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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	Town of Montgomery Police Station
Contact Person	Matt Seckler
Contact Email	mseckler@consigli.com
Contact Phone	845-391-1925
BidDueDate	05/23/2025 02:00 PM
ConstructionManager	Consigli Construction Co., Inc.
Architect	ADG Architects (Jason T. Anderson Architect, P.C.)
EngineerOfRecord	M/E Engineering (Schenectady, NY)

Project Information

Project Name	Town of Montgomery Police Station HVAC System
Location	110 Bracken Road, Montgomery, NY 12549
Start Date	02-24-25
Completion Date	N/A
Budget	N/A
Scope	HVAC and Plumbing Systems Installation
Project ID	TOM Police Station
Project URL	BuildVision Project Link
DesignStage	Bid Documents
ProjectStatus	Bidding
ApplicableSpecifications	22 0000 - Plumbing, 23 0000 - HVAC, 26 0000 - Electrical

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Date: 05-14-25

Project Equipment

Packaged Rooftop Air Handling Units

Equipment Tag	Manufacturer	Model
RTU-1	Daikin Applied	DPSH03B
RTU-2	Daikin Applied	DPSH12B

Notes

DX/Electric heat pump units with economizer capability; 10-20 week lead time

Split System Air Conditioning Units

Equipment Tag	Manufacturer	Model
AC-01	Trane	MSZ-GS36NA (Indoor) / MUZ-GS36NA (Outdoor)

Notes

Heat Pump Type; 10-20 week lead time

Exhaust Fans

Equipment Tag	Manufacturer	Model
EF-1	Greenheck	G-120-VG
EF-122	Greenheck	G-060-VG
EF-124	Greenheck	G-060-VG

Notes

Downblast type for roof installation; 10-14 week lead time

Unit Heaters

Equipment Tag	Manufacturer	Model
UH-111	QMark	MUH0581-PRO
UH-125	QMark	MUH0581-PRO

Notes

Electric unit heaters; <10 week lead time

Cabinet Unit Heaters

Equipment Tag	Manufacturer	Model
CUH-1	QMark	AWH4408
CUH-2	QMark	EFF4008

Notes

Electric cabinet heaters; <10 week lead time

Plumbing Fixtures

Equipment Tag	Manufacturer	Model
DF-1	Elkay Manufacturing Company	LZWSM8K
DF-2	Elkay Manufacturing Company	LZS-LRPBM28K
MS-1	Fiat	TSB-300

Notes

As specified in Section 22 40 00

Water Treatment Equipment

Equipment Tag	Manufacturer	Model
SF-1	Watts	PHSJUM40
UV-A	VIQUA	PRO20
UV-B	VIQUA	PRO20

Notes

As specified in Section 22 67 00

Equipment Curbs and Supports

Equipment Tag	Manufacturer	Model
EC-1	RPS	Custom
PC-1	RPS	Custom

Notes

Wind-rated supports for rooftop equipment; <10 week lead time

Suppliers

Packaged Rooftop Air Handling Units

Manufacturer	Model	Representativ	Compatibility Notes	BoD
Daikin	Applied DPSH Series	N/A	Basis of Design	**Yes**
Daikin Applied	DPSH Series	Thermal Environment Sales	Basis of Design unit.	No
Carrier	48HC	RJ Murray Company	Compatible with specified requirements. 208V/3-Phase electrical connection.	No
Trane	Precedent	Trane Technologies	Compatible with specified requirements. 208V/3-Phase electrical connection.	No
York	Predator	Johnson Controls	Compatible with specified requirements. 208V/3-Phase electrical connection.	No

Split System Air Conditioning Units

Manufacturer	Model	Representativ	Compatibility Notes	BoD
Trane	MSZ-GS36NA/MUZ GS36NA	N/A	Basis of Design	**Yes**
Trane	MSZ-GS36NA/MUZ-GS36NA	Trane Technologies	Basis of Design unit. Note: Model naming uses Mitsubishi designation; verify compatibility.	No

Ultraviolet Sterilizers

Manufacturer	Model	Representativ	Compatibility Notes	BoD
VIQUA	PRO20	N/A	Basis of Design	**Yes**
VIQUA	PRO20	VIQUA (Trojan Technologies)	Basis of Design unit.	No
Atlantic Ultraviolet	Sanitron S5000C	Atlantic Ultraviolet Corporation	Must meet NSF Standard 61 and Standard 55 Class A certification as required by NYS Department of Health.	No

Trojan Technologies	UV Max Pro20	Trojan Technologies	Must meet NSF Standard 61 and Standard 55 Class A certification as required by NYS Department of Health.	No

Exhaust Fans

Manufacturer	Model	Representativ	Compatibility Notes	BoD
Greenheck	G-Series	N/A	Basis of Design	**Yes**
Greenheck	G-Series	Buckley Associates	Basis of Design unit.	No
Loren Cook	ACE-B	RF Peck Company, Inc.	Compatible with specified requirements.	No
PennBarry	Domex	Kane-Davey Associates, Inc.	Compatible with specified requirements.	No

Unit Heaters & Cabinet Unit Heaters

Manufacturer	Model	Representativ	Compatibility Notes	BoD
QMark	MUH Series/AWH Series	N/A	Basis of Design	**Yes**
QMark	MUH Series/AWH Series	QMark (Marley Engineered Products)	Basis of Design unit.	No
Markel	HF/HT Series	Applied Thermal Systems Inc.	Compatible with specified requirements. Verify panel compatibility.	No
Berko	HUHAA Series	Electrical Equipment Corp.	Compatible with specified requirements. Verify panel compatibility.	No

Equipment Curbs and Supports

Manufacturer	Model	Representativ	Compatibility Notes	BoD
RPS	Custom	N/A	Basis of Design	**Yes**
RPS	Custom	Roof Products & Systems Corporation	Basis of Design custom equipment curbs with wind-rated design.	No

Design Notes

Rooftop HVAC Systems

Technical Observations:

- System designed with packaged rooftop heat pump units with economizer capability for fresh air intake
- Variable air volume distribution system for improved energy efficiency
- Minimum of VAV boxes with electric reheat for zone control
- Exhaust systems designed for proper building ventilation
- Long-lead risk on Daikin RTUs with 10-20 week lead times
- Wind restraint requirements for all rooftop equipment per Division 23

Concerns:

- Ensuring proper weatherproofing at all roof penetrations
- Maintaining adequate access for maintenance of rooftop equipment
- Sizing of ductwork for proper air distribution with minimal noise
- Lead time risk for critical equipment could impact project schedule
- Ductless Split model naming (MSZ/MUZ) shows Mitsubishi designations while specified as Trane

Opportunities:

- High-efficiency heat pump systems for reduced energy consumption
- Demand controlled ventilation opportunities where applicable
- Economizer operation during moderate weather conditions
- Early procurement of long-lead items to mitigate schedule risk

Water Treatment Systems

Technical Observations:

- Sediment filtration system with 20 micron filter for incoming water
- Dual UV disinfection system with redundancy in case of failure
- NSF Standard 61 and Standard 55 Class A certification as required by NYS Department of Health

Concerns:

- Ensuring proper installation of UV systems with adequate clearance for lamp replacement
- Providing robust water quality monitoring and backup systems
- Maintaining proper flow rates through treatment equipment

Opportunities:

- Parallel installation of UV systems allows for maintenance without system shutdown
- System designed for 40 GPM total capacity (2 x 20 GPM units)

Plumbing Systems

Technical Observations:

- ADA-compliant fixtures throughout
- High-efficiency water coolers with bottle filling stations
- Specialized service basin fixtures in janitorial areas

Concerns:

- Ensuring proper installation of backflow prevention devices
- Coordinating fixture rough-ins with architectural details

Opportunities:

- Water-efficient fixtures to reduce overall consumption
- Durable materials selection for long service life

BuildVision Recommendations

1. Install additional monitoring systems for water treatment equipment

Rationale: The current design includes dual UV disinfection systems but would benefit from real-time monitoring to ensure continuous operation and immediate notification of any issues.
Estimated Impact: Increased reliability of water treatment system and reduced risk of water quality issues.
Implementation: Add water quality monitoring system with remote notification capabilities to alert maintenance staff of any issues.
Priority: High

2. Implement advanced controls for rooftop units

Rationale: The specified HVAC equipment supports advanced controls that could optimize performance beyond the base requirements.
Estimated Impact: Potential energy savings of 10-15% through optimized operation and enhanced economizer control.
Implementation: Upgrade control sequences to include demand-controlled ventilation and integration with building automation system.
Priority: Medium

3. Provide additional roof curb insulation

Rationale: Standard roof curbs may create thermal bridging that can reduce overall system efficiency.
Estimated Impact: Reduction in energy loss and potential condensation issues.
Implementation: Specify higher R-value insulation for rooftop equipment curbs beyond minimum requirements.
Priority: Medium

4. Implement comprehensive commissioning plan

Rationale: Complex HVAC and water treatment systems require thorough commissioning to ensure proper operation.
Estimated Impact: Verification of proper system operation and documentation for future maintenance.
Implementation: Develop detailed commissioning plan including testing of all control sequences and system performance metrics.
Priority: High

5. Schedule early procurement of long-lead equipment

Rationale: Daikin RTUs have 10-20 week lead times which could impact project schedule if not ordered early.
Estimated Impact: Avoidance of potential project delays of 4-8 weeks.
Implementation: Early submittal and procurement process for Daikin RTUs and other long-lead items.
Priority: High

6. Verify ductless split system model compatibility

Rationale: Trane split system specifications show model numbers with Mitsubishi designations (MSZ/MUZ), indicating potential supply chain or specification issue.
Estimated Impact: Prevention of procurement delays and installation issues.
Implementation: Coordinate with design team to verify correct manufacturer and model specifications before procurement.
Priority: High

7. Ensure wind restraint submittals meet requirements

Rationale: Division 23 requires PE-stamped calculations and submittals for rooftop equipment curbs and supports.
Estimated Impact: Compliance with code requirements and prevention of inspection issues.
Implementation: Coordinate with structural engineer for wind restraint design and certifi-

cation of all rooftop equipment.
Priority: Medium

Conclusion

Key Findings

- The selected equipment meets or exceeds energy efficiency requirements
- The HVAC system provides appropriate zoning for different building areas
- Water treatment systems include redundancy for critical functions
- The overall design follows current best practices for safety and reliability
- Long lead times for Daikin RTUs (10-20 weeks) present schedule risk
- Model number discrepancies in the ductless split system specifications need resolution
- Wind restraint requirements for rooftop equipment require PE certification

Highest Priority Actions

- Implement comprehensive commissioning plan to verify proper system operation
- Schedule early procurement of long-lead equipment to prevent schedule delays
- Install additional monitoring for water treatment systems
- Verify ductless split system model compatibility before procurement
- Ensure PE-stamped wind restraint submittals for all rooftop equipment
- Provide detailed training for maintenance staff on all specialized equipment

Summary

The HVAC and plumbing systems designed for the Town of Montgomery Police Station incorporate energy-efficient equipment and provide for reliable operation. The use of variable air volume distribution with heat pump technology balances energy efficiency with occupant comfort. The water treatment system meets regulatory requirements while providing redundancy for critical functions. Several issues require attention, including long lead times for critical equipment, model number discrepancies for the ductless split system, and wind restraint requirements for rooftop equipment.

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