

DEPARTMENT OF THE ARMY
Omaha District, Corps of Engineers
106 South 15th Street
Omaha, Nebraska 68102-1618

:NOTICE: Failure to acknowledge : Solicitation No. W9128F 04 R 0024
:all amendments may cause rejec- :
:tion of the offer. See FAR : Date of Issue: 08 JUN 2004
:52.215-1 of Section 00100 : **New Date of Receiving Proposals:**
13 JUL 2004

Amendment No. 0002
02 July 2004

SUBJECT: Amendment No. 0002 to specifications and drawings for Construction of
B-1B WEAPONS SYSTEMS TRAINER, FXBM 02-3002, ELLSWORTH AFB, SOUTH
DAKOTA.
Solicitation No. W9128F 04 R 0024.

TO: Prospective Offerors and Others Concerned

1. The specifications and drawings for subject project are hereby modified as follows (revise all specification indices, attachment lists, and drawing indices accordingly).

a. Specifications. (Descriptive Changes.)

(1) Page 00010-1 (Standard Form SF 1442), delete date and time of receiving proposals shown and substitute "13 JUL 2004" at "1400".

(2) Amendment No. 0001, Page 8, paragraph 1.c, item (1) for Sheet C5.01, line 2, delete "FONTS" and substitute "FOOTINGS".

(3) Section 03300, Page 14, paragraph 2.1.1 Portland Cement, lines 3 and 4, delete sentence reading "White Portland cement shall ...Type II." and substitute:

"White Portland cement shall meet the above requirements except that it may be Type I/II or Type II."

(4) Section 04200, Page 20, Paragraph 3.2.4 Brick Units, line 2, delete "running bond" and substitute "Flemish bond".

(5) Section 05500A, Page 6, delete paragraph 2.14 FIRE EXTINGUISHER CABINETS AND BRACKETS in its entirety and substitute:

"2.14 FIRE EXTINGUISHER CABINETS

Non-rated cabinets shall be of the semi-recessed type suitable for 15-pound extinguishers. Box and rounded trim shall be of heavy gauge rolled steel. Door shall be of rigid frame with full-length piano type hinge and double strength (DSA) glass panel. Door and panel shall have the manufacturer's standard white baked enamel finish inside and out. See drawings for location for cabinets."

(6) Section 06410A, Page 4, following Paragraph 2.1.2.3, add:

"2.1.2.4 Plywood Veneers

Plywood veneers shall be plain sliced and are identified as WD-1 Red Oak, clear finish and WD-2 Cherry, clear finish."

(7) Section 07416A:

(a) **Page 11**, Paragraph 1.5, SD-07 Certificates, item f. Warranty certificate, lines 5 and 6, delete "20-year system weathertightness warranty" and substitute "30-year system weathertightness warranty".

(b) **Page 16**, Paragraph 2.8, line 1, delete "waest" and substitute "west".

(c) **Page 20**, Paragraph 3.3.1, to the end of the paragraph, add:

"Use maximum length of sheets possible to minimize the number of joints, and layout of joints (lapped joints) shall occur at underside of purlins to maximize lap sealing effectiveness."

(8) Section 08120, Page 4, paragraph 1.3 SUBMITTALS, to the list of submittals, add:

"SD-04 Samples

Doors finish colors: G-AE

Submit a minimum of three color samples showing range of color finish."

(9) Section 08800, Page 4, paragraph 1.2 SUBMITTALS, SD-04 Samples, following submittal item for "Insulating Glass", insert "; G-AE"; Also, last 2 lines, delete description reading "Three samples ... 5 by 7 inches."

(10) Section 08900, Page 6, paragraph 1.3 SUBMITTALS, to the list of submittals, add:

"SD-04 Samples

Glazed Curtain Wall finish colors; G-AE

Submit a minimum of three color samples showing range of color finish."

(11) Section 09310.

(a) **Page 5**, delete paragraph 2.1.1 Mosaic Tile in its entirety.

(b) **Page 7**, paragraph 2.4.2 Ceramic Tile Grout, to end of paragraph, add:

"Color shall be as specified in Section 09915 COLOR SCHEDULE."

(12) Section 09445A, Page 2, paragraph 1.2 SUBMITTALS, SD-04 Samples, following submittal item "Resinous Terrazzo Floor" add: "; G-AE".

(13) Section 09680.

(a) **Page 5**, paragraph 2.1.1.1. a. Carpet Construction, delete "Textureweave" and substitute "Patterned loop."

(b) **Page 6**, paragraph 2.1.1.2. a. Carpet Construction, delete "Textureweave" and substitute "Patterned loop."

(c) **Pages 7 and 8**, delete Paragraph 2.2. a. ARR (Appearance Retention Rating) in its entirety.

(d) **Page 8**, paragraph 2.2. c. Flammability and Critical Radiant Flux Requirements, line 3, delete "0.22 and substitute "0.45".

(14) Section 09720, Page 4, paragraph 2.1.1, paragraph title, after "4", insert ", 6".

(15) Section 12610, Page 5, paragraph 3.1.1 Seating Schedule, to end of paragraph, add:

"See drawings for seat layout and tablet arm locations."

(16) Section 15080A.

(a) **Page 26**, paragraph 3.3.2 Insulation and Vapor Retarder for Cold Air Duct, delete item reading "e. Outside air intake for ducted condenser fan." and substitute:

"e. Supply Air Duct
g. Return Air Duct
h. Exhaust Air Duct".

(b) **Page 28**, delete paragraph 3.3.3 Acoustical Lined Duct in its entirety.

(17) Section 15400, Page 22, delete paragraphs 2.9, 2.9.1 and 2.9.1.1 in their entirety and substitute:

"2.9 WATER HEATERS

Water heater type and capacity shall be as indicated on the drawing sheets. The gas-fired water heater shall have controls with an adjustable range that includes 120 to 180 degrees F. Hot water systems utilizing recirculation systems shall be tied into building off-hour controls. The water heater will operate at 83% thermal efficiency.

The water heater will be a vertical fire tube design that is constructed and stamped in accordance with Section IV, Part HLW of

the ASME code. Both the storage and heating sections of the water heater will be National Board Registered for a working pressure of 150 psi and will be pressure tested at 1-1/2 times working pressure. For maximum thermal strength, the fireside of the heating surfaces will be of boiler-grade steel. For corrosion protection, the waterside of the heating tubes will be sealed in copper. The heating tubes will be rolled, beaded, and seal welded into the tube sheets. The combustion side of the tube sheet will be insulated by a layer of ceramic fiber that will protect the tube sheet from both thermal stresses and failure that can result from the accumulation of scale and precipitants. The heater will be insulated to meet current ASHRAE standards, jacketed with powder-coated steel, and mounted on heavy-duty channel skids. The lining will be applied only after the tank is completely fabricated and all welding is completed. Consist of multiple applications of high-temperature fluoropolymer. The coating shall be continuous and nonporous with no interruptions or discontinuities and require no sacrificial anode rods for protection. The heater will fit properly in the space provided and installation will conform to all local, state, and national codes. Start up on the unit will be performed by factory trained and authorized personnel. A copy of the start up report will be provided to the owner. The burner and all heater parts will have a one-year parts and labor warranty. Storage tank will have a five-year warranty covering manufacturing or material defects, and/or the production of rusty water. Tank and heating surfaces will have a nonprorated, three-year warranty against failure due to scale buildup with no provisions for periodic cleaning for warranty coverage.

2.9.1 Gas Fired Type

Combustion will be provided by a forced-draft power burner with a gas train meeting the specifications of ANSI Z21.10.3. Water heater will be a category I, non-condensing appliance. It will be UL listed for use with non-pressurized, type B venting material. The water heater shall be sealed combustion. Plastic material Polyetherimide (PEI) and polyethersulfone (PES) are forbidden to be used for vent piping of combustion gases.

As a minimum, the heater will be equipped with the following:

- a. Electronic flame monitoring with pre-purge
- b. Two immersion operating thermostats
- c. An immersion temperature limiting device
- d. An ASME- or AGA-rated temperature and pressure relief valve"

(18) Section 15569A.

- (a) **Page 12**, delete paragraph 2.1.1 Condensing Boiler in its entirety and substitute:

"2.1.1 Condensing Boiler

Each boiler shall be a self-contained packaged type, complete with accessories, insulated with heavy-density fiberglass insulation, jacketed with coated steel, and mounted on heavy-duty channel skids.

Each boiler shall conform to the commercial design used by the manufacturer and shall permit free thermal expansion without placing undue stress on any part of the boiler. The boiler will be a vertical, steel fire tube design. It will be stamped in accordance with Section IV of the ASME code and National Board Registered for a maximum allowable working pressure of 125 psi. The heating tubes shall be rolled, beaded, and seal welded into the tube sheets. Fireside components that are exposed to condensate will be constructed of stainless steel or coated with condensate inert polymers. Each boiler shall be specifically designed for condensing application. Each boiler shall withstand the corrosive effects of condensate for each part which may be in contact with the condensate at all possible operating conditions. Each boiler shall be provided with a separate air intake, exhaust and condensate drain. Boiler will be capable of operating with a primary-only boiler heating loop. Each boiler shall be designed to withstand the water temperature differentials anticipated at the required start up and operating conditions without experiencing any damage due to thermal shock. The boiler shall have a full one-year parts, labor and freight warranty. Complete copies of all warranties and service policies shall be part of the submittal package. Start up on the unit will be performed by factory trained and authorized personnel. A copy of the start up report will be provided to the owner."

(b) **Page 12**, delete Paragraph 2.1.2.items d. and i. in their entirety and substitute:

"d. The operating temperature differential between boiler discharge and system return shall be 20 degrees F. The start-up temperature differential between boiler discharge and system return shall be 120 degrees F."

"i. The Gas fired boiler with a return temperature of 140°F shall operate with a minimum thermal efficiency of 87.5%."

(c) **Page 13**, delete Paragraph 2.2.1.1 Gas and Combination Gas-Oil Fired Burners and Controls in its entirety and substitute:

2.2.1.1 Gas Fired Burners and Controls

Boiler will utilize an induced-draft power burner that can operate with a minimum inlet flow gas pressure of 4.5 inches water column. The boiler will be category IV and be UL-listed for use with single-wall, positive pressure stainless steel vent. The water boiler shall be direct venting both inlet air (6" vent @ 120 eq. Ft.) and exhaust gases (28 BHP: 4" vent @ 50 eq. Ft., 6" vent @ 390 eq.ft. All others: 4" vent @ 100 eq.ft, 6" vent @ 500 eq. Ft.). The burner shall meet U.L. Standard 795 gas train requirements and Factory Mutual (FM) gas train requirements and conform to ANSI Z21.13. Boiler shall have two stage firing with 3 to 1 turndown.'

(d) **Page 15**, paragraph 2.3.5 Combustion Safety Control and Equipment, following item d, add:

"e. Solid-state flame safeguard with pre-purge, programmable post-purge, and flame status indicating lights."

(19) Section 15895.

(a) **Page 25**, paragraph 2.10.1, to the end of the paragraph title, add: "(Includes AHU-2 through AHU-8)".

(b) **Page 26**, paragraph 2.10.1.1 Casings, lines 31 thru 34, delete "Casing insulation shall conform to NFPA 90A Double-wall casing sections handling conditioned air shall be insulated with not less than 2 inch thick, 1-1/2 pound density coated fibrous glass material having a thermal conductivity no greater than 0.23 Btu/hr-sf-F." and substitute:

"Casing insulation shall conform to NFPA 90A Double-wall casing sections handling conditioned air shall be insulated with not less than 2 inch thick, 1-1/2 pound density coated fibrous glass material on walls, floor, and roof having a minimum thermal conductivity R of 12.5 Btu/hr-sf-F."

(c) **Page 26**, delete text of paragraph 2.10.1.2, Heating and Cooling Coils, in its entirety and substitute:

'Coils shall be selected to maximize unit tunnel area using single coil arrangements as needed to satisfy required coil face areas. All coils shall have performance certified in accordance with ARI Standard 410 for coil capacity and pressure drop. Coils used with glycol are outside the scope of ARI-410, but shall be selected to meet scheduled performance. All coils must be circuited to operate at design load with water velocity within the ARI range of certified rating conditions. Coil segment side and top panels shall be removable to allow for removal and replacement of coils, without affecting the structural integrity of the unit. Upstream and downstream segment door clearances shall accommodate a minimum 2-inches of field installed external piping insulation. Cooling Coil Segment shall be provided with a full-width, multi-sloped (IAQ) drain pan that extends downstream a minimum 25 inches beyond the last coil in the section to provide drain pan access for cleaning and inspection. Drain pan design and application shall comply fully with the stated intent of ASHRAE 62-2001. Drain pans shall be sloped in a minimum of 2 planes; cross break interior pans and pitch toward drain connections to ensure complete condensate drainage. Units with cooling coils shall have drain pans under complete cooling coil section. A minimum of 1" clearance shall be provided from the bottom of the coil casing to the drain pan so that the drain pan can be visually inspected and physically cleaned, including underneath coil, without removal of the coil. All drain pan connections will be to one side of the unit to enable proper trapping. Drain pans that do not comply with these maintenance requirements will be the responsibility of the contractor to field modify. The drain pan shall be of double wall construction with a minimum galvanized liner and shall be insulated with spray-injected foam to completely seal the drain pan assembly. The drain pan liner shall be of double wall construction of 16 gage galvanized steel and shall be fully insulated with spray injected foam, completely sealing the drain pan assembly. The drain pan shall have a mastic coating. All coils shall be slide out, "shipping" type, mounted on tracks, and easily removable from

the air handling unit by removing only one exterior panel. Coils that require additional disassembly of the unit or replacement of the entire coil section (e.g. "unit" type coils) for coil removal are unacceptable. Coils shall be supported by galvanized coil support members, constructed of channeled members, allowing uninhibited access for inspection and safe cleaning. All vertical coil supporting members (bulkheads) and block offs shall be constructed of galvanized steel and shall entirely seal off the coil, preventing air bypass. Coil grommets shall be provided on all coils to completely seal the area between the coil connection and the unit casing. Drainable Water coils shall be designed to operate at 250 psig design working pressure and up to 300° F and shall be tested with 325 psig compressed air under water. Circuiting shall provide free and complete draining and venting when installed in the unit. All vent and drain connections shall be extended to the outside of the unit casing. The primary surface shall be 5/8-inch O.D. or 1/2-inch O.D. copper tube, staggered in direction of airflow. Tubes shall be mandrel expanded to form fin bond and provide burnished, work-hardened interior surface. The tubes shall have a minimum tube wall thickness of .020-inch for 5/8-inch O.D. coils and .020-inch for 1/2-inch O.D. coils. Specified thickness shall be maintained throughout the tube including brazed U-bends. Extended surface shall consist of die-formed, continuous, aluminum corrugated fins. The fins shall have fully drawn collars to accurately space fins, and to form a protective sheath for the primary surface. The fin thickness shall be .006-inch Aluminum. Coils with finned height greater than 48 inches shall have an intermediate drain pan extending the entire finned length of the coil. Cooling coils in excess of 48 inches in height shall not be acceptable unless provided with an intermediate drain pan. The intermediate pans shall have down spouts to guide condensate to the main drain pan. Coil casing shall be constructed of 16-gauge galvanized steel. Tube sheets on each end shall have drawn collars to support tubes. A single intermediate coil support shall be provided on coils with a finned length of more than 62 inches, two (2) intermediate supports above 100 inches in length, and three (3) intermediate supports on coils with a finned length of more than 141 inches. Casing channels shall be free-draining, without depressions to collect moisture and contaminants. Casing channels shall not block fin area. Headers shall be of heavy seamless copper tubing, silver-brazed to tubes. Connections shall be of steel, with male pipe threads, silver-brazed to the headers. A 1/4-inch FPT, plugged vent or drain tap shall be provided on each connection. All vent and drain connections shall be extended to the outside of the unit casing. Circuiting shall be to provide free draining and venting, through one vent and one drain on each coil, when installed with casing level. Coils shall be circuited, and have connections arranged, for counter-flow of air and water with supply on bottom and return on top of coil headers. Coil circuiting shall provide for design water velocity in tubes without exceeding total water pressure drops in schedule.'

(d) **Page 27**, following paragraph 2.10.1.6, add:

'2.10.1.7 Electrical Characteristics and Components

All fan motors will be built in accordance with the latest standards of the National Electrical Manufacturer's Association (NEMA) and IEEE

and shall be rated for continuous duty at full load at 40°C ambient temperature rise and a service factor of 1.15. Fan motors shall be NEMA design ball bearing type. Fan motors shall be 1500 RPM open drip proof type. All fan motors shall be high efficiency. Motors shall be suitable for use in variable frequency application, per NEMA MG-1 Part 30. The motor starter panel shall contain a main power block, single speed fan motor contactor(s) with overload device(s), three phase ambient compensated overload heater elements, two primary control fuses, one secondary control line size fuse, terminal strip, and a door-mounted on/off auto switch. The air-handling unit shall be equipped with factory mounted and wired external non-fused disconnect in a separate NEMA 1 enclosure.

Variable-air-volume units shall be equipped with factory mounted and wired variable frequency drives serving supply for fan unloading control. Each drive shall be mounted in a dedicated, NEMA 1 compartment located on the side of its associated fan section. After the air unit is installed, the VFD shall be field commissioned by a factory trained and employed service technician. The VFD shall be UL listed and comply with all applicable provisions of the National Electric Code.

Constant volume units shall be equipped with factory mounted and wired or motor starter panel(s) serving supply fan motor(s). The motor starter panel(s) and all associated components shall be U.L. listed. The motor starter panel shall be protected by an environmental enclosure per ETL rating. Individually protected supply fan starter with short circuit and overload protection. 115 volt control power transformer with primary and secondary protection. The starter panel shall be provided with a 5 point terminal strip for field connections. Integral non-fused main power-disconnect shall be provided. The disconnect shall be an integral part of the motor starter panel. The disconnect shall be factory wired.

2.10.2 Custom Fabricated Air Handling Unit, AHU-1

2.10.2.1 Quality Assurance

Fans shall bear the AMCA Certified Ratings Seal for Air and Sound Performance. Provide factory assembled air handling units that are the products of a manufacturer regularly engaged in manufacturing units of the size and type specified. All units furnished under this Specification shall be ETL labeled and shall conform with the requirements of all applicable codes. CSA is not acceptable. Coils shall bear the ARI certified ratings seal for performance.

2.10.2.2 General

Provide draw-through custom fabricated air handling units as indicated and as detailed on the Drawings. The air handling units shall have the components with access sections in between each component except between the filter and heating coil sections. The components are on the drawings for exact unit layouts. Air handling units shall be shipped in individual or combined sections as required by the project construction. Maximum height and width of air handling units as indicated on the drawings shall be adhered to by all equipment

manufacturers to facilitate installation within existing building structure constraints.

2.10.2.3 Unit Housing

The unit housing shall be constructed to withstand a minimum internal positive pressure of 12 inches of water gauge. Leakage rate shall be 1% @ 12" W.G. and shall be certified in writing by an Officer of the Company. Include testing of one unit at the factory. All sections shall be double wall solid construction with the insulation between the walls. All external and internal surfaces shall be solid steel panels except as noted below. Provide a 20 gauge solid base liner under the bottom of the unit. Construct housing exterior walls and roof from minimum 16 gauge galvanized steel with 2 inch thick, 3-pound density insulation. On the inside of the air handling unit, line the insulation with minimum 20 gauge, galvanized steel. Construct housing interior floor from minimum 12 gauge continuously welded epoxy coated checkerplate steel mounted on 12" centers with 2 inch thick, 3-pound density insulation. Screws shall not protrude upwards from the surface of the floor, or the interior panels. Cover the insulation below the floor with minimum 20 gauge galvanized steel. Deflection of the floor shall not exceed 1/16" when subjected to a 200 Lb. load. Provide 6" C-Channel base for structural integrity during shipping and rigging as well as to elevate the unit for proper trapping of condensate. Base shall be provided with lifting lugs, minimum of four (4) per unit section. Floor shall be flat, reinforced from below, with all seams continuously welded. Screws used in the construction of the floor will not be acceptable. Provide a 1.5" perimeter collar around the entire unit, and around each floor opening to ensure the unit is internally watertight. The entire base shall act as an auxiliary drain pan and hold up to 1.5" of water.

2.10.2.4 Unit Construction

Basic unit construction shall consist of welded steel frame onto which panels are attached, or the panels shall be fabricated to be structural units that are self supporting. Panels shall be attached using bolted or welded joints for a rigid, air-tight seal. All seams shall be gasketed with closed cell neoprene and caulked to be made air tight. Any gasketing/sealing materials exposed to the air stream shall conform to NFPA 90A/90B. Exterior of the unit shall be painted with 2 coats of alkyd enamel paint.

2.10.2.5 Insulation

Insulation shall be continuous throughout the air handling unit. Thermal gaps in the insulation shall not be allowed. Also, thermal breaks shall be employed in the panel construction to prevent thermal conductivity from the inside of the air handling unit to the outside of the unit through panel steel edges that are continuous from inside to outside. If uninsulated gaps are inherent in the design of the product (i.e. panel), then insulation shall be installed in the gaps and covered with a steel skin after the panels have been erected to form a continuously sealed and insulated air handling unit wall.

2.10.2.6 Access Sections:

Provide an access section between each pair of adjacent components constructed to the same standards specified above for the entire, double wall housing. Provide access section dimensions shown on the Drawings. Provide each access section with a access door, a marine type light with a wire cage around the glass and a 120 volt, 1 phase duplex GFI receptacle. Run factory wiring inside electrical conduit and provide a light switch outside the access section. Units must bear a UL or ETL label. Provide test ports above access door for the purpose on inserting test probes for commissioning and air balancing. Test ports shall be installed to prevent air leakage and maintain the pressure class integrity of the air handling unit.

2.10.2.7 Access Doors:

Provide 2" thick continuously welded access doors for each access section shown on the Drawings of 24" minimum width. Doors shall be of the same double wall construction and same depth (thickness) as unit housing. Corners of the doors shall be continuously welded for rigidity and to minimize air leakage. Fit each door with a minimum 10" round, hermetically sealed, double glazed laminated safety glass observation window. Construct doors according to the housing double wall standards specified above. Brace and stiffen the doors and provide them with a continuous 304 stainless steel piano hinge and two (2) 310 compression latches operable from either side of door. Doors shall be fully gasketed with continuous 1/2" closed cell hollow round black neoprene gasket with a metal encapsulated reinforced backing that mechanically fastens to the door frame. Provide construction similar to that shown in the SMACNA Duct Standards Manual for the pressure class of the system fan. All access doors must swing against the air pressure (ie. positive pressure plenum doors must swing in), unless otherwise shown on the drawings. Fan discharge section must have a door of minimum width to remove the motor and plenum fan wheel. This usually requires a door width of 24", 30", or 36". Plastic door latches will not be acceptable.

2.10.2.8 Access Panels:

Provide access panels sized and located to permit coil removal through the side of each unit housing. Construct all access panels to the same double wall standard specified for the other parts of the housings. Brace and stiffen access panels and bolt them to the housing using closed cell neoprene gaskets around the entire perimeter of each panel. Provide square metal grommets around the coil pipe penetrations through the access panels. Seal all coil pipe penetrations through the access panels to be air tight and to prevent condensation formation.

2.10.2.9 Coil Sections:

Provide double wall coil sections constructed to the same standard specified for the other parts of the housings. Support each coil on a steel channel or double angle frame and secure it to the rest of the housing support framing. Each coil shall be mounted on individual coil racks and be individually replaceable. Extend coil pipe connections through the access panel with threaded connections external to the air handling unit. Provide red brass fittings

extending through the air handling unit housing at the coil pipe connections for each coil to act as dielectric fittings and minimize galvanic corrosion. Provide the coils with piped drain and vent connections to the outside of the housing. Provide all stainless steel support frames for cooling coils. Coils shall also have stainless steel coil casings. Interior walls and roof of cooling coil sections shall be constructed of minimum 20 gauge stainless steel. The interior floor of cooling coil sections shall be constructed of minimum 18 gauge stainless steel. Arrange supports for cooling coils to avoid piercing or short circuiting drain pans. Include minimum 10 gauge, stainless steel, structural support members for each cooling coil section. Also provide each cooling coil with intermediate stainless steel drain pans with 1" stainless steel drain lines extending down to the top edge of the drain pan below. Fabricate cooling coil drain pans from minimum 18 gauge stainless steel. All drain pans shall be IAQ sloped in two directions and fully drainable. Make all upper tier pans 2-1/2 inches deep and extend them beyond the cooling coils leaving air side at least 6 inches. Extend the bottom drain pan beyond the full width of the lowest coil section to gather condensation from the headers and U-bends. Also extend it beyond the coil at least 4 inches on the entering air side and at least 12 inches on the leaving air side. Extend the pan at least 3 inches beyond the return U-bends end of the coil and all the way to the housings inner wall on the header end of the coil. The insulation contractor shall extend the cooling system piping insulation at least 2 inches into the housing and shall seal the butt end of the insulation to prevent it from absorbing the condensate as it forms on the pipe. Weld all drain pans watertight. Provide a minimum 1 inch drain pipe from each upper tier pan to the bottom tier pan. Provide a minimum 1-1/2 inch drain from the lower end of the bottom drain pan through the housing wall. The Mechanical Contractor shall extend the drain piping to a floor drain within the mechanical room. When the floor drain is outside the unit or in an area at a different air pressure under normal operation, the Mechanical Contractor shall provide a deep seal trap in the drain line suitable for the design pressure of the unit

2.10.2.10 Air Intake/Damper Section

Provide Aluminum Airfoil low leak dampers for return air, outside air, and relief air dampers.

2.10.2.11 Air filter Section

Provide filter banks as indicated on drawings. Provide magnehelic filter gauge, complete with static pressure tips, aluminum tubing and vent valves. Flush mount filter gauge in outside surface of air handling unit wall.

2.10.2.12 Heat Recovery Section

2.10.2.12.1 Rotary Air-to-Air Heat Exchanger

Furnish a rotary air-to-air heat exchanger. Exchanger shall include hygroscopic rotor, constant or variable speed drive, rotation detector with alarm connection, and speed controller with temperature sensors.

2.10.2.12.2 Enthalpy Recovery Wheel

Exchanger shall be constructed of alternate Layers of corrugated and flat aluminum sheet material. Both sides of the exchanger shall be completely smooth with less than 0.005" variation between alternate layers to allow for optimum sealing surface for brush seals. The rotor shall have smooth air channels to ensure laminar airflow for low pressure drops. Dry particles up to 900 microns shall pass freely through the rotor without clogging the media. The rotor media shall be capable of being cleaned with low temperature steam without degrading unit performance. The rotor media must be made of aluminum which is coated to prohibit corrosion. All surfaces shall be coated with a nonmigrating adsorbent specifically developed for the selective transfer of water vapor. Verification in writing must be presented from independent laboratory evaluations confirming that the desiccant adsorbent surface does freely transmit water vapor without detectable gaseous cross-contamination.

2.10.2.12.3 Energy Wheel Unit Housing

The rotor housing shall be constructed using a heavy duty welded tubular steel frame (rotors under 42" shall have a heavy duty galvanized frame) with galvanized sheet metal cover plates and inspection hatches. Adjustable brush seals must be provided along the periphery of the rotor and between the inlet and outlet air passages to effectively prevent air leakage and cross-contamination between airflows. Total airflow between airstreams from leakage and purge shall be less than 10% @ 2.5"w.g. differential pressure between airflows. Rotor and casing shall be reinforced to prevent deflection from differential pressures to less than .03 inches. All rotors shall be mounted on sealed permanently-lubricated spherical bearings. All rotors over 42" in diameter must have flanged or pillow block bearings that can be serviced or replaced without removal of the rotor from the rotor housing.

2.10.2.12.4 Purge

The unit must be provided with a factory set, field adjustable purge sector designed to limit cross contamination at qualified appropriate design conditions to operate at less than .04 percent of that of the exhaust air stream concentration. Independent laboratory evaluations must indicate purge sector configurations, rotor construction, gasses, air pressure differentials, rotor speeds and other phenomena that constitute "appropriate design conditions" required to limit cross-contamination and air leakage.

2.10.2.12.5 Drive System/Speed Control

The rotor drive system shall consist of a self adjusting belt around the rotor perimeter driven by an AC motor with gear reduction. The variable speed drive shall be specifically designed for heat wheel applications to include: an AC inverter, soft start/stop, rotation detection w/alarm contacts, automatic self cleaning jog cycle, and self testing capability. The speed controller shall be capable of accepting any control signal (potentiometer, VDC, and mA).

- a) On/Off Control

The AIRotor will receive power and will operate when the main disconnect is turned on. A modulating signal is required to control the AIRotor speed. The controller can be set up for the following input signals: (0-5V, 0-10V, 1-5V, 2-10V, 5-10V, 10-0V, 10-2V, 10-5V, 0-20V Phase cut, 0-20mA, and 4-20mA). The AIRotor can be turned on and off remotely by removing white jumper from terminals #5 and #6 in wheel speed control panel and connecting remote switch as indicated.

b) Rotation Detection and Alarm

A magnet fitted to the periphery of the rotor actuates a pulse sensor once every revolution. Under normal operation the internal contacts are in the energized position (contact closed between #15 and #13). If the drive belt should fail or if the drive stops, after 20 minutes the internal contacts shall close between #15 common and #14 NC), sending a signal to a remote alarm furnished by others.

c) Automatic Purge

When wheel is at minimum signal or zero recovery, the wheel will automatically run at minimum speed for 10 seconds every 30 minutes to ensure that the rotor surface is kept clean.

d) Gentle Starting

The control unit soft-starts the wheel, taking approximately 30 seconds to ramp up the wheel to maximum speed. This extends the life of the drive and belt.

e) Maximum Discharge Temperature Speed Control

The remote modulating signal shall modulate the speed of the rotor to maintain a maximum Supply Air discharge temperature leaving the AIRotor (T-SA). As T-SA rises above the recommended setpoint of 58°F, rotor speed is reduced to decrease rotor effectiveness. If T-SA is below setpoint, the rotor runs at maximum speed with maximum recovery.

f) Summer Mode Control

When the Outside Air temperature (T-OA) rises above the return air temperature (T-RA), the rotor should be run at maximum speed for maximum recovery.

g) Frost Control

When the exhaust temperature (T-EA) leaving the AIRotor falls below the recommended set point of 15°F, the rotor speed is reduced to reduce heat recovery and maintain a minimum exhaust temperature.

2.10.2.12 Cooling and Heating Coils

Provide Chilled Water cooling coils and hot water heating coils within each air handling unit as scheduled on the Drawings. Encase coils in coil sections with the headers and the U-bends fully contained within the housing. Cooling Coil casings shall be 304 stainless steel. Hot water heating coils shall be Galvanized Steel. In general, provide coils with same end piping connections. Extend pipe connections to outside the casing to permit connection to the building chilled water system. Seal the hole with blue silicone seal and provide an escutcheon to prevent damage to the seal. Cooling coil face area shall be sized to guarantee against moisture carryover without the use of moisture eliminators. Coils shall be certified per ARI 410. Coil tubes to be copper construction, 0.02" tube wall thickness. Aluminum Fins to be provided, 0.075" thickness. Pipe connections shall be at an accessible end of the coil to facilitate coil removal.

2.10.2.14 Supply Fans and Motors

Provide AMCA 210 rated belt drive plenum fans. All fans shall have solid drive shafts. Statically and dynamically balance fan wheels at the factory and then rebalanced them in the field, if necessary. Provide fans capable of delivering air flows (CFM) and external static pressures (inches of water, gauge) listed in the schedule on the Drawings while requiring no more than the brake horsepower (BHP) shown. Lubrication fittings shall be extended to the exterior of the fan cabinet by using 1/4" copper tubing. Plastic tubing will not be permitted. Fan housing shall be constructed of 1/4" plate steel, adequately braced with structural steel for rigidity. Fan wheels shall be constructed of aluminum to keep the starting torque to a minimum. Fan shafts are to be solid, ground and polished, carbon steel, SAE 1045 material, machined to close tolerances, keyed to the fan wheel. Coat the fan shaft with a rust inhibitor after machining. Fan bearings shall be in self aligning pillow block, grease lubricated, extra heavy duty anti-friction ball or spherical roller type, selected for an average life of 200,000 hours at design operating conditions. Bearings are to be mounted on the fan structural bracing. Provide extended lubrication lines to permit lubrication for both bearings to be performed from the access door side of the air handling unit. Fan and motor are to be mounted on an all welded, structural steel, prime coated, internal isolation base with springs selected to provide 99% isolation efficiency from the building structure. The outlet of the fan shall be separated from the unit casing by means of a factory installed flexible fabric connection. The internally mounted motor shall be provided on a slide rail base to allow proper adjustment of belt tension. Fan and motors shall be mounted on a rigid frame inside the air handling unit housing and the rigid frame shall be internally vibration isolated. Also, also provide integral thrust restraints. Vibration isolators shall be rigidly attached to the air handling unit base frame. Provide a high pressure flexible connector between fan discharge and air handling unit housing. The internally mounted motor shall be provided on a slide rail base to allow proper adjustment of belt tension. Provide premium efficiency motors. Factory mount and adjust motors and drives. All motors shall be inverter duty for use with variable frequency drive (VFD). It shall be the responsibility of the fan manufacturer to match the torque rating of the fan assembly with the torque rating of the selected motor. Fan drive shall be designed for a minimum of 1.5 service factor and shall be factory mounted and aligned. Fan drives shall be in strict accordance with

UBC Chapter 905. Select fan assemblies so they operate without passing through the first critical speed. Manufacturer shall provide AMCA 300 certified sound power ratings per each octave band frequency for the actual air handling units and return/relief fans for this project. The sound power ratings shall be provided at the location of the air handling unit discharge duct connection and the intake duct connections. All sound power ratings must take into account the blade passage frequency of the fan. Provide structural steel support stand within the air handling unit's fan discharge section to accommodate the vane axial supply fan. Secure the supply fan to the structural support stand with spring vibration isolators.

2.10.2.15 Inlet/Outlet Bells and Screens

Provide each supply plenum with an OSHA approved belt guard, and a protective cage around the fan. Provide ½ inch mesh by 0.047 inch diameter wire screen at each plenum fan air inlet.

2.10.2.16 Acoustical Discharge Plenum

Provide each air handling unit fan assembly with a factory engineered discharge sound plenum constructed of insulated perforated double wall sheet metal inner liner.

2.10.2.17 Fan Inlet Air Flow Measuring Stations

Provide each supply fan airflow traverse probes mounted in the fan inlet bell capable of continuously measuring the airflow capacity (air volume) of the respective plenum fan complete with static pressure sensors, air flow measuring stations, transmitters, transducers, and all cabinets, wiring and tubing. The fan inlet airflow traverse probes shall use multiple sensors placed at concentric area centers along the exterior surface of the cylindrical probe and electronically connected to their respective controller. Sensors shall not protrude beyond the surface of the probe, nor be adversely affected by particle contamination, humidity, and temperature normally present in building system airflow. The fan inlet airflow traverse probes (two per inlet) shall have dual end support swivel brackets suitable for mounting in the fan inlet bell and symmetrical averaging signal takeoffs and fittings, and shall be of aluminum construction with hard anodized finish. The fan inlet airflow traverse probes shall not induce a measurable pressure drop, nor affect the sound level within the system by its presence in the fan inlet bell. The probes shall be capable of producing steady, non-pulsating signals without need for flow corrections or factors, with an accuracy of 2% of actual flow over a fan operating range of 10 to 1 capacity turndown. Sensors shall be capable of a stable signal up to 9000 fpm inlet velocity. Sensors shall be able to withstand temperature ranges from -20 to 200 degrees Fahrenheit, and 0-100 % non-condensing humidity. They shall be impervious to dust and dirt contamination. The controller shall indicate Total CFM as an LED readout, and shall provide a 2-10 VdC or 4-20 mA signal to the ATC/BAS that is linear and proportional. Provide a correlation curve showing air volume (CFM) vs. measured velocity pressure signal (IN. wc) to facilitate the Temperature Control Contractor's determination of the fan capacity readings. Air

handling unit manufacture shall factory mount air flow probes in inlet bell of each supply, exhaust and return fan.

2.10.2.18 Electrical

The manufacturer shall factory wire, test, and have all air handling units approved by CSA, ETL or UL. The manufacturer shall supply one [1] single point 460V/60 Hz/3 Ph power connection for each unit. The manufacturer shall wire all 120 V/208V/60 Hz/1 Ph components such as lights, convenience outlet, controls, heaters, etc. from a panel with circuit breakers for each type of electric device. The panel for 120 V/208 V/60 Hz/3 Ph is fed from a separate service. The manufacturer shall label and number code all wiring and electrical devices in accordance with the unit electrical diagram. The manufacturer shall mount the devices in a control panel inside the unit's service enclosure or on the outside and ensure the control panel meets the CSA, ETL or UL. The manufacturer shall provide a system of motor control including all necessary terminal blocks, motor contactors, motor overload protection, grounding lugs, auxiliary contactors and terminals for the connection of external control devices or relays. The manufacturer shall individually fuse all fan and branch circuits. The manufacturer shall provide wiring from the motors to the motor control in accordance with CSA, ETL or UL and contained by EMT conduit with liquid tight connections. The manufacturer shall seal the casing penetrations in a manner that eliminates air leaks. The manufacturer shall provide factory mounted and wired VFD's and a through the door type disconnect.'

(e) **Page 30**, delete paragraphs 2.12 and 2.12.1 in their entirety.

(20) Section 15951A.

(a) **Page 16**, paragraph 2.1 GENERAL EQUIPMENT REQUIREMENTS, insert the following sentence at the beginning of the paragraph:

'The direct digital controls shall be a Honeywell XBS 5000 system and shall be 100% compatible with the existing EMCS front end.

Notwithstanding Section 00700 Contract Clauses clause "FAR 52.236-5, Material and Workmanship", the Direct Digital Controls system XBS 5000, shall be manufactured by Honeywell in order insure full intergration into the existing HVAC control system. No other product will be acceptable. The Competition Advocate authorizes sole source procurement.'

(b) **Page 42**, paragraph 2.15.1 Operating System, add the following sentences at the end of the paragraph:

"Provide full graphics package and data base installed into the existing EMCS frontend. Graphics package shall include all equipment with control features and sensing elements for complete control and monitoring of the facility."

b. Specifications (New and/or Revised and Reissued). Delete and substitute or add specification pages or sections as noted below. The

substituted pages or sections are revised and reissued with this amendment.

<u>Pages or Sections Deleted</u>	<u>Pages or Sections Substituted or Added</u>
Section 09915	Section 09915
---	Section 12705
---	Section 12708 and attachments

c. Drawings (Not Reissued). The following sheets of drawing code AF 171-10-01 are revised as indicated below with latest revision date of 2 July 2004. These drawings are not reissued with this amendment.

(1) Sheet A1.01, GENERAL NOTES, note 9, delete sheet reference "SHEET A9.07" and substitute "14/A9.05."

(2) Sheet A1.02,

(a) SECOND LEVEL FLOOR PLAN, Room 225, to end of note reading "UPHOLSTER AUDITORIUM SEATING ... FRONT OF ROOM", add:

"THE 8 END SEATS AT THE EAST AISLE TO HAVE LEFT HAND TABLET ARMS. THE REMAINING SEATS TO HAVE RIGHT HAND TABLET ARMS. TOTAL OF 80 SEATS."

(b) GENERAL NOTES, note 9, delete sheet reference "Sheet A9.07" and substitute "14/A9.05."

(3) Sheet A9.07, delete FIRE EXTINGUISHER CABINET detail 15/A9.07 in its entirety.

(4) Sheet S2.02, FLOOR FRAMING PLAN 1/S2.02.

(a) Near intersection of plan grid 3 and grids F and G, delete reference to section cut reference "19/S6.01" and substitute the attached note with leader:

"PROVIDE WELD PLATE IN SLAB AND CONNECTION PLATE TO COLUMN C-3 SIMILAR TO SECTION 17/S6.01".

(b) Near intersection of plan grid G and grids 3 and 6, near Section cut 1/S6.01, add note reading "INTERFACE OF THE PRECAST AND THE WALL"; and near Section Cut 17/S5.02, add note reading "INTERFACE OF THE FLOOR SLAB AND EXTERIOR STAIR LANDING".

(c) Between plan grids C and D and grids 3 and 6, delete section cut reference numbers "17/S5.02" and "17/S5.02 SIM" and substitute "6/S5.02" and "6/S5.02 SIM".

(d) At stairwell near Grid A and Grid 7, delete Section cut reference numbers "18/S5.02" and "18/S5.02 SIM" and substitute "7/S5.02" and "7/S5.02 SIM", respectively.

(e) Near intersection of plan Grid 3 and Grids A and B, delete section cut reference "16/S5.02" and substitute "5/S5.02".

(5) Sheet S6.05, CONCRETE MASONRY Notes, following note 9, add:

"10. HORIZONTAL REINFORCEMENT STEEL SHALL BE CONTINUOUS THROUGH CONTROL JOINTS. HORIZONTAL TRUSS STYLE REINFORCEMENT SHALL BE DISCONTINUED AT CONTROL JOINTS."

(6) Sheet M1.03, HVAC SECOND LEVEL UPPER PLENUM PLAN, west wall of Rooms 250 and 251, show and identify a wall-mounted humidistat next to the thermostat (for each room).

(7) Sheet M3.03, COMPUTER ROOM COOLING UNIT PIPING 10/M3.03 detail, show and identify a manual air vent on the chilled water piping between the shut off valve and the wye strainer.

(8) Sheet M3.04, CHILLED WATER PIPING DIAGRAM 2/M3.04, revise drawing to move check valves on the discharge piping of each chiller to before the shut off valve on the discharge of each chiller.

(9) Sheet M3.05, HUMIDIFIER SCHEDULE, NOTES below schedule, delete Note 4 in its entirety and substitute:

"4. PROVIDE ON/OFF HIGH LIMIT DUCT HUMIDISTAT AND AIRFLOW PRESSURE SWITCH".

(10) Sheet M3.06, AIR HANDLING UNIT SCHEDULE, for AHU-1, under Column FILTER, delete "FB-1 AND FB-11" and substitute

"FB-1, FB-11 & FB-12".

(11) Sheet E2.03, ENLARGED FIRST LEVEL FLOOR PLAN 1/E2.03, room 101, show and identify the following: Provide junction box with 120V power for AHU-1 convenience power. 20A/1P circuit breaker to panel L11, circuit 18 for AHU-1 convenience power. Coordinate with division 15.

(12) Sheet E8.03, SCHEDULE FOR PANEL L11, circuit 18, under LOAD KVA, MISC, insert "0.5"; and under NOTES, delete "SPARE" and substitute "AHU-1 CONV PWR".

(13) Sheet EU.01, SITE PLAN, to end of note reading "NEW ELECTRICAL MANHOLE", add: "(8'-0" SQUARE X 7'-0" DEEP)".

(14) Sheet P1.01, PLUMBING FIRST LEVEL PLAN, Room 152, intersection of gridlines G/3, near Keynote 15, delete note reading "(TYP 5)" and substitute "(TYP 6)".

d. Drawings (Reissued). The following sheets of drawing code AF 171-10-01 are revised with latest revision date of 30 June 2004, and reissued with this amendment.

(1) Sheet A6.03.

(2) Sheets I1.02, I1.04, I2.01, and I2.02.

(3) Sheets S6.06 and S6.07.

(4) Sheets M2.05, M3.08 and M4.02.

2. This amendment is a part of the proposing papers and its receipt shall be acknowledged on the Standard Form 1442. All other conditions and requirements of the specifications remain unchanged. If the proposals have been mailed prior to receiving this amendment, you will notify the office where proposals are received, in the specified manner, immediately of its receipt and of any changes in your proposal occasioned thereby.

a. Hand-Carried Proposals shall be delivered to the U.S. Army Corps of Engineers, Omaha District, Contracting Division (Room 301), 106 South 15th Street, Omaha, Nebraska 68102-1618.

b. Mailed Proposals shall be addressed as noted in Item 8 on Page 00010-1 of Standard Form 1442.

3. Offers will be received until 2:00 p.m., local time at place of receiving proposals, 13 JUL 2004.

Attachments:

Spec Pages or Sections listed in 1.b. above
Dwgs. listed in 1.d. and 1.e. above

U.S. Army Engineer District, Omaha
Corps of Engineers
106 South 15th Street
Omaha, Nebraska 68102-1618

2 July 2004
DRL/4547

SECTION TABLE OF CONTENTS

DIVISION 09 - FINISHES

SECTION 09915

COLOR SCHEDULE

08/02

PART 1 GENERAL

- 1.1 GENERAL
- 1.2 SUBMITTALS

PART 2 PRODUCTS

- 2.1 REFERENCE TO MANUFACTURER'S COLOR
- 2.2 COLOR SCHEDULE
 - 2.2.1 Exterior Walls
 - 2.2.1.1 Brick:
 - 2.2.1.2 Colored Mortar:
 - 2.2.1.3 Integrally Colored Rock Faced Concrete Masonry Units:
 - 2.2.1.4 Composite Aluminum Wall Panel System
 - 2.2.1.5 Glass and Glazing:
 - 2.2.2 Exterior Trim
 - 2.2.2.1 Steel Doors, Door Frames, and Louvers:
 - 2.2.2.2 Pipe Guards:
 - 2.2.2.3 Aluminum Doors and Door Frames:
 - 2.2.2.4 Aluminum Windows (mullion, muntin, trim, and sill):
 - 2.2.2.5 Fascia:
 - 2.2.2.6 Overhangs:
 - 2.2.2.7 Caulking and Sealants:
 - 2.2.2.8 Expansion Joint and/or Covers:
 - 2.2.2.9 Handrails; Exterior Stair:
 - 2.2.2.10 Signage:
 - 2.2.3 Exterior Roof
 - 2.2.3.1 Metal:
 - 2.2.4 Interior Floor Finishes
 - 2.2.4.1 Carpet:
 - 2.2.4.2 Carpet Tile:
 - 2.2.4.3 Rubber Sheet Flooring
 - 2.2.4.4 Rubber Stair Treads, Kick Strips, and Risers:
 - 2.2.4.5 Sheet Linoleum Flooring
 - 2.2.4.6 Terrazzo Flooring
 - 2.2.4.7 Terrazzo Flooring Dividers
 - 2.2.4.8 Terrazzo Tile Stair Treads
 - 2.2.4.9 Porcelain Tile:
 - 2.2.4.10 Grout:
 - 2.2.4.11 Static Conductive Tile:
 - 2.2.4.12 Concrete Sealed:
 - 2.2.4.13 Solid Surface Polymer
 - 2.2.4.14 Fluid Applied Flooring
 - 2.2.5 Interior Base Finishes
 - 2.2.5.1 Resilient Base and Moldings:
 - 2.2.5.2 Porcelain Tile:

- 2.2.5.3 Wood:
- 2.2.5.4 Precast Terrazzo:
- 2.2.5.5 Integrally Colored Smooth Faced Concrete Masonry Units:
- 2.2.5.6 Colored Mortar:
- 2.2.6 Interior Wall Finishes
 - 2.2.6.1 Paint:
 - 2.2.6.2 Vinyl Wall Covering:
 - 2.2.6.3 Ceramic Tile:
 - 2.2.6.4 Ceramic Tile Grout:
 - 2.2.6.5 Brick:
 - 2.2.6.6 Colored Mortar
 - 2.2.6.7 Burnished Concrete Masonry Units:
 - 2.2.6.8 Composite Aluminum Wall Panel System:
- 2.2.7 Interior Ceiling Finishes
 - 2.2.7.1 Acoustical Tile:
 - 2.2.7.2 Acoustical Grid
 - 2.2.7.3 Deep Edge System:
 - 2.2.7.4 Paint:
 - 2.2.7.5 Metal Deck:
 - 2.2.7.6 Structural Framing:
- 2.2.8 Interior Trim
 - 2.2.8.1 Steel Doors:
 - 2.2.8.2 Steel Door Frames:
 - 2.2.8.3 Aluminum Doors and Door Frames:
 - 2.2.8.4 Aluminum Windows (mullion, muntin, trim, and sill):
 - 2.2.8.5 Wood Doors:
 - 2.2.8.6 Window Sills:
 - 2.2.8.7 Fire Extinguisher Cabinets:
 - 2.2.8.8 Handrails:
 - 2.2.8.9 Metal Stairs:
 - 2.2.8.10 Exposed Ductwork:
- 2.2.9 Interior Window Treatment
 - 2.2.9.1 Window Shades:
- 2.2.10 Interior Miscellaneous
 - 2.2.10.1 Toilet Partitions and Urinal Screens:
 - 2.2.10.2 Plastic Laminate:
 - 2.2.10.3 Solid Surfacing Material:
 - 2.2.10.4 Casework:
 - 2.2.10.5 Signage (Excluding Handicapped Signage)
 - 2.2.10.6 Signage Message Color (excluding handicapped signage):
 - 2.2.10.7 Signage Background Color (excluding handicapped signage):
 - 2.2.10.8 Operable Partitions:
 - 2.2.10.9 Corner Guards:
 - 2.2.10.10 Auditorium Seating
 - 2.2.10.11 Wall Switch Handles and Standard Receptacle Bodies:
 - 2.2.10.12 Electrical Device Cover Plates:
 - 2.2.10.13 Electrical Panels:
 - 2.2.10.14 Aluminum Storage Locker:
 - 2.2.10.15 Elevator
- 2.3 PLACEMENT SCHEDULE

PART 3 EXECUTION (Not Applicable)

-- End of Section Table of Contents --

SECTION 09915

COLOR SCHEDULE

08/02

PART 1 GENERAL

1.1 GENERAL

This section covers only the color of the exterior and interior materials and products that are exposed to view in the finished construction. The word "color" as used herein includes surface color and pattern.

Requirements for quality and method of installation are covered in other appropriate sections of the specifications. Specific locations where the various materials are required are shown on the drawings. Items not designated for color in this section may be specified in other sections. When color is not designated for items, the Contractor shall propose a color for approval.

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only or as otherwise designated. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-04 Samples

Color Schedule; G-AE

1 set of color boards, 120 days after the Contractor is given Notice to proceed, complying with the following requirements:

- a. Color boards shall reflect all actual finish textures, patterns, and colors required for this contract.
- b. Materials shall be labeled with the finish type, manufacturer's name, pattern, and color reference.
- c. Samples shall be on size 8-1/2 by 11 inch boards with a maximum spread of size 25-1/2 by 33 inches for foldouts.
- d. Samples for this color board are required in addition to samples requested in other specification sections.
- e. Color boards shall be submitted to the following addresses:
SLL/Leo A Daly
730 2nd Ave. S.
Suite 1100
Minneapolis, MN 55402
Attn: Phil Vogel

PART 2 PRODUCTS

2.1 REFERENCE TO MANUFACTURER'S COLOR

Where color is shown as being specific to one manufacturer, an equivalent color by another manufacturer may be submitted for approval. Manufacturers and materials specified are not intended to limit the selection of equal colors from other manufacturers.

2.2 COLOR SCHEDULE

The color schedule lists the colors, patterns and textures required for exterior and interior finishes, including both factory applied and field applied colors.

2.2.1 Exterior Walls

Exterior wall colors shall apply to exterior wall surfaces including recesses at entrances and projecting vestibules. Conduit shall be painted to closely match the adjacent surface color. Wall color shall be provided to match the colors listed below.

2.2.1.1 Brick:

- FB-1: Mutual Materials Brick; Carib, Wire cut
- FB-2: Mutual Materials Brick; Carib, Smooth

2.2.1.2 Colored Mortar:

- M-1: To match CMU matrix color
- M-2: Prism P4140 Chestnut (at brick locations)

2.2.1.3 Integrally Colored RockFaced Concrete Masonry Units:

- CMU-2: Anchor Block Company, #296 Sahara - Rock Faced

2.2.1.4 Composite Aluminum Wall Panel System

- MP-1: Centria #9918 Dove Gray

2.2.1.5 Glass and Glazing:

- Glass: Gray tint and clear as indicated on drawings.
- Ceramic Frit: Viracon "Simulated Sandblast".

2.2.2 Exterior Trim

Exterior trim shall be provided to match the colors listed below.

2.2.2.1 Steel Doors, Door Frames, and Louvers:

- PNT-4: ICI #266 Residence Row (at Face Brick walls)
- PNT-5: ICI #1148 Abstract Grey (at Metal Wall panel)

2.2.2.2 Pipe Guards:

- PNT-6: ICI #1143 Stonewall

2.2.2.3 Aluminum Doors and Door Frames:

- Clear anodized.

2.2.2.4 Aluminum Windows (mullion, muntin, trim, and sill):

- Clear anodized.

- 2.2.2.5 Fascia:
MP-1: Centria #9918 Dove Gray
- 2.2.2.6 Overhangs:
To match SSSMR-1
- 2.2.2.7 Caulking and Sealants:
For Blast Retardant Windows & Opaque Panels Structural Silicone
Sealant: Gray color to match framing system.
- 2.2.2.8 Expansion Joint and/or Covers:
Elastomeric Face Seal.
- 2.2.2.9 Handrails; Exterior Stair:
Handrails: Galvanized
Stair Structure: PNT-6 ICI #1143 Stonewall
- 2.2.2.10 Signage:
Satin finish, brushed aluminum.

2.2.3 Exterior Roof

Roof color shall apply to exterior roof surfaces including sheet metal flashings and copings, mechanical units, roof trim, pipes, conduits, electrical appurtenances, and similar items. Roof color shall be provided to match the colors listed below.

- 2.2.3.1 Metal:
SSSMR Type 1: MBCI Siliconized Polyester, Charcoal Gray
SSSMR Type 2: MBCI Siliconized Polyester, Charcoal Gray
SSSMR Type 3: Centria, #9989 Platinum

2.2.4 Interior Floor Finishes

Flooring materials shall be provided to match the colors listed below.

- 2.2.4.1 Carpet:

CPT-2: Patcraft Pattern Undercover #18454-00212, Color Eavesdrop
CPT-1: Patcraft Pattern Classified #18446-00112, Color Operation
CPT-4: Patcraft Pattern Cloisonne #I0065-65215, Color Venetian
CPT-5: Patcraft Pattern Cloisonne #I0065-65410, Color Cyanic
- 2.2.4.2 Carpet Tile:
CPT-3: Lee's Pattern First Step #L8512, Color Stepping Stone #524
(Walk-off)
- 2.2.4.3 Rubber Sheet Flooring

RBR-1: Ecosurfaces, Pattern Ecorocks, Color Big Boulder #852
- 2.2.4.4 Rubber Stair Treads, Kick Strips, and Risers:
RST-1: Flexco, Pattern Flextones, Style 1775, Color Charcoal #03,
Finish Hammered
- 2.2.4.5 Sheet Linoleum Flooring

LIN-1: Forbo, Marmoleum Real, Color Caribbean #3038

LIN-2: Forbo, Marmoleum Real, Color Sahara #3174
LIN 3: Forbo, Marmoleum Fresco, Color Nomad #3868.

2.2.4.6 Terrazzo Flooring

TER-1: Cream/field (custom mix, Terrazzo and Marble Supply #04-274)
TER-2: Burgundy (custom mix, Terrazzo and Marble Supply #03-506)
TER-3: Dark blue (custom mix, Terrazzo and Marble Supply #04-276)

2.2.4.7 Terrazzo Flooring Dividers

Material: Zinc

2.2.4.8 Terrazzo Tile Stair Treads

TER-1: Cream/field (custom mix Terrazzo and Marble Supply #04-274)

2.2.4.9 Porcelain Tile:

PCT-1: Daltile, Porcealto Graniti 8x8 floortile, Color Beige #CD31

2.2.4.10 Grout:

GR-2: Laticrete, Color Antique White #23

2.2.4.11 Static Conductive Tile:

ESC-1: Forbo, Style ESC, Pattern: SD150244, Color Leventina

2.2.4.12 Concrete Sealed:

SLD

2.2.4.13 Solid Surface Polymer

SS-2: Corian, Color: Aurora (thresholds Toilet Room)

2.2.4.14 Fluid Applied Flooring

FAF-1: Neogard, Color: Allied Gray

2.2.5 Interior Base Finishes

Base materials shall be provided to match the colors listed below.

2.2.5.1 Resilient Base and Moldings:

Vinyl Base

VB-1: Johnsonite vinyl base, Color Silver Grey #55

VB-2: Johnsonite vinyl base, Color Burnt Umber #63 (Scheduling Desk Base)

Vinyl Moldings

Johnsonite, Color Silver Grey #55

2.2.5.2 Porcelain Tile:

PCB-1: Daltile, Porcealto Graniti 6x8 coved, Color Beige #CD31.

2.2.5.3 Wood:

WD-1: Natural Oak, Clear Finish

2.2.5.4 Precast Terrazzo:

TB-1: Cream/field (Custom Mix, Terrazzo and Marble Supply #04-274)

2.2.5.5 Integrally Colored Smooth Faced Concrete Masonry Units:
CMU-3: Anchor Block Company, #296 Sahara-Smooth Faced

2.2.5.6 Colored Mortar:
M-1: To match CMU-3 Matrix Color

2.2.6 Interior Wall Finishes

Interior wall color shall apply to the entire wall surface, including reveals, vertical furred spaces, grilles, diffusers, electrical and access panels, and piping and conduit adjacent to wall surfaces unless otherwise specified. Items not specified in other paragraphs shall be painted to match adjacent wall surface. Wall materials shall be provided to match the colors listed below.

2.2.6.1 Paint:
PNT-1: Benjamin Moore, Color Cream Froth #2158-70

2.2.6.2 Vinyl Wall Covering:
VWC-1: JM Lynne, Essex, Pattern Avalon, Color #SP-89-14 Ginger
VWC-2: JM Lynne, Essex, Pattern Avalon, Color #SP-89-16 Nutria
VWC-3: See 2.2.10.6 Operable Partitions Finish
VWC-4: Sanitas, Pattern Indulgence, Color Corso Com o 3B21-93
VWC-5: Not used
VWC-6: MDC, Memerese, Pattern Whitewall, Color White #MWW-6001

2.2.6.3 Ceramic Tile:
CT-1: Daltile, Glazed 4x4 Wall Tile, Color Canvas 0137
CT-2: Daltile, Glazed 4x4 Wall Tile, Color Mexican Sand #K-174
CT-3: Daltile, Glazed 4x4 Wall Tile, Color Bombay #0170
CT-4: Daltile, Glazed 4x4 Wall Tile, Color Galaxy #1469

2.2.6.4 Ceramic Tile Grout:
GR-1: Laticrete, Color Bright White #44 (Toilet Rooms)

2.2.6.5 Brick:
FB-1: Mutual Materials Brick; Carib, Wire Cut
FB-2: Mutual Materials Brick; Carib, Smooth

2.2.6.6 Colored Mortar
M-1: To Match CMU-1 Matrix Color
M-2: Prism P4140 Chestnut (at brick locations)

2.2.6.7 Burnished Concrete Masonry Units:
CMU-1: Gage Brothers Concrete Products, Inc., Seashell Burnished

2.2.6.8 Composite Aluminum Wall Panel System:
MP-1: Centria #9918 Dove Gray

2.2.7 Interior Ceiling Finishes

Ceiling colors shall apply to ceiling surfaces including soffits, furred down areas, grilles, diffusers, registers, and access panels. Ceiling color shall also apply to joist, underside of roof deck, and conduit and piping where joists and deck are exposed and required to be painted. Ceiling materials shall be provided to match the colors listed below.

2.2.7.1 Acoustical Tile:
ACT-1: Armstrong, Pattern Optima

ACT-2: USG, Pattern Panz, Color Clear Anodized

2.2.7.2 Acoustical Grid

ACT-1: Manufacturer's standard as specified, color as specified.

ACT-2: USG, DX system, Color Silver Satin 002

2.2.7.3 Deep Edge System:

USG, 6" Compasso Edge, Color Silver Satin 002

2.2.7.4 Paint:

PNT-3: Benjamin Moore, Color Superwhite (Ready Mix)

2.2.7.5 Metal Deck:

PNT-3: Benjamin Moore, Color Superwhite (Ready Mix) (Lobby)

2.2.7.6 Structural Framing:

PNT-6: ICI #1143 Stonewall (Lobby)

2.2.8 Interior Trim

Interior trim shall be provided to match the colors listed below.

2.2.8.1 Steel Doors:

PNT-2: ICI #606 Song Sparrow

2.2.8.2 Steel Door Frames:

PNT-2: ICI #606 Song Sparrow

2.2.8.3 Aluminum Doors and Door Frames:

Clear Anodized

2.2.8.4 Aluminum Windows (mullion, muntin, trim, and sill):

Vistawall #215 R1 Clear C-I

2.2.8.5 Wood Doors:

WD-1: Red Oak, Clear Satin Finish

2.2.8.6 Window Sills:

SS-2: Corian, Color Aurora

2.2.8.7 Fire Extinguisher Cabinets:

Manufacturer's standard baked enamel white

2.2.8.8 Handrails:

PNT-2: ICI #606 Song Sparrow

2.2.8.9 Metal Stairs:

PNT-2: ICI #606 Song Sparrow

2.2.8.10 Exposed Ductwork:

PNT-3: Benjamin Moore, Color Superwhite (Ready Mix)

2.2.9 Interior Window Treatment

2.2.9.1 Window Shades:

WT-1: Meccoshade Systems: Thermoveil #0910 Light Grey

WT-2: Meccoshade Systems: Blackout Vinyl #0702 Grey

2.2.10 Interior Miscellaneous

Miscellaneous items shall be provided to match the colors listed below.

2.2.10.1 Toilet Partitions and Urinal Screens:

TP-1: Bobrick Beige #1530-60

2.2.10.2 Plastic Laminate:

PL-1: Nevamar, Pattern/Color Silver Alu Metalx #MXT-003T

PL-2: Nevamar, Pattern/Color Creme Tranquility #TQ-2-1T

PL-3: Nevamar, Pattern/Color Amazon Light #AZY-004T

2.2.10.3 Solid Surfacing Material:

SS-1: Corian, Color Acorn

SS-3: Not Used

SS-4: Corian, Color Canyon

2.2.10.4 Casework:

WD-1: Red Oak, Clear Finish

WD-2: Cherry, Clear Finish

2.2.10.5 Signage (Excluding Handicapped Signage)

Painted Signage Background:

PNT-6: ICI #1486 Signature Blue

Solid Surface Signage Background

SS-5: Hi-Macs Midnight Pearl #G15

Test:

PNT-5: ICI #1148 Abstract Grey

2.2.10.6 Signage Message Color (excluding handicapped signage):

PNT-5: ICI #1148 Abstract Grey

2.2.10.7 Signage Background Color (excluding handicapped signage):

Painted Signage: PNT-6 ICI #1486 Signature Blue

Solid Surface: SS-5 Hi-Macs Midnight Peave #G15

2.2.10.8 Operable Partitions:

OP-1: JM Lynne Essex, Color SP-89-23 Burnished (vinyl wallcovering #VWC-3)

2.2.10.9 Corner Guards:

CG-1: Acrovyn CO-8/SCO-8, Finish: Stainless Steel

2.2.10.10 Auditorium Seating

TMF (Metal Finish): Color Titanium, Hussey Quattro Chair

TPF (Plastic Finish): Color Titanium, Hussey Quattro Chair

PL-4 (Tablet Arm Plastic Laminate): Wilsonart #4795-60 Windswept

Pewter, Hussey Quattro Chair

FAB-1 Upholstery: Maharam Milestone #403901, Color 055 Embrace

2.2.10.11 Wall Switch Handles and Standard Receptacle Bodies:

Gray

2.2.10.12 Electrical Device Cover Plates:

Stainless Steel

2.2.10.13 Electrical Panels:
PNT-1

2.2.10.14 Aluminum Storage Locker:

Salsbury Industries, 2214 Series, Powder Coat Silver Finish, Black
Peripheral Trim, #2468 Engraved Door

2.2.10.15 Elevator

Interior Walls, Doors: Stainless Steel
Floor: CPT-2

2.3 PLACEMENT SCHEDULE

Placement of color shall be in accordance with the Room Finish Schedules

PART 3 EXECUTION (Not Applicable)

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 12 - FURNISHINGS

SECTION 12705

FURNITURE SYSTEMS

11/03

PART 1 GENERAL

- 1.1 REFERENCES
- 1.2 SUBMITTALS
- 1.3 WORKSTATIONS
 - 1.3.1 General Requirements
 - 1.3.2 Detail Drawings
- 1.4 DELIVERY, STORAGE, AND HANDLING
- 1.5 PATTERN AND COLOR
- 1.6 WARRANTY

PART 2 PRODUCTS

- 2.1 PERFORMANCE AND SAFETY REQUIREMENTS
 - 2.1.1 Fire Safety
 - 2.1.2 General Safety
 - 2.1.3 Electrical System
- 2.2 PANEL SYSTEM
 - 2.2.1 Panel System
 - 2.2.2 Free Standing Workstation
- 2.3 WORK SURFACE
- 2.4 PEDESTALS
- 2.5 STORAGE
 - 2.5.1 Upper Storage
- 2.6 ACCESSORIES
 - 2.6.1 Pencil Drawer
 - 2.6.2 Bridging Brackets
- 2.7 ELECTRICAL
 - 2.7.1 Task Lighting

PART 3 EXECUTION

- 3.1 INSTALLATION
- 3.2 CLEANING

-- End of Section Table of Contents --

SECTION 12705

FURNITURE SYSTEMS

11/03

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70 (2002) National Electrical Code

NFPA 265 (2002) Fire Tests for Evaluating Room Fire Growth Contribution of Textile Coverings on Full Height Panels and Walls

UNDERWRITERS LABORATORIES (UL)

UL 1286 (1999; Rev thru Oct 2002) Office Furnishings

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only or as otherwise designated. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Detail Drawings; G-AE
Installation; G-AE

Drawings showing the proposed workstation installation at a scale of 1/4 inch = 1 foot, unless otherwise specified.

SD-03 Product Data

Product Data; G-AE

Manufacturer's product and construction specifications which provide technical data for furniture system and components specified, including task lighting and illumination performance information. Literature shall include adequate information to verify that the proposed product meets the specification.

Warranty; G-AE

Two copies of the warranty.

Workstations

Complete listing of part/model numbers for all components to be furnished, including names and codes of components referenced on updated drawings.

SD-04 Samples

Workstations; G-AE

Four sets of the finish samples listed below. The Government reserves the right to reject any finish samples that do not satisfy the construction or color requirements. The Contractor shall submit additional samples as required to obtain final approval. Work shall not proceed without sample approval in writing from the Contracting Officer.

a. Panels, tackboards and privacy screens. Minimum 2-1/2 x 3 inches with label designating the manufacturer, color, fiber content, fabric weight, fire rating, and use panels, tackboards and privacy screens.

b. Panel, deck supports, spine wall, work surface, modesty panel, and component finish. Minimum 2-1/2 x 3 inches with label designating the manufacturer, color, and finish.

c. Task lights. Minimum 2-1/2 x 3 inches with label designating the manufacturer.

d. Upper Storage. Minimum 2-1/2 x 3 inches with label designating the manufacturer's color and finish.

SD-06 Test Reports

Fire Safety; G-AE
Electrical System; G-AE

One complete set of test reports for the proposed system.

SD-10 Operation and Maintenance Data

Maintenance Manuals
Cleaning

Three sets of maintenance manuals describing proper cleaning and minor repair procedures.

Electrical System; G-AE

Three sets of electrical system manuals describing the functions, configuration, of the electrical system. This material may be included in the above 2 manuals at the Contractor's option.

Communications Data

1.3 WORKSTATIONS

1.3.1 General Requirements

The furniture solution requires that it must provide a freestanding planning solution. This means that the same components (worksurfaces, privacy screens, storage cabinets, drawer pedestals, etc.) must be capable of being configured in a free-standing application through the use of steel legs, beams and support stanchions as a standard product.

1.3.2 Detail Drawings

As a minimum, the Contractor shall submit the following:

a. Overall reference drawings: Drawings showing workstation locations and overall plan view within each floor. The scale shall be 1/4 inch = 1 foot. Layouts shall reflect field verified conditions.

b. Installation drawings: Drawings showing workstations, components, and plan view within each floor. Workstations shall be identified by workstation type. Scale of drawings shall be identical to Architectural plans. Installation drawings shall reflect field verified conditions.

c. Workstation elevations: Dimensioned workstation elevations showing each type of workstation configurations and all components identified with manufacturer's catalog numbers. Elevations shall be drawn at 1/2 inch = 1 foot scale.

d. Panel drawings: Panel drawings showing panel locations and critical dimensions from finished face of walls, columns, panels, including clearances and aisle widths. Assemblies shall be keyed to a legend which shall include width, height, configuration and composition of frame covers finishes and fabrics (if different selections exist within a project), power or nonpower, connectors and wall mount hardware. Drawings shall reflect field verified conditions.

e. Electrical voice and data drawings: Drawings showing power provisions including type and location of feeder components (service entry poles, base or ceiling feeds), activated outlets and other electrical components. Voice and data outlet locations shall be identified and a legend provided as applicable.

1.4 DELIVERY, STORAGE, AND HANDLING

Components shall be delivered to the jobsite in the manufacturer's original packaging with the brand, item identification, and project reference clearly marked thereon. Components shall be stored in a dry location that is adequately ventilated and free from dirt and dust, water, and other contaminants, and in a manner that permits easy access for inspection and handling.

1.5 PATTERN AND COLOR

Pattern and color of finishes and fabrics for screens, components, and trim shall be in accordance with Section 09915 COLOR SCHEDULE.

1.6 WARRANTY

The system furniture must carry a limited lifetime warranty for the original owner with the following exceptions. Except operational parts, controls, electrical, special custom products. 5 year on operational parts, controls and electrical. 1 year on light ballasts and bulbs.

PART 2 PRODUCTS

2.1 PERFORMANCE AND SAFETY REQUIREMENTS

2.1.1 Fire Safety

Fabric shall meet the requirements of NFPA 265. Panel flame spread shall not exceed 25 for Class A and panel smoke development shall not exceed 450 for Class A, B and C.

2.1.2 General Safety

Workstation products shall be free of rough or sharp edges. Workstation must have metal to metal connections on all components.

2.1.3 Electrical System

Task lights shall be UL approved and shall meet the requirements of NFPA 70. The electrical system shall meet the requirements of UL 1286.

2.2 PANEL SYSTEM

2.2.1 Panel System

Accessories and appurtenances for a completely finished panel assembly shall be supplied complete with the system. The system shall be capable of structurally supporting cantilevered work surfaces, shelves, files, and other components in the configurations shown on the drawings. The panel system shall be capable of structurally supporting more than one fully loaded component per panel per side. Panels shall be either tackable or capable of accommodating fabric covered tackboards. The panel system shall be available in a variety of nominal widths and heights as designated on the drawings. Heights shall be measured from the finished floor to the top of the panel. Powered and nonpowered panels shall be compatible in height. Panel heights shall be coordinated with the HVAC and electrical designs. The Contractor shall submit Assembly Manuals as specified in the Submittals paragraph.

2.2.2 Free Standing Workstation

Support legs must be constructed of 18 gauge steel. Legs must be connected by 18-gauge steel beams. The leg and beam assembly must allow for distribution of power and data cables. Privacy screens must be available with aluminum extruded frame and a solid, tackable core. Support for overhead cabinets must be available as standard product. Overhead cabinet supports must allow for power and data cable distribution and termination. A filler panel is required to provide a full enclosure between leg supports.

2.3 WORK SURFACE

Worksurface must be 1-1/4 inch 3-ply construction. Must be available in plastic laminate with double postformed edges front and back. Worksurface

must be fitted with threaded metal inserts to connect supporting bracketry.

Straight surfaces must be available in 18 inches, 24 inches, and 36 inches deep. Worksurfaces must be available in straight, corner, straight and corners with split keyboard supports, L-shaped extended corners, waved shaped, half and bullet round shapes. Work surface must include factory installed grommets.

2.4 PEDESTALS

Must have 20 gauge, seamless steel case finished on all sides. Must have full extension ball bearing slides. All pedestals must be equipped with lock and keyed alike to workstation. Pedestals must have leveling glides with 2 inch travel. Pedestals are floor standing and must attach to worksurfaces threaded inserts with threaded metal screws. Pedestals shall be field interchangeable from right to left.

2.5 STORAGE

2.5.1 Upper Storage

The overhead cabinet door recedes within cabinet. Bottom shelf has slots for vertical dividers. The overhead cabinet is of welded steel box construction. 14 inches deep x 17-3/4 inches high. Interior clearance is 12-3/4 inches. Painted front with horizontal pull. Locking and keyed alike. Overhead must include a back.

2.6 ACCESSORIES

2.6.1 Pencil Drawer

Must be included.

2.6.2 Bridging Brackets

All supporting brackets must be made of 14 gauge steel.

2.7 ELECTRICAL

It is essential that a fully modular nondirectional eight-wire, four-circuit 20 amp electrical system be supplied: four hots, two neutrals (10 gauge, 35A rated), two ground. The modular electrical system must be capable of positioning under and/or above the worksurfaces and in support stanchions.

2.7.1 Task Lighting

Task lights are mounted in the horizontal beam of the overhead. Standard warm white lamp. 8 foot grounded cordset, prismatic lens, rocker switch, and mounting hardware.

PART 3 EXECUTION

3.1 INSTALLATION

The workstations shall be installed by certified installers in accordance with manufacturer's recommended product data and installation instructions. Workstation components shall be installed level, plumb, square, and with proper alignment with adjoining furniture. The components shall be securely interconnected and securely attached to the building

where required. Three sets of special tools and equipment necessary for the relocation of panels and other components shall be furnished. Three sets of communications data describing the function and configuration of supporting through panel system base raceway.

3.2 CLEANING

Upon completion of installation, all products shall be cleaned and polished and the area shall be left in a clean and neat condition. Any defects in material and installation shall be repaired, and damaged products that cannot be satisfactorily repaired shall be replaced. The Contractor shall submit Maintenance Manuals as specified in the Submittals paragraph.

-- End of Section --

SECTION 12708

COMPREHENSIVE INTERIOR DESIGN PACKAGE

PART 1 – GENERAL

ATTACHMENTS: FURNITURE ILLUSTRATION SHEETS,
PROCUREMENT INFORMATION SHEETS AND
FURNITURE PLACEMENT LIST BY ROOM

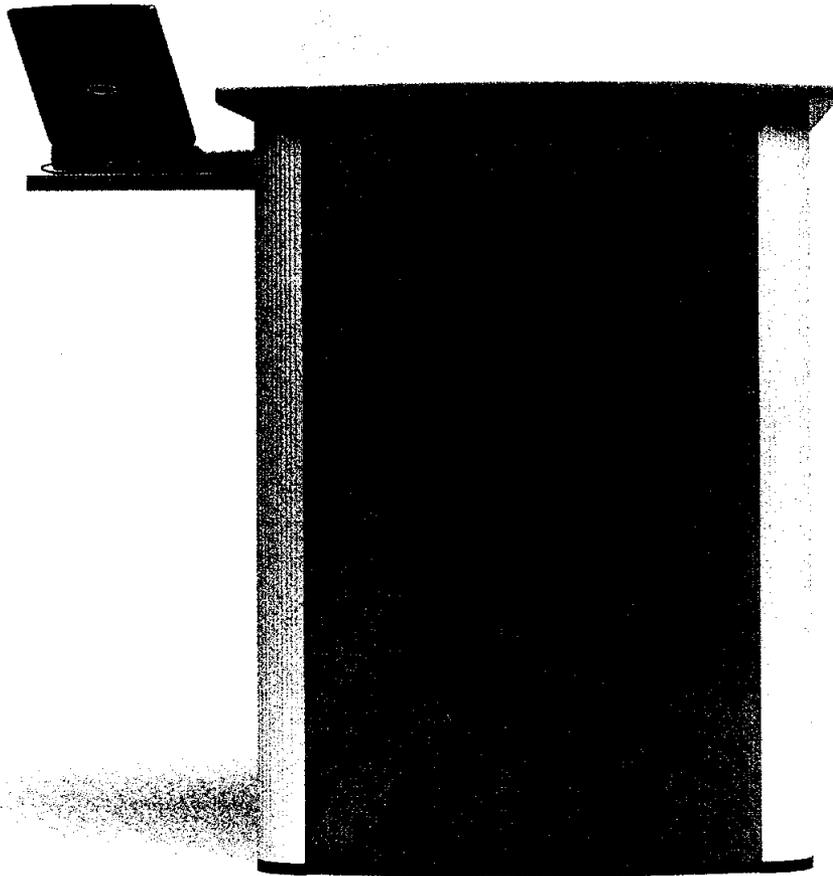
Option O-3: Contractor Furnished-Contractor Installed furniture is identified in this section and shown on the drawings. See attached Furniture Illustration Sheets, Procurement Information Sheets and Furniture Placement List By Room. Where conflict between the drawings and these attachments exist, the requirements contained in this section shall govern. In addition, specifications for Furniture Systems are included in Section 12705 FURNITURE SYSTEMS. See drawing Sheets i1.03 and i1.04.

Project: B1-B Weapons System Trainer
Ellsworth AFB, SD
PN FXBM 023002

FURNITURE ILLUSTRATION SHEET

Item Code: LEC-1

Item Name: Lectern



AM #0002

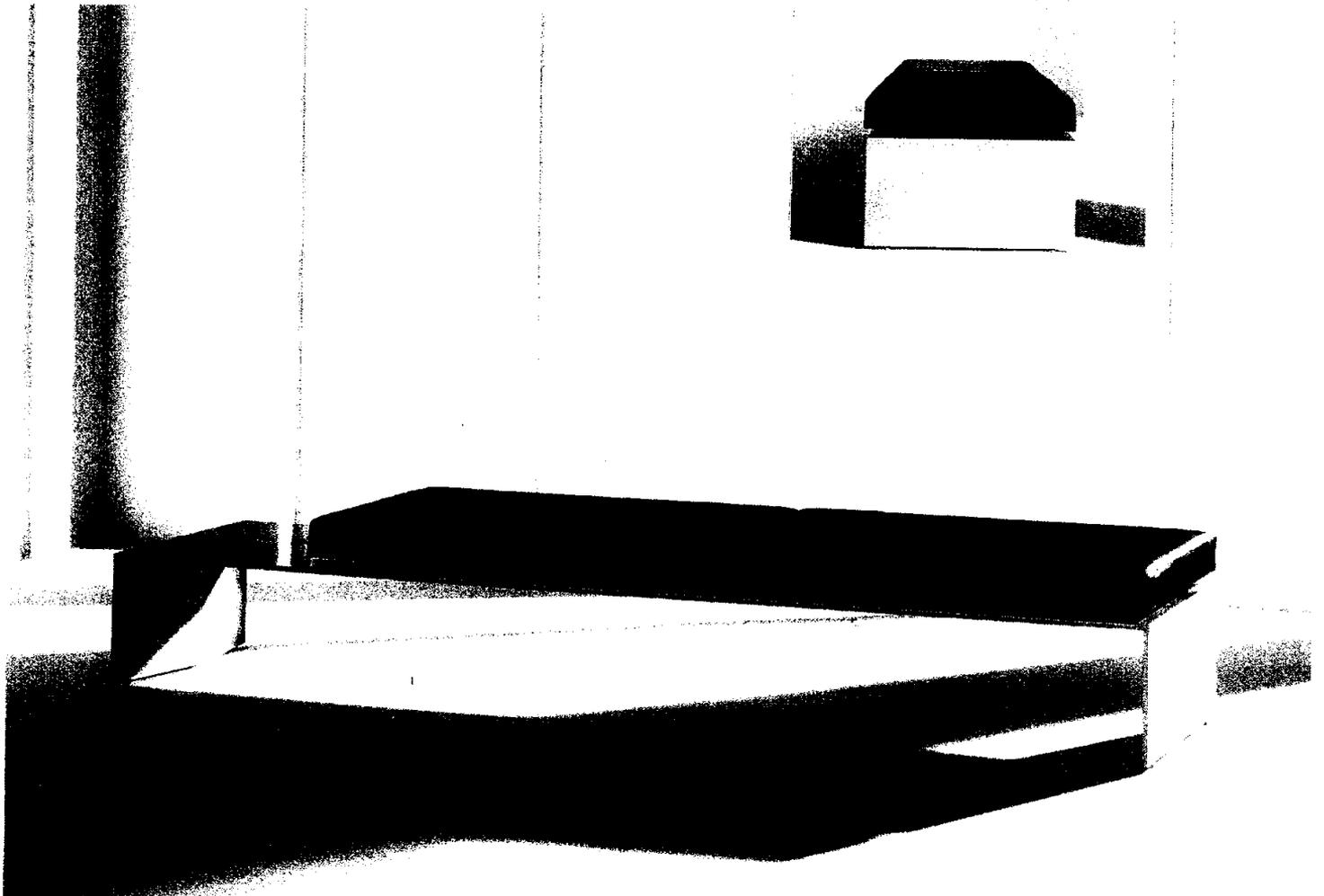
/

**Project: B1-B Weapons System Trainer
Ellsworth AFB, SD
PN FXBM 023002**

FURNITURE ILLUSTRATION SHEET

Item Code: LS-1

Item Name: Bench, upholstered

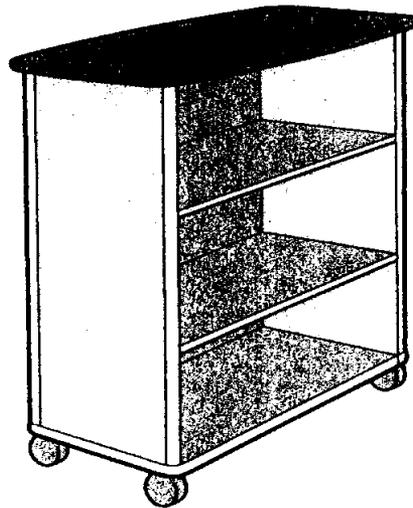


**Project: B1-B Weapons System Trainer
Ellsworth AFB, SD
PN FXBM 023002**

FURNITURE ILLUSTRATION SHEET

Item Code: MC-1

Item Name: Mobile cart

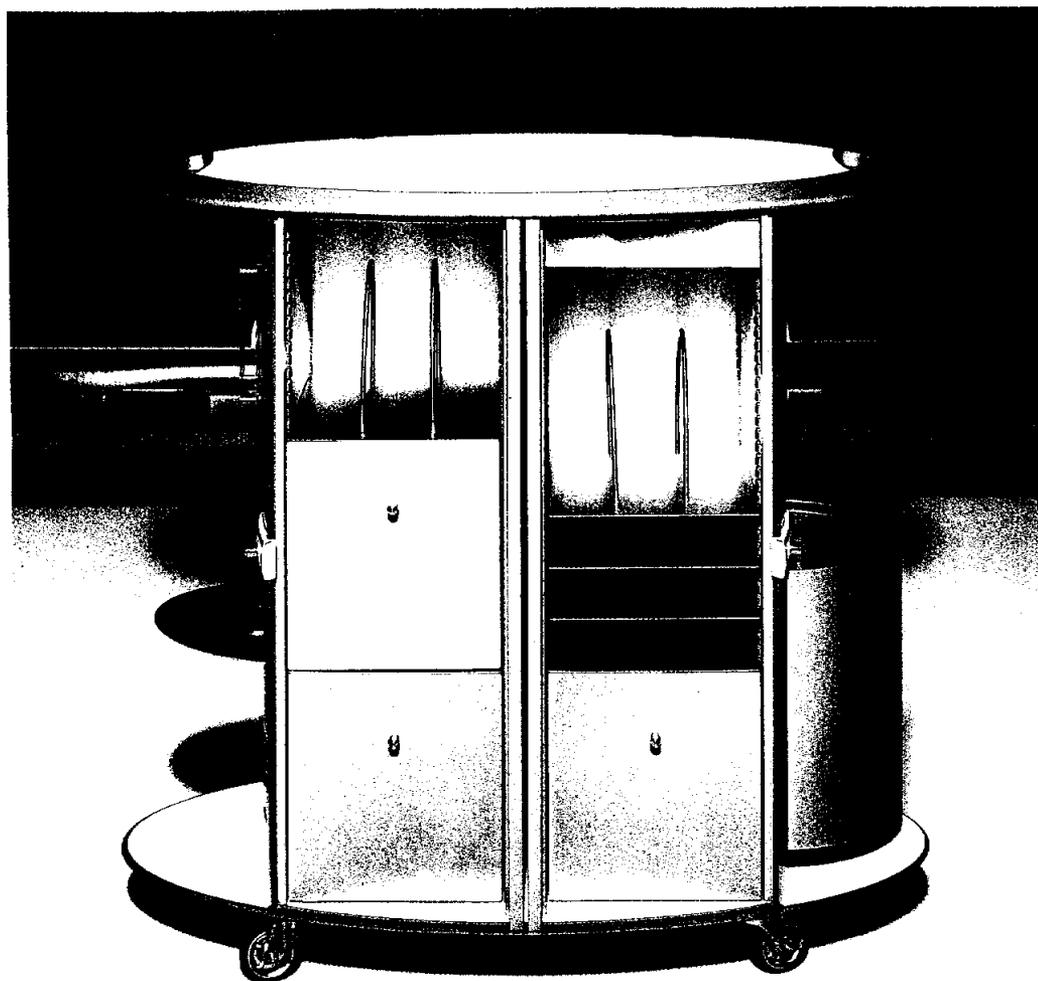


**Project: B1-B Weapons System Trainer
Ellsworth AFB, SD
PN FXBM 023002**

FURNITURE ILLUSTRATION SHEET

Item Code: MC-2

Item Name: Mobile cart

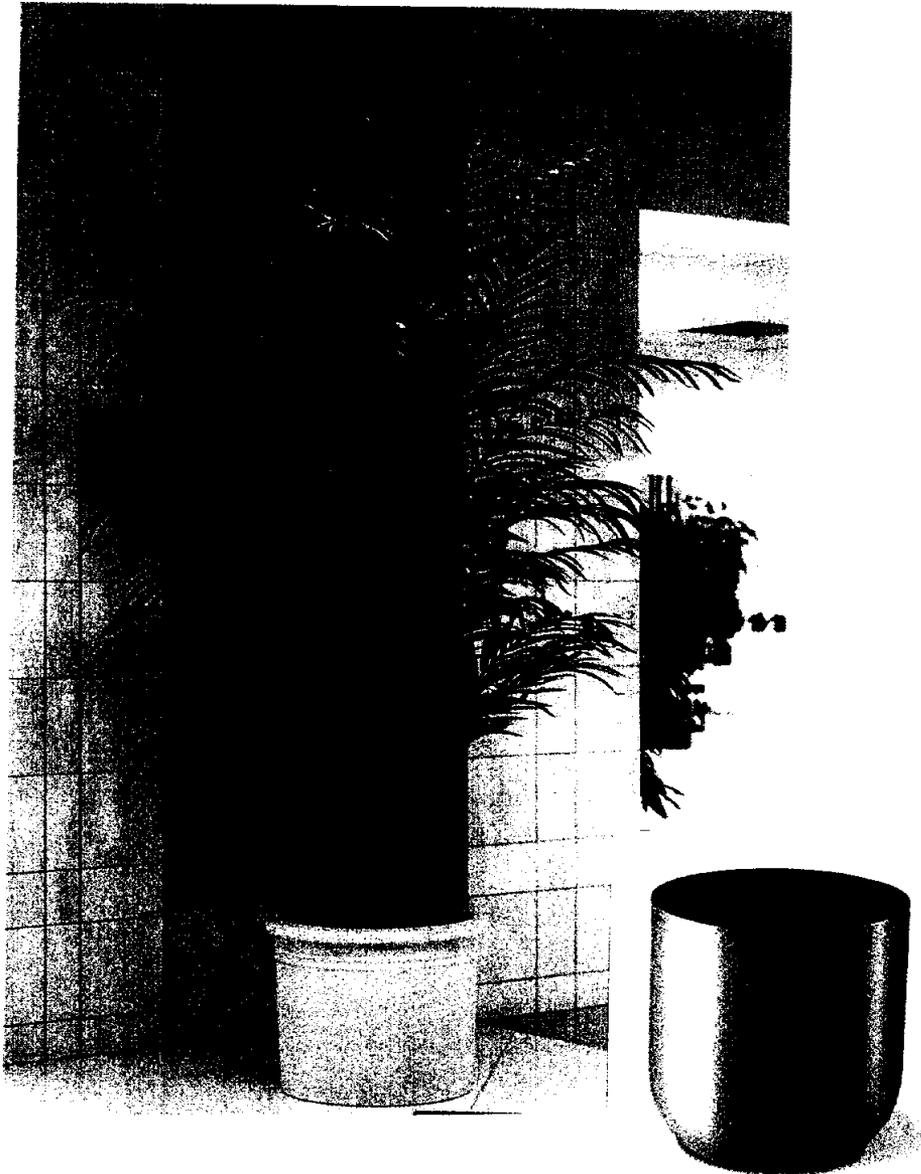


**Project: B1-B Weapons System Trainer
Ellsworth AFB, SD
PN FXBM 023002**

FURNITURE ILLUSTRATION SHEET

Item Code: P-1

Item Name: Areca Palm/planter



**Project: B1-B Weapons System Trainer
Ellsworth AFB, SD
PN FXBM 023002**

FURNITURE ILLUSTRATION SHEET

Item Code: S-1

Item Name: Task chair

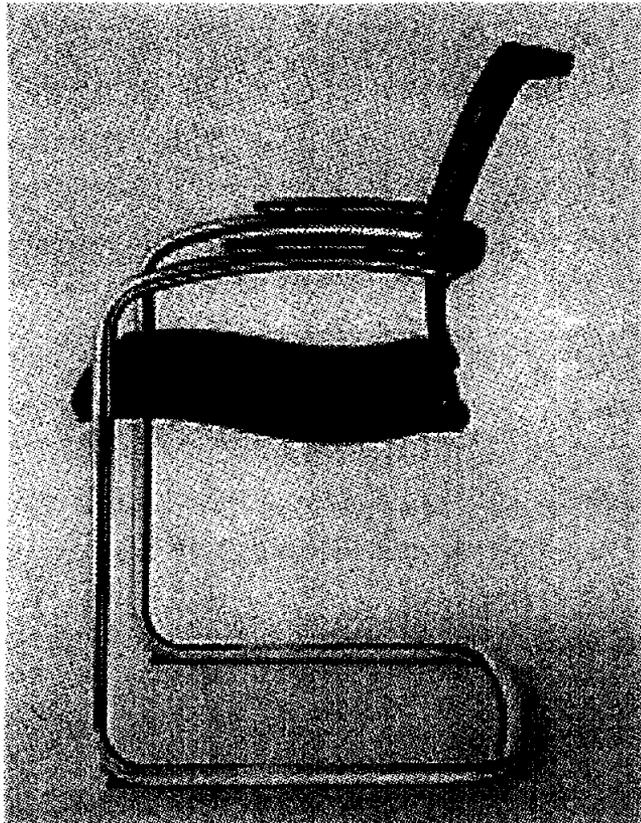


**Project: B1-B Weapons System Trainer
Ellsworth AFB, SD
PN FXBM 023002**

FURNITURE ILLUSTRATION SHEET

Item Code: S-2

Item Name: Guest chair



**Project: B1-B Weapons System Trainer
Ellsworth AFB, SD
PN FXBM 023002**

FURNITURE ILLUSTRATION SHEET

Item Code: S-3

Item Name: Conference chair

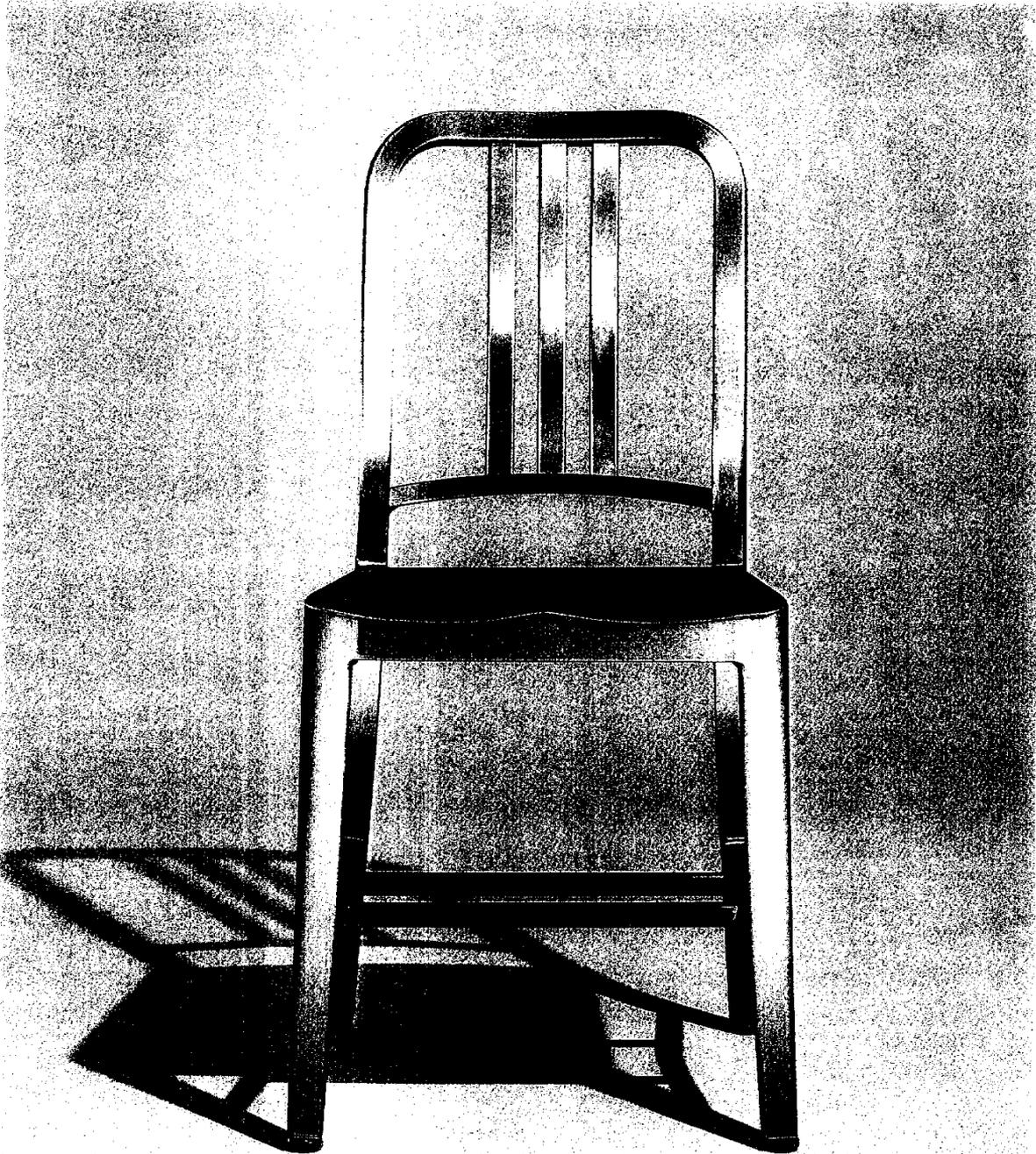


**Project: B1-B Weapons System Trainer
Ellsworth AFB, SD
PN FXBM 023002**

FURNITURE ILLUSTRATION SHEET

Item Code: S-4

Item Name: Side chair



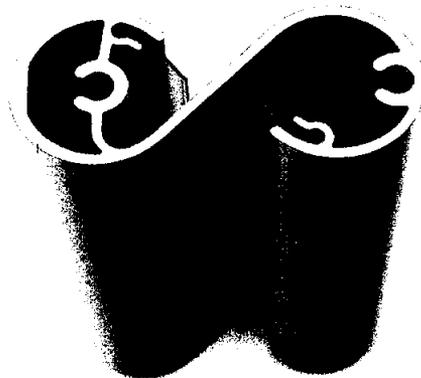
**Project: B1-B Weapons System Trainer
Ellsworth AFB, SD
PN FXBM 023002**

FURNITURE ILLUSTRATION SHEET

Item Code: T-1.A

Item Name: Conference table (42x96)

Tables will not have grommets or power/data cut-outs in tops.



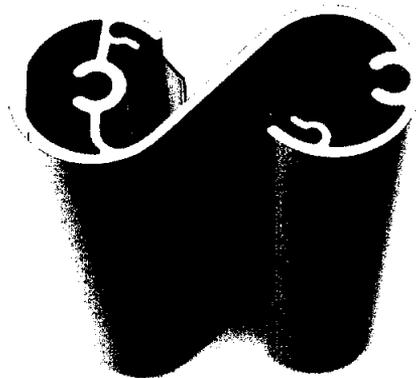
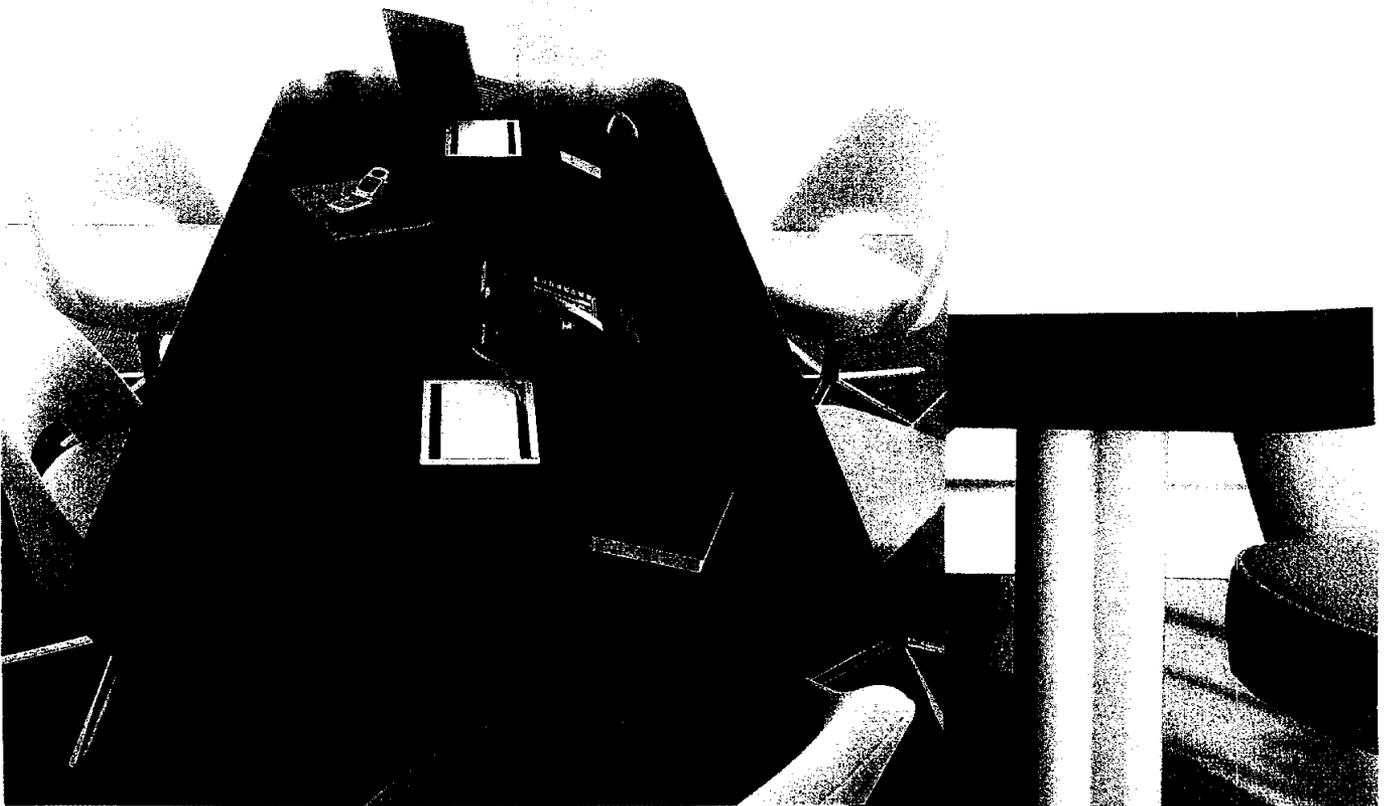
Project: B1-B Weapons System Trainer
Ellsworth AFB, SD
PN FXBM 023002

FURNITURE ILLUSTRATION SHEET

Item Code: T-1.B

Item Name: Conference table (48x96)

Tables will not have grommets or power/data cut-outs in tops.



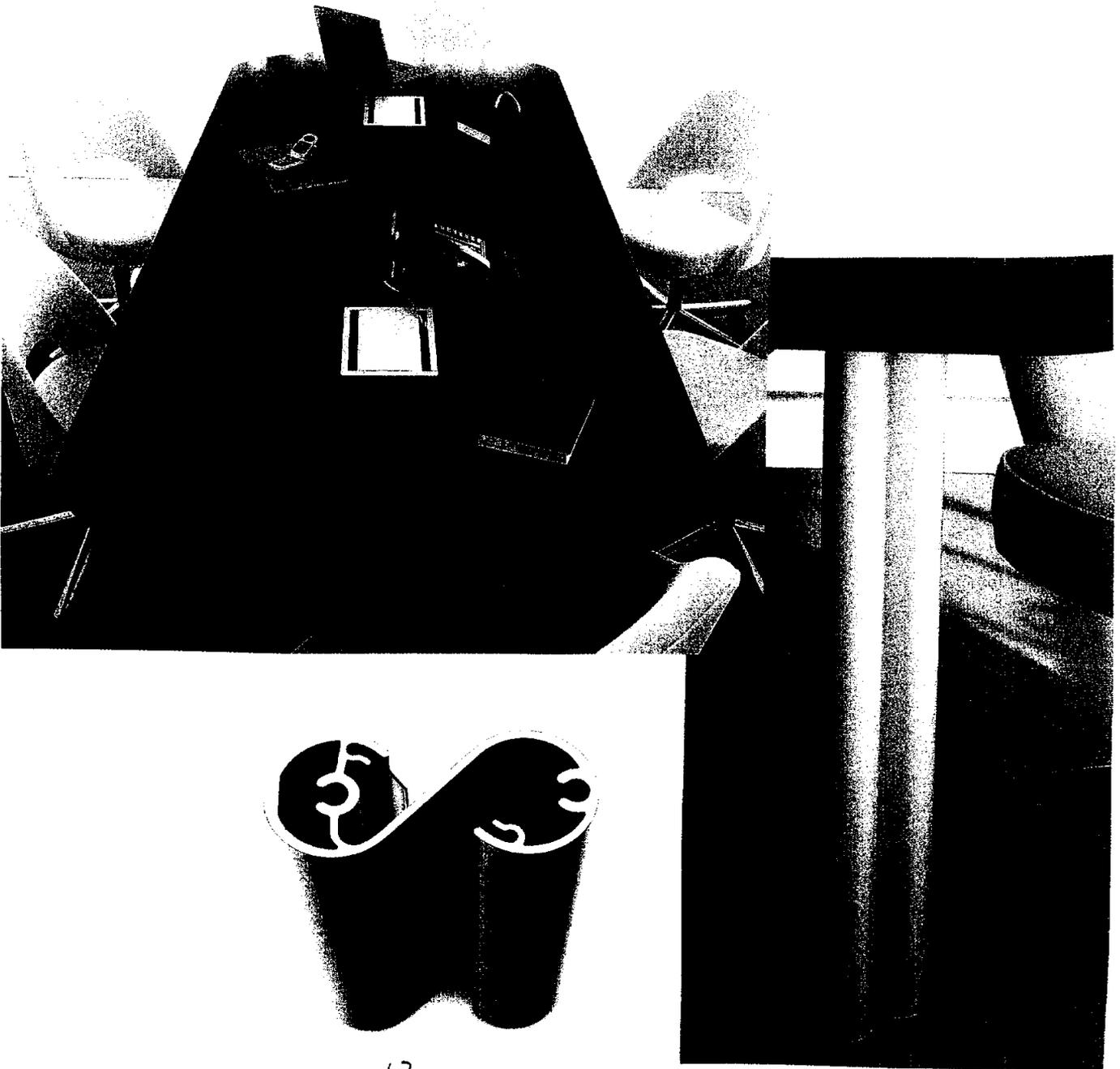
**Project: B1-B Weapons System Trainer
Ellsworth AFB, SD
PN FXBM 023002**

FURNITURE ILLUSTRATION SHEET

Item Code: T-1.C

Item Name: Conference table (144x42)

Tables will not have grommets or power/data cut-outs in tops.



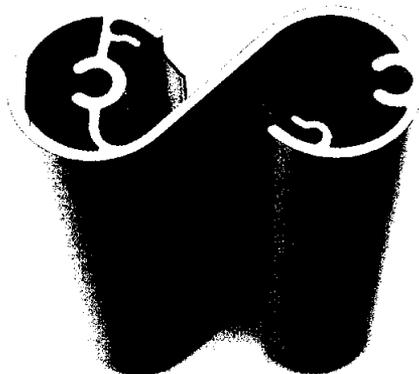
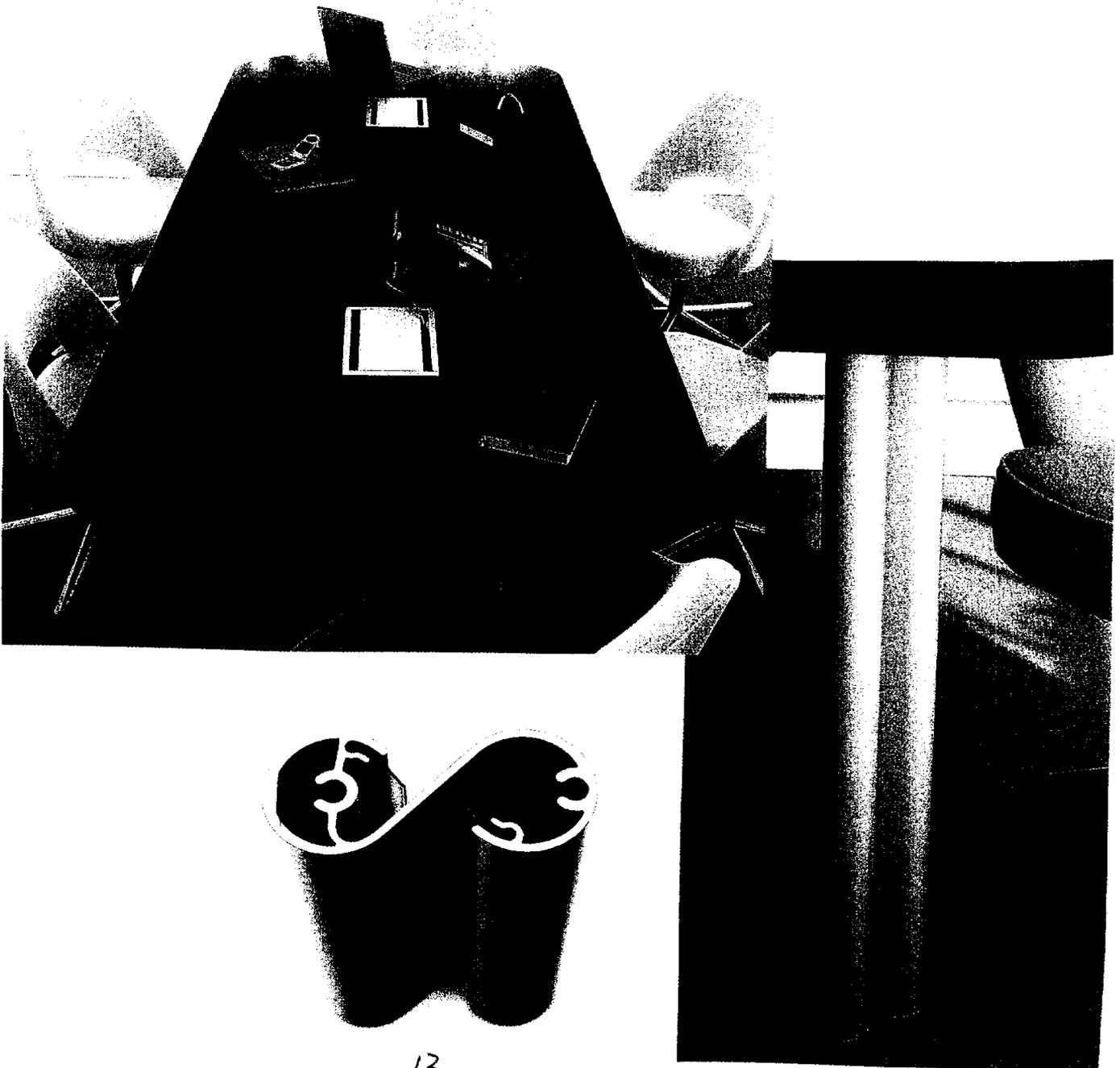
**Project: B1-B Weapons System Trainer
Ellsworth AFB, SD
PN FXBM 023002**

FURNITURE ILLUSTRATION SHEET

Item Code: T-1.D

Item Name: Conference table (144x48)

Tables will not have grommets or power/data cut-outs in tops.



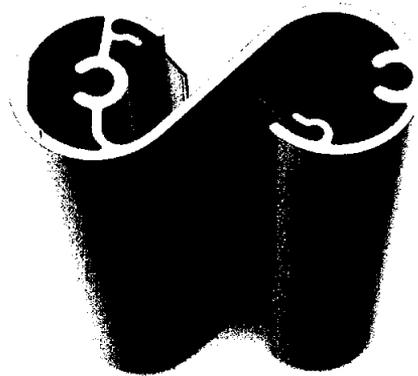
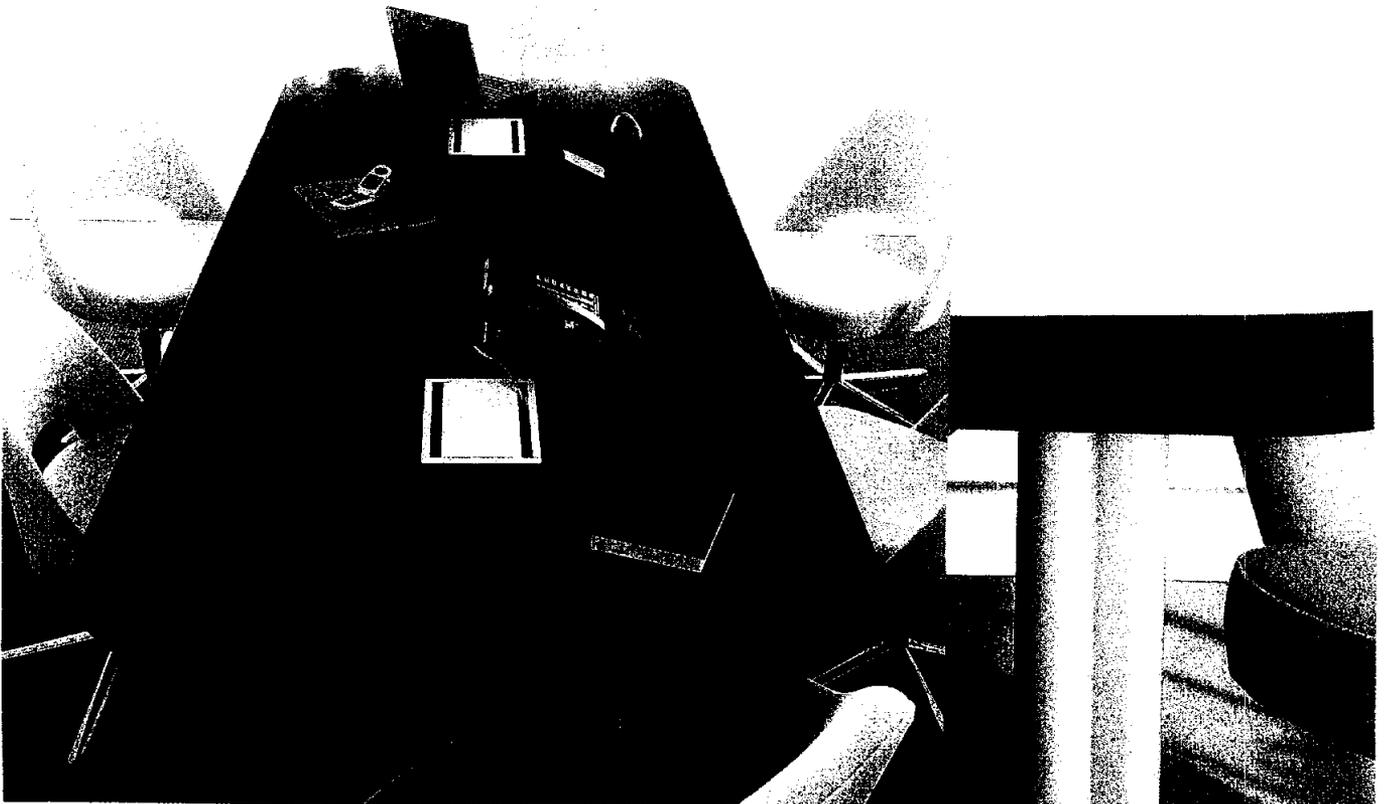
Project: B1-B Weapons System Trainer
Ellsworth AFB, SD
PN FXBM 023002

FURNITURE ILLUSTRATION SHEET

Item Code: T-1.E

Item Name: Conference table (72x48)

Tables will not have grommets or power/data cut-outs in tops.



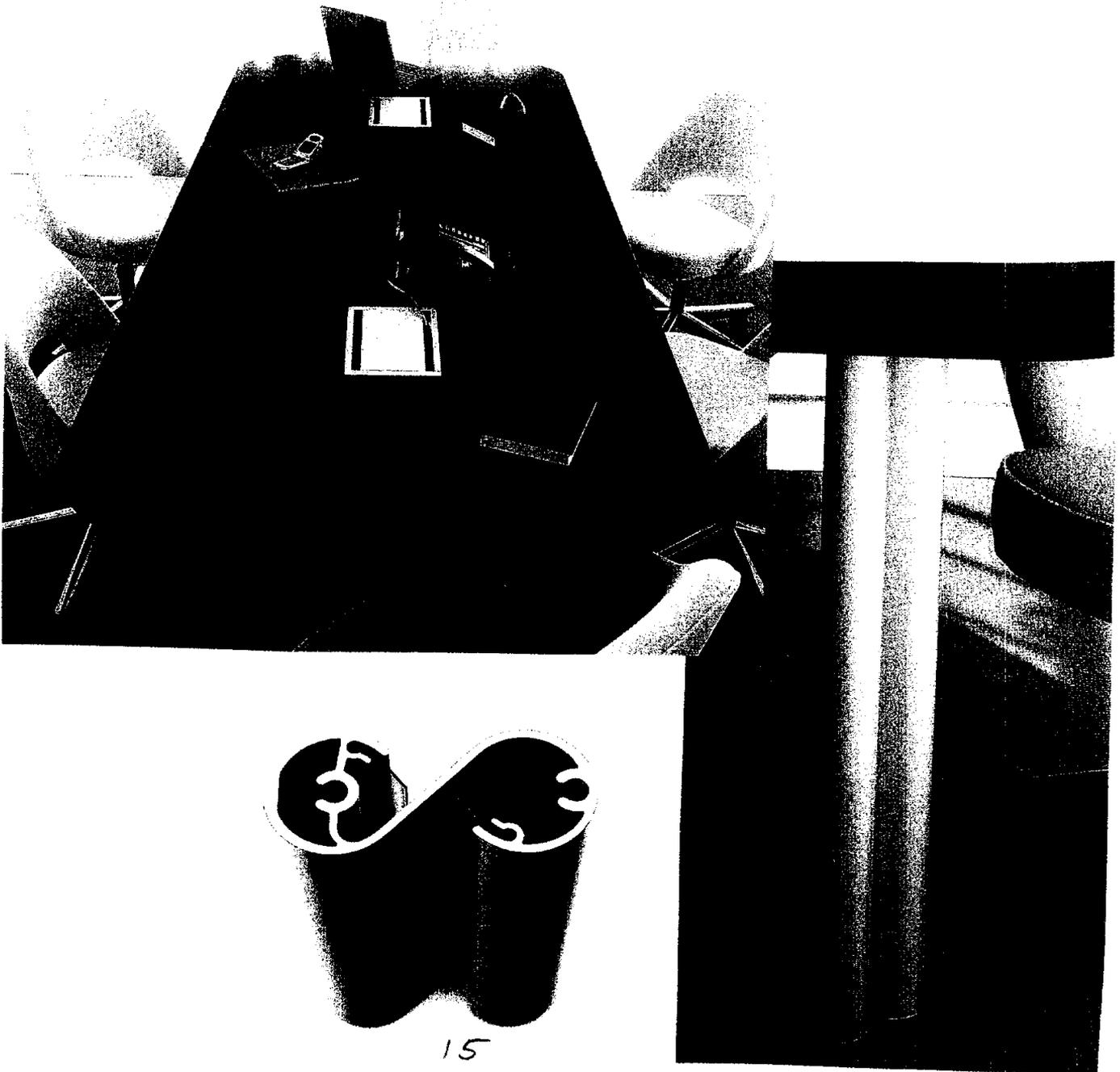
Project: B1-B Weapons System Trainer
Ellsworth AFB, SD
PN FXBM 023002

FURNITURE ILLUSTRATION SHEET

Item Code: T-1.F

Item Name: Conference table (72x42)

Tables will not have grommets or power/data cut-outs in tops.



**Project: B1-B Weapons System Trainer
Ellsworth AFB, SD
PN FXBM 023002**

FURNITURE ILLUSTRATION SHEET

Item Code: T-2

Item Name: Table (42 round)

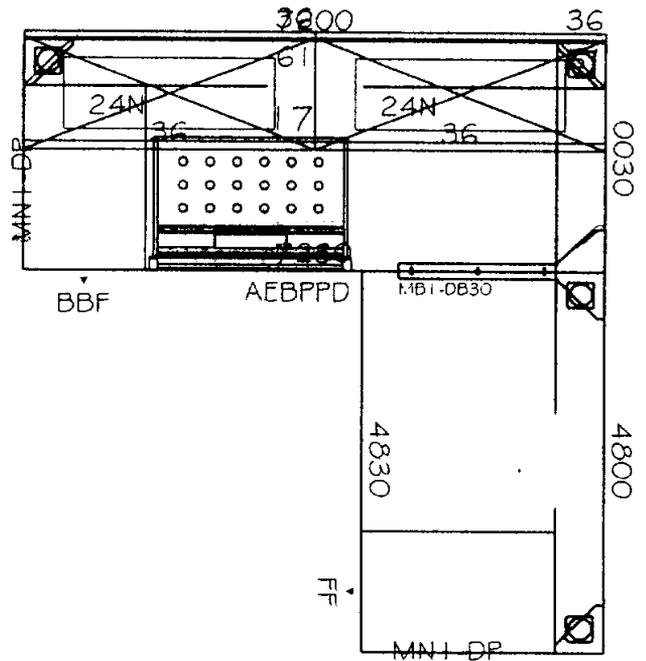
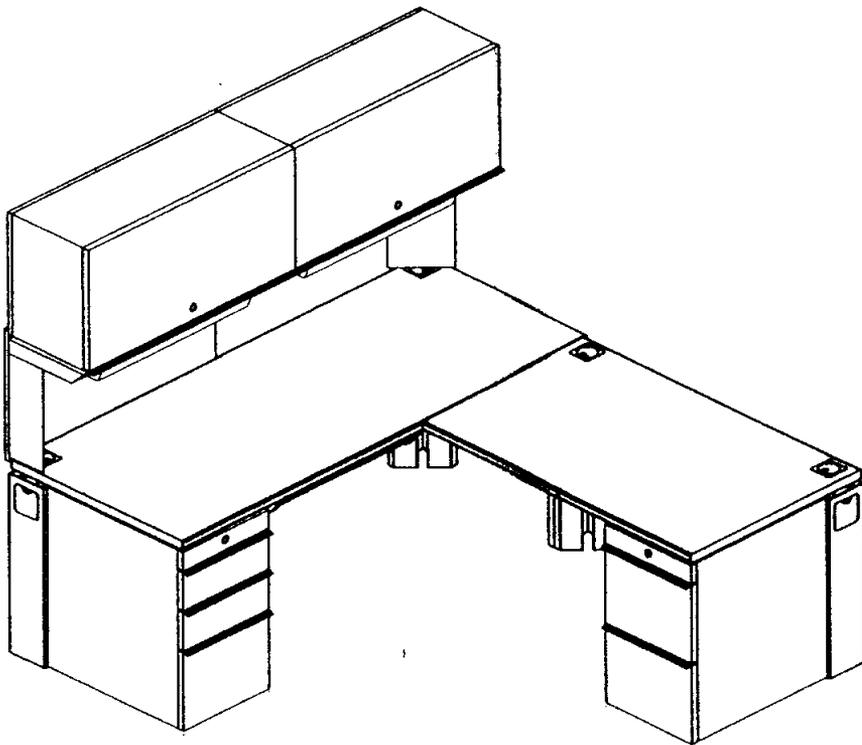


Project: B1-B Weapons System Trainer
Ellsworth AFB, SD
PN FXBM 023002

FURNITURE ILLUSTRATION SHEET

Item Code: WS-1.A

Item Name: Workstation "A" typical



WORKSTATION TYPICAL A

MORRISON

ITEM NO	QTY	PART NUMBER	DESCRIPTION
1.00	8	BP-PD	PENCIL DRAWER
2.00	8	MB1-DB24	DUAL BRIDGING BRACKET
3.00	8	MD6-D0B2F	MORRISON PEDESTAL FF FINISH: SILVER
4.00	8	MD6-D2B1F	MORRISON PEDESTAL BBF FINISH: SILVER
5.00	8	MN2-D0030	NETWORK 30" RETURN DESK SUPPORT FINISH: SILVER
6.00	8	MN2-D4800	NETWORK 48" STRAIGHT DESK SUPPORT FINISH: SILVER
7.00	8	MN2-D7200	NETWORK 72" STRAIGHT DESK SUPPORT FINISH: SILVER
8.00	16	MN1-DP	DESK SUPPORT TO PED BRACKET
9.00	8	MU1-S7230-A	STRAIGHT WORKSURFACE 72" W x 30" D x 1-1/4" H UNDECIDED LAMINATE
10.00	8	MU1-S4830-A	STRAIGHT WORKSURFACE 48" W x 30" D x 1-1/4" H UNDECIDED LAMINATE
11.00	16	MZ1-B3619	36" WORKSURFACE SCREEN TO 46" H OVERHEAD HARMONY (W232-6) GRAPHITE
12.00	8	MN2-S7218	72" OVERHEAD SUPPORT FINISH: SILVER
13.00	16	MO8-N36-698	36" OVERHEAD FINISH: SILVER LOCK

WORKSTATION TYPICAL A

MORRISON

ITEM NO	QTY	PART NUMBER	DESCRIPTION
14.00	16	QMM133483	NETWORK SCREEN CLIPS FINISH: SILVER
15.00	16	MO7-NB36	BACK FOR OVERHEADS FINISH: SILVER
16.00	8	ML1-NF48N	48" W TASKLIGHT FOR OVERHEAD FINISH: SILVER
17.00	8	KSPEC4	SET OF 4 CORES AND KEYS

WORKSTATION TYPICAL B

MORRISON

ITEM NO	QTY	PART NUMBER	DESCRIPTION
1.00	10	BP-PD	PENCIL DRAWER
2.00	20	MB1-DB24	DUAL BRIDGING BRACKET
3.00	10	MD6-SOB2F	MORRISON PEDESTAL FF FINISH: SILVER
4.00	10	MD6-D2B1F	MORRISON PEDESTAL BBF FINISH: SILVER
5.00	10	MN2-D2400	NETWORK 24" STRAIGHT DESK SUPPORT FINISH: SILVER
5.00	10	MN2-D0030	NETWORK 30" RETURN DESK SUPPORT FINISH: SILVER
6.00	10	MN2-D4200	NETWORK 42" STRAIGHT DESK SUPPORT FINISH: SILVER
7.00	20	MN2-D7200	NETWORK 72" STRAIGHT DESK SUPPORT FINISH: SILVER
8.00	10	MN2-F72	72" FILLER PANEL FINISH: SILVER
8.00	20	MN1-DP	DESK SUPPORT TO PED BRACKET
9.00	10	MU1-S7230-A	STRAIGHT WORKSURFACE 72" W x 30" D x 1-1/4" H UNDECIDED LAMINATE
10.00	10	MU1-S4224-A	STRAIGHT WORKSURFACE 42" W x 24" D x 1-1/4" H UNDECIDED LAMINATE
10.00	10	MU1-S7224-A	STRAIGHT WORKSURFACE 72" W x 24" D x 1-1/4" H UNDECIDED LAMINATE

WORKSTATION TYPICAL B

MORRISON

ITEM NO	QTY	PART NUMBER	DESCRIPTION
11.00	20	MZ1-B3619	36" WORKSURFACE SCREEN TO 46" H OVERHEAD HARMONY (W232-6) GRAPHITE
12.00	10	MN2-S7218	72" OVERHEAD SUPPORT FINISH: SILVER
13.00	20	MO8-N36-698	36" OVERHEAD FINISH: SILVER LOCK
14.00	20	QMM133483	NETWORK SCREEN CLIPS FINISH: SILVER
15.00	20	MO7-NB36	BACK FOR OVERHEADS FINISH: SILVER
16.00	10	ML1-NF48N	48" W TASKLIGHT FOR OVERHEAD FINISH: SILVER
17.00	10	KSPEC4	SET OF 4 CORES AND KEYS

TYPICAL C

MORRISON

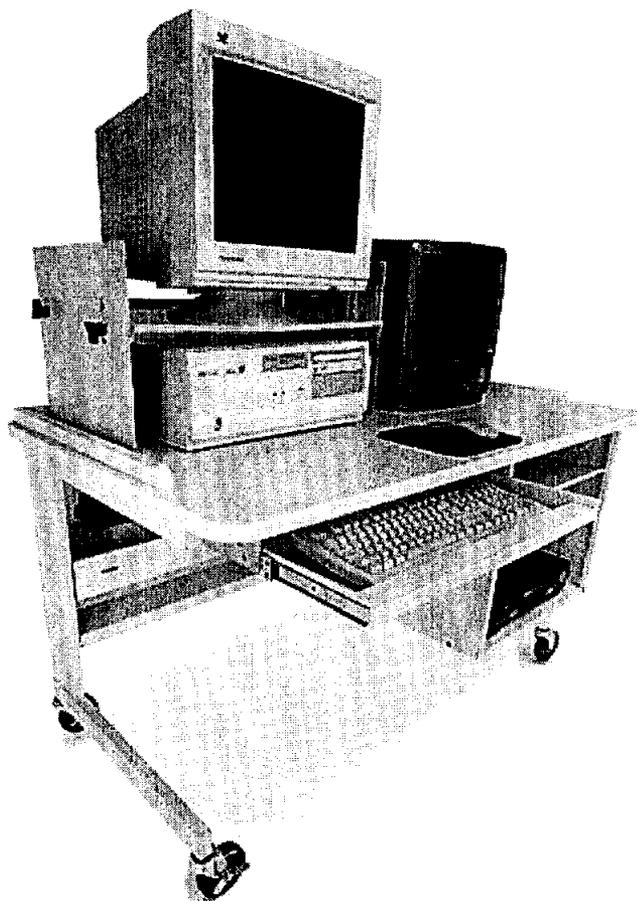
ITEM NO	QTY	PART NUMBER	DESCRIPTION
1.00	1	MU1-S7230-A	30" x 72" Straight Worksurface Undecided Laminate
2.00	1	MD6-D2B1F	Box/Box/File Pedestal Undecided Finish
3.00	1	RO2-NS21	Reuter Stanchions Undecided Finish
4.00	1	RO3-N72	72" Reuter Overhead Undecided Finish
5.00	1	RT2-F48(L)	Task Light for 72" Reuter Overhead Undecided Finish
6.00	2	MZ1-B3622	Morrison Network Screens Undecided Grade 20
7.00	1	MN2-E24	End Panel for Desk Support Undecided Finish
8.00	1	MN2-7200	72" Morrison Network Support Undecided Finish

**Project: Weapon System Trainer
Ellsworth AFB, SD
PN FXBM 023002**

FURNITURE ILLUSTRATION SHEET

Item Code: WS-2

Item Name: Workstation, mobile



Project: Weapon System Trainer
Ellsworth AFB, SD
PN FXBM 023002

PROCUREMENT INFORMATION

Item Code: LEC-1

Item Name: Lectern

Manufacturer: ICF/Nienkamper
257 Finchdene Square
Scarborough, Ontario
Canada M1X 1B9
Phone: 800.668.9318
Fax: 416.298.9535

Contractor: Contract Source Inc.
140 W 98th Street, Suite 201
Bloomington, MN 55420
Phone: 952.401.7880
Fax: 952.470.7805

GSA Contract Number: GS-28F0044J
Contract Expiration Date: 09/30/04
FSC Group:
SIN: 711-11
MOL: \$500,000

Model Name: Vox Presenter's Lectern

Model Number: 23465

Dimensions: 35 ½ " W x 27 ½" D x 53" H

Finish Name/Number: F-06 Standard Cherry wood veneer, AL-01 Clear Anodized Aluminum vertical legs and screen

Fabric Name/Number: N/A

Description: Lectern includes a pull-out shelf, push-latch storage below, aluminum screen to conceal lectern work area, aluminum microphone grommet pre-wired at top and floor level to an XLR jack, adjustable reading light, aluminum paper stop, one fixed shelf, foot rest, and 4 ½" diameter wheels. Facet edge.

Memo: All of the above features are required for the multiple functions of the Theater. Power locations must be coordinated in the electrical layout.

Item location: Room 225 Theater – QTY 1

Special instructions: Power locations must be coordinated in the electrical layout.

Project: Weapon System Trainer
Ellsworth AFB, SD
PN FXBM 023002

PROCUREMENT INFORMATION

Item Code: LS-1

Item Name: Bench, upholstered

Manufacturer: ICF/Nienkamper
257 Finchdene Square
Scarborough, Ontario
Canada M1X 1B9
Phone: 800.668.9318
Fax: 416.298.9535

Contractor:
Contract Source
140 W 98th Street, Suite 201
Bloomington, MN 55420
Contact: Lisa Kirkbride

GSA Contract Number: GS-28F0044J
Contract Expiration Date: 9/30/04
FSC Group:
SIN: 711-18
MOL: \$500,000

Model Name: Elevation Bench

Model Number: 23801

Dimensions: 101"W x 24"D x 18"H

Finish Name/Number: Base – silver painted

Fabric Name/Number: ArcCom TaskForce Melodie/AC-66101, Color Grape #2 (COM)

Description: Stainless steel frame supports attached upholstered cushions.

Memo: N/A

Item location: RM 240 Lobby – QTY 2

Project: Weapon System Trainer
Ellsworth AFB, SD
PN FXBM 023002

PROCUREMENT INFORMATION

Item Code: MC-1

Item Name: Mobile cart

Manufacturer:
Peter Pepper Products
17929 S. Susana Road
Compton, CA 90224
Phone: 800.496.0204
Fax: 310.639.6013

Contractor: same

GSA Contract Number: GS-28F-1100C
Contract Expiration Date: 8/31/05
FSC Group: 71, Part III
SIN: 71-399
MOL: \$150,000

Model Name: Wheelies Media Cart, large

Model Number: 7905-42

Dimensions: Top 33 $\frac{3}{4}$ "W x 23 $\frac{3}{8}$ " D, Lower cabinet 30"W x 36"H x 20"D

Finish Name/Number: Top and doors – Graphite, Side and back panel – Cool Grey

Fabric Name/Number: N/A

Description: Mobile storage unit has open front with two adjustable shelves. Top and doors shall be medium density fiber board in textured color. Hinged doors open 270 degrees. Side and back panel finish shall be melamine. Interior finish: Cool Grey melamine. Frame: natural anodized aluminum. Castors are 3" locking. Wire grommets are located at top and bottom of back panel. 2" grommets through shelves.

Item location: RM 216 – QTY 1; RM 219 – QTY 1; RM 256 – QTY 2 (Total quantity 4)

Special instructions: N/A

Project: Weapon System Trainer
Ellsworth AFB, SD
PN FXBM 023002

PROCUREMENT INFORMATION

Item Code: MC-2

Item Name: Mobile Cart

Manufacturer:

Bretford
11000 Seymour Avenue
Franklin Park, IL 60131
Phone: 800.521.9614
Fax: 800.343.1779

GSA Contract Number: 29F-0134G
Contract Expiration Date: 3/31/06
FSC Group: 7110
SIN: 711-2
MOL: \$500,000

Model Name: Freeloader

Model Number: FLDR7700

Dimensions: 41 ½"W x 24"D x 40 ½" H

Finish Name/Number: Cabinet Sides, Base, File drawer, Shelves – Aluminum (AL), Molded edge – Slate Grey (S), Laminate work surface – Windswept Pewter (461)

Fabric Name/Number: N/A

Description: Freeloader is a mobile storage unit with a functional work surface top. Includes one file drawer that is powder-coated sheet metal on full extension runners, non-locking with stainless steel pull; pen drawer that is compartmentalized and satin finish frosted polypropylene in a powder coated sheet metal housing; interior shelves made of 14-gauge powder coated sheet metal that are adjustable in 5/8" increments; exterior shelves constructed of 14-gauge powder coated sheet metal that are adjustable in 4" increments; waste bin made of powder coated sheet metal with a stainless steel bag retainer. Top and base are 1" high pressure laminate and polyurethane external edges. Body is a combination of high pressure laminate with MDF coated 18-gauge sheet metal. Doors are constructed from translucent white polypropylene with aluminum handles.

Item location: RM 201, 214, 215, 220, 221 – QTY 1 each (5 Total)

Special instructions: None

Project: Weapon System Trainer
Ellsworth AFB, SD
PN FXBM 023002

PROCUREMENT INFORMATION

Item Code: P-1

Item Name: Areca Palm and container

Manufacturer:
Commercial Silk Int'l (Div of Plantscape, Inc.)
6300 Bury Drive
Minneapolis, MN 55346
Phone: 800.241.2718
Fax: 952.934.3807

GSA Contract Number: GS 03F5082C
Contract Expiration Date: 3/31/09
FSC Group: 7290
SIN: 72-2 (722-06 Artificial Trees)
MOL: \$100,000

Model Name: Areca Palm and container

Model Number: Plant - APCM08, Container – BR1817 Bottom Radius (Architectural Supplements)

Dimensions: Plant - 8' tall x 4' diameter, Container – 18" diameter x 17" high

Finish Name/Number: Satin Aluminum

Fabric Name/Number: N/A

Description: Silk-like, replica plant with natural trunk and commercial fullness. Container shall be spun aluminum with bottom radius.

Memo: Add "Inherent Flame Retardant" to foliage at factory

Item location: RM 240 Lobby – QTY 2

Special instructions: N/A

Project: Weapon System Trainer
Ellsworth AFB, SD
PN FXBM 023002

PROCUREMENT INFORMATION

Item Code: S-1

Item Name: Task chair

Manufacturer:
Herman Miller, Inc.
Zeeland, MI
Phone: 800.851.1196

Contractor:
Commercial Furniture Services
4301 Highway 7
Saint Louis Park, MN 55415
Phone: 952.915.6349
Fax: 952.922.4025
Contact: Maureen Sietsema

GSA Contract Number: GS-28F8049H
Contract Expiration Date: 6/30/04
FSC Group:
SIN: A1335
MOL: \$200,000

Model Name: Mirra task chair

Model Number: MR121AAAJG1C7ZKBK3Q06

Dimensions: 27"W x 17"D x 43"H (maximum)

Finish Name/Number: Base – Graphite G1, Arm pad – Black BK, Molded back – Cappuccino ZK

Fabric Name/Number: Seat – AireWeave Cappuccino 3Q06

Description: Passive ergonomic task chair with molded polymer back. Controls: TriFlex backrest, AireWeave seat suspension, FlexFront adjustable seat depth, Harmonic tilt, lumbar support, and armrest adjustment.

Memo: Chair is 96% recyclable.

Item location: RM 117, 121, 122, 202, 204, 205, 206, 207, 208, 225 – QTY 1 each; RM 103, 226 – QTY 2 each; RM 212 – QTY 4; RM 119 – QTY 7 (Total quantity 25)

Special instructions: N/A

Project: Weapon System Trainer
Ellsworth AFB, SD
PN FXBM 023002

PROCUREMENT INFORMATION

Item Code: S-2

Item Name: Guest chair

Manufacturer:
Knoll, Inc.
1235 Water Street
East Greenville, PA 18041
Phone: 800.445.5045

Contractor:
Knoll
275 Market Street
Minneapolis, MN 55405
Phone: 612.313.8104
Fax: 612.313.8105
Contact: Joan Fitzgibbons

GSA Contract Number: Open market item
Contract Expiration Date: N/A
FSC Group: N/A
SIN: N/A
MOL: N/A

Model Name: Open Up Stacking Side Chair

Model Number: S908-4-SL-2

Dimensions: 22 1/2" W x 24 1/2" D x 33 3/4" H

Finish Name/Number: Silver painted aluminum base (4)

Fabric Name/Number: Back – Knoll Mesh Light Grey 04, Seat – Knoll Masquerade K806/2 Dusk

Description: Stacking side chair with silver painted metal base and 100% poly mesh back.

Item location: RM 121 – QTY 2; RM 202, 204, 205, 206, 207, 208 – QTY 3 (Total 20)

Special instructions: N/A

Project: Weapon System Trainer
Ellsworth AFB, SD
PN FXBM 023002

PROCUREMENT INFORMATION

Item Code: S-3

Item Name: Conference chair

Manufacturer:
Knoll, Inc.
1235 Water Street
East Greenville, PA 18041
Phone: 800.445.5045

Contractor: Knoll, Inc.
275 Market Street
Minneapolis, MN 55405
Phone: 612.313.8104
Fax: 612.313.8105
Contact: Joan Fitzgibbons

GSA Contract Number: GS-28F-8029H
Contract Expiration Date: 6/30/04 with option to 12/31/07
FSC Group: 71, Part 1
SIN: 711-18, 711-19, 711-95
MOL: \$533,333

Model Name: Bulldog Professional

Model Number: 7A8-1-D5G-H

Dimensions: 24 ¼"W x 21 ¾" D x 31" H (minimums)

Finish Name/Number: Dark Grey (1)

Fabric Name/Number: Knoll Field Day K124/13 Cobalt

Description: Multi-function ergonomic chair with synchronized tilt, 4" back height adjustment, variable position tilt stop, upright tilt lock, 8 degree forward tilt with free float, forward tilt lock, pneumatic seat height, high-resilient molded foam sea, and aluminum die cast control housing for nylon base.

Memo: Bulldog chair is 95% recyclable. 10-year multi-shift warranty.

Item location: RM 214, 215, 220, 221 – QTY 5 each; RM 118 – QTY 7; RM 213 – QTY 9; RM 201, 216, 219 – QTY 11 each; RM 256 – QTY 14 (Total 83)

Special instructions: N/A

Project: Weapon System Trainer
Ellsworth AFB, SD
PN FXBM 023002

PROCUREMENT INFORMATION

Item Code: S-4

Item Name: Side chair

Manufacturer:
Emeco
805 Elm Avenue
Hanover, PA 17331
Phone: 717.637.5951
Fax: 717.633.6018

Contractor:
Lisa Kirkbride
2080 Boulder Road
Chanhassen, MN 55317
Phone: 952.401.7880
Fax: 952.470.7805

GSA Contract Number:
Contract Expiration Date: 5/23/07
FSC Group: 71 – Part 2
SIN: 71-207
MOL: \$1,000,000

Model Name: Navy chair

Model Number: 1006

Dimensions: 16 ¼"W x 19 ½" D x 34"H

Finish Name/Number: Brushed aluminum

Fabric Name/Number: N/A

Description: 100% aluminum (composition must be certified) side chair, heat-treated and aged after welding, no fasteners, anodized aluminum hand finish.

Memo: 75% recycled aluminum used in manufacturing of this chair.

Item location: RM 112 – QTY 16

Special instructions: N/A

Project: Weapon System Trainer
Ellsworth AFB, SD
PN FXBM 023002

PROCUREMENT INFORMATION

Item Code: T-1.A

Item Name: Conference table

Manufacturer:
Knoll, Inc.
1235 Water Street
East Greenville, PA 18041
Phone: 800.445.5045

Contractor:
Knoll
275 Market Street
Minneapolis, MN 55405
Phone: 612.313.8111
Fax: 612.313.8105
Contact: Jill Englund

GSA Contract Number: GS-28F-8029H
Contract Expiration Date: 6/30/04 with option to 12/31/07
FSC Group: 71, Part 1
SIN: 711-18, 711-19, 711-95
MOL: \$533,333

Model Name: Propeller Conference Table

Model Number: P3-NL56-G-X-5-Y-Y-A

Dimensions: 96"W x 42" D x 28 ½"H

Finish Name/Number: Top – American Cherry (X), Legs – Aluminum (A), PVC Edgeband – Medium Grey (5)

Fabric Name/Number: N/A

Description: Table top is 1 1/8" thick, solid medium density fiberboard core with balanced backer sheet on bottom. Solid wood veneer, cross-veneered. Threaded inserts are die-cast zinc. All table edges are finished with PVC edge. S-shaped legs incorporate two separate channels. Vertical leg is extruded aluminum construction with clear satin anodized finish. Legs are 5"W x 2 ¼" deep. Standard conference leg mountings plates are steel stampings with powder-coat finish. Leg end caps are injection-molded, glass-filled nylon. Black plastic glide with ¾" levelling range.

Memo: Conference table does not have grommets or power/data cut-out in top.

Item location: RM 213, 228 – QTY 1 (2 Total)

Project: Weapon System Trainer
Ellsworth AFB, SD
PN FXBM 023002

PROCUREMENT INFORMATION

Item Code: T-1.B

Item Name: Conference table

Manufacturer:
Knoll, Inc.
1235 Water Street
East Greenville, PA 18041
Phone: 800.445.5045

Contractor:
Knoll
275 Market Street
Minneapolis, MN 55405
Phone: 612.313.8111
Fax: 612.313.8105
Contact: Jill Englund

GSA Contract Number: GS-28F-8029H
Contract Expiration Date: 6/30/04 with option to 12/31/07
FSC Group: 71, Part 1
SIN: 711-18, 711-19, 711-95
MOL: \$533,333

Model Name: Propeller Conference Table

Model Number: P3-NL76-G-X-5-Y-Y-A

Dimensions: 96"W x 48" D x 28 ½"H

Finish Name/Number: Top – American Cherry (X), Legs – Aluminum (A), PVC Edgeband – Medium Grey (5)

Fabric Name/Number: N/A

Description: Table top is 1 1/8" thick, solid medium density fiberboard core with balanced backer sheet on bottom. Solid wood veneer, cross-veneered. Threaded inserts are die-cast zinc. All table edges are finished with PVC edge. S-shaped legs incorporate two separate channels. Vertical leg is extruded aluminum construction with clear satin anodized finish. Legs are 5"W x 2 ¼" deep. Standard conference leg mountings plates are steel stampings with powder-coat finish. Leg end caps are injection-molded, glass-filled nylon. Black plastic glide with ¾" levelling range.

Memo: Conference table does not have grommets or power/data cut-out in top.

Item location: RM 214, 215, 220, 221 – QTY 1 each (Total 4)

Project: Weapon System Trainer
Ellsworth AFB, SD
PN FXBM 023002

PROCUREMENT INFORMATION

Item Code: T-1.C

Item Name: Conference table

Manufacturer: Knoll, Inc.
1235 Water Street
East Greenville, PA 18041
Phone: 800.445.5045

Contractor: Knoll
275 Market Street
Minneapolis, MN 55405
Phone: 612.313.8111
Fax: 612.313.8105
Contact: Jill Englund

GSA Contract Number: GS-28F-8029H
Contract Expiration Date: 6/30/04 with option to 12/31/07
FSC Group: 71, Part 1
SIN: 711-18, 711-19, 711-95
MOL: \$533,333

Model Name: Propeller Conference Table

Model Number: P3-CL16-G-X-5-Y-Y-A

Dimensions: 144"W x 42" D x 28 ½"H

Finish Name/Number: Top – American Cherry (X), Legs – Aluminum (A), PVC Edgeband – Medium Grey (5)

Description: Table top is 1 1/8" thick, solid medium density fiberboard core with balanced backer sheet on bottom. Solid wood veneer, cross-veneered. Threaded inserts are die-cast zinc. All table edges are finished with PVC edge. S-shaped legs incorporate two separate channels. Vertical leg is extruded aluminum construction with clear satin anodized finish. Legs are 5"W x 2 ¼" deep. Standard conference leg mountings plates are steel stampings with powder-coat finish. Leg end caps are injection-molded, glass-filled nylon. Black plastic glide with ¾" levelling range.

Memo: Conference table does not have grommets or power/data cut-out in top.

Item location: RM 201 – QTY 1

Special instructions: Table will ship in two separate pieces which will be need to be connected upon installation.

Project: Weapon System Trainer
Ellsworth AFB, SD
PN FXBM 023002

PROCUREMENT INFORMATION

Item Code: T-1.D

Item Name: Conference table

Manufacturer:

Knoll, Inc.
1235 Water Street
East Greenville, PA 18041
Phone: 800.445.5045

Contractor:

Knoll
275 Market Street
Minneapolis, MN 55405
Phone: 612.313.8111
Fax: 612.313.8105
Contact: Jill Englund

GSA Contract Number: GS-28F-8029H
Contract Expiration Date: 6/30/04 with option to 12/31/07
FSC Group: 71, Part 1
SIN: 711-18, 711-19, 711-95
MOL: \$533,333

Model Name: Propeller Conference Table

Model Number: P3-CL36-G-X-5-Y-Y-A

Dimensions: 144"W x 48" D x 28 ½"H

Finish Name/Number: Top – American Cherry (X), Legs – Aluminum (A), PVC Edgeband – Medium Grey (5)

Description: Table top is 1 1/8" thick, solid medium density fiberboard core with balanced backer sheet on bottom. Solid wood veneer, cross-veneered. Threaded inserts are die-cast zinc. All table edges are finished with PVC edge. S-shaped legs incorporate two separate channels. Vertical leg is extruded aluminum construction with clear satin anodized finish. Legs are 5"W x 2 ¼" deep. Standard conference leg mountings plates are steel stampings with powder-coat finish. Leg end caps are injection-molded, glass-filled nylon. Black plastic glide with ¾" levelling range.

Memo: Conference table does not have grommets or power/data cut-out in top.

Item location: RM 216, 219 – QTY 1 each (Total 2)

Special instructions: Table will ship in two separate pieces that will be need to be connected upon installation.

Project: Weapon System Trainer
Ellsworth AFB, SD
PN FXBM 023002

PROCUREMENT INFORMATION

Item Code: T-1.E

Item Name: Conference table

Manufacturer: Knoll, Inc.
1235 Water Street
East Greenville, PA 18041
Phone: 800.445.5045

Contractor: Knoll
275 Market Street
Minneapolis, MN 55405
Phone: 612.313.8111
Fax: 612.313.8105
Contact: Jill Englund

GSA Contract Number: GS-28F-8029H
Contract Expiration Date: 6/30/04 with option to 12/31/07
FSC Group: 71, Part 1
SIN: 711-18, 711-19, 711-95
MOL: \$533,333

Model Name: Propeller Conference Table

Model Number: P3-NL68-G-X-5-Y-Y-A

Dimensions: 72"W x 48" D x 28 ½"H

Finish Name/Number: Top – American Cherry (X), Legs – Aluminum (A), PVC Edgeband – Medium Grey (5)

Fabric Name/Number: N/A

Description: Table top is 1 1/8" thick, solid medium density fiberboard core with balanced backer sheet on bottom. Solid wood veneer, cross-veneered. Threaded inserts are die-cast zinc. All table edges are finished with PVC edge. S-shaped legs incorporate two separate channels. Vertical leg is extruded aluminum construction with clear satin anodized finish. Legs are 5"W x 2 ¼" deep. Standard conference leg mountings plates are steel stampings with powder-coat finish. Leg end caps are injection-molded, glass-filled nylon. Black plastic glide with ¾" levelling range.

Memo: Conference table does not have grommets or power/data cut-out in top.

Item location: RM 256 – QTY 2

Special instructions: N/A

Project: Weapon System Trainer
Ellsworth AFB, SD
PN FXBM 023002

PROCUREMENT INFORMATION

Item Code: T-1.F

Item Name: Conference table

Manufacturer: Knoll, Inc.
1235 Water Street
East Greenville, PA 18041
Phone: 800.445.5045

Contractor: Knoll
275 Market Street
Minneapolis, MN 55405
Phone: 612.313.8111
Fax: 612.313.8105
Contact: Jill Englund

GSA Contract Number: GS-28F-8029H
Contract Expiration Date: 6/30/04 with option to 12/31/07
FSC Group: 71, Part 1
SIN: 711-18, 711-19, 711-95
MOL: \$533,333

Model Name: Propeller Conference Table

Model Number: P3-NL48-G-X-5-Y-Y-A

Dimensions: 72"W x 42" D x 28 ½"H

Finish Name/Number: Top – American Cherry (X), Legs – Aluminum (A), PVC Edgeband – Medium Grey (5)

Fabric Name/Number: N/A

Description: Table top is 1 1/8" thick, solid medium density fiberboard core with balanced backer sheet on bottom. Solid wood veneer, cross-veneered. Threaded inserts are die-cast zinc. All table edges are finished with PVC edge. S-shaped legs incorporate two separate channels. Vertical leg is extruded aluminum construction with clear satin anodized finish. Legs are 5"W x 2 ¼" deep. Standard conference leg mountings plates are steel stampings with powder-coat finish. Leg end caps are injection-molded, glass-filled nylon. Black plastic glide with ¾" levelling range.

Memo: Conference table does not have grommets or power/data cut-out in top.

Item location: RM 118– QTY 1

Special instructions: N/A

Project: Weapon System Trainer
Ellsworth AFB, SD
PN FXBM 023002

PROCUREMENT INFORMATION

Item Code: T-2

Item Name: Table (round)

Manufacturer:

KI

1330 Bellevue Street

Green Bay, WI 54308-8100

Phone: 920.468.8100

Fax: 920.468.2699

GSA Contract Number: GS-28F-8022H

Contract Expiration Date: 12/31/07

FSC Group: 71, Part I

SIN: 7110

MOL: \$500,000

Model Name: Venue table

Model Number: Base – FS1632/CH/CH, Top – WR35/14R/VCY

Dimensions: 42" diameter x 29"H

Finish Name/Number: Base – Chrome (polished aluminum), Top – Cherry veneer

Fabric Name/Number: N/A

Description: Table top is 1 1/8" thick high density particleboard core. Top and bottom surfaces are veneer (top is center-matched). Top edges are 1 1/4" solid hardwood lumber bullnose with radius corner. Bottom surfaces are pre-drilled for locating spiders. Base has cast aluminum legs, hub ring and spider. Column and stringers are seam-welded tubular steel. Adjustable glides.

Item location: RM 112 – QTY 4

Special instructions: N/A

Project: Weapon System Trainer
Ellsworth AFB, SD
PN FXBM 023002

PROCUREMENT INFORMATION

Item Code: WS-1.A

Item Name: Workstation

Manufacturer: Knoll, Inc.
1235 Water Street
East Greenville, PA 18041
Attention: Order Entry

Contractor: Knoll, Inc.
Parameters, Ltd.
1600 Utica Avenue South #120
Minneapolis, MN 55416
Phone: 952.903.5200
Fax: 952.903.5293

GSA Contract Number: GS-28F-8029H
Contract Expiration Date: 6/30/04 with option to 12/31/07
FSC Group: 71, Part 1
SIN: 711-18, 711-19, 711-95
MOL: \$533,333

Model Name: Morrison

Dimensions: See parts list and drawing

Finish Name/Number: Silver SP-3 all steel components, Pumice 95S-52M93 Laminate – work surfaces

Fabric Name/Number: Knoll Harmony W232/6

Description: 1 ¼" top with plastic laminate, three ply solid core construction for extra durability, all components must have metal to metal connections. Steel construction on all other components. All workstations shown with overheads require tackboards and task lights. Drawer interiors shall be all steel. Pencil drawers must be provided as shown. 72" worksurfaces shall have two factory-installed grommets each; smaller ones shall have one.

Memo: Key each workstation pedestals and overhead alike. Lifetime warranty required. Field verify all dimensions.

Item location: RM 103, 121 – QTY 1 each; RM 119 – QTY 7 (Total 9)

Special instructions: Installation included.

Project: Weapon System Trainer
Ellsworth AFB, SD
PN FXBM 023002

PROCUREMENT INFORMATION

Item Code: WS-1.B

Item Name: Workstation

Manufacturer: Knoll, Inc.
1235 Water Street
East Greenville, PA 18041
Attention: Order Entry

Contractor: Knoll, Inc.
Parameters, Ltd.
1600 Utica Avenue South #120
Minneapolis, MN 55416
Phone: 952.903.5200
Fax: 952.903.5293

GSA Contract Number: GS-28F-8029H
Contract Expiration Date: 6/30/04 with option to 12/31/07
FSC Group: 71, Part 1
SIN: 711-18, 711-19, 711-95
MOL: \$533,333

Model Name: Morrison

Dimensions: See parts list and drawing

Finish Name/Number: Silver SP-3 all steel components, Pumice 95S-52M93 Laminate – work surfaces

Fabric Name/Number: Knoll Harmony W232/6

Description: 1 ¼" top with plastic laminate, three ply solid core construction for extra durability, all components must have metal to metal connections. Steel construction on all other components. All workstations shown with overheads require tackboards and task lights. Drawer interiors shall be all steel. Pencil drawers must be provided as shown. 72" worksurfaces shall have two factory-installed grommets each; smaller ones shall have one.

Memo: Key each workstation pedestals and overhead alike. Lifetime warranty required. Field verify all dimensions.

Item location: RM 202, 204, 205, 206, 207, 208, 225 – QTY 1 each; RM 212 – Qty 4 (Total 11)

Special instructions: N/A

Project: Weapon System Trainer
Ellsworth AFB, SD
PN FXBM 023002

PROCUREMENT INFORMATION

Item Code: WS-1.C

Item Name: Workstation

Manufacturer: Knoll, Inc.
1235 Water Street
East Greenville, PA 18041
Attention: Order Entry

Contractor: Knoll, Inc.
Parameters, Ltd.
1600 Utica Avenue South #120
Minneapolis, MN 55416
Phone: 952.903.5200
Fax: 952.903.5293

GSA Contract Number: GS-28F-8029H
Contract Expiration Date: 6/30/04 with option to 12/31/07
FSC Group: 71, Part 1
SIN: 711-18, 711-19, 711-95
MOL: \$533,333

Model Name: Morrison

Dimensions: See parts list and drawing

Finish Name/Number: Silver SP-3 all steel components, Pumice 95S-52M93 Laminate – work surfaces

Fabric Name/Number: Knoll Harmony W232/6

Description: 1 ¼" top with plastic laminate, three ply solid core construction for extra durability, all components must have metal to metal connections. Steel construction on all other components. All workstations shown with overheads require tackboards and task lights. Drawer interiors shall be all steel. Pencil drawers must be provided as shown. 72" worksurfaces shall have two factory installed grommets each; smaller ones shall have one.

Memo: Key each workstation pedestals and overhead alike. Lifetime warranty required. Field verify all dimensions.

Item location: RM 103, 118 – QTY 1 each (Total 2)

Special instructions: N/A

Project: Weapon System Trainer
Ellsworth AFB, SD
PN FXBM 023002

PROCUREMENT INFORMATION

Item Code: WS-2

Item Name: Workstation (mobile)

Manufacturer:

Bretford

11000 Seymour Avenue

Franklin Park, IL 60131

Phone: 800.521.9614

Fax: 800.343.1779

GSA Contract Number: 29F-0134G

Contract Expiration Date: 3/31/06

FSC Group: 7110

SIN: 711-2

MOL: \$500,000

Model Name: Mobile Multimedia Workstation

Model Number: UCS800-GM/UCSE10/UCSAMS-GM/UCSKDMP2-GM

Dimensions: 51"W x 30"D x 26"-33"H

Finish Name/Number: White Nebula (020)

Fabric Name/Number: N/A

Description: Workstation has a 51" wide worksurface that is height-adjustable from 26"-33". Table rolls on 4" casters (two with locking brakes). A vinyl bumper protects the edge of the worksurface. Four grommet holes at rear of tabletop and the lower cord bin keep cables and wires in order. A retainer lip runs along the back and sides of the worksurface. A rear access panel enables easy access to equipment for cable configuration. The lower cabinet has two adjustable shelves. Electrical unit has 10 outlets, 20' cord and 110 volt surge suppression with on/off switch. Keyboard drawer has mouse pad extender (can be used on left or right) and built-in wrist rest. Adjustable monitor shelf adjusts with side knobs.

Memo: Ships ready to assemble.

Item location: RM 201, 213, 214, 215, 216, 219, 220, 221, 228 – QTY 1 each; RM 256 – QTY 2 (Total 11)

Furniture Placement List By Room
Project: Weapon System Trainer
Ellsworth AFB, SD

Room # and Name	Item Code	Item Name	Qty.
103 PCA Storage	S-1	Task Chair	2
	WS-1.A	Workstation	1
	WS-1.C	Workstation	1
112 Break Room	S-4	Side Chair	16
	T-2	Table, round	4
117 Office	S-1	Task Chair	1
118 Contractor Library	MC-1	Mobile Cart	1
	S-3	Conference Chair	7
	T-1.F	Conference Table	1
	WS-1.C	Workstation	1
119 Contractor Support	S-1	Task Chair	7
	WS-1.A	Workstation	7
121 Contractor Office	S-1	Task Chair	1
	S-2	Guest Chair	2
	WS-1.A	Workstation	1
122 Entry Control	S-1	Task Chair	1
201 Mission Planning	MC-1	Mobile Cart	1
	S-3	Conference Chair	11
	T-1.C	Conference Table	1
	WS-2	Workstation, mobile	1
202 Office	S-1	Task Chair	1
	S-2	Guest Chair	3
	WS-1.B	Workstation	1
204 Office	S-1	Task Chair	1
	S-2	Guest Chair	3
	WS-1.B	Workstation	1
205 Office	S-1	Task Chair	1
	S-2	Guest Chair	3
	WS-1.B	Workstation	1
206 Office	S-1	Task Chair	1
	S-2	Guest Chair	3

Furniture Placement List By Room
Project: Weapon System Trainer
Ellsworth AFB, SD

	WS-1.B	Workstation	1
07 Office	S-1	Task Chair	1
	S-2	Guest Chair	3
	WS-1.B	Workstation	1
208 Office	S-1	Task Chair	1
	S-2	Guest Chair	3
	WS-1.B	Workstation	1
212 PO/QAR	S-1	Task Chair	4
	WS-1.B	Workstation	4
213 Mission Planning	S-3	Conference Chair	7
	T-1.A	Conference Table	1
	WS-2	Workstation, mobile	1
214 Mission Planning 1A	MC-2	Mobile Cart	1
	S-3	Conference Chair	5
	T-1.B	Conference Table	1
	WS-2	Workstation, mobile	1
215 Mission Planning 2A	MC-2	Mobile Cart	1
	S-3	Conference Chair	5
	T-1.B	Conference Table	1
	WS-2	Workstation, mobile	1
216 AM Flight Lead	MC-1	Mobile Cart	1
	S-3	Conference Chair	11
	T-1.D	Conference Table	1
	WS-2	Workstation, mobile	1
219 PM Flight Lead	MC-1	Mobile Cart	1
	S-3	Conference Chair	11
	T-1.D	Conference Table	1
	WS-2	Workstation, mobile	1
220 Mission Planning 2B	MC-2	Mobile Cart	1
	S-3	Conference Chair	5
	T-1.B	Conference Table	1
	WS-2	Workstation, mobile	1
221 Mission Planning	MC-2	Mobile Cart	1

Furniture Placement List By Room
Project: Weapon System Trainer
Ellsworth AFB, SD

1B			
	S-3	Conference Chair	5
	T-1.B	Conference Table	1
	WS-2	Workstation, mobile	1
225 Theater	LEC-1	Lectern	1
	S-1	Task Chair	1
	WS-1.B	Workstation	1
226 Scheduling Counter	S-1	Task Chair	2
228 Library	S-3	Conference Chair	9
	T-1.A	Conference Table	1
	WS-2	Workstation, mobile	1
240 Lobby	LS-1	Bench	2
	P-1	Areca Palm Tree	2
256 Mission Planning Room	MC-1	Mobile Cart	2
	S-3	Conference Chair	14
	T-1.E	Conference Table	2
	WS-2	Workstation, mobile	2