Airvac

The world leader in vacuum sewer collection technology.

RFQ NO. 2024000557

Lake View Midway Water Quality Improvements Project

Charlotte County

A brand of
Aqseptence Group

Clint Hawn
President & CEO
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February 24, 2025

Charlotte County Purchasing Division
18500 Murdock Circle, Suite 344
Port Charlotte, Florida 33948-1094

Subject: Submission for RFQ No. 2024000557 – Vacuum Sewer System Materials

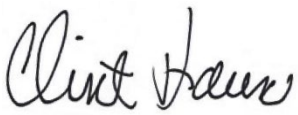
To Whom It May Concern,

On behalf of Airvac, Inc., I am pleased to submit our response to **RFQ No. 2024000557 – Vacuum Sewer System Materials**. As a leader in vacuum sewer technology, we appreciate the opportunity to provide our qualifications for consideration as the approved provider for the **Lake View Midway Water Quality Improvements** project.

Enclosed, you will find our qualifications package, which outlines our experience, technical expertise, and ability to supply high-quality vacuum sewer system materials. We are committed to supporting Charlotte County Utilities in achieving its project objectives with reliable and cost-effective solutions.

Please do not hesitate to reach out with any questions or requests for additional information. I can be reached at **574.242.9086** or **clint.hawn@airvac.com**. We appreciate your time and consideration and look forward to the opportunity to support this important project.

Sincerely,



Clint Hawn
President & CEO
Airvac, Inc.

RFQ 2024000557

Airvac

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SECTION 1
CORPORATE EXPERIENCE

RFQ NO. 2024000557

Lake View Midway Water Quality Improvements Project
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SECTION 1
CORPORATE EXPERIENCE

AIRVAC HISTORY

It all started in 1969 when National Homes Corporation (NHC) acquired the rights to the Liljendahl Vacuum Sewage System in the U.S. from Electrolux. NHC purchased Burton Plumbing & Heating (BPH), a mechanical contracting company in Rochester, IN and a vacuum division called Sanivac was created.

In 1971 NHC and Electrolux parted ways and the Sanivac name was changed to Airvac. On January 29, 1974, Airvac was incorporated. Since then, Airvac has been purchased by several other companies, most notably Ebara in 1988 and Bilfinger Berger in 2005.

Eventually 7 Bilfinger companies/brands including Airvac, were purchased by Aqseptence Group. Aqseptence Group is headquartered in Germany's Aarbergen, close to Frankfurt am Main and employs around 1,500 people. Aqseptence Group is a global supplier of specialized products, equipment and system solutions for filtration and separation, as well as water technology for various applications. Aqseptence Group remains the parent company of Airvac, Inc.

EXPERIENCE

Airvac has 55+ years of experience designing, installing, servicing and operating vacuum systems throughout the U.S. and abroad.

- First US municipal project: 1972 St Michaels, MD
- First U.S. commercial project: 1972 Scott Paper, Mobile, AL
- First international project: 1980 Project in England

U.S. Systems (505)

Airvac has systems in 33 different states in the U.S.
Presently there are 505 operating Airvac vacuum systems in the U.S., with 85,500+ 3" valves serving 185,500+ households.

There are 106 Airvac systems in FL alone, with 20 in Charlotte County & Sarasota County.

Retrofit of other systems (22)

Airvac has been involved in an upgrading/retrofitting situation in 22 vacuum systems installed by other manufacturers (mostly in the 60s and 70s) where Airvac valves have replaced approximately 3,330 of the other manufacturers' valves.

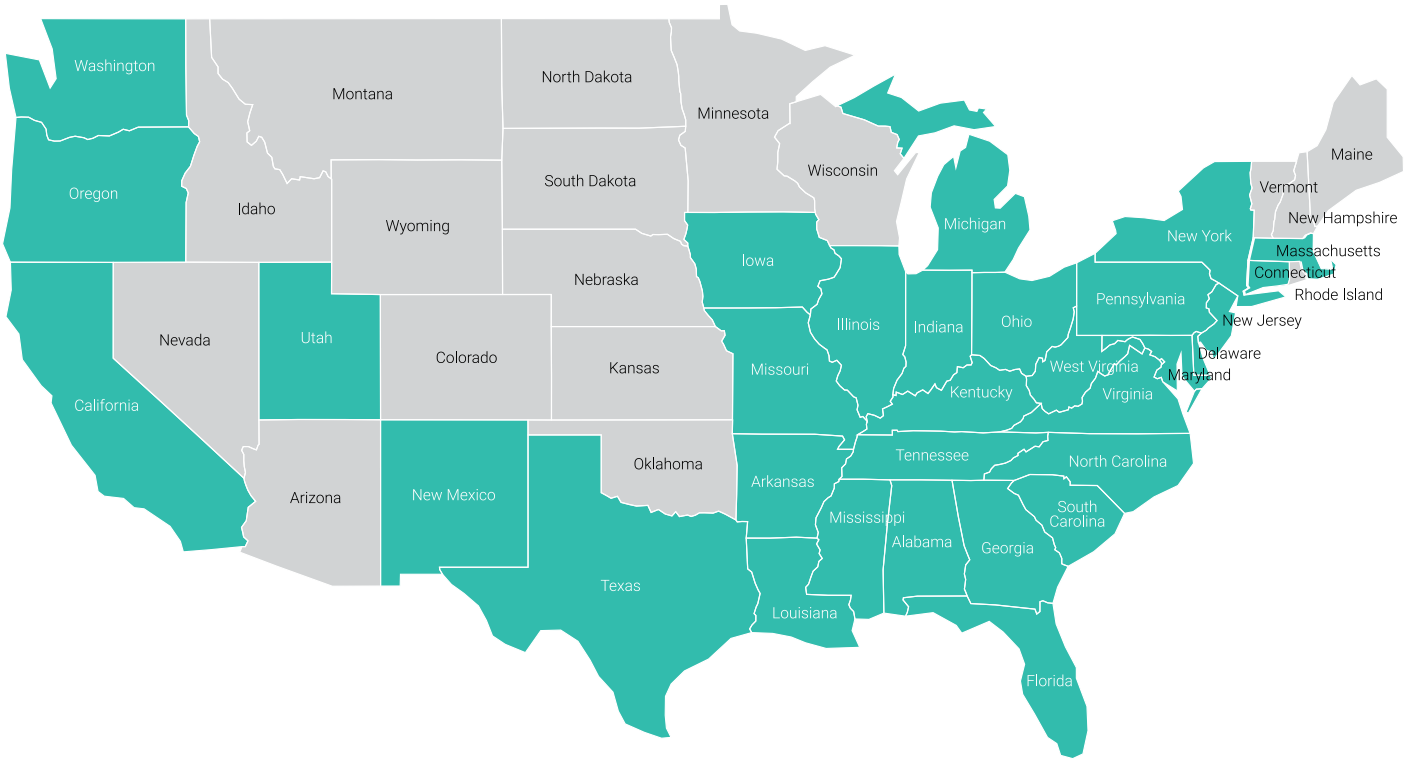
International systems (600+)

Airvac has been involved in projects in other countries for over 40 years. The list of countries grows at a steady pace every year. Airvac had operating systems in 36 different countries, with nearly 60,000 valves serving 200,000 households.

STATES WITH AIRVAC VACUUM SYSTEMS

As of Dec 31, 2024

505 VACUUM SYSTEMS IN 33 STATES, PUERTO RICO & THE BAHAMAS



Other Projects	#
Monitoring	15
Retrofit	22
Rehab	19

AIRVAC VACUUM SYSTEMS - INTERNATIONAL

As of Dec 31, 2024

Number of Countries	Number of Projects	Number of Vacuum Valves	Number of Vacuum Stations
36	632	58,720	632

INDUSTRY REPUTATION

EPA Manual

The "Airvac way" has been recognized by the US EPA as the industry standard. One of Airvac's most significant achievements has been its recognition by the US EPA as the leader in vacuum sewer technology. In a manual produced by the EPA (Alternative Wastewater Collection Systems: EPA/625/1-91/024), the Airvac design method and concepts are used exclusively as the industry standard. Members of Airvac's staff have participated in EPA conferences as speakers.

WEF Manual

The Water Environment Federation (WEF) used the EPA manual as a basis for their own manual under their name as a Manual of Practice. The WEF manual included up-to-date information on vacuum sewers. Rich Naret, P.E., of Airvac, was again chosen to be the author of the vacuum section. The WEF Manual (WEF MOP FD-12, Alternative Sewer Systems) was published in 2008 and is considered to be the industry standard for vacuum sewers. This manual is currently undergoing an update with Rich Naret, P.E., once again authoring the vacuum chapter.

As supported by independent evaluators (RFP's)

In past years, various entities have evaluated Airvac and its competitors to identify the most qualified vacuum manufacturer for their particular project. In every case but one, Airvac was selected as the winner (16 out of 17). Airvac is now providing after-market services to the one project that used another vacuum vendor.

The RFP's were all extremely detailed with information requested concerning every conceivable angle including present price, future price, experience, manufacturer's support of the owner, technical features, services, spare parts, ease of operation, etc. Those who evaluated the RFP's include owners, engineers, and operating personnel.

As supported by Airvac customers

Over the past 55+ years, Airvac has received many endorsements from system users. This has come in the form of letters, surveys, phone calls, and personal comments made to others outside of our presence.

Perhaps the most meaningful endorsements come when prospective customers contact one of our existing users for a reference. In fact, these owner endorsements have sold more Airvac systems than any other single factor in our history. In these cases, Airvac is not part of the conversation, so it is not possible to document these endorsements; however, we routinely get positive feedback from those who do call the references.

REGULATORY REVIEW

Grant and loan monies usually come with strings attached. This means compliance with state and federal regulations. Various forms and certifications are required as is Plan and Specification review and approval. Airvac is proud that our projects have all met the scrutiny of funding and regulatory agencies in 33 different states throughout the years. Surprisingly, very few states have formal vacuum regulations. As a result, most refer to other industry standards when reviewing a vacuum project.

WEF Manual of Practice (sample regulations section): The WEF manual contained a section called Sample Regulations that some states use as their unofficial regulations for vacuum.

Like the EPA manual, this manual is based on Airvac and is regarded by most as the industry standard for vacuum systems. The vacuum chapter was authored by Rich Naret, P.E. (retired Airvac)

FDEP Design Review Checklist: The FDEP developed a design review checklist specifically for vacuum systems. The checklist uses the technical information contained in the WEF Manual. The Engineer of Record must initial each item on the checklist indicating that the design meets the criteria for that item.

Note: The FDEP checklist not only follows the WEF MOP, but also is consistent with the Airvac Design Manual.

REFERENCE CONTACT INFORMATION

Confidential information and not to be shared outside of the review team or to the public.

Charlotte County Utilities

Municipal system, vacuum station, vacuum valves
25550 Harbor View Road Suite 1
Port Charlotte, Florida 33980

Dean Campbell
(941)456-0041
dean.campbell@charlottecountyfl.gov

# Vacuum Stations	# Connections Served	Year 1st system in service	Year most recent system in service	Total Project Amount
4	3,900	2016	2024	$9,000,000

Martin County Utilities

Municipal system, vacuum station, vacuum valves
2378 S.E. Ocean Blvd.
Stuart, Florida 34995

Brittany Bassett
(772)209-2441
bbassett@martin.fl.us

# Vacuum Stations	# Connections Served	Year 1st system in service	Year most recent system in service	Total Project Amount
5	2,300	2005	2021	$5,000,000

City of Cape May Water and Sewer Utility

Municipal system, vacuum station, vacuum valves
643 Washington St.
Cape May, New Jersey 08204

Joseph Mendo
(609)884-9577
jrm@capemaycity.com

# Vacuum Stations	# Connections Served	Year 1st system in service	Year most recent system in service	Total Project Amount
2	1,100	2022	2022	$4,300,000

Donna Ana Mutual Domestic Water Consumers Association Utilities

Municipal system, vacuum station, vacuum valves
5535 Ledesma Dr.
Las Cruces, New Mexico 88007

Jennifer Horton
(575)526-3491
jennifer@dawater.org

# Vacuum Stations	# Connections Served	Year 1st system in service	Year most recent system in service	Total Project Amount
2	648	2007	2022	$1,500,000

Sussex County

Municipal system, vacuum station, vacuum valves
PO Box 589
Georgetown, Delaware 19947

Paul Mauser
(302)854-5028
paul.auser@sussexcounty.gov

# Vacuum Stations	# Connections Served	Year 1st system in service	Year most recent system in service	Total Project Amount
1	400	2023	2023	$1,600,000

Sarasota County

Municipal system, vacuum station, vacuum valves
1001 Sarasota Center Blvd.
Sarasota, Florida 34240

Andy Ward
(941)861-0954
award@scgov.net

# Vacuum Stations	# Connections Served	Year 1st system in service	Year most recent system in service	Total Project Amount
8	8,700	2003	2016	$20,200,000

CLIENT TESTIMONIALS

Following are customer testimonial statements regarding Airvac and vacuum sewers taken directly from various trade magazines that have featured Airvac projects over the years. Some of those quoted have since retired or changed jobs; however, the information below is accurate for the time period cited.

Mike Allen, General Manager, Broadcreek PSD, SC

"Airvac has been a partner with BCPSD helping us through every stage of the system rehab. They were available for technical support when needed, which BCPSD administration listed high on its list of appreciation."
W&WD March 2020

Jamie Tuccolo, Deputy Director, City of Newbury Port, MA

"I have worked with vacuum sewers since 2008, having come from a job where we maintained gravity sewers. It took a little time to learn the technology, but now I am a huge proponent of vacuum sewers. The Airvac company was terrific in helping train me on the system and were extremely helpful during the winter storm of 2015."
W&WD March 2018

George Kedgus, P.E., Public Service Director, Oak Island, NC

"If a question comes up that we can't answer, we simply call AIRVAC and they walk us through the issue."
CENews July 2012

David Burnell, City Manager, Crystal River, FL

"Airvac has been great to work with. They provided instruction and testing during the installation, and excellent training on how to operate and maintain the system."
Informed Infrastructure Sept 2015

Don Eckler, P.E, President, Eckler Engineering

"Airvac developed most of the specifications used in vacuum system design so it's always good to have their expertise for a job as big as this one. They have worked well with us to create a fail-safe functioning system that will experience minimal problems in the future."
CENews Sept 2009

Jorge Vazquez, System Operator, Martin Co Utilities, FL

"A few years ago, we had a hurricane come through. Before the storm even arrived, I got a call from John asking, 'Is there anything we can do to help?' He was willing to drive over and help us prep for the storm. When the storm was over, he called again asking if we needed help."
WE&T May 2020

SUMMARY: WHY AIRVAC?

Unmatched Experience

- 55+ years in the business.
- Over 1000 operating systems worldwide, 505 in US, 106 in FL.
- Since 2006, Airvac has been the only manufacture to supply valve pits, vacuum station components and other system appurtenances (i.e.- a complete working system) for a U.S. installation.
- Multiple, experienced staff members available to assist.

Unmatched Customer Support

- Airvac provides engineering support for multiple projects being installed simultaneously.
- Airvac provides construction support for multiple projects being installed simultaneously.
- Airvac provides service support for multiple projects being installed simultaneously.
- Airvac is the only manufacturer with a US factory.

SUMMARY: WHY AIRVAC? (cont)

Superior Products

- Airvac is the only manufacturer that can provide the latest valve controller technology (HP Controller- Patent # 10,001,787).
- Airvac is the only manufacturer that can provide the latest "valve to service line" connection technology (Pipe coupling- Patent # 9,523,449).
- Airvac is the only manufacturer that can provide the latest "controller protection" device, the Pressure Activated Sump Breather (Pressure Activated Sump Breather-Patent #11,299,878).
- Airvac is the only manufacturer that can provide Busch vacuum pumps manufactured specifically for use in a vacuum sewer system (Airvac proprietary pumps).
- Airvac is the only manufacturer that can supply a valve pit that is H20 traffic rated without the use of a concrete collar.
- Airvac's products meet the Buy American provisions and the BABA Act.

Interdependence

It is in the client's best interest to have everything from a single manufacturer to avoid complications. Airvac supplies valves, valve pits, complete vacuum stations and prefab buildings. No other manufacturer can do this.

Airvac is driven by innovation, continuously developing and delivering cutting-edge vacuum sewer technology that no other provider offers. Our solutions are designed with advanced features that enhance performance, reliability, and ease of maintenance—setting Airvac apart in the industry. Rather than compromising on quality, we remain dedicated to pushing the boundaries of vacuum sewer technology, ensuring our clients receive the most effective and forward-thinking solutions available.

Specific details about these patented items are included in Airvac's latest standard 02730 specification (some patented items are listed in a table in Section 2 - Page 14).

Competitive Pricing

- Airvac's pricing remains consistent with projects that do not involve a competitive bidding process.
- According to contractor feedback, our pricing aligns with other vacuum sewer providers when competitive bidding is used. When comparing similar technology and specifications, Airvac's prices were either lower than those of other vacuum sewer providers or comparable.

Miscellaneous

- Airvac provides a full design manual and standards to follow for the design phase.
- Airvac assembles and tests the vacuum station equipment prior to shipment. Some Counties require manufacturing testing and observation of proper system function by County personnel (witness test). With no operational and testing plant in the US, we do not believe that any other vacuum manufacturers have this capability.
- It's important to use the best in the business that has full support staffing and extensive experience. Accordingly, it is not in the customer's best interest nor worth the risk to forgo all the advantages Airvac offers for this important project.

SECTION 2
SYSTEM DESCRIPTION/QUALITY

RFQ NO. 2024000557

Lake View Midway Water Quality Improvements Project
Charlotte County

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SECTION 2
SYSTEM DESCRIPTION/QUALITY

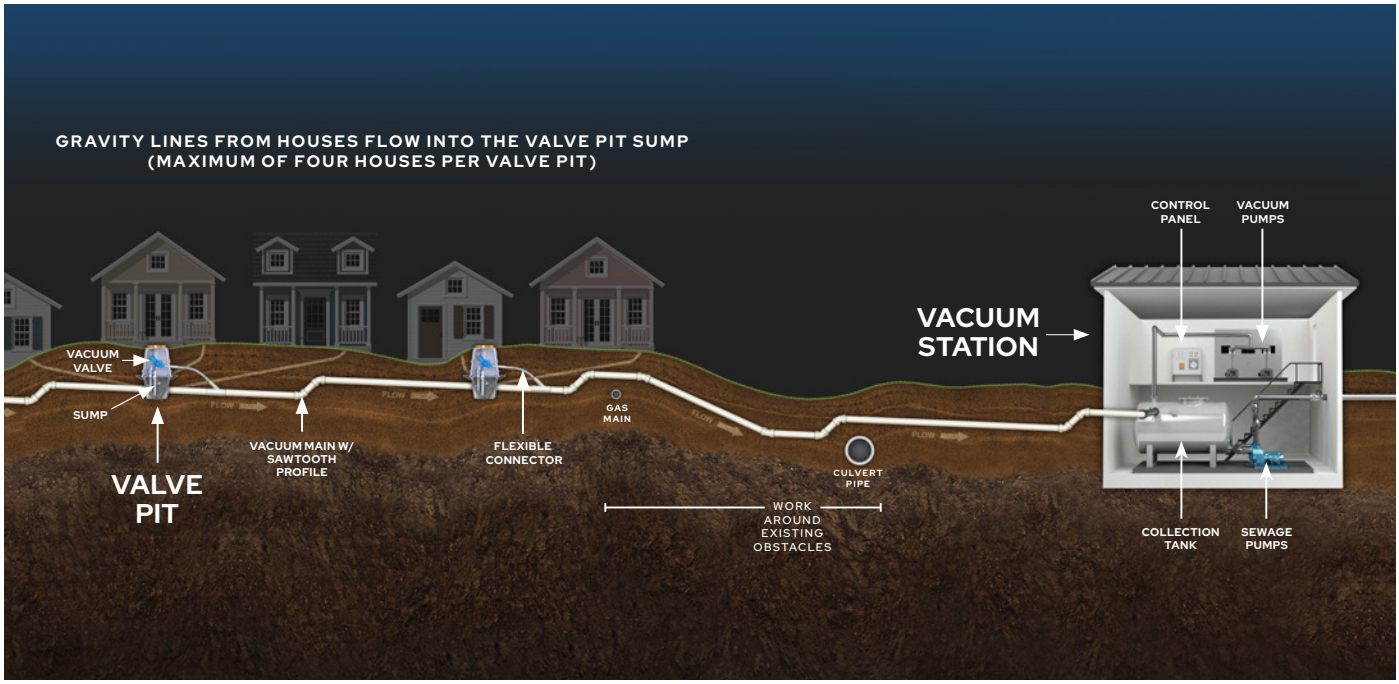
VACUUM SEWER SYSTEMS

A vacuum sewer system is an ecological alternative to areas where failing septic tanks are causing pollution or where traditional gravity sewer systems are aging. They specifically work well in areas with subsurface difficulties (For example: high groundwater tables, sandy and unstable soils, rocky terrain, restricted construction conditions, acid sulfate soils (A.S.S), or sensitive eco-systems).

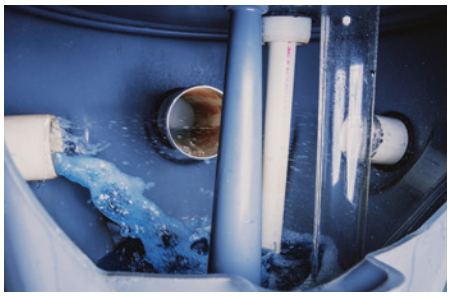
With a vacuum sewer system, vacuum pumps maintain continuous vacuum pressure on the system. In addition, there are vacuum valves located at each sewage input point that seals the system. When these valves are activated, differential pressure propels the wastewater through the piping to the vacuum station.

Because there is constant vacuum pressure on the system, wastewater never leaks into the ground. Although rare, if a pipe should get punctured or cracked, the vacuum will continue to "suck in" instead of "leak out". For this reason, vacuum sewer systems are significantly better for the environment.

HOW IT WORKS



FOLLOWING IS A STEP-BY-STEP SUMMARY OF HOW A VACUUM SYSTEM WORKS.



A traditional gravity line carries wastewater from a customer's home to an Airvac valve pit package.

The Airvac vacuum valve opens when 10 gallons of sewage collects in the sump. Differential pressure propels the contents into the vacuum main.

Wastewater travels at 15 to 18 fps in a vacuum main, which is laid in a sawtooth fashion to ensure adequate vacuum levels at the end of each line.

At the vacuum station, Vacuum pumps cycle on and off as needed to maintain a constant level of vacuum on the entire collection system.

Wastewater enters the collection tank and fills to a predetermined level.

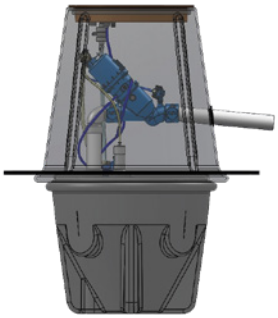
Sewage pumps then transfer the sewage to the treatment plant via a force main.

PRODUCT PHOTOS Photos of the various Airvac products can be found on the following pages.

QUALITY Airvac is ISO-9001:2015 Certified, which is an international standard for quality management systems (QMS). This demonstrates our ability to consistently provide products and services that meet customer needs and regulatory requirements.

DESIGN PHILOSOPHY Airvac product design philosophy is straightforward: Design high performance products that are durable and can easily adapt to existing technology. Key products are described on the following pages.

VALVE PIT



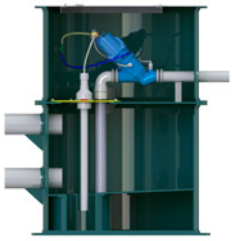
Valve Pits

Airvac valve pits are durable and corrosion resistant with variations available to suit any project, including a 1-piece pit, a 2-piece pit. These pits are available in depths ranging from 6 feet to 10 feet.

Airvac sumps are rotationally molded and are made entirely of polyethylene. All valve pits include an anti-buoyancy collar and have an H-20 traffic load rating. In addition, the valve pit package includes a special flexible PVC hose (Airvac Flexible Connector) to easily connect the outgoing 3" vacuum line from the valve pit to the vacuum main. Key benefits are shown below:

- Valve pits include an anti-buoyancy collar.
- Operators are never exposed to raw sewage while doing maintenance.
- Electricity is not required at the valve pit.
- Special plumbing fixtures are not required by the homeowner.
- Airvac valve pits are H-20 traffic rated.
- Airvac valve pits are made with durable materials and have a long life.
- Airvac valve pits are available in multiple depths to accommodate customer needs.
- All components of the valve pit are corrosion resistant.

BUFFER TANKS



Buffer Tanks

Buffer tanks are typically used for schools, apartments, nursing homes, and other large-volume water users. Buffer tanks function in a similar manner to the standard Airvac valve pit but have additional storage capacity in the sump area to allow for large, instantaneous flow inputs to be temporarily stored while the vacuum valve(s) evacuate the sump.

In some cases, buffer tanks are used to serve multiple users when space is limited, and flow rates are low. Such is the case with Bay Indies where buffer tanks serving more than 4 mobile homes are more practical than using the standard Airvac valve pits serving only 2 homes. In this case, these are buffer tanks in name only.

Buffer tanks are available in either fiberglass or concrete. However, since the introduction of the fiberglass tanks, concrete tanks are no longer recommended due to their many disadvantages (concrete is susceptible to corrosion, operator is exposed to raw sewage, odor and I&I are prevalent, field assembly required, confined space entry).

The fiberglass buffer tanks arrive at the job site completely assembled. None of the disadvantages of a concrete buffer tank exist with fiberglass models.

VACUUM VALVE

The Airvac 3" (78mm) Vacuum Valve is the most dependable, industry leading, light weight piston valve and incorporates a valve positioning sensor for monitoring. Key benefits are show below:

- Inside diameter is designed for handling 78mm (3.1 in) solids.
- Corrosion resistant components.
- Pneumatic operation requires no electricity to operate.
- Airvac's monitoring system easily connects to the vacuum valve through the built-in monitoring port.
- Full rubber tapered plunger flexes and prevents ice buildup.
- Uses a socket head bolt for firm attachment.
    - Buna Rubber resists shrinkage due to chemical attack.
- Minimal maintenance.
- Inexpensive rebuild costs.
- The geometry provides a high Cv factor, keeping friction losses through the valve to a minimum.
- Recommended rebuilding timeframe is 15 years.
- Airvac Vacuum Valves and HP Controllers have independent certification for AS 4310-2204; EN16932-2018, and EN-1091.

Valve Controller/HP Controller (Patent #10,001,787)

The Airvac HP Controller/sensor is the key component of the Airvac 3-inch vacuum valve. The device relies on three forces for its operation: pressure, vacuum, and atmosphere. As the sewage level rises in the sump, it compresses air in the sensor tube. This pressure initiates the opening of the valve by overcoming spring tension in the controller and activates a three-way valve. Once opened, the three-way valve allows the controller/sensor to take vacuum from the downstream side of the valve and apply it to the actuator chamber to fully open the valve.

The controller/sensor can maintain the valve fully open for a fixed period, which typically is adjustable over a range of 3 to 10 seconds (contact Airvac Engineering if longer cycle times are needed). After the preset time has elapsed, atmospheric air is admitted to the actuator chamber permitting spring assisted closing of the valve.

The Airvac 3-inch vacuum valve controller is chemically resistant to sewage and sewage gases and is capable of operating when submerged in water. The Airvac valve pit was designed so that a very repeatable, specific amount of liquid is withdrawn on each cycle (10 gallons). The air cycle of the controller changes as vacuum levels fluctuates. With a varying amount of air and a specific amount of liquid, the air-to-liquid ratio will also fluctuate.

Pressure Activated Sump Breather (Patent #11,299,878)

Airvac's Model pressure activated Sump Breather is characterized by its uncomplicated operation and a flexible diaphragm that reacts to breather pipe pressure. It not only protects the controller from moisture and water, it also eliminates the need for a high sewage sump float for monitoring.

It also features a built-in port for simple wireless monitoring connectivity.

- Normal liquid levels: The sensor pipe pressure ranges from 0" (sump emptied) to 6" (level where valve normally cycles).
- Abnormally high liquid level: When sewage level becomes abnormally high, the sensor pressure continues to rise. When 22" of pressure is present, the diaphragm will seal off the ports of the sump breather, protecting the controller from water and moisture damage. An internal switch will activate which provides a high sewage sump level signal for monitoring. As a result, high sewage sump floats are no longer required.
- When a problem is corrected: When a system operation problem is corrected, the valve will cycle, and the sewage sump will be emptied. The sensor pipe pressure will drop to 0" allowing the valve and controller to return to normal operation.

VACUUM VALVE (cont)

Internal Valve Position Switch

The lower housing of the 3-inch Airvac valve has a molded-in, external IP68 rated thermoplastic electrical connection as well as an internal IP68 rated valve position switch. Unlike previous Airvac model valves that use magnetic sensors and reed relays on the outside of the valve that require precise alignment to activate the switch, the internal valve position switch does not require an alignment procedure.

The valve position switch, along with the pressure activated sump breather and an Airvac wiring harness, allows for monitoring of the valve and sump.

Vacuum Supply Check Valve Assembly (patent pending)

The latest model Airvac valve includes a patent pending Vacuum Supply Check Valve Assembly with these features:

- High flow.
- Delivers high vacuum to the controller.
- Does not hold liquid & fully drains (eliminates freeze potential).
- Large passages prevent blocking.
- Simple design is easy to work on.
- Has ports for monitoring or chart recorder connections.

ANTI-BUOYANCY COLLARS

Anti-Buoyancy Collars

Airvac's hybrid 2-piece PE Valve Pit is available with two anti-buoyancy collar options. A 1 piece, 1-inch (25mm)thick sheet anti-buoyancy collar or a 2 piece, bolt together anti-buoyancy collar, both made from PE. The 1 piece sheet collar fits around the tapered valve pit and holds the valve pit down on the PE sump. The 2 piece anti-buoyancy collar locks the pit and sump sections together to allow for the assembly to be installed as 1 complete unit.

6-IN AIR TERMINAL

6-inch Air-Terminal (AT)

The 6-inch Air Terminal (AT) consists of a molded housing made by Airvac that is placed on 6-inch piping connected directly to a valve pit sump as shown in Fig 6-12. The Air Terminal was designed to look like other utility boxes/structures typically seen in rights-of-way. It has an access door and is available in 3 colors: sandstone (recommended), utility green, & gray granite.

PIPE COUPLING

Pipe Coupling (Patent #9,523,449)

The 3-inch pipe coupling assembly is used to connect the 3" Airvac valve to the sump suction line and the outgoing 3" vacuum service line. It is composed of a plastic hinged clamp, rubber sleeve, and worm gear clamp all of which are chemically resistant to sewage. Assembly hinges open for easy installation when coupling the 3" interface valve to the suction line and the outgoing 3" vacuum service line.

FLEX CONNECTOR

Airvac Flexible Connector

The Airvac Flexible Connector is a standard item supplied with all Airvac valve pits. The flexible connector uses a combination of PVC pipe and a special 3-inch flexible PVC hose in order to provide some installation flexibility when making the connection from the valve pit to the vacuum main.

Connections at both ends of the flexible connector are the same as with PVC pipe. The use of an Airvac flexible connector virtually eliminates stress-related leaks caused by poor workmanship or ground settlement.

VACUUM STATION

Engineered Custom Vacuum Station

Engineered custom vacuum stations are ideally suited for larger systems with more than 550 connections and peak flows greater than 350 gpm. With an engineered custom vacuum station, Airvac provides all the internal components on a skid(s) which are housed in a building or other structure that is custom designed by an engineering firm.

PacVac Vacuum Station using Prefabricated Buildings

PacVac vacuum station models are ideally suited for small to medium-sized projects serving less than 550 connections and/or peak flows less than 350 gpm. Generally, the mechanical and electrical components are located on skids including the vacuum pumps, sewage pumps, collection tank and control panel.

The skids are housed in a prefabricated building that are supplied by Airvac. The prefabricated building can either be installed on-grade or on a contractor-built basement vault. Advantages are:

- Fully assembled prefabricated building and station option.
- Wiring, HVAC installation, and testing completed prior to arrival.
- Reduces onsite engineering and construction time and costs.
- Designed to meet all local codes, regardless of project size.
- Customized solutions to meet specific needs and requirements.
- Reliable, efficient, and cost-effective vacuum sewer system.
- Delivered on time and within budget.

CONTROL PANEL

Every control panel is custom designed by engineers at Airvac. Our experience in vacuum technology has allowed us to create a control panel that is tailored to specifics of vacuum sewer collection technology.

The control panel controls the operations of the vacuum and sewage pumps. The standard control panel package for new vacuum stations is designed to use a vacuum pressure transmitter and level transmitter on the collection tank and a flow transmitter on the combined force main. The vacuum pressure transmitter controls vacuum pump operation and allows for Mink or Cobra type vacuum pumps to be modulated. The level transmitter controls the starting and stopping of sewage pumps, while the flow transmitter can control the sewage pump flow rate. A redundant level control system is included, in addition to the main level transmitter, for collection tank high level lockout alarm. This provides added protection of vacuum pumps.

Standard Control Panel

The standard control panel package includes:

- PLC and VFDs.
- An ethernet switch for convenient communication of the vacuum station parameters and alarms to a separate SCADA system.
- An operator interface screen that displays information, including:
    - System parameters such as collection tank vacuum level, collection tank sewage level, and sewage pump flow rate.
    - Vacuum and sewage pump information such as run time meters and run/fault status.
    - Vacuum level and sewage level setpoints to control vacuum and sewage pump operation.
    - Collection tank vacuum level trending data.
    - System alarms list.
    - Interactive eCabinet for additional system parameters and preventative maintenance information.

CONTROL PANEL (cont)

Interactive eCabinet

The interactive eCabinet provides a "real time" assessment of the vacuum sewer system. Prior to the interactive eCabinet, data was derived from system operators traveling to the job site, collecting data, analyzing, and developing a report. With the invention of the interactive eCabinet, key performance indicators are analyzed, computed, and displayed in real time at the control panel.

The interactive eCabinet displays helpful system information, including:

- Preventative maintenance log.
- Pump oil life calculator.
- Modulation information and parameters.
- Sewage pump efficiency.
- System air-to-liquid ratio.
- Preventative maintenance and troubleshooting tutorial videos.

PROGRAM LOGIC

Vacuum Pump Modulation (Patent # 11,939,760)

Modulation is an Airvac program logic that improves the manner in which your vacuum system functions. Previous designs required vacuum pumps to turn on at 16" Hg and off at 20" Hg in response to vacuum levels within the vacuum system.

The modulation sequence controls the speed of the vacuum pumps to maintain a tighter vacuum range and speeds up and slows down depending on the demand of the vacuum system. Since the pumps are not turning on and off as frequently and are running at lower speeds, modulation also significantly reduces the overall power consumption and creates less heat and noise.

Modulation has proven so effective that capital outlay pay-back period may be as little as eighteen months through energy savings alone. Benefits include:

- Reduction of up to 35% of current power usage.
- Reduction of noise & heat (operator safety/comfort).
- Improved end-of line pressure and overall more consistent pressures throughout results in a more reliable system.
- Potential for energy grants.

S.M.A.R.T. Technology (Patent #10,316,504)

(Strategic Monitoring for Advanced Remote Transfer)

Airvac's patented S.M.A.R.T. technology works in conjunction with the monitoring system. It proactively makes real-time adjustments, prevents problems from occurring, and it reduces operation & maintenance costs.

Using artificial intelligence (AI), S.M.A.R.T. communicates with the various vacuum station controls and will override pump control as necessary. S.M.A.R.T. software uses several modes to identify system imbalances and to provide recovery options. This may include monitoring various system vacuum levels, monitoring pump operating parameters, monitoring incoming flows, actuating remote vacuum valves, and adjusting vacuum levels at the station.

Dedicated Ports

One of the key innovations introduced by Airvac is the integration of dedicated ports into the vacuum valve and sump breather. These dedicated ports facilitate quick and easy connections for monitoring cables.

PROGRAM LOGIC (cont)

No magnets or floats required

Vacuum valve monitoring does not require a magnet with newer model vacuum valves, minimizing the risk of failure due to misalignment, switch malfunction, or debris build-up. Sump levels are monitored through our new diaphragm breather instead of using a float. This minimizes the chance of failure due to the float getting stuck or hung up on internal wiring (magnet switches and floats are still available for older systems).

Two-way communication

Two-way communication offers operators the ability to remotely cycle specific S.M.A.R.T. vacuum valves.

MONITORING

Solar Light Monitoring

A solar light monitor is mounted on the air terminal and connects to the sump breather and the vacuum valve. The solar light monitor can signal a high sewage sump level via the breather or a valve failure via the vacuum valve. The light is easily visible from a long distance, avoiding the need for operators to physically check every vacuum valve in the system. Benefits include:

- Activates if high sewage sump levels occur.
- Flashes if the valve remains open longer than 15 seconds.
- Allows operators to easily identify which valve pit is affected.
- Is easily visible from a long distance.

Wireless Monitoring w/S.M.A.R.T. Technology (Patent #10,316,504)

Controlling a vacuum system's behavior typically has been a reactive process where operators analyze system data and make adjustments accordingly. Or a problem may occur requiring an operator's attention prior to any adjustment being made.

With Airvac's S.M.A.R.T. System, operation of the vacuum sewage system is taken to the next level. S.M.A.R.T. not only monitors the sewage system, but automatically makes real-time adjustments to optimize system hydraulics. This proactive approach of controlling the vacuum sewage system's behavior results in increased system efficiency, prevents problems from occurring, increases end of line vacuum levels and reduces operation & maintenance costs.

System Benefits

- Automatically monitor and control your entire vacuum system.
- Perform automatic real-time system adjustments that previously required human interaction.
- Activate vacuum valves remotely.
- Control vacuum pump modulation.
- Wirelessly monitor valve pits.
- Access controls on a mobile device.
- Proactive not reactive.
- Potential problems are not only identified but adjustments are made automatically to correct them.

A more efficient system

System imbalances can be quickly overcome, resulting in a more efficient system, fewer callouts, and lower power bills.

Built in Purge Cycle

A "purge" cycle can be programmed into the logic controller that will automatically clear the vacuum mains at predetermined times to ensure that waterlogging of the system during critical times will not occur.

MONITORING
(cont)

Airvac is Connected 24/7

Airvac specialists can monitor your system in real-time providing another set of eyes for the system operator.

System Updates are Pushed Automatically

Airvac automatically pushes new programming updates remotely to keep the S.M.A.R.T. System current.

MONITORING FEATURES SIDE-BY-SIDE COMPARISON

	Airvac	Industry Standard
System Connections		
LoRa Modules	✓	✓
Cloud Data Storage	✓	✓
SCADA Connectivity	✓	✓
Main Gateways	✓	✓
Remote Gateways	✓	✓
Magnet Activated Sensors	✓	✓
Sump Float	✓	✓
Vacuum Station Control Panels	✓	✓
Types of Reporting		
Vacuum Levels	✓	✓
Valve Status	✓	✓
Sump Level High	✓	✓
System Trends	✓	✓
Cycles, Cycle Time	✓	✓
Infiltration	✓	✓
Latest Technology		
Dedicated Ports	✓	
Modulation	✓	
S.M.A.R.T. Technology	✓	
Two-Way Communication	✓	✓
Interactive e-Cabinets	✓	
No Magnets or Floats Required	✓	

DATA SHEETS

Airvac has a series of Data Sheets that provides detailed information about a particular product.

A typical Data Sheet includes a description, photos or diagrams, and a list of benefits. Data Sheets are available for:

- 1 Piece Valve Pit
- 2 Piece Valve Pit
- 3 inch Pipe Coupling
- 3 inch (78 mm) Vacuum Valve
- HP Controller
- 6 inch Air Terminal
- Buffer Tanks (Concrete)
- Buffer Tanks (Fiberglass)
- Custom Vacuum Station
- PacVac (versions 1,2, & 3)
- Modulation
- S.M.A.R.T.
- Wireless Monitoring
- Solar Light Monitoring

The RFQ limits our response to 30 pages maximum, hence it is not possible to include these Data Sheets. However, they are available upon request or on the Airvac Portal (portal.airvac.com).

COUNTY DETAILS

Requirement 3.0.A requires compliance with County's Details. However, these details do not include any vacuum system requirements. Airvac has assisted numerous other entities in creating such details and can do the same for Charlotte County.

SPECIFICATIONS - GENERAL

Airvac has 3 standard specification sections that are slightly modified for each project to match the project particulars. They are 02730-s (vacuum main, valve pit, monitoring, etc.), 11308 (vacuum station electrical specs) and 11307 (vacuum station mechanical specs).

Each of these sections are 25+ pages long. The RFQ limits our response to 30 pages maximum, hence it is not possible to include these on our response. However, they are available upon request or on the Airvac Portal (portal.airvac.com).

SPECIFICATIONS - SOME KEY SPECS

Following are a few of the key spec sections that will be used in the Lakeview Midway Project.

VALVE PITS (2-PIECE TYPE – polyethylene)

Described below is the Model VP3042P2 valve pit. The other 2-piece models differ only by dimensions relating to depth.

A. Type: Valve pit shall have two (2) major components: 1) the valve pit cone; and (2) the collection sump as well as associated pipes, connectors, seals and grommets. Overall depth of the unit shall be 72" nominal.

B. Valve pit cone: The valve pit cone shall be manufactured by the rotational molding process using polyethylene (PE) with a 36" inside diameter at bottom and conically shaped to allow fitting a 26 ¾" frame with a 23 ½" inch diameter clear opening cast iron cover. The valve pit cone shall have a depth of 42".

C. Collection sump: The collection sump and integral pit bottom shall be manufactured by the rotational molding process using polyethylene (PE). It shall be tapered with the upper rim designed to accept the valve pit cone as described in paragraph B above. The collection sump shall have an overall height of 30" nominal with a capacity of 85 gallons. The collection sump shall have (4) stabilizing embosses to accept up to (4) gravity service connections with 4" or 6" PVC pipe (see Part 2 Products). Holes shall be field cut by the INSTALLATION CONTRACTOR.

D. Suction and Sensor Pipes: Suction and sensor pipes shall be Sch 40 PVC. Lubricant shall be as specified in Part 2.5.E.

E. Anti-buoyancy collar: Anti-buoyancy collars shall be manufactured from polyethylene and designed to prevent flotation of the valve pit assembly when ground water is present at grade. Anti-buoyancy collar shall be a minimum of 60" square with 45-degree corners and a minimum ¾" thick.

SPECIFICATIONS - SOME KEY SPECS (cont)

F. Grommets: Holes for the house gravity line connections into the collection sump shall be field located and cut. EPDM Rubber grommets as manufactured by Airvac shall be used to make a watertight seal.

G. Optional cold-weather upgrade: The standard 2-piece polyethylene valve pits shall be modified to include layers of a foam insulating material in the walls of the valve pit cone. In addition, a 23" diameter, 2.5" thick insulted lid insert made of rotationally molded PE shall also be provided.

H. Manufacturer: Valve pit model VP3042P2 (or VP3042CW for cold weather pit) as manufactured by Airvac.

Two (2) Piece Valve Pits (material: all polyethylene)				
Model No.	**Nominal Depth**	**Actual Depth**	**Depth to invert of gravity inlet stub-out**	**Sump Capacity**
VP3042P2	6 ft	6.0313 ft	5.00 ft	85 gal
VP5442P2	8 ft	8.0313 ft	7.00 ft	158 gal
VP7842P2	10 ft	10.0313 ft	9.00 ft	250 gal

VACUUM VALVE:

A. Design conformance: Vacuum valves shall be designed to minimize head loss through the valve and shall have a "Cv" factor of 256 or higher. An Independent laboratory certificate shall be supplied upon request.

B. Type: Internal breather; Type F as manufactured by Airvac.

C. Valve Construction: Full-port 3-inch (78mm) diameter valve capable of passing a 3" diameter solid while matching the outside diameter of 3" SDR 21 PVC pipe. Valve to be vacuum operated on opening and spring assisted on closing; valve configuration arranged so that the system vacuum ensures positive valve seating. Valve plunger and shaft arranged to be completely out of the flow path when valve is in open position. Valve plunger and seat shall have no exposed metal parts that could allow ice buildup.

D. Vacuum Operator: Self lubricating, rolling diaphragm type; diameter sufficient to open valve fully using line vacuum to overcome sealing force; equipped with elastomer seal where shaft enters housing; vacuum drain connected to housing to return seal leakage to sewer when valve cycles.

E. Valve Position Switch: The valve position switch shall be IP67 rated and shall be internally installed in the lower housing. The valve position switch shall not require any alignment in order to activate. Valve position switches that require the use of magnetic sensor are prohibited.

F. Lower housing electrical connections: An IP68 rated thermoplastic electrical connection shall be installed into the side of the lower housing. Connection contacts shall be gold plated and supplied with a rubber cover plug. Connectors shall have molded-in elastomer seal faces. Loose o-rings are prohibited. All electrical connections shall be epoxy encapsulated or plastic over-molded.

G. Operation: Valve and sensor / controller require no outside power service.

H. The valve shall be manufactured such that small objects may be removed from the valve seat area by means other than complete valve removal and disassembly.

SPECIFICATIONS - SOME KEY SPECS
(cont)

I. The valve and sensor/controller shall be capable of operation when submerged in water to a depth of 2 feet above the upper most component.

J. Materials: Valves shall be chemically resistant to sewage and sewage gases. The valves shall be constructed from materials described in the following table.

COMPONENT	MATERIAL
Valve Body	Glass Filled Polypropylene
Valve Shaft	316 Stainless Steel
Valve Shaft Seal	Buna N Rubber
Valve O-Rings	Buna N Rubber
Valve Spring	304 Stainless Steel
Valve Plunger	Buna N Rubber
Valve Seat	Buna N Rubber
Valve Piston Cup	Polypropylene
Valve Bearing	Acetal
All Fasteners	316 Stainless Steel

K. Furnished: Vacuum valves shall be furnished by the CONTRACTOR.

L. Installed: Vacuum valves shall be installed by the OWNER (see part 1.3.F for exception).

M. Manufacturer: Vacuum valve and accessories as manufactured by Airvac.

VACUUM VALVE SENSOR / CONTROLLER:

A. The valve as described in paragraph 2.15 shall be equipped with a sensor-controller which shall rely on atmospheric air and vacuum pressure from the downstream side of the valve for its operation, thereby requiring no other power source. Rising liquid within the holding sump shall initiate the opening of the valve when sufficient head pressure is reached in the holding sump. The activation point shall equate to approximately 10 gallons of liquid. The controller shall apply line vacuum from the downstream side of the vacuum valve and apply it to the actuator chamber and fully open the valve.

B. The Controller shall be capable of maintaining the valve fully open for a fixed period of time. This shall be field adjustable over a range of 3 to 10 seconds. After this time period has elapsed, the controller shall apply atmospheric air to the actuator chamber permitting spring assisted closure of the valve.

C. The Controller shall have no internal tubing, nor use tubing for connection of timing components.

D. The Controller shall not use a needle valve for timing, but use a timing wheel composed of plastic components and rubber seals that are not prone to change of adjustment, moisture freezing, and do not allow out of range max or min settings that can cause the unit to hold open.

E. The Controller shall have passages and chamber sizes to allow water to pass through if present, and not hold open for unacceptable lengths of time while passing water.

SPECIFICATIONS - SOME KEY SPECS (cont)

F. The Controller shall have vacuum passages that are designed to drain moisture from chambers, which prevents possibility of held moisture from freezing.

G. The Controller air passages shall be designed to reduce likelihood of water being pulled into controller.

H. The Controller shall be serviceable by factory-trained personnel and shall be removable from the valve by means of a sliding key device. There shall be no tools required to remove and replace the controller from the vacuum valve with the exception of tubing clamp nut drivers.

I. The Controller shall be easily fully functional tested to determine any leaking internal seals and to guarantee consistent quality. This shall be done by manufacturer production and during operator re-build.

J. The Controller body end pieces shall be constructed to allow visual inspection for moisture and to determine operation position without disassembly.

K. Each vacuum valve controller shall be equipped with a port for connecting a portable, self-contained valve cycle counter.

L. The Controller shall be chemically resistant to sewage and sewage gases, including bleach (used as disinfectant) and sulfuric acid (from septic sewage). Controllers shall be constructed from materials described in the following table.

COMPONENT	MATERIAL
Controller Body, Clear End Parts	Clear Nylon 12
Controller Body, Blue Parts	Polypropylene
Controller Shaft, Small parts	Polypropylene
Controller Springs	316 Stainless Steel
Controller O-Rings	Silicon Rubber, Buna N Rubber
All metal Fasteners	316 Stainless Steel

M. The Controller shall provide for manual activation by using an activation tool. The activation design shall not expose any rubber components that can be damaged or deteriorate and prevent controller operation.

N. Manufacturer: Airvac HP Controller as manufactured by Airvac.

IN-SUMP BREATHER:

A. With the exception of the individual house 4" gravity line air intake (or the 6" Air Terminal, if used), there shall be no other external sources of air necessary or permitted as a part of this assembly.

B. A factory provided internal sump breather unit arrangement shall connect the controller to its air source and provide a means of assuring no liquid can enter the controller during system shutdowns and re-starts.

C. The sump breather shall install into a breather pipe fitting that mounts through a grommet in the sump pit bottom. The sump breather shall be activated by pressure building in the breather pipe only when high sewage level occurs. The pressure then causes the sump breather to switch to the closed position and protect water from getting to the controller or valve.

SPECIFICATIONS - SOME KEY SPECS (cont)

D. The internal sump breather shall be arranged to prevent sump pressure from forcing the valve to open during low vacuum conditions and provide positive sump venting regardless of traps in the home gravity service line. The tubing connection arrangement provides a floating check valve to vent any sump pressure but not discharge any sewage into valve pit.

E. The internal sump breather shall be arranged to ensure proper valve opening by preventing vacuum to be present in the valve lower housing when the sump breather is in the closed position and the valve is attempting to open. This shall be done by an air inlet check valve in the tubing connection that will admit air from the valve pit to release any vacuum in the valve lower housing.

F. Breather high sewage level switch: The breather position switch shall be IP67 rated and shall be internally installed in the sump breather. The breather high sewage level switch shall not use a floating switch in the sewage sump. Breather position switches that require the use of magnetic sensors are prohibited.

G. Lower housing electrical connections: An IP68 rated thermoplastic electrical connection shall be installed into the sump breather housing. Connection contacts shall be gold plated and supplied with a rubber cover plug. Connectors shall have molded-in elastomer seal faces. Loose o-rings are prohibited. All electrical connections shall be epoxy encapsulated or plastic over-molded.

H. Manufacturer: In-sump breather SBPA as manufactured by Airvac.

PATENTS

No other vacuum manufacturer, other than Airvac, has a single U.S. patent. Shown below are active patents held by Airvac.

U.S. Patent #	Title	Description	File date
9,523,449	Pipe Coupling	3-in Pipe coupling	03/31/2012
10,001,787	Controller for Vacuum Sewerage System	HP Controller	03/10/2015
10,316,504	Vacuum Sewerage System w/Monitoring System	S.M.A.R.T. System	06/08/2016
11,299,878	Sump Breather	Pressure Activated Sump Breather (SBPA)	03/27/2019
11,939,760	Vacuum Sewerage System w/Monitoring System and Variable Speed Pump	Vacuum Pump Modulation	03/30/2020
Pending	Vacuum Sewage System with Check Valve	Check Valve (new vacuum supply check valve)	01/26/2021

Airvac has held numerous other patents over the years, going back to the 1970s. In addition to those shown above, Airvac has 16 other patents that have expired. This is a testament to Airvac's ongoing quest to improve products while continuing to move the vacuum sewer market forward.

SECTION 3
SUPPORT SERVICES

RFQ NO. 2024000557

Lake View Midway Water Quality Improvements Project
Charlotte County

Airvac
A brand of
Aqseptence Group

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SECTION 3
SUPPORT SERVICES

Airvac is not only focused on making superior products, but also on developing long-term customer relationships. Airvac believes in the team approach where we assist engineers, contractors, and owners in all phases of a project. We do this by providing support and services every step of the way, including assistance with planning, design, construction, and operation of your vacuum system.

PLANNING

System Layout/Preliminary Design/Technical Information

A preliminary system layout that includes the sizing of the vacuum main, vacuum pumps, sewage pumps and the collection tank will be presented in a proposal package. The estimated quantities of the various system components will also be identified. Technical information will be included that summarizes the design assumptions, line and station sizing, and the valve pit quantities required for the project.

Budget Estimate

Upon receipt of some basic project information, Airvac engineers will assist consulting engineers with a budget estimate. The budget estimate will include an estimate of both capital costs as well as the annual operation and maintenance costs.

DESIGN

Airvac is available to help throughout the design phase of a project and will assist as much or as little as a customer requires. From the design of the vacuum station equipment to the profiling of the vacuum mains, we are here to assist you. Airvac can also provide specifications and standard details for vacuum system installation and components.

Detailed Design Assistance

When a consulting engineer commences with the detailed system design, assistance will be provided by an Airvac Engineer for vacuum 101 training and hands-on design work. Airvac can support the engineer with design reviews at key milestones (25%, 50%, 75%, 90%, 100%).

Line Profiling Assistance

Airvac can provide assistance with vacuum main profiling. Typically, this includes assistance with profiling the most critical vacuum main. When completed, Airvac will review the line profiles and do a complete hydraulic analysis of both static and friction loss.

Plan and Profile Drawings

Each design firm has their own set of requirements for how much detail needs to be included in their plan and profile drawings. Information that is typically included in other utility designs should also be included in a vacuum sewer design. Certain vacuum-specific items need to be included as well and Airvac can provide that information.

CONSTRUCTION

Airvac can provide a field service representative during the construction phase of a project. This includes a vacuum installation 101 presentation, providing the contractor with a better understanding of how a vacuum sewer system works, how components are delivered, stored, and installed. The representative will provide tips and instructions for valve pit installation, vacuum main installation, and vacuum main testing. The field service representative will also help to ensure that the project is installed properly, which will lead to a successful operating system.

Construction Field Services

In our over 50-year history, one simple fact stands out: No matter how good the design, a vacuum system that is not constructed or serviced properly will not operate at peak performance. The correct installation is vital to the ultimate success of a vacuum system. Airvac can provide skilled field representatives to advise and assist contractors and consulting engineers with the construction of the vacuum sewer system. In most first-time vacuum projects, Airvac recommends that a field representative be present during the entire construction phase. For repeat clients, or for projects where a consulting firm has vacuum experience, Airvac can provide field services as needed.

ENGINEERING

Our core of engineers develops, and continually improves our products based on ingenuity, adaptability, reliability, and affordability.

Quality Certification

Our quality policy is to strive for total client satisfaction through defect free products and services, available on time, and that meet requirements. To achieve this, we maintain an effective quality system and a culture of continuous improvement.

Airvac is ISO-9001:2015 Certified, which is the international standard for quality management systems ("QMS"). It addresses the design, development, production, installation, and service of the company products. This demonstrates our ability to consistently provide products and services that meet customer and regulatory requirements and demonstrates our commitment to continuous improvement.

New product development & continuous improvement

Our customers have the option to either upgrade their vacuum systems to the newest products or improve their existing products by adapting the new and improved components.

- We build our products to be durable, safe, effective, and easily maintained.
- Every product is designed to work with existing systems, either out of the box or with a minor retrofit.
- Existing products can be improved by adapting newer components.
- We stand behind and support every product we make.

Our Service Team has an average of 20 years of experience with factory trained technicians around the country. We utilize a state-of-the-art CRM system to schedule, track, and report on all service events. This experience, combined with the newest system diagnostic technology, helps us operate, maintain, and repair systems effectively and efficiently, keeping customer down time at a minimum. Our Service staff works closely with our R&D and manufacturing teams to help develop and improve, not only our technology, but also installation and repair processes.

As with all capital equipment, periodic rehabilitations and upgrades are necessary to guarantee continued performance and client satisfaction. Airvac continues to innovate many new products and solutions that increase performance and reduce the operational expenditure of your Airvac vacuum sewer system, all of which are adaptable to your current system.

SERVICES

Utilizing a regional structure, our service team partners with our sales team, keeping us closer to our customers. This partnership combines expertise from a product and support system, assisting our customers from system design through installation and operation, as well as on-going assistance with training, improvements, and service.

O&M Services

On-site Airvac trained technicians operate your system 24/7/365.

Customized Service Agreements

Customized service levels based on your needs for service by a Factory Certified Airvac Technician. Options include term, hours of coverage, response time, and any applicable parts discounts.

System Site Survey

One day overview of your system: evaluation of performance of the vacuum system, maintenance and operation procedures with documented recommendations for improvements.

SERVICES (cont)

Comprehensive System Evaluation

One week on site which includes in-depth testing and evaluation of the vacuum station components and field testing. Comprehensive reporting which includes system efficiency results vs factory standards, recommendations for improvement via Service and Products including training links, Product Data Sheets and NextGen Technology.

Preventive Maintenance Services

Offered as Annual, Bi-Annual or Quarterly. Complete documented evaluation, adjustment, and recommendations for operation, repair, or replacement of components.

On-Site Training Classes

Held at your site with focus on operator training and review of current parts and technology.

Airvac Customer Portal

Contains troubleshooting videos, product data sheets, and other useful tools. Available at portal.airvac.com.

Operator School

Offered monthly in Rochester, IN or Tampa, FL (free of charge). CEU's available for qualifying states.

CONTINUING EDUCATION CREDITS

Airvac is committed to the educational process by offering several platforms for engineers & operators to earn CEUs/PDHs.

PDH credits- various Airvac presentations

- Vacuum 101 (typically 1 or 2 PDH).
- Vacuum Design Seminar (typically 4 PDH).

PDH/CEU credit – Operator training

- Airvac Operator training school (40 hrs).

PDH credits – on-line courses for Professional Engineers

Courses authored by Airvac and available on PDHEngineer.com

- EN-4019 Vacuum Sewers 101 (4PDH).
- EN-8014 Vacuum Sewers: Design & Installation (8 PDH).
- EN-4020 Vacuum Sewers: O&M and System Management (4 PDH).

HURRICANE PRONE AREAS

Airvac systems have withstood many hurricanes, primarily in FL and NC. To assist customers in hurricane-prone areas, Airvac prepared a Hurricane Checklist document that includes step by step instructions on how to prepare a vacuum system for a hurricane. In addition, Airvac also has a long history of assisting customers whose system was affected by a hurricane.

The Hurricane Checklist is available upon request.

AIRVAC CUSTOMER PORTAL & WEB SHOP

Inside the portal, you will find installation, maintenance, and other useful information regarding Airvac's products and services. The portal also features our Web Shop, where you can view and order products directly from the website.

- Operation and Maintenance Documents
- Operation and Maintenance Videos
- Troubleshooting Documents
- Troubleshooting Videos
- Installation Videos
- Manuals
- Product Datasheets
- Case Studies
- Editorials
- Airvac News
- Airvac Brochures
- Webinars

AIRVAC LOCATIONS

Airvac's Service Department is based in Tampa and has factory trained field technicians located around the U.S. In addition, Airvac has a large service staff that operates Sarasota County's 8 vacuum systems 24/6/365 under a service contract with the County.

Airvac Rochester Campus

Airvac Administrative Offices

Airvac Tampa Solutions Center

LOCATION OF SUPPORT PERSONNEL

Airvac's Service Department is headquartered in Tampa and has a large service staff in Sarasota that supports all projects in the area. In addition, Airvac has factory trained field technicians located around the U.S.

RESPONSE TIME

With Airvac's Service Department located in Tampa, emergency response to issues that may arise in the Charlotte County system can be expected within 1 to 4 hours.

WARRANTY

Airvac offers a 2-year warranty on all collection system products it manufactures and a 1-year warranty on vacuum station equipment (See the following pages).

VACUUM STATION & OTHER EQUIPMENT
1 YEAR WARRANTY

1. **WARRANTY.** AIRVAC, Inc. warrants the following Goods within the Warranty Period (as hereinafter defined) to function properly under normal, proper and rated use and service and to be free of defects in material or workmanship. The term "Warranty Period" shall mean the earlier of (i) 18 months following delivery of the Goods in question or (ii) the first anniversary from the date the vacuum system is placed in service (defined as successful station start-up completed by AIRVAC).

   Vacuum Station skid(s), including all individual skid component Goods supplied by AIRVAC
   AIRVAC Trailer-mounted vacuum pump (TMVP)
   AIRVAC SMART system equipment

2. **MANUFACTURING DEFECTS.** Subject to the time limits specified in Section 1 hereof and conditions herein, AIRVAC will repair or replace, at its option and expense, Goods that have failed to function properly because of defects in material or workmanship demonstrated to AIRVAC's satisfaction to have existed at the time of delivery, or refund the purchase price therefor. If the Goods in question can be sent in a box or similar package, Buyer, at AIRVAC's request, will send any allegedly defective Goods to a location designated by AIRVAC for inspection and any warranty repairs. The party making the warranty claim shall bear the expense of such return of Goods to AIRVAC. AIRVAC shall review returned Goods and determine if such returned Goods were subject to misuse or neglect. AIRVAC shall pay for return shipment to the party making the warranty claim unless AIRVAC determines that the returned Goods were misused or neglected, in which case the party making the warranty claim shall bear the cost of return shipment.

   If the Goods in question cannot be so sent, AIRVAC shall arrange for a representative to make an on-site inspection of the Goods and any warranty repairs. If the Goods in question are determined not to be covered by the Warranty set forth in this Section, then the party making the warranty claim shall be responsible for any delivery costs associated with the delivery and return of the Goods and for all reasonable costs and standard field service charges for any on-site inspection. If the Goods in question are covered by the Warranty, AIRVAC shall reimburse the party making the warranty claim for its shipping costs associated with the delivery and return of the Goods.

3. **WARRANTY LIMITATIONS AND EXCLUSIONS.** The limited warranty set forth above (the "Warranty") is provided by AIRVAC to the Buyer and first end user of the Goods (if different than Buyer) only and does not extend, expressly or by implication, to any other person or entity. Any purported assignment of any rights hereunder by Buyer or the first end user (if different than Buyer) without AIRVAC's prior express written consent shall be void. THE WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR INFRINGEMENT NOT EXPRESSLY SET FORTH HEREIN; AND ALL SUCH OTHER WARRANTIES ARE EXPRESSLY DISCLAIMED. The Warranty shall not apply to any Goods that (i) have been subjected to misuse, mishandling, improper installation, neglect, accident, modification or alteration performed by anyone other than AIRVAC, (ii) have not been maintained or operated in strict accordance with AIRVAC instructions or (iii) are affected by a change in condition of usage, for which Buyer assumes all responsibility. It shall be Buyer's sole responsibility to test Goods for use upon a change in condition affecting such use. The foregoing warranty does not cover labor or any other cost or expenses to remove or install any defective or replaced Goods.

4. **DISCLAIMER OF CONSEQUENTIAL DAMAGES.** IN NO EVENT SHALL AIRVAC BE LIABLE FOR LOSS OR DAMAGES ARISING DIRECTLY OR INDIRECTLY FROM THE USE OF AIRVAC'S GOODS, OR FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES, WHETHER BASED ON CONTRACT, WARRANTY, OR TORT (INCLUDING INTENTIONAL ACTS, ERRORS OR OMISSIONS, NEGLIGENCE, INDEMNITY, STRICT LIABILITY OR OTHERWISE) ARISING OUT OF OR IN CONNECTION WITH THE DIRECT OR INDIRECT USE OF THE GOODS COVERED HEREBY, WHETHER OR NOT FORESEEABLE. Consequential damages shall include, without limitation, loss of use, income or profit, or losses sustained as the result of injury (including death) to any person or loss of or damage to property, (including without limitation, property handled or processed by the use of the Goods). Buyer shall indemnify AIRVAC against all liability, cost or expense, which may be sustained by AIRVAC on account of any such loss or injury. AIRVAC's entire liability for any defective material shall in no event exceed the original purchase price of the defective Goods. This limitation applies even if AIRVAC cannot or does not replace any defective Goods.

5. **SPECIFIC ACTIONS THAT WILL VOID THE WARRANTY.** In addition to provisions set forth in Section 3(i), 3(ii) and 3(iii) hereof, any of the following specific actions will void the Warranty:

   - Failing to perform the complete vacuum station start-up tasks recommended by AIRVAC
   - Disabling any protective device such as emergency lock-out valves, vacuum pump over-temperature limits, etc.
   - Manifolding multiple vacuum pump exhaust lines without AIRVAC's prior written permission
   - Installing isolation valves on vacuum pump exhaust lines without AIRVAC's prior written permission
   - Abusing or failing to protect the AIRVAC equipment during storage handling or installation
   - Allowing flow rates to enter the vacuum station that are in excess of the station's rated design capacity
   - Any installation or action that is in conflict with AIRVAC's Design Manual, Installation Manual or other written
   - Maintenance instructions without AIRVAC's prior written permission.

AIRVAC VALVES, VALVE PITS & MANUFACTURED ITEMS
2 YEAR WARRANTY

1. **WARRANTY.** AIRVAC, Inc. warrants the following Goods within the Warranty Period (as hereinafter defined) to function properly under normal, proper and rated use and service and to be free of defects in material or workmanship. The term "Warranty Period" shall mean the earlier of (i) 30 months following delivery of the Goods in question or (ii) the second anniversary from the date the vacuum system is placed into service (defined as successful station start-up completed by AIRVAC)*.

   Vacuum valves, controllers and in-sump breathers
   Valve pit packages (all types)
   AIRVAC flotation collars
   AIRVAC flexible connectors
   AIRVAC Air-terminals
   Spare parts manufactured by AIRVAC
   Any item manufactured specifically for AIRVAC for use on or within an AIRVAC valve pit

   ** If Goods are not part of the original project installation, then "Warranty Period" shall mean the earlier of (i) 30 months following delivery of the Goods in question or (ii) the second anniversary of their installation.*

Claims of any kind or nature (except for warranty or latent defects claims) regarding, arising out of or pertaining to AIRVAC's Goods are barred and waived unless made in writing delivered to AIRVAC by certified mail, return receipt requested, within the earlier of: (a) forty-eight (48) hours after the delivery of the Goods; or (b) twenty-four (24) hours after

AIRVAC's first invoice to Buyer for the Goods. Warranty claims and/or claims for latent defects are barred and waived unless made in writing delivered to AIRVAC, with proof of purchase from Airvac, by certified mail, return receipt requested, no later than the earlier of ninety (90) days after: (a) Buyer or the party making the claim discovered or should have discovered the event giving rise to the claim; (b) expiration of the applicable Warranty Period; or (c) expiration of twenty-four (24) months after the date of delivery of the Goods to Buyer.

2. **MANUFACTURING DEFECTS.** Subject to the time limits specified in Section 1 hereof and conditions herein, AIRVAC will repair or replace, at its option and expense, Goods that have failed to function properly because of defects in material or workmanship demonstrated to AIRVAC's satisfaction to have existed at the time of delivery, or refund the purchase price therefor. If the Goods in question can be sent in a box or similar package, the party making the warranty claim shall at AIRVAC's request, will send any allegedly defective Goods to a location designated by AIRVAC for inspection and any warranty repairs. The party making the warranty claim will bear the expense of such return of Goods to AIRVAC. AIRVAC shall review returned Goods and determine if such returned Goods were subject to misuse or neglect. AIRVAC shall pay for return shipment to the party making the warranty claim unless AIRVAC determines that the returned Goods were misused or neglected, in which case the party making the warranty claim shall bear the cost of return shipment. If the Goods in question cannot be so sent, AIRVAC shall arrange for a representative to make an on-site inspection of the Goods and any warranty repairs. In the event that the Goods in question are determined not to be covered by the Warranty set forth in this Section, then the party making the warranty claim shall be responsible for any delivery costs associated with the delivery and return of the Goods and for all reasonable costs and standard field service charges for any on-site inspection. If the Goods in question are covered by the Warranty, AIRVAC shall reimburse the party making the warranty claim for its shipping costs associated with the delivery and return of the Goods.

3. **WARRANTY LIMITATIONS AND EXCLUSIONS:** The limited warranty set forth above (the "Warranty") is provided by AIRVAC to the Buyer and first end user of the Goods (if different than the Buyer) only and does not extend, expressly or by implication, to any other person or entity. Any purported assignment of any rights hereunder by Buyer or the first end user (if different than Buyer) without AIRVAC's prior express written consent shall be void. THE WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR INFRINGEMENT NOT EXPRESSLY SET FORTH HEREIN; AND ALL SUCH OTHER WARRANTIES ARE EXPRESSLY DISCLAIMED.

   The Warranty shall not apply to any Goods that (i) have been subjected to misuse, mishandling, improper installation, neglect, accident, modification or alteration performed by anyone other than AIRVAC, (ii) have not been maintained or operated in accordance with AIRVAC instructions or (iii) are affected by a change in condition of usage, for which Buyer assumes all responsibility. It shall be Buyer's sole responsibility to test Goods for use upon a change in condition affecting such use. The foregoing Warranty does not cover labor or other cost or expenses to remove or install any defective or replaced Goods.

4. **DISCLAIMER OF CONSEQUENTIAL DAMAGES AND LIMITATION OF LIABILITY.** IN NO EVENT SHALL AIRVAC BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES, WHETHER BASED ON CONTRACT, WARRANTY OR TORT (INCLUDING INTENTIONAL ACTS, ERRORS OR OMISSIONS, NEGLIGENCE, INDEMNITY, STRICT LIABILITY OR OTHERWISE), ARISING OUT OF OR IN CONNECTION WITH THE DIRECT OR INDIRECT USE OF THE GOODS COVERED HEREBY, WHETHER OR NOT FORESEEABLE. Consequential damages shall include, without limitation, loss of use, income or profit, or losses sustained as the result of injury (including death) to any person or loss of or damage to property, (including without limitation, property handled or processed by the use of the Goods). Buyer shall indemnify AIRVAC against all liability, cost or expense, which may be sustained by AIRVAC on account of any such loss or injury. AIRVAC's entire liability arising out of or pertaining to the sale of any Goods hereunder shall in no event exceed the original purchase price of the Goods in question. This limitation applies to all claims and even if AIRVAC cannot or does not replace any defective Goods.

5. **SPECIFIC ACTIONS THAT WILL VOID THE WARRANTY.** In addition to provisions set forth in Section 3(i), 3(ii) and 3(iii) hereof, any of the following specific actions will void the Warranty:

   - Installing the AIRVAC valve without adequate sump venting (minimum 4" air-intake w/AIRVAC approved screen)
   - Installing an AIRVAC Air Terminal (dedicated air intake) on any gravity inlet line connected to a valve pit without AIRVAC's prior written approval.
   - Abusing or failing to protect AIRVAC product during storage, handling, or installation
   - Allowing flow rates to enter the valve pit that are in excess of the valve pit's recommended design capacity
   - Installing an AIRVAC valve in a fiberglass or plastic valve pit manufactured by others
   - Installing an AIRVAC valve in a concrete pit or buffer tank that is not approved by AIRVAC
   - Installing any item not provided by AIRVAC on or within the AIRVAC valve pit
   - Any installation or action that is in conflict with AIRVAC's Design Manual, Installation Manual or other written maintenance instructions without AIRVAC's prior written permission.

SECTION 4
PERSONNEL

RFQ NO. 2024000557

Lake View Midway Water Quality Improvements Project
Charlotte County

Airvac
A brand of
Aqseptence Group

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Airvac

SECTION 4
KEY PERSONNEL

KEY PERSONNEL

Airvac is a vertically integrated company with experienced staff available to assist both the design firm as well as the city. Key personnel who will assist in the Charlotte County project are shown below. **Resumes for these individuals is located on the following pages of this section.**

MAIN PROJECT CONTACT
Sawyer Stevens

PROJECT ENGINEERING	PRODUCT ENGINEERING	MFG/ QUALITY	SERVICE AND AFTERSALES	OTHERS
Caleb Moore	Keith McGriff	Mike Moss	Greg Namyak	Clint Hawn
Jeff Smith		Bobby Myers	John King	Michèle Gertner
Adam Wilson			Matt Nard	Julie Kotterman
Adam Schaaf			Tyler Walley	
Corbyn Jones			Becky Murphy	

CONSULTANTS	
Dave Elias	Rich Naret, P.E.

KEY SUB VENDORS		
Vacuum Pumps	Busch	516 Viking Drive, VA Beach, VA 23452
Collection Tanks	DuraTech	2520 S. Wabash Ave, Centralia, IL 62801
Collection Sump	Duracast	16160 Highway 27, Chambers Lake Wales, FL 33859
Fiberglass Buffer Tanks	Topps Industries	420 N State Rd 25, Rochester, IN 46975
Valve Pit Covers	US Foundry	8351 NW 93rd St, Medly, FL 33166
Prefabricated Buildings	EFI Solutions	1311 N Maple St, Centralia, IL62801

PERSONNEL EXPERIENCE / RESUMES

SAWYER STEVENS

Global Business Unit Director - VTS Sewerage

Cell: +1 574.800.1524
Email: sawyer.stevens@airvac.com
Main Project Contact

Sawyer Stevens is the Global Business Unit Director for VTS Sewerage at Airvac and Roediger, bringing nearly six years of experience within the organization. He began as an Area Manager, successfully overseeing multiple U.S. regions, with a strong focus on South Florida, where he supported existing customers and built lasting partnerships—a region he continues to manage in part.

His role later expanded globally, where he now leads business development, manages international teams, and drives initiatives focused on product improvement, market growth, and strengthening customer relationships. Sawyer's leadership ensures that Airvac and Roediger remain at the forefront of vacuum sewer technology solutions worldwide.

CLINT HAWN

President and CEO
Airvac, Inc.

Main: +1 574.208.5903
Cell: +1 574.242.9086
Email: clint.hawn@airvac.com

Clint has been with Airvac for over 27 years (since 1998), primarily specializing in service, customer relationships, and management roles. From 1998 to 2012, he assumed various positions within the Airvac Service Department, holding the title of Service Manager for a decade.

Between 2012 and 2016, Clint's expertise and dedication led him to take on several mid-level roles within Airvac. His exceptional leadership skills were recognized in 2016 when he was promoted to the position of Vice President of Aqseptence Group, Inc. In addition to becoming a Board Member, he was also entrusted with the responsibility of Global Product Director. In this capacity, Clint oversaw the global technical aspects of the Aqseptence Group Segment Vacuum Technology Systems (VTS), which encompassed both the Airvac and Roediger brands.

In 2022, Airvac attained its own legal entity, and Clint was appointed as the CEO of Airvac, Inc. His vast experience and unwavering commitment have played a vital role in the company's success and growth.

MICHELE GERTNER

CFO

Airvac's CFO, Michèle Gertner, joined the company at the beginning of 2023. She came to Airvac from the Aqseptence Group headquarters in Aarbergen, Germany.

As CFO, Michèle oversees all aspects of Procurement, Customer Order Entry and Logistics, and also manages Airvac's Human Resources.

PERSONNEL EXPERIENCE / RESUMES

DAVE ELIAS

Consultant

Dave Elias, the Southeast Area Manager has an impressive 36-year track record in Florida's wastewater industry. Throughout his extensive career, he has primarily served as an Area Sales Engineer, specializing in equipment and systems related to the water and wastewater sector. Notably, Dave has been a valuable asset to Airvac for the past 29 years, focusing on promoting and educating municipal government entities about vacuum sanitary sewer system technology and its tailored applications to meet their specific needs. Dave's expertise extends to various counties in Florida, where he has been actively involved in significant projects:

RICH NARET P.E.

Consultant

Rich is a Professional Engineer with 42 years of experience in the wastewater industry including 30 years with Airvac. Prior to joining Airvac in 1990, Rich worked for a regulatory agency for 3 years and for a consulting engineering firm for 10 years. Considered one of the nation's experts on vacuum sewer technology, Rich authored the vacuum chapters of both the US EPA manual "Alternative Wastewater Collection Systems, EPA/625/1-91/024" and the WEF manual "Water Environment Federation (2007) Alternative Sewer Systems, 2nd ed.; Manual of Practice No. FD-12WEF.

JULIE KOTTERMAN

Customer Order Entry/ Logistics Coordinator

Julie was hired at Airvac in 1995 in production to assemble controllers, vacuum valves and parts bags. After 3 years, Julie transferred to the accounting department where she is responsible for entering all large contracted purchase orders, generating customer invoices and maintaining customer charge accounts while keeping all information confidential. She analyzes and resolves billing issues and stores completed documentation for back up operations. Julie arranges all transportation services for clients to ensure material is delivered as scheduled in the most cost efficient manner.

KEITH MCGRIFF

Product Engineering Manager

Keith has been with Airvac for 28 years (since 1997) and currently serves as the Product Engineering Manager. He began his career at Airvac as a Production Engineer, a role he held for 5 years, and has since dedicated the last 20 years as a Product Engineer. Recently, at the beginning of 2023, Keith was promoted to the position of Product Engineering Manager. His primary focus includes driving continuous product improvement for a wide range of Airvac products and spearheading the design of innovative solutions to cater to the vacuum sewer industry's needs. Keith is also deeply involved with the Airvac Monitoring and S.M.A.R.T. Systems.

PERSONNEL EXPERIENCE / RESUMES

MIKE MOSS

Manufacturing Manager

Mike serves as our Manufacturing Manager, which encompasses our Fabrication shop, Production, warehouse, and building maintenance departments. In addition to his department managerial duties, Mike is OSHA 30-hour certified and the former chair of the Airvac safety committee. Other key roles Mike has held from his start with us in 1998 include: managing our service department and providing southwest regional sales manager duties.

BOBBY MYERS

Quality Control Technician

Bob is a dedicated professional with 32 years of experience at Airvac, primarily in the Quality Department. Serving as the Airvac Quality Manager, he plays a crucial role in our ISO 9001 program and actively collaborates with internal and external stakeholders to uphold the highest quality standards for our clients'. Bob's commitment to excellence extends to collecting and addressing customer feedback, driving continuous product improvement and outstanding support.

CALEB MOORE

Project Engineering Manager

Caleb has been with Airvac for the past four years and holds a Bachelor of Science in Civil Engineering from Trine University. He manages the Project Engineering group and is the key contact for civil design of the vacuum system. Caleb works closely with local engineers and clients to ensure that project designs adhere to Airvac's criteria and operate as efficiently as possible.

ADAM WILSON

Project Manager

Adam has been with Airvac for the past 17 years (since 2007) and has held many roles within the company, from shipping / receiving, production technician, quality control technician, service technician, project administrator, procurement, quality control manager, and safety director. He is lead auditor and OSHA 30-hour certified. In 2022, he was promoted to the project manager position. Adam knows many aspects of the company and uses these skills to provide our clients with the best overall experience.

PERSONNEL EXPERIENCE / RESUMES

JEFFREY SMITH

Lead Engineer\
Project Engineering Coordinator

Jeff has been with Airvac for the past 14+ years (since 2010) and is heavily involved in the Mechanical design of the Airvac vacuum station equipment. Jeff earned his Bachelor of Science degree in Mechanical Engineering from Purdue University and has been an active engineer for the past 30+ years. Jeff is involved throughout the design process and works closely with local engineers and clients to ensure the design of the vacuum station equipment and line work fits the needs of the project.

ADAM SCHAAF

Project Engineer

Adam has been with Airvac for the past 7 years and holds a Bachelor of Science degree in Mechanical Engineering from Trine University. Adam is heavily involved with the control panel design that operates the vacuum station equipment. Adam works with local engineers and clients to make sure the equipment provided is best for each project.

CORBYN JONES

Project Engineer

Corbyn is a Project Engineer at Airvac, where he works closely with the sales team at the front end of the sales process. Since joining Airvac in May 2023, he has been responsible for developing municipal project preliminary layouts and budget estimates to assist potential clients in evaluating optimized and cost-effective vacuum sewer solutions. Prior to Airvac, Corbyn spent 2.5 years as a civil design engineer, specializing in site design for construction projects with a focus on stormwater control. His experience also includes designing and laying out water and wastewater utilities, providing him with a strong foundation in municipal infrastructure planning.

GREG NAMYAK

US/LATAM Service and Aftermarket Sales Manager

Greg has been with Airvac since 2020 and serves as US/LATAM Service Manager. Greg has served in several key service roles for the last 24 years, including 15 years with Siemens. He has worked in various industries all within the Customer Service arena and has managed small and large teams on a Regional and National level. He has managed organizations ranging from small start-up businesses to national and global companies. Greg is responsible for all service and aftersales support for North and South America. Additionally, he is ultimately responsible for vacuum sewer system training and the instructors providing it.

PERSONNEL EXPERIENCE / RESUMES

BECKY MURPHY

Service & Aftermarket Sales Representative

Becky has been with Airvac for 30 years (since 1995), spending most of her career as a Service Technician and lead Trainer. For vacuum sewer system operators, Becky has been the first contact regarding troubleshooting and maintenance support. As a product expert, Becky rebuilds, repairs, and troubleshoots vacuum sewer system products. In 2022, Becky was promoted to Quality Manager, where her focus was mainly managing Airvac's ISO 9001 certification. Recently, Becky returned to our Service department because of her extensive knowledge in client support and vacuum sewer system operator training.

JOHN KING

Regional Service Technician

John has been with Airvac for 37 years (since 1988), spending most of his career as a Regional Service Technician. John is ultimately responsible for vacuum sewer system operation and maintenance contracts. He and his team are solely responsible for the vacuum sewer systems with more than 10,500 home connections in Sarasota County. Additionally, John supports more clients from around the world with maintenance, preventative maintenance and troubleshooting support.

MATT NARD

Regional Service Technician

Matt has been with Airvac for 24 years (since 2001), spending most of his career as a Regional Service Technician. Prior to this service role, Matt fabricated vacuum sewer stations (e.g. tanks, piping and pumps). Matt is well rounded in the technology and he has operated and maintained many vacuum sewer systems in the state of Indiana. Today, he supports clients around the world with the vacuum sewer systems.

TYLER WALLEY

Electrical Engineering Technician

Tyler has been with Airvac for 7 years (since 2018), spending most of his career as an electrical & programming technician. Tyler supports vacuum sewer system operators from around the world with programming and electrical programming, troubleshooting and support. Today, Tyler is a lead vacuum sewer system programmer, and he commissions new vacuum sewer systems, both after fabrication and at the municipalities site. Tyler's strong mechanical and electrical aptitude brings tremendous value to existing vacuum sewer system operators.

SECTION 5
BABA ACT AND SRF REQUIREMENTS

RFQ NO. 2024000557

Lake View Midway Water Quality Improvements Project
Charlotte County

Airvac
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SECTION 5
BABA ACT AND SRF REQUIREMENTS

February 20, 2025

Airvac, Inc.
4217 N Old US Highway 31
Rochester, IN 46975

Subject: Build America, Buy America and State Revolving Fund Certification for Charlotte County RFQ NO. 2024000557

This is to certify that the following Airvac, Inc. products that will be incorporated into the submittal for Charlotte County RFQ NO. 2024000557 are manufactured in the United States of America in compliance with the Build America, Buy America Act (BABAA) requirements under Title IX of the Infrastructure Investment and Jobs Act, Pub. L. 177-58.

Products:

1. Valve Pit	3. Buffer Tank	5. Vacuum Valve Controller	7. Anti-Buoyancy Collar	9. Control Panel
2. Valve Pit Lid/Frame	4. Vacuum Valve	6. Valve Pit Sump Breather	8. Air Terminal	10. Collection Tank

Manufacturing of those products took place at one or more of the following manufacturing locations:

- Rochester, Indiana
- Lake Wales, Florida
- Medley, Florida
- Centralia, Illinois

Airvac vacuum sewer systems can meet the Build America, Buy America (BABA) Act and State Revolving Fund (SRF) Requirements in the following ways:

I. Iron and Steel Compliance

- Airvac ensures that all **iron and steel components** used in this vacuum sewer system will be **produced and manufactured in the United States.**
- This includes **piping, valves, fittings, vacuum station components, and structural steel**, all sourced from **U.S.-based manufacturers** that comply with domestic production requirements, including **melting, forming, and coating processes.**

II. Manufactured Products Compliance

- Airvac's vacuum sewer products, such as vacuum **valves, valve pits, and control panels**, are **manufactured in the U.S.**, ensuring compliance with BABA and SRF regulations.
- The **cost of U.S. sourced components** in these products **exceeds 55% of total component costs**.
- **Assembly, fabrication, and final testing** of Airvac vacuum sewer equipment occur **at Airvac's U.S. facilities**, supporting compliance with U.S. manufacturing requirements.

III. Construction Materials Compliance

- All **construction materials** used in Airvac vacuum sewer projects, including **polyethylene valve pits and other infrastructure components**, are **manufactured in the United States**.
- **Manufacturing processes** for these materials, including molding, forming, and finishing, take place in **U.S.-based production facilities**.

By adhering to these standards, Airvac ensures full compliance with BABA and SRF requirements, making its vacuum sewer technology eligible for federally funded infrastructure projects under these guidelines.

If you need further assistance, please send your request to clint.hawn@airvac.com.

Sincerely,

Clint Hawn

Clint Hawn

President & CEO | Airvac, Inc.

Managing Director | Roediger-Vacuum GmbH

SECTION 6
VSSM BACKGROUND QUESTIONNAIRE

RFQ NO. 2024000557

Lake View Midway Water Quality Improvements Project
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SECTION 6
VSSM BACKGROUND QUESTIONNAIRE

PART IV - SUBMITTAL FORMS
QUALIFICATION SUBMITTAL SIGNATURE FORM

The undersigned attests to his/her authority to submit this proposal and to bind the firm herein named to perform as per contract, if the firm is awarded the Contract by the County. The undersigned further certifies that he/she has read the Request for Qualifications, Terms and Conditions, Insurance Requirements and any other documentation relating to this request and this proposal is submitted with full knowledge and understanding of the requirements and time constraints noted herein.

By signing this form, the proposer hereby declares that this proposal is made without collusion with any other person or entity submitting a proposal pursuant to this RFQ.

In accordance with section 287.135, Florida Statutes, the undersigned certifies that the company is not on the Scrutinized Companies with Activities in Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, and does not have business operations in Cuba or Syria (if applicable) or the Scrutinized Companies that Boycott Israel List, or is not participating in a boycott of Israel.

As Addenda are considered binding as if contained in the original specifications, it is critical that the Vendor acknowledge receipt of same. The submittal may be considered void if receipt of an addendum is not acknowledged.

Addendum No. 1 Dated 2/11/25 Addendum No._____ Dated_____ Addendum No._____ Dated_____

Addendum No._____ Dated_____ Addendum No._____ Dated_____ Addendum No._____ Dated_____

Type of Organization (please check one): INDIVIDUAL (__) PARTNERSHIP (__) CORPORATION (X) JOINT VENTURE (__)

Airvac, Inc.
Firm Name

(574) 223-3980
Telephone

Fictitious or d/b/a Name

35-2749561
Federal Employer Identification Number (FEIN)

4217 N. Old US 31
Home Office Address

Rochester, Indiana 46975
City, State, Zip

56
Number of Years in Business

4440 E. Adamo Drive, Tampa, FL 33605
Address: Office Servicing Charlotte County, other than above

Sawyer Stevens
Name/Title of your Charlotte County Rep.

(574) 800-1524
Telephone

Clint Hawn / CEO
Name/Title of Individual Binding Firm (Please Print)

Clint Hawn
Signature of Individual Binding Firm

02/24/2025
Date

clint.hawn@airvac.com
Email Address

Airvac

DRUG FREE WORKPLACE FORM

The undersigned vendor in accordance with Florida Statute 287.087 hereby certifies that Airvac, Inc. (name of business) does:

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.

2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.

3. Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection (1).

4. In the statement specified in subsection (1), notify the employees that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.

5. Impose a sanction on or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.

6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

As the person authorized to sign the statement, I certify that this firm complies fully with the above requirements.

Clint Hawes
Proposer's Signature

02/24/2025
Date

Airvac

HUMAN TRAFFICKING AFFIDAVIT
for Nongovernmental Entities Pursuant To FS. §787.06

Charlotte County Contract #2024000557

The undersigned on behalf of the entity listed below, (the "Nongovernmental Entity"), hereby attests under penalty of perjury as follows:

1. I am over the age of 18 and I have personal knowledge of the matters set forth except as otherwise set forth herein.

2. I am an officer or representative of the Nongovernmental Entity and authorized to provide this affidavit on the Company's behalf.

3. Nongovernmental Entity does not use coercion for labor or services as defined in Section 787.06, Florida Statutes.

4. This declaration is made pursuant to Section 92.525, Florida Statutes. I understand that making a false statement in this declaration may subject me to criminal penalties.

Under penalties of perjury, I declare that I have read the foregoing Human Trafficking Affidavit and that the facts stated in it are true.

Further Affiant sayeth naught.

Clint Hawn
Signature

Clint Hawn
Printed Name

CEO
Title

Airvac, Inc.
Nongovernmental Entity

02/24/2025
Date

Airvac

REFERENCES: VACUUM SEWER SYSTEM MATERIALS

Vendor shall submit a minimum of five (5) recent (within the past five (5) years) references of projects of similar size and scope. Each reference shall include a project description, project location, name and phone number of a contact person, total project amount, and completion date. The County reserves the right to contact references.

1. Project Owner / Company: Martin County Utilities
Name of Contact Person: Brittany Bassett Telephone #: (772)209-2441
Address: 2378 S.E. Ocean Blvd.
City & State: Stuart, Florida Zip Code: 34995
Email: bbassett@martin.fl.us Duration of Contract or Business Relationship: 2005

2. Project Owner / Company: Charlotte County Utilities
Name of Contact Person: Dean Campbell Telephone #: (941)456-0041
Address: 25550 Harbor View Road Suite 1
City & State: Port Charlotte, Florida Zip Code: 33980
Email: dean.campbell@charlottecountyfl.gov Duration of Contract or Business Relationship: 2016

3. Project Owner / Company: City of Cape May Water and Sewer Utility
Name of Contact Person: Joseph Mendo Telephone #: (609)884-9577
Address: 643 Washington St.
City & State: Cape May, New Jersey Zip Code: 08204
Email: jrm@capemaycity.com Duration of Contract or Business Relationship: 2022

4. Project Owner / Company: Donna Ana Mutual Domestic Water Consumers Association
Name of Contact Person: Jennifer Horton Telephone #: (575)526-3491
Address: 5535 Ledesma Dr.
City & State: Las Cruces, New Mexico Zip Code: 88007
Email: jennifer@dawater.org Duration of Contract or Business Relationship: 2007

5. Project Owner / Company: Sussex County
Name of Contact Person: Paul Mauser Telephone #: (302)854-5028
Address: PO Box 589
City & State: Georgetown, Delaware Zip Code: 19947
Email: paul.auser@sussexcounty.gov Duration of Contract or Business Relationship: 2023

6. Project Owner / Company: Sarasota County
Name of Contact Person: Andy Ward Telephone #: (941)861-0954
Address: 1001 Sarasota Center Blvd.
City & State: Sarasota, Florida Zip Code: 34240
Email: award@scgov.net Duration of Contract or Business Relationship: 2003

Name of Bidder: Airvac, Inc.

Confidential information and not to be shared outside of the review team or to the public.

ATTACHMENT 1

SECTION 6: VSSM BACKGROUND QUESTIONNAIRE: To determine the qualifications of the VSSM, the VSSM is required to include information on the following categories. The information provided will be used to rank the VSSM, based on the evaluation of the responses provided.

1. **EXPERIENCE AND EXPERTISE WITH VACUUM SEWER SYSTEMS**

A. How many systems in North America do you have that are operating at this time?
Provide a separate list of all your installations in North America, showing the number of valves in each system and the year each system was placed in operation. Provide references for each, including the name and phone number of the owner of his Utility Director or operator.

Response: 505

B. How many systems do you have operating outside of North America?

Response: 632

C. During what year did your 1st North American system go online?

Response: 1972

D. What is your company's primary business (brief paragraph)?

Response: Airvac, Inc. is a leading provider of vacuum sewer technology, specializing in design, engineering, manufacturing and technical service for municipal applications. Airvac systems use differential air pressure to transport wastewater through a network of vacuum mains, reducing infiltration, exfiltration and the environmental impact.

E. What percentage of your company's total sales are from vacuum sewer components?

Response: 100%

F. How many direct United States based employees does your company have (not counting sales representatives) that are assigned to your vacuum sewer valve and station equipment manufacturing, technical support, and training business?

Response: 35

G. How many of your vacuum valves are currently installed in the North America?

Response: 85,707 vacuum valves

1. Of these, how many are in your designed systems?

Response: 82,353 vacuum valves & 505 vacuum stations

2. How many are in a retrofit situation?

Response: 3,354 vacuum valves & 22 vacuum stations

3. Where your valves are in a retro-fit, what brand valves were replaced?

Response: Calburns, Evac, Iseki & Roediger

H. Are your valves manufactured in the United States?

Response: YES X NO ____

2. TECHNICAL SUPPORT

A. With your current North American staff, how many projects of a size similar to this one can your company handle concurrently (support, design assistance, product supply, construction supervision, and the like.)?

Response: 7

B. Provide the name of the design engineer within your company that will assist our ENGINEER with the design review.

Response: Jeff Smith

3. SYSTEM OPERATING IN A SIMILAR ENVIRONMENT

A. How many operating vacuum systems do you have in North America that service over 500 customers?

Response: 263 (assuming 2.5 people per connection)

B. How many systems, with your valves, are operating in Florida?

Response: 126 vacuum stations

C. How many North American systems do you have that are in a coastal environment similar to Charlotte County?

Response: 54,338 vacuum valves & 265 vacuum stations

D. How many of your company's systems were designed to replace septic tank systems?

Response: 81,807 vacuum valves & 477 vacuum stations

E. Where is your closest technical support office with permanent staff?

Response: Sarasota County, FL

F. How many customers are connected to your largest combined vacuum station and collection system?

Response: 8,750 customers (3,500 connections X 2.5 people per connection/home)

4. COMPONENT DESIGN & RELIABILITY

A. Provide detailed drawings, specifications, and manufacture literature of the proposed vacuum valve pit(s) and vacuum valves to be provided. Include sizes, weight, backfill requirements, and installation/repair guidelines.

B. Provide detailed drawings, specifications, manufacture literature, and schedule of materials for the vacuum station equipment to be provided. **(For 4.A and 4.B, see Appendix)**

C. Do you provide a fiberglass buffer tank?

Response: YES X NO ____

D. Do you provide a fiberglass buffer tank with the valve and appurtenances in a separate chamber above the sealed sump?

Response: YES X NO ____

E. Is your valve pit/chamber rated for H20 traffic loads without a concrete collar?

Response: YES X NO ____

F. Will your valve pit resist the buoyant forces from high groundwater without the use of additional concrete ballast?

Response: YES X NO ____

G. How many connections can be served by one vacuum tank chamber by size?

Response: Typically 4 connections

H. What is your maximum vacuum valve to connection ratio (Such as 1 house/valve or 2 per valve)?

Response: Typically 4 houses / valve

I. What is the largest diameter sphere your valve can pass?

Response: 78 mm

J. Are any solids left behind in the collection sump after the vacuum valve operates?

Response: YES ____ NO X

K. How many field joints are required to connect your valve pit (from vacuum main to pit)?

Response: 1

L. Are any field connections required to connect the sewage collection sump to the valve?

Response: YES ____ NO X

M. What vacuum levels are required throughout the collection system to ensure proper operation of your valve?

Response: Absolute minimum: 5" Hg in – Hg

Maximum: 29" Hg in – Hg

Recommended operating range: 16-20" Hg in – Hg

N. What is the maximum recommended level of vacuum that your valve can withstand over an extended period of time before it is damaged?

Response: 29" Hg in – Hg

O. Describe the means air is supplied to the valve? How is water prevented from entering the breather assembly or tubing?

Response: The Airvac Internal Sump Breather enables air transfer between the collection sump and valve, ensuring proper air placement and displacement during valve operation. The product is 100% confined within the valve pit and does not require external piping. Its closed-loop design enables full submersion without risking water intrusion, protecting the vacuum equipment (datasheet attached).

P. List vacuum valve manufacturers that offer valves interchangeable and capable of fitting within the valve chamber that you supply.

Response: Iseki, Roediger and Flovac

Q. Describe in detail what piping modifications or re-arranging, fittings, adaptors, and the like would be necessary to retrofit a valve of another manufacturer.

Response: To the best of our knowledge, no piping or fitting modifications are required, only tubing configurations.

R. Will your valve fit and operate in valve pits that are not manufactured by your company?

Response: YES X NO ____

S. What types and lengths of warranties do you provide?

Response: Standard warranty: 1 year station and 2 year valve/valve pit components. Longer warranty periods are available if desired by the client. See attached for warranty documents.

T. If your company supplies valves and valve pits and another company supplies the vacuum station components (control panel and premanufactured pump/tank skid units) will your company provide a system wide warranty? If not, describe how to overcome this problem.

Response: YES ____ NO X Choose the most qualified supplier to provide all vacuum products to insure optimal design, calibration, and performance.

U. Will your company supply some, but not all, primary vacuum components for the Lake View Midway vacuum system?

Response: YES ____ NO X Airvac will supply and manufacture all the vacuum components.

5. CONTRACTOR SUPPORT SERVICES

A. Do you provide construction inspection services?

Response: YES X NO ____

B. What is your recommended acceptable leak rate for the vacuum mains? (such as inches/hour % loss.)

Response: 1" Hg loss over 4 hours @ 22" Hg.

C. Provide the name of the person in your company who will oversee/manage equipment delivery and construction services for this project.

Response: John King

6. START-UP AND TRAINING SERVICES

A. Do you provide system start-up services?

Response: YES X NO ____

B. Do you provide a formal operator training school?

Response: YES X NO ____

7. PRODUCT: WARRANTY & RELIABILITY

A. Does your valve warranty include wearing parts?

Response: YES X NO ____

B. Where are your valves manufactured?

Response: Airvac - Rochester, Indiana

C. Where are your vacuum valve controllers manufactured?

Response: Airvac - Rochester, Indiana

D. Do you assemble your own vacuum skids or is this contracted out and done by others?

Response: Own X By Others ____

E. Can the owner's system operator rebuild your controller at his shop?

Response: YES X NO ____

F. Does your controller have test ports?

Response: YES X NO ____

8. AFTER-MARKET SERVICES

A. If we need a field technician after the system is in operation, how many hours/days/weeks after the request is made until they arrive on site?

Response: 2 hours

B. If we need critical parts, such as a vacuum pump, after the system is in operation, how many hours/days/weeks after the request is made until the items will be delivered on-site?

Response: Many cases, next day

C. Where is your closest technical support service location?

Response: Sarasota, Florida

D. Do you provide an emergency 24-hour telephone support number, including weekends and holidays?

Response: YES X NO ____

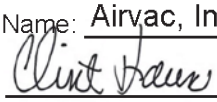
E. If YES, what is that number?

Response: (941) 232-2605

9. **OTHER INFORMATION:** Provide any other information that you consider important in the evaluation of your system; including vacuum valve assemblies and your central vacuum station components, with emphasis on design features, ease of installation, access and maintenance, system reliability, service call histories or frequencies.

10. **ATTEST STATEMENT:** I do hereby attest to the best of my knowledge, all information included in this Questionnaire, to be used in the evaluation of equipment for the Lake View Midway Vacuum Sewer Project is accurate and truthful.

Supplier's Name: Airvac, Inc

Signature: 

Title: CEO

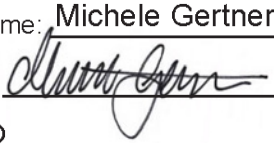
Address: 4217 N Old US 31, Rochester, IN 46975

Telephone Number: (574) 223-3980

Date: 02/24/2025

Witness: Michele Gertner

Printed Name: Michele Gertner

Signature: 

Title: CFO

Date: 02/24/2025