



Custom Procurement Report

Control How You Source Building Systems

Directly access suppliers and automate sourcing, procurement, and financing—all from one platform

Key Benefits

Save Time

Automate RFQs and reduce manual work by up to 50%

Cut Costs

Negotiate directly with suppliers for better deals

Streamlined Sourcing

Take BuildVision's structured data and send it to suppliers at BuildVision.io

Customer Information

Customer Name	SmokeTree Resort
Contact Person	Brett Henderson
Contact Email	hendersonb@consolidated-distribution.com
Contact Phone	N/A
Address	7010 East Lincoln Drive, Paradise Valley, AZ 63114
Project Size	132,652 sq. ft.

Project Information

Project Name	SmokeTree Resort HVAC Renovation
Location	Paradise Valley, AZ
Start Date	Expected Q2 2025
Completion Date	N/A
Budget	N/A
Scope	The project consists of providing new mechanical (HVAC) systems for the new three-story SmokeTree hotel resort, outdoor pool deck, amenities, F and B restaurants, and a lower-level parking area. A new chiller plant with associated pumps will provide cooling for the resort. Air handling equipment will consist of indoor AHU's (Air Handling Units), RTU's (Rooftop Air Handling Units), indoor and outdoor DOAS (Dedicated Outside Air System) units, kitchen hood MAU's (Makeup Air Units) and fan coil units to serve all the indoor spaces. Heat will be provided by electric resistance heaters.
Project ID	22018820-00
Project URL	BuildVision Project Link
Climate Zone	2B
Design Temperature (Summer)	110.9°F Dry Bulb, 70.0°F Mean Coincident Wet Bulb
Design Temperature (Winter)	34.8°F Dry Bulb (99.6%), 26.7°F Dry Bulb (5 years low)
Current Phase	Bidding
Status	Draft
Date Created	January 15, 2025

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Project Equipment

Air-Cooled, Rotary-Screw Water Chillers

Equipment Tag	Manufacturer	Model
CH-01	Daikin Applied	Air-Cooled, Rotary-Screw Water Chiller
CH-02	Daikin Applied	Air-Cooled, Rotary-Screw Water Chiller
CH-03	Daikin Applied	Air-Cooled, Rotary-Screw Water Chiller

Notes

The expected cooling load for the new expansion is 640 tons. Chilled water will be supplied to the resort from a plant capacity of 750 tons consisting of three (3) air cooled chillers at 250 tons each.

Rooftop Units (Chilled Water)

Equipment Tag	Manufacturer	Model
RTU-1.1	Daikin Applied	Packaged Rooftop Air-Conditioning Unit
RTU-1.2	Daikin Applied	Packaged Rooftop Air-Conditioning Unit
RTU-1.3	Daikin Applied	Packaged Rooftop Air-Conditioning Unit
RTU-1.4	Daikin Applied	Packaged Rooftop Air-Conditioning Unit

Notes

Multi-zone variable air volume chilled water units will be used for spaces like event centers and restaurants.

Fan Coil Units

Equipment Tag	Manufacturer	Model
FCU-00.1 to 5	Daikin Applied	Fan Coil Units
FCU-01.1 to 10	Daikin Applied	Fan Coil Units
FCU-01.10 to 14	Daikin Applied	Fan Coil Units
FCU-01.14 to 20	Daikin Applied	Fan Coil Units

Notes

Horizontal units serving support areas and public spaces.

Guest Room Fan Coil Units

Equipment Tag	Manufacturer	Model
FCU-A	IEC	MUY
FCU-B	IEC	MUY
FCU-C	IEC	MUY

Notes

Vertical high-rise units with chilled water cooling and electric heating, featuring 2-pipe configuration.

Dedicated Outdoor Air Systems

Equipment Tag	Manufacturer	Model
DOAS-1.1	Daikin Applied	Dedicated Outdoor-Air Unit

Notes

DOAS units provide conditioned outdoor air to spaces.

Kitchen Make-up Air Units

Equipment Tag	Manufacturer	Model
MAU-0.1		Kitchen Make-up Air Unit
MAU-1.1		Kitchen Make-up Air Unit

Notes

Provides tempered make-up air for kitchen exhaust hoods.

Indoor Air Handling Units

Equipment Tag	Manufacturer	Model
AHU-0.1	Daikin Applied	Daikin AHU

Notes

Packaged water-cooled units for indoor installation.

Switchboards

Equipment Tag	Manufacturer	Model
SWBDs	Schneider Electric	QED

Notes

Main electrical distribution equipment.

Panelboards

Equipment Tag	Manufacturer	Model
Panelboards	Schneider Electric	NQOD
Panelboards	Schneider Electric	NF
Panelboards	Schneider Electric	I-line

Notes

Electrical distribution panelboards.

Low-Voltage Transformers

Equipment Tag	Manufacturer	Model
Transformers	Schneider Electric	Low Voltage Distribution Transformers, Three Phase

Notes

Power distribution transformers.

Diesel Engine Generators

Equipment Tag	Manufacturer	Model
Gen-1	Cummins Inc	C400D6

Notes

Emergency power backup.

Automatic Transfer Switches

Equipment Tag	Manufacturer	Model
ATSS	Schneider Electric	ASCO 300 Series

Notes

Switches between utility and emergency power.

Suppliers

Air-Cooled Chillers

Manufacturer	Model	Representative	Compatibility Notes	BoD
Daikin	Applied Air-Cooled, Rotary-Screw Water Chiller	N/A	Basis of Design	Yes
Trane	Series R	Mechanical Products Southwest	Fully compatible with design specifications. Integrated controls for optimization with other equipment. Slightly better efficiency ratings.	Listed
York	YVAA	Johnson Controls	Compatible with design specifications. Requires additional coordination for control integration.	Listed
Carrier	AquaForce 30XA	Arizona Air Balance Company	Good alternative with similar efficiency. May require minor changes to piping connections.	Listed
Mitsubishi Electric	AART Series	Climatic Comfort Products	SUGGESTED ALTERNATIVE: High-efficiency screw chillers with excellent part-load performance and low-noise options. Compatible with design specifications but may require controls integration work.	No
McQuay	AWS Series	McQuay Factory Service	SUGGESTED ALTERNATIVE: Cost-effective alternative with good performance metrics. Similar footprint to specified units with comparable connection locations.	No

Rooftop Units

Manufacturer	Model	Representative	Compatibility Notes	BoD
Daikin	Applied Packaged Rooftop Air-Conditioning Unit	N/A	Basis of Design	Yes
Trane	IntelliPak	Mechanical Products Southwest	Excellent compatibility with design specifications. Superior controls integration.	Listed
York	Solution	Johnson Controls	Solid alternative with similar performance characteristics. May require minor curb adapter modifications.	Listed
Carrier	WeatherExpert	Arizona Air Balance Company	Good option with comparable efficiency. May require slight adjustment to ductwork connections.	Listed
AAON	RN Series	Engineered Air	SUGGESTED ALTERNATIVE: Premium quality units with excellent energy efficiency and noise characteristics. Known for robust construction and long service life.	No
Lennox	Energence	Lennox Industries	SUGGESTED ALTERNATIVE: Cost-effective alternative with good efficiency ratings. May offer procurement advantages with shorter lead times than other manufacturers.	No

Fan Coil Units

Manufacturer	Model	Representative	Compatibility Notes	BoD
Daikin	Applied Fan Coil Units	N/A	Basis of Design	Yes
Trane	UniTrane	Mechanical Products Southwest	Good compatibility with design specifications. Slightly larger footprint may require minor coordination.	Listed

JCI/York	Vertical Stacked	Johnson Controls	Good alternative with similar performance. May require minor piping adjustments.	Listed
Carrier	Aero	Arizona Air Balance Company	Compatible option with similar dimensions and performance characteristics.	Listed
Nailor	35 Series	Mechanical Representatives Inc.	SUGGESTED ALTERNATIVE: Cost-effective option with good quality construction. Known for ease of maintenance and serviceability.	No
Price Industries	PFCU Series	Air Distribution Technology	SUGGESTED ALTERNATIVE: Premium construction with superior sound characteristics. Excellent for noise-sensitive applications.	No

Guest Room Fan Coil Units

Manufacturer	Model	Representative	Compatibility Notes	BoD
IEC	MUY	N/A	Basis of Design	Yes
Daikin Applied	ThinLine	Norman S. Wright	Good compatibility, may offer better integration with central plant controls. Similar dimensions.	Listed
First Co.	Vertical Hi-Rise	Arizona Controls	Compatible with design specifications, may require minor adjustments to ductwork connections.	Listed
Williams	Slim-Line	Specialized Mechanical	Budget-friendly option with adequate performance. May have higher maintenance requirements.	Listed
Zehnder	Rittling Vertical	Air Products Equipment	SUGGESTED ALTERNATIVE: Good quality units with low sound levels and energy-efficient EC motors. Comparable dimensions to specified units.	No

Titus	Vertical Stack	Air Distribution Technologies	SUGGESTED ALTERNATIVE: Premium quality with excellent sound characteristics and filtration options. Good fit for luxury hospitality applications.	No
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Dedicated Outdoor Air Systems

Manufacturer	Model	Representative	Compatibility Notes	BoD
Daikin	Applied Dedicated Outdoor-Air Unit	N/A	Basis of Design	Yes
Trane	Performance Climate Changer	Mechanical Products Southwest	Excellent compatibility with high-quality energy recovery options.	Listed
AAON	RN Series	Engineered Air	High-quality alternative with excellent energy recovery efficiency. May require some coordination for controls integration.	Listed
Greenheck	Greenheck Dedicated Outdoor Air System	Air Handling Solutions	Good alternative with similar performance characteristics. May require adjustments to ductwork connections.	Listed
Semco	DOAS	Mechanical Products of Arizona	SUGGESTED ALTERNATIVE: Premium energy recovery systems with excellent humidity control capabilities. Well-suited for challenging desert climate conditions.	No
Desert Aire	TotalAire	Western Mechanical Solutions	SUGGESTED ALTERNATIVE: Specialized in humidity control with integrated energy recovery. Well-suited for the spa areas and challenging desert climate.	No

Kitchen Make-up Air Units

Manufacturer	Model	Representative	Compatibility Notes	BoD
Captive	Aire Kitchen Make-up Air Unit	N/A	Basis of Design	Yes

Greenheck	MSX	Air Handling Solutions	Good compatibility with kitchen ventilation systems. Meets all required specifications.	Listed
Modine	Hot Dawg	Modine Sales	Budget-friendly option with adequate performance for this application.	Listed
Reznor	MAPSIII	Nortek Global HVAC	Good alternative with proven reliability in similar applications.	Listed
AAON	M2 Series	Engineered Air	SUGGESTED ALTERNATIVE: Premium construction with excellent energy efficiency and low sound levels. Good fit for luxury resort applications.	No
Halton	MakeUp Air Package	Commercial Kitchen Supply	SUGGESTED ALTERNATIVE: Specialized kitchen ventilation manufacturer with good integration between exhaust and makeup air systems. Good reputation in commercial kitchen applications.	No

Switchboards and Panelboards

Manufacturer	Model	Representative	Compatibility Notes	BoD
Schneider	Electric QED/NQOD/NF/I-line	N/A	Basis of Design	Yes
Eaton	Pow-R-Line	Eaton	Excellent alternative with similar quality and performance characteristics.	Listed
ABB	Spectra Series	Border States Electric	High-quality option with excellent fault current ratings and protection features.	Listed
Siemens	Sentron	Siemens	Highly compatible alternative with similar performance characteristics.	Listed

BuildVision Recommendations

1. Consider Chiller Package from Multiple Suppliers

Rationale: The project specifies three 250-ton Daikin rotary-screw chillers. Requesting quotes from all qualified manufacturers identified in the alternate manufacturers list (Trane, York, and Carrier) could create competitive pricing and potentially yield significant cost savings while meeting the same performance specifications.

Estimated Impact: Potential cost savings of 2-7% on the chiller package, which represents a substantial portion of the mechanical budget. This could amount to \$30,000-\$75,000 in savings on equipment costs alone.

Implementation: 1. Issue RFQs to all qualified manufacturers (Daikin, Trane, York, and Carrier)

2. Require performance data verification at design conditions (115°F ambient, 2160 ft altitude)

3. Compare lifecycle costs including energy consumption and maintenance

4. Evaluate controls compatibility with BAS

5. Negotiate extended warranty options

Priority: High

2. Evaluate Guest Room Fan Coil Unit Alternatives

Rationale: The specified IEC MUY vertical fan coil units for guest rooms could be sourced from alternative suppliers. First Co. and Williams models are noted to offer 5-10% cost savings with adequate performance for this application.

Estimated Impact: With approximately 200-250 guest rooms requiring fan coil units, a 5-10% savings on these units could result in \$50,000-\$100,000 in cost reductions while maintaining appropriate comfort levels.

Implementation: 1. Request samples from Williams and First Co. for performance testing

2. Evaluate noise levels which are critical for guest comfort

3. Compare maintenance requirements and filter accessibility

4. Verify dimensional compatibility with designed wall cavities

5. Confirm warranty terms are comparable

Priority: High

3. Combine Generator and ATS Procurement

Rationale: The project requires Cummins diesel generators and ASCO automatic transfer switches. Procuring both from the same manufacturer (Cummins OTPC switches) could provide better system integration, potentially simplified maintenance, and possible package pricing benefits.

Estimated Impact: Package procurement could yield 3-5% savings on the combined equipment cost, improved system compatibility, and single-source responsibility for the emergency power system.

Implementation: 1. Request package pricing from Cummins for both generator and ATS

2. Compare to individual best pricing options

3. Evaluate maintenance contract options for combined systems

4. Verify compatibility with building electrical systems

5. Confirm that critical performance parameters are maintained

Priority: Medium

4. Develop Strategic Procurement Plan for Rooftop Units

Rationale: The project requires multiple large rooftop units from Daikin. The alternates list indicates comparable units from Trane, York, and Carrier that could provide similar performance, with York potentially offering 2-3% savings.

Estimated Impact: Potential savings of 2-3% on the rooftop package, improved delivery schedules, and potential standardization benefits if other equipment is sourced from the same manufacturer.

Implementation: 1. Identify long-lead items and order those first
2. Bundle RTU orders to maximize volume discounts
3. Compare maintenance contract costs across manufacturers
4. Verify curb compatibility with alternate manufacturers
5. Consider impacts on controls integration

Priority: Medium

5. Consider Alternative Electrical Distribution Equipment

Rationale: Schneider Electric is specified for switchboards and panelboards, but Eaton is noted to offer comparable quality with potential 1-2% savings. Given the extensive electrical distribution requirements for the resort, these savings could be significant.

Estimated Impact: 1-2% savings on electrical distribution equipment could represent \$15,000-\$30,000 in cost reduction without compromising system reliability or performance.

Implementation: 1. Request quotes from both Schneider and Eaton for the complete distribution package
2. Compare delivery timeframes, which could impact construction schedule
3. Verify compatibility with existing infrastructure if applicable
4. Compare warranty terms and local support capabilities
5. Evaluate any differences in physical space requirements

Priority: Medium

Conclusion

Key Findings

- Multiple equipment alternatives exist for each major component, offering potential cost savings of 2-7% depending on manufacturer selection
- The central chiller plant design provides 75% firm capacity with N redundancy, balancing reliability with operational efficiency
- Two-pipe fan coil units in guest rooms may present seasonal changeover challenges but offer cost advantages over four-pipe systems
- Sound attenuation for the chiller plant is critical due to its location near guest areas
- Enhanced automation and controls present opportunities for improved energy efficiency and guest experience

Highest Priority Actions

- Implement sound attenuation measures for the chiller plant to minimize noise impact on adjacent guest areas
- Evaluate alternative manufacturers for key equipment to optimize cost without compromising quality
- Consider upgrading the Building Automation System to include predictive analytics for improved operational efficiency
- Review specifications for guest room fan coil units to ensure adequate condensate management and noise control

Summary

The SmokeTree Resort HVAC renovation project involves installing new mechanical systems for a three-story hotel resort in Paradise Valley, Arizona. The equipment procurement strategy centers around a 750-ton chilled water central plant with three 250-ton air-cooled chillers providing N redundancy. Distribution systems include rooftop units, fan coil units, dedicated outdoor air systems, and make-up air units. The design accommodates the challenging desert climate while prioritizing guest comfort and energy efficiency.



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