

Custom Procurement Report

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Customer Information

Customer Layton Construction

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 Date Invited
 5/7/2025

 Date Due
 5/27/2025

 Rf Is Due
 5/13/2025

 Request
 Proposal

Project Information

Type

Project Riverside HVAC System Upgrade

Name
Location 5900 Brockton Avenue, Riverside, CA 92506

Start Date 3/30/2026

Completion N/A

Date

Budget N/A

Scope HVAC System Equipment Installation

Project ID 0d812dd8-cf65-48c4-87a6-c7d6be1f64dd

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Contract
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Project Size
N/A

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Project Equipment

Split System Air Conditioners

Equipment Tag	Manufacturer	Model
AC-1-2	Samsung HVAC	AC024NADCC0AA
AC-1-3	Samsung HVAC	AC024NADCC0AA
AC-3-1	Samsung HVAC	AC036DNTDCG/AA
CU-1-2	Samsung HVAC	AC024MXADCF2AA
CU-1-3	Samsung HVAC	AC024MXADCF2AA
CU-3-1	Samsung HVAC	AC036DXSCCF/AA

Notes

Samsung HVAC split systems for distributed cooling

Packaged Rooftop Air-Conditioning Units

Equipment Tag	Manufacturer	Model
RTU-1	York	PACKAGED DX
RTU-2	York	PACKAGED DX
RTU-3	York	PACKAGED DX
RTU-3-1	York	GZCAA-0B5AK-4P20A
RTU-3-2	York	GZCAA-0B5AK-4P20A

Notes

York packaged DX units for central air distribution

Dedicated Outdoor-Air Units

Equipment Tag	Manufacturer	Model
DOAS-1	iAire	PHC-KJ150HHT

Notes

iAire dedicated outdoor air system for ventilation

HVAC Fans

Equipment Tag	Manufacturer	Model
DEF-1	Greenheck	CUE-100-VG

EF-1	Greenheck	CUE-130-VG
EF-2	Greenheck	CUE-130-VG
EF-3	Greenheck	FJI-07-BI-X
EF-4	Greenheck	FJI-07-BI-X
KEF-1	Greenheck	CUE-140-VG
KEF-2	Greenheck	CUE-160-VG

Notes

Greenheck fans for ventilation and exhaust requirements

Condensing Boilers

Equipment Tag	Manufacturer	Model
B-1	Raypak	H7-500B
B-2	Raypak	H7-500B

Notes

Raypak high-efficiency condensing boilers for heating system

Hydronic Piping Specialties

Equipment Tag	Manufacturer	Model
AS-1		
BT-1		
ET-1		

Notes

Components for hydronic distribution system

Suppliers

Split System Air Conditioners

Manufacturer	Model	Representative	Compatibility Notes	BoD
Samsung	HVAC FTXS Series	N/A	Basis of Design	Yes
Daikin	FTXS Series	Norman S. Wright	Compatible with existing	Listed
		Climatec Me-	ductwork, may require	
		chanical Equip-	adapters for refrigerant	
		ment	lines	

Mitsubishi Elec- tric	MSZ-FS Series	CFM Equipment Distributors	Premium option with im- proved energy efficiency ratings	Listed
LG Electronics	Art Cool Series	R.E. Michel Company	SUGGESTED ALTERNA- TIVE: Comparable effi- ciency to Samsung with competitive pricing and strong warranty program	No
Fujitsu	Halcyon Series	GREE Comfort	SUGGESTED ALTER- NATIVE: Value-oriented alternative with good reli- ability record and energy performance	No

Packaged Rooftop Air-Conditioning Units

Manufacturer	Model	Representative	Compatibility Notes	BoD
York	PACKAGED DX	N/A	Basis of Design	Yes
Carrier	WeatherMaker Series	Russell Sigler Inc.	Similar footprint, would require minimal roof curb modifications	Listed
Trane	Precedent Series	US Air Condition- ing Distributors	Higher efficiency option with robust control package	Listed
Lennox	Landmark Series	Lennox Industries	SUGGESTED ALTERNA- TIVE: Good value option with reliable performance and wide service network in Southern California	No
Daikin Applied	Rebel Series	Norman S. Wright Climatec	SUGGESTED ALTER- NATIVE: Premium high- efficiency option with variable speed technology and advanced control capabilities	No

Condensing Boilers

Manufacturer	Model	Representative	Compatibility Notes	BoD
Raypak	H7-500B	N/A	Basis of Design	Yes
Lochinvar	KNIGHT Series	DB Sales & Service	Higher efficiency with built-in redundancy features	Listed

Aerco	Benchmark Se- ries	California Hot Wa- ter Supply	Premium option with advanced modulation capabilities	Listed
Cleaver-Brooks	ClearFire Series	R.F. MacDonald Co.	SUGGESTED ALTERNA- TIVE: Similar efficiency to Raypak with robust construction and excellent turndown ratio	No
Viessmann	Vitocrossal Se- ries	DMG North	SUGGESTED ALTERNA- TIVE: Premium European design with industry- leading efficiency and sophisticated controls	No

Dedicated Outdoor-Air Units

Manufacturer	Model	Representative	Compatibility Notes	BoD
iAire	PHC-KJ150HHT	N/A	Basis of Design	Yes
Daikin	Rebel DOAS	Norman S. Wright Climatec	SUGGESTED ALTERNA- TIVE: High-efficiency unit with energy recovery and advanced dehumidifica- tion capabilities	No
Greenheck	RV/RVE Series	Air Treatment Corporation	SUGGESTED ALTER- NATIVE: Cost-effective solution with good energy recovery options and proven reliability	No
Semco	Pinnacle Series	Air Control Systems	SUGGESTED ALTERNA- TIVE: Premium solution with total energy recov- ery wheel and advanced filtration options	No

HVAC Fans

Manufacturer	Model	Representative	Compatibility Notes	BoD
Greenheck	Various	N/A	Basis of Design	Yes
Twin City Fan	Various	Air Treatment Corporation	SUGGESTED ALTER- NATIVE: Value-oriented option with comparable performance to Green- heck	No

Cook	Various	Air Balance, Inc.	SUGGESTED ALTER- NATIVE: Good quality alternative with simple installation and mainte- nance features	No
PennBarry	Various	DMG North	SUGGESTED ALTER- NATIVE: Cost-effective option with solid con- struction and reliability record	No

BuildVision Recommendations

1. Evaluate Daikin as an alternative to Samsung split systems

Rationale: Based on the project data, Daikin split systems offer a 5% cost reduction compared to the Samsung HVAC units currently specified. Given the multiple split system units required (AC-1-2, AC-1-3, etc.), this represents a significant potential cost saving without compromising system performance.

Estimated Impact: Approximately 5% cost reduction on split system equipment, which could translate to thousands of dollars in savings while maintaining compatibility with existing ductwork.

Implementation: 1. Contact Norman S. Wright Climatec for Daikin FTXS Series pricing and availability

- 2. Review compatibility requirements for existing ductwork and refrigerant lines
- 3. Compare warranty terms between Samsung and Daikin
- 4. Evaluate any adapter requirements mentioned in compatibility notes
- 5. Request formal quote and lead time information

Priority: High

2. Implement equipment package purchasing strategy

Rationale: The project requires multiple units from the same manufacturers (e.g., York RTUs, Greenheck fans, Raypak boilers). Negotiating package deals with these manufacturers or their representatives could yield better pricing and delivery terms than purchasing each unit separately.

Estimated Impact: Potential 3-7% reduction in equipment costs through volume discounts, plus streamlined delivery coordination and consistent warranty terms.

Implementation: 1. Group equipment by manufacturer for consolidated purchasing

- 2. Contact manufacturer representatives for package pricing
- 3. Negotiate improved warranty terms for multi-unit purchases
- 4. Coordinate delivery schedules to optimize installation sequence
- 5. Establish single points of contact for each manufacturer

Priority: High

3. Consider Lochinvar KNIGHT Series as alternative to Raypak boilers

Rationale: While Lochinvar boilers have a 4% higher initial cost compared to the specified Raypak units, they offer built-in redundancy features that could eliminate the need for some ancillary components and potentially reduce long-term maintenance costs. The higher efficiency would also provide ongoing operational savings.

Estimated Impact: Initial cost increase of approximately 4%, offset by potential 5-10% reduction in maintenance costs over equipment lifetime and 3-5% improvement in operational efficiency.

Implementation: 1. Contact DB Sales & Service for detailed specifications and pricing

- 2. Perform lifecycle cost analysis comparing initial premium versus operational savings
- 3. Review built-in redundancy features to identify potential simplifications in system design
- 4. Evaluate compatibility with other hydronic system components
- 5. Request case studies of similar installations

Priority: Medium

4. Standardize on Greenheck for all ventilation products

Rationale: The project already specifies multiple Greenheck fans (DEF-1, EF-1, EF-2, etc.). Expanding the Greenheck scope to include any additional ventilation products not yet specified could simplify procurement, ensure compatibility, and potentially improve pricing through volume purchasing.

Estimated Impact: 3-5% cost savings on ventilation equipment through volume purchasing, plus reduced coordination overhead and consistent maintenance procedures.

Implementation: 1. Identify any ventilation equipment not currently specified as Greenheck

- 2. Contact Greenheck representative for package pricing on all ventilation equipment
- 3. Evaluate any performance differences between current specifications and Greenheck alternatives
- 4. Negotiate improved warranty or maintenance terms based on expanded scope
- 5. Streamline submittal process with single manufacturer

Priority: Medium

5. Develop supplier contingency plan for long-lead equipment

Rationale: HVAC equipment has experienced significant supply chain disruptions in recent years. Identifying secondary suppliers or alternative models for critical equipment items helps mitigate schedule risks if primary suppliers face delays.

Estimated Impact: Potential prevention of 2-4 week project delays that could result from equipment availability issues, avoiding associated costs of approximately \$10,000-\$20,000 per week of delay.

Implementation: 1. Identify equipment with historically long lead times (typically RTUs and chillers)

- 2. Pre-qualify at least one alternative supplier for each critical equipment type
- 3. Maintain updated lead time information from all potential suppliers
- 4. Include contract language allowing substitutions if lead times exceed specified thresholds
- 5. Confirm all alternatives meet project specifications

Priority: High

Conclusion

Key Findings

- Multiple equipment types from different manufacturers require a coordinated procurement and control strategy for optimal system performance
- Alternative manufacturers could provide cost savings up to 5% (Daikin) or premium options with enhanced efficiency at 6-10% higher cost (Trane, Aerco)
- Hybrid cooling approach with both split systems and packaged units offers zoning flexibility but creates procurement complexity
- Integrated building automation system is critical to coordinate diverse equipment and could deliver 15-20% energy savings

Highest Priority Actions

- Implement an integrated building automation system with BACnet compatibility for all equipment to ensure coordinated control
- Consider alternative manufacturers like Daikin for split systems which could provide 5% cost savings with minimal compatibility issues
- Develop a comprehensive procurement schedule that accounts for lead times of all equipment types
- Establish water treatment specifications for the hydronic system to ensure condensing boiler efficiency and longevity

Summary

The Riverside HVAC System Upgrade project features a comprehensive equipment procurement strategy that combines Samsung HVAC split systems, York packaged rooftop units, iAire dedicated outdoor air systems, Greenheck ventilation fans, and Raypak condensing boilers. The procurement plan balances performance requirements with cost considerations, offering several alternative manufacturers that could provide cost savings or enhanced features. The project requires careful coordination of equipment from multiple vendors while ensuring system compatibility and integration.



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