Idaho Department of Correction

To promote a safer Idaho by reducing recidivism

C. L. "BUTCH" OTTER
Governor

BRENT D. REINKE
Director

April 2, 2014

DPW
Attn: Mr. Martin Santoyo

Re: 14-063/ Door controllers and door operators ISCI/ scope of work

IDOC has outlined below the scope of work we are requesting for the 14-063 project.

1. **Detention Control Center:** The existing detention security system consists of a network of light-duty, proprietary controllers from a company located in the South. IDOC would like to replace the existing detention control and intercom head-end systems with a new, PLC-based touch screen system. This system is currently being used at the IDOC Pocatello Women's Prison. The system in Pocatello has functioned very well for IDOC. IDOC would like to maintain consistency in these systems at all facilities. IDOC would prefer the PLC's (Programmable Logic Controller) be the Square D / Modicon family of industrial controllers. Four new LCD touch screen workstations (three in each control room) would be installed as an operator interface to replace the existing graphic panels. With these workstations, the operator will have full access to all door control, intercom, CCTV video, lighting control, inmate phone control, and alarm monitoring such as generator, doors, and duress, in an easy-to-use, integrated control package. All existing control functions on the existing consoles would be moved to the touch screen/PLC system, with the exception of the telephone, radio, and facility PC's, which would need to be relocated to the new console. The touch screen would be the glass-faced, wear-proof ELO type employing SAW technology, as opposed the membrane-type touch panels.

   The existing control system consists of a network of small, low point count proprietary controllers, located in enclosures in the attic space and other locations around the building. These use a proprietary communications protocol that is not industry standard. Under this proposal, the controllers would be replaced with new, commonly available, Schneider Electric/Modicon PLC's in each enclosure. Additionally, a new communications cable would be pulled through existing conduits from controller enclosure to controller enclosure,

utilizing industry standard communications protocols. The provider will be required to “as-build” all existing devices prior to the new design. Accurate existing drawings that locate all devices do not exist.

2. **Intercom System:** the intercom amplifiers and associated switching relays would be replaced with a new, modern micro-processor-based intercom system, as manufactured by Harding Instruments (or pre-approved equal by IDOC). The workstations will be able to receive intercom calls, or initiate calls to remote intercom stations, with each point integrated with its associated door for ease and speed of selection. This will allow any touch screen station to be able to talk to any field intercom station. Increasing the flexibility of the control room operator. The existing intercom stations and associated field wiring would be reused, with new cabling for the master stations in Control. The existing master intercom stations located in the Tier Officer’s station shall be removed, and the opening covered with a stainless steel #12 ga cover, secured with security screws.

3. **Door and Door Operator Replacement:** the existing 5 sliding doors in each building (units 15 & 16) have a number of problems. The doors are warped, and the overhead operator enclosures were not installed properly with regards to the building surface and the frames. IDOC maintenance receives weekly work orders, IDOC would prefer that the operators and associated headers be changed to electromechanical from pneumatic, and the doors replaced with new doors. Additionally, the observation glass in each door will be reduced in size to 2- 6” x 20” openings. This will allow for a more secure opening, and with greater structural integrity. Specifications (IDOC would prefer) for the provision and installation of the Habersham doors (or an equal approved by IDOC). In unit 14 IDOC is only requesting replacement of the door operators. There are 5 doors in unit 14.

4. **UPS’s**: Under this proposal, the Design Build Team will also provide and install new UPS’s (Uninterruptible Power Supply) to operate the security electronics. The UPS’s will be sized to keep the electronics operational for 20 minutes. This provides two advantages: First, the electronics will stay operational during a power failure, until the back-up generator takes over. Second, the UPS acts as a power line filter, removing the majority of the spikes, brown-outs, and other power disturbances, which lengthens the lifespan of the electronics.

The existing Central Control Room consoles should be remodeled, partially to accommodate the new workstations, but more importantly, to improve the operation of the area. With the new system, ergonomics can be improved to reduce operator fatigue and physical stress, visual sightlines of the corridors outside will be enhanced, and the space can be better utilized due to the smaller space requirements of the system. IDOC would like the existing consoles be replaced with new modern cabinetry, which

would allow for the recessed mounting of the LCD touch screens and monitors and provide for a more efficient layout. The Design Build Team should work with IDOC to design and install the new cabinetry. We need to maintain a secure view of the tiers from the control room. DPW may want to hire a local cabinet shop or use Correctional Industries (CI), instead of having the electronics vendor subcontract this work. Any existing non-security components, such as PC's, telephones, and radio systems, would have to be relocated to the new consoles. We will need to discuss if this will be done by the security contractor or by IDOC. The Design Build Team would be responsible for the removal of the security electronics from the existing consoles and installation of the new security components in the new cabinetry. IDOC could be responsible for the removal of the existing consoles. We are looking at options to salvage these consoles for use elsewhere. The Design Build Team would work with IDOC and DPW to develop a new control room layout, and assist with the design and fabrication of the cabinetry. With this approach IDOC will have a more efficient layout, with the ability to expand without impacting space and existing workloads.

Every effort needs to be made to keep the system downtime to a minimum, and reduce the impact to the operation of the facility. The system should be pre-manufactured and thoroughly tested at the manufacturer before bringing it onsite. The system shall be certified to UL standards, and receive its UL listing. After testing and approval by DPW and IDOC, the system should be carefully packaged and shipped to the jobsite for installation. The system should be pre-installed as much as possible, and started up, with labor to install the touch screen in a temporary location until the physical control room modification are completed. Each component should be transferred over, one at a time, to the new system, until the transfer is complete. At that point the existing consoles will be removed and the new cabinetry installed, then the touch screens should be relocated into their permanent location, Owner training completed, and maintenance documentation and as-built drawings submitted to complete the installation. IDOC believes this plan will allow for the smoothest transition and the least amount of down time.

IDOC would estimate the following schedules and downtime for this project.

1. Electronics design and submittals from Notice to Proceed: 2 months
2. Fabrication and programming of electronics:2 months from DPW/IDOC approval
3. IDOC witnessed shop test and shipping of materials to site: 2 weeks
4. Pre-installation activities: 2 weeks
5. Actual cutover: 1 week of downtime
6. Punch list, training, and O&MM's: 2 weeks
7. Door and operator design and submittals from Notice to Proceed: 1 month
8. Fabrication and delivery of doors and operators: 2 months from DPW/IDOC approval
9. Installation of doors and operators: 2 days per door (Note: This work should be done in advance of the electronics cutover, in order to get these doors operational as soon as possible).
10. IDOC would prefer the door replacement be completed before the new control panels are installed.

IDOC would like to discuss options in the project documents for delays cause by the contractor. This is an important security process to the facility. A detailed critical path schedule and coordination with the facility will be required.