



ROWAN COUNTY

130 West Innes Street

Salisbury, NC 28144

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Email: david.sifford@rowancountync.gov

REQUEST FOR PROPOSALS

FOR REPLACEMENT OF COMMERCIAL ROOFTOP AIR CONDITIONING UNIT

Issued on: Monday, April 11, 2016

Due Date: Friday, April 22, 2016 at 12:00 PM EST

Administered by: David Sifford, Purchasing Agent

NOTICE TO VENDORS

Pursuant to General Statutes of North Carolina Section 143-129 as amended, proposals will be received by the Purchasing Office for Rowan County for the following:

REQUEST FOR PROPOSAL Replacement of Commercial Rooftop Air Conditioning Unit

The County plans to purchase and contract for the replacement of one Commercial Rooftop Air Conditioning Unit that is currently being utilized at the J. Newton Cohen, Sr. Rowan County Administration Building located at 130 West Innes Street, Salisbury, NC 28144. All proposals submitted for the replacement of the one Commercial Rooftop Air Conditioning Unit located at the J. Newton Cohen, Sr. Rowan County Administration Building must meet or exceed the time frame and the product specifications as outlined in this REQUEST FOR PROPOSALS.

Proposals, which must include a completed **Proposal Form**, for the purchase and installation of the Air Conditioning Unit will be accepted until **Friday, April 22, 2016 at 12:00 PM EST** at the Purchasing Department in the Rowan County Finance Department, 1st Floor, 130 West Innes Street, Salisbury, NC 28144. Proposals shall be mailed or delivered to the following:

Rowan County Finance Department
Attn: David Sifford, Purchasing Agent
130 West Innes Street, Suite 110
Salisbury, NC 28144

Submission of any proposal signifies the Vendor's agreement that its' proposal and the content thereof are valid for 90 calendar days following the submission deadline and will become part of the contract that is negotiated between Rowan County and the successful vendor. All prices submitted with the proposal shall remain in effect for the 90-day period.

All proposals are confidential and will not become public knowledge until awarded. Rowan County reserves the right to award and/or reject any and/or all proposals and waive any technicalities or irregularities. This contract will not be awarded solely on the basis of cost. Rather the contract for this project will be awarded to the lowest responsible, responsive bidder, taking into consideration quality, performance, and the time specified in the proposal for the performance of the contract.

Sincerely,

David Sifford

David Sifford
Purchasing Agent

SECTION I – INTENT of RFP and INTRODUCTION :

Intent of this RFP:

The purpose and intent of this Request for Proposals is to acquire and have installed one Commercial Rooftop Air Conditioning Unit that will replace the existing unit at the J. Newton Cohen, Sr. Rowan County Administration Building in Salisbury, North Carolina. It is the full responsibility of the vendor to thoroughly investigate the needs/requirements of the County, not necessarily specified in this RFP, and to propose a new system, including removal and disposal of the existing unit and installation of the new unit, that is designed and has been tested that will most efficiently meet or exceed the needs/requirements of the County.

Important Dates:

Issue Date:	Monday, April 11, 2016
Pre-Proposal Meeting:	Friday, April 15, 2016 at 2:00 P.M.
Final Date for Written Questions:	Tuesday, April 19, 2016 at 10:00 A.M.
Final Date for Addenda Posting:	Wednesday, April 20, 2016 at 12:00 P.M.
Deadline for Submitting Proposals:	Friday, April 22, 2016 at 12:00 P.M.
Anticipated Award Date (tentative)	Monday, May 2, 2016 at 5:00 P.M.

Pre-Proposal Meeting:

A pre-proposal meeting will be held on site at **130 West Innes Street, Salisbury, NC 28144**. Please meet in the Conference Room on the first floor at 2:00 P.M. on Friday, April 15, 2016. The pre-bid meeting is not mandatory. However, interested bidders are strongly encouraged to attend in order to familiarize themselves with the project.

Submission of Proposals:

Proposals must be presented on the **Proposal Form** attached to this RFP in a sealed envelope and mailed or delivered to:

David Sifford, Purchasing Agent
Rowan County Finance Department
130 West Innes Street
Salisbury, NC 28144

The package shall be plainly marked, **“Proposal for Commercial Rooftop Air Conditioning Unit.”**

Vendors must submit one original and one (1) complete copy of their proposal.

No responsibility shall be attached to the County for the premature opening of any bid proposal not properly addressed or identified.

Proposals will be publicly opened at 12:00 p.m. on Friday, April 15, 2016 in the First Floor Conference Room, J. Newton Cohen, Sr. Rowan County Administration Building at 130 West Innes Street, Salisbury, North Carolina.

The bidding process will be closed at 12:00 p.m. on Friday, April 15, 2016. In order to be considered for selection, proposals must be received by Rowan County as indicated herein by Friday, April 15, 2016 at 12:00 p.m. Failure to meet this deadline will disqualify the bidder from consideration in this project.

Additional Information:

This Request for Proposals can be accessed and viewed in its' entirety on the Rowan County website at www.rowancountync.gov under the “Public Notices” links on the home page. Copies of this Request for Proposals will be provided upon receipt of a written request to David Sifford at david.sifford@rowancountync.gov.

Request for Clarification:

Rowan County will not be bound by or be responsible for any interpretations or conclusions drawn from this RFP. All questions or requests for clarification or additional information must be submitted in writing no later than 10:00 AM on Tuesday, April 19, 2016. These written questions or requests must be submitted to David Sifford, Purchasing Agent either by mail, fax or e-mail. Signed faxed messages will be treated as written questions. Any questions the County feels are pertinent to all interested bidders will be posted on the Rowan County website, www.rowancountync.gov, as addenda to this RFP. Any information communicated verbally by any Rowan County employee shall not be considered binding. In no event may a vendor rely on any oral statement or communication by the County or its' agents, advisors or consultants.

In addition, the County assumes no responsibility for conclusions or interpretations derived from technical and background information presented in this RFP, or otherwise distributed or made available during this procurement process. The County will not be bound by or be responsible for any explanation, interpretation or conclusions of this RFP or any documents provided by the County other than those given in writing by the County through the issuance of addenda. It is the full responsibility of the vendor to thoroughly investigate the needs/requirements of the County not necessarily assumed in this RFP.

Addenda:

The County will be bound by or responsible for only information or documents provided by the County in writing through the issuance of addenda. .

Any addendum to these documents shall be posted on the County's website at www.rowancountync.gov and can be found under the "Public Notices" link on the home page. Once any addendum is posted it becomes part of this RFP and the contract. No oral statements, explanations, or commitments by anyone shall be of any effect unless incorporated into the addenda. It is the responsibility of the Vendor to periodically check the County's website to obtain any addenda that has been issued prior to submitting a proposal. No addenda shall be posted after 12:00 P.M. on **Wednesday, April 20, 2016.**

SECTION II -- GENERAL CONDITIONS and FINANCIAL PROVISIONS:

Signed Bid Considered an Offer:

Receipt of a signed proposal shall be considered an offer on the part of the Vendor. The terms, conditions and specifications of this Request for Proposals will become part of the contract if the proposal shall be deemed approved and accepted by Rowan County Government. In the event of a default on the part of the Vendor after acceptance by the County, the County may take such action as it deems appropriate including legal action for damages or specific performance.

Contract Agreement:

All subsequent contract agreements as a result of an award hereunder, shall incorporate all terms, conditions, and specifications contained herein, and in response hereto, unless mutually amended in writing.

Assignment:

The Vendor shall not have the right or power to assign, subcontract, or transfer interest in this contract. The Vendor is prohibited from subcontracting any products or services covered in these specifications.

Availability of Funds:

A contract for this project will only be awarded and deemed binding to the extent of appropriated funds for the purpose set forth in this RFP.

Non-Discrimination:

The Vendor shall not discriminate against any individuals and will take proactive measures to assure compliance with all Federal and State requirements concerning fair employment, employment of people with disabilities, and concerning the treatment of all employees without regard to discrimination based upon age, race, color, religion, sex, national origin or disability.

Governing Laws:

This contract is made under and shall be governed and construed in accordance with the laws of the State of North Carolina.

Advertising:

In submitting a proposal to Rowan County, the Vendor agrees to refrain from using the results of their proposal as a part of any commercial advertising without prior approval of Rowan County Government.

Insurance Coverage:

During the term of the contract, the Vendor, at their sole cost and expense, shall provide commercial insurance of such type and with such terms and limits as may be reasonably associated with the contract. At a minimum, the Vendor shall provide and maintain the following coverage and limits:

- **Worker's Compensation** – The Vendor shall provide and maintain Worker's Compensation Insurance, as required by the laws of North Carolina, as well as employer's liability coverage with minimum limits of \$1,000,000.00, for bodily injury per accident. This insurance must include and cover all of the Vendor's employees who are engaged in any work under this contract.
- **General Liability** – The Vendor shall provide and maintain General Liability Coverage at a rate no less than \$1,000,000 per occurrence for bodily injury, personal injury and property damage.

Insurance Requirements:

Providing and maintaining adequate insurance coverage is a material obligation of the Vendor. All such insurance shall meet all laws of the State of North Carolina. Such insurance coverage shall be obtained from companies that are authorized to provide such coverage and that are authorized by the Commissioner of Insurance to do business in North Carolina. The Vendor shall at all times comply with the terms of such insurance policies, and all requirements of the insurer under any such insurance policies, except as they may conflict with existing North Carolina laws or this contract. The limits of coverage under each insurance policy maintained by the Vendor shall not be interpreted as limiting the Vendor's liability and obligations under the contract.

Other Insurance Provisions: The policy or policies are to contain, or be endorsed to contain, the following provisions:

- A. Vendor's insurance is to be considered primary for losses that occur as a direct result of the Vendor's actions.
- B. Coverage shall state that the Vendor's insurance shall not be suspended, voided, canceled, reduced in coverage or in limits except after 30 days written notice.
- C. Vendor shall submit with their proposal Certificates of Insurance for their Worker's Compensation and General Liability insurance which outlines comprehensive, liability, and bodily injury coverage for each accident and person.

Collusive Bidding:

The Vendor's signature on the Rowan County "Proposal Form" is a guarantee the prices quoted have been arrived at without collusion with other eligible Vendor(s) and without effort to preclude Rowan County Government from obtaining the lowest possible competitive price.

General Indemnity:

The Vendor shall save and hold harmless, pay on behalf of, protect, defend, and indemnify Rowan County Government (including the County Manager, the Board of Commissioners, as well as Rowan County officers, agents, and employees) from and against any demand, claim, suit, loss, expense, or damage which may be asserted against any of them in their official or individual capacities by reason of any alleged damage to property, or injury to, or death of any person arising out of, or in any way related to, any action or inaction of the Vendor (including its officers, agents, and employees) in the performance or intended performance of this agreement, or the maintenance of any facility, or the operation of any program, which is the subject of, or is related to the performance of this agreement. The obligations of the Vendor pursuant to this paragraph shall not be limited in any way by any limitation in the amount or type of proceeds, damages, compensation, or benefits payable under any policy of insurance or self-insurance maintained by or for the use and benefit of the Vendor.

Assignment

The successful Vendor shall be the prime contractor and shall be solely responsible for all contractual performance. The Vendor shall not assign, transfer, convey, sublet, or otherwise dispose of its' agreements with the County, or its' rights, title, or interests herein, or its' power to execute such agreement, to any other person, company, or corporation without the previous written consent and approval of Rowan County.

Conflict of Interest:

All Vendors must disclose in writing with their proposal the name of any owner, officer, director, or agent who is also an employee of Rowan County Government. All Vendors must also disclose in writing with their proposal the name of any employee of Rowan County Government who owns, directly or indirectly, an interest of five percent (5%) or more in the Vendor's firm or any of its branches or subsidiaries. By submitting a proposal, the Vendor certifies that there is no relationship between the Vendor and any person or entity which is or gives the appearance of a conflict of interest related to this RFP or project.

Errors and Omissions:

The Vendor shall not take advantage of any errors or omissions in this RFP, and shall promptly notify Rowan County Government of any omissions or errors found in this document.

References:

At least three recent business references are required. The Vendor shall provide the date and product(s) and services provided each business reference. The Vendor shall include in the reference information name, address, contact person(s), telephone number(s), e-mail address and any other information that may be deemed important and that will assist Rowan County personnel in contacting the Vendor's references. Rowan County may request additional evidence of the Vendor's experience, qualifications, ability, products, service facilities, and financial standing for which the Vendor shall be prepared to provide to Rowan County, if required.

Evaluation Criteria:

Price will be a major consideration in Rowan County's evaluation criteria but it will not be the determining factor in our evaluation. The proposals will be evaluated on a "best overall value" basis including but not limited to pricing, quality, performance, compatibility with the existing system, and the Vendor's ability to adhere to all conditions and requirements of the specifications outlined in this RFP. The Vendor's ability to provide a team of skilled, trained employees, maintenance costs, warranty provisions, and the Vendor's experience with similar projects will also be considered in Rowan County's evaluation of the proposals submitted.

Award:

Rowan County reserves the right to accept, award and/or reject any and/or all proposals, in whole or in part, and waive any technicalities or irregularities. This contract will not be awarded solely on the basis of cost. Rowan County Government, at its sole discretion, following an objective evaluation, will award this contract to the lowest responsible, responsive Vendor that submits the best overall proposal based on their ability to meet and exceed these minimum specifications.

The County reserves the right to determine the lowest responsive, responsible Vendor on the basis of an individual item, groups of items, or any way determined to be in the best interest of Rowan County. Award shall be based on but not limited to the following factors (where applicable): (a) adherence to all conditions and requirements of the specifications; (b) price; (c) overall quality of the product; (d) qualifications of the vendor, including past performance, financial responsibility, general reputation, experience, service capabilities, and facilities; (e) delivery or completion date; (f) maintenance costs and warranty provisions.

Termination for Cause:

Rowan County reserves the right to terminate this contract at anytime for cause. The violation of any provision or condition contained in this contract, or the refusal, failure, or inability to carry out any provisions of this contract shall constitute sufficient cause to terminate this contract for cause. Should Rowan County elect to terminate this contract for cause, Rowan County will notify the Vendor in writing and shall specify the cause for termination and the date that such termination shall be effective. Immediate dismissals may be executed if deemed necessary by Rowan County.

SECTION III -- PRICING and INVOICING:

Pricing:

Submission of any proposal signifies the Vendor's agreement that its' proposal and the contents thereof are valid for 90 calendar days following the submission deadline and will become part of the contract that is negotiated between Rowan County and the successful Vendor. All prices submitted with the proposal shall remain in effect for the 90-day period.

The Vendor warrants that the pricing stated herein shall remain firm for a period of 90 calendar days after April 22, 2016.

Invoicing:

Following final approval and sign-off of acceptance of the system, the Vendor shall invoice Rowan County for the A/C Unit. All invoices shall be mailed to:

Rowan County Facilities Management
Attn: Joni Hobbs
425 Airport Road
Salisbury, NC 28147

Payment Terms:

Payment terms are NET 30 days following receipt of correct invoice. Rowan County is responsible for all payments to the Vendor under this contract.

SECTION IV – GENERAL INFORMATION:

Manufacturer:

This RFP is for the replacement of one existing Commercial Rooftop Air Conditioning Unit. The proposed Air Conditioning Unit must be specifically designed for outdoor rooftop installation on a roof curb. The proposed Air Conditioning Unit must work within the parameters of the existing units with regards to the roof curb, connections and duct work. The unit must also tie in with the existing control system. Trane manufactured Air Conditioning Units are preferred but are not required. Submitted proposals should be for one (1) Trane 90 Ton Commercial Air Conditioning Unit or an Air Conditioning Unit like or similar to a Trane 90 ton Commercial Air Conditioning Unit in manufacturing specifications. The unit must fit the existing footprint and tie in with the existing control system. Mechanical Schedules for the original building design are attached to this RFP.

Existing Unit:

The one existing Air-Conditioning unit is to be completely dismantled and removed from Rowan County premises. The Vendor shall provide all labor, tools, equipment, parts and accessories required for the complete dismantlement and removal of the Air Conditioning Unit. All work areas are to be cleaned and debris removed to the satisfaction of Don Bringle, Facilities Management Director.

Additional Equipment:

Installation of each new air conditioning unit must include the following:

- A new equipment adapter
- A new thermostat / sensor
- A new condensate drain

Installation:

The Vendor shall provide all labor, tools, equipment, parts and accessories required to install one Air Conditioning Unit. Vendor personnel shall deliver, unpack and position the unit at the defined location.

Installation of the Air Conditioning Unit shall begin within 14 days of the date the Air-Conditioning units are delivered to the Vendor from the Manufacturer.

Connections:

Connections must make an air tight plenum transition.

Inspections:

Units, wiring and connections must meet all code requirements. Vendor shall be responsible for and obtain all required State and/or Local permits and inspections.

Start-up:

Vendor must perform a complete system start-up for each unit. Don Bringle, Facilities Management Director, or his designee must be present for the start-up of each air conditioning unit.

Approval:

There will be a 30-day trial period, to allow the Rowan County Facilities Management Department to test and qualify the installation and operation of the Air Conditioning Unit. If the system is in accordance with the RFP specifications and working properly, the Facilities Management Department will signify their acceptance of the system by issuing a dated, signed memo stating acceptance of the system on behalf of the County. A copy of this memo shall be forwarded to Rowan County Accounts Payable and Rowan County Purchasing requesting payment for the system to be processed.

Installation and Service Manual:

One installation and service manual shall be included with each Air Conditioning Unit.

Maintenance:

A toll free telephone number for service requests must be provided by the Vendor on a 24 hours – 7 days a week basis. Telephone support must be available within one hour. In the event emergency and on-site service is required, Vendor must provide confirmation of dispatch within one hour of having established the need. Vendor's service technicians shall be available to diagnose and service the unit(s) within 4 hours of dispatch.

Warranty:

The Air Conditioning Units and **OPTIONAL** Control System (where applicable) shall be covered by:

- A one (1) year parts and labor warranty.
- A one (1) year refrigerant warranty.
- A five (5) year compressor warranty.

These warranties shall include travel time and expense and provide on-site service and labor.

SECTION V – SPECIFICATIONS:

This RFP is for the replacement of one existing Commercial Rooftop Air Conditioning Unit. The proposed Air Conditioning Unit must be specifically designed for outdoor rooftop installation on a roof curb. The proposed Air Conditioning Unit must work within the parameters of the existing units with regards to the roof curb, connections and duct work. The unit must also tie in with the existing control system. Trane manufactured Air Conditioning Units are preferred but are not required. Submitted proposals should be for one (1) Trane 90 Ton Commercial Air Conditioning Unit or an Air Conditioning Unit like or similar to a Trane 90 ton Commercial Air Conditioning Unit in manufacturing specifications. The unit must fit the existing footprint and tie in with the existing control system. Mechanical Schedules for the original building design are attached to this RFP.

A pre-proposal meeting will be held on site at 130 West Innes Street, Salisbury, NC 28144. Please meet in the Conference Room on the first floor at 2:00 P.M. on Friday, April 15, 2016. The pre-bid meeting is not mandatory. However, interested bidders are strongly encouraged to attend in order to familiarize themselves with the project.

PROPOSAL FORM

Instructions: Complete all THREE parts of this proposal form.

PART I: Proposal Summary

Complete the information below. If you wish to submit more than one brand, make a photocopy of this Proposal Form.

1.	TRANE (or like or similar) A/C UNIT – Model # _____ (including removal, disposal and installation)	\$
2.		\$
3.		\$
4.		\$
5.	OTHER -- Explain	\$
6.	GRAND TOTAL	\$

PART II: Addenda Acknowledgements (if applicable)

Each vendor is responsible for determining that all addenda issued by the Rowan County Purchasing Office have been received before submitting a proposal.

Addenda	Date Vendor Received	Initials
“A”		
“B”		
“C”		

PART III: Vendor Information:

Vendor Name	
Address	
Telephone	
E-Mail	
Representative (print name)	
Signature of Representative	
Date Submitted	

FAN POWERED TERMINAL UNITS - PARALLEL

SYM	COOLING SECTION				FAN SECTION				HEATING SECTION				MAX. NO. T. SP.	MFR & MODEL		REMARKS	
	CFM RANGE	INLET DIA.	MAX. STATIC PRESSURE DROP (in.)	ESP (in.)	CFM	HP	ESP (in.)	VOLTS/PH.	CFM	MBH	EAT (°F)	EW T (°F)		AIR Δ T (°F)	WATER PD (FT)		MFR MODEL
B1	45-215	6"	0.25"	150	1/10	0.5	115/1#	0.5	6.5	65	180	40	5	30	TITUS MFV-3000-II	2	1, 2
B2	230-1035	10"	0.25"	730	1/4	0.5	115/1#	3.0	17.7	65	180	35	5	30	TITUS MFV-3000-II	4	1, 2
B3	35-160	6"	0.25"	125	1/10	0.5	115/1#	0.5	6.7	65	180	50	5	30	TITUS MFV-3000-II	2	1, 2
B4	75-370	6"	0.25"	260	1/10	0.5	115/1#	1.5	12.6	65	180	45	5	30	TITUS MFV-3000-II	2	1, 2
B5	200-980	8"	0.25"	700	1/10	0.5	115/1#	3.0	18.0	65	180	40	5	30	TITUS MFV-3000-II	2	1, 2
B6	305-1520	12"	0.25"	900	1/4	0.5	115/1#	2.0	19.5	65	180	20	5	30	TITUS MFV-3000-II	4	1, 2
B7	155-775	8"	0.25"	545	1/4	0.5	115/1#	2.5	26.6	65	180	45	5	30	TITUS MFV-3000-II	3	1, 2
M1	230-835	10"	0.25"	635	1/4	0.5	115/1#	3.0	27.5	65	180	40	5	30	TITUS MFV-3000-II	4	1, 2
M2	230-935	10"	0.25"	655	1/4	0.5	115/1#	3.0	28.4	65	180	40	5	30	TITUS MFV-3000-II	4	1, 2
M3	75-390	6"	0.25"	305	1/10	0.5	115/1#	1.5	13.3	65	180	40	5	30	TITUS MFV-3000-II	2	1, 2
M4	140-690	8"	0.25"	410	1/10	0.5	115/1#	1.0	8.8	65	180	20	5	30	TITUS MFV-3000-II	2	1, 2
M5	75-380	6"	0.25"	240	1/10	0.5	115/1#	1.5	14.1	65	180	45	5	30	TITUS MFV-3000-II	2	1, 2
M6	70-350	8"	0.25"	260	1/10	0.5	115/1#	1.0	11.3	65	180	40	5	30	TITUS MFV-3000-II	2	1, 2
M7	125-620	6"	0.25"	370	1/10	0.5	115/1#	1.0	8.1	65	180	20	5	30	TITUS MFV-3000-II	2	1, 2
M8	55-275	6"	0.25"	195	1/10	0.5	115/1#	1.0	8.5	65	180	40	5	30	TITUS MFV-3000-II	2	1, 2
M9	100-495	8"	0.25"	350	1/10	0.5	115/1#	1.5	15.2	65	180	40	5	30	TITUS MFV-3000-II	2	1, 2
M10	120-600	8"	0.25"	420	1/10	0.5	115/1#	1.5	15.9	65	180	35	5	30	TITUS MFV-3000-II	2	1, 2
M11	75-365	6"	0.25"	265	1/10	0.5	115/1#	1.0	11.5	65	180	40	5	30	TITUS MFV-3000-II	2	1, 2
M12	75-360	6"	0.25"	255	1/10	0.5	115/1#	1.5	12.5	65	180	45	5	30	TITUS MFV-3000-II	2	1, 2
M13	275-1400	12"	0.25"	1010	1/3	0.5	115/1#	5.5	54.7	65	180	50	5	30	TITUS MFV-3000-II	5	1, 2
M14	80-400	6"	0.25"	280	1/10	0.5	115/1#	1.0	12.1	65	180	40	5	30	TITUS MFV-3000-II	2	1, 2
S1	140-715	8"	0.25"	500	1/4	0.5	115/1#	2.0	19.0	65	180	35	5	30	TITUS MFV-3000-II	3	1, 2
S2	125-635	8"	0.25"	445	1/4	0.5	115/1#	2.0	19.3	65	180	40	5	30	TITUS MFV-3000-II	3	1, 2
S3	100-485	8"	0.25"	340	1/10	0.5	115/1#	1.5	14.7	65	180	40	5	30	TITUS MFV-3000-II	2	1, 2
S4	75-370	6"	0.25"	270	1/10	0.5	115/1#	1.5	13.1	65	180	45	5	30	TITUS MFV-3000-II	2	1, 2
S5	100-490	8"	0.25"	345	1/10	0.5	115/1#	1.5	15.0	65	180	40	5	30	TITUS MFV-3000-II	2	1, 2
S6-S7	45-215	6"	0.25"	150	1/10	0.5	115/1#	0.5	6.5	65	180	40	5	30	TITUS MFV-3000-II	2	1, 2
S8	55-275	6"	0.25"	200	1/10	0.5	115/1#	1.0	8.7	65	180	40	5	30	TITUS MFV-3000-II	2	1, 2
S9	50-225	6"	0.25"	180	1/10	0.5	115/1#	0.5	6.8	65	180	35	5	30	TITUS MFV-3000-II	2	1, 2
S10	115-570	8"	0.25"	355	1/10	0.5	115/1#	1.5	13.4	65	180	35	5	30	TITUS MFV-3000-II	2	1, 2
S11	110-550	8"	0.25"	385	1/10	0.5	115/1#	1.5	14.6	65	180	35	5	30	TITUS MFV-3000-II	2	1, 2
S12	145-715	8"	0.25"	500	1/10	0.5	115/1#	2.0	21.7	65	180	40	5	30	TITUS MFV-3000-II	2	1, 2
T1	75-360	6"	0.25"	270	1/10	0.5	115/1#	1.5	13.2	65	180	45	5	30	TITUS MFV-3000-II	2	1, 2
T2	120-535	8"	0.25"	415	1/10	0.5	115/1#	1.5	15.8	65	180	35	5	30	TITUS MFV-3000-II	2	1, 2
T3-T4	415-1840	12"	0.25"	1100	1/3	0.5	115/1#	4.0	39.7	65	180	20	5	30	TITUS MFV-3000-II	5	1, 2
T5	80-400	6"	0.25"	300	1/10	0.5	115/1#	1.5	14.6	65	180	45	5	30	TITUS MFV-3000-II	2	1, 2
T6	130-650	8"	0.25"	455	1/4	0.5	115/1#	1.5	17.3	65	180	35	5	30	TITUS MFV-3000-II	3	1, 2
T7	45-210	6"	0.25"	145	1/10	0.5	115/1#	0.5	6.3	65	180	40	5	30	TITUS MFV-3000-II	2	1, 2
T8	100-500	6"	0.25"	350	1/10	0.5	115/1#	1.5	15.2	65	180	40	5	30	TITUS MFV-3000-II	2	1, 2
T9	125-620	8"	0.25"	485	1/4	0.5	115/1#	2.0	21.1	65	180	40	5	30	TITUS MFV-3000-II	3	1, 2
T10	85-410	8"	0.25"	285	1/10	0.5	115/1#	1.0	7.7	65	180	25	5	30	TITUS MFV-3000-II	2	1, 2
T11	170-840	10"	0.25"	590	1/4	0.5	115/1#	2.0	22.4	65	180	35	5	30	TITUS MFV-3000-II	3	1, 2
T12	95-485	8"	0.25"	340	1/10	0.5	115/1#	1.5	12.9	65	180	35	5	30	TITUS MFV-3000-II	2	1, 2
T13	105-525	8"	0.25"	365	1/10	0.5	115/1#	1.5	15.8	65	180	40	5	30	TITUS MFV-3000-II	2	1, 2
T14	145-730	8"	0.25"	515	1/4	0.5	115/1#	2.0	22.3	65	180	40	5	30	TITUS MFV-3000-II	3	1, 2
T15	65-310	6"	0.25"	245	1/10	0.5	115/1#	1.5	11.9	65	180	45	5	30	TITUS MFV-3000-II	2	1, 2
T16	120-600	8"	0.25"	420	1/10	0.5	115/1#	1.0	9.1	65	180	20	5	30	TITUS MFV-3000-II	2	1, 2
T17	160-810	10"	0.25"	485	1/4	0.5	115/1#	1.5	15.8	65	180	30	5	30	TITUS MFV-3000-II	3	1, 2

1. SUBSTITUTIONS BY ENVIROTECH, TEMPMASTER, OR APPROVED EQUAL.
2. NC DATA BASED ON ASSUMPTIONS AS BY TITUS.

PACKAGE A/C UNIT SCHEDULE

SYM.	BLOWER DATA			COOLING DATA (MBH)				COMPRESSOR SECTION			CONDENSER FAN			MANUFACTURER & MODEL NO.		REMARKS	
	CFM	EXTERNAL SP (IN.)	HP	TOTAL COOLING	SENS. COOLING	EAT (F)	AMB. T.(F)	NO.	VOLT/PHASE	LRA (ea.)	RLA (ea.)	NO.	VOLT/PHASE	FLA (ea.)			
RTU-1	32000	3.75	40	460/3#	967	737	80/67	95	2	460/3#	283	56	8	460/3#	2.0	McQUAY RPS080C	1, 2, 3, 4, 5, 6

1. SUBSTITUTIONS BY TRANE, CARRIER, OR APPROVED EQUAL. 3. SINGLE PT. CONNECTION.
2. R.A. FAN = 32,000 CFM @ 1-3/4" ESP; 25 HP, 460V/3# 4. 5-RW/12 FPI FLOW COIL. 5. 30% FILTER SECTION
6. COOLING ONLY

SINGLE INLET TERMINAL UNITS

SYM	NOMINAL CFM	INLET DIA.	STATIC PRESSURE DROP (in.)	DISCH. NO. AT 1" SP	MODEL	REMARKS
A	0-265	5"	0.25	30	TITUS ESV-3000-II	1, 2
B	270-375	6"	0.25	30	TITUS ESV-3000-II	1, 2
C	380-650	8"	0.25	30	TITUS ESV-3000-II	1, 2
D	755-1050	10"	0.25	30	TITUS ESV-3000-II	1, 2
E	1050-1500	12"	0.25	30	TITUS ESV-3000-II	1, 2

1. SUBSTITUTIONS BY ENVIROTECH, TEMPMASTER, OR APPROVED EQUAL.
2. NC DATA BASED ON ASSUMPTIONS AS BY TITUS.

GRILLE & DIFFUSER SCHEDULE

SYMBOL	TYPE	USE	CFM RANGE	NECK SIZE	OVER-ALL SIZE	DAMPER	FINISH	FRAME	MODEL	REMARKS
A---	LOUVER FACE	SUPPLY 4-WAY	SEE PLANS & RMK 5	RMK 5	RMK 4	0BD	OFF WHITE	RMK 3	CARNES SK	1-5, 7,9
BS	SIDEWALL	SUPPLY	SEE PLANS	SEE PLANS	RMK 4	0BD	PRIME COAT	S	CARNES RTD4H	1-4,8,9
C---	PERF	EXHAUST	SEE PLANS & RMK 6	RMK 6	RMK 4	0BD	OFF WHITE	RMK 3	CARNES SP	1-4,8,9
D---	PERF	RETURN	SEE PLANS & RMK 6	RMK 6	RMK 4	NO	PRIME COAT	RMK 3	CARNES SP	1-4,8,9
ES	SIDEWALL	RETURN	SEE PLANS	SEE PLANS	RMK 4	NO	PRIME COAT	S	CARNES RSL4H	1-4,9
FS	SIDEWALL	EXHAUST	SEE PLANS	SEE PLANS	RMK 4	0BD	PRIME COAT	S	CARNES RSL4H	1-4,9
G---	LINEAR	RETURN	0-1225	SEE NOTE 10					CARNES CTR	1, 10
H---	ARCH.	SUPPLY	460	48X8	48X8	NO	PRIME COAT	MTD	ARCHITECTURAL GRILLE	1, 11
I---	ARCH.	RETURN	920	24X24	24X24	NO	PRIME COAT	MTD	ARCHITECTURAL GRILLE	1, 12

REMARKS:
1. EQUALS BY KRUEGER; TITUS SCHEDULE IS GENERAL. NOT ALL SHOWN ARE NECESSARILY USED.
2. SYMBOL EXPLANATION: GRILLE TYPE, USE. FRAME TYPE: REMARK 3. NECK SIZE: REMARK 5,6.
3. FRAME TYPES: T = T-BAR, S = SURFACE MOUNT (FRAME #2, PERF.), E = DUCT MOUNTED.
4. OVERALL SIZE = 2'X2' LAY-IN, NECK SIZE + 2" (APPROX.) OTHER GRILLES.
5. LOUVER FACE SUPPLY NECK SIZES:
NO. SIZE CFM NO. SIZE CFM
A 5" 70 K 12X12 500
B 6" 100 L 15X15 780
C 8" 210 M 18X18 1125
D 10" 400 N 21X21 1530
E 12" 600 O 24X24 2000
F 14" 800
G 16" 1100
H 18" 1500
I 20" 2000
J 24" 2800
(1) TRANSITION REQ'D. BY CONTRACTOR IF 8" SHOWN ON PLANS.
6. PERFORATED EXHAUST/RETURN NECK SIZES:
NO. SIZE CFM NO. SIZE CFM
1 2'X2' (1) 1400 9 2'X2 1345
2 2'X2 (1) 2800 10 2'X2 1300
3 3'X3 175 11 3'X3 175
4 10X10 280 12 10X10 280
5 12X12 545 13 12X12 460
6 14X14 900 14 12X14 545
7 18X18 710 14 12X18 545
8 18X18 900
7. ADJUSTABLE: HORIZONTAL/VERTICAL
8. VOLUME EXTRACTOR WHERE SHOWN ON PLANS.
9. THIS SCHEDULE IS GENERAL IN NATURE. NOT ALL GRILLES AND DIFFUSERS ARE NECESSARILY USED.
10. SEE DETAIL 13/M5.
11. 1" W/1/4" BAR - 84% OPEN.
12. 2" - 50% OPEN.

PUMP SCHEDULE

PUMP NO	SERVICE	GPM	HEAD (FT)	EFF. (%)	RPM	HP	VOLTS	#	TYPE	VIBRATION ISOLATION	MFG. & MODEL NO.	REMARKS
P-1	HOT WATER	42	52.5	56	1750	2	460	3#	END SUCTION	-	B&G 1510 1 1/4 AC	

1. SUBSTITUTIONS BY TACO, PEERLESS, OR APPROVED EQUAL.

SPLIT SYSTEM COMPUTER ROOM UNIT SCHEDULE

SYM.	INDOOR SECTION										OUTDOOR SECTION				MANUFACTURER & MODEL NO.	REMARKS	
	BLOWER DATA			COOLING DATA (MBH)				COMPRESSOR			CONDENSER FAN						
	AREA SERVED	CFM	EXTERNAL SP (IN.)	HP	TOTAL COOLING	SENS. COOLING	EAT (F)	AMB. T.(F)	NO.	VOLT/PHASE	FLA	NO.	VOLT/PHASE	FLA (EA.)			
CRU-1/PRINT ROOM CU-1	311	850	-	1/5	208/1#	22.1	19.1	72/60	95	1	208/1#	12.4	1	200/1#	1.4	DATA AIRE MINI CEILING SYSTEM DAM.02	1, 2
CRU-2/COMP ROOM CU-2	312	1000	0.3	1/2	208/1#	27.1	22.9	72/60	95	1	208/1#	12.1	1	200/1#	4.6	DATA AIRE MINI-PLUS SYSTEM DAME 025	1, 2

1. SUBSTITUTIONS BY LIEBERT OR APPROVED EQUAL.
2. UNIT CONDENSATE PUMP.

FAN SCHEDULE

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