#### **PURCHASE AGREEMENT**

<u>University</u>: University of North Texas Health Science Center

HSC Contract #2022-0313

Vendor: Cantrol International Inc

391 Steelcase Rd. W Unit 22

Markham, Ontario, Canada L3R 3V9

<u>Product(s)</u>: See Exhibit APrice: See Exhibit A

Delivery: Delivery and Installation shall be FOB Destination to:

University of North Texas Health Science Center 3500 Camp Bowie Blvd., Ft Worth, TX, 76107,

**ROOM EAD 322** 

Warranty: One-year warranty on all material and workmanship, and two-year warranty on parts.

<u>Payment.</u> See Exhibit A for the Payment Schedule; Vendor must be in good standing, not indebted to the State of Texas, and current on all taxes owed to the State of Texas for payment to occur. Invoices and any required supporting documents must be presented to: University of North Texas System – Business Service Center, 1112 Dallas Dr. Ste. 4000, Denton, TX 76205. Payment shall be made by University to Vendor in U.S. Dollars.

<u>Eligibility to Receive Payment</u>. By entering into and performing under this Agreement, Vendor certifies that under Section 231.006 of the Texas Family Code and under Section 2155.004 of the Texas Gov't Code, it is not ineligible to receive the specified payment and acknowledges that this Agreement may be terminated and payment may be withheld if this certification is inaccurate.

<u>Tax Exempt</u>. University is exempt from the payment of taxes and will provide documentation confirming its tax exempt status.

Breach of Contract Claims Against University. Chapter 2260 of the Texas Gov't Code establishes a dispute resolution process for contracts involving goods, services, and certain types of projects. To the extent that Chapter 2260, Texas Gov't Code, is applicable to this Agreement and is not preempted by other applicable law, the dispute resolution process provided for in Chapter 2260 and the related rules adopted by the Texas Attorney General pursuant to Chapter 2260, shall be used by the parties to attempt to resolve any claim for breach of contract against University that cannot be resolved in the ordinary course of business.

Governing Law and Venue. Vendor and University agree that any matter related to or arising out of this Agreement shall be resolved in accordance with the laws of the State of Texas, U.S.A, without regard to principles of conflict of law, and excluding the provisions of the CISG. The parties expressly opt out of the CISG. State and federal courts of proper jurisdiction and venue sitting in Texas shall have exclusive jurisdiction over any claim arising out of this Agreement and each party consents to the exclusive jurisdiction of such courts. Venue for any legal proceedings shall be subject to Texas Education Code § 105.151.

No Excess Obligations. In the event this Agreement spans multiple fiscal years, University's continuing performance under this Agreement is contingent upon the appropriation of funds to fulfill the requirements of the contract by the Texas State Legislature. If the Legislature fails to appropriate or allot the necessary funds, or if such appropriation is reduced by the veto of the Governor or by any means provided in the appropriations act, University shall issue written notice to Vendor that University may terminate the Agreement without further duty or obligation.

<u>Public Information</u>. University shall release information to the extent required by the Texas Public Information Act and other applicable law. If requested, Vendor shall make public information available to University in an electronic format.

Required Posting of Contracts on Website. Vendor acknowledges and agrees that University is required by Section 2261.253 of the Texas Gov't Code to post each contract it enters into for the purchase of goods or services from a private vendor on its Internet website, including any terms and conditions otherwise marked confidential and/or proprietary.

State Law Verifications. If the Agreement is subject to Texas Gov't Code Section 2271.002, Vendor hereby represents, verifies, and warrants that it does not boycott Israel and will not boycott Israel during the term of the Agreement. If the Agreement is subject to Texas Gov't Code Section 2274.002, Vendor hereby represents, verifies, and warrants that it does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association and will not discriminate against a firearm entity or firearm trade association during the term of the Agreement. If the Agreement is subject to Texas Gov't Code Section 2274.002, Vendor hereby represents, verifies, and warrants that it does not boycott energy companies and will not boycott energy companies during the term of the Agreement.

<u>Delay</u>. Failure of subcontractors and the inability to obtain materials shall not be considered as an excusable delay. If due to such cause, Vendor should be unable to meet all of its delivery commitments for items ordered hereunder as they become due, Vendor shall not discriminate against the University or in favor of any other customer in making deliveries of such items. However, if the University believes that the delay or anticipated delay in Vendor's deliveries may impair its ability to meet its production schedules or may otherwise interfere with its operation, the University may, at its option and without liability to Vendor, cancel outstanding deliveries hereunder wholly or in part.

Nonconformity. All goods shall be received subject to the University's right of inspection and rejection. Defective goods or goods not in accordance with the University's specifications will be held for Vendor's instruction at Vendor's risk and, if Vendor so directs, will be returned at Vendor's expense. If inspection discloses that part of the goods received are not in accordance with the University's specifications, the University shall have the right to cancel any unshipped portion. Payment for goods prior to inspection shall not constitute acceptance thereof and is without prejudice to any and all claims that the University may have against Vendor.

<u>Provision of Services</u>. Vendor shall provide all necessary personnel, equipment, material, supplies, and facilities in the performance of any services. Vendor shall provide the services with that standard of professional care, skill, and diligence customarily and ordinarily provided in the performance of similar services.

On Campus Presence. If this Agreement requires the presence of Vendor's employees, agents, subcontractors or suppliers on the University's premises, Vendor shall cause such parties to comply with all applicable rules of the University, including without limitation those relative to environmental quality, safety, and fire protection.

On Campus Insurance Requirements. If this Agreement requires the presence of Vendor's employees, agents, suppliers or permitted subcontractors (if any) on the University's premises, Vendor agrees to maintain and to cause its agents, suppliers and permitted subcontractors (if any) to maintain the following insurance coverages for at least the specified limits: (a) Workers' Compensation: Statutory Limits; (b) Employer's Liability \$1,000,000 per accident and employee; (c) Commercial General Liability (including contractual liability): \$1,000,000 per occurrence, \$2,000,000 aggregate; (d) Product/Completed Ops: \$1,000,000 aggregate; (e) Auto Liability: \$1,000,000 combined single limit. All policies (except Workers' Compensation) shall name the University as an Additional Insured. All policies must be written on a primary basis; non-contributory with any other insurance coverage and/or self- insurance carried by the University. A Waiver of Subrogation Clause in favor of the University and thirty (30) day notice of cancellation is required on all policies. Certificates of insurance verifying the foregoing requirements shall be provided to the University prior to commencement of any services under this contract.

<u>Independent Contractor.</u> With respect to this Agreement and any goods and services provided hereunder, the Vendor is and shall be deemed to be an independent contractor and not an agent or employee of the University. Vendor shall not have the authority to make any statement, representation, or commitment of any kind, or take any action which shall be binding on the University.

<u>Indemnification</u>. Vendor agrees to indemnify and hold harmless the University, its Regents, employees, and agents from any claim, damage, liability, injury, expense or loss (including attorney's fees) arising out of Vendor's performance, direct or indirect, under this Agreement. Indemnification shall survive termination. In addition, Vendor warrants the material purchased hereunder does not infringe any letters patent granted by the United States and Vendor shall defend, indemnify and hold harmless the University, its Regents, employees and agents from and against all claims arising from infringement or alleged infringement of any patent, copyright, trademark or other intellectual property rights of a third party arising out of, in connection with or resulting from this Agreement or the goods and/or services provided under this Agreement.

State Auditor's Right to Audit. Pursuant to Section 2262.154, Texas Government Code, the state auditor may conduct an audit or investigation of any entity receiving funds from the state directly under the contract or indirectly

through a subcontract under the contract. Acceptance of funds directly under the contract or indirectly through a subcontract under the contract acts as acceptance of the authority of the state auditor, under the direction of the legislative audit committee, to conduct an audit or investigation in connection with those funds. Under the direction of the legislative audit committee, an entity that is the subject of an audit or investigation by the state auditor must provide the state auditor with access to any information the state auditor considers relevant to the investigation or audit.

<u>U.S. Trade and Export Regulations</u>. Vendor agrees not to take any action that would cause University to be in violation of regulations promulgated by the U.S. Treasury Department, including those administered and enforced by the Office of Foreign Asset Control (OFAC), and Vendor agrees not to take any action that would cause University to be in violation of regulations promulgated by the U.S. Department of State, including its International Traffic in Arms Regulation (ITAR). Vendor agrees to be responsible for clearing goods for export from the country of origin and for import into the country of delivery and for all related duties and tariffs.

<u>U.S. Foreign Corrupt Practices Act.</u> Vendor agrees that in connection with this Agreement it shall not offer, promise, or give, directly or indirectly, anything of value to any government official, political party, official, political candidate, or employee thereof or to any third party while knowing that such item of value or any portion thereof may be offered, promised, or given to a government official, political party official, political candidate, or employee thereof for the purpose of obtaining or retaining business. Vendor specifically agrees that in connection with this Agreement, it shall neither take nor omit to take any action, which would cause University to be in violation of the applicable laws of the United States, including the U.S. Foreign Corrupt Practices Act.

<u>Use of University Name.</u> Nothing in this Agreement constitutes a license to use the name or marks of the University. Any use of the University name or marks requires the express written permission of the University.

No Assignment or Delegation. This Agreement, and the rights and obligations set forth herein, may not be assigned or delegated by either party without the express written consent of the other party.

<u>No Third-Party Beneficiaries</u>. Nothing in this Agreement shall be construed as creating or giving rise to any rights in any third parties or any persons other than the parties hereto

Severability & Non-Waiver. The provisions of this Agreement are separate and divisible, and if any court shall determine any provision of this Agreement is void and/or unenforceable, the remaining provision or provisions shall remain. The University's failure to insist on Vendor's strict performance of the terms and conditions of this Agreement at any time shall not be construed as a waiver by the University for performance in the future.

<u>Incorporation and Entire Agreement.</u> This Agreement, including any exhibits or addenda identified and incorporated by reference herein, constitutes the entire agreement between the parties and contains all agreements between the parties. The parties expressly acknowledge that, in entering into and executing this Agreement, the parties rely solely upon the representations and agreements contained in this Agreement and no others.

IN WITNESS WHEREOF, the parties have executed this Agreement in to be effective as of the last date of signature herein.

signature nereni.	
CANTROL INTERNATIONAL INC ("Vandar")	INIVERSITY OF NORTH TEXAS HEALTH

011111	itoe it treat the tree ( tendor )	0111121	torri or region remis memerican
		SCIENC	CE CENTER ("University")
Date:	12/22/2021		12/21/2021
		Date:	

#### Exhibit A

Vendor to provide complete design, supply, installation and commissioning of the Environmental test Chamber as detailed below:

#### PERFORMANCE PARAMETERS

#### **ENVIRONMENTAL TEST CHAMBER: ETC-01 - CONTROLLED SPACE**

Overall Exterior Dimensions: 10'-0" x 12'-0" x 12'-0" high

Interior T-Bar Grid Ceiling Height: 10'-0"

Temperature Control:

Selectable Temperature Range: -18°C\* to +44°C

Temperature Control:  $\pm 0.5$  °C Temperature Uniformity:  $\pm 1.5$  °C

\*Defrost Cycle: 20 min defrost cycle once every 6 hours of operation below 0°C

**Humidity Control:** 

Humidity Range (high temp): 25% RH to 90% RH between +24°C and +44°C Humidity Range (low temp): 40% RH to 90% RH between +5°C and +24°C

Humidity Control: ±2.5% RH
Maximum Humidity Variation: +/- 4% RH

Make-up Air Volume: 50 C.F.M.

# Assumed Internally Generated Heat load (per Hr.)

RM ETC-1 1- Exercising subjects @ 400 W per subject 400 Watts

6 Evaporator Fans 120W 600 Watts 4 Light Fixtures testing area @25w per fixture 200 Watts 1- Resting subjects @ 60W per experimenter 60 Watts

1- Treadmill/Bike @ 1200 Watts per item 1,800 Watts

\* Miscellaneous testing equip. & computers 1,000 Watts
4,060 Watts

Assumed Internally Generated Moisture load (per Hr.)

ETC-1 1- Exercising subject producing 2.5 lbs/Hr each

1 - OBSERVER PRODUCING 0.25 LBS/HR

1-50 CFM 0.8 LBS/HR

# PHYSICAL PARAMETERS - ETC-01

Panel Insulation: 4" (100mm) thick foamed-in-place Class "A" urethane.

ULC-S102 rated panel

Panel Finish Interior: Baked White Enamel on 26-gauge embossed Aluminum. Panel Finish Exterior:

Baked White Enamel on 26-gauge embossed steel.

Floor Finish: 4" Thick - .10 smooth galvanized reinforced to support 700 lbs PSF.

Floor Covering: Continuous vinyl non-slip safety flooring applied over the existing

insulated aluminum chamber floor with 4" cove base around the

perimeter of the interior.

Access Ramp: External ramp 48" x 36" Deep

**Entrance Door:** 48" W. x 78 H. Flush mount in-swing door complete with, 14" x 14" viewing

window, magnetic gaskets, self-closing door closer, door lock with

Inside safety release and polished chrome finish hardware.

ROOM ACCESSORIES

(4) Four dimmable vapor-proof light LED fixtures per room. Lights wired Testing Area Lighting:

to exterior door switch c/w pilot light.

Power Outlets: (6) 120V weather-proof outlets recessed in prefab wall and prewired to

junction box above for treadmills, mobile lights, misc. equipment, etc.

Wall Viewing Windows: (1) 30" x 60" heated multi thermo-pane viewing window.

Ceiling plenum: Aluminum T-Bar Grid ceiling to conceal plenum space and provide

uniform distribution of air through prism egg-crate tile diffusers.

CONDITIONING AND CONTROL SYSTEM

Refrigeration System: One (1) Indoor Air-Cooled R-448A 208V/3/60 remote condensing unit located

not more than 50 feet away complete with pressure control, receiver, sight glass, drier, expansion valve, liquid line solenoid, hot gas valves, crankcase

pressure regulator and suction line accumulator.

Complete with low profile, medium velocity evaporators coils mounted to

ceiling chamber.

Condensing unit to operate continuously to eliminate On/Off with hot gas bypass control and supplemental electric heat for accelerated ramp up rates.

Condensing unit location: Not to Exceed 50'-0" from the Environmental

Chamber

#### **Humidification Control**

Humidification System: "Pure Humidifier" Steam generating type using DI water supplied at 3 GPH.

Complete with low water level cut-out and high temperature cut-out safety

features. Top Mounted.

**DI Water System:** Provided by Others complete with shut off valve to with 5 feet of the chamber.

(Optional if not available)

De-Humidification System: Top mounted desiccant type dehumidifier with front service access panel

complete with silica gel single titanium desiccant rotary structure and electric reactivation heater assembly. The dehumidifier shall be designed for

continuous operation and top mounted.

Fresh Air Ventilation: 50 CFM introduced from the ambient space.

**Drain Line:** 3/4" Copper condensate drain line stubbed 6" outside the chamber (provided

by CANTROL) for connection to a floor drain or pump provided by others.

CONTROL SYSTEM

Control Panel:

(Size: 19" x 42" x 6")

CAN-TROL Key-Lock Control Center constructed of heavy gauge steel

finished in baked white enamel, and mounted and sealed adjacent to the latch side of the entrance door or located in another suitable location as site

conditions dictate.

The Control panel shall be equipped with an electrical disconnect switch.

The controllers, control switches and indicator lights are mounted in the lower section behind a lockable, hinged metal door with a Plexiglas window. The upper section contains High/Low temperature limits, control relays; defrost clock and an electrical load center with separate breakers for fan motors and

lights.

User Interface: Control package including a Temperature and Humidity Dual loop control

system complete with HMI LCD touch screen windows based interface, Ethernet communication, real time clock, and capacity for 100 programs, multilevel security access, and data logging capability. Alarm and emergency

stop messages complete with alarm history tracing.

Digital Timer for automatic programmed automatic start-up.

Ethernet connection point at top of Control Panel

Main Temperature Controller: Micro-processer based temperature/humidity/light/air velocity controllers

with:

Digital color displays of room temperature and set point temperature.

PID Control.

High and Low Temperature and Humidity audible and visual alarms. Independent High and low temperature safety shut-off controls.

Communications: Ethernet and 485 communications for remote monitoring.

Provision for remote alarm contacts for BAS interface.

Controllers to be password protected.

Humidity Sensor: Humidity Probe with accuracy of +/- 2% complete with NIST certificates.

Temperature Sensor: RTD temperature sensor complete with NIST traceable certificates.

#### **Temperature Uniformity Mapping**

To record operating temperature/RH as measured at sensor, of +/- 1.5°C uniformity and +/- 4.0% R.H. at given points in the room recorded at 15 minute intervals, measured and recorded by a NIST certified utilizing eight (8) RTD temperature/RH Data Loggers located at a minimum of 12" above the floor, 12" below the ceiling.

#### INSTALLATION INCLUDES

- Shop drawing and equipment submittal sheets for Approval provided in hard copy and electronic format.
- 2. Supply and Installation of prefabricated panels and all necessary penetrations.
- Supply and Installation of all refrigeration and mechanical systems.
- 4. All materials, labor, and equipment to hoisting the condensing unit and mounted on equipment pad.
- All Control wiring.
- Power supply connections from ETC-1 power distribution panel to Control Panel, Humidifier, Dehumidifier, power outlets etc.
- 7. All necessary recessed reinforcing for wall mounted fixtures/cabinets supplied by others.
- 8. All necessary labour to start up and test the system
- 9. All necessary steam piping to interconnect the suspended humidifier to unit cooler.
- 10. 34" Condensate drain stubbed to outside chamber
- 11. On-Site Pre-Construction Meeting.
- 3 (Three) 12 Hour (8 point) Temperature and humidity mapping test for each system at the high/low and mid-point temperature/humidity ranges.
- One-day informal training seminar on operation and maintenance.
- Full Commissioning documentation as outlined in including but not limited to Start up Report, As-Built Drawings, spare parts list, O & M Manuals, and Temperature and Humidity Mapping results.
- 15. One-year Warranty on all material and workmanship.

# INSTALLATION DOES NOT INCLUDE

- ~70 Amp. 120/208/3/60 4 Wire Power Supply to control panel. Subject to final approval of drawings.
- ~30 AMP 208/3/60 Power supply to the Outdoor Condensing Unit.
- Condensing unit support pad 55" x 40" x 4" high.
- Condensate pump and piping to suitable drain.
- ¼" DI or RO Water supply connection complete with shut off. (3 GPH)
- Fire protection system and signage.
- Roof/Block Wall penetrations and/or 4" Pitch pocket.
- Shelving or Casework.
- Alteration/Demolition of existing area, plumbing, lab furnishings and lab equipment.
- Any bonding or building permits.

# **Qualifications**

Vendor' chambers are designed for precise control of all temperature and humidity applications, ideal for environmental simulation and controlled temperature storage. Vendor has many years' experience in designing, manufacturing, installing, and commissioning these specialized chambers throughout North America.

# **Service Requirement**

Vendor to provide a dedicated project manager and installation team for the duration of the installation and customer training. Customer service will be available post installation.

# **Delivery/Installation Schedule**

- 2 weeks for shop drawings after Vendor receives purchase order
- 18 weeks for material lead time after Vendor receives University approved drawings
- 3 4 weeks for installation
- 1 week for commissioning

# **Pricing**

Price: For the Supply and Installation as outlined above: ETC-01: \$ 129,400.00 USD (Use-Tax Status: Exempt)

# **Payment Schedule**

- 30% Deposit with Order.
- 30% Upon delivery of material.
- 30% Upon completion of installation
- 10% Upon final approval



November 23, 2021

University of North Texas System Procurement Services Business Service Center 1112 Dallas Drive, Suite 4000 Denton, TX 76205

Re: RFP No.: RFP763-21-148974-BS

Title: Controlled Environmental Chamber - Quotation - Revised

Further to your request, we are pleased to present our quotation for the complete design, supply, installation and commissioning of Environmental test chamber as detailed below.

# **SECTION 5: Scope of Proposal**

#### **PERFORMANCE PARAMETERS**

#### **ENVIRONMENTAL TEST CHAMBER: ETC-01 — CONTROLLED SPACE**

**Overall Exterior Dimensions**: 10′-0″ x 12′-0″ x 12′-0″ high

**Interior T-Bar Grid Ceiling Height:** 10′-0″

**Temperature Control:** 

**Selectable Temperature Range:** -18°C\* to +44°C

**Temperature Control**:  $\pm 0.5 \,^{\circ}\text{C}$  **Temperature Uniformity:**  $\pm 1.5 \,^{\circ}\text{C}$ 

\*Defrost Cycle: 20 min defrost cycle once every 6 hours of operation below 0°C

**Humidity Control:** 

**Humidity Range (high temp):** 25% RH to 90% RH between +24°C and +44°C **Humidity Range (low temp):** 40% RH to 90% RH between +5°C and +24°C

**Humidity Control:** ±2.5% RH **Maximum Humidity Variation:** +/- 4% RH

Make-up Air Volume: 50 C.F.M.

#### Assumed Internally Generated Heat load (per Hr.)

RM ETC-1 1- Exercising subjects @ 400 W per subject 400 Watts 6 Evaporator Fans 120W 600 Watts

6 Evaporator Fans 120W4 Light Fixtures testing area @25w per fixture

4 Light Fixtures testing area @25w per fixture
1- Resting subjects @ 60W per experimenter
60 Watts
1- Treadmill/Bike @ 1200 Watts per item
1,800 Watts

\* Miscellaneous testing equip. & computers 1,000 Watts 4,060 Watts

# Assumed Internally Generated Moisture load (per Hr.)

C-1 1- Exercising subject producing 2.5 lbs/Hr each

1 - OBSERVER PRODUCING 0.25 LBS/HR

1 - 50 CFM 0.8 LBS/HR

#### PHYSICAL PARAMETERS - ETC-01

Panel Insulation: 4" (100mm) thick foamed-in-place Class "A" urethane.

ULC-S102 rated panel

**Panel Finish Interior:** Baked White Enamel on 26-gauge embossed Aluminum. **Panel Finish Exterior:** 

Baked White Enamel on 26-gauge embossed steel.

Floor Finish: 4" Thick – .10 smooth galvanized reinforced to support 700 lbs PSF.

Floor Covering: Continuous vinyl non-slip safety flooring applied over the existing

insulated aluminum chamber floor with 4" cove base around the

perimeter of the interior.

External ramp 48" x 36" Deep **Access Ramp:** 

**Entrance Door:** 48" W. x 78 H. Flush mount in-swing door complete with, 14" x 14" viewing

window, magnetic gaskets, self-closing door closer, door lock with

Inside safety release and polished chrome finish hardware.

**ROOM ACCESSORIES** 

**Testing Area Lighting:** (4) Four dimmable vapor-proof light LED fixtures per room. Lights wired

to exterior door switch c/w pilot light.

**Power Outlets:** (6) 120V weather-proof outlets recessed in prefab wall and prewired to

junction box above for treadmills, mobile lights, misc. equipment, etc.

**Wall Viewing Windows:** (1) 30" x 60" heated multi thermo-pane viewing window.

Ceiling plenum: Aluminum T-Bar Grid ceiling to conceal plenum space and provide

uniform distribution of air through prism egg-crate tile diffusers.

#### **CONDITIONING AND CONTROL SYSTEM**

#### **Refrigeration System:**

One (1) Indoor Air-Cooled R-448A 208V/3/60 remote condensing unit located not more than 50 feet away complete with pressure control, receiver, sight glass, drier, expansion valve, liquid line solenoid, hot gas valves, crankcase pressure regulator and suction line accumulator.

Complete with low profile, medium velocity evaporators coils mounted to ceiling chamber.

Condensing unit to operate continuously to eliminate On/Off with hot gas bypass control and supplemental electric heat for accelerated ramp up rates.

Condensing unit location: Not to Exceed 50'-0" from the Environmental Chamber

#### **Humidification Control**

**Humidification System**: "Pure Humidifier" Steam generating type using DI water supplied at 3 GPH.

Complete with low water level cut-out and high temperature cut-out safety

features. Top Mounted.

**DI Water System:** Provided by Others complete with shut off valve to with 5 feet of the chamber.

(Optional if not available)

**De-Humidification System:** Top mounted desiccant type dehumidifier with front service access panel

complete with silica gel single titanium desiccant rotary structure and electric reactivation heater assembly. The dehumidifier shall be designed for

continuous operation and top mounted.

**Fresh Air Ventilation:** 50 CFM introduced from the ambient space.

**Drain Line:** 3/4" Copper condensate drain line stubbed 6" outside the chamber (provided

by CANTROL) for connection to a <u>floor drain or pump provided by others.</u>

**CONTROL SYSTEM** 

Control Panel:

(Size: 19" x 42" x 6")

CAN-TROL Key-Lock Control Center constructed of heavy gauge steel finished in baked white enamel, and mounted and sealed adjacent to the latch side of the entrance door or located in another suitable location as site conditions dictate.

The Control panel shall be equipped with an electrical disconnect switch.

The controllers, control switches and indicator lights are mounted in the lower section behind a lockable, hinged metal door with a Plexiglas window. The upper section contains High/Low temperature limits, control relays; defrost clock and an electrical load center with separate breakers for fan motors and

lights.

**User Interface**: Control package including a Temperature and Humidity Dual loop control

system complete with HMI LCD touch screen windows based interface, Ethernet communication, real time clock, and capacity for 100 programs, multilevel security access, and data logging capability. Alarm and emergency

stop messages complete with alarm history tracing.

Digital Timer for automatic programmed automatic start-up.

Ethernet connection point at top of Control Panel

Main Temperature Controller: Micro-processer based temperature/humidity/light/air velocity controllers

with:

Digital color displays of room temperature and set point temperature.

PID Control.

High and Low Temperature and Humidity audible and visual alarms. Independent High and low temperature safety shut-off controls.

Communications: Ethernet and 485 communications for remote monitoring.

Provision for remote alarm contacts for BAS interface.

Controllers to be password protected.

\_4\_

**Humidity Sensor:** Humidity Probe with accuracy of +/- 2% complete with NIST certificates.

**Temperature Sensor:** RTD temperature sensor complete with NIST traceable certificates.

#### **Temperature Uniformity Mapping**

To record operating temperature/RH as measured at sensor, of +/- 1.5°C uniformity and +/- 4.0% R.H. at given points in the room recorded at 15 minute intervals, measured and recorded by a NIST certified utilizing eight (8) RTD temperature/RH Data Loggers located at a minimum of 12" above the floor, 12" below the ceiling.

#### **INSTALLATION INCLUDES**

- 1. Shop drawing and equipment submittal sheets for Approval provided in hard copy and electronic format.

- Supply and Installation of prefabricated panels and all necessary penetrations.
   Supply and Installation of all refrigeration and mechanical systems.
   All materials, labor, and equipment to hoisting the condensing unit and mounted on equipment pad.
- 5. All Control wiring.
- 6. Power supply connections from ETC-1 power distribution panel to Control Panel, Humidifier, Dehumidifier, power outlets etc.
- 7. All necessary recessed reinforcing for wall mounted fixtures/cabinets supplied by others.
- 8. All necessary labour to start up and test the system
- 9. All necessary steam piping to interconnect the suspended humidifier to unit cooler.
- 10. 3/4" Condensate drain stubbed to outside chamber
- 11. On-Site Pre-Construction Meeting.
- 12. 3 (Three) 12 Hour (8 point) Temperature and humidity mapping test for each system at the high/low and mid-point temperature/humidity ranges.
- 13. One-day informal training seminar on operation and maintenance.
- 14. Full Commissioning documentation as outlined in including but not limited to Start up Report, As-Built Drawings, spare parts list, O & M Manuals, and Temperature and Humidity Mapping results.
- 15. One-year Warranty on all material and workmanship.

#### **INSTALLATION DOES NOT INCLUDE**

- ~70 Amp. 120/208/3/60 4 Wire Power Supply to control panel. Subject to final approval of drawings.
- ~30 AMP 208/3/60 Power supply to the Outdoor Condensing Unit.
- Condensing unit support pad 55" x 40" x 4" high.
- Condensate pump and piping to suitable drain.
- 1/4" DI or RO Water supply connection complete with shut off. (3 GPH)
- Fire protection system and signage.
- Roof/Block Wall penetrations and/or 4" Pitch pocket.
- Shelving or Casework.
- Alteration/Demolition of existing area, plumbing, lab furnishings and lab equipment.
- Any bonding or building permits.

# **5.2 QUALIFICATIONS**

Our chambers are designed for precise control of all temperature and humidity applications, ideal for environmental simulation and controlled temperature storage.

CANTROL has many years' experience in designing manufacturing, installing, and commissioning these specialized chambers throughout North America, for many universities including,

University of Connecticut
University of North Carolina – Greensboro
Appalachian State University
Southern Methodist University
University of Oregon
University of Arkansas
University of Buffalo
Gonzaga University
University of Nebraska – Life Sciences
\*For contact info please see "References Section"

# **5.3 SERVICE REQUIREMENT**

CANTROL we provide a dedicated project manager and installation team for the duration of the installation and customer training. Customer service will be available post installation.

#### **5.4 DELIVERY**

ALL PRICING IS VALID FOR 180 DAYS FROM DATE OF QUOTATION, WITH PROJECT START DATE WITHIN 270 DAYS CANTROL we provide delivery of the entire system within 6 months of purchase order.

#### **SCHEDULE**

- 2 weeks for shop drawings after receipt of purchase order
- 18 weeks for material lead time after receipt of customer approved drawings
- 3-4 weeks for installation
- 1 week for commissioning

#### PRICING:

Price: For the Supply and Installation as outlined above: ETC-01: \$ 129,400.00 USD (Use-Tax Status: Exempt)

# **Payment Terms**

- 30% Deposit with Order.
- 30% Upon delivery of material.
  30% Upon completion of installation
  10% Upon final approval

Trusting the above meets with approval, we look forward to working with you on this project.

**Cantrol International Inc.** 



# **REQUEST FOR PROPOSAL**

RFP No.: RFP763-21-148974-BS Title: Controlled Environmental Chamber

Proposal Submittal Deadline: August 24, 2021, 2:00 pm, local time

Prepared by:

Barry Sullenberger Strategic Sourcing Coordinator

University of North Texas System Procurement Services
Business Service Center
1112 Dallas Drive, Suite 4000
Denton, Texas 76205
Date Issued: July 27, 2021

# **REQUEST FOR PROPOSAL**

# **Table of Contents**

SECTION 1: INTRODUCTION	2
SECTION 2: NOTICE TO PROPOSER	
SECTION 3: SUBMITTAL OF PROPOSAL	
SECTION 4: GENERAL TERMS AND CONDITIONS	6
SECTION 5: SCOPE OF PROPOSAL	6
APPENDIX ONE	7
Section 1: Affirmations and Confirmations	7
Section 2: Execution of Offer	10
Section 3: Proposer's General Questionnaire	12
Section 4: Addenda Checklist	14
ATTACHMENT(S) (as separate files)	

Attachment A: UNT System Reference Page

Attachment B: Agreement (Sample)

Attachment C Historically Underutilized Business Subcontract Plan

#### **SECTION 1: INTRODUCTION**

1.1 UNTS System Description

The University of North Texas System (UNTS) is a University system that is composed of the University of North Texas in Denton (UNT), the University of North Texas Health Science Center (UNTHSC) in Fort Worth and the University of North Texas at Dallas (UNTD). The UNT System Administration is based in downtown Dallas. The three independent universities of the UNT System have combined enrollment of just over 45,000 students across five major teaching locations, including each main campus as well as Frisco and downtown Dallas. Proposals submitted in response to this RFP shall be for goods and/or services provided to UNTS, UNT, UNTHSC and/or UNTD, as agreed to in writing by the parties.

1.2 Background

University of North Texas-Health Science Center, Center Of Anatomical Science is seeking proposals for a Controlled Environmental Chamber (NIGP Commodity Code 312-48).

The NSF funded project will assess thermoregulatory responses in human subjects during experimental exposure to climatic conditions mimicking those of tropic rainforests (hot-humid), xeric deserts (hot-dry), and polar tundra (cold-dry). A walk-in environmental chamber will be used to control the environmental exposures.

1.3 Group Purchase Authority

Texas law authorizes institutions of higher education to use the group purchasing procurement method (ref. Sections 51.9335, 73.115, and 74.008, Education Code). Additional Texas institutions of higher education may therefore elect to enter into a contract with the successful Proposer(s) under this Section. Should another institution exercise this option the resulting contract and obligations shall be between that institution and the vendor with UNTS incurring no obligation as a result thereof.

#### **SECTION 2: NOTICE TO PROPOSER**

#### 2.1 Submittal Deadline

UNTS will accept proposals submitted in response to this RFP until 2:00 p.m., local time, on August 24, 2021 (the "Submittal Deadline").

# 2.2 UNTS Contact Person

Proposers will direct all questions or concerns regarding this RFP to the following UNTS contact ("UNTS Contact"):

# Barry Sullenberger Strategic Sourcing Coordinator

The University specifically instructs all interested parties to restrict all contact and questions regarding this RFP to written communications forwarded to the UNTS Contact via the following email: barry.sullenberger@untsystem.edu

The UNTS Contact must receive all questions or concerns no later than 2:00 PM local time on August 10, 2021. It is UNTS' intent to respond to all appropriate questions and concerns; however, UNTS reserves the right to decline to respond to any question or concern.

Answers to questions will be posted via addendum to this RFP on UNTS Business Service Center Bid Opportunities web page located at: <a href="https://www.untsystem.edu/bid-opportunities">https://www.untsystem.edu/bid-opportunities</a>