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Custom Procurement Report

Control How You Source Building Systems

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

Key Benefits

T **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	Layton Construction
Contact Person	William Winslow
Contact Email	wwinslow@laytonconstruction.com
Contact Phone	N/A
Date Invited	5/7/2025
Date Due	5/27/2025
Rf Is Due	5/13/2025
Request Type	Proposal

Project Information

Project Name	Riverside HVAC System Upgrade
Location	5900 Brockton Avenue, Riverside, CA 92506
Start Date	3/30/2026
Completion Date	N/A
Budget	N/A
Scope	HVAC System Equipment Installation
Project ID	0d812dd8-cf65-48c4-87a6-c7d6be1f64dd
Project URL	BuildVision Project Link
Created	5/7/2025
Contract Type	N/A
Job Walk	N/A
Project Size	N/A

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Date: 2025-05-20

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

Note: Cost differences are AI-estimated percentages relative to Basis of Design and are not based on actual project data. Always obtain accurate quotes from vendors directly via buildvision.io.

Manufacturer	Model	Representativ	AI Est. Cost D	Compatibility Notes	BoD
Samsung	HVAC	N/A		Basis of Design	**Yes**
Samsung	HVAC	N/A		Basis of Design	No

Daikin	FTXS Series	Norman S. Wright Climatec Mechanical Equipment	-5%	Compatible with existing ductwork, may require adapters for refrigerant lines	No
Mitsubishi Electric	MSZ-FS Series	CFM Equipment Distributors	+8%	Premium option with improved energy efficiency ratings	No

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Manufacturer	Model	Representativ	AI Est. Cost D	Compatibility Notes	BoD
York		N/A		Basis of Design	**Yes**
York		N/A		Basis of Design	No
Carrier	WeatherMaker Series	Russell Sigler Inc.	+3%	Similar footprint, would require minimal roof curb modifications	No
Trane	Precedent Series	US Air Conditioning Distributors	+6%	Higher efficiency option with robust control package	No

Condensing Boilers

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Manufacturer	Model	Representativ	AI Est. Cost D	Compatibility Notes	BoD
Raypak		N/A		Basis of Design	**Yes**
Raypak		N/A		Basis of Design	No
Lochinvar	KNIGHT Series	DB Sales & Service	+4%	Higher efficiency with built-in redundancy features	No
Aerco	Benchmark Series	DMG North Inc.	+10%	Premium option with advanced modulation capabilities	No

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Raypak		N/A		Basis of Design	No
Lochinvar	KNIGHT Series	DB Sales & Service	+4%	Higher efficiency with built-in redundancy features	No
Aerco	Benchmark Series	California Hot Water Supply	+10%	Premium option with advanced modulation capabilities	No

Design Notes

HVAC Cooling Systems

Technical Observations:

- Multiple split systems indicate a zoned approach to cooling
- Combination of split systems and packaged units suggests a hybrid approach
- Samsung equipment selected as basis of design for split systems

Concerns:

- Coordination between multiple system types will require careful control integration
- Refrigerant line routing for split systems needs to be validated

Opportunities:

- Potential for energy savings through optimization of multiple systems
- Zoning approach allows for more granular temperature control

Ventilation Systems

Technical Observations:

- Dedicated outdoor air system (DOAS) provides centralized fresh air delivery
- Multiple exhaust fans indicate distributed exhaust requirements
- Kitchen exhaust fans (KEF) suggest commercial kitchen ventilation needs

Concerns:

- Balancing of supply and exhaust air will be critical
- Kitchen exhaust compliance with NFPA 96 should be verified

Opportunities:

- Energy recovery potential between exhaust and outdoor air streams
- Demand-controlled ventilation could reduce energy consumption

Hydronic Heating System

Technical Observations:

- Dual boiler system provides redundancy
- High-efficiency condensing boilers selected as basis of design
- Hydronic piping specialties indicate a distributed hot water system

Concerns:

- Condensate management for high-efficiency boilers needs to be addressed

- System water quality maintenance is essential for longevity

Opportunities:

- Potential for further efficiency optimization through outdoor air reset controls
- Dual boiler staging can maximize condensing operation

BuildVision Recommendations

1. Implement integrated building automation system

Rationale: Multiple equipment types and manufacturers require coordinated control for optimal operation
Estimated Impact: 15-20% energy savings through optimized sequencing and setpoint management
Implementation: Specify BACnet compatibility for all equipment and central BAS controller
Priority: High

2. Consider demand-controlled ventilation for DOAS

Rationale: CO2-based control can reduce unnecessary ventilation during periods of low occupancy
Estimated Impact: 10-15% reduction in ventilation-related energy consumption
Implementation: Add CO2 sensors in major zones and modify DOAS controls
Priority: Medium

3. Evaluate hydronic system water treatment options

Rationale: Proper water treatment is essential for condensing boiler efficiency and longevity
Estimated Impact: Extended equipment life by 3-5 years, maintained efficiency
Implementation: Specify advanced filtration and chemical treatment package
Priority: Medium

4. Consider variable primary flow for boiler system

Rationale: Variable flow matches system capacity to load more precisely than primary/secondary
Estimated Impact: 5-8% reduction in pumping energy, improved delta-T
Implementation: Modify hydronic design to variable primary, specify VFDs for pumps

Priority: Low

Conclusion

Key Findings

- The hybrid cooling approach provides good zoning capabilities but requires careful control integration
- Dedicated outdoor air system provides centralized fresh air delivery with potential for energy recovery
- High-efficiency condensing boilers provide good redundancy and efficiency for the heating system
- Multiple exhaust systems indicate specialized ventilation requirements that must be carefully balanced

Highest Priority Actions

- Implement integrated building automation system for coordinated control
- Ensure proper refrigerant line routing and sizing for split systems
- Verify kitchen exhaust compliance with applicable codes
- Develop comprehensive water treatment strategy for hydronic system

Summary

The proposed HVAC system for this Riverside, CA project incorporates a diverse range of equipment to meet various heating, cooling, and ventilation needs. The design utilizes a hybrid approach with both split systems and packaged rooftop units for cooling, dedicated outdoor air for ventilation, and a dual condensing boiler system for heating. While the equipment selections are appropriate for the application, there are opportunities for optimization in controls integration, energy recovery, and system operation.

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