

**STATE OF LOUISIANA  
SOWELA TECHNICAL COMMUNITY COLLEGE  
AGENCY REQUEST FOR QUOTATION**

PURCHASING AGENT: Susan Tucek

EMAIL: susan.tucek@sowela.edu

**BID NUMBER**

**82324**

<b>BID OPENING DATE/TIME:</b> 05/23/24 10:00 AM		<b>DELIVERY TERMS/FOB POINT</b>  FOB DESTINATION			
<b>VENDOR NAME</b>		<b>DELIVER BID BEFORE OPENING DATE/TIME TO:</b> SOWELA TECHNICAL COMMUNITY COLLEGE SUSAN TUCEK 3820 SEN J B JOHNSTON AVENUE LAKE CHARLES, LA 70615			
<u>EMAIL ADDRESS:</u>		<b>THESE ITEMS ARE BEING REQUESTED FOR DELIVERY TO:</b> SOWELA TECHNICAL COMMUNITY COLLEGE 3810 SEN J B JOHNSTON AVENUE LAKE CHARLES, LA 70615			
<b>SIGNATURE:</b>					
<b>DATE:</b>					
LINE NO	COMMODITY/SERVICE DESCRIPTION	QUANTITY ORDERED	UNIT	UNIT PRICE	EXTENDED AMOUNT
1	HVAC DUCT CLEANING SERVICE ON SYCAMORE BLDG TOTAL AMOUNTS OF EACH DUCT SYSTEM COMPONENT TYPE TO BE SERVICED. <i>CLEANING OF COMPONENTS:</i> * 1550 LINEAR FT OF EXTERNALLY INSULATED METAL DUCT * 30 VAV BOXES MEDIUM SIZE * 150 LAY IN TYPE DIFFUSER * 20 DIFFUSER WITH INTERNAL DAMPER MECHANISM * 30 REHEAT COIL * 4 AIR HANDLER UNIT(S) (12-40 TON RANGE) * 1925 LINEAR FEET OF METAL ROUND AND OVAL SPIRAL DUCT <i>INSTALLATION OF ACCESS PLATES:</i> * 1925 LINEAR FEET OF METAL ROUND AND OVAL SPIRAL DUCT * 1550 LINEAR FT OF EXTERNALLY INSULATED METAL DUCT * 30 REHEAT COIL <i>APPLY BBJ SANITIZER:</i> * 20 DIFFUSER WITH INTERNAL DAMPER MECHANISM  <b>CONTINUED ON NEXT PAGE</b>	1	JOB		

LINE NO	COMMODITY/SERVICE DESCRIPTION	QUANTITY ORDERED	UNIT	UNIT PRICE	EXTENDED AMOUNT
2	<p>* 1925 LINEAR FT OF METAL ROUND AND OVAL SPIRAL DUCT  * 4 AIR HANDLER UNIT(S) (12-40 TON RANGE)  * 150 LAY IN TYPE DIFFUSER  * 1550 LINEAR FT OF EXTERNALLY INSULATED METAL DUCT  * 30 REHEAT COIL</p> <p>HVAC DUCT CLEANING SERVICE ON RTC BLDG. TOTAL AMOUNT OF EACH DUCT SYSTEM COMPONENT TYPE TO BE SERVICED.  <i>CLEANING OF COMPONENTS:</i>  * 3275 LINEAR FT OF EXTERNALLY INSULATED METAL DUCT  * 104 VAV BOXES MEDIUM SIZE  * 338 LAY IN TYPE DIFFUSER  * 104 REHEAT COIL  * 1 AIR HANDLER UNIT(S) (7.5-10 TON RANGE)  * 5 AIR HANDLER UNIT(S) (12-40 TON RANGE)  * 6 RETURN AIR FAN BLOWER HOUSING AND CAGE  * 2050 LINEAR FT OF METAL ROUND AND OVAL SPIRAL DUCT  <i>INSTALLATION OF ACCESS PLATES:</i>  * 2050 LINEAR FT OF METAL ROUND AND OVAL SPIRAL DUCT  * 3275 LINEAR FT OF EXTERNALLY INSULATED METAL DUCT  * 104 REHEAT COIL  <i>APPLY BBJ SANITIZER:</i>  * 2050 LINEAR FT OF METAL ROUND AND OVAL SPIRAL DUCT  * 6 RETURN AIR FAN BLOWER  * 5 AIR HANDLER UNIT(S) (12-40 TON RANGE)  * 338 LAY IN TYPE DIFFUSER  * 1 AIR HANDLER UNIT(S) (7.5-10 TON RANGE)  * 3275 LINEAR FT OF EXTERNALLY INSULATED METAL DUCT  * 104 REHEAT COIL</p>	1	JOB		
3	<p>HVAC DUCT CLEANING SERVICE ON HC DREW NURSING BLDG TOTAL AMOUNTS OF EACH DUCT SYSTEM COMPONENT TYPE TO  <b><i>CONTINUED ON NEXT PAGE</i></b></p>	1	JOB		

LINE NO	COMMODITY/SERVICE DESCRIPTION	QUANTITY ORDERED	UNIT	UNIT PRICE	EXTENDED AMOUNT
	<p>BE SERVICED.</p> <p><i>CLEANING OF COMPONENTS:</i></p> <ul style="list-style-type: none"> <li>* 1900 LINEAR FT OF EXTERNALLY INSULATED METAL DUCT</li> <li>* 43 VAV BOXES MEDIUM SIZE</li> <li>* 22 DIFFUSER LINEAR SLOT TYPE</li> <li>* 228 LAY IN TYPE DIFFUSER</li> <li>* 740 LINEAR FT OF FLEXIBLE DUCTWORK</li> <li>* 43 REHEAT COIL</li> <li>* 2 AIR HANDLER UNIT(S) (12-40 TON RANGE)</li> <li>* 1 FAN COIL UNIT LARGE</li> <li>* 550 LINEAR FT OF METAL ROUND AND OVAL SPIRAL DUCT</li> </ul> <p><i>INSTALLATION OF ACCESS PLATES:</i></p> <ul style="list-style-type: none"> <li>* 550 LINEAR FT OF METAL ROUND AND OVAL SPIRAL DUCT</li> <li>* 1900 LINEAR FT OF EXTERNALLY INSULATED METAL DUCT</li> <li>* 43 REHEAT COIL</li> </ul> <p><i>APPLY BBJ SANITIZER:</i></p> <ul style="list-style-type: none"> <li>* 550 LINEAR FT OF METAL ROUND AND OVAL SPIRAL DUCT</li> <li>* 740 LINEAR FT OF FLEXIBLE DUCTWORK</li> <li>* 1 FAN COIL UNIT LARGE</li> <li>* 2 AIR HANDLER UNIT(S) (12-40 TON RANGE)</li> <li>* 22 DIFFUSER LINEAR SLOT TYPE</li> <li>* 228 LAY IN TYPE DIFFUSER</li> <li>* 1900 LINEAR FT OF EXTERNALLY INSULATED METAL DUCT</li> <li>* 43 REHEAT COIL</li> </ul> <p style="text-align: center;">SEE ATTACHED SPECS FOR EACH BUILDING LISTED</p>				





## INSTRUCTIONS TO BIDDERS

1. READ THE ENTIRE BID, INCLUDING ALL TERMS AND CONDITIONS AND SPECIFICATIONS.
2. ALL BID PRICES MUST BE TYPED OR WRITTEN IN INK. ANY CORRECTIONS, ERASURES, OR OTHER FORMS OF ALTERATION TO UNIT PRICES SHOULD BE INITIALIZED BY THE BIDDER.
3. THIS BID IS TO BE MANUALLY SIGNED IN INK.
4. BID PRICES SHALL INCLUDE DELIVERY OF EACH ITEM(S) F.O.B. DESTINATION OR AS OTHERWISE PROVIDED. BIDS CONTAINING "PAYMENT IN ADVANCE" OR "C.O.D." REQUIREMENTS MAY BE REJECTED. ***PAYMENT IS TO BE MADE WITHIN 30 DAYS AFTER RECEIPT OF PROPERLY EXECUTED INVOICE OR DELIVERY, WHICHEVER IS LATER.***
5. TO ASSURE CONSIDERATION OF YOUR BID, **ALL BIDS AND ADDENDA SHOULD BE RETURNED BY EMAIL (PREFERRED) OR IN AN ENVELOPE OR PACKAGE CLEARLY MARKED WITH THE BID OPENING DATE AND THE BID NUMBER.**
6. BIDS SUBMITTED ARE SUBJECT TO PROVISIONS OF THE LAWS OF THE STATE OF LOUISIANA INCLUDING BUT NOT LIMITED TO L.R.S. 39:1551-1736; PURCHASING RULES AND REGULATIONS; EXECUTIVE ORDERS; STANDARD TERMS AND CONDITIONS; SPECIAL CONDITIONS; AND SPECIFICATIONS LISTED IN THIS SOLICITATION.
7. IMPORTANT: BY SIGNING THE BID, THE BIDDER CERTIFIES COMPLIANCE WITH ALL INSTRUCTIONS TO BIDDERS, TERMS, CONDITIONS AND SPECIFICATIONS, AND FURTHER CERTIFIES THAT THIS BID IS MADE WITHOUT COLLUSION OR FRAUD. THIS BID IS TO BE MANUALLY SIGNED IN INK BY A PERSON AUTHORIZED TO BIND THE VENDOR. ALL BID INFORMATION SHALL BE MADE WITH INK OR TYPEWRITTEN.
8. ADDRESS **ALL INQUIRIES AND CORRESPONDENCE** TO THE BUYER AT THE **EMAIL ADDRESS** SHOWN ON THE BID.
9. QUANTITIES MAY BE INCREASED OR DECREASED AFTER BID OPENING.
10. BID FORMS.

ALL WRITTEN BIDS, UNLESS OTHERWISE PROVIDED FOR, MUST BE SUBMITTED ON, AND IN ACCORDANCE WITH, FORMS PROVIDED, PROPERLY SIGNED. BIDS SUBMITTED IN THE FOLLOWING MANNER WILL NOT BE ACCEPTED:

- A. BID CONTAINS NO SIGNATURE INDICATING INTENT TO BE BOUND;
- B. BID FILLED OUT IN PENCIL
- C. BID NOT SUBMITTED ON SOWELA TECHNICAL COMMUNITY COLLEGE'S STANDARD FORMS.

BIDS MUST BE RECEIVED AT THE ADDRESS SPECIFIED IN THE SOLICITATION PRIOR TO BID OPENING TIME IN ORDER TO BE CONSIDERED. EMAIL AND TELEPHONE ALTERATIONS TO BIDS RECEIVED BEFORE BID OPENING TIME WILL BE CONSIDERED PROVIDED FORMAL BID AND WRITTEN ALTERATION HAVE BEEN RECEIVED AND TIME-STAMPED BEFORE BID OPENING TIME. ENTIRE BID SHOULD BE RETURNED, EXCEPT ITEM PAGES NOT BID.



11. STANDARDS OF QUALITY  
ANY PRODUCT OR SERVICE BID SHALL CONFORM TO ALL APPLICABLE FEDERAL AND STATE LAWS AND REGULATIONS AND THE SPECIFICATIONS CONTAINED IN THE SOLICITATION. UNLESS OTHERWISE SPECIFIED IN THE SOLICITATION, ANY MANUFACTURER'S NAME, TRADE NAME, BRAND NAME, OR CATALOG NUMBER USED IN THE SPECIFICATION IS FOR THE PURPOSE OF DESCRIBING THE STANDARD OF QUALITY, PERFORMANCE, AND CHARACTERISTICS DESIRED AND IS NOT INTENDED TO LIMIT OR RESTRICT COMPETITION. BIDDER MUST SPECIFY THE BRAND AND MODEL NUMBER OF THE PRODUCT OFFERED IN HIS BID. BIDS NOT SPECIFYING BRAND AND MODEL NUMBER SHALL BE CONSIDERED AS OFFERING THE EXACT PRODUCTS SPECIFIED IN THE SOLICITATION.
12. DESCRIPTIVE INFORMATION.  
BIDDERS PROPOSING AN EQUIVALENT BRAND OR MODEL SHOULD SUBMIT WITH THE BID INFORMATION (SUCH AS ILLUSTRATIONS, DESCRIPTIVE LITERATURE, TECHNICAL DATA) SUFFICIENT FOR SOWELA TECHNICAL COMMUNITY COLLEGE TO EVALUATE QUALITY, SUITABILITY, AND COMPLIANCE WITH THE SPECIFICATIONS IN THE SOLICITATION. FAILURE TO SUBMIT DESCRIPTIVE INFORMATION MAY CAUSE BID TO BE REJECTED. ANY CHANGE MADE TO A MANUFACTURER'S PUBLISHED SPECIFICATIONS SUBMITTED FOR A PRODUCT SHALL BE VERIFIABLE BY THE MANUFACTURER. IF ITEM(S) BID DOES NOT FULLY COMPLY WITH SPECIFICATIONS (INCLUDING BRAND AND/OR PRODUCT NUMBER), BIDDER MUST STATE IN WHAT RESPECT ITEM(S) DEVIATE. FAILURE TO NOTE EXCEPTIONS ON THE BID FORM WILL NOT RELIEVE THE SUCCESSFUL BIDDER(S) FROM SUPPLYING THE ACTUAL PRODUCTS REQUESTED.
13. BID OPENING.  
BIDDERS MAY ATTEND THE BID OPENING, BUT NO INFORMATION OR OPINIONS CONCERNING THE ULTIMATE CONTRACT AWARD WILL BE GIVEN AT THE BID OPENING OR DURING THE EVALUATION PROCESS. BIDS MAY BE EXAMINED WITHIN 72 HOURS AFTER BID OPENING. INFORMATION PERTAINING TO COMPLETED FILES MAY BE SECURED BY VISITING SOWELA TECHNICAL COMMUNITY COLLEGE DURING NORMAL WORKING HOURS. WRITTEN BID TABULATIONS WILL NOT BE FURNISHED.
14. AWARDS.  
SOWELA TECHNICAL COMMUNITY COLLEGE RESERVES THE RIGHT TO AWARD ITEMS SEPARATELY, GROUPED OR ON AN ALL-OR-NONE BASIS AND TO REJECT ANY OR ALL BIDS AND WAIVE ANY INFORMALITIES.
15. PRICES.  
UNLESS OTHERWISE SPECIFIED BY SOWELA TECHNICAL COMMUNITY COLLEGE IN THE SOLICITATION, BID PRICES MUST BE COMPLETE, INCLUDING TRANSPORTATION PREPAID BY BIDDER TO DESTINATION AND FIRM FOR ACCEPTANCE FOR A MINIMUM OF 30 DAYS. IF ACCEPTED, PRICES MUST BE FIRM FOR A PERIOD OF SIXTY (60) DAYS FROM DATE OF BID OPENING. BIDS OTHER THAN F.O.B. DESTINATION MAY BE REJECTED. PRICES SHOULD BE QUOTED IN THE UNIT (EACH, BOX, CASE, ETC.) AS SPECIFIED IN THE SOLICITATION.
16. DELIVERIES.  
BIDS MAY BE REJECTED IF THE DELIVERY TIME INDICATED IS LONGER THAN THAT SPECIFIED IN THE SOLICITATION.
17. TAXES.  
VENDOR IS RESPONSIBLE FOR INCLUDING ALL APPLICABLE TAXES IN THE BID PRICE. STATE AGENCIES ARE EXEMPT FROM ALL STATE AND LOCAL SALES AND USE TAXES.
18. NEW PRODUCTS.  
UNLESS SPECIFICALLY CALLED FOR IN THE SOLICITATION, **ALL PRODUCTS FOR PURCHASE MUST BE NEW, NEVER PREVIOUSLY USED, AND THE CURRENT MODEL AND/OR PACKAGING. NO REMANUFACTURED, DEMONSTRATOR, USED OR IRREGULAR PRODUCT WILL BE CONSIDERED FOR PURCHASE** UNLESS OTHERWISE SPECIFIED IN THE SOLICITATION. THE MANUFACTURER'S STANDARD WARRANTY WILL APPLY UNLESS OTHERWISE SPECIFIED IN THE SOLICITATION.
19. CONTRACT CANCELLATION.  
SOWELA TECHNICAL COMMUNITY COLLEGE HAS THE RIGHT TO CANCEL ANY CONTRACT, IN ACCORDANCE WITH PURCHASING RULES AND REGULATIONS, FOR CAUSE, INCLUDING BUT NOT LIMITED TO, THE FOLLOWING: (1) FAILURE TO DELIVER WITHIN THE TIME SPECIFIED IN THE CONTRACT; (2) FAILURE OF THE PRODUCT OR SERVICE TO MEET SPECIFICATIONS, CONFORM TO SAMPLE QUALITY OR TO BE DELIVERED IN GOOD CONDITION; (3) MISREPRESENTATION BY THE CONTRACTOR; (4) FRAUD, COLLUSION, CONSPIRACY OR OTHER UNLAWFUL MEANS OF OBTAINING ANY CONTRACT WITH THE STATE; (5) CONFLICT OF CONTRACT PROVISIONS WITH CONSTITUTIONAL OR STATUTORY PROVISIONS OF STATE OR FEDERAL LAW; (6) ANY OTHER BREACH OF CONTRACT.

20. **DEFAULT OF CONTRACTOR.**  
FAILURE TO DELIVER WITHIN THE TIME SPECIFIED IN THE BID WILL CONSTITUTE A DEFAULT AND MAY CAUSE CANCELLATIONS OF THE CONTRACT. WHERE SOWELA TECHNICAL COMMUNITY COLLEGE HAS DETERMINED THE CONTRACTOR TO BE IN DEFAULT, SOWELA TECHNICAL COMMUNITY COLLEGE RESERVES THE RIGHT TO PURCHASE ANY OR ALL PRODUCTS OR SERVICES COVERED BY THE CONTRACT ON THE OPEN MARKET AND TO CHARGE THE CONTRACTOR WITH COST IN EXCESS OF THE CONTRACT PRICE. UNTIL SUCH ASSESSED CHARGES HAVE BEEN PAID, NO SUBSEQUENT BID FROM THE DEFAULTING CONTRACTOR WILL BE CONSIDERED.
21. **ORDER OF PRIORITY.**  
IN THE EVENT THERE IS A CONFLICT BETWEEN THE INSTRUCTIONS TO BIDDERS OR STANDARD CONDITIONS AND THE SPECIAL CONDITIONS, THE SPECIAL CONDITIONS SHALL GOVERN.
22. **APPLICABLE LAW.**  
ALL CONTRACTS SHALL BE CONSTRUED IN ACCORDANCE WITH AND GOVERNED BY THE LAWS OF THE STATE OF LOUISIANA.
23. **EQUAL OPPORTUNITY.**  
BY SUBMITTING AND SIGNING THE BID, BIDDER AGREES THAT HE WILL NOT DISCRIMINATE IN THE RENDERING OF SERVICES TO AND/OR EMPLOYMENT OF INDIVIDUALS BECAUSE OF RACE, COLOR, RELIGION, SEX, AGE, NATIONAL ORIGIN, HANDICAP, DISABILITY, VETERAN STATUS, OR ANY OTHER NON-MERIT FACTOR.
24. **SPECIAL ACCOMMODATION.**  
ANY "QUALIFIED INDIVIDUAL WITH A DISABILITY" AS DEFINED BY THE AMERICANS WITH DISABILITIES ACT WHO HAS SUBMITTED A BID AND DESIRES TO ATTEND THE BID OPENING, MUST NOTIFY THIS OFFICE IN WRITING NO LATER THAN SEVEN DAYS PRIOR TO THE BID OPENING DATE OF THE NEED FOR SPECIAL ACCOMMODATIONS. IF THE REQUEST CANNOT BE REASONABLY PROVIDED, THE INDIVIDUAL WILL BE INFORMED PRIOR TO THE BID OPENING.
25. **INDEMNITY.**  
CONTRACTOR AGREES, UPON RECEIPT OF WRITTEN NOTICE OF A CLAIM OR ACTION, TO DEFEND THE CLAIM OR ACTION, OR TAKE OTHER APPROPRIATE MEASURE, TO INDEMNIFY, AND HOLD HARMLESS, SOWELA TECHNICAL COMMUNITY COLLEGE, ITS OFFICERS, ITS AGENTS AND ITS EMPLOYEES FROM AND AGAINST ALL CLAIMS AND ACTIONS FOR BODILY INJURY, DEATH OR PROPERTY DAMAGES CAUSED BY THE FAULT OF THE CONTRACTOR, ITS OFFICERS, ITS AGENTS, OR ITS EMPLOYEES. CONTRACTOR IS OBLIGATED TO INDEMNIFY ONLY TO THE EXTENT OF THE FAULT OF THE CONTRACTOR, ITS OFFICERS, ITS AGENTS, OR ITS EMPLOYEES. HOWEVER, THE CONTRACTOR SHALL HAVE NO OBLIGATION AS SET FORTH ABOVE WITH RESPECT TO ANY CLAIM OR ACTION FROM BODILY INJURY, DEATH OR PROPERTY DAMAGES ARISING OUT OF THE FAULT OF SOWELA TECHNICAL COMMUNITY COLLEGE, ITS OFFICERS, ITS AGENTS OR ITS EMPLOYEES.
26. **SIGNATURE AUTHORITY.**  
IN ACCORDANCE WITH L.R.S. 39:1594 (ACT 121), THE PERSON SIGNING THE BID MUST BE: A CURRENT CORPORATE OFFICER, PARTERSHIP MEMBER OR OTHER INDIVIDUAL SPECIFICALLY AUTHORIZED TO SUBMIT A BID AS REFLECTED IN THE APPROPRIATE RECORDS ON FILE WITH THE SECRETARY OF STATE; OR AN INDIVIDUAL AUTHORIZED TO BIND THE VENDOR AS REFLECTED BY A CORPORATE RESOLUTION, CERTIFICATE OR AFFIDAVIT; OR OTHER DOCUMENTS INDICATING AUTHORITY WHICH ARE ACCEPTABLE TO THE PUBLIC ENTITY.
27. **EEOC COMPLIANCE**  
BY SUBMITTING AND SIGNING THIS BID, BIDDER CERTIFIES THAT HE AGREES TO ADHERE TO THE MANDATES DICTATED BY TITLE VI AND VII OF THE CIVIL RIGHTS ACT OF 1964, AS AMENDED; THE VIETNAM ERA VETERANS READJUSTMENT ASSISTANCE ACT OF 1974; SECTION 503 OF THE REHABILITATION ACT OF 1973; SECTION 202 OF EXECUTIVE ORDER 11246. AS AMENDED; AND THE AMERICANS WITH DIABILITIES ACT OF 1990. BIDDER AGREES TO KEEP INFORMED OF AND COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS, ORDINANCES AND REGULATIONS, WHICH AFFECT HIS EMPLOYEES OR PROSPECTIVE EMPLOYEES.
28. **CANCELLATION.**  
SOWELA TECHNICAL COMMUNITY COLLEGE RESERVES THE RIGHT TO CANCEL THIS CONTRACT WITH THIRTY (30) DAYS WRITTEN NOTICE.

Sowela Technical Community College does not discriminate on the basis of race, color, national origin, gender, disability, or age in its programs or activities. The following person has been designated to handle inquiries regarding the non-discrimination policies:

Title: Compliance Office  
 Address: 3820 Sen J Bennett Johnston Ave, Lake Charles, LA 70615  
 Telephone No: 337-421-6565 or 800-256-0483  
 Email: [complianceofficer@sowela.edu](mailto:complianceofficer@sowela.edu)



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## **Duct System Component and Task Specifications for Sycamore Bldg**

### **Air Handler Unit(s) (12-40 Ton Range)**

This classification indicates that the AHU (air handling unit) is part of a split system. The 12-40 ton range is utilized to identify the physical size of the equipment to be cleaned rather than the capacity of cooling or heating. Most systems in this size range allow entry into the unit by our workers. The EPA and NADCA standards require that all internal components be cleaned. Air handling units that fall into this range are designed for commercial applications. These units are generally located within the facility's mechanical room (vertical application) or hung above the ceiling space (horizontal application). Air handlers have been identified by the EPA as a microbiological growth site. Strict protocol is followed when cleaning this component to prevent cross contamination.

#### **Cleaning Of Components**

System is shut down and locked out during the cleaning process. All internal components including the evaporator coil, drain pan, blower wheel and housing, heating components and fiberglass liner are HEPA vacuumed with contact vacuums rated at 99.97% arrestance to .3 microns. Hydro-remediation is employed for evaporator coils, blower components and drain pans utilizing an alkali foaming coil cleaner. EPA recommendations are followed for unit cleaning. A minimum of three complete applications of foaming coil cleaner is used to loosen impacted particulate. Note: Not all evaporator coils can be completely cleaned. However, Vendor uses best-effort practices.

#### **Apply BBJ Sanitizer**

Metal components and non-porous surfaces are treated with this sanitizer in order to kill microbiological growth. BBJ Biocide is registered by the EPA (#67212-1) for the sanitization and deodorization of ventilation systems and air conditioning ductwork. This product is primarily used for odor control, as this component is a known microbiological growth site.

### **Lay In Type Diffuser**

A lay-in diffuser is the register or grille-like facing which is designed specifically to be suspended by drop-ceiling grid work and then attached to the branch run or main duct through a flexible duct. These diffusers have the boot attachment for the ductwork connection and the register facing all as one unit requiring unique cleaning. All diffusers, grilles and registers are first-line indicators of either dirty mechanical systems or free-floating debris in the room air. Many employee complaints originate from this condition.

#### **Cleaning Of Components**

The diffuser grille is removed from the flexible attachment. The open flexible ductwork is prepared to control cross contamination. The cleaning is conducted with high-efficiency negative air machines that filter 99.97% of particles down to .3 microns to prevent cross-contamination and capture particulate. Diffusers are transported to central cleaning stations. When design allows, the lay-in diffuser will then have the front perforated facing removed to allow contact HEPA vacuuming of the molded fiberglass boot. A mild mixture of alkali cleaning solution is applied to the diffuser's metallic components followed by hand brushing and rinsing thoroughly with water.

#### **Apply BBJ Sanitizer**

Metal components and non-porous surfaces are treated with this sanitizer in order to kill microbiological growth. BBJ Biocide is registered by the EPA (#67212-1) for the sanitization and deodorization of ventilation systems and air conditioning ductwork.

### **Diffuser With Internal Damper Mechanism**

A diffuser is the register or grille facing attached to the branch or main run through a connector called the duct system boot or a short duct run. Directly behind the face of the diffuser is a secondary damper that is used to modulate airflow. These dampers require special attention to remove microbiological growth and prevent cross contamination into the work environment. All diffusers, grilles and registers are first-line indicators of either dirty mechanical systems or free-floating debris in the room air. Many employee complaints originate from this condition.

#### **Cleaning Of Components**

The diffuser grille and secondary damper mechanism are removed from the boot attachment. The exposed boot is contact HEPA vacuumed, then prepared to control cross contamination. The cleaning is conducted with high-efficiency negative air machines that filter 99.97% of particles down to .3 microns to prevent cross-contamination

and capture particulate. Diffusers are transported to central cleaning stations. A mild mixture of alkali cleaning solution is applied to diffusers followed by hand brushing and rinsing thoroughly with water.

#### **Apply BBJ Sanitizer**

Metal components and non-porous surfaces are treated with this sanitizer in order to kill microbiological growth. BBJ Biocide is registered by the EPA (#67212-1) for the sanitization and deodorization of ventilation systems and air conditioning ductwork.

#### **Metal Round And Oval Spiral Duct**

This type of duct is constructed of galvanized sheet metal with a continuous spiral seam over the entire length of duct. The duct has no inner or outer insulation. This duct type requires special attention with regard to access and closure.

#### **Cleaning Of Components**

Ducts are accessed through existing service openings or fabricated openings created by Vendor. These openings allow maximum closure strength and preserve structural integrity of the duct system. HEPA-filtered contact vacuuming is combined with aggressive cleaning methods using air whips, air sweeps, pneumatic driven brushes, cable driven brushes and robotics. The cleaning is conducted with high-efficiency negative air machines that filter 99.97% of particles down to .3 microns to prevent cross-contamination and capture particulate. The remediation process begins with mechanically dislodging debris from the duct walls. Air velocity is maintained within the duct to transport particles to the collection device. Various pneumatic sweeping tools assist in particle movement. This cleaning method is repeated section by section until national standards have been met.

#### **Installation Of Access Plates**

Closures are made using metal galvanized insulated or non-insulated plates. The plates are fabricated of a gauge (thickness) metal, which is equal to or greater than the gauge it is applied to. Plates are sized 1" larger than the access opening and secured with self-tapping screws. Foil metallic tape (not duct tape) is then applied over the seam. Mastic is applied to the tape, plate and duct, further strengthening the closure. These closures are designed to be permanent. This procedure allows the system to be re-energized at the end of the work cycle without air leakage occurring. This closure method requires additional labor and materials. Therefore, bid differences may be reflected here.

#### **Apply BBJ Sanitizer**

Metal components and non-porous surfaces are treated with this sanitizer in order to kill microbiological growth. BBJ Biocide is registered by the EPA (#67212-1) for the sanitization and deodorization of ventilation systems and air conditioning ductwork.

#### **Externally Insulated Metal Duct**

This type of duct is defined by its utilization of a fiberglass duct insulation that is installed on the outside of the duct system. The external insulation must be penetrated to allow access to the metal duct. The ducts should be accessed and closed using industry-accepted standards while adhering to or exceeding local codes. The integrity of the outer insulation's vapor barrier is critical in assuring that moisture will not condense on the cold duct's outer surface. The outer insulation is also critical in retaining energy during the heating season.

#### **Cleaning Of Components**

Ducts are accessed through existing service openings or fabricated openings created by Vendor. These openings allow maximum closure strength and preserve structural integrity of the duct system. HEPA-filtered contact vacuuming is combined with aggressive cleaning methods using air whips, air sweeps, pneumatic driven brushes, cable driven brushes and robotics. The cleaning is conducted with high-efficiency negative air machines that filter 99.97% of particles down to .3 microns to prevent cross-contamination and capture particulate. The remediation process begins with mechanically dislodging debris from the duct walls. Air velocity is maintained within the duct to transport particles to the collection device. Various pneumatic sweeping tools assist in particle movement. This cleaning method is repeated section by section until national standards have been met.

#### **Installation Of Access Plates**

Closures are made using metal galvanized insulated or non-insulated plates. The plates are fabricated of a gauge (thickness) metal, which is equal to or greater than the gauge it is applied to. Plates are sized 1" larger than the access opening and secured with self-tapping screws. Foil metallic tape (not duct tape) is then applied over the seam. Mastic is applied to the tape, plate and duct, further strengthening the closure. These closures are designed to be permanent. This procedure allows the system to be re-energized at the end of the work cycle without air leakage



occurring. This closure method requires additional labor and materials. Therefore, bid differences may be reflected here.

#### **Apply BBJ Sanitizer**

Metal components and non-porous surfaces are treated with this sanitizer in order to kill microbiological growth. BBJ Biocide is registered by the EPA (#67212-1) for the sanitization and deodorization of ventilation systems and air conditioning ductwork.

#### **Reheat Coil**

Reheat coils are located at strategic points within the duct system. They are used for heating or dehumidification purposes. They are designed to serve a specific zone or area of the facility.

#### **Cleaning Of Components**

Both sides of the reheat coil face are accessed. Fiberglass liner and coil are HEPA vacuumed with contact vacuums rated at 99.97% arrestance to .3 microns. Hydro-remediation is employed for coils and drain pans utilizing an alkali foaming coil cleaner. EPA recommendations are followed for unit cleaning. A minimum of three complete applications of foaming coil cleaner is used to loosen impacted particulate. Note: Not all evaporator coils can be completely cleaned. However, Vendor uses best-effort practices.

#### **Installation Of Access Plates**

Closures are made using metal galvanized insulated or non-insulated plates. The plates are fabricated of a gauge (thickness) metal, which is equal to or greater than the gauge it is applied to. Plates are sized 1" larger than the access opening and secured with self-tapping screws. Foil metallic tape (not duct tape) is then applied over the seam. Mastic is applied to the tape, plate and duct, further strengthening the closure. These closures are designed to be permanent. This procedure allows the system to be re-energized at the end of the work cycle without air leakage occurring. This closure method requires additional labor and materials. Therefore, bid differences may be reflected here.

#### **Apply BBJ Sanitizer**

Metal components and non-porous surfaces are treated with this sanitizer in order to kill microbiological growth. BBJ Biocide is registered by the EPA (#67212-1) for the sanitization and deodorization of ventilation systems and air conditioning ductwork.

#### **VAV Boxes Medium Size**

Medium sized Variable Air Volume (VAV) boxes are located above the ceiling space and provide a throttling effect that regulates airflow to specific rooms and spaces. Dampers and automated devices are located within the box and receive control orders through a sensing device such as a thermostat. Internal insulation and components require special attention as microbiological contamination regularly develops within these components. Since VAV boxes are welded construction and lack planned access points, disassembly of internal components is required for access. A large box can require several hours for proper remediation.

#### **Cleaning Of Components**

Internal components including the dampers, actuators and fiberglass liner are HEPA vacuumed with contact vacuums rated at 99.97% arrestance to .3 microns. Components may be removed from the box depending on the manufacturer and accessibility.

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Safety - Vendor is trained in lock-out/tag-out, MSDS, hazardous communications, safety, respirators, ladders, and other job-related issues. Vendor safety program manual is available to you upon request. Medical logs detailing each crew person's health and respiratory physical exam history is also available. We recommend pre-informing all building occupants when remediation will occur. Odor problems within a facility cannot always be eliminated. However, they are generally reduced when the HVAC unit or duct system is the cause. Security systems and/or protocols may be altered while performing our service. When alternative systems are needed due to these criteria, it will be the owners, owner's representative or contracting agent's responsibility to coordinate.

Indemnity - SOWELA agrees that CONTRACTOR is not a generator of contamination, pollutants, toxins and hazardous substances. The SOWELA also agrees that there is no warranty or guarantee by CONTRACTOR either expressed or implied that the air conditioning system(s), air, water (potable, ground/surface), soil, building, interior furnishings (including plants) and process equipment, is free from all toxins, contaminants (including biological growth), or hazardous materials and substances that have been determined by proper authorities are detrimental to the safety or health and welfare of human and animal populations and the environment

SOWELA Responsibility - SOWELA shall provide access to building interior & HVAC equipment during normal working hours, or hours as agreed by the SOWELA.

Change Orders - Substantial deviations from the original, agreed-upon scope of work, time frame, price or method of payment, or other substantive provision of the contract, be documented and approved in a written change order that details the deviation before the work is performed.

Confidentiality - Vendor agrees to retain all non-public information obtained from SOWELA as confidential and agrees not to release or discuss any of such information unless we have received prior consent of SOWELA or is otherwise forced, compelled, or required to disclose this information by operation of law or applicable government authority.



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## **Duct System Component and Task Specifications for HC Drew Nursing Bldg**

### **Air Handler Unit(s) (12-40 Ton Range)**

This classification indicates that the AHU (air handling unit) is part of a split system. The 12-40 ton range is utilized to identify the physical size of the equipment to be cleaned rather than the capacity of cooling or heating. Most systems in this size range allow entry into the unit by our workers. The EPA and NADCA standards require that all internal components be cleaned. Air handling units that fall into this range are designed for commercial applications. These units are generally located within the facility's mechanical room (vertical application) or hung above the ceiling space (horizontal application). Air handlers have been identified by the EPA as a microbiological growth site. Strict protocol is followed when cleaning this component to prevent cross contamination.

#### **Cleaning Of Components**

System is shut down and locked out during the cleaning process. All internal components including the evaporator coil, drain pan, blower wheel and housing, heating components and fiberglass liner are HEPA vacuumed with contact vacuums rated at 99.97% arrestance to .3 microns. Hydro-remediation is employed for evaporator coils, blower components and drain pans utilizing an alkali foaming coil cleaner. EPA recommendations are followed for unit cleaning. A minimum of three complete applications of foaming coil cleaner is used to loosen impacted particulate. Note: Not all evaporator coils can be completely cleaned. However, VENDOR uses best-effort practices.

#### **Apply BBJ Sanitizer**

Metal components and non-porous surfaces are treated with this sanitizer in order to kill microbiological growth. BBJ Biocide is registered by the EPA (#67212-1) for the sanitization and deodorization of ventilation systems and air conditioning ductwork. This product is primarily used for odor control, as this component is a known microbiological growth site.

### **Lay In Type Diffuser**

A lay-in diffuser is the register or grille-like facing which is designed specifically to be suspended by drop-ceiling grid work and then attached to the branch run or main duct through a flexible duct. These diffusers have the boot attachment for the ductwork connection and the register facing all as one unit requiring unique cleaning. All diffusers, grilles and registers are first-line indicators of either dirty mechanical systems or free-floating debris in the room air. Many employee complaints originate from this condition.

#### **Cleaning Of Components**

The diffuser grille is removed from the flexible attachment. The open flexible ductwork is prepared to control cross contamination. The cleaning is conducted with high-efficiency negative air machines that filter 99.97% of particles down to .3 microns to prevent cross-contamination and capture particulate. Diffusers are transported to central cleaning stations. When design allows, the lay-in diffuser will then have the front perforated facing removed to allow contact HEPA vacuuming of the molded fiberglass boot. A mild mixture of alkali cleaning solution is applied to the diffuser's metallic components followed by hand brushing and rinsing thoroughly with water.

#### **Apply BBJ Sanitizer**

Metal components and non-porous surfaces are treated with this sanitizer in order to kill microbiological growth. BBJ Biocide is registered by the EPA (#67212-1) for the sanitization and deodorization of ventilation systems and air conditioning ductwork.

### **Diffuser Linear Slot Type**

A linear diffuser is the register or grille, which is attached to the duct system through a series of long thin plenums generally, located above the ceiling. This type of diffuser is generally located along the perimeter of the facility. All diffusers, grilles and registers are first-line indicators of either dirty mechanical systems or free-floating debris in the room air. Many employee complaints originate from this condition.

#### **Cleaning Of Components**

The linear diffuser facing is removed from the plenum where it is attached. All plenum attachments are HEPA vacuumed with direct contact methods. The cleaning is conducted with high-efficiency negative air machines that filter 99.97% of particles down to .3 microns to prevent cross-contamination and capture particulate. Diffusers are transported to central cleaning stations. A mild mixture of alkali cleaning solution is applied to diffusers followed by hand brushing and rinsing thoroughly with water.

### **Apply BBJ Sanitizer**

Metal components and non-porous surfaces are treated with this sanitizer in order to kill microbiological growth. BBJ Biocide is registered by the EPA (#67212-1) for the sanitization and deodorization of ventilation systems and air conditioning ductwork.

### **Fan Coil Unit Large**

Fan coil units (FCU's) contain a heat exchange coil, blower housing and wheel, drain pan, electrical components and internal fiberglass liner. They are typically located in close proximity to the area they are serving. They receive chilled or heated water through a network of piping from a centralized location. The EPA and NADCA standards require that all internal components be cleaned. Fan coil units have been identified by the EPA as a microbiological growth site. Strict protocol is followed when cleaning this component to prevent cross contamination.

### **Cleaning Of Components**

System is shut down and locked out during the cleaning process. All internal components including the evaporator/heating coil, drain pan, blower wheel and housing, electrical components and fiberglass liner are HEPA vacuumed with contact vacuums rated at 99.97% arrestance to .3 microns. Hydro-remediation is employed for evaporator coils, blower components and drain pans utilizing an alkali foaming coil cleaner. EPA recommendations are followed for unit cleaning. A minimum of three complete applications of foaming coil cleaner is used to loosen impacted particulate. Note: Not all evaporator coils can be completely cleaned. However, VENDOR uses best-effort practices.

### **Apply BBJ Sanitizer**

Metal components and non-porous surfaces are treated with this sanitizer in order to kill microbiological growth. BBJ Biocide is registered by the EPA (#67212-1) for the sanitization and deodorization of ventilation systems and air conditioning ductwork. This product is primarily used for odor control, as this component is a known microbiological growth site.

### **Flexible Ductwork**

Flexible ducts are composed of a spiral-wound wire wrapped with a Mylar or vinyl coating. Small ducts range in size from 4" to 12" in diameter. All flex ducts in this range can be cleaned using the same method, but require specific cleaning procedures to assure cleanliness.

### **Cleaning Of Components**

Access to the flexible duct is made through the boot connection or trunk line connection point. Rotating cable-driven brushes initially dislodge debris adhering to the inner wall of the flex duct. Self-propelling air sweeping tools are used to move the dislodged debris toward the high-efficiency negative air machines that filter 99.97% of particles down to .3 microns. Note: Flex ductwork is never cut by VENDOR to gain access.

### **Apply BBJ Sanitizer**

Metal components and non-porous surfaces are treated with this sanitizer in order to kill microbiological growth. BBJ Biocide is registered by the EPA (#67212-1) for the sanitization and deodorization of ventilation systems and air conditioning ductwork.

### **Metal Round And Oval Spiral Duct**

This type of duct is constructed of galvanized sheet metal with a continuous spiral seam over the entire length of duct. The duct has no inner or outer insulation. This duct type requires special attention with regard to access and closure.

### **Cleaning Of Components**

Ducts are accessed through existing service openings or fabricated openings created by VENDOR. These openings allow maximum closure strength and preserve structural integrity of the duct system. HEPA-filtered contact vacuuming is combined with aggressive cleaning methods using air whips, air sweeps, pneumatic driven brushes, cable driven brushes and robotics. The cleaning is conducted with high-efficiency negative air machines that filter 99.97% of particles down to .3 microns to prevent cross-contamination and capture particulate. The remediation process begins with mechanically dislodging debris from the duct walls. Air velocity is maintained within the duct to transport particles to the collection device. Various pneumatic sweeping tools assist in particle movement. This cleaning method is repeated section by section until national standards have been met.



**Installation Of Access Plates**

Closures are made using metal galvanized insulated or non-insulated plates. The plates are fabricated of a gauge (thickness) metal, which is equal to or greater than the gauge it is applied to. Plates are sized 1" larger than the access opening and secured with self-tapping screws. Foil metallic tape (not duct tape) is then applied over the seam. Mastic is applied to the tape, plate and duct, further strengthening the closure. These closures are designed to be permanent. This procedure allows the system to be re-energized at the end of the work cycle without air leakage occurring. This closure method requires additional labor and materials. Therefore, bid differences may be reflected here.

**Apply BBJ Sanitizer**

Metal components and non-porous surfaces are treated with this sanitizer in order to kill microbiological growth. BBJ Biocide is registered by the EPA (#67212-1) for the sanitization and deodorization of ventilation systems and air conditioning ductwork.

**Externally Insulated Metal Duct**

This type of duct is defined by its utilization of a fiberglass duct insulation that is installed on the outside of the duct system. The external insulation must be penetrated to allow access to the metal duct. The ducts should be accessed and closed using industry-accepted standards while adhering to or exceeding local codes. The integrity of the outer insulation's vapor barrier is critical in assuring that moisture will not condense on the cold duct's outer surface. The outer insulation is also critical in retaining energy during the heating season.

**Cleaning Of Components**

Ducts are accessed through existing service openings or fabricated openings created by Vendor. These openings allow maximum closure strength and preserve structural integrity of the duct system. HEPA-filtered contact vacuuming is combined with aggressive cleaning methods using air whips, air sweeps, pneumatic driven brushes, cable driven brushes and robotics. The cleaning is conducted with high-efficiency negative air machines that filter 99.97% of particles down to .3 microns to prevent cross-contamination and capture particulate. The remediation process begins with mechanically dislodging debris from the duct walls. Air velocity is maintained within the duct to transport particles to the collection device. Various pneumatic sweeping tools assist in particle movement. This cleaning method is repeated section by section until national standards have been met.

**Installation Of Access Plates**

Closures are made using metal galvanized insulated or non-insulated plates. The plates are fabricated of a gauge (thickness) metal, which is equal to or greater than the gauge it is applied to. Plates are sized 1" larger than the access opening and secured with self-tapping screws. Foil metallic tape (not duct tape) is then applied over the seam. Mastic is applied to the tape, plate and duct, further strengthening the closure. These closures are designed to be permanent. This procedure allows the system to be re-energized at the end of the work cycle without air leakage occurring. This closure method requires additional labor and materials. Therefore, bid differences may be reflected here.

**Apply BBJ Sanitizer**

Metal components and non-porous surfaces are treated with this sanitizer in order to kill microbiological growth. BBJ Biocide is registered by the EPA (#67212-1) for the sanitization and deodorization of ventilation systems and air conditioning ductwork.

**Reheat Coil**

Reheat coils are located at strategic points within the duct system. They are used for heating or dehumidification purposes. They are designed to serve a specific zone or area of the facility.

**Cleaning Of Components**

Both sides of the reheat coil face are accessed. Fiberglass liner and coil are HEPA vacuumed with contact vacuums rated at 99.97% arrestance to .3 microns. Hydro-remediation is employed for coils and drain pans utilizing an alkali foaming coil cleaner. EPA recommendations are followed for unit cleaning. A minimum of three complete applications of foaming coil cleaner is used to loosen impacted particulate. Note: Not all evaporator coils can be completely cleaned. However, Vendor uses best-effort practices.

**Installation Of Access Plates**

Closures are made using metal galvanized insulated or non-insulated plates. The plates are fabricated of a gauge (thickness) metal, which is equal to or greater than the gauge it is applied to. Plates are sized 1" larger than the

access opening and secured with self-tapping screws. Foil metallic tape (not duct tape) is then applied over the seam. Mastic is applied to the tape, plate and duct, further strengthening the closure. These closures are designed to be permanent. This procedure allows the system to be re-energized at the end of the work cycle without air leakage occurring. This closure method requires additional labor and materials. Therefore, bid differences may be reflected here.

#### **Apply BBJ Sanitizer**

Metal components and non-porous surfaces are treated with this sanitizer in order to kill microbiological growth. BBJ Biocide is registered by the EPA (#67212-1) for the sanitization and deodorization of ventilation systems and air conditioning ductwork.

#### **VAV Boxes Medium Size**

Medium sized Variable Air Volume (VAV) boxes are located above the ceiling space and provide a throttling effect that regulates airflow to specific rooms and spaces. Dampers and automated devices are located within the box and receive control orders through a sensing device such as a thermostat. Internal insulation and components require special attention as microbiological contamination regularly develops within these components. Since VAV boxes are welded construction and lack planned access points, disassembly of internal components is required for access. A large box can require several hours for proper remediation.

#### **Cleaning Of Components**

Internal components including the dampers, actuators and fiberglass liner are HEPA vacuumed with contact vacuums rated at 99.97% arrestance to .3 microns. Components may be removed from the box depending on the manufacturer and accessibility.

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Safety - Vendor is trained in lock-out/tag-out, MSDS, hazardous communications, safety, respirators, ladders, and other job-related issues. Vendor safety program manual is available to you upon request. Medical logs detailing each crew person's health and respiratory physical exam history is also available. We recommend pre-informing all building occupants when remediation will occur. Odor problems within a facility cannot always be eliminated. However, they are generally reduced when the HVAC unit or duct system is the cause. Security systems and/or protocols may be altered while performing our service. When alternative systems are needed due to these criteria, it will be the owners, owner's representative or contracting agent's responsibility to coordinate.

Indemnity - SOWELA agrees that Vendor is not a generator of contamination, pollutants, toxins and hazardous substances. The SOWELA also agrees that there is no warranty or guarantee by Vendor either expressed or implied that the air conditioning system(s), air, water (potable, ground/surface), soil, building, interior furnishings (including plants) and process equipment, is free from all toxins, contaminants (including biological growth), or hazardous materials and substances that have been determined by proper authorities are detrimental to the safety or health and welfare of human and animal populations and the environment

Vendor Responsibility - Vendor shall provide access to building interior & HVAC equipment during normal working hours, or hours as agreed by the Vendor.

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## Duct System Component and Task Specifications for RTC Bldg

### **Air Handler Unit(s) (12-40 Ton Range)**

This classification indicates that the AHU (air handling unit) is part of a split system. The 12-40 ton range is utilized to identify the physical size of the equipment to be cleaned rather than the capacity of cooling or heating. Most systems in this size range allow entry into the unit by our workers. The EPA and NADCA standards require that all internal components be cleaned. Air handling units that fall into this range are designed for commercial applications. These units are generally located within the facility's mechanical room (vertical application) or hung above the ceiling space (horizontal application). Air handlers have been identified by the EPA as a microbiological growth site. Strict protocol is followed when cleaning this component to prevent cross contamination.

#### **Cleaning Of Components**

System is shut down and locked out during the cleaning process. All internal components including the evaporator coil, drain pan, blower wheel and housing, heating components and fiberglass liner are HEPA vacuumed with contact vacuums rated at 99.97% arrestance to .3 microns. Hydro-remediation is employed for evaporator coils, blower components and drain pans utilizing an alkali foaming coil cleaner. EPA recommendations are followed for unit cleaning. A minimum of three complete applications of foaming coil cleaner is used to loosen impacted particulate. Note: Not all evaporator coils can be completely cleaned. However, VENDOR uses best-effort practices.

#### **Apply BBJ Sanitizer**

Metal components and non-porous surfaces are treated with this sanitizer in order to kill microbiological growth. BBJ Biocide is registered by the EPA (#67212-1) for the sanitization and deodorization of ventilation systems and air conditioning ductwork. This product is primarily used for odor control, as this component is a known microbiological growth site.

### **Air Handler Unit(s) (7.5 - 10 Ton Range)**

This classification indicates that the AHU (air handling unit) is part of a split system. The 7.5-10 ton range is utilized to identify the physical size of the equipment to be cleaned rather than the capacity of cooling or heating. Most systems in this size range allow limited entry into the unit by our workers. The EPA and NADCA standards require that all internal components be cleaned. Most air handling units that fall into this range are designed for commercial applications. These units are generally located within the facility's mechanical room (vertical application) or hung above the ceiling space (horizontal application). Air handlers have been identified by the EPA as a microbiological growth site. Strict protocol is followed when cleaning this component to prevent cross contamination.

#### **Cleaning Of Components**

System is shut down and locked out during the cleaning process. All internal components including the evaporator coil, drain pan, blower wheel and housing, heating components and fiberglass liner are HEPA vacuumed with contact vacuums rated at 99.97% arrestance to .3 microns. Hydro-remediation is employed for evaporator coils, blower components and drain pans utilizing an alkali foaming coil cleaner. EPA recommendations are followed for unit cleaning. A minimum of three complete applications of foaming coil cleaner is used to loosen impacted particulate. Note: Not all evaporator coils can be completely cleaned. However, VENDOR uses best-effort practices.

#### **Apply BBJ Sanitizer**

Metal components and non-porous surfaces are treated with this sanitizer in order to kill microbiological growth. BBJ Biocide is registered by the EPA (#67212-1) for the sanitization and deodorization of ventilation systems and air conditioning ductwork. This product is primarily used for odor control, as this component is a known microbiological growth site.

### **Lay In Type Diffuser**

A lay-in diffuser is the register or grille-like facing which is designed specifically to be suspended by drop-ceiling grid work and then attached to the branch run or main duct through a flexible duct. These diffusers have the boot attachment for the ductwork connection and the register facing all as one unit requiring unique cleaning. All diffusers, grilles and registers are first-line indicators of either dirty mechanical systems or free-floating debris in the room air. Many employee complaints originate from this condition.

### **Cleaning Of Components**

The diffuser grille is removed from the flexible attachment. The open flexible ductwork is prepared to control cross contamination. The cleaning is conducted with high-efficiency negative air machines that filter 99.97% of particles down to .3 microns to prevent cross-contamination and capture particulate. Diffusers are transported to central cleaning stations. When design allows, the lay-in diffuser will then have the front perforated facing removed to allow contact HEPA vacuuming of the molded fiberglass boot. A mild mixture of alkali cleaning solution is applied to the diffuser's metallic components followed by hand brushing and rinsing thoroughly with water.

### **Apply BBJ Sanitizer**

Metal components and non-porous surfaces are treated with this sanitizer in order to kill microbiological growth. BBJ Biocide is registered by the EPA (#67212-1) for the sanitization and deodorization of ventilation systems and air conditioning ductwork.

### **Return Air Fan Blower Housing And Cage**

This type of fan is used to draw air back to the main air handler and usually is a secondary fan to the system. A return air fan can dramatically increase airflow to the evaporator coil once serviced and restored.

### **Cleaning Of Components**

System is shut down and locked out during the cleaning process. All internal components including the blower wheel and housing, electrical components and fiberglass liner are HEPA vacuumed with contact vacuums rated at 99.97% arrestance to .3 microns. Hydro-remediation is employed for evaporator coils, blower components and drain pans utilizing an alkali foaming coil cleaner. EPA recommendations are followed for unit cleaning. A minimum of three complete applications of foaming coil cleaner is used to loosen impacted particulate. Note: Not all evaporator coils can be completely cleaned. However, VENDOR uses best-effort practices.

### **Apply BBJ Sanitizer**

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### **Metal Round And Oval Spiral Duct**

This type of duct is constructed of galvanized sheet metal with a continuous spiral seam over the entire length of duct. The duct has no inner or outer insulation. This duct type requires special attention with regard to access and closure.

### **Cleaning Of Components**

Ducts are accessed through existing service openings or fabricated openings created by VENDOR. These openings allow maximum closure strength and preserve structural integrity of the duct system. HEPA-filtered contact vacuuming is combined with aggressive cleaning methods using air whips, air sweeps, pneumatic driven brushes, cable driven brushes and robotics. The cleaning is conducted with high-efficiency negative air machines that filter 99.97% of particles down to .3 microns to prevent cross-contamination and capture particulate. The remediation process begins with mechanically dislodging debris from the duct walls. Air velocity is maintained within the duct to transport particles to the collection device. Various pneumatic sweeping tools assist in particle movement. This cleaning method is repeated section by section until national standards have been met.

### **Installation Of Access Plates**

Closures are made using metal galvanized insulated or non-insulated plates. The plates are fabricated of a gauge (thickness) metal, which is equal to or greater than the gauge it is applied to. Plates are sized 1" larger than the access opening and secured with self-tapping screws. Foil metallic tape (not duct tape) is then applied over the seam. Mastic is applied to the tape, plate and duct, further strengthening the closure. These closures are designed to be permanent. This procedure allows the system to be re-energized at the end of the work cycle without air leakage occurring. This closure method requires additional labor and materials. Therefore, bid differences may be reflected here.

### **Apply BBJ Sanitizer**

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### **Externally Insulated Metal Duct**

This type of duct is defined by its utilization of a fiberglass duct insulation that is installed on the outside of the duct system. The external insulation must be penetrated to allow access to the metal duct. The ducts should be accessed and closed using industry-accepted standards while adhering to or exceeding local codes. The integrity of the outer insulation's vapor barrier is critical in assuring that moisture will not condense on the cold duct's outer surface. The outer insulation is also critical in retaining energy during the heating season.

#### **Cleaning Of Components**

Ducts are accessed through existing service openings or fabricated openings created by VENDOR. These openings allow maximum closure strength and preserve structural integrity of the duct system. HEPA-filtered contact vacuuming is combined with aggressive cleaning methods using air whips, air sweeps, pneumatic driven brushes, cable driven brushes and robotics. The cleaning is conducted with high-efficiency negative air machines that filter 99.97% of particles down to .3 microns to prevent cross-contamination and capture particulate. The remediation process begins with mechanically dislodging debris from the duct walls. Air velocity is maintained within the duct to transport particles to the collection device. Various pneumatic sweeping tools assist in particle movement. This cleaning method is repeated section by section until national standards have been met.

#### **Installation Of Access Plates**

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### **Reheat Coil**

Reheat coils are located at strategic points within the duct system. They are used for heating or dehumidification purposes. They are designed to serve a specific zone or area of the facility.

#### **Cleaning Of Components**

Both sides of the reheat coil face are accessed. Fiberglass liner and coil are HEPA vacuumed with contact vacuums rated at 99.97% arrestance to .3 microns. Hydro-remediation is employed for coils and drain pans utilizing an alkali foaming coil cleaner. EPA recommendations are followed for unit cleaning. A minimum of three complete applications of foaming coil cleaner is used to loosen impacted particulate. Note: Not all evaporator coils can be completely cleaned. However, VENDOR uses best-effort practices.

#### **Installation Of Access Plates**

Closures are made using metal galvanized insulated or non-insulated plates. The plates are fabricated of a gauge (thickness) metal, which is equal to or greater than the gauge it is applied to. Plates are sized 1" larger than the access opening and secured with self-tapping screws. Foil metallic tape (not duct tape) is then applied over the seam. Mastic is applied to the tape, plate and duct, further strengthening the closure. These closures are designed to be permanent. This procedure allows the system to be re-energized at the end of the work cycle without air leakage occurring. This closure method requires additional labor and materials. Therefore, bid differences may be reflected here.

#### **Apply BBJ Sanitizer**

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### **VAV Boxes Medium Size**

Medium sized Variable Air Volume (VAV) boxes are located above the ceiling space and provide a throttling effect that regulates airflow to specific rooms and spaces. Dampers and automated devices are located within the box and receive

control orders through a sensing device such as a thermostat. Internal insulation and components require special attention as microbiological contamination regularly develops within these components. Since VAV boxes are welded construction and lack planned access points, disassembly of internal components is required for access. A large box can require several hours for proper remediation.

#### **Cleaning Of Components**

Internal components including the dampers, actuators and fiberglass liner are HEPA vacuumed with contact vacuums rated at 99.97% arrestance to .3 microns. Components may be removed from the box depending on the manufacturer and accessibility.

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Safety - VENDOR is trained in lock-out/tag-out, MSDS, hazardous communications, safety, respirators, ladders, and other job-related issues. VENDOR safety program manual is available to you upon request. Medical logs detailing each crew person's health and respiratory physical exam history is also available. We recommend pre-informing all building occupants when remediation will occur. Odor problems within a facility cannot always be eliminated. However, they are generally reduced when the HVAC unit or duct system is the cause. Security systems and/or protocols may be altered while performing our service. When alternative systems are needed due to these criteria, it will be the owners, owner's representative or contracting agent's responsibility to coordinate.

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