ADDENDA ACKNOWLEDGMENT FORM

I T B
ADDENDUM

Department of Corrections
2601 Blair Stone Road
Tallahassee, Florida 32399-2500

ITB/BID NO: **10-SANTA ROSA-8232**

ITB/BID TITLE: **Plumbing Fixtures**

OPENING DATE: **12/21/10**

ADDENDUM NO: **3**

DATE: **12/14 /10**

PLEASE BE ADVISED THAT THE FOLLOWING CHANGES ARE APPLICABLE TO THE ORIGINAL SPECIFICATIONS OF THE ABOVE-REFERENCED ITB:

Please add Attachment 2, Specifications to the above solicitation.

THIS ADDENDUM NOW BECOMES A PART OF THE ORIGINAL ITB. THE ADDENDUM ACKNOWLEDGMENT FORM SHALL BE SIGNED BY AN AUTHORIZED COMPANY REPRESENTATIVE, DATED AND RETURNED, AS INSTRUCTED IN SECTION 5, BID SUBMISSION REQUIREMENTS, WITH THE BID. FAILURE TO DO SO MAY SUBJECT THE BIDDER/CONTRACTOR TO DISQUALIFICATION.

BIDDER:_____ BY:_____

ADDRESS:_____ PHONE:_____

CITY, STATE_____ DATE: _____

_____
AUTHORIZED SIGNATURE

ATTACHMENT 2 - SPECIFICATIONS
SECTION 22 00 02
PLUMBING

1.01 PLUMBING FIXTURES

A. Acceptable Manufacturers – The fixtures listed are from various vendors and are not intended to limit competition. See Section 3.4, Trade Names on page 7.

B. Fixture Trim – Exposed metal parts shall be of heavy weight polished brass, heavily chrome plated, of best quality as regularly furnished by the plumbing fixture manufacturer. Provide stop valve and supply to all fixtures and equipment.

1.02 FIXTURE SCHEDULE

A. Bath Tubs:

1. BT-1 BATHTUB (Institutional)

TUB:	KOHLER K-840. (SEE ARHITECTURAL DRAWINGS FOR TUB ENCLOSURE)
FAUCET:	SPEAKMAN VS-1980-AFSS-M
DRAIN:	KOHLER K-7161-AF

2. BT-2 (BOQ)

TUB:	KOHLER K-1585/1586
TUB SHOWER VALVE:	SYMMONS S-96-2-X-VP
WASTE & OVERFLOW:	McGUIRE 1221TL

3. BT-3 BATHTUB:

TUB;	KOHLER K-505/506
TUB SHOWER VALVE:	SYMMONS S-96-2-X
WASTE OVERFLOW	McGUIRE 1221TL

B. Lavatories:

1. L-1:

BOWL:	KOHLER K-2849
FAUCET:	SYMMONS S-61
TRAP:	McGUIRE B-8872
SUPPLY:	McGUIRE 2165CCLK
GRID DRAIN:	McGUIRE 155A

2. L-2:

BOWL:	KOHLER K-2849
FAUCET:	SYMMONS S-61
TRAP:	McGUIRE B-8872
SUPPLY:	McGUIRE 2165CCLK
GRID DRAIN:	McGUIRE 155WC
TRAP WRAP:	BOCAR C500RHS WHITE

3. L-3:

BOWL:	KOHLER K-2867
FAUCET:	SYMMONS S-61
TRAP:	McGUIRE B-8872
SUPPLY:	McGUIRE 2165CCLK
GRID DRAIN:	McGUIRE 155A
CARRIER:	J.R. SMITH 0752-M30

4. L-4:

BOWL:	KOHLER K-2867
FAUCET:	SYMMONS S-61
TRAP:	McQUIRE B-8872
SUPPLY:	McGUIRE 2165CCLK
GRID DRAIN:	McGUIRE 155WC
TRAP WRAP:	BOCAR C500RHS WHITE
CARRIER:	J.R. SMITH 0752-M30

5. L-5:

BOWL:	KOHLER K-2849
FAUCET:	SYMMONS S-60-H
TRAP:	McGUIRE B-8872
SUPPLY:	McGUIRE 2165CCLK
GRID DRAIN:	McGUIRE 155A

6. L-6:

BOWL:	KOHLER K-2849
FAUCET:	SYMMONS S-60-H
TRAP:	McQUIRE B-8872
SUPPLY:	McGUIRE 2165CCLK
GRID DRAIN:	McGUIRE 155WC
TRAP WRAP:	BOCAR C500RHS WHITE

7. L-7:

BOWL:	KOHLER K-2867
FAUCET:	SYMMONS S-20-W-FR
TRAP:	McGUIRE B-8872
SUPPLY:	McGUIRE 2165CCLK
GRID DRAIN:	McGUIRE 155A
CARRIER:	J.R. SMITH 0752-M30

8. L-8:

BOWL:	KOHLER K-2867
FAUCET:	SYMMONS S-60-H
TRAP:	McGUIRE B-8872
SUPPLY:	McGUIRE 2165CCLK
GRID DRAIN:	McGUIRE 155WC
TRAP WRAP:	BOCAR C500RHS WHITE
CARRIER:	J.R. SMITH 0752-M30

9. L-9:

BOWL:	KOHLER K-2905-4
FAUCET:	SYMMONS S-60-H
TRAP:	McGUIRE B-8872
SUPPLY:	McGUIRE 2165CCLK
GRID DRAIN:	McGUIRE 155A

10. L-10:

BOWL:	KOHLER K-2905-4
FAUCET:	SYMMONS S-60-H
TRAP:	McGUIRE B-8872
SUPPLY:	McGUIRE 2165CCLK
GRID DRAIN:	McGUIRE 155A
TRAP WRAP:	BOCAR C500RHS WHITE

11. L-11:

BOWL:	KOHLER K-2005
FAUCET:	SYMMONS S-20-W-FR
TRAP:	McGUIRE B-8872
SUPPLY:	McGUIRE 2165CCLK
GRID DRAIN:	McGUIRE 155A
CARRIER:	J.R. SMITH 700-M31 OR 700

12. L-12:

BOWL:	KOHLER K-2905-4
FAUCET:	SYMMONS S-20-2-FR
TRAP:	McGUIRE 8872
SUPPLY:	McGUIRE 2165CCLK

13. L-13: Not Used.

14. L-14:

BOWL:	KOHLER K-2867
FAUCET:	SYMMONS S-60H
TRAP:	McGUIRE B-8872
SUPPLY:	McGUIRE 2165 CCLK
GRID DRAIN:	McGUIRE 155A
CARRIER:	J.R. SMITH 0752-M30

15. L- 15: HANDICAP

BOWL:	KOHLER K-2867
FAUCET:	SYMMONS S-60H
TRAP:	McGUIRE B-8872
SUPPLY;	McGUIRE 2165CCLK
GRAD DRAIN:	McGUIRE 155A
TRAP WRAP:	BOCAR C500RHS WHITE
CARRIER:	J.R. SMITH 0752-M30

C. Water Closets:

1. WC-1:

BOWL:	KOHLER K-4350
SEAT:	BEMIS 1955 SS/C
FLUSH VALVE:	SEE SECTION 22 42 40

2. WC-2:

BOWL:	KOHLER K-4368
SEAT:	BEMIS 1955 SS/C
FLUSH VALVE:	SEE SECTION 22 42 40

3. WC-3:

BOWL:	KOHLER K-4330
SEAT:	BEMIS 1955 SS/C
FLUSH VALVE:	SEE SECTION 22 42 40
CARRIER:	J.R.SMITH 115-L-Y-M50-M12

4. WC-4:

BOWL:	KOHLER K-3422
SEAT:	BEMIS 1950-SS/C
SUPPLY:	McGUIRE 2166CCLK

5. WC-5:

BOWL:	KOHLER K-3427
SEAT:	BEMIS 1950-SS/C
SUPPLY:	McGUIRE 2166CCLK

6. WC-6:

BOWL:	KOHLER K-4330-L
SEAT:	BEMIS 1955 SS/C
FLUSH VALVE:	SEE SECTION 22 42 40
CARRIER:	J.R.SMITH 115-L-Y-M50-M12

D. Urinals:

1. U-1:

BOWL:	KOHLER K-5016-ET
FLUSH VALVE:	SEE SECTION 22 42 40

2. U-2:

BOWL:	KOHLER K-5016-ET
FLUSH VALVE:	SEE SECTION 22 42 40

∗ MOUNT LIP 17” ABOVE FINISHED FLOOR

3. U-3:

BOWL:	KOHLER K-5016-ET
FLUSH VALVE:	SEE SECTION 15151
CARRIER:	J.R.SMITH 0636

E. Sinks:

1. S-1:

BOWL:	ELKAY D-11719 (3 HOLE DRILLING)
FAUCET:	T&S BRASS B-0865-VP-04
TRAP:	McGUIRE B-8912
SUPPLY:	McGUIRE 2165CCLK
DRAIN:	McGUIRE 151A

2. S-2:

BOWL:	ELKAY D-11719 (3 HOLE DRILLING)
FAUCET:	T&S BRASS B-0305LN/VP120X/010204-40
TRAP:	McGUIRE B-8912
SUPPLY:	MGUIRE 2165CCLK
DRAIN:	McGUIRE 151A

3. S-3:

BOWL:	ELKAY D23319 (3 HOLE DRILLING)
FAUCET:	T&S BRASS B-0865-04-VP
TRAP:	McGUIRE B-8912
SUPPLY:	McGUIRE 2165CCLK
DRAIN:	(2) McGUIRE 151A
WASTE:	McGUIRE 11C16G17

4. S-4:

BOWL:	JUST A-18665
FAUCET:	T&S BRASS B-0669-POL-VP
TRAP:	McGUIRE B-8912
DRAIN:	JUST J-35-GS-STP

5. S-5:

BOWL:	KOHLER K-6714
FAUCET:	T&S BRASS B-0669-POL -VP
TRAP:	KOHLER K-6672

6. S-6:

BOWL:	ELKAY D-11719
FAUCET:	T&S BRASS B-2851/B-0199-06
TRAP:	J.R. SMITH 8750
DRAIN:	McGUIRE 151A
SUPPLY:	McGUIRE 2165CCLK

7. S-7:

BOWL:	ELKAY D-23319 (3 HOLE DRILLING)
FAUCET:	T&S BRASS B-2955/B-0199-06
TRAP:	McGUIRE B-8912
SUPPLY:	McGUIRE 2165CCLK
DRAIN:	(2)McGUIRE 151A
WASTE:	McGUIRE 11C16G17

8. S-8:

BOWL:	FURNISHED WITH
FAUCET	DENTAL
DRAIN:	EQUIPMENT
TRAP:	McGUIRE B-8912
SUPPLY:	McGUIRE 2165CCLK

9. S-9 SINK:

BOWL:	ELKAY D-23322 (3 HOLE DRILLING)
FAUCET:	T&S BRASS B-2855/B-0199-06
	PIPE BOTH SIDES OF FAUCET WITH COLD WATER.
TRAP:	McGUIRE B-8912
SUPPLY:	McGUIRE 2165CCLK
DRAIN:	(2) McGUIRE 151A
WASTE:	McGUIRE 11C16G17

10. S-10:

BOWL:	KOHLER K-6718
FAUCET:	T&S BRASS B-0669-POL-VP
TRAP:	KOHLER K-6673

11. S-11:

BOWL:	FIAT FL-1
FAUCET:	FIAT A-1
TRAP:	McGUIRE B-8912
SUPPLY:	McGUIRE 2165CCLK

12. S-12:

BOWL:	ELKAY D-23319
FAUCET:	SYMMONS S-23-2
STRAINER:	ELKAY LK-35
WASTE:	McGUIRE 11C16G17
TRAP:	McGUIRE 8912

F. Mop Sinks:

1. MS-1:

RECEPTOR:	FIAT MSB-2424
FAUCET:	T&S BRASS B-0650-BSTP-VP
HOSE & BRACKET:	FIAT 832-AA
MOP HANGER:	FIAT 889-CC
BUMPER GUARD:	FIAT E-77-AA
DRAIN CONNECTOR:	FIAT QDC-3XH

2. MS-2: SAME AS MS-1 EXCEPT PIPE BOTH SIDES OF FAUCET WITH COLD WATER

3. MS-3:

RECEPTOR:	Field Constructed, See Architectural Drawings
FAUCET:	T&S BRASS B-0650-BSTP-VP
HOSE & BRACKET:	FIAT 832-AA
MOP HANGER:	FIAT 889-CC
BUMPER GUARD:	FIAT E-77-AA
DRAIN:	J.R. smith model #2005LXH03-U

G. Electric Water Coolers:

1. EWC-1:

COOLER:	SUNROC NWCA-8
SUPPLY:	McGUIRE 2165CCLK
TRAP:	McGUIRE B-8872

2. EWC-2:

COOLER:	SUNROC NWCA-8 MODIFIED. PROVIDE DRILLING FOR BUT LESS GLASS FILLER
HOT WATER FAUCET:	ZURN Z-825A
WALL SUPPORT BRACKET:	T&S B-0109-01 WITH VANDAL PROOF SCREWS
SUPPLY:	McGUIRE 2165CCLK
TRAP:	McGUIRE B-8872

3. EWC-3 (Handicap, Chill Only)

COOLER:	ELKAY EZSTL8C (right unit rough-in) ELKAY EZSTLR8C (left unit rough-in)
SUPPLY:	McGUIRE 2165CCLK
TRAP:	McGUIRE B-8872

4. EWC-4WATER COOLER: (Handicap, Chill & Hot)

COOLER:	ELKAY EZSTL8C (right unit rough-in) ELKAY EZSTLR8C (left unit rough-in) MODIFIED. PROVIDE DRILLING FOR BUT LESS GLASS FILLER.
HOT WATER FAUCET:	ZURN Z-825A
WALL SUPPORT BRACKET:	T&S B-0109-01 WITH VANDAL PROOF SCREWS
SUPPLY:	McGUIRE 2165CCLK
TRAP:	McGUIRE B-8872

H. Drinking Fountains:

1. DF-1 DRINKING FOUNTAIN: (Exterior, CW)

FOUNTAIN:	ELKAY EDFP217RAC WITH BOTTOM COVER PLATE AND MOUNTING PLATE.
SUPPLY: 1	McGUIRE 2165CCLK
TRAP: 1	McGUIRE B-8872

I. Showers:

1. SHR-1:

SHOWER VALVE:	SYMMONS S-96-1-X PRESSURE BALANCED WITH INTEGRAL STOPS, SHOWER HEAD AND ARM

2. SHR-2:

SHOWER VALVE:	SYMMONS S-96-500-B30-LV-X-VP PRESSURE BALANCED WITH INTERGRAL STOPS, SHOWER HEAD AND ARM, HAND HELD

END OF SECTION

SECTION 22 09 00
INSTRUMENTATION AND CONTROL FOR PLUMBING

PART TWO - GENERAL

1.01 DESCRIPTION

A. The General Conditions of the specifications are applicable in full hereto.

B. Include all equipment and materials required for a complete electronic water control system.

1.02 WORK INCLUDED

A. Work will include, but is not limited to the following:

1. Force activated sensors.

2. 4 I/O port controllers.

3. Manifold hot and cold water solenoid valves.

4. Color coded control wire and connectors.

5. Water supply tubing from solenoid valves to fixture filler bubbler.

6. 16 gauge stainless steel mounting plate with controllers, manifold solenoids and transformer pre-mounted.

7. 24VAC transformer with cord and 20 amp plug.

8. Label all Panels: Secure housing unit will be labeled with the corresponding room number. The Open Bay Dorm panels will be labeled for each fixture it controls.

B. Connection to fixtures specified and or indicated shall be served with electronic water controls. Line voltage power wiring shall be furnished under work of Section 16000.

C. Maximum distance from fixture to control panel is 50 feet.

D. Furnish repair parts as specified.

E. Start-up and check out of control system.

F. Lavatory filler bubblers and solenoid operated flush valves will be furnished.

1.03 GUARANTEE AND SERVICE

A. The contractor shall guarantee all control panel parts furnished for a period of one (1) year from receipt of purchase order against defects due to faulty materials or workmanship. Such defects shall be corrected promptly after notification by Owner and at Contractor's expense with no additional cost to the Department.

B. The Contractor shall furnish, without charge, any reasonable service in making minor adjustments to equipment furnished. The service shall not include the replacement of parts damaged by maliciousness or vandalism after acceptance by Department.

C. The contractor shall put all items furnished under this section into operation and instruct the Department's Maintenance Personnel in all points requiring service or maintenance.

D. Furnish two (2) bound copies of maintenance instructions, operating instructions and parts list.

1.04 SUBMITTAL DATA

A. Within 25 days after award of contract, submit for approval a complete schedule of equipment proposed to be furnished. Include the catalog data.

1.05 REPAIR PARTS

A. Furnish the following replacement parts to the Department prior to final acceptance.

1. Ten (10) stainless steel force activated sensor assemblies with 40' Lead, modular plug, nut and lock-washer.

2. Five (5) 24 VAC transformers. Type TRB-0233.

3. Thirty (30) solenoid valves.

4. Fifteen (15) CNC 0004 controllers

5. Ten (10) CNC-0004 (HCFF) (5) CNC-0004 (SSSS)

6. Twenty (20) FVK-7001-X Solenoid operated flush valves.

7. Three (3) CNC- 0008 (FFFFFFFF) controllers.

8. Four (4) CNC0004 (HCHC) controllers.

9. One (1) force activated sensor assembly (Tester).

PART TWO - PRODUCTS

2.01 APPROVED MANUFACTURERS

A. **ICON-SYSTEMS**
1724 W. Broadway
Oviedo, Florida 32765
(407) 365-6241

or SLOAN

B. The successful supplier shall provide a control system manufactured by a firm specializing in the production of Prison Electronic Control Systems with a minimum of five (5) years successful experience in the specified field and provide a minimum reference list containing five (5) of the manufacturer's successfully installed and operational facilities.

C. The successful bidder shall provide a (1) year full warranty of all components provided. This shall include, but not be limited to, any rebuild parts and kits for any components, and/or new sensors, valves, control boards, and solenoids as required. This warranty shall not include damages or failures to abuse, negligence or misuse.

2.02 CONTROL PANEL CP-1 I-CON HA-7344-1-CPS COMBIE

A. I-Con Model CNC 0004 non-communicating control box shall be self-contained housing with four (4) input/output ports. Each set of input/output have a standard predetermined designation (i.e. Port #1 shall control the hot water lavatory spout. Port #2 shall control the cold water to the lavatory spout; Port #3 shall control the flush valve and Port #4 shall be a 'Spare" flush valve port). The input port is sent a low voltage electrical impulse from the pressure- activated sensor mounted in the fixture. The impulse is immediately transferred to the output port and the output function is then controlled by the preprogrammed microprocessor. The output port transfers the electrical signal to the solenoid valve, which results in water flows to lavatory filler bubblers or flush valve solenoid for a preprogrammed amount of time.

The control board shall have the ability to be upgraded to a communication controller by the use of an add-on module and using the existing 110V power line as the network link with no additional communication wires required.

B. VLM-7104 Lavatory Manifold shall include eight (8) solenoid valve operators to provide hot and cold water for four (4) lavatory units. Lavatory manifold valves shall be industrial quality and shall include solenoid valves without diaphragms. Valves that include diaphragms are acceptable. Manifold shall include ½" IPS hot and cold water inlets with 20" braided stainless steel hose connectors, stainless steel strainers, check stops, 0.5 GPM flow control and eight (8) soft close anti-hammer solenoid operators. Each solenoid valve operator shall be furnished with a minimum of twenty (20) feet of telephone cable with modular plug type connector and 3/8" water tubing. Each lavatory solenoid shall include a manual override feature to enable to turn on water to filler bubblers by bypassing the electronic circuitry in the event of power loss or during troubleshooting. The solenoid coil and plunger shall be interchangeable with solenoid coil plunger of shower valve.

C. Flush valves are specified in another section of specifications. Electronics manufacturer shall provide all necessary fittings to connect supplied flush valves to the electronic system.

D. Icon SEF1489 Touch Sensor Button assemblies shall have stainless steel housing and shall be pressure activated with no mechanical moving components and completely waterproof. The sensor shall operate on a strain gauge type principle and the sensor adjustment shall be self-calibrating. Sensor assembly shall include six (6) feet of telephone type cable and modular plug type connector. Sensors shall be pre-wired prior to shipment. Furnish a CDA1489 core drill assembly for each SS-2 fixture.

E. Touch Sensor Buttons must fit fixture manufacturer's "D' punching.

F. Controllers shall be factory programmed in accordance with the following:

1. Lavatory:

   a. Hot water twenty (20) second run-time
   b. Cold water ten (10) second run-time

2. Flush Valve:
   Pressure senor ***Solenoid*** is activated. Flush cycle occurs immediately. If procedure is repeated within five (5) minutes then the flush valve is disabled for fifteen (15) minutes. Repeated pressure sensor operation has no effect on the disabled lock out time. Lock-out time shall be field adjustable for 0-60 minute lockout.

G. Transformer shall be 110 VAC, 60 Hz primary, 24 VAC, 40 VA, Class II, overload protected complete with six (6) feet of #12-3 conductor SJO cord, and NEMA 5-20 plug**.** Protected by – ½ AMP SBT fuse on the primary side and a 2 AMP fuse on secondary.

2.03 CONTROL PANEL CP-2 I-CON HA -7344-1-SPS SHOWER PANEL ASSEMBLY

A. I-Con Model CNC 0004 non-communicating control box shall be self-contained housing with one (2) input/output ports. Each set of input/output ports have a standard predetermined designation (i.e. Port #1 shall control the hot water. Port #2 shall control the cold water. The input port is sent a low voltage electrical impulse from the pressure- activated sensor mounted in the fixture. The impulse is immediately transferred to the output port and the output function is the controlled by the preprogrammed microprocessor. The output port transfers the electrical signal to the solenoid valve, which results in water flows to the showerhead for a preprogrammed amount of time. The control board shall have the ability to be upgraded to a communication controller by the use of an add-on module and using the existing 110V power line as the network link with no additional communication wires required.

B. The control box shall contain lights indicating the functions of operation. Amber LED shall show power to the control box, green LED to each input port when the pressure sensor is activated and at the output port when the solenoid operator is activated. The output port shall remain illuminated for the duration of the preprogrammed run time.

C. A pair of red LEDs shall indicate when block times are in effect when a red LED is illuminated, the shower valve run time has expired, and the program is preventing the shower valve solenoids from being activated. The shower valve shall be prevented from use as long as the fixture's associated red LED is illuminated.

D. I-Con VLM-7104 Shower manifold shall include (8) eight solenoid operators to provide hot and cold water for (4) four shower heads. Shower manifold valves shall be industrial quality and shall include solenoid valves without diaphragms. Any valve that includes diaphragms is not acceptable. Manifold shall include ½" IPS hot and cold water inlets with 8" braided stainless steel hose connectors, stainless steel strainers, check stops, 2.5 GPM flow control, and eight (8) soft close anti-hammer solenoid operators. Each solenoid valve operator shall be furnished with a minimum of twenty (20) feet of telephone cable with modular plug type connector and 3/8" water tubing. Each lavatory solenoid shall include a manual override feature to enable to turn on water to shower head by bypassing the electronic circuitry in the event of power loss or during troubleshooting. The solenoid coil and plunger shall be interchangeable with solenoid coil plunger of lavatory valve.

E. Icon SEF1489 Touch Sensor Button assemblies shall have stainless steel housing and shall be pressure activated with no mechanical moving components and completely waterproof. The sensor shall operate on a strain gauge type principle and the sensor adjustment shall be self-calibrating. Sensor assembly shall include six (6) feet of telephone type cable and modular plug type connector. Sensors shall be pre-wired prior to shipment.

F. Controllers shall be factory programmed in accordance with the following.

1. Shower:

Hot and cold water five (5) minute run-time. Field adjustable lock out reinitiates delay following shut-off of zero (0) to fifteen (15) minutes. Reinitiated delay shall lock out both hot and cold water.

G. Transformer shall be 110 VAC, 60 Hz primary, 24 VAC, 40 VA, Class II, overload protected complete with six (6) feet of #12-3 conductor, SJO cord and NEMA 5-20 plug. Protected by – ½ AMP SBT fuse on the primary side and a 2 AMP fuse on secondary**.**

2.04 CONTROL PANEL CP-3 I-Con HA -7344-2-SPS - Shower Panel Assembly Medical Isolation Cells

A. I-Con Model CNC 0004 non-communicating control box shall be self-contained housing with one (4) input/output ports. Each set of input/output ports have a standard predetermined designation (i.e. Port #1 shall control the hot water. Port #2 shall control the cold water. Port #3 shall control the hot water. Port #4 shall control the cold water. The input port is sent a low voltage electrical impulse from the pressure- activated sensor mounted in the fixture. The impulse is immediately transferred to the output port and the output function is the controlled by the preprogrammed microprocessor. The output port transfers the electrical signal to the solenoid valve, which results in water flows to the showerhead for a preprogrammed amount of time. The control board shall have the ability to be upgraded to a communication controller by the use of an add-on module and using the existing 110V power line as the network link with no additional communication wires required.

B. The control box shall contain lights indicating the functions of operation. Amber LED shall show power to the control box, green LED at each input port when the pressure sensor is activated and at the output port when the solenoid operator is activated. The output port shall remain illuminated for the duration of the preprogrammed run time.

C. A pair of red LEDs shall indicate when block times are in effect. When a red LED is illuminated, the shower valve run time has expired, and the program is preventing the shower valve solenoids from being activated. The shower valve shall be prevented from use as long as the fixture's associated red LED is illuminated.

D. I-Con VLM-7102 Shower manifold shall include (4) four solenoid operators to provide hot and cold water for (2) two shower heads. Shower manifold valves shall be industrial quality and shall include solenoid valves without diaphragms. **Any valve that includes diaphragms is acceptable**. Manifold shall include ½" IPS hot and cold water inlets with 8" braided stainless steel hose connectors, stainless steel strainers, check stops, 2.5 GPM flow control and eight (4) soft close anti hammer solenoid operators. Each solenoid valve operator shall be furnished with a minimum of twenty (20) feet of telephone cable with modular plug type connector and 3/8" water tubing. Each shower solenoid shall include a manual override feature to enable to turn on water to shower head by bypassing the electronic circuitry in the event of power loss or during troubleshooting. The solenoid coil and plunger shall be interchangeable with solenoid coil plunger of shower valve.

E. Icon SEF1489 Touch Sensor Button assemblies shall have stainless steel housing and shall be pressure activated with no mechanical moving components and completely waterproof. The sensor shall operate on a strain gage type principle and the sensor adjustment shall be self-calibrating. Sensor assembly shall include sixty (60) feet of telephone type cable and modular plug type connector. Sensors shall be pre-wired prior to shipment.

F. Controllers shall be factory programmed in accordance with the following:
   1. Shower
      Hot and cold water three (3) minute run-time. Field adjustable lock-out reinitiates delay following shut-off of zero (0) to fifteen (15) minutes. Reinitiates delay shall lock-out both hot and cold water.

G. Transformer shall be 110 VAC, 60 Hz primary, 24 VAC, 40 VA, Class II, overload protected complete with six (6) feet of #12-3 conductor SJO cord, and NEMA 5-20 plug. Protected by – ½ AMP SBT fuse on the primary side and a 2 AMP fuse on secondary.

2.05 CONTROL PANEL CP4 I-Con HA -7344-1-LPS (Lavatory Open Bay Dorms)

A. I-Con Model CNC 0004 non-communicating control box shall be self-contained housing with four (4) input/output ports. Each set of input/output ports have a standard predetermined designation (i.e. Port #1 shall control the hot water. Port #2 shall control the cold water. The input port is sent a low voltage electrical impulse from the pressure- activated sensor mounted in the fixture. The impulse is immediately transferred to the output port and the output function is the controlled by the preprogrammed microprocessor. The output port transfers the electrical signal to the solenoid valve, which results in water flows to the lavatory for a preprogrammed amount of time. The control board shall have the ability to be upgraded to a communication controller by the use of an add-on module and using the existing 110V power line as the network link with no additional communication wires required.

B. The control box shall contain lights indicating the functions of operation. Amber LED to show power to the control box, green LED at each input port when the pressure sensor is activated and at the output port when the solenoid operator is activated. The output port shall remain illuminated for the duration of the preprogrammed run time.

C. A pair of red LEDs shall indicate when block times are in effect when a red LED is illuminated, the lavatory valve run time has expired, and the program is preventing the lavatory valve solenoids from being activated. The lavatory valve shall be prevented from use as long as the fixture's associated red LED is illuminated.

D. I-Con VLM-7104 Lavatory manifold shall include (8) eight solenoid operators to provide hot and cold water for (4) four lavatories. Lavatory manifold valves shall be industrial quality and shall include solenoid valves without diaphragms. Any valve that includes diaphragms is not acceptable. Manifold shall include ½" IPS hot and cold water inlets with 8" braided stainless steel hose connectors, stainless steel strainers, check stops, 0.5 GPM flow control and eight (8) soft close anti-hammer solenoid operators. Each solenoid valve operator shall be furnished with a minimum of twenty (20) feet of telephone cable with modular plug type connector and 3/8" water tubing. Each lavatory solenoid shall include a manual override feature to enable to turn on water to shower head by bypassing the electronic circuitry in the event of power loss or during troubleshooting. The solenoid coil and plunger shall be interchangeable with solenoid coil plungers on the shower valves.

E. Icon SEF1489 Touch Sensor Button assemblies shall have stainless steel housing and shall be pressure activated with no mechanical moving components and completely waterproof. The sensor shall operate on a strain gage type principle and the sensor adjustment shall be self-calibrating. Sensor assembly shall include twenty (20) feet of telephone type cable and modular plug type connector. Sensors shall be pre-wired prior to shipment.

F. Controllers shall be factory programmed in accordance with the following.
   1. Lavatory
      Hot water twenty (20) second run time, cold water ten (10) second run time. Field adjustable lock out reinitiates delay following shut-off of zero (0) to fifteen (15) minutes. Reinitiated delay shall lock out both hot and cold water.

G. Transformer shall be 110 VAC, 60 Hz primary, 24 VAC, 40 VA, Class II, overload protected complete with six (6) feet of #12-3 conductor SJO cord, and NEMA 5-20 plug. Protected by – ½ AMP SBT fuse on the primary side and a 2 AMP fuse on secondary.

2.06 CONTROL PANEL CP-5 HA-7344-2-CPS MEDICAL ISOLATION CELLS

A. I-Con Model CNC 0004 non-communicating control box shall be self-contained housing with four (4) input/output ports. Each set of input/output ports have a standard predetermined designation (i.e. Port #1 shall control the hot water lavatory spout. Port #2 shall control the cold water to the lavatory spout. Port #3 shall control the flush valve at the toilet and port #4 shall control the flush valve from a remote location in the adjacent vestibule. The input port is sent a low voltage electrical impulse from the pressure- activated sensor mounted in the fixture. The impulse is immediately transferred to the output port and the output function is then controlled by the preprogrammed microprocessor. The output port transfers the electrical signal to the solenoid valve, which results in water flows to lavatory filler bubblers or flush valve solenoid for a preprogrammed amount of time. The control board shall have the ability to be upgraded to a communication controller by the use of an add-on module and using the existing 110V power line as the network link with no additional communication wires required.

B. The control box shall contain lights indicating the functions of operation. Amber LED to show power to the control box, green LED at each input port when the pressure sensor is activated and at the output port when the solenoid operator is activated. The output port shall remain illuminated for the duration of the preprogrammed run time.

C. A pair of red LEDs shall indicate when block times are in effect when a red LED is illuminated, the flush valve has been used too often in a given period of time, and the program is preventing the flush valve solenoid from being activated. The flush valve shall be prevented from use as long as the fixture's associated red LED is illuminated.

D. VLM-7101 Lavatory Manifold shall include two (2) solenoid valve operators to provide hot and cold water for one (1) lavatory unit. Lavatory manifold valves shall be industrial quality and shall include solenoid valves without diaphragms. **Any valve that includes diaphragms is acceptable**. Manifold shall include ½" IPS hot and cold water inlets with 20" braided stainless steel hose connectors, stainless steel strainers, check stops, 0.5 GPM flow control and two (2) soft close anti-hammer solenoid operators. Each solenoid valve operator shall be furnished with a minimum of twenty (20) feet of telephone cable with modular plug type connector and 3/8" water tubing. Each lavatory solenoid shall include a manual override feature to enable to turn on water to filler bubblers by bypassing the electronic circuitry in the event of power loss or during troubleshooting. The solenoid coil and plunger shall be interchangeable with solenoid coil plunger of shower valve.

E. Flush valves: I-Con FVK-7001-X come standard with 1"ball valve, vacuum breaker, flush tubing, and a 20'lead.

F. Icon SEF1489 Touch Sensor Button assemblies shall have stainless steel housing and shall be pressure activated with no mechanical moving components and completely waterproof. The sensor shall operate on a strain gage type principle and the sensor adjustment shall be self-calibrating. Sensor assembly shall include six (20) feet of telephone type cable and modular plug type connector. Sensors shall be pre-wired prior to shipment. Furnish a CDA1489-8" core drill assembly for each SS-14&15 fixture.

G. Touch Sensor Buttons must fit fixture manufacturer's "D' punching.

H. Controllers shall be factory programmed in accordance with the following.

1. Lavatory: Hot water twenty (20) second run-time. Cold water ten (10) second run-time

2. Flush valve: Pressure sensor is activated. Flush cycle occurs immediately.
If procedure is repeated within five (5) minutes then the flush valve is disabled for fifteen (15) minutes. Repeated pressure sensor operation has no effect on the disabled lock out time. Lock-out time shall be field adjustable for 0-60 minute lock-out.

I. Transformer shall be 110 VAC, 60 Hz primary, 24 VAC, 40 VA, Class II, overload protected complete with six (6) feet of #12-3 conductor SJO cord and NEMA 5-20 plug, protected by-1/2 AMP SBT fuse on the primary side and a 2 AMP fuse on the secondary side.