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

DEPT: Chief Executive Office **BOARD AGENDA #** *B-14

Urgent ☐ **Routine** ☑ **AGENDA DATE** November 6, 2007

CEO Concurs with Recommendation YES ☑ **NO** ☐ **4/5 Vote Required YES** ☐ **NO** ☑
(Information Attached)

SUBJECT:

Approval to Issue a Request for Qualifications and Proposal for Design and Engineering Services for the Juvenile Hall Security and Fire Alarm System Upgrade

STAFF RECOMMENDATIONS:

Authorize the issuance of a request for qualifications and proposals for design and engineering services to upgrade the electronic security and fire alarm systems at the juvenile hall.

FISCAL IMPACT:

The current county budget includes $650,000, in funding previously set aside for improvements at the Juvenile Hall. This project would upgrade the fire life safety systems at the Juvenile Hall. An assessment has been conducted of the system upgrades needed and the preliminary cost estimate is $730,000 for this effort. (Continued Page 2)

BOARD ACTION AS FOLLOWS:

No. 2007-879

On motion of Supervisor Mayfield , **Seconded by Supervisor** Grover
and approved by the following vote,
Ayes: Supervisors: Mayfield, Grover, Monteith, DeMartini, and Chairman O'Brien
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:

Christine Ferraro

ATTEST: **CHRISTINE FERRARO TALLMAN, Clerk** **File No.**

FISCAL IMPACT: (Continued)

In addition, it is recommended that replacement of the security doors in the older housing units be studied and considered for replacement as part of the security and fire alarm system upgrade. Recommendations regarding actual project budget funding will be developed during the design process. It is estimated that the design work should not exceed $55,000 for the scope of work recommended. Recommendations for final design and actual cost estimates will be returned to the Board of Supervisors prior to seeking bids for the work.

DISCUSSION:

This agenda item is being submitted to the Board of Supervisors to begin the process to improve and upgrade the Electronic Security and Fire Alarm and Services systems at the Juvenile Justice Center

The original Juvenile Detention Facility was constructed in 1976 and expansions were completed in 2000 and 2002. The security electronics and fire alarm systems currently in place include components installed at various times over the last 30 years. The present security electronics system infrastructure is located in three separate equipment rooms with each room housing a generation of control equipment for a specific phase of the facility; original construction, 2000 expansion and 2002 expansion. The facility is experiencing significant operational issues due to the mixed states and conditions of the various systems. Problem areas include: connectivity issues between various systems and control stations; ergonomics problems in central control; unreliable operation of remote-controlled security doors, unreliable status indication of security doors, difficult resetting of the fire alarm system; lack of adequate closed circuit television camera surveillance in some areas; deteriorating condition of equipment, difficulty in obtaining service; poor documentation of existing installations, and vendor management.

On-line Consulting Services completed a Security and Fire Alarm Systems Assessment in August 2007 which involved investigating the existing conditions of the security and fire alarm systems and providing recommendations for replacement/upgrades to improve system reliability and efficiency. The assessment determined little confidence in the viability of the existing system and noted that over forty services related incidents occurred between September 2006 and March 2007.

The current fire alarm system in the Juvenile Detention Facility is also not integrated with the existing fire alarm system for the adjoining building occupied by the Probation Department Administration and Field Services Divisions, Public Defender's Office, District Attorney and Superior Court. The fire alarm system for

this adjoining area, as well as the original construction area, does not have the capability of pinpointing the location that is triggering the alarm; therefore, the entire facility must be evacuated and each area visually inspected to determine the cause of the alarm. Subsequent to the needs assessment completed by On-line Consulting, the fire marshal conducted an annual inspection of the Juvenile Justice Center. As a result of the inspection concerns have been raised regarding the adjoining administration building, which is required to be connected to a separate panel. The panel must be continuously monitored due to the number of sprinkler heads installed in the building. The department has been directed by the Fire Marshal to resolve this issue.

The doors and locks currently installed in housing units 3 and 4 are outdated and in need of replacement. The type of doors and locks in use are from the original construction of the facility and are deemed to be antiquated by today's standards. These doors and locking mechanisms require more frequent replacement due to the wear of repeatedly opening and closing the doors or from damage caused from juveniles hitting or kicking the doors. The county locksmith has notified the facility that the the current locking mechanisms within units 3 and 4 are no longer being manufactured. There are currently 42 doors with the antiquated locking devices in units 3 and 4 combined. Once the locksmith utilizes all replacement parts on hand, individual cells with damaged or worn locking mechanisms will be no longer be viable to house offenders.

The scope of this project will address much needed improvements to fire and life safety and enhanced security for minors, staff and visitors of the Juvenile Justice Center as well as ensure that the facility remains within code compliance. Proposals for design and engineering services will be requested in order to proceed to the design phase of this project. Design details and a updated cost estimate will be returned to the Board of Supervisors for final consideration prior to seeking construction bids. It is expected that the design effort will be complete in late Spring, 2008.

POLICY ISSUES:

The Board should determine if the recommended actions are consistent with the Board priority of a safe community.

STAFFING IMPACT:

The County anticipates substantial review and interaction with the Probation Department and Chief Executive Office Capital Projects staff to evaluate proposals and to develop plans for improving the Juvenile Hall security and fire alarm system.

Stanislaus County
Striving to be the Best

Stanislaus County
Capital Projects
825 12th Street
Modesto, CA 95354
(209) 525-4380
(209) 525-4385 fax

STANISLAUS COUNTY

JUVENILE JUSTICE CENTER

FIRE ALARM, ELECTRONIC SECURITY AND LIFE SAFETY SYSTEM UPGRADE PROJECT 2215 BLUE GUM AVE. MODESTO, CA

REQUEST FOR QUALIFICATIONS AND PROPOSALS FOR DESIGN AND ENGINEERING SERVICES

November 6, 2007

REQUEST FOR QUALIFICATIONS AND PROPOSALS
FOR DESIGN AND ENGINEERING SERVICES
FOR THE FIRE ALARM, ELECTRONIC SECURITY
AND LIFE SAFETY SYSTEM UPGRADE PROJECT
AT THE JUVENILE JUSTICE CENTER
2215 BLUE GUM AVE
MODESTO, CA

1 NOTICE. Notice is hereby given that the County of Stanislaus ("County") will receive proposals for design and engineering services for the Fire Alarm, Electronic Security and Life Safety System Upgrade Project at the Juvenile Justice Center located at 2215 Blue Gum Ave. Modesto, California.

2 Any questions concerning the RFQ/RFP should be directed to: Darrell Long, Stanislaus County Capital Projects (209) 525-4380.

3. SCHEDULE FOR RFP PROCESS

3.1	Board of Supervisors Approval	November 6, 2007
3.2	Issue RFQ/RFP	November 6, 2007
3.3	Proposals Due	December 5, 2007 @ 12:00 Noon
3.4	Interviews	December 10, 2007
3.5	Notice to Proceed	January 10, 2007

Note that this schedule may be adjusted at the sole discretion of the County.

4. SUBMISSION DEADLINE

4.1 Submit three (3) Qualification Statements and Price Proposals by no later than December 5, 2007 @ 12:00 noon at the following address:

Stanislaus County Capital Projects
Attn: Darrell Long
825 12th Street
Modesto, CA 95354
Phone (209) 525-4380, Fax (209) 525-4385

5. SUBMITTED QUALIFICATIONS AND PRICING PROPOSALS

5.1 QUALIFICATION STATEMENT. The proposer shall provide detailed information on the qualifications of the proposer, including the following information:

5.1.2 Detailed information about your firm.

5.1.3 The names of the key staff members who will be responsible for each of the various components of the scope of services for this project, their professional qualifications, and resumes of experience.

5.1.4 The name, address, telephone and fax number (and e-mail address if available) of the person to whom correspondence or communications should be directed.

5.1.5 Description of any litigation that is pending or was settled in the past three years.

5.1.6 Information on sub-consultants

5.1.7 Information on at least three public works projects of similar scope for County staff to consider in evaluating your qualifications.

5.1.8 Your technical approach to providing services to the County for this project.

5.1.9 Describe how your team is organized to provide the services required to perform this project. Describe the major strengths of your team.

5.1.10 Submit a proposed project budget and project schedule.

5.2 PRICING PROPOSALS. The proposer shall provide the following information:

5.2.1 Provide a not-to-exceed price for all work on each of the following phases:

Concept and Schematic Design;
Construction Documents;
Bid and Award;
Construction Administration;
Close-Out.

The services shall include value engineering.

The pricing proposals shall comply with the following requirements:

5.2.1 REIMBURSEABLE EXPENSES. Reimburseable expenses must be included in the not-to-exceed proposed price. (Reimburseable expenses will not be separately reimbursed.)

5.2.2 OVERTIME. Overtime must be included in the not-to-exceed proposed

price.

5.2.3 TRAVEL. Travel time must be included in the not-to-exceed proposed price.

5.2.4 SIGNATURE. The signature of the proposer shall be in longhand.

6. PROJECT SCHEDULE AND BUDGET. The Architect shall develop and submit a proposed Project Budget and Project Schedule in connection with its response to this RFQ/RFP.

7. SUBMISSION OF PROPOSALS

7.1 It is the sole responsibility of the proposer to see that his proposal is received in proper time.

7.2 The proposer shall carefully examine the instructions contained herein and satisfy himself as to the conditions with which he must comply prior to submitting his proposal, and to the conditions affecting the award of contract.

7.3 If more than one proposal is offered by any individual, firm, partnership, corporation, association, or any combination thereof, under the same or different names, all such proposals may be rejected.

7.4 All proposers are hereby notified that any collusive agreement fixing prices so as to control or affects the awarding of this contract is in violation of the competitive bid requirements of State law and may render void any contract let under such circumstances.

7.5 Proposed prices shall be in effect for ninety (90) days from the date of submission.

8. WITHDRAWAL OF PROPOSALS. Any proposal may be withdrawn at any time prior to the time fixed for responding to this RFQ/RFP upon the County's receipt of a written document signed by the proposer requesting the withdrawal of such proposal. An oral, telegraphic, or telephonic request to withdraw a proposal is not acceptable. The withdrawal of a proposal shall not prejudice the right of a proposer to file a new proposal, provided such proposal is submitted in a timely fashion.

9. IRREGULAR PROPOSALS. A proposal may be rejected if it shows any alteration of form, additions not called for, conditional proposals, incomplete proposals, erasures, or irregularities of any kind. If the proposal amount is changed after the amount is originally inserted, the change should be initialed.

10. REJECTION OF PROPOSALS. The County, in its sole discretion, may reject any and all proposals received.

11. INTERVIEWS. The County, in its sole discretion, may prepare a short list of proposers for interviews. Proposers who are invited to attend an interview will be notified in writing.

12. BASIS OF AWARD. The County, in its sole discretion, will select the proposer whose proposal and qualifications best meet the needs and requirements of the County. Consideration will be given to:

- The ability, capacity, and skill of the proposer and its subconsultant team to perform the contract and effectuate the work;
- The type of work needed by the County in light of the nature of the project and budgetary issues;
- The ability of the proposer to effectuate the work within the time specified, without delay;
- The character, integrity, reputation, judgement, experience, and efficiency of the proposer and its subconsultants;
- Whether the proposer has satisfactorily performed similar work on similar projects in occupied detention facilities;
- Price;
- Any other factor deemed to be relevant, in the County's sole discretion.

13. AWARD. A contract(s) may be awarded by the County to the selected proposer. In the event the County is not successful in negotiating a contract with the selected firm, the County may proceed to the next-ranked firm. The time for awarding the contract may be extended by the County.

14. The successful Architect will be expected to provide complete design and engineering services to competitively bid the work including, but not limited to:

14.1 GATHER AND VERIFY PROJECT AND SITE INFORMATION. The Architect will examine the existing facilities to coordinate between existing and new construction. The Architect will meet with Capital Projects to establish a program for the function to fit within existing space.

14.2 BUDGET. The Architect will correlate the program and design to the project budget. The Architect will confirm in writing that they agree the project can be achieved within budget.

14.3 DESIGN PHASE, BID PHASE, AND CONTRACT ADMINISTRATION.

Based on the County's program and budget requirements, the Architect will prepare Schematic and Construction Documents. The Architect will engage such qualified specialty subconsultants as are necessary to accomplish the technical design as required for all aspects of the project. Each design phase is dependent upon the review and approval of the previous phase by the County. If the Contract Documents and budget are approved, the Architect will assist the County in taking and evaluating bids. If the construction contract(s) is/are awarded, the Architect will provide Contract Administration Services.

14.4 MEETINGS. As needed, the County, Construction Manager, Architect, and other parties shall meet to review and discuss progress, problems, and activities planned for the next interval.

14.5 COST. The Architect will prepare a statement of probable construction cost based on the documents and other available data, and will compare it to the program budget. If the statement of probable construction cost exceeds the budget, the Architect will re-design the project at their own expense. The statement of probable construction cost must not exceed the budget.

14.6 COUNTY APPROVAL. The complete drawings, specifications, probable cost estimate, and other documents will be presented to the County for written approval at the end of each design phase. The Architect may also be required to obtain approvals from Stanislaus County Fire Marshall, code compliance reviewers, and/or other County departments.

15. INSURANCE. The successful proposer will be required to provide insurance coverage, which shall be at least as broad as:

15.1 General Liability: ONE MILLION DOLLARS ($1,000,000.00) combined single limit per occurrence for bodily injury, personal injury, and property damage.

15.2 Auto Liability: Owned/Non-owned automobile liability insurance providing combined single limits covering bodily injury liability with limits of no less than ONE MILLION DOLLARS ($1,000,000.00) per accident and providing property damage liability of no less the ONE MILLION DOLLARS ($1,000,000.00) per accident.

15.3 Workers' Compensation Insurance: Workers' Compensation Insurance as required by the Labor Code of the State of California.

15.4 Professional Liability Insurance: Professional Liability Insurance with a minimum limit of $1,000,000.00 per claim and in the aggregate.

15.5 Additional Insured Endorsements: The Consultant shall name the County, the Landlord and their officers, directors, agents and employees as additional insureds.

16. ATTACHMENTS.

16.1 Exhibit A. Description of Project and Scope of Work
16.2 Exhibit B. On Line Consulting Services Report dated August 15, 2007.

ATTACHMENT A

DESCRIPTION OF PROJECT AND SCOPE OF WORK

1. Project Description: The original Juvenile Detention Facility was constructed in 1976 and expansions were completed in 2000 and 2002. The security electronics and fire alarm systems currently in place include components installed at various times over the last 30 years.

1A **Security Electronics and Fire Alarm Systems.** The present security electronics system infrastructure is located in three separate equipment rooms with each room housing a generation of control equipment for a specific phase of the facility; original construction, 2000 expansion, and 2002 expansion. The facility is experiencing significant operational issues due to the mixed states and conditions of the various systems.

Problem areas include: connectivity issues between various systems and control stations; ergonomic problems in central control; unreliable operation of remote-controlled security doors; unreliable status indication of security doors; difficulty resetting of the fire alarm system; lack of adequate closed circuit television camera surveillance in some areas; deteriorating condition of equipment; difficulty in obtaining service; poor documentation of existing installations and vendor management.

On-Line Consulting Services completed a Security and Fire Alarm Systems Assessment in August 2007 which involved investigating the existing conditions of the security and fire alarm systems and providing recommendations for replacement/upgrade to improve system reliability and improved efficiencies. The assessment determined little confidence in the viability of the existing system and noted that over forty services related incidents occurred between September 2006 and March 2007. A copy of the On-Line Consulting Report is attached hereto.

1B **Fire Marshal Issue.** The current fire alarm system in the Juvenile Detention Facility is also not integrated with the existing fire alarm system for the adjoining building occupied by the Probation Department Administration and Field Services Divisions, Public Defender's Office, District Attorney and Superior Court. The fire alarm system for this adjoining area, as well as the original construction area, does not have the capability of pinpointing the location that is triggering the alarm; therefore, the entire facility must be evacuated and each area visually inspected to determine the cause of the alarm. Subsequent to the needs assessment completed by On-Line Consulting, the Stanislaus County Fire Marshal conducted an annual inspection of the Juvenile Justice Center. As a result of the inspection, the Fire Marshal found that the adjoining administration building was not in compliance with a State Code, which required the alarm monitoring system to be tied into a separate panel. The panel must be continuously monitored due to

the number of sprinkler heads installed in the building. The department has been directed by the Fire Marshal to resolve this issue.

2 **Bid Alternate – Doors and Locks.** The doors and locks currently installed in housing units 3 and 4 are outdated and in need of replacement. The type of doors and locks in use are from the original construction of the facility and are deemed to be antiquated by today's standards. These doors and locking mechanisms require more frequent replacement due to the wear of repeated opening and closing the doors or from damage caused from juveniles hitting or kicking the doors. The county locksmith has notified the facility that the current locking mechanisms within units 3 and 4 are no longer being manufactured, which require maintenance staff to replace damaged or worn locks more frequently, often time without benefit of replacement parts readily at hand.

2. Scope of Work:

The Stanislaus County is required to upgrade the Fire Alarm and Electronic Security systems in the Stanislaus County Juvenile Justice Center. Upgrades are detailed in the Security and Fire Alarm Systems assessment attached to this RFP. This assessment was conducted by On Line Consulting Services on August 15, 2007. The Scope of Work proposed shall include production of design drawings and specifications, and provision of associated construction management services, for the following construction work:

Infrastructure Upgrade

(a) Documentation of existing PLC system.
(b) Upgrade proprietary electronics for Units 7 & 8 to PLC based system.
(c) Upgrade Central Control.
(d) Connect to door locks, door position switches, intercom stations and other security systems.
(e) Provide shop drawings and tests.
(f) Install data communications from main PLC to remote PLC locations.

Operator Control Panels

(a) Upgrade Central Control Panel
(b) Upgrade monitors in Central Control
(c) New Casework
(d) Demolition of existing Control Panel and Casework.
(e) Provide shop drawings and tests.

Upgrade Intercom System

(a) Replace intercom/paging system headend with new intercom/paging control system integrated with the PLC.
(b) Provide new intercom system amplifiers.
(c) Provide new two-way intercom in Booking.

Upgrade Housing Intercom System – Option 1

(a) Connect Existing Intercom System to PLC.
(b) Provide new intercom system amplifiers.
(c) Provide shop drawings and tests

Upgrade CCTV System
(a) Upgrade existing CCTV matrix Switch.
(b) Provide new fixed position camera in Lard Yard.
(c) Provide new pan-tilt-zoom camera in Large Yard.
(d) Provide two cameras in each Housing Unit.
(e) Provide new fixed-position camera in other areas.
(f) Provide new digital video recording devise.
(g) Modify CCTV matrix switch for Through Outputs.
(h) Relocate Police entry camera.

Court Hallway and Judges' Hallway CCTV Cameras- Option 2
(a) Provide Court Hallway and Judge's Entry Cameras.

Duress Alarm and "Man Down" System
(a) Provide wall-mounted duress alarm buttons.
(b) Upgrade existing radios.

Upgrade Fire Alarm System in Original Construction Area
(a) Provide new Fire Alarm Control Panel.
(b) Provide new Code compliant Fire Alarm devises.
(c) Upgrade existing system.
(d) Demolition.

All work shall comply with all applicable laws and regulations, including, where applicable, laws requiring the payment of prevailing wages as set forth in Labor Code Section 1770 et seq.

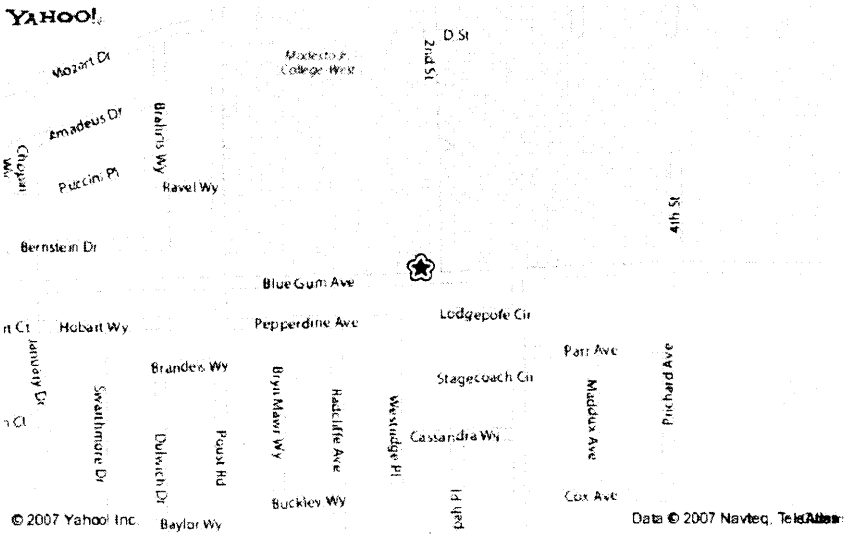
ATTACHMENT B

ON-LINE CONSULTING SERVICES
Security and Fire Alarm Systems Assessment
And Preliminary Cost Estimate
Dated August 15, 2007
14 Pages

Security and Fire Alarm Systems Assessment
And
Preliminary Cost Estimate

Stanislaus County Juvenile Hall

2215 Blue Gum Avenue
Modesto, Ca 95358



Prepared By:

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Contact:
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(510) 268-8373

August 15, 2007

Stanislaus County Juvenile Hall

Security and Fire Alarm Systems Assessment

PURPOSE AND INTENT

The purpose of this document is to investigate the existing conditions of the security and fire alarm systems at the Stanislaus County Juvenile Hall and provide recommendations for replacement of those systems to improve system reliability and control room operator efficiency. This will create a more secure operational environment for the facility. The upgrade program will consist of replacement and or modification of existing control systems equipment, wiring and conduit infrastructure, and field devices (smoke detectors, intercoms, door locks, CCTV cameras, etc.). These elements are addressed in more detail as described below. A preliminary construction cost analysis accompanies the description of work.

METHODOLOGY USED

The Architect and Security Designer conducted preliminary meetings with the County to determine the functional condition of the existing security and fire alarm systems. Field visits were performed by On Line Consulting Services to investigate the physical condition of field devices, head-end equipment, and wiring. As-built documentation was reviewed and equipment cabinet locations were verified and identified during field visits.

SECURITY SYSTEMS

The original Juvenile Detention Facility was constructed in 1975-6; facility expansions were completed in 2000 and 2002. The security electronics and fire alarm systems currently in place include components installed at various times over the last 30 years. The facility is experiencing significant operational issues due to the mixed states and conditions of the various systems. The existing security electronics systems can be described as follows:

SECURITY ELECTRONICS CONTROL INFRASTRUCTURE

The present security electronics system infrastructure is located in three separate equipment rooms. These rooms each house a generation of control equipment for a specific phase of facility expansion; original construction, 2000 expansion, 2002 expansion.

The 2000 expansion included two housing units, a medical center, and a new Central Control Room. A new programmable logic controller (PLC) and CCTV matrix switcher was installed in a new security electronics room located off of the main expansion hallway. New security electronics devices were connected to this equipment and light-and-switch control panels with monitors were installed as an operator interface at Central Control. Housing units 5 and 6 are also equipped with control panels to operate the associated cell intercoms.

The security electronics devices controlling movement installed in the original construction are located in a security equipment closet located near booking. These devices were disconnected from the original relay-based control equipment and connected to the PLC controlling the security electronics equipment installed in the 2000 expansion using PLC expander modules. Wiring for cameras installed during the original construction was extended to the 2000 expansion security equipment closet and connected to a CCTV matrix switcher communicating via a data connection with the PLC in the 2000 expansion closet. The controls from the original control panel located in booking were relocated to the new control panels in Central Control. Some redundant controls for the original construction still

exist in the booking area. Housing units 2, 3, and 4 still maintain independent intercom systems within each housing unit.

Security electronics installed in the 2002 expansion are controlled by a proprietary door control and intercom system independent of the systems in the rest of the facility. A new independent control panel is located in central control to accommodate movement into housing units 7 and 8. Housing units 7 and 8 are also equipped with control panels to operate the associated cell doors and intercoms. Units 7 and 8 are the only units in the facility with electrified cell doors. Cameras for this construction are connected to the matrix switch located in the 2000 expansion control room and displayed on monitors in Central Control.

There is little confidence in the viability of the existing system. Over forty service related incidents were logged by staff between September 2006 and March 2007. Components from less essential portions of the system have been cannibalized in order to keep the more critical portions of the facility functional. The lack of as-built point-to-point wiring documentation has made it difficult to obtain consistent service in the facility. The current system maintenance provider is not providing updated as-built documentation with their current service. As more security electronics system modification occurs without documentation, the possibility for total system failure becomes more likely.

This facility houses in the neighborhood of 140-150 wards. A loss of security electronics controls would be catastrophic in a facility of this size. Staff would need to be increased to manually accomplish the inmate movement afforded by central control. Security within the facility would be greatly reduced because staff would be forced to carry keys to open doors. Safety risks to staff and inmates would increase. It would take many months to install replacement equipment following an equipment failure, leaving the facility to operate without critical security systems in the interim.

Wiring and Conduit

The wiring infrastructure between the control equipment and field devices (intercoms, electric locks, CCTV cameras, etc.) appears to be in good condition and can be re-used. Raceway exists between the Central Security Equipment Room (2000 Expansion) and Original construction Security Equipment Room, and the Central Security Equipment Room and the 2002 expansion Security Equipment Room.

Central Control

Central Control is currently staffed by a single operator responsible for controlling staff, ward, and visitor movement throughout the facility. Three separate light-and switch control panels, each controlling intercoms and doors from the three different phases of construction, are operated in central control. Quad screen view CCTV monitors are located above the control panels to provide staff camera views of the facility. There is no redundancy or duplicate control.

The arrangement of equipment, CCTV monitor displays, and controls is not ergonomic. Operators must reach above, in front of, and to either side of their seated location distances greater than three feet in order to operate required controls.

Housing Control

Existing housing control unit control panels are located in units 5, 6, 7, and 8. In units 5 and 6 the control panels are currently located in the holding control room and control cell intercoms only. Control panels in units 7 & 8 are located at the unit housing control desk and intercoms and doors for each unit. A music input is located at each housing control desk and provides the ability to feed music into each cell via the intercom station.

Intercom and Paging System

The existing cell intercom system controlled at Housing Control locations is functional. The audio for movement intercom stations at Central Control is not reliable and malfunctions on a regular basis.

Two hands-free, two-way intercom systems are located in the booking area. Although these intercom systems are installed correctly, the acoustics in the spaces where they are installed causes poor audio transmission from juveniles to staff.

CCTV System

The existing CCTV system currently controls approximately 50 color cameras viewable on quad screen displays and by manual call-up on four separate monitors at Central Control. Automatic intercom station call-up of cameras originally operational when the system was first installed can no longer reliably be performed by control operators via the CCTV switcher. Without camera call-up, an operator must look for the camera view on one of the quad view monitors. This is inefficient and time consuming. In most modern systems, intercoms and camera views are automatically associated with door control to provide audio and visual contact with a remotely-controlled door before it is operated.

Preliminary investigation indicates existing camera locations do not provide the central control operator adequate views of all housing unit areas. The large recreation yard, booking, the multi-purpose room, the nurse's station, and the padded room at central control also have no camera coverage or inadequate camera coverage.

Duress Alarm System

The existing duress alarm system for probation staff is integrated into the handheld radio system. Activation of a trigger on a handheld radio worn by probation staff will alert the central control operator to a unique radio address identifying the staff in distress. Exact alarm location cannot be monitored by this system.

A wall-mounted duress button is located behind staff casework in the Nurses Station/Clinic area and is connected directly to the programmable logic controller. Although activation of this button will notify the central control operator of a duress situation in the Nurses area, its physical location on the wall makes it virtually unusable.

Security and Fire Alarm Systems Assessment

FIRE ALARM SYSTEM

There are two separate fire alarm systems in the Juvenile Detention Facility. The fire alarm system for the area of original construction is an outdated hard-wired fire alarm control panel. Many of the zones on the system are in a constant fault condition. The second system is an addressable fire alarm system and serves the 2000 and 2002 expansion areas. An alarm condition on either control panel will cause an alarm to annunciate on the other panel. Reset of the alarm condition requires a synchronized manual reset of both alarm control panels located in separate parts of the facility.

RECOMMENDATION

The recommendations of this project provide a twofold objective:

1. Provide a secure detention environment for staff and wards. This includes physical protection of staff from juveniles, juveniles from staff, and juveniles from other juveniles.

2. Provide a safe and efficient work environment for staff by providing a means for staff to easily communicate with staff and juveniles, and perform controlled movements of staff and juveniles through the facility.

SECURITY ELECTRONICS

INFRASTRUCTURE UPGRADE

The current security electronics systems have provided a viable means of accomplishing these tasks since the building began operation over thirty years ago. Although the existing systems in the original construction and 2000 expansion portions of the facility use industry standard programmable logic controllers, the lack of accurate wiring documentation for this system restricts maintenance. The system installed in the 2002 expansion portion of the facility is proprietary and replacement parts are not reliably available. It is recommended that the existing programmable logic controller system, CCTV matrix switcher and associated wiring installed in the original building and the 2000 expansion be completely documented. Field device wiring will be traced and point-to-point wiring diagrams will be created. Wiring will be labeled at both the device end and the control equipment termination location using a standardized labeling scheme. It is recommended that the proprietary security electronics in the 2002 expansion portion of the facility be demolished and replaced with an addition to the existing programmable logic controller system. The programmable logic controller systems use industry standard equipment to accomplish and streamline all of the tasks originally performed by the existing proprietary equipment. It also provides a means for easy expansion and future upgrade-ability.

The PLC will monitor door locks, door position switches, intercom stations, paging speakers, duress button alarms, CCTV camera switching, and alarm monitoring. The system will be modular and readily expandable throughout the facility.

The PLC system will be reprogrammed to provide integration of door and intercom functions into a single, ergonomic operator's control panel in Central Control. CCTV monitors quantities and locations will be reconfigured, and their positions will be user customizable. Activation of intercom stations will cause cameras monitoring the location of the station to be automatically displayed on CCTV monitors at the control location.

Architectural upgrades will consist of minor modification of casework in central control. No significant structural or mechanical work will be required.

New work will be coordinated with existing conditions and be phased to minimize disruption to the facility.

OPERATOR CONTROL PANELS
Operator control panels in Central Control will be replaced with a new control panel. Controls will be located and grouped to allow one operator ergonomic control of all movement functions currently operated by all panels in central control. Light-and-switch control panels or touch screen-based control panels will be used in Central Control.

New casework in central control will be installed with an emphasis on ergonomics. Control casework will be designed in such a way as to accommodate a better viewing angle for operator down the existing hallway. A wire management system will be incorporated into the casework. New work will be coordinated with existing conditions and be phased to minimize disruption to the facility.

EXISTING DOOR LOCKS
The existing door locks will be interfaced with the PLC system. Existing electric door locks and door position switches are generally in good condition and can be reused.

INTERCOM SYSTEM
Intercom stations are installed at movement doors that are remotely controlled. The existing intercom stations are generally in good condition and can be retained, controlled by the new electronic system. Intercom station wiring appears to be acceptable and can be retained. Duress buttons located in the medical area will be monitored by the PLC system. Intercom system amplifiers are failing and will be replaced and integrated with the PLC control system.

Option 1: As an option, the intercom systems in housing units 2, 3, and 4 can be integrated into the programmable logic controller system. The existing intercom systems will be demolished. Intercom wiring will be extended to the original construction security equipment closet. New intercom control panels will be installed in the associated housing units.

The hands-free intercom stations in booking should be replaced with two-way push to talk intercoms. These types of stations will allow staff to control the audio talk path and provide more reliable transmission of audio from the juvenile to staff.

CLOSED CIRCUIT TELEVISION Cameras view movement doors and other areas. Operators in Central Control do not have reliable automatic camera call-up on the Central Control Monitors. This project reprograms the existing camera switching equipment with the PLC system to activate camera call-up when intercom stations are activated to request door opening. This allows operators to quickly determine who is requesting access prior to

granting it before remotely opening controlled doors. Six new fixed-view cameras should be installed in the large exercise yard area. Two pan-tilt-zoom cameras should be installed in the exterior yards to allow the Central Control Operator to actively monitor activity. Existing cameras in housing units 2-8 should be demolished. Two new cameras should be located in each housing unit to provide complete camera coverage for each unit. New cameras should be located in unit 5-8 classrooms. New cameras should be installed in the unit 2 and unit7/8 recreation yards. New cameras should also be installed to provide complete area coverage in
booking, the multi-purpose room, the nurse's station, and the hallway to the padded room at central control.
The camera viewing the police entry gate should be relocated closer to the gate to provide a more acceptable view of drivers requesting entry into the vehicle sallyport.

All other existing camera wiring, cameras, and camera housings will be reused.

Option: As an option, existing cameras and housings can be replaced with new CCTV cameras and housings. A per unit cost has been included in the Cost Analysis portion of this assessment or this option. Existing wiring will be reused at these locations.

Option 2: As an option, cameras can be located in the courtroom hallway and at the Judges' entrance and recorded for investigative purposes. A total of three cameras should be provided at this location.

A network-based digital video recording system will be installed to record all cameras on the premises. The digital video recorders will be connected to the facility network to allow review of recorded camera video from a remote computer station connected to the network

DURESS ALARM SYSTEM AND "MAN DOWN" SYSTEM

The existing duress alarm button in the Nurses Station/Clinic should be relocated to a usable location.

There are four basic options for installing a "Man Down" system in this type of facility. The most reliable and cost-effective solution is to provide wall-mounted duress alarm buttons connected directly to the programmable logic controller throughout the facility. These buttons can be programmed to annunciate and provide automatic camera call-up at the central control operator's location. Activation of these types of buttons will provide annunciation with near 100% reliability. The disadvantage to this type of system is that staff in duress must be in close proximity to the duress buttons to activate them. A system of this type has an estimated cost of $1,500 per duress button location.

Another reliable and cost-effective solution for providing a facility-wide "Man Down" system is to upgrade the existing handheld radio system. In addition to having a duress alarm switch, the handheld radios can be equipped with a mercury switch to cause an alarm when the radio is in a horizontal position for more than 20 seconds. The radios can be programmed to automatically open an audio talk path over the radio system allowing the staff in distress to audibly signal location. This type of system is reliable in all areas of the facility where there is existing radio

coverage. The disadvantages of this type of system are that exact duress location in the facility cannot be automatically annunciated, and opening a talk path or the staff in duress eliminates the possibility of radio traffic on the channel in alarm. A system of this type has an estimated cost of $1,500 per radio.

A third "Man Down" system solution is a combination infrared/radio frequency-based system. An upgrade to this type of system would require staff to wear a uniquely identified, wireless duress alarm button/locator. This device contains smart electronics to obtain building location information from infrared transmitters located at each doorway in the facility. Crossing through a doorway automatically updates location information to the staff-worn device. The staff-worn device then transmits location information via radio frequency (900 MHz) to receiver antennas located throughout the facility. The location information for all belt mounted devices can be tracked in real-time via software installed on a computer workstation. Activation of a duress alarm from the staff-worn device will automatically annunciate at the computer workstation. Although these systems have been installed in many facilities, their reliability for tracking staff is questionable when more than fifty simultaneous staff-worn devices are in use. Also, because location information is transmitted to the staff-worn device from an infrared transmitter at the door locations, direct line-of-sight transmission is required. This means if staff is carrying something, or wearing clothing that blocks the direct line-of-sight view to the infrared transmitter when walking through a door, there is the possibility that location information will not be updated to the staff-worn device and, in turn, the wrong location information will be broadcast from the staff-worn device to the radio frequency antenna and the computer workstation. A system of this type should be considered 90% reliable and has an estimated cost of $200,000-$300,000 for a facility of this size.

The fourth type of "Man Down" system is similar to the previous solution. A uniquely identified, wireless duress button/locator is worn by staff. This locator transmits the identifier information to radio frequency/infrared receivers located in each room of the facility. Each receiver is programmed with a unique identifier for its location. These devices communicate their location and any staff locaters in their vicinity to control equipment which can annunciate staff location and/or duress alarms via a computer-based workstation. The main disadvantage to this type of system is that when the staff worn transmitter transmits its identification information, it can be received by multiple receivers in different rooms. This can lead to improper staff location identification at the computer workstation. A system of this type should be considered 90% reliable. This system has an estimated cost of $150,000-$200,000 for a facility of this size.

Reliability is an important factor when selecting a "Man Down" system. If a system provides incorrect information, or is latent in transmission of information staff confidence in the system will rapidly decline. For this reason, it is recommended that this facility upgrade its existing hands-free radio system to include mercury switches and provide an automatic open talk path when an alarm is activated. Wall mounted duress buttons can be located in areas of the facility where radio transmission is weak or where more acute coverage is required.

Courtroom Duress Alarm

Option: As an option to provide probation staff audible and visible notification of Duress Alarm events in the courtrooms, hard wired duress alarms can be installed at the judge's desk, the clerk's

desk, and the bailiff's station. These devices can be connected to the Juvenile Hall security system for annunciation at central control. A camera can be installed in the courtroom and programmed with alarm-based camera call-up to provide visual notification of any alarm events. The estimated cost for this type of system is $9,500 per courtroom.

Existing Devices to be Reused

Except as noted in this narrative, this project assumes that existing security system field devices (locks, door position switches, intercoms, etc.) and their associated conduit and wiring are in good operating condition and will be reused. Locks and door position switches are industry standard and are compatible with the recommended control equipment. The County is responsible for maintaining this equipment in good working order.

Fire Alarm System

It is recommended that the existing fire alarm system in the original construction area be replaced in its entirety. A new fire alarm system transponder will be installed and connected via communication network to the fire alarm system servicing the rest of the facility. This may require the installation of additional devices in the original construction area to achieve compliance with current fire alarm code.

IMPLEMENTATION

The security program objectives and budget should be carefully reviewed and modified by the project team to ensure that the new systems installed will provide better functionality, maintainability, ease of operator use, and the ability to be easily upgraded or modified in the future. Upon approval of these, development of project documents will commence. Floor plan layouts, block diagrams, details, schedules and specifications will be created by the architect and security designer to verbally and graphically represent the ideas expressed in the design narrative and compel a contractor to install the security electronics systems as designed.

The budget will be further refined and become more accurate in its representation of estimated costs for the project and a preliminary construction schedule will be developed showing general project phasing and an estimated number of days for project completion. These documents will be used as a basis from where the project will be publicly bid. Upon award of a contract to a successful bidding contractor, a detailed construction schedule will be developed fully describing drawing and submittal production and approval, equipment procurement, phasing, and project completion.

During project construction, it is likely that the phasing schedule developed by the contractor will involve the evacuation of inmates from individual housing units for extended periods of time. Construction required for casework and control panel upgrades in Central Control will require that staff lose some system functionality during installation. Portions of the intercom, door control, and CCTV systems will be non-functional during system cut-over and facility will need to provide required staff to ensure safety during these periods of time. After the project has

been awarded to a successful contractor, the phasing scheme can be coordinated with the owner to minimize impact to the facility.

It is vitally important to realize that this is an existing working system that is being upgraded. Although the contractor will try to ensure that all precautions are taken to keep the system running during the upgrade, there always remains the possibility that during construction, significant portions of the security electronics systems may fail completely due to contractor error or another means. Staff must have a contingency plan ready for such an occasion.

Security and Fire Alarm Systems Assessment

COST ANALYSIS

$ 63,825 Infrastructure Upgrade

Document Existing PLC System, Upgrade Proprietary Electronics for Units 7 & 8 to PLC Based System. Update Central Control. Connect to door locks, door position switches, intercom stations, and other security systems. Install data communications from the main PLC to remote PLC locations.

Item	Unit Cost	Quantity	Total
Existing PLC System Documentation	$15,000	Lot	$15,000
Existing Proprietary System Documentation	$2,500	Lot	$2,500
Existing CCTV Matrix Switch Documentation	$7,500	lot	$7,500
NEW PLC for Units 7 and 8	$12,500	Lot	$12,500
Reprogram PLC	$5,000	Lot	$5,000
Reprogram Matrix Switch	$3,000	Lot	$3,000
Proprietary System Demolition	$2,000	Lot	$2,000
Shop drawings, As-Builts. Tests	$8,000	Lot	$8,000
Contingency 15%			$8,325
		Total	$63,825

$23,575 Operator Control Panels

Upgrade Operator Control Panels and Monitors in Central Control.

Item	Unit Cost	Quantity	Total
New Central Control Panel	$8,000	Lot	$8,000
New Monitors in Central Control	$1,500	4	$6,000
New Casework	$4,000	Lot	$4,000
Existing Control Panel and Casework Demolition	$1,500	Lot	$1,500
Shop drawings, tests	$1,000	Lot	$1,000
Contingency 15%		Lot	$3,075
		Total	$23,575

$13,225 Upgrade Intercom System

The intercom/paging system headend will be replaced with a new intercom/paging control system integrated with the PLC. Existing intercom stations will be maintained in operation, connected to the new control system. Provide new two-way intercom systems in Booking.

Item	Unit Cost	Quantity	Total
Provide New Intercom System Amplifiers	$7,500	Lot	$7,500
Provide New Two-Way Intercoms in Booking	$2,000	2	$4,000
Contingency 15%		Lot	$1,725
		Total	$13,225

Security and Fire Alarm Systems Assessment

$28,750 Upgrade Housing Intercom Systems – Option 1

Integrate housing 2, 3, and 4 intercoms with PLC system. Provide new Control Panels.

Item	Unit Cost	Quantity	Total
Connect Existing Intercom System to PLC	$2,000	4	$8,000
Provide New Intercom System Amplifiers	$1,500	4	$6,000
Provide New Control Panels	$2,500	4	$10,000
Shop drawings, tests	$1,000	Lot	$1,000
Contingency 15%		Lot	$3,750
		Total	$28,750

$303,025 Upgrade CCTV System

Provide new cameras at Large Exercise Yard, Housing Units 2-8, and other locations. Provide network-based video recording of all facility cameras.

Item	Unit Cost	Quantity	Total
Upgrade Existing CCTV Matrix Switch	$30,000	Lot	$30,000
Provide New Fixed-Position Camera in Large Yard	$4,000	6	$24,000
Provide New Pan-Tilt-Zoom Camera in Large Yard	$6,000	2	$12,000
Provide Two Cameras in Each Housing Unit	$4,000	14	$56,000
Provide New Fixed-Position Camera in Other Areas	$4,000	14	$56,000
Provide New Digital Video Recording Device	$15,000	5	$75,000
Modify CCTV Matrix Switch for Through Outputs	$1,000	8	$8,000
Relocate Police entry Camera	$2,500	lot	$2,500
Contingency 15%		Lot	$39,525
		Total	$303,025

Option: Existing CCTV cameras and housings can be replaced with new CCTV cameras w/integrated housing for $1,500 per camera.

$13,800 Court Hallway and Judges' Hallway CCTV Cameras – Option 2

Provide new cameras at Court Hallway and Judges' entry

Item	Unit Cost	Quantity	Total
Provide Court Hallway and Judge's Entry Cameras	$4,000	3	$12,000
Contingency 15%		Lot	$1,800
		Total	$13,800

TBD Duress Alarm and "Man Down" System

Provide wall-mounted duress alarm buttons - $1,500 per button.
Upgrade existing radios - $1,500 per radio.

Security and Fire Alarm Systems Assessment

$ 101,200 Upgrade Fire Alarm System in Original Construction Area

Replace Existing Original construction Area Fire Alarm System with a Code Compliant Fire alarm System Integrated with the Housing Unit 5, 6, 7, and 8 fire alarm system. This upgrade will require an upgrade of the 2000 and 2002 construction area fire alarm system firmware.

Item	Unit Cost	Quantity	Total
Provide New Fire Alarm Control Panel	$20,000	1	$20,000
New Code Compliant Fire Alarm Devices	$1,000	60	$60,000
Existing System Upgrade	$3,000	Lot	$3,000
Demolition	$5,000	Lot	$5,000
Contingency 15%		Lot	$13,200
		Total	$101,200

Stanislaus County Juvenile Hall

Security and Fire Alarm Systems Assessment

BUDGET WORKSHEET

Program Item	Total of Work - Base	Total of Base Work + Option 1	Total of Base Work + Option 2	Total of Base Work + Option 1&2
Infrastructure Upgrade	$63,825	$63,825	$63,825	$63,825
Operator Control Panels	$23,575	$23,575	$23,575	$23,575
Upgrade Intercom System	$13,225	$13,225	$13,225	$13,225
Upgrade Housing Intercom System - Option 1		$28,750		$28,750
Upgrade CCTV System	$303,025	$303,025	$303,025	$303,025
Court Hallway and Judges's Entry Cameras - Option 2			$13,800	$13,800
Upgrade Fire Alarm System in Original Construction Area	$101,200	$101,200	$101,200	$101,200
Construction Subtotal	**$504,850**	**$533,600**	**$518,650**	**$547,400**
Construction Contingency @ 12%	$60,582	$64,032	$62,238	$65,688
Permits and Bidding Advertisement @ 4%	$20,194	$21,344	$20,746	$21,896
Design and Construction Administration Fees	$60,582	$64,032	$62,238	$65,688
County Administration	$30,291	$32,016	$31,119	$32,844
Total Project Cost	**$676,499**	**$715,024**	**$694,991**	**$733,516**

Construction cost estimates include contractor overhead and profit, permits, and loss-of-efficiency factor for work in a detention environment.

3501 Balamont Way
Carmichael, CA 95608

PLANS AVAILABLE: November 12, 2007

PLANS AND SPECIFICATIONS AVAILABLE AT:
Signature Reprographics,
620 Sunbeam Ave, Sacramento CA 95814
Ph: (916) 454-0800

COST OF BID DOCUMENTS:
$100 Non Refundable Deposit

3Ti November 7, 14, 21, 2007

NO 333 PUBLIC NOTICE

CITY OF FOLSOM

NOTICE TO BIDDERS
REQUEST FOR BID NO. PW/ST 001

The CITY CLERK of the City of Folsom will receive sealed bids for **One (1) Diesel Powered Regenerative Air Variable High Side Dump Municipal Street Sweeper.** Bids will be accepted at City of Folsom, City Clerks Office, **second floor,** 50 Natoma Street, Folsom, CA 95630, until **10:00 A.M., November 30, 2007.** Bids will be publicly opened in the Folsom City Council Chambers immediately following the closing or as soon thereafter as business allows. Specifications and bid forms for submitting a proposal shall be obtained at the Main Reception/Information Desk at City Hall, 50 Natoma Street, Folsom, CA 95630.

Bids must be submitted on printed forms supplied by the Public Works Department and enclosed in a sealed envelope marked:

Bid No. PW/ST 001

The City of Folsom reserves the right to cancel an invitation for bid, reject any or all bids, or to waive any informality in any bid.

QUESTIONS: All questions or clarifications regarding this request for bid proposal must be directed to the following City representatives in writing. Questions may be sent by email or fax to the following address:

Bill Gisler
Street Operations Supervisor
50 Natoma Street
Folsom, CA 95630
(916) 351-3348
Fax (916) 351-3568
E-Mail bgisler@folsom.ca.us

Note: The City is intending on trading in a 1995 Tymco Sweeper. Call Bill Gisler to make arrangements to evaluate sweeper if needed.

Oral explanations or instructions will not be binding. Questions regarding the bid opening may be by telephone to Christa Schmidt, City Clerk 355-7270.

1Ti November 7, 2007

3Ti November 5, 6, 7, 2007

NO 472 PUBLIC NOTICE

REQUEST FOR QUALIFICATIONS AND PROPOSALS FOR THE
Design and Engineering Services for the Fire Alarm, Electronic Security and Life Safety System Upgrade Project at the Juvenile Justice Center

Notice is hereby given that Stanislaus County will receive proposals for design and engineering services for the fire alarm, electronic safety and life safety system upgrade project at the Juvenile Justice Center located on 2215 Blue Gum Ave. Modesto, CA. The RFP package may be obtained from Stanislaus County Capital Projects, 825 12th Street, Modesto, CA 95354. Requests for the RFP package may be directed to Stanislaus County Capital Projects by phone 209-525-4380 or by fax 209-525-4385. Submit three (3) Qualification Statements and Price Proposals by no later than 12:00 PM, December 5, 2007, to Stanislaus County Capital Projects, Attn: Darrell Long, 825 12th Street, Modesto, CA 95354.

3Ti November 7, 8, 9, 2007

NO 478 PUBLIC NOTICE

EL DORADO IRRIGATION DISTRICT

REQUEST FOR BIDS
P07-03

NOTICE IS HEREBY GIVEN that sealed bids will be received no later than **3:00 p.m., local time, November 29, 2007,** at the Lobby Desk of the Customer Service Building, 2890 Mosquito Road, Placerville, CA 95667 for **Procurement of Variable Frequency Drives, Project 05002E.**

This Request for Bid (RFB) is for procurement consisting of design, fabrication and delivery of two variable frequency drives and the provision of related services, including but not limited to, contractor assistance, testing and training. The Procurement Documents contain the full description of the Supply.

Interested parties may obtain a copy of the RFB by calling the Administrative Services Division at (530) 622-4513 or via email Linda Delfino at ldelfino@eid.org. Questions, requests for clarification and comments must be submitted in writing to Daryl Noel at the address listed above or via email at dnoel@eid.org.

THE EL DORADO IRRIGATION DIST.
Daryl Noel, Associate Engineer II

3Ti November 7, 14, 21, 2007