that give flexibility to the material, provide excellent insulation and the optimum cooling to the fibers close to the flame. The knitted structure shall be relatively open creating less chance of contamination and blockage of the surface during operation. The burner manufacturer shall provide a five (5) year written warranty for the combustion head.
6. The combustion head shall be provided with a refractory insulated boiler mounting plate.
7. All combustion air shall be supplied by a blower mounted integral to the burner. The blower wheel shall be of the forward curved centrifugal design or a backward inclined centrifugal design and shall be directly driven by a 15 HP 3450 RPM 460 volt, 60 Hz, 3 phase motor. Blower motors located in the same chamber or blast tube as the premix gas are not allowed. A multi-blade damper assembly located on the inlet side of the blower wheel shall meter the combustion air flow.
8. The burner assembly shall be of welded steel construction and have a baked-on powder coat finish. Supply a three-dimensional AutoCAD drawing of the burner to assure proper fit up to the boiler or heat exchanger.

### C. Approval Codes

1. Each burner shall adhere to UL design guidelines and be UL Listed. Each burner shall be designed and constructed as an integrated combustion system package and shall be factory fire tested.

### D. Ignition System

1. The burner ignition system shall utilize natural gas as the fuel source. The gas pilot system components shall include spark-ignited pilot assembly, 6000 volt ignition transformer, pilot solenoid valve, and manual gas shutoff valve. The flame proving system shall incorporate a ultra-violet flame detector which will monitor both the pilot and main flames. The pilot assembly shall fit within the confines of the burner/pilot assembly front mounting plate.

### E. Fuel/Air Control System

1. Main gas supply shall be controlled by dual gas safety shut-off valves.
2. A servo motor shall control the positioning of the air inlet dampers and main gas flow control valve. The position of the main gas and combustion air servo motors shall be controlled by a modulating type (temperature and pressure) controller. When the operating control is satisfied the burner shall shutoff and return to the closed position. The servo motors shall provide a feedback signal to ensure a guaranteed low fire start position prior to the pilot trial for ignition sequence.

F. Gas Control Trains

1 Pilot gas train

- a. Shutoff cock
- b. Pilot regulator size for job size pressure
- c. Main and auxiliary solenoid shutoff valves
- d. Pilot gas strainer (NFPA)
- e. Pilot NOVV with Locking shutoff cock (NFPA)
- f. Gas pressure gauge with shutoff cock (NFPA)
- g. Inlet and manifold gas pressure gauge with shutoff cocks

2. The gas train shall contain the following:

- a. Manual shutoff cock, pressure lubricated.
- b. Main gas pressure regulator Sized for job site pressure
- c. Automatically operated main motorized gas valve with proof of closure interlock switch
- d. Automatically operated main motorized gas valve (above 5,000 MBH) with Proof of closure interlock
- e. Main NOVV valve with Locking gas cocks (NFPA)
- f. Manual reset Low and High gas pressure switches
- g. Manual leakage test cock.
- h. Burner manifold gas pressure gauge
- i. Inlet gas pressure gauge with shutoff cock
- j. (2) ¼" leak test cocks
- k. NFPA locking NOVV shutoff main and pilot
- l. Lubricated main gas shutoff.

G. Burner Operating Controls

The on-off operation of the burner shall be controlled by a (pressure) control. A safety manual reset-type limit control shall be provided by others to shut the burner down in the event of excessive pressure. The position of the servo motors and other fuel/air components shall be controlled by a modulating type pressure control in addition to the on-off operating control.

H. Interlocks

The combustion air servo motor shall be sequenced to allow for four (4) complete air changes of the combustion chamber and breaching, and through a feedback signal electrically interlocked with the control burner circuit to insure the air damper is in the low fire start position before the burner ignition sequence can begin.

I. Combustion & Boiler Control System

1. General: Each burner shall be furnished with an integrated flame safeguard, parallel position boiler control system providing technology and function to monitor and control the boilers as defined herein. The system shall be factory equipped with a pre-configured controller and human-machine interface (HMI).

J. Major Functions:

1. Parallel positioning control for precise control of fuel/air ratio.
2. Servo motors for main gas and combustion air.
3. Variable speed drive (VSD) for burner combustion air fan to minimize energy costs.
4. Linkage-less full modulation for control (PID Algorithms)
5. Oxygen trim to optimize fuel/air ratio.
6. Burner sequencing: Light off/shutdown, and pre- and post-purge (to meet FM/IRI/UL).
7. Full flame safeguard functions (to meet IRI/FM/CUL).
8. Annunciation & diagnostics.
9. LCD display interface & monitoring.
10. BMS interface.

K. Major System Components:

1. Programmable controller: Replaceable main control unit shall be re-commissioned by downloading parameters from backup storage in the programming and display unit, or PC and shall not require reprogramming or re-commissioning.
2. LCD display.
3. MODBUS communication network.

4. Integral burner management controller.
  5. One flame scanner.
  6. One flame amplifier.
  7. Pressure sensors as required.
  8. O<sub>2</sub> analyzer.
  9. End devices: VFD & servo motors.
- L. LED Display & Interface Monitoring:
1. Manual control of the boiler firing rate utilizing control pushbuttons to increment and decrement the firing rate.
  2. Indication of burner status and diagnostics.
  3. Indication of connected pressure sensor readings.
  4. On-screen display of system alarms and faults.
  5. On-screen history of alarms and faults.
- M. Integrated Boiler Controls:
1. Operating and modulating control.
  2. Primary low water cut-off.
  3. Variable speed drive fault shutdown.
  4. Password protection of programmable controller logic.
  5. Password protection of parallel positioning control.
- N. Transmitters and Sensors:
1. Variable speed drive sensor.
  2. O<sub>2</sub> analyzer.
  3. Combustion air temperature transmitter.
  4. Stack temperature transmitter.
  5. Steam pressure transmitter.
- O. Field End Device:
1. Variable frequency drive.
  2. Servo motors as required.
- P. Control Panel:
1. Each burner shall be complete with a remote panel. All wiring for remote panel electrical components shall be factory pre-wired to a terminal strip mounted within the control panel. A junction box pre-wired to the burner components shall be mounted on the burner. It shall have a terminal strip which shall match a terminal strip in the remote panel. Field wiring shall be required between the burner mounted junction box and the remote control panel.
  2. Appropriate electrical knockouts shall be provided on both sides of the panel to allow for necessary power and limit control wiring. The control panel shall be constructed of 14 gauge steel and shall be complete with a top switch and control section, which shall be hinged to allow for full access to all panel mounted components. The control panel shall have a baked-on powder coat finish in a color identical to the burner being supplied. Main three-phase power shall be single-point electrical connection with circuit breaker for blower motor, manual disconnect, and branch circuit breaker for control power. All three-phase power shall be in a separate enclosure attached to the main control panel. Both panels shall have matching keyed locks.  
The control panel shall include a step-down control circuit transformer fused on both the primary and secondary windings to power 120 V components.
  4. The control panel shall have the following status indicators: Power On – Green; Limit Circuit Closed – Green; Main gas – Blue, Flame Failure – Red. High water or low water – Red
  5. Provide an alarm buzzer and auto reset alarm silencing switch to signal any failure status.
- Q. Documentation:
- The burner manufacturer shall furnish as a minimum a burner specification sheet, comprehensive Bill of Material, piping diagram, ladder logic wiring diagram, and job-specific 3-D model of the complete burner that includes dimensional information, “see through” feature for viewing internal assemblies and component identification.
- R. Product Liability Insurance:
- The burner manufacturer will provide an Insurance Certificate documenting his current coverage of Product Liability Insurance (no less than \$10 million coverage).

S. Burner Start-up Information and Test Data:

On completion of the burner system start up, the installing Contractor shall complete a Burner Startup Information Sheet and a Control Setting Sheet and deliver to the Specifying Engineer.

1.3 Equipment Controls Specifications: (APPLIES TO BOILER #1 FLAME ASSEMBLY RETROFIT)

Basic Unit with O2 trim, VSD

A. General:

1. Each boiler / burner shall be equipped with a boiler / burner management system (BMS) having functionality equal to a Siemens LMV 52 BMS with integral parallel positioning, O2 trim, and variable speed drive (VSD).

B. Components:

1. Major components of the BMS shall consist of:
  - i. LMV 52 Burner Control.
  - ii. AZL remote display and interface.
  - iii. SQM actuators.
  - iv. Stack & ambient temperature sensors.
  - v. LMV power supply.
  - vi. Flame scanner with integral amplifier (IR self-check or UV self-check).
  - vii. Pressure and/or temperature sensor(s).
  - viii. Zirconium-oxide oxygen sensor.
  - ix. Oxygen sensor mounting kit & collector.
  - x. PLL oxygen trim module.
  - xi. VSD speed wheel & inductive pick-up sensor (optional).
  - xii. Variable speed drive (optional)
2. The LMV52 controller, local interface, actuators, scanner(s), pressure and/or temperature sensors and oxygen sensor shall be from the same manufacturer.

C. Functionality:

1. The BMS shall have the following Safety functions:
  - i. Gas valve proving (leak detection) via a pressure switch located between the main and blocking gas valves, and monitoring proof of closure (POC) switches on the gas valves.
  - ii. Separate POC circuits for main gas and main oil safety shutoff valves.
  - iii. Gas valve proving on start-up, shut down, or both.
  - iv. Pre-purge and post-purge time adjustable from 1 second to 63 minutes. Separate purge timer cards not required.
  - v. Lengthened or normal pre-purge or post-purge times after an alarm.
  - vi. Programmable overlap of spark (ignition transformer energized) and pilot valve energized (open).
  - vii. Programmable overlap of the proven pilot and the main gas valves energized (open).
  - viii. Programmable stops so that the startup sequence can be stopped and held in all of the following phases: pre-purge, pre-ignition, pilot ignition, and main flame.
  - ix. Programmable actuator positions for pre-purge, post-purge, home (standby), and ignition position.
  - x. A constant check of each actuators position using a algorithm that evaluates the following:
    - Deviation from the desired position.
    - The time at this deviated position.
  - xi. Low voltage actuators utilizing digital CANBUS communications.
  - xii. Password protected access to OEM level, safety-related parameters.
  - xiii. Password protected access to service level parameters.
  - xiv. Alarm and shutdown if maximum boiler water temperature is exceeded.
  - xv. Optional flame detection on two separate channels (an optical flame detector and a flame rod) with the following features selectable for pilot phase, normal operation, and post-main valve closure:
    - Single flame detector operation.
    - If the optical flame detector (OFD) reads a flame or the flame rod (FR) reads a flame then a flame signal is recognized by the unit.
    - If the OFD and the FR both read a flame, then no flame signal is recognized by the unit. The OFD alone must read a flame to have a flame signal recognized by the unit.
    - If the OFD reads a flame, then the FR will not be evaluated.

- If the OFD and the FR both read a flame, then no flame signal is recognized by the unit. The FR alone must read a flame to have a flame signal recognized by the unit.
  - If the FR reads a flame, then the OFD will not be evaluated.
  - Both the OFD and the FR must read a flame for a flame signal to be recognized by the unit.
2. The BMS fuel air ratio control shall have the following functionality:
    - i. Capability of positioning 5 actuators and one variable speed drive (VSD- optional) simultaneously on their programmed curves with an accuracy of 0.1 degree (actuators) and 0.1% (VSD).
    - ii. The possibility of fifteen (15) programmable points per curve and four (4) independent positions including pre-purge, ignition, post purge and standby.
    - iii. Settings to control the angular speed of the actuators during normal operation (gas valves open) and during prepurge, postpurge (gas valves closed).
    - iv. Separate, programmable actuator positions for ignition and low-fire.
    - v. The unit shall have the capability to use either one or two fuel actuators for dual fuel burners.
  3. The BMS load controller shall have the following functions:
    - i. Internal load control (ILC) by sensing temperature or pressure directly and adjusting load according to setpoint. The ILC shall also feature:
      - Modulation control via PID loop algorithm
      - PID loop adaptation
      - Independent, programmable points to cycle the burner off and on.
    - ii. External load control, in which the unit can be connected to an analog signal that will directly control the burner load.
    - iii. External load control via modbus communications.
    - iv. Setpoint shift via modbus communications.
    - v. Setpoint shift via analog input.
    - vi. Programmable limits on setpoint shift.
    - vii. Internal setpoint switchover by potential free contact closure.
    - viii. Changeover to internal load control from any other mode by potential free contact closure.
    - ix. The unit shall have cold start thermal shock protection (CSTP) with the following features:
      - Pressure/ temperature-based, or both.
      - Programmable activation/deactivation values.
      - Load ramping based on pressure, temperature, and/or time.
      - True low fire hold, release based on time, temperature, or pressure.
    - x. Retransmission of the burner load as an analog signal.
  4. The BMS shall have the following communications capabilities:
    - i. Modbus communications via a RJ45 jack. Loss of communications results in "revert to internal PID control".
    - ii. Internal registers have both read and write capabilities.
    - iii. Separate connection available for downloading software updates, and/or configuring the unit with a PC.
  5. The BMS shall have the following annunciation capabilities:
    - i. Plain text and error code annunciation of every digital input.
    - ii. A time stamped log of the last 9 faults.
    - iii. Plain text warnings for non-lockout events that may disrupt normal operation.
  6. The Oxygen trim and monitoring (OTM) feature of the BMS shall have the following functions:
    - i. The ability to set a minimum % O2 at every point on the curve.
    - ii. The ability to set a target % O2 at every point on the curve.
    - iii. Selection of which actuators and / or VSD the OTM will trim.
    - iv. The ability to trim with the following fuels:
      - Natural gas
      - Light oil
      - Propane
      - User defined fuel
    - v. Automatic deactivation and reactivation of O2 trim function should % O2 sensor temperature drop below minimum. The burner will operate on the default ratio curve in the event that that the % O2 sensor is not sufficiently hot, or if there is a problem with the % O2 sensor. When the sensor is ready for service, the OTM shall automatically reengaged and then operate normally. During low O2 Monitor conditions, the OTM will deactivate and require manual reactivation.
    - vi. Monitor % O2 only, and not trim.
    - vii. Deactivation of the OTM completely with the components still attached.
    - viii. Lockout of the burner in the event that that the % O2 sensor is not sufficiently hot or if there is a problem with the % O2 sensor.

- ix. A self test of the % O2 sensor during start-up and normal operation.
  - x. An O2 sensor that is immersed in the flue gas stream (in-situ) that operates without a filter or pump. No moving parts.
7. The BMS shall have burner/boiler efficiency monitoring with the following capabilities:
    - i. Efficiency calculation using an oxygen sensor, stack temperature sensor and ambient air temperature sensor.
    - ii. Flue gas temperature high warning, with separate setpoints for gas and oil.
  8. The BMS shall have capabilities to interface externally via ModBus with such items as touch screen HMI device's, building management systems, PLC's and chart recorders that are capable of acting as a ModBus Master.
    - i. Access will allow monitoring and adjustments to all non-password protected, user-adjustable parameters such as but not limited to:
      - Burner Status (on or off) as well as hours run on a specific fuel and the number of starts for each fuel.
      - Boiler water level & setpoint (with optional Feedwater Control).
      - Load, boiler pressure / temperature, stack & ambient temp.
      - Percent O2, boiler efficiency, actuator position.
      - Flame signal, remote setpoints.
      - Fuel flow, gas or oil (if meters attached to LMV52).
      - Fuel pressures, oil temperature, steam flow, economizer temperature (with optional equipment).
      - Alarm status and alarm history.
      - Fault history.

D. Actuator Features:

1. Internal protection from over torque and over temperature conditions.
2. Digital CanBus communications.
3. 900 motor positions through 90 degree rotation utilizing high accuracy stepper motor.
4. Direction of rotation is electronically selected and does not require re-wiring.
5. Actuators are factory calibrated and do not require site calibration.
6. "Daisy chain" communications wiring allows for minimizing and ease of electrical wiring installation.
7. Factory supplied couplings utilized to extend the life of the actuators by minimizing the side loading of the actuator's shaft.

E. Special Features;

1. The BMS shall have the following Special Features:
  - i. Programmable high / low gas and high / low oil pressure switch buffer so that pressure shocks (caused by main valves opening) can be ignored for a specified, short period of time.
  - ii. CAN bus connected actuators, configured by pressing a button on the actuator.
  - iii. Quick start capability, so that if there is a demand for heat while in post-purge, the unit will begin pre-purge without de-energizing the fan motor starter / VSD.
  - iv. Blower air pressure switch checking before each pre-purge without de-energizing fan motor starter / VSD.
  - v. Gas pilot valve proving (double pilot valve applications).
  - vi. The ability to run full modulation on gas and either full modulation on oil or multi-stage oil.
  - vii. Masking of a particular load range of the burner that can eliminate the potential for burner combustion harmonics at certain firing rates.
  - viii. The entire commissioned program can be backed up and stored in the local operator interface (AZL display) for future downloading should a replacement LMV5 be needed. This will ensure minimized downtime in such an event.
  - ix. A laptop computer is not required to commission the LMV5. However, the complete parameter set can be saved on an external laptop utilizing the ACS410 software for future downloading. The software also provides the ability to generate a 10 page start up report detailing all components and settings in the LMV5.
  - x. The flue gas control actuator can be held at the closed position on start up based upon stack temperature or a pre-configured time.
  - xi. The fuel-to-air ratio curve can be easily adjusted at any point in the firing rate. Any point can be deleted as necessary and additional points (if available) can be added at any time and at any firing rate.

## 1.4 SUBSTITUTIONS

1. Contractor shall submit separate request for substitution (and four copies) for each product and support each request with:
    - a. Product identification.
    - b. Manufacturer's literature.
    - c. Samples, as applicable.
    - d. Name and address of similar projects on which product has been used, and dates of installation.
    - e. Name, address, and telephone number of manufacturer's representative or sales engineer.
    - f. For construction methods: Detailed description of proposed method; drawings illustrating methods.
  2. Contractor shall itemize a comparison of the proposed substitution with product specified and list significant variations including, but not limited to dimensions, weights, service requirements, and functional differences. If variation from product specified is not pointed out in submittal, variation will be rejected even though submittal was favorably reviewed. Identify all variations of the proposed substitute from that specified in the RFS and indicate available maintenance, repair, and replacement service.
  3. Contractor shall state whether the substitute will require a change in any of the Contract Documents (or provisions of any other direct contract with County for work on the Project) to adapt the design of the proposed substitute, and whether or not incorporation or use of the substitute in connection with Work is subject to payment of any license fee or royalty. Submit data relating to changes in construction schedule.
  4. Contractor shall include accurate cost data comparing proposed substitution with product and amount of net change in Contract Sum including, but not limited to, an itemized estimate of all costs or credits that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors affected by the resulting change, all of which will be considered by County in evaluating the proposed substitute. County may require Contractor to furnish additional data about the proposed substitute.
  5. County will not consider substitutions for acceptance (or, in County's sole discretion, County may make Contractor solely responsible for all resulting costs, expenses and other consequences) when a substitution:
    - a. Results in delay meeting construction Milestones or completion dates.
    - b. Is indicated or implied on submittals without formal request from Contractor.
    - c. Is requested directly by Subcontractor or supplier.
    - d. Acceptance will require substantial revision of Contract Documents.
    - e. Disrupts Contractor's job rhythm or ability to perform efficiently.
  6. Substitute products shall not be ordered without written acceptance of County.
  7. County will determine acceptability of proposed substitutions and reserve right to reject proposals due to insufficient information.
  8. Accepted substitutions will be evidenced by a Change Order. All Contract Documents requirements apply to Work involving substitutions.
- A. Contractor's Representation and Warranty:
- 1 Contractor's RFS constitute a representation and warranty that Contractor:
    - a. Has investigated proposed product and determined that it meets or exceeds, in all respects, specified product.
    - b. Will provide the same warranty for substitution as for specified product.
    - c. Will coordinate installation and make other changes that may be required for Work to be complete in all respects.
    - d. Waives claims for additional costs which may subsequently become apparent.
    - e. Will compensate County for additional redesign costs associated with substitution.
    - f. Will be responsible for Construction Schedule slippage due to substitution.
    - g. Will be responsible for Construction Schedule delay due to late ordering of available specified products caused by requests for substitution that are subsequently rejected by County.
    - h. Will compensate County for all costs; including extra costs of performing Work under Contract Documents, extra cost to other contractors, and any claims brought against County, caused by late requests for substitutions or late ordering of products.
- B. County's Duties. County will:
- 1 Review Contractor's RFS with reasonable promptness.
  2. Notify Contractor in writing of decision to accept or reject requested substitution.



C. Administrative Requirements:

1. Specified products, materials, or systems for Project may include Architectural or Engineering or on-file standards required by the regulatory agency. Contractor's substitution of products, materials or systems may require additional Architectural or Engineering, testing, reviews, approvals, assurances, or other information for compliance with regulatory agency requirements or both. Contractor shall provide all agency approvals or other additional information required and pay additional costs for required County services made necessary by the substitution at no increase in Contract Sum or Contract Time, and as a part of substitution proposal.

1.5 **Addenda:** Addendum No. 1 and Addendum No. 2 to Bid 15-11 MP are incorporated herein by reference.

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**2.00 GENERAL CONDITIONS.**

**2.01 OWNER.** The term "Owner", where used herein, shall mean the County of Stanislaus, a political subdivision of the State of California.

**2.02 BOARD.** The term "Board", where used herein, shall mean the Stanislaus County Purchasing Division of the County of Stanislaus, California.

**2.03 ENGINEER.** The Director of Public Works shall supervise and be responsible for the work, and whenever the word "Director" or the word "Engineer" is used herein, it shall mean the Director of the Department of Public Works of the County of Stanislaus, acting either directly or through properly authorized agents, such agents acting within the scope of the particular duties delegated to them.

**2.04 CONTRACTOR.** The term "Contractor", where used herein, shall mean the Contractor to whom the contract for the work described and specified herein has been awarded to by the Board.

**2.05 SUBCONTRACTOR.** The term "Subcontractor", where used herein, includes only those having a direct contract with the Contractor for the work or portion of the work described and specified herein.

**2.06 WORK.** The term "Work", where used herein, includes all labor, materials and any necessary equipment required for complete performance of the contract.

**2.07 CONTRACT DOCUMENTS.** The term "Contract Documents", where used herein, includes the following: The Notice to Bidders, the Instructions to Bidders, the General Conditions, the plans and specifications, the bid, the Agreement, the general bond and insurance certificates. The contract documents are complementary, and what is called for by one shall be as binding as if called for by all.

**2.08 DOCUMENT CLARITY.** The Contractor's attention is directed Government Code section 27361.7, which requires that documents will reproduce readable photographic record:

Whenever the text of a document presented for record may be made out but is not sufficiently legible to reproduce a readable photographic record, the recorder may require the person presenting it for record to substitute a legible original document or to prepare a legible copy of the first document by handwriting or typewriting and attach the same to the original as a part of the document for making the permanent photographic record. The handwritten or typewritten legible copy shall be certified by the party creating the copy under penalty of perjury as being a true copy of the original. As used in this section, the word "text" includes the notary seal, certificates, and other appendages thereto.

**2.09 COMPLETE CONTRACT.** The complete contract consists of all of the contract documents.

**2.10 PLANS AND SPECIFICATIONS.** The term "Plans and Specifications", where used herein, shall mean and include all specifications and provisions of any kind, whether general, detailed or otherwise, relating to the labor, equipment, material or work in the installation thereof, and the plans and drawings, if any, accompanying same which are made a part hereof.

**2.11 AGREEMENT.** The Contractor to whom the work is awarded shall, within eight days after receipt of the contract documents as mailed by the Department of Public Works, enter into an agreement with the owner. The form of agreement is attached herein and made a part of these General Conditions.

**2.12 MATERIAL, LABOR, EQUIPMENT AND OTHER FACILITIES.** Unless otherwise provided, the Contractor shall provide and pay for all materials, labor, water, tools, equipment, lights, power, transportation and other facilities necessary for the execution and completion of the work.

**2.13 PERMITS AND LICENSES.** All permits and licenses necessary for the prosecution of the work shall be secured and paid for by the Contractor, except those secured by Owner and so noted.

**2.14 INSPECTION OF WORK.** A representative of the Owner shall, at all times, have access to the work and the Contractor shall provide proper facilities for such access and for inspection. The Contractor's attention is directed to Government Code Section 1126 and Stanislaus County Department of Public Works regulations wherein the Owner's representative is prohibited from accepting from the Contractor, his employees, and subcontractors any gratuity, gift, service or material of any value or use of equipment or facilities, and agrees to abide by the section and regulations.

**2.15 BONDS.** The Contractor shall furnish and deliver to the Board a surety bond in the amount equal to one hundred percent (100%) of the contract price to guarantee the faithful performance of the contract, and a surety bond in an amount equal to one hundred percent (100%) of the contract price for the faithful payment and satisfaction of all lawful claims of all persons for labor and material furnished and the prosecution of the contract. Such surety bonds shall be issued by a corporation duly and legally licensed to transact surety business in the State of California and approved by the Board. All participating signatures on the bonds shall be notarized.

**2.16 INSURANCE.**

**2.16.1 Scope of Coverage.** Contractor shall take out, and maintain during the life of this Agreement, insurance policies with coverage at least as broad as follows:

(a) General Liability. Comprehensive general liability insurance covering bodily injury, personal injury, property damage, products and completed operations with limits of no less than One Million Dollars (\$1,000,000) per incident or occurrence. If Commercial General Liability Insurance or other form which uses a general aggregate limit, either the general aggregate limit shall apply separately to any act or omission by Contractor under this Agreement or the general aggregate limit shall be twice the required occurrence limit.

(b) Fire Insurance. Builder's Risk Fire Insurance, including Extended Coverage and Vandalism and Malicious Mischief endorsements, jointly in the name of the Owner and the Contractor, such insurance at all times to be of sufficient amount to cover fully all loss or damage to the work under this agreement, resulting from fire and perils covered by the above-referenced endorsements, with limits of not less than one hundred percent of the contract price.

(c) Automobile Liability Insurance. If the Contractor or the Contractor's officers, employees, agents, representatives or subcontractors utilize a motor vehicle in performing any of the work or services under this Agreement, owned/non-owned automobile liability insurance providing combined single limits covering bodily injury, property damage and transportation related pollution liability with limits of no less than One Million Dollars (\$1,000,000) per incident or occurrence.

(d) Workers' Compensation Insurance. Workers' Compensation insurance as required by the California Labor Code. In signing this contract, the Contractor certifies under section 1861 of the Labor Code that the Contractor is aware of the provisions of section 3700 of the Labor Code which requires every employer to be insured against liability for workmen's compensation or to undertake self-insurance in accordance with the provisions of that code, and that the Contractor will comply with such provisions before commencing the performance of the work of this Agreement.

**2.16.2 Deductibles, Self-insured Retentions and Named Insureds.** Any deductibles, self-insured retentions or named insureds must be declared in writing and approved by Owner. At the option of the Owner, either: (a) the insurer shall reduce or eliminate such deductibles, self-insured retentions or named insureds, or (b) the Contractor shall provide a bond, cash or letter of credit guaranteeing payment of the self-insured retention or deductible and payment of any and all costs, losses, related investigations, claim administration and defense expenses.

**2.16.3 Additional Insured.** The Contractor shall provide a specific endorsement to all required insurance policies, except Workers' Compensation insurance and Professional Liability insurance, if any, naming the Owner and its officers, officials and employees as additional insureds regarding: (a) liability arising from or in connection with the performance or omission to perform any term or condition of this Agreement by or on behalf of the Contractor, including the insured's general supervision of the Contractor; (b) services, products and completed operations of the Contractor; (c) premises owned, occupied or used by the Contractor; and (d) automobiles owned, leased, hired or borrowed by the Contractor. For Workers Compensation insurance, the insurance carrier shall agree to waive all rights of subrogation against the Owner and its officers, officials and employees for losses arising from the performance of or the omission to perform any term or condition of this Agreement by the Contractor.

**2.16.4 Primary Insurance.** The Contractor's insurance coverage shall be primary insurance regarding the Owner and Owner's officers, officials and employees. Any insurance or self-insurance maintained by the Owner or Owner's officers, officials and employees shall be excess of the Contractor's insurance and shall not contribute with Contractor's insurance.

**2.16.5 Compliance.** Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the Owner or its officers, officials, employees or volunteers.

**2.16.6 Application of Insurance.** The Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

**2.16.7 Notice of Cancellation.** Each insurance policy required by this section shall be endorsed to state that coverage shall not be suspended, voided, canceled by either party or reduced in coverage or in limits except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to Owner.

**2.16.8 Acceptability of Insurers.** Insurance is to be placed with California admitted insurers (licensed to do business in California) with a current rating by Best's Key Rating Guide of no less than A-VII.

**2.16.9 Subcontractors.** Contractor shall require that all of its subcontractors are subject to the insurance and indemnity requirements stated herein, or shall include all subcontractors as additional named insureds under its insurance policies.

**2.16.10 Verification of Coverage.** At least ten (10) days prior to the date the Contractor begins performance of its obligations under this Agreement, Contractor shall furnish County with certificates of insurance, and with original endorsements, showing coverage required by this Agreement, including, without limitation, those that verify coverage for subcontractors of the Contractor. The certificates and endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. All certificates and endorsements shall be received and, in County's sole and absolute discretion, approved by County. County reserves the right to require complete copies of all required insurance policies and endorsements, at any time.

**2.16.11 Limitation of Liability.** The limits of insurance described herein shall not limit the liability of the Contractor and Contractor's officers, employees, agents, representatives or subcontractors.

## **2.17 DEFENSE AND INDEMNIFICATION.**

**2.17.1 Contractor Indemnification.** Contractor and its officers, employees, agents, representatives or subcontractors shall defend, indemnify and hold harmless the Owner and its agents, officers and employees from and against all claims, damages, losses, judgments, liabilities, expenses and other costs, including litigation costs and attorney fees, arising out of, resulting from, or in connection with the performance of this Agreement by Contractor or Contractor's officers, employees, agents, representatives or subcontractors. Contractor's obligation to defend, indemnify and hold the Owner and its agents, officers and employees harmless applies to any actual or alleged personal injury, death, or damage or destruction to tangible or intangible property including the loss of use. Contractor's obligation under this paragraph extends to any claim, damage, loss, liability, expense or other cost which is caused in whole or in part, directly or indirectly, by any act or omission of the Contractor and its officers, employees, agents, representatives, subcontractors, suppliers or anyone directly or indirectly employed by any of them or anyone for whose acts or omissions any of them may be liable.

**2.17.2 Effect of Insurance.** Contractor's obligation to defend, indemnify and hold the Owner and its agents, officers and employees harmless under the provisions of this paragraph is not limited to or restricted by any requirement in this Agreement for Contractor to procure and maintain a policy of insurance.

**2.17.3 Owner Indemnification.** To the extent permitted by law, the Owner shall defend, indemnify and hold harmless Contractor and its officers, employees, agents, representatives or subcontractors from and against all claims, damages, losses, judgments, liabilities, expenses and other costs, including litigation costs and attorney's fees, arising out of or resulting from the active negligence or wrongful acts of Owner and its officers or employees.

**2.18 ASSIGNMENT OF CONTRACT.** The Contractor shall not assign the contract or sublet it as a whole without written consent of the owner, nor shall the Contractor assign any monies due or to become due to him hereunder without the written consent of the Owner.

**2.19 EIGHT-HOUR DAY.** The time of service of any laborer, workman, or mechanic employed upon any of the work herein specified is limited and restricted to eight (8) hours during any one calendar day, and 40 hours during any one calendar week, except that work performed by employees of contractors in excess of eight (8) hours per day, and 40 hours during any one week, shall be permitted upon public work upon compensation for all hours worked in excess of eight (8) hours per day and not less than one and one-half (1-1/2) times the basic rate of pay.

The Contractor shall forfeit, as a penalty to the owner \$25.00 for each laborer, workman or mechanic employed in the execution of this contract by him or by any subcontractor under him, upon any public work herein

specified for each calendar day or week during which any laborer, workman or mechanic is required or permitted to labor more than eight (8) hours in any one calendar day or 40 hours in any one calendar week in violation of the provisions of Article 3 of Chapter 1, Part 7, Division 2 of the Labor Code of the State of California, and said sums and amount which shall have been so forfeited pursuant to this paragraph and said provisions of said Labor Code shall be withheld and retained from payment due to the Contractor under this contract, pursuant to this contract and the said terms of said Code; but no sums shall be so withheld, retained, or forfeited except from the final payment without a full investigation by either the Division of Labor Law Enforcement of the State Department of Industrial Relations or by said Board.

**2.20 PREVAILING WAGES.** The Contractor shall comply with Labor Code Section 1775. In accordance with said Section 1775, the Contractor shall forfeit, as a penalty to the County of Stanislaus, \$25.00 for each calendar day or portion thereof for each workman paid less than the stipulated prevailing rates for such work or craft in which such workman is employed for any work done under the contract by him or by any subcontractor under him. In addition to said penalty, the difference between such stipulated prevailing wage rates and the amount paid to each workman for each calendar day or portion thereof for which each workman was paid less than the stipulated prevailing wage rate shall be paid to each workman by the Contractor.

Pursuant to Sections 1770 and 1773 of the Labor Code, the Board of Supervisors has ascertained the general prevailing rate of per diem wages applicable to the work to be done for straight time, overtime, Saturday, Sunday and holiday work. These wage rates, which are set forth by the Director of the Department of Industrial Relations, are now on file with the Department of Public Works and are a part of the contract. The Contractor is required to post a copy of these prevailing wage rates on the job site.

The Owner will not recognize any claim for additional compensation because of the payment by the Contractor of any wage rate in excess of the prevailing wage rate set forth as provided herein. The possibility of wage increases is one of the elements to be considered by the Contractor in determining his bid, and will not under any circumstances be considered as the basis of a claim against the Owner on the contract.

**2.21 PAYROLLS AND BASIC RECORDS.** The Contractor shall meet the requirements of Section 7-1.01A(3), "Payroll Records", of the State of California Standard Specifications. The Contractor shall be responsible for compliance by his subcontractors.

**2.22 REQUIRED LISTING OF PROPOSED SUBCONTRACTORS.** Each bid shall have listed therein the name and address of each subcontractor to whom the bidder proposes to subcontract portions of the work in the amount of 1/2 of one percent of his total bid or \$10,000, whichever is greater, in accordance with the Subletting and Subcontracting Fair Practices Act, commencing with Section 4100 of the Public Contract Code. A sheet for listing the subcontractors, as required herein, is included in the Bid. The bidder's attention is invited to other provisions of said Act related to the imposition of penalties for a failure to observe its provisions by using unauthorized subcontractor or by making unauthorized substitutions.

**2.23 STANDARD SPECIFICATIONS AND CODES.** All work herein specified shall be performed in accordance with applicable sections of the following Standard Specifications or Codes which are herein named and hereby made a portion of these specifications. In a case of conflict between these specifications and said Standards, these specifications shall be paramount.

Stanislaus County Code Title 16, Chap. 16.05 (Uniform Building Code, 1994 Edition)  
Stanislaus County Code Title 16, Chap. 16.10 (Uniform Plumbing Code, 1994 Edition)  
Stanislaus County Code Title 16, Chap. 16.15 (National Electric Code, 1993 Edition)  
Stanislaus County Code Title 16, Chap. 16.20 (Uniform Mechanical Code, 1994 Edition)  
Standard Specifications, State of California, Department of Transportation (1996)  
Stanislaus County Improvement Standards  
California Building Code (California Code of Regulations, Title 24, Part 2)

**2.24 TAXES.** Any federal, state or city tax payable on articles furnished by the Contractor under the contract shall be included in the contract price paid by the Contractor.

**2.25 TIME FOR COMPLETION AND LIQUIDATED DAMAGES.** The work to be performed on each Project identified in Article V of this Agreement shall be completed within

**"Sixty (60) Working Days"**

from the date of Notice to Proceed issued with respect to each Project. Should the Contractor fail to complete this contract and the work provided for therein within the fixed time for such completion, the parties hereto agree that it would be impracticable or extremely difficult to fix the actual damage, and therefore agree that the Contractor shall be liable to the Owner and may be assessed by the Owner in the sum of five hundred dollars (\$500.00) per day for each calendar day this contract is delayed beyond the time of completion above agreed upon by failure of the Contractor to complete the contract as specified. Such payment shall be construed to be liquidated damages by the Contractor in lieu of any other claim for damage because of such delay, and shall not be construed as a penalty.

**2.26 PREFERENCES.** Price and quality being equal, preference shall be given by the Contractor to Stanislaus County products.

**2.27 DEFECTS IN WORK.** The Contractor shall be responsible for and must make good any defects through faulty, improper or inferior workmanship or materials arising or discovered in any part of this work within one (1) year after the completion and acceptance of the same.

**2.28 DEVIATION FROM PLANS AND SPECIFICATIONS.** No deviation shall be made from the plans and specifications. If the Contractor shall vary from the plans and specifications in the form of quality or in the work or the amount or value of the materials herein provided for, the Owner shall have the right to order such improper work or materials removed, remade or replaced. In the event that the work is ordered changed, any other work disturbed or damaged by such alteration shall be made good at the Contractor's expense.

**2.29 BRANDS.** Wherever the name or brand of a manufacturer or an article is specified herein, it is used as a measure of quality and utility or a standard. If the Contractor desires to use any other brand or manufacturer of equal quality and utility to that specified, he shall make application to the Owner in writing and submit samples, if requested. The Contractor shall have 35 days after the award of the contract for submission of data substantiating any such request for substitution of "equal" items. The Owners will then determine whether or not the name brand or article is equal in quality and utility to that specified, and its decision shall be final.

Except in those instances in which the product is designated to match others presently in use, specifications herein calling for a designated material, product, thing or service by specific brand or trade name shall be deemed to be followed by the words "or equal" so that bidders may furnish any equal material, product, thing or service. The successful bidder shall have thirty-five (35) days after award of the contract for submission of data substantiating a request for a substitution of "an equal" item, pursuant to Section 3400 of the Public Contract Code.

**2.30 NEW MATERIALS.** All materials used in the work shall be new and the best market quality, unless specified or shown otherwise. All labor used on this contract shall be competent and skilled for the work. All work executed under this contract shall be done in the best, most thorough substantial and workmanlike manner. All material and labor shall be subject to the approval of the Engineer as to quality and fitness, and shall be immediately removed if it does not meet with his approval.

**2.31 ABANDONMENT OF WORK.** Should the Contractor abandon the work called for under the plans and specifications and contract documents, or assign his contract, or if the Contractor unnecessarily and unreasonably delays the work, or if the Contractor willfully violates any of the conditions of the plans and specifications or contract documents, or performs the work in bad faith, the Owner shall have the power to notify the Contractor to discontinue all work or any part thereof under this contract, and thereupon the Contractor shall cease to continue said work or such part thereof as the Owner may designate, and the Owner shall thereupon have the power to employ such persons as it may consider desirable, and to obtain by contract, purchase, hire or otherwise, such implements, tools, material or materials as the Owner may deem advisable to work at and be used to complete the work herein described, or such part thereof as shall have not been completed, and to use such material as it may find upon the site of said work, and to charge the expense of such labor and material, implements and tools to the Contractor, and the expense so charged shall be deducted and paid by the Owner out of such monies as may be either due, or may at any time thereafter become due to the Contractor hereunder and by virtue of the contract.

In the case such expense is less than the sum which would have been payable under the contract, if the same had been completed by the Contractor, the Contractor shall be entitled to receive the difference, and in case such expense shall exceed the last said amount, then the Contractor or his bondsman shall pay the amount of such excess to the Owner on notice to either from the Owner the excess so due.

**2.32 OCCUPANCY OF BUILDING.** The Owner reserves the right to occupy or use any part or parts or the entirety of the building or project upon which the work is to be performed during the performance of the work. The exercising of this right shall in no way constitute an acceptance of such part or parts of the work, nor shall it in any way effect the date and time when the work is to be completed, nor shall it in any way prejudice the Owner's rights in

the Contractor any bond guaranteeing the same; this contract is to be deemed completed only when all of the work contracted for shall be duly and properly performed and accepted by the Board.

**2.33 EXTENSION OF TIME.** If it appears to the Contractor that he will not complete the work herein specified in the time agreed, he shall make written application to the Owner at least five (5) calendar days prior to the expiration of the time for completion, stating the reasons why and the amount of extension which he believes he should be granted. The Owner may then, in its discretion, grant or deny such extension.

**2.34 SUSPENSION OF WORK.** Should the Owner, for any cause, authorize a suspension of work, the time of such suspension will be added to the time allowed for completion. Suspension of work by order of the Board shall not be deemed a waiver of the claim of the Owner for damages for non-completion of the work as above required.

**2.35 JUSTIFIABLE DELAYS.** The Contractor shall not be held responsible for delays in the completion of the work caused by strikes, labor disturbances, lack or failure of transportation, war, inability to obtain materials due to war conditions, perils of the sea, insurrection, riot, acts of any government, whether foreign or domestic, federal or state, and/or any other causes similar to the foregoing which are beyond the control of and are not the fault of the Contractor, or if prevented by conditions directly resulting from the execution of contracts or the placing of orders by the Federal government or its authorized agencies or representatives, which are required by law to be given priority, but provided that whenever the Contractor shall claim that delays are due to any or all of the above named cause or causes of delay, request an extension of time in accordance with paragraph 2.31 of these General Conditions, and if the Board finds that such cause or causes of delay exist, it shall grant him an extension of time equal to the delay resulting from such cause or causes, or the Board may at its option, rescind said contract and pay said Contractor for the reasonable value of the work completed and let a new contract for the completion of the remainder of the work herein specified.

**2.36 PATENTS AND ROYALTIES.** If any material, composition, process or any other thing called for or required by the plans and specifications heretofore adopted by the Owner is covered by letter patent, all royalties and expenses thereof, all litigation therefrom, or other things whatsoever which may develop as a cost from the use of such material, composition, process or any other thing which is covered by letter patents shall be borne by the Contractor. The Contractor shall pay all license and/or royalty fees. He shall defend all suits or claims for infringement of any patent rights and shall save the Owner harmless from loss on account thereof.

**2.37 EXAMINATION OF SITE.** The Contractor shall be held to have examined the site, compared it with the drawings and specifications, and to have satisfied himself as to the conditions under which the work is to be performed. No allowance or claims on his behalf will be made for any expense to which he may be put as a result or failure on his part to thoroughly acquaint himself with conditions at the site.

**2.38 DAMAGE TO OTHERS.** The Contractor shall exercise due caution during his operations so as not to damage the property of others or Owner's property not directly involved under the plans and specifications, and shall be responsible for the protection of this property and shall replace any and all such property to its former condition as a result of his failure to provide protection or exercise due caution during his operations.

**2.39 SURVEYS AND GRADES.** The Engineer shall establish permanent type reference monuments or posts for the alignment and elevations of all work. For structures he will provide said monuments for reference data only. For general engineering contracts he shall provide the usual stakes sufficient for construction. The Contractor shall be charged with the responsibility of adequately protecting said stakes and monuments. The Contractor shall be requested to set supplemental posts for detailed construction needs.

**2.40 SHOP DRAWINGS.** The Contractor shall furnish two (2) copies of shop drawings for all steel, miscellaneous iron, electrical and sheet metal work at such time as to cause no delay in his own or other person's work. The Engineer shall, with reasonable promptness, check the drawings, making corrections, and return them for fabrication; two (2) copies of the corrected drawings used for fabrication shall be returned to the Engineer. The drawings shall not relieve the Contractor from any errors made in fabrication or deviation from original plans and specifications unless such deviation has been specifically permitted in writing by the Director of the Department of Public Works.

**2.41 CORRECTION OF WORK AFTER FINAL PAYMENT.** Neither the final certificate nor final payment, nor any provision of the contract documents shall relieve the Contractor of responsibility for faulty materials or workmanship, and unless otherwise specified, he shall remedy any defects due thereto and shall pay for any damage or other work resulting therefrom which shall appear within a period of one year from the date of substantial completion. The Owner shall give notice of observed defects with reasonable promptness. All questions arising under this article shall be decided by the Director of Public Works.

**2.42 CHANGES IN WORK.** The Owner, without invalidating the contract, may order extra work or make changes by altering, adding to or deducting from the work, the contract sum being adjusted accordingly. All such work shall be performed under the conditions of the contract except that any claim for extension of time caused thereby shall be adjusted at the time of ordering the change. The Engineer shall have authority to make minor changes not involving extra cost and not inconsistent with the purpose of the project.

The value of such extra work or change shall be determined in one or more of the following ways:

- (a) By estimate and acceptance in a lump sum;
- (b) By unit prices named in the contract or subsequently agreed upon;
- (c) By cost and percentage and fixed fee.

Should conditions below surface of the ground be at variance with the conditions indicated by the drawings and specifications, the contract sum shall be equitably adjusted upon claim by either party made within a reasonable time after first observation of conditions.

The amount agreed upon as the value of any extra work resulting from any change order shall constitute full and complete compensation for all overhead, labor, material, tools, and equipment furnished in the performance of work required by that change order. Furthermore, the amount agreed upon as the value of extra work for any change order shall be accepted by the Contractor as full and complete compensation for any and all claims of any nature whatsoever, including, but not limited to, any actual or alleged claims for compensation by Contractor, or any subcontractor of Contractor for delays occasioned by or in any way arising out of stoppage of the work, coordination of the work with others, or processing of that change order.

**2.43 CLEANING UP.** Contractor shall at all times keep the premises free from accumulations of waste material or rubbish as a result of this operation. Upon completion of work he shall remove all rubbish, material and his equipment from the job and shall leave the job site in a "broom clean" or equivalent condition. In case of a dispute regarding this item, the Owner may remove rubbish or material and charge the cost to the several contractors as the authorized representative shall deem just.

**2.44 SUPERVISION.** The Contractor shall, at all times during the working hours of the contract, have a competent foreman or superintendent on the job who shall be authorized to act as an agent of the Contractor. Such agent shall be familiar with the type of work hereunder and be aware of the hazards and the safety rules relating to this particular type of construction. Ignorance or incompetence of a foreman shall be due cause for his removal from the job and cessation of work under this contract until the intent of this paragraph is fulfilled, without recourse by the Contractor for any extension of the time of completion as a result of the removal of such unsatisfactory agent.

**2.45 APPRENTICESHIP STANDARDS.** This contract is subject to the provisions in Sections 1777.5 (Chapter 1411, Statutes of 1968) and 1777.6 of the Labor Code concerning the employment of apprentices by the Contractor or any subcontractor under the Contractor. Section 1777.5, as amended, requires the Contractor or subcontractor employing tradesmen in any apprenticeable occupation to apply to the Joint Apprenticeship Committee nearest the site of the public works project and which administers the apprenticeship program in that trade for a certificate of approval. The certificate will also fix the ratio of apprentices to journeymen that will be used in the performance of the contract. The ratio of apprentices to journeymen in such cases shall not be less than one to five, except:

- (a) When unemployment in the area of coverage by the Joint Apprenticeship Committee has exceeded an average of fifteen percent (15%) in the 90 days prior to the request for certificate; or
- (b) When the number of apprentices in training in the area exceeds a ratio of one to five; or
- (c) When the trade can show that it is replacing at least 1/30 of its membership through apprenticeship training on an annual basis statewide or locally; or
- (d) When the Contractor provides evidence that he employs registered apprentices on all of his contracts on an annual average of not less than one apprentice to eight journeymen.

The Contractor is required to make contributions to funds established for the administration of apprenticeship programs if he employees registered apprentices or journeymen in any apprenticeable trade on such contracts and if other contractors on the public works site are making such contributions.



The Contractor and any subcontractor under him shall comply with the requirements of Sections 1777.5 and 1777.6 in the employment of apprentices.

Information relative to apprenticeship standards, wage schedules, and other requirements may be obtained from the Administrator of Apprenticeship, San Francisco, California, or from the Division of Apprenticeship Standards and its branch offices.

**2.46 ASSIGNMENT OF ANTI-TRUST ACTIONS AND UNFAIR BUSINESS PRACTICE CLAIMS.**

In entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to a public works contract, the Contractor or subcontractor offers and agrees to assign to the awarding body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (commencing with section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to the Contractor, without further acknowledgment by the parties.

**2.47 EQUAL EMPLOYMENT OPPORTUNITY.** Contractor agrees for the duration of this contract that it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, age, political affiliation, marital status, or handicap. The Contractor will take affirmative action to insure that employees are treated during employment or training without regard to their race, color, religion, sex, national origin, age, political affiliation, marital status, or handicap. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

The Contractor will in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, age, political affiliation, marital status, or handicap.

The Contractor will send to each labor union or other representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice advising the workers' representative of the Contractor commitments under this agreement.

The Contractor agrees that it will comply with the provisions of Titles VI and VII of the Civil Rights Act, Revenue Sharing Act Title 31, U.S. Code Section 2716, and California Government Code Section 12990.

The Contractor agrees that it will assist and cooperate with the County of Stanislaus, the State of California and the United States Government in obtaining compliance with the equal opportunity clause, rules, regulations, and relevant orders of the State of California and United States Government issued pursuant to the Acts.

In the event of the Contractor's non-compliance with the discrimination clause, the affirmative action plan of this contract, or with any of the said rules, regulations or orders, this contract may be canceled, terminated, or suspended in whole or in part by the Owner.

**2.48 HANDICAPPED NON-DISCRIMINATION.** This project is subject to Section 504 of the Rehabilitation Act of 1973 as amended (29 U.S.C. 794) and all requirements imposed by the applicable office of Revenue Sharing Regulations (31 CFR Part 51) and all guidelines and interpretations issued thereto. In this regard, the Owner and all of its contractors and subcontractors will take all reasonable steps to ensure that handicapped individuals have the maximum opportunity for the same level of aid, benefit or service as any other individual.

**2.49 FAIR EMPLOYMENT AND HOUSING ACT ADDENDUM.** In the performance of this contract, the Contractor will not discriminate against any employee or applicant for employment because of race, sex, color, religion, ancestry, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, sex, color, religion, ancestry, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, promotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor shall post in conspicuous places, available to employees and applicants for employment, notices to be provided by the State or local agency setting forth the provisions of this Fair Employment and Housing Section.

The Contractor will permit access to his records of employment, employment advertisements, application forms, and other pertinent data and records by the State Fair Employment and Housing Commission, or any other agency of the State of California designated by the awarding authority, for the purposes of investigation to ascertain compliance with the Fair Employment and Housing section of this contract.

Remedies for willful violation include:

(a) The State or local agency may determine a willful violation of the Fair Employment and Housing provision to have occurred upon receipt of a final judgment having that effect from a court in an action to which Contractor was a party; or upon receipt of a written notice from the Fair Employment and Housing Commission that it has investigated and determined that the Contractor has violated the Fair Employment and Housing Act and has issued an order or obtained an injunction under Government Code Section 12900, et seq.

(b) For willful violation of this Fair Employment and Housing provision the State or local agency shall have the right to terminate this contract either in whole or in part, and any loss or damage sustained by the State or local agency in securing the goods or services hereunder shall be borne and paid for by the Contractor and by his surety under the performance bond, if any, and the State or local agency may deduct from any monies due or that thereafter may become due to the Contractor, the difference between the price named in the contract and the actual cost thereof to the State or local agency.

**2.50 CONTRACTS WHICH INVOLVE DIGGING TRENCHES OR EXCAVATIONS.** Pursuant to Public Contract Code section 7104, the Contractor is hereby notified as follows:

Any public works contract of a local public entity which involves digging trenches or other excavations that extend deeper than four feet below the surface shall contain a clause which provides the following:

(a) That the Contractor shall promptly, and before the following conditions are disturbed, notify the public entity, in writing, of any:

(1) Material that the Contractor believes may be material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law.

(2) Subsurface or latent physical conditions at the site differing from those indicated.

(3) Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the contract.

(b) That the public entity shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in the contractor's cost of, or the time required for, performance of any part of the work shall issue a change order under the procedures described in the contract.

(c) That, in the event that a dispute arises between the public entity and the contractor whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the contractor's cost of, or time required for, performance of any part of the work, the contractor shall not be excused from any scheduled completion date provided for by the contract, but shall proceed with all work to be performed under the contract. The Contractor shall retain any and all rights provided either by contract or by law which pertain to the resolution of disputes and protests between the contracting parties.

**2.51 ARBITRATION.** The last paragraph in Section 9-1.10, "Arbitration," of the Standard Specifications is amended to read as follows:

Arbitration shall be initiated by a Complaint in Arbitration made in compliance with the requirements of said regulations. A Complaint in Arbitration by the Contractor shall be made not later than 180 days after the date of service in person or by mail on the Contractor of the final written decision by the Department on the claim.

**2.52 NOTICE OF POTENTIAL CLAIM.** Section 9-1.04, "Notice of Potential Claim," of the Standard Specifications is amended to read as follows:

**9-1.04 Notice of Potential Claim.** The Contractor shall not be entitled to the payment of any additional compensation for any act, or failure to act, by the Engineer, including failure or refusal to

issue a change order, or for the happening of any event, thing, occurrence, or other cause, unless he shall have given the Engineer due written notice of potential claim as hereinafter specified. Compliance with this Section 9-1.04 shall not be a prerequisite as to matters within the scope of the protest provisions in Section 4-1.03, "Changes," or Section 8-1.06, "Time of Completion," or the notice provisions in Section 5-1.116, "Differing Site Conditions," or Section 8-1.07, "Liquidated Damages," or Section 8-1.10, "Utility and Non-Highway Facilities," nor to any claim which is based on differences in measurements or errors of computation as to contract quantities.

The written notice of potential claim shall be submitted to the Engineer prior to the time that the Contractor performs the work giving rise to the potential claim for additional compensation, if based on an act or failure to act by the Engineer, or in all other cases within 15 days after the happening of the event, thing, occurrence, or other cause, giving rise to the potential claim.

The written notice of potential claim shall be submitted on Form CEM-6201 furnished by the Department and shall be certified with reference to the California False Claims Act (Government Code sections 12650 et seq.). The notice shall set forth the reasons for which the Contractor believes additional compensation will or may be due and the nature of the costs involved. Unless the amount of the potential claim has been stated in the written notice, the Contractor shall, within 15 days of submitting said notice, furnish an estimate of the cost of the affected work and impacts, if any, on project completion. Said estimate of costs may be changed or updated by the Contractor when conditions have changed. When the affected work is completed, the Contractor shall submit substantiation of his actual costs. Failure to do so shall be sufficient cause for denial of any claim subsequently filed on the basis of said notice of potential claim.

It is the intention of this Section 9-1.04 that differences between the parties arising under and by virtue of the contract be brought to the attention of the Engineer at the earliest possible time in order that such matters may be settled, if possible, or other appropriate action promptly taken. The Contractor hereby agrees that he shall have no right to additional compensation for any claim that may be based on any such act, failure to act, event, thing or occurrence for which no written notice of potential claim as herein required was filed.

Should the Contractor, in connection with or subsequent to the assertion of a potential claim, request inspection and copying of documents or records in the possession of the Department that pertain to the potential claim, Contractor shall make its records of the project, as deemed by the Department to be pertinent to the potential claim, available to the Department for inspection and copying.

**2.53 FINAL PAYMENT AND CLAIMS.** Section 9-1.07B, "Final Payment and Claims," of the Standard Specifications is amended to read as follows:

**"9-1.07B Final Payment and Claims.** After acceptance by the Director, the Engineer will make a proposed final estimate in writing of the total amount payable to the Contractor, including therein an itemization of said amount, segregated as to contract item quantities, extra work and any other basis for payment, and shall also show therein all deductions made or to be made for prior payments and amounts to be kept or retained under the provisions of the contract. All prior estimates and payments shall be subject to correction in the proposed final estimate. The Contractor shall submit written approval of the proposed final estimate or a written statement of all claims arising under or by virtue of the contract so that the Engineer receives such written approval or statement of claims no later than close of business of the thirtieth day after receiving the proposed final estimate. If the thirtieth day falls on a Saturday, Sunday or legal holiday, then receipt of such written approval or statement of claims by the Engineer shall not be later than close of business of the next business day. No claim will be considered that was not included in the written statement of claims, nor will any claim be allowed as to which a notice or protest is required under the provisions in Sections 4-1.03, "Changes," 8-1.06, "Time of Completion," 8-1.07, "Liquidated Damages" 5-1.116, "Differing Site Conditions," 8-1.10, "Utility and Non-Highway Facilities," and 9-1.04, "Notice of Potential Claim," unless the Contractor has complied with the notice or protest requirements in said sections.

"On the Contractor's approval, or if he files no claim within said period of 30 days, the Engineer will issue a final estimate in writing in accordance with the proposed final estimate submitted to the Contractor and within 30 days thereafter the State will pay the entire sum so found to be due. Such final estimate and payment thereon shall be conclusive and binding against both

parties to the contract on all questions relating to the amount of work done and the compensation payable therefor, except as otherwise provided in Sections 9-1.03C, 'Records,' and 9-1.09, "Clerical Errors."

"If the Contractor within said period of 30 days files claims, the Engineer will issue a semifinal estimate in accordance with the proposed final estimate submitted to the Contractor and within 30 days thereafter the State will pay the sum so found to be due. Such semifinal estimate and payment thereon shall be conclusive and binding against both parties to the contract on all questions relating to the amount of work done and the compensation payable therefor, except insofar as affected by the claims filed within the time and in the manner required hereunder and except as otherwise provided in Sections 9-1.03C, "Records," and 9-1.09, "Clerical Errors."

"Claims filed by the Contractor shall be in sufficient detail to enable the Engineer to ascertain the basis and amount of said claims. If additional information or details are required by the Engineer to determine the basis and amount of said claims, the Contractor shall furnish such further information or details so that the information or details are received by the Engineer no later than the fifteenth day after receipt of the written request from the Engineer. If the fifteenth day falls on a Saturday, Sunday or legal holiday, then receipt of such information or details by the Engineer shall not be later than close of business of the next business day. Failure to submit such information and details to the Engineer within the time specified will be sufficient cause for denying the claim.

"The Contractor shall keep full and complete records of the costs and additional time incurred for any work for which a claim for additional compensation is made. The Engineer or any designated claim investigator or auditor shall have access to those records and any other records as may be required by the Engineer to determine the facts or contentions involved in the claims. Failure to permit access to such records shall be sufficient cause for denying the claims.

"Claims submitted by the Contractor shall be accompanied by a notarized certificate containing the following language:

"Under the penalty of law for perjury or falsification and with specific reference to the California False Claims Act (Government Code Section 12650 et. seq.), the undersigned, hereby certifies that the claim for the additional compensation and time, if any, made herein for the work on this contract is a true statement of the actual costs incurred and time sought, and is fully documented and supported under the contract between parties.

Dated \_\_\_\_\_ /s/ \_\_\_\_\_  
\_\_\_\_\_  
(name) \_\_\_\_\_ of  
(title) \_\_\_\_\_  
(company) \_\_\_\_\_

Subscribed and sworn before me this \_\_\_\_\_ day of \_\_\_\_\_.

\_\_\_\_\_  
Notary Public

My Commission Expires \_\_\_\_\_

Failure to submit the notarized certificate will be sufficient cause for denying the claim.

Any claim for overhead type expenses or costs, in addition to being certified as stated above, shall be supported by an audit report of an independent Certified Public Accountant. Any such overhead claim shall also be subject to audit by the State at its discretion.

Any costs or expenses incurred by the State in reviewing or auditing any claims that are not supported by the Contractor's cost accounting or other records shall be deemed to be damages incurred by the State within the meaning of the California False Claims Act.

The District Director of the District which administers the contract will make the final determination of any claims which remain in dispute after completion of claim review by the Engineer. A board or person designated by said District Director will review such claims and make a written recommendation thereon to the District Director. The Contractor may meet with the review board or person to make a presentation in support of such claims.

Upon final determination of the claims, the Engineer will then make and issue his final estimate in writing and within 30 days thereafter the State will pay the entire sum, if any, found due thereon. Such final estimate shall be conclusive and binding against both parties to the contract on all questions relating to the amount of work done and the compensation payable therefor, except as otherwise provided in Sections 9-1.03C, "Records," and 9-1.09, "Clerical Errors."

## **2.54 CLAIMS UNDER \$375,000.**

The provision of Article 1.5 (commencing with section 20104) of the Public Contract Code, relating to the resolution of construction Claims of three hundred seventy-five thousand dollars (\$375,000) or less which arise between a contractor and a local agency are hereby incorporated in this Contract and set forth below.

20104. (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" has the same meaning as in Sections 3100 and 3106 of the Civil Code, except that "public work" 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.

20104.2. 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 claims 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.

20104.4. 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 nonbinding mediation unless waived by mutual stipulation of both parties. The mediation process shall provide for the selection within 15 days by both parties of a disinterested third person as mediator, shall be commenced within 30 days of the submittal, and shall be concluded within 15 days from the commencement of the mediation unless a time requirement is extended upon a good cause showing to the court or by stipulation of both 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 (Title 4 (commencing with Section 2016.010) of Part 4 of the Code of Civil Procedure) shall apply to any proceeding brought under this subdivision consistent with the rules pertaining to judicial arbitration.

(2) Notwithstanding any other provision of law, upon stipulation of the 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) of Title 3 of Part 3 of the Code of Civil Procedure, any party who after receiving an arbitration award requests a trial de novo but does not 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 party arising out of the trial de novo.

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

20104.6. (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.

**[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]**