

TO: The Honorable Mayor and Town Council
FROM: Ryan Curley, Town Manager *RC*
DATE: November 17, 2025
SUBJECT: Termination of the ESA with NORESKO, LLC

Summary of Agenda Item:

The Town is currently under an energy services agreement with NORESKO, LLC of Westborough, MA for the energy performance contract that was completed in 2018. We are in year seven of the agreement and the project is meeting the guaranteed savings per the annual reconciliation report. There are 12 more annual audits and reports scheduled as part of the contract with the fees listed below. Should the decision be made to terminate the ESA, the annual fees would be saved within the budget.

2026	\$20,265.00
2027	\$20,873.00
2028	\$21,499.00
2029	\$22,144.00
2030	\$22,809.00
2031	\$23,493.00
2032	\$24,198.00
2033	\$24,924.00
2034	\$25,671.00
2035	\$26,442.00
2036	\$27,235.00
2037	<u>\$21,039.00</u>
	<u>\$280,592.00</u>

Funding:

N/A

Action Needed:

Move to terminate the ESA with NORESKO, LLC of Westborough MA and forgo any future audits and guaranteed savings reconciliations reports as this is in the best interest of the Town.

Attachments:

Year Seven- Guaranteed Savings Reconciliation Report
Draft ESA Termination Letter

Prepared By: Douglas Solek, Director of Facilities





One Research Drive, Suite 400C • Westborough, MA 01581 • 508.614.1000 • www.noresco.com

May 31, 2025

Arosha Jayawickrema
Town Manager
Town of Berlin, CT
240 Kensington Rd
Berlin, CT 06037

**RE: ENERGY SERVICES AGREEMENT - TOWN OF BERLIN, CONNECTICUT
GUARANTEED SAVINGS RECONCILIATION REPORT FOR CONTRACT YEAR SEVEN**

Dear Mr. Jayawickrema,

NORESCO is pleased to present the Year Seven Guaranteed Savings Reconciliation Report (GSRR) to the Town of Berlin for the nine Energy Conservation Measures (ECMs) implemented under the Energy Services Agreement (ESA) with NORESO. The enclosed report documents the verified savings per Year Seven. Based on the as-built documentation and results of the Measurement and Verification (M&V) process, the verified savings for the Year Seven Guarantee Period is \$663,312. This exceeds the Revised Guaranteed Savings of \$660,839 by \$2,473.

NORESCO was notified on March 18, 2025, of the Town of Berlin's request to terminate the M&V contract for this project. NORESO responded to the Town on May 5, 2025, asking for the Town to provide a formal termination letter to proceed with the termination. NORESO has processed invoice #38310 for Year Seven and confirmed. Pursuant to Section 4 item B Compensation and Payment of the ESA, this contract is billed annually on the first day of the month following the end of the given performance period year. If Town of Berlin does not provide NORESO with a formal termination letter prior to April 1, 2026 then NORESO will process an invoice for the Year Eight Measurement and Verification Services and deliver the corresponding GSRR.

NORESCO is pleased to provide an exceptional Customer Care Program with a team that strives to deliver continued customer satisfaction throughout the full project lifecycle. Your Customer Care liaison will foster open communications, evaluate your project satisfaction, and address any issues in a timely and efficient manner. On behalf of NORESO, we appreciate the efforts of Town of Berlin and the collaborative measures taken to ensure a successful project.

If you have any technical questions regarding the report, please contact Taj Whitney at taj.whitney@noreso.com. Any other questions or concerns, contact your customer care specialist, Matthew Miller at matthew.miller@noreso.com, or (724) 554-7100. Thank you for your time and continued support.

Regards,
Matthew Miller
Customer Care Specialist

cc: Kevin Delaney, Finance Director
Doug Solek, Facilities Director

Enclosure

ENERGY SERVICES AGREEMENT

TOWN OF BERLIN
BERLIN, CONNECTICUT

**Guaranteed Savings
Reconciliation Report
Year Seven**

May 31, 2025

Submitted by:

NORESCO

NORESCO, LLC.
One Research Drive
Westborough, MA 01581
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A decorative background graphic consisting of two large, overlapping, curved shapes in light blue and light green, with several small, semi-transparent circles in the same colors scattered around them.

ENERGY SERVICES AGREEMENT

TOWN OF BERLIN
BERLIN, CONNECTICUT

GUARANTEED SAVINGS RECONCILIATION REPORT
YEAR SEVEN

May 31, 2025

TABLE OF CONTENTS

SECTION I: GUARANTEED SAVINGS RECONCILIATION REPORT

SECTION II: ATTACHMENTS

► OVERALL PROJECT SUMMARY

- Attachment OA: Final ECM Acceptance
- Attachment OB: Year Seven O&M Inspection Report

► ECM-1: LIGHTING IMPROVEMENT AND CONTROLS

- Attachment 1A: Hours Group Summary
- Attachment 1B: Lighting Savings Summary and Building Summary

► ECM-2: DIRECT DIGITAL CONTROL ENERGY MANAGEMENT SYSTEM

- Attachment 2A: New DDC EMS Savings Calculations

► ECM-3: VARIABLE FREQUENCY DRIVES AND PREMIUM EFFICIENCY MOTORS

- Attachment 3A: PE Motor & VFDs Savings Calculations

► ECM-4: COOLER CONTROLS

- Attachment 4A: Walk-In Cooler Upgrades Savings Calculations

► ECM-7: BUILDING WEATHERIZATION

- Attachment 7A: Weatherization Savings Calculations

► ECM-8: HIGH-EFFICIENCY CONDENSING BOILERS

- Attachment 8A: New Boilers Savings Calculations

► ECM-9: NEW FAN COIL AND AIR HANDLING UNITS

- Attachment 9A: New HVAC Savings Calculations

► ECM-10: SOLAR PHOTOVOLTAICS

- Attachment 10A: PV Savings Calculations

SECTION I: GUARANTEED SAVINGS
RECONCILIATION REPORT

**TOWN OF BERLIN
BERLIN, CONNECTICUT**

**GUARANTEED SAVINGS RECONCILIATION REPORT
YEAR SEVEN**

Performance Period Dates Covered: April 1, 2024 to March 31, 2025

Contract Year: Seven of Nineteen

0. EXECUTIVE SUMMARY

0.1 Project Background

NORESCO is pleased to submit the Guaranteed Savings Reconciliation Report (GSRR) for Year Seven to the Town of Berlin (Berlin). NORESKO submitted the Investment Grade Energy Audit (IGA) Report to Berlin on November 30, 2015. This GSRR covers nine Energy Conservation Measures (ECMs). Originally 11 ECMs were proposed, but ECM-5 and ECM-6 were removed with Change Order No. 1 dated July 7, 2016 and Change Order No. 2 December 15, 2016.

- ▶ ECM-1: Lighting Improvements & Controls
- ▶ ECM-2: Direct Digital Control (DDC) Energy Management System
- ▶ ECM-3: Variable Frequency Drives (VFDs) and Premium Efficiency Motors
- ▶ ECM-4: Cooler Controls
- ▶ ECM-7: Building Weatherization
- ▶ ECM-8: High Efficiency Condensing Boilers
- ▶ ECM-9: New Fan Coil and Air Handling Units
- ▶ ECM-10 Solar Photovoltaics
- ▶ ECM-11: LED Streetlights

Berlin accepted the overall construction project by executing the Certificate of Final Acceptance dated March 15, 2018 which is attached hereto as **Attachment OA: Final ECM Acceptance**. This GSRR provides the verified savings for the Year Seven Guarantee Period based on as-built conditions and post-installation Measurement and Verification (M&V) activities. The Year Seven Guarantee Period covers the period from April 1, 2024 through March 31, 2025.

This Report summarizes the M&V activities and results that occurred during the Year Seven Guarantee Period including an overview of the project and its implemented ECMs, and descriptions of changes made since the original proposal.

Guaranteed Savings are the amount of avoided energy and operational costs that NORESKO has guaranteed to Berlin as specified in *Schedule F* in the Energy Services Agreement (ESA) and finalized in Change Order No. 4 effective date of September 30, 2017. The verified savings are the savings that NORESKO calculated for the Seventh Guarantee Period as a result of as-built conditions and post-installation M&V activities.

NORESCO was notified on March 18, 2025, of the Town of Berlin's request to terminate the M&V contract of this project. NORES CO responded to the Town on May 5, 2025, asking for the Town to provide a formal termination letter to proceed with the termination. Until NORES CO receives a formal termination letter, M&V services will continue and an invoice for the Year 8 Performance Period will be processed on April 1, 2026.

0.2 Brief Project and ECM Descriptions

A summary of each ECM is outlined below:

ECM-1: Lighting Improvements & Controls

This ECM replaced existing 32-watt T-8 lamps with 25- or 28-watt T-8 lamps with high efficiency ballasts, and many incandescent, High Intensity Discharge (HID), and fluorescent fixtures were replaced with Light Emitting Diode (LED) fixtures. This ECM also installed occupancy sensors in select locations, which automatically turn off lights when the areas are unoccupied.

ECM-2: DDC Energy Management System

This ECM replaced pneumatic valves and actuators with direct digital control (DDC) components in the Town Hall.

ECM-3: VFDs and Premium Efficiency Motors

This ECM installed VFDs on constant volume pumps and fans at the Library and Town Hall. In addition, standard efficiency motors for the hot water pumps were replaced with premium efficiency motors.

ECM-4: Cooler Controls

This ECM upgraded the fan motors and controls on the walk-in coolers and freezers at the High School and McGee Middle School.

ECM-7: Building Weatherization

This ECM installed improvements to the building envelopes at Willard Elementary School, Timberlin Golf Course, the Town Hall and Peck Memorial Library.

ECM-8: High Efficiency Condensing Boilers

This ECM installed new, energy-efficient condensing hot water boilers and new boiler controls at McGee Middle School and the Town Hall.

ECM-9: New Fan Coil and Air Handling Units

This ECM installed new air handling units (AHUs) and fan coil units (FCUs) in the Town Hall.

ECM-10: Solar Photovoltaics

This ECM installed solar photovoltaic (PV) arrays at McGee Middle School, Griswold, Hubbard, and Willard Elementary Schools.

ECM-11: LED Streetlights

This ECM replaces exterior high-pressure sodium streetlights with LED fixtures. This ECM was implemented by the Town of Berlin and its contractor Tanko Lighting.

0.3 Summary of Proposed & Verified Energy and Cost Savings

Table 0-1 lists the proposed unit and cost savings by ECM as specified in the ESA. The proposed cost savings the Year Seven energy rates as determined per ESA Schedule F-2: Baseline Energy Rates and escalated by Schedule Rates. For ECM 10: Solar Photovoltaics, the guaranteed savings are 95 percent of the proposed savings calculated.

TABLE 0-1: PROPOSED AND GUARANTEED YEAR SEVEN SAVINGS BASED ON ESA, DATED NOVEMBER 2011

ECM No.	ECM Name	Electricity (kWh)	Natural Gas (CCF)	Utility Savings (\$)
-1	Lighting Improvements & Controls	644,509	(746)	\$152,964
-2	Direct Digital Control Energy Management System	6,698	3,435	\$4,026
-3	Variable Frequency Drives and Premium Efficiency Motors	51,918	---	\$10,667
-4	Cooler Controls	20,816	---	\$4,446
-5	Plug Load Controls	25,840	---	\$6,137
-6	Computer Power Management	76,966	---	\$17,087
-7	Building Weatherization	7,702	3,565	\$5,098
-8	High Efficiency Condensing Boilers	---	15,428	\$13,166
-9	New Fan Coil and Air Handling Units	3,766	3,990	\$3,922
-10	Solar Photovoltaics	973,070	---	\$217,707
-11	LED Streetlights	---	---	\$248,845
Total		1,811,286	25,672	\$684,064

Numbers across columns or rows may appear to have small discrepancies when summed due to rounding.

PV Savings degradation by 0.5% applied annually.

Table 0-1A lists the revised guaranteed savings based on two Change Orders that were executed during the c Change Order No. 1, dated July 21, 2016, removed ECM-06 from the project. Change Order No. 2, dated Dec ECM-05 from the project. These Change Orders were included as attachments in the Post Installation Report 2018. The Revised Guaranteed Savings for the project is shown below:

TABLE 0-1A: REVISED GUARANTEED YEAR SEVEN SAVINGS BASED ON EXECUTED CHANGE ORDERS

ECM No.	ECM Name	Electricity (kWh)	Natural Gas (CCF)	Utility Savings (\$)
-1	Lighting Improvements & Controls	644,509	(746)	\$152,964
-2	Direct Digital Control Energy Management System	6,698	3,435	\$4,026
-3	Variable Frequency Drives and Premium Efficiency Motors	51,918	---	\$10,667
-4	Cooler Controls	20,816	---	\$4,446
-5	Plug Load Controls	---	---	\$---
-6	Computer Power Management	---	---	\$---
-7	Building Weatherization	7,702	3,565	\$5,098
-8	High Efficiency Condensing Boilers	---	15,428	\$13,166
-9	New Fan Coil and Air Handling Units	3,766	3,990	\$3,922
-10	Solar Photovoltaics	973,070	---	\$217,707
-11	LED Streetlights	---	---	\$248,845
Total		1,708,480	25,672	\$660,839
Year Seven Guaranteed Savings				

Numbers across columns or rows may appear to have small discrepancies when summed due to rounding.

PV Saving's degradation by 0.5% applied annually.

Table 0-2 lists the Verified Year Seven savings per ECM based on the as-built conditions and the post-installation

TABLE 0-2: VERIFIED SAVINGS - YEAR SEVEN

ECM No.	ECM Name	Electricity (kWh)	Natural Gas (CCF)	Utility Savings (\$)
-1	Lighting Improvements & Controls	663,312	(763)	\$156,99
-2	Direct Digital Control Energy Management System	6,698	3,335	\$3,94
-3	Variable Frequency Drives and Premium Efficiency Motors	51,919	---	\$10,66
-4	Cooler Controls	20,816	---	\$4,44
-5	Plug Load Controls	---	---	\$---
-6	Computer Power Management	---	---	\$---
-7	Building Weatherization	7,356	3,455	\$4,96
-8	High Efficiency Condensing Boilers	---	13,664	\$11,52
-9	New Fan Coil and Air Handling Units	3,766	3,990	\$3,92
-10	Solar Photovoltaics	924,346	---	\$217,99
-11	LED Streetlights	---	---	\$248,8
Total		1,678,213	23,682	\$663,3
Year Six Guaranteed Savings				

Numbers across columns or rows may appear to have small discrepancies when summed due to rounding.

PV Saving's degradation by 0.5% applied annually.

Based on the as-built documentation and results of the M&V process, the verified savings for the Year Seven is \$663,312. This exceeds the Revised Guaranteed Savings of \$660,839 by \$2,473.

0.4 Savings Adjustments

A summary of the adjustments made during the post-installation M&V are listed below. For full details of the adjustments, refer to the detailed M&V sections for each ECM.

ECM-5: Plug Load Controllers

Change Order No. 2, dated December 15, 2016, removed ECM-5 from the project.

ECM-6: Computer Power Management

Change Order No. 1, dated July 21, 2016, removed ECM-6 from the project.

0.5 Performance and O&M Issues

During the annual inspection, NORESO noted issues with ECM-2. Observations revealed that some of the schedules and temperature setpoints were adjusted from the proposed settings. For detailed information of the annual inspection, please see each ECM section and **Attachment OB: Year Seven Annual Inspection.**

0.6 Energy, Water, and O&M Rate Data

The baseline unit energy and water costs, as listed in Attachment F of the ESA, are included below in *Table O-3* and the annual escalation rates are shown in *Table O-4*. The baseline energy rates have been increased by the energy escalation percentages for each year by the applicable amount shown in *Table O-4*. The Year Seven escalated energy rates are shown in *Table O-5* and were calculated by escalating the baseline rates for seven years.

TABLE O-3: BASELINE ENERGY UNIT COSTS

Facility	Electricity Blended Rate (\$/kWh)	Natural Gas (\$/CCF)
Griswold Elementary School	\$0.1821	\$0.8692
High School	\$0.1546	\$0.8692
Hubbard Elementary School	\$0.1670	\$0.9860
McGee Middle School	\$0.1842	\$0.6487
Willard Elementary School	\$0.1731	\$0.7891
Art League	\$0.1604	\$---
Timberlin Golf Course	\$0.1991	\$1.0934
Highway, Facilities, Parks, Water, Departments	\$0.1694	\$1.1702
Library	\$0.1691	\$0.8620
Sage Park	\$0.4724	\$---
Senior Center	\$0.1731	\$1.6441
Town Hall & Police Department	\$0.1414	\$0.6062
South Kensington Fire Department	\$0.1723	\$1.0644

TABLE 0-4: ESCALATION RATES

Year	Electricity Blended Rate (\$/kWh)	Natural Gas (\$/CCF)
One	5.02%	5.02%
Two-Nineteen	4.00%	4.00%

TABLE 0-5: YEAR SEVEN ENERGY RATES

Facility	Electricity Blended Rate (\$/kWh)	Natural Gas (\$/CCF)
Griswold Elementary School	\$0.2419	\$1.1551
High School	\$0.2054	\$1.1551
Hubbard Elementary School	\$0.2219	\$1.3103
McGee Middle School	\$0.2448	\$0.8620
Willard Elementary School	\$0.2301	\$1.0487
Art League	\$0.2131	\$---
Timberlin Golf Course	\$0.2645	\$1.4530
Highway, Facilities, Parks, Water, Departments	\$0.2251	\$1.5551
Library	\$0.2247	\$1.1456
Sage Park	\$0.6278	\$---
Senior Center	\$0.2300	\$2.1849
Town Hall & Police Department	\$0.1879	\$0.8056
South Kensington Fire Department	\$0.2289	\$1.4144

0.7 Verified Savings to Date

TABLE 0-6: VERIFIED SAVINGS FOR PERFORMANCE PERIOD TO DATE

Performance Period	Electric Savings (kWh)	Natural Gas (CCF)	Utility Savings (\$)	Total Savings (\$)	Guaranteed Savings (\$)
Year One	1,751,978	25,655	\$259,221	\$259,221	\$256,920
Year Two	1,701,672	23,682	\$269,939	\$269,939	\$267,971
Year Three	1,696,933	23,682	\$286,130	\$286,130	\$284,079
Year Four	1,692,218	23,682	\$299,791	\$299,791	\$297,649
Year Five	1,687,526	23,682	\$630,205	\$630,205	\$627,963
Year Six	1,682,858	23,682	\$644,951	\$644,951	\$642,958
Year Seven	1,678,213	23,682	\$663,312	\$663,312	\$660,839
Total	11,891,398	167,747	\$3,053,549	\$3,053,549	\$3,038,379

Numbers across columns or rows may appear to have small discrepancies when summed due to rounding.

1. ECM-1: LIGHTING IMPROVEMENTS AND CONTROLS

1.1 Overview of ECM, M&V Plan, and Savings Calculations

NORESCO used International Performance Measurement and Verification Protocol (IPMVP) Option A for this ECM.

This ECM saves energy by installing more efficient light fixtures that use less electricity than the existing fixtures. Existing 32-watt T-8 lamps were upgraded to 25- or 28-watt T-8 lamps with high efficiency ballasts, and many incandescent, HID and fluorescent fixtures were replaced with LED fixtures. Additional savings come from the installation of occupancy sensors in select locations, which automatically turn off lights when the areas are unoccupied.

To establish baseline energy consumption for this ECM, NORESO developed a spreadsheet that implemented electrical power measurements (kW) and pre-wattage tables of the existing fixtures, as well as operating hours.

1.2 M&V Activities Conducted this Period

Jeffery Lyskawa, from NORESO, met with Town of Berlin to conduct the annual inspection of ECM-1 on March 4, 2025 and March 5, 2025. No issues were noted during this inspection. For detailed information on the inspection, please see **Attachment OB: Year Seven Annual Inspection**.

1.3 Verified Savings Calculations and Methodology

To calculate the direct energy savings, fixtures were grouped by baseline lamp and ballast combination (LBC), post-installation LBC, and hours of operation. Energy savings calculations for this ECM used data from the following sources:

- ▶ An on-site audit
- ▶ Measurements of energy consumption of existing and new fixtures
- ▶ Industry standard lighting wattage tables showing standard consumption of the LBCs that were not measured
- ▶ Data provided by facility personnel supported by data from lighting loggers (occupancy data, operating hours of fixtures)

Key parameters that affect baseline energy use include fixture energy consumption and operating hours. Building operating and occupant data was determined from lighting loggers that logged hours of lighting operation throughout the sites over an extended period of time. If any of these parameters could not be determined from these sources, NORESO estimated the parameter based on standard engineering practices and experience.

For each line item in the inventory, the verified electric energy savings has been calculated using the following equations:

$$ES_{LTG} = \{(P_{base} * N_{base}) - (P_{post} * N_{post})\} * H_{base}$$

Where:

ES_{LTG}	= Annual Energy Savings (kWh)
P_{BASE}	= Baseline Electrical Power (kW/fixture)
N_{BASE}	= Baseline Fixture Quantity
P_{POST}	= Post-installation Electrical Power (kW/fixture)
N_{POST}	= Post-installation Fixture Quantity
H_{BASE}	= Baseline Annual Operating Hours

Annual hours of operation are the values shown for each entry in the comprehensive lighting audit and spreadsheet model. The total verified electric energy savings are the sum of the energy savings for each line item in the inventory.

To calculate the verified lighting control savings, fixtures were grouped with other fixtures sharing the same baseline LBC group, post-installation LBC group, and hours of operation. The baseline and post-installation operating hours agreed to by both Parties for all lighting equipment is detailed in **Attachment 1B: Lighting Savings Summary and Building Summary**.

For each group of fixtures, energy savings from the new controls are calculated as follows:

$$ES_{CONTROLS} = \{(P_{post} * H_{base}) - (P_{post} * H_{post})\} * N_{post}$$

Where:

$ES_{controls}$	= Energy savings, in kWh, for the on/off controls.
P_{post}	= Electrical power, in kW, per fixture for appropriate post-installation LBC group.
H_{base}	= Baseline annual operating hours defined by fixture's pre-hours group.
H_{post}	= Post-Installation annual operating hours defined by fixture's post hours group.
N_{post}	= Number of fixtures in representative post-installation LBC group.

The associated interactive heating and cooling effects on electric consumption and natural gas usage are calculated using the following equations:

$$ES_{CLG} = ES_{LTG} \times LCC / (COP \times SC) \times WC / 52$$

$$P_{HTG} = (ES_{LTG} \times PS \times LCH \times SH \times WH / 52 \times HFCF) / EFF_{HTG}$$

Where:

ES_{CLG}	= Annual Interactive Cooling Energy Savings (kWh)
P_{HTG}	= Annual Interactive Heating Penalty
LCC	= Lighting Contribution to Cooling Load, as a percentage of total lighting energy use
SC	= Space Cooled, as a percentage of the total floor space
COP	= Cooling System Efficiency (COP)
WC	= Weeks of Cooling per year
PS	= Perimeter Spaces, as a percentage of the total floor space
LCH	= Lighting Contribution to Heating Load, as a percentage of total lighting energy use.
SH	= Space Heated, as a percentage of the total floor space
WH	= Weeks per year Heating
$HFCF$	= Heating Fuel Conversion Factor
	= 0.03412 Therms per kWh for Natural Gas
	= 1.0 kWh per kWh for Electricity
EFF_{HTG}	= Heating System Efficiency

TABLE 1-1: VERIFIED ANNUAL SAVINGS FOR ECM-1 - YEAR SEVEN

ECM No.	ECM Name	Electricity (kWh)	Natural Gas (CCF)	Utility Savings (\$)
-1	Lighting Improvements & Controls	663,312	(763)	\$156,95

Numbers across columns or rows may appear to have small discrepancies when summed due to rounding.

Baseline M&V Activities

NORESCO measured baseline fixture wattages for a representative sample of fixtures from a number of pre-installation LBC groups. The pre-installation LBC groups measured were based on fixture quantities and hours of operation. The type and number of fixtures measured represented 91.2 percent of the total connected baseline lighting load. The hours of operation for each area's fixtures were determined via staff interviews and on-site observations supplemented by the data collected from the lighting loggers.

Post-Installation M&V Activities

Post-installation energy consumption was based on the calculations described above updated for as-built conditions. During the commissioning phase, NORESKO verified that the new lighting equipment is in accordance with the specifications described in the IGA.

The final as-built scope of work included 6,482 installed luminaires in 12 buildings. During the construction period, NORESKO identified some minor variations in luminaire counts and descriptions from the original IGA. These changes were minor and are consistent with variations that occur on most projects due to facility changes, areas that were inaccessible during the original audit, and minor auditing adjustments.

All luminaire retrofits were consistent with the technologies recommended in the IGA. A final walk-through and sign-off was conducted with facility personnel on a building-by-building basis. The following table identifies the types and quantities of retrofits that were included in this ECM.

TABLE 1-2: RETROFITS COMPLETED

Retrofit Type	Quantity
Centering Kit - T-8 Linear Fluorescent	37
Exit Sign	7
New Fixtures - LED (Exterior)	212
New Fixtures - LED (Interior)	255
New Reflectors - T-8 Linear Fluorescent	1,562
Plug-In - LED	19
Relamp & Reballast - T-5HO Linear Fluorescent	854
Relamp & Reballast - T-8 Linear Fluorescent	2,942
Retrofit Kits - LED	113
Screw-In - LED	481
Total	6,482
<i>Audited Fixtures That Did Not Require a Retrofit</i>	<i>618</i>

The following table identifies the as-built quantities of installed fixtures per building:

TABLE 1-3: BUILDING SUMMARY

Building Name	Pre Fixtures	Post Fixtures
Griswold ES	818	828
Hubbard ES	618	621
McGee MS	1,722	1,691
Willard ES	990	991
Art League	29	29
Timberlin Golf Course	157	157
Highway, Facilities, Parks	308	314
Library	646	646
Sage Park	83	83
South Kensington Fire Dept.	68	73
Senior Center	176	176
Town Hall & Police Department	842	873
Total	6,457	6,482

Verified savings have been calculated using the equations above based on post-installation fixture wattage measurements and the as-built quantities. **Attachment 1A Hours Group Summary** and **Attachment 1B Lighting Savings Summary and Building Summary** detail the values used to derive the verified savings, while **PIR Attachments: Attachment 1D.2 Post-Installation M&V Field Notes** contains the field notes from the post-installation measurements performed at the sites. As shown in **PIR Attachments: Attachment 1D.1 Post Installation Results** and summarized in *Table 1-4* below these attachments were included in the PIR sent May 31, 2018 and available upon request, measured wattages came in as expected or lower and coefficients of variation were less than 10 percent for each meter code. These measurements captured 82.2 percent of the total connected post-installation lighting load. Included in the attachments are summaries of the hours groups, retrofit quantities and savings, LBC groups and the savings resulting from the HVAC interaction analysis.

TABLE 1-4: POST-INSTALLATION MEASUREMENT SUMMARY

LBC Description	Total Population	Sample Size	Sample Mean (W)	Percent of Total Project Lighting Energy (%)	Sample Coefficient of Variation (%)
FO28 - 2 - 2LT ELEC HE HIGH - 1	1,284	3	59	22.43%	5.87%
FO28 - 2 - 2LT ELEC HE LOW - 1	1,711	3	41	19.31%	2.84%
FO28 - 3 - 3LT ELEC HE LOW - 1	293	3	61	4.96%	5.30%
FO28 - 4 - 4LT ELEC HE LOW - 1	286	3	82	6.46%	1.86%
FP54/T5HO-47W - 2 - - - 0	854	3	104	24.10%	3.33%
LED100 - 1 - LED - 1	185	3	102	4.97%	0.57%

1.4 Details of O&M and Other Savings

There is no O&M or other savings for this ECM.

1.5 O&M and Other Activities

There were no O&M or other activities conducted for this ECM.

2. ECM-2: ENERGY MANAGEMENT SYSTEM

2.1 Overview of ECM, M&V Plan, and Savings Calculations

NORESCO used Option A for this ECM.

This ECM replaced pneumatic valves and actuators with direct digital control (DDC) components in the Town Hall. Savings are realized by reducing the runtimes of HVAC equipment during unoccupied hours, as well as the implementation of optimized space temperature setpoints.

2.2 M&V Activities Conducted this Period

Jeffery Lyskawa from NORESKO met with Town of Berlin to conduct the annual inspection of ECM-2 on March 5, 2025. NORESKO noted some schedule and temperature changes in the controls settings and suggests reverting to the expected settings to ensure that overall energy savings are met. The recommended schedules and setpoints for ECM-2 can be found in Also, it was noted AHU-4 was removed from the Town Hall. For detailed information on the inspection, please see **Attachment OB: Year Seven Annual Inspection**.

2.3 Verified Savings Calculations and Methodology

Baseline energy consumption was calculated using the systems' fan motor horsepower, HVAC system efficiencies, as well as operational parameters such as hours of operation and temperature setpoints. NORESKO created a spreadsheet model based on these parameters, as well as local weather data to determine the baseline energy consumption. The equipment operating hours and temperature setpoints were modified in the post-installation model to calculate post-installation consumption. This was subtracted from the baseline consumption to determine the energy savings.

The following equations were used to calculate baseline and post-installation energy consumption:

$$q = 1.08 \cdot CFM \cdot \Delta T$$

Where:

q	= AHU Heating Load (Btu/hr)
1.08	= Conversion Constant (Btu/CFM*hr*°F)
CFM	= AHU Air Flow (Cubic Feet per Minute)
ΔT	= Temperature Differential (°F)

$$q = 4.5 \cdot CFM \cdot \Delta h$$

Where:

q	= AHU Total Cooling Load (Btu/hr)
4.5	= Conversion Constant (pounds of dry air*min/CFM*hr)
CFM	= AHU Air Flow (Cubic Feet per Minute)
Δh	= Enthalpy Differential (Btu/pound)

$$kW = Hp \cdot 0.746 \cdot LF \cdot VFD \div Eff.$$

Where:

<i>kW</i>	= Motor Power (kW)
<i>Hp</i>	= Motor Hp (HP)
<i>0.746</i>	= Conversion Constant (kW/HP)
<i>LF</i>	= Motor Load Factor
<i>Eff</i>	= Motor Efficiency (%)
<i>VFD</i>	= % Motor Speed

Energy savings for unoccupied temperature setbacks were calculated using the following equations:

$$\text{Envelope Load MMBtu} = (UA \times (\sum (\text{OAT-Occupied Setpoint}) \times \text{Occupied Hours} + \sum (\text{OAT-Unoccupied Setpoint}) \times \text{Unoccupied Hours})) / 10^6$$

$$\text{Infiltration Load MMBtu} = (1.08 \times \text{Infiltration CFM} \times (\sum (\text{OAT-Occupied Setpoint}) \times \text{Occupied Hours} + \sum (\text{OAT-Unoccupied Setpoint}) \times \text{Unoccupied Hours})) / 10^6$$

$$UA = 1/R\text{-Value of Wall} \times \text{Wall Area} + 1/R\text{-Value of Roof} \times \text{Roof Area}$$

$$\text{Infiltration CFM} = \text{Building Area} \times 10 \text{ Feet Average Height} \times \text{Building Air Changes Per Hour} / 60$$

$$\text{Cooling kWh} = (\text{Envelope} + \text{Infiltration Load}) \times 10^6 / 12000 \times \text{kW/Ton Cooling Efficiency (Loads for Hours above Balance Point only)}$$

$$\text{Heating MMBtu} = (\text{Envelope} + \text{Infiltration Load}) / \text{Heating Efficiency (Loads for Hours below Balance Point only)}$$

Details of these calculations can be viewed in **Attachment 2A New DDC EMS Savings Calculations**.

TABLE 2-1: VERIFIED ANNUAL SAVINGS FOR ECM-2 - YEAR SEVEN

ECM No.	ECM Name	Electricity (kWh)	Natural Gas (CCF)	Utility Savings (\$)
-2	Direct Digital Control Energy Management System	6,698	3,335	\$3,94

Numbers across columns or rows may appear to have small discrepancies when summed due to rounding.

Baseline M&V Activities

NORESKO reviewed existing space temperatures, setpoints and schedules in the Energy Management System (EMS). A site audit was also performed to gather the existing equipment manufacturer specifications and nameplate data. Characteristics of baseline HVAC equipment were used to create the spreadsheet models with regards to heating and cooling loads and operating hours.

The following inputs were collected on site and used in the baseline models:

- ▶ Equipment nameplate data (capacity, efficiency class, etc.)
- ▶ Equipment type (water cooled, air cooled, etc.)
- ▶ Equipment configuration (primary pumping, primary secondary pumping, etc.)
- ▶ Building architectural, electrical, mechanical, plumbing, and structural drawings (blueprints)
- ▶ Thermal zone designations (mechanical floor plans)

Key parameters that affect baseline energy use include existing temperature setpoints, operating hours and building population. Building operating and occupant data was provided by town of Berlin staff. If any of these parameters could not be determined from these sources, NORESKO estimated the parameter based on standard engineering practices and experience.

Post-Installation M&V Activities

Post-installation M&V activities focused on ensuring that the new equipment was installed and commissioned properly. Successful completion of this commissioning process in accordance with the manufacturer's prescribed procedures verified the ability of the new equipment to perform as designed. Verified savings were calculated using the baseline model updated to reflect the installed improvements, including agreed upon setpoints and schedules.

NORESKO furnished and installed the following equipment as part of this ECM:

- ▶ A new DDC EMS in the Town Hall, which controls the new boilers, hot water pumps, chiller, cooling tower, chilled and condenser water pumps, six air handling units (AHUs), including five new AHUs, reheat coils, and 90 vertical and ceiling-mount fan coil units.
- ▶ A new variable frequency drive for AHU-7
- ▶ New DDC points associated with ECM-03, -08 and -09 have been installed and integrated with the existing building EMS.

During the commissioning process, the new controls and newly programmed operational strategies were inspected to confirm proper installation and programming and that the ECM is capable of achieving verified energy savings. Functional performance tests (FPTs) of each system were performed to verify operations of equipment based on new programming.

Table 2-2 below includes the agreed upon setpoints and schedules that were implemented within the installed equipment:

TABLE 2-2: ECM-2 SCHEDULES AND SETPOINTS

Bldg. Name	Unit No.	Operating Schedule	Designed / Commissioned Items	
			Heating Occupied/Unoccupied	Cooling Occupied/Unoccupied
Library	AHU-1	10:00-17:00PM (Mon-Thur) 10:00-1700F, 10:00-16:00Sat	70/60	75/85
Library	AHU-2	10:00-17:00PM (Mon-Thur) 10:00-1700F, 10:00-16:00Sat	70/60	75/85
Library	HW Reset	HW OAT 10/HW 180, OA 60/ HW 120, Unocc 10/140, 60/120		
Town Hall	AHU-3, 4, 5, 6	06:00-19:00 M-F	70/60	75/85
Town Hall	AHU-1	24hrs	70/60	75/85
Town Hall	AHU-7	24hrs	70/60	75/85
Town Hall	FCUs (all)	06:00-19:00 M-F	70/60	75/85
Town Hall	HW Reset	HW OAT 10/HW 180, OA 60/ HW 120, Unocc 10/140, 60/120		
Town Hall	Chiller	OAT enabled at 70°F	70/60	75/85
McGEE MS	HW Reset	HW OAT 10/HW 180, OA 60/ HW 120, Unocc 10/140, 60/120		

2.4 Details of O&M and Other Savings

There is no O&M or other savings for this ECM.

2.5 O&M and Other Activities

There were no O&M or other activities conducted for this ECM.

3. ECM-3: VARIABLE FREQUENCY DRIVES AND PREMIUM EFFICIENCY MOTORS

3.1 Overview of ECM, M&V Plan, and Savings Calculations

NORESCO used Option A for this ECM.

This ECM installed VFDs on constant volume pumps and fans at the Library and Town Hall. In addition, standard efficiency motors for the hot water pumps were replaced with premium efficiency motors. Savings for this ECM are realized by modulating pump and fan speeds to allow them to run below full speed whenever possible. Additional savings result from the installation of more efficient motors on hot water pumps which use less energy than the existing motors.

3.2 M&V Activities Conducted this Period

Jeffery Lyskawa, from NORESKO, met with Town of Berlin to conduct the annual inspection of ECM-3 on March 5, 2025. No issues were noted during this inspection, but it was noted five ABB Drive VFDs operated at or close to 60 Hz. For detailed information on the inspection, please see **Attachment OB: Year Seven Annual Inspection**.

3.3 Verified Savings Calculations and Methodology

Baseline energy consumption was calculated using the existing pump and fan efficiencies and flow rates applied to a bin model of the buildings' heating and cooling loads. This model was updated with the proposed equipment and its performance specifications to calculate post-installation consumption. This was subtracted from the baseline consumption to determine the energy savings.

The following equations were used to calculate baseline and post-installation energy consumption:

$$\text{Current Usage (kWh)} = (((\text{Motor HP} \times 0.746) \times (\text{current rpm } \%)^3) + \text{VFD kW}) \times \text{operating bin hours}$$

$$\text{Proposed Usage (kWh)} = (((\text{Motor HP} \times 0.746) \times (\text{proposed rpm } \%)^3) + \text{VFD kW}) \times \text{operating bin hours}$$

$$\text{Motor Energy Savings} = \text{Current Usage (kWh)} - \text{Proposed Usage (kWh)}$$

Details of these calculations can be viewed in **Attachment 3A: PE Motor & VFDs Savings Calculations**.

TABLE 3-1: VERIFIED ANNUAL SAVINGS FOR ECM-3 - YEAR SEVEN

ECM No.	ECM Name	Electricity (kWh)	Natural Gas (CCF)	Utility Saving (\$)
-3	Variable Frequency Drives and Premium Efficiency Motors	51,919	---	\$10,66

Numbers across columns or rows may appear to have small discrepancies when summed due to rounding.

Baseline M&V Activities

NORESCO reviewed existing EMS schedules to determine the baseline operating hours for the equipment included in this ECM. Site audits were also performed to gather the existing equipment performance specifications and nameplate data. This information was incorporated into the heating and cooling load bin models to calculate baseline energy consumption.

The following inputs were collected on site and used in the baseline models:

- ▶ Equipment nameplate data (capacity, efficiency class, etc.)
- ▶ Equipment type (water cooled, air cooled, etc.)
- ▶ Equipment configuration (primary pumping, primary secondary pumping, etc.)
- ▶ Building architectural, electrical, mechanical, plumbing, and structural drawings (blueprints)
- ▶ Thermal zone designations (mechanical floor plans)

Key parameters that affect baseline energy use include existing fan and pump power, temperature setpoints and operating hours, building populations, HVAC system efficiencies and building construction materials. Building operating and occupant data was provided by the town of Berlin staff. If any of these parameters could not be determined from these sources, NORESO estimated the parameter based on standard engineering practices and experience.

Post-Installation M&V Activities

Post-installation M&V activities focused on ensuring that the new equipment was installed and commissioned properly. Successful completion of this commissioning process in accordance with the manufacturer's prescribed procedures verified the ability of the new equipment to perform as designed. Verified savings were calculated using the baseline model updated to reflect the installed improvements, including agreed-upon setpoints and schedules.

NORESCO furnished and installed the following equipment as part of this ECM:

- ▶ Premium efficiency motors and VFDs for AHU-1 and AHU-2 at the Peck Library.
- ▶ VFDs for the existing premium efficiency motors for AHU-7 in the Town Hall.
- ▶ Premium efficiency motors and VFDs on hot water pump motors in Peck Library and Town Hall.
- ▶ Control strategies for all the new VFDs and existing VFDs for AHU1, AHU-2, and AHU-7 in Peck Library and Town Hall respectively. In addition, added controls for the hot water pumps, chilled water pumps and condenser water pumps in Peck Library and Town Hall.

During the commissioning process, the new VFDs and controls were inspected to confirm proper installation and startup and that the ECM is capable of achieving expected energy savings.

3.4 Details of O&M and Other Savings

There is no O&M or other savings for this ECM.

3.5 O&M and Other Activities

There were no O&M or other activities conducted for this ECM.

4. ECM-4: COOLER CONTROLS

4.1 Overview of ECM, M&V Plan, and Savings Calculations

NORESCO used Option A for this ECM.

This ECM upgraded the fan motors and controls on the walk-in coolers and freezers at the High School and McGee Middle School. This reduces energy consumption and increases the reliability of the evaporator fan motors and door heaters. Savings for this ECM are realized through reducing the runtime of the cooling systems to better match the cooling load, as well as by installing more efficient fans and reducing door heater runtimes.

4.2 M&V Activities Conducted this Period

Jeffery Lyskawa, from NORESO, met with Town of Berlin to conduct the annual inspection of ECM-4 on March 5, 2025. It was noted that several units are bypassed. For detailed information on the inspection, please see **Attachment 0B: Year Seven Annual Inspection**.

4.3 Verified Savings Calculations and Methodology

Baseline energy consumption was calculated using the existing cooler and freezer fan motor efficiencies and operating hours. This model was updated with the proposed equipment and its performance specifications to calculate post-installation consumption. This was subtracted from the baseline consumption to determine the energy savings.

The following equations were used to calculate baseline and post-installation energy consumption:

$$\text{Existing kWh} = [(\text{Existing Fan HP} \times 0.746 \times \text{Load Factor}) \times \text{Existing Fan Run Hours}] + (\text{Door Heater kW} \times \text{Existing Heater Run Hours})$$

$$\text{Proposed kWh} = [(\text{Proposed Fan HP} \times 0.746 \times \text{Load Factor}) \times \text{Proposed Fan Run Hours}] + (\text{Door Heater kW} \times \text{Proposed Heater Run Hours})$$

Details of these calculations can be viewed in **Attachment 4A: Walk-in Cooler Upgrades Savings Calculations**.

TABLE 4-1: VERIFIED ANNUAL SAVINGS FOR ECM-4 - YEAR SEVEN

ECM No.	ECM Name	Electricity (kWh)	Natural Gas (CCF)	Utility Savings (\$)
-4	Cooler Controls	20,816	---	\$4,446

Numbers across columns or rows may appear to have small discrepancies when summed due to rounding.

Baseline M&V Activities

Equipment audits were performed to gather the existing fan and heater efficiencies, as well as cooler and freezer operating hours. This information was incorporated into the models to calculate baseline energy consumption.

The following inputs were collected on site and used in the baseline models:

- ▶ Equipment nameplate data (capacity, efficiency class, etc.)
- ▶ Equipment type (water cooled, air cooled, etc.)
- ▶ Equipment configuration (primary pumping, primary secondary pumping, etc.)

Key parameters that affect baseline energy use include existing cooling systems fan power, cooler and freezer temperature setpoints and operating hours. If any of these parameters could not be determined from these sources, NORESKO estimated the parameter based on standard engineering practices and experience.

Post-Installation M&V Activities

Post-installation M&V activities focused on ensuring that the new equipment was installed and commissioned properly. Successful completion of this commissioning process in accordance with the manufacturer's prescribed procedures verified the ability of the new equipment to perform as designed. Verified savings were calculated using the baseline model updated to reflect the installed improvements, including agreed-upon setpoints and schedules.

NORESCO furnished and installed the following equipment as part of this ECM:

- ▶ Replaced all non-electronically commutated motors that were being used for the evaporator units serving three walk-in cooler / freezers in the High School and McGee Middle School with ECM motors.
- ▶ Installed a CoolTrol® control system to manage all walk-in units as supplied by National Resource Management (NRM) in both the High School and McGee Middle School.

During the commissioning process, the new motors and controls were inspected to confirm proper installation and startup and that the ECM is capable of achieving verified energy savings

4.4 Details of O&M and Other Savings

There is no O&M or other savings for this ECM.

4.5 O&M and Other Activities

There were no O&M or other activities conducted for this ECM.

5. ECM-5: PLUG LOAD CONTROLS

This ECM was removed from the project under Change Order No. 2, dated December 15, 2016. See **PIR Attachments: Attachment OB Change Orders** for the Change Orders. Guaranteed savings associated with the ECM were removed.

6. ECM-6: COMPUTER POWER MANAGEMENT

This ECM was removed from the project under Change Order No. 1, dated July 7, 2016. See **PIR Attachments: Attachment OB Change Orders** for the Change Orders. Guaranteed savings associated with the ECM were removed.

7. ECM-7: BUILDING WEATHERIZATION

7.1 Overview of ECM, M&V Plan, and Savings Calculations

NORESCO used Option A for this ECM.

This ECM installed improvements to the building envelopes at Willard Elementary School, Timberlin Golf Course, the Town Hall and Peck Memorial Library. Sealing the building envelope reduces infiltration of unconditioned air, which reduces HVAC costs and improves occupant comfort. NORESOCO identified attic bypass areas, buck frame joints, window casings and several roof-wall intersections that benefited from improved caulking or insulation.

7.2 M&V Activities Conducted this Period

Jeffery Lyskawa, from NORESOCO, met with Town of Berlin to conduct the annual inspection of ECM-7 on March 5, 2025. The two largest areas where this ECM was installed were inspected. No issues were noted during this inspection. For detailed information on the inspection, please see **Attachment 0B: Year Seven Annual Inspection**.

7.3 Verified Savings Calculations and Methodology

Baseline energy consumption was calculated with a spreadsheet model using ASHRAE formulas to calculate air leakage through window, attic, and roof-wall intersections as a function of gap widths and wind pressure. The savings are calculated by finding the energy cost of this infiltration due to the additional winter heating and summer cooling loads associated with unconditioned air entering the building. Local weather data including average temperature difference and wind speed are also used to calculate the air volume in cubic feet per minute (cfm). The baseline model was updated with the proposed building envelope improvements to calculate post-installation energy consumption. This was subtracted from the baseline consumption to determine the energy savings.

The following equations were used to calculate baseline and post-installation energy consumption, and detail how to calculate the additional energy required conditioning a given volume of air:

$$\text{Energy Usage (Btu)} = 1.08 * \text{Volume (cfm)} * \text{Temperature Difference (}^{\circ}\text{F)} * \text{Heating Hours}$$

$$\text{Volume (cfm)} = \text{Area (sq.in.)} * ((\text{Stack Coeff.} * \text{Avg. Temp. Diff}) * (\text{Wind Coeff.} * \text{Wind Speed}^2))^{\frac{1}{2}}$$

Details of these calculations can be viewed in **Attachment 7A: Weatherization Savings Calculations**.

TABLE 7-1: VERIFIED ANNUAL SAVINGS FOR ECM-7 - YEAR SEVEN

ECM No.	ECM Name	Electricity (kWh)	Natural Gas (CCF)	Utility Savings (\$)
-7	Building Weatherization	7,356	3,455	\$4,968

Numbers across columns or rows may appear to have small discrepancies when summed due to rounding.

Baseline M&V Activities

During building audits, NORESKO identified areas that could benefit from improved weatherization. The existing insulating properties of these areas were estimated and resulting air infiltration rates were calculated. This information was incorporated into the model to determine baseline energy consumption.

Post-Installation M&V Activities

Post-installation M&V activities focused on ensuring that the new insulation was installed properly. Successful completion of this commissioning process in accordance with the manufacturer's prescribed procedures verified the ability of the new equipment to perform as designed. Verified savings were calculated using the baseline model updated to reflect the installed improvements, including agreed-upon setpoints and schedules.

NORESKO furnished and installed the following equipment as part of this ECM:

Willard Elementary School

- ▶ NORESKO sealed the joints at the buck frame and rough openings that were identified as pathways for air leakage.

Police Department/Town Hall

- ▶ NORESKO furnished and installed an approximately four to six-inch wide by two-inch deep bead of high-density spray polyurethane foam at the air leakage pathway.

Peck Library

- ▶ NORESKO blocked and sealed all air leakage pathways using a combination of the sealants and appropriate building materials such as drywall, backer rods, and rigid foam insulation.
- ▶ NORESKO caulked the non-operational components of the window jamb, casing or trim that were identified as pathways for air leakage; installed backer rod as required at large gaps.

Timberlin Golf Course

- ▶ NORESKO blocked and sealed all air leakage pathways using a combination of the sealants and appropriate building materials such as drywall, backer rods, and rigid foam insulation.

During the commissioning process, the new insulation materials and caulking were inspected to confirm proper installation and that the ECM is capable of achieving expected energy savings.

7.4 Details of O&M and Other Savings

There is no O&M or other savings for this ECM.

7.5 O&M and Other Activities

There were no O&M or other activities conducted for this ECM.

8. ECM-8: HIGH-EFFICIENCY CONDENSING BOILERS

8.1 Overview of ECM, M&V Plan, and Savings Calculations

NORESCO used Option A for this ECM.

This ECM installed new, energy-efficient condensing hot water boilers and new boiler controls at McGee Middle School and the Town Hall. This reduces heating energy use and improves occupant comfort by more closely matching heating outputs to the building loads. Savings for this ECM result from improved boiler efficiencies compared to the existing equipment.

8.2 M&V Activities Conducted this Period

Jeffery Lyskawa, from NORESKO, met with Town of Berlin to conduct the annual inspection of ECM-8 on March 5, 2025. No issues were noted during this inspection. For detailed information on the inspection, please see **Attachment OB: Year Seven Annual Inspection**.

8.3 Verified Savings Calculations and Methodology

Baseline energy consumption for these units was calculated using the existing boilers' efficiencies based on recent combustion efficiency testing reports provided by the town of Berlin staff. These efficiencies were applied to a bin model of the buildings' heating loads. This model was updated with the proposed equipment and its performance specifications to calculate post-installation consumption. This was subtracted from the baseline consumption to determine the energy savings.

$$\text{Heating Savings (for each bin temperature)} = \text{Bin hours} \times \text{heating load} \times (1/\text{existing efficiency} - 1/\text{proposed efficiency})$$

Details of these calculations can be viewed in **Attachment 8A: New Boilers Savings Calculations**.

TABLE 8-1: VERIFIED ANNUAL SAVINGS FOR ECM-8 - YEAR SEVEN

ECM No.	ECM Name	Electricity (kWh)	Natural Gas (CCF)	Utility Savings (\$)
-8	High Efficiency Condensing Boilers	---	13,664	\$11,525

Numbers across columns or rows may appear to have small discrepancies when summed due to rounding.

Baseline M&V Activities

During the building audits, NORESO gathered the nameplate data and manufacturer performance specifications for the existing boilers. This information was incorporated into the heating load bin models to calculate baseline energy consumption.

The following inputs were collected on site and used in the baseline models:

- ▶ Boiler nameplate data (capacity, efficiency class, etc.)
- ▶ Equipment configuration (primary pumping, primary secondary pumping, etc.)
- ▶ Building architectural, electrical, mechanical, plumbing, and structural drawings (blueprints)
- ▶ Thermal zone designations (mechanical floor plans)

Key parameters that affect baseline energy use include existing boiler efficiencies, temperature setpoints, building populations and operating hours. Equipment operating and occupant data were provided by town of Berlin staff. If any of these parameters could not be determined from these sources, NORESO estimated the parameter based on standard engineering practices and experience.

Post-Installation M&V Activities

Post-installation M&V activities focused on ensuring that the new boilers and controls were installed, programmed and operating properly. Successful completion of this commissioning process in accordance with the manufacturer's prescribed procedures verified the ability of the new equipment to perform as designed. Verified savings were calculated using the baseline model updated to reflect the installed improvements, including agreed-upon setpoints and schedules.

NORESOS furnished and installed the following equipment as part of this ECM:

McGee Middle School

- ▶ Two new 5,000-MBH condensing boilers
- ▶ New condensing hot water heater
- ▶ Modified piping to create a primary/secondary hydronic piping arrangement.
- ▶ Integrated the boiler controls with the EMS per ECM-2.

Town Hall & Police Department

- ▶ Two new 3,000-MBH condensing boilers
- ▶ Modified piping to create a primary/secondary hydronic piping arrangement.
- ▶ Integrated the boiler controls with the EMS per ECM-2.

During the commissioning process, the new boilers, controls and programming were tested and inspected to confirm proper installation, startup and programming. This verified that the ECM is capable of achieving verified energy savings.

8.4 Details of O&M and Other Savings

There is no O&M or other savings for this ECM.

8.5 O&M and Other Activities

There were no O&M or other activities conducted for this ECM.

9. ECM-9: NEW FAN COIL AND AIR HANDLING UNITS

9.1 Overview of ECM, M&V Plan, and Savings Calculations

NORESCO used Option A for this ECM.

This ECM installed new AHUs and FCUs in the Town Hall. This decreases energy use while providing better occupant comfort. Savings for this ECM come from replacing old, outdated AHUs and FCUs with newer more efficient equipment that can also be controlled by the new DDC system installed under ECM-02. This will allow the Customer to implement unoccupied temperature setbacks and shutdowns to reduce runtime of HVAC equipment.

9.2 M&V Activities Conducted this Period

Jeffery Lyskawa, from NORESKO, met with Town of Berlin to conduct the annual inspection of ECM-9 on March 5, 2025. No issues were noted during this inspection. For detailed information on the inspection, please see **Attachment OB: Year Seven Annual Inspection**.

9.3 Verified Savings Calculations and Methodology

Baseline energy consumption was calculated using the existing AHU and FCU efficiencies, as well as operational parameters such as hours of operation and temperature setpoints. NORESKO created a spreadsheet model based on these parameters, as well as local weather data to determine the baseline energy consumption. The equipment efficiencies, operating hours and temperature setpoints were modified in the post-installation model to calculate post-installation consumption. This was subtracted from the baseline consumption to determine the energy savings.

The following equations were used to calculate baseline and post-installation energy consumption:

$$q = 1.08 \cdot CFM \cdot \Delta T$$

Where:

q	= AHU/FCU Heating Load (Btu/hr)
1.08	= Conversion Constant (Btu/CFM*hr*°F)
CFM	= AHU/FCU Air Flow (Cubic Feet per Minute)
ΔT	= Temperature Differential (°F)

$$q = 4.5 \cdot CFM \cdot \Delta h$$

Where:

q	= AHU/FCU Total Cooling Load (Btu/hr)
4.5	= Conversion Constant (pounds of dry air*min/CFM*hr)
CFM	= AHU/FCU Air Flow (Cubic Feet per Minute)
Δh	= Enthalpy Differential (Btu/pound)

$$kW = Hp \cdot 0.746 \cdot LF \cdot VFD \div Eff.$$

Where:

kW	= Motor Power (kW)
Hp	= Motor Hp (HP)
0.746	= Conversion Constant (kW/HP)

LF = Motor Load Factor
Eff = Motor Efficiency (%)
VFD = % Motor Speed

Energy savings for unoccupied temperature setbacks were calculated using the following equations:

$$\text{Envelope Load MMBtu} = (UA \times (\sum (\text{OAT-Occupied Setpoint}) \times \text{Occupied Hours} + \sum (\text{OAT-Unoccupied Setpoint}) \times \text{Unoccupied Hours})) / 10^6$$

$$\text{Infiltration Load MMBtu} = (1.08 \times \text{Infiltration CFM} \times (\sum (\text{OAT-Occupied Setpoint}) \times \text{Occupied Hours} + \sum (\text{OAT-Unoccupied Setpoint}) \times \text{Unoccupied Hours})) / 10^6$$

$$UA = 1/R\text{-Value of Wall} \times \text{Wall Area} + 1/R\text{-Value of Roof} \times \text{Roof Area}$$

$$\text{Infiltration CFM} = \text{Building Area} \times 10 \text{ Feet Average Height} \times \text{Building Air Changes Per Hour} / 60$$

$$\text{Cooling kWh} = (\text{Envelope} + \text{Infiltration Load}) \times 10^6 / 12000 \times \text{kW/Ton Cooling Efficiency (Loads for Hours above Balance Point only)}$$

$$\text{Heating MMBtu} = (\text{Envelope} + \text{Infiltration Load}) / \text{Heating Efficiency (Loads for Hours below Balance Point only)}$$

Details of these calculations can be viewed in **Attachment 9A: New HVAC Savings Calculations**.

TABLE 9-1: VERIFIED ANNUAL SAVINGS FOR ECM-9 - YEAR SEVEN

ECM No.	ECM Name	Electricity (kWh)	Natural Gas (CCF)	Utility Savings (\$)
-9	New Fan Coil and Air Handling Units	3,766	3,990	\$3,92

Numbers across columns or rows may appear to have small discrepancies when summed due to rounding.

Baseline M&V Activities

A site audit was performed to gather the existing AHU and FCU manufacturer specifications and nameplate data. Characteristics of baseline equipment were used to create the spreadsheet models with regards to heating and cooling loads and operating hours.

The following inputs were collected on site and used in the baseline models:

- ▶ Equipment nameplate data (capacity, efficiency class, etc.)
- ▶ Equipment type (water cooled, air cooled, etc.)
- ▶ Equipment configuration (primary pumping, primary secondary pumping, etc.)
- ▶ Building architectural, electrical, mechanical, plumbing, and structural drawings (blueprints)
- ▶ Thermal zone designations (mechanical floor plans)

Key parameters that affect baseline energy use include efficiencies of existing equipment, existing temperature setpoints, operating hours and building population. Building operating and occupant data was provided by town of Berlin staff. If any of these parameters could not be determined from these sources, NORESO estimated the parameter based on standard engineering practices and experience.

Post-Installation M&V Activities

Post-installation M&V activities focused on ensuring that the new AHUs and FCUs were installed, programmed, and operating properly. Successful completion of this commissioning process in accordance with the manufacturer's prescribed procedures verified the ability of the new equipment to perform as designed. Verified savings were calculated using the baseline model updated to reflect the installed improvements, including agreed-upon setpoints and schedules.

NORESO furnished and installed the following equipment as part of this ECM:

- ▶ Replaced five pre-existing AHUs at the Town Hall with new units with features such as economizers, premium efficiency fan motors with variable frequency drives.
- ▶ Added new DDC controls under ECM-2 to include hot and chilled water coil control valves, 10-zone reheat coil control valves, and included new electronic thermostats with adjustable set point control and temporary override capability.
- ▶ Replaced the Town Hall vertical and horizontal-mount fan coil units with new, high efficiency cooling and heating terminal units.
- ▶ Integrated new digital controls for thermostats, hot and chilled water control valves and damper actuators, into the new building energy management system for the new fan coil units.
- ▶ Integrated all new equipment with the EMS included in ECM-2.

During the commissioning process, the new AHUs, FCUs, controls and programming were tested and inspected to confirm proper installation, startup and programming. This verified that the ECM is capable of achieving expected energy savings.

9.4 Details of O&M and Other Savings

There is no O&M or other savings for this ECM.

9.5 O&M and Other Activities

There were no O&M or other activities conducted for this ECM.

10. ECM-10: SOLAR PHOTOVOLTAICS

10.1 Overview of ECM, M&V Plan, and Savings Calculations

NORESCO used Option A for this ECM.

This ECM installed solar PV arrays at McGee Middle School, Griswold, Hubbard and Willard Elementary Schools. The PV arrays generate electricity from a renewable resource and offset a portion of the purchased electric consumption and peak demand.

Verified Savings are based on the on the calculations described in this section and one-time post-installation measurements documented in the PIR. No measurements will be taken during the performance period. In addition, an annual derating factor of 0.5 percent is applied to the Verified Savings to compensate for PV system efficiency degradation over time.

10.2 M&V Activities Conducted this Period

Jeffery Lyskawa, from NORESKO, met with Town of Berlin to conduct the annual inspection of ECM-10 on March 5, 2025. No issues were noted during this inspection. For detailed information on the inspection, please see **Attachment OB: Year Seven Annual Inspection**.

10.3 Verified Savings Calculations and Methodology

The energy savings associated with this ECM is equal to the net output of the PV arrays. NORESKO calculated the verified output of each array, net of array and inverter losses, using PVWatts®, an online software tool developed by the National Renewable Energy laboratory (NREL). PVWatts® calculates the monthly and annual verified output of the PV system based on parameters such as location, azimuth, tilt angle, and long-term historical weather data. It also accounts for PV array losses, inverter losses, and other miscellaneous power conditioning losses. For locations with detailed long-term weather data, PVWatts® can also provide hourly PV system output. The outputs from the calculations described above are shown in Appendix 1 of the IGA Report and included in **Attachment 10A: PV Savings Calculations**.

The key assumptions used in the calculations are as follows:

- ▶ PV module performance and inverter efficiencies are based on typical manufacturers' data.
- ▶ The energy savings calculations use long-term solar irradiance and weather data interpolated from nearby weather stations in PVWatts®.

The equation used to determine the net output of the array is as follows:

$$E_{AC} = (H_t) (A_p) (h_p) (1 - L_p) (1 - L_c) (h_{inv})$$

Where:

E_{AC}	= Net electric power produced (W-AC)
H_t	= Solar irradiance in the plane of the PV array (W/m ²)
A_p	= Area of the PV array (m ²)
h_p	= Average efficiency of PV array (%)
L_p	= Miscellaneous PV array losses (%)
L_c	= Other power conditioning losses (%)
h_{inv}	= Inverter efficiency (%)

TABLE 10-1: VERIFIED ANNUAL SAVINGS FOR ECM-10 - YEAR SEVEN

ECM No.	ECM Name	Electricity (kWh)	Natural Gas (CCF)	Utility Savings (\$)
-10	Solar Photovoltaics	924,346	---	\$217,95

Numbers across columns or rows may appear to have small discrepancies when summed due to rounding.

PV Saving's degradation by 0.5% applied annually.

May 2, 2025

VIA CERTIFIED MAIL/RETURN RECEIPT

NORESCO, LLC
One Research Drive, Suite 400C
Westborough, MA 01581
Attention: Legal Department, Contracts Counsel

Re: Energy Services Agreement with Town of Berlin, CT (“Subject Property”)

To Whom It May Concern:

Reference is made to the Energy Services Agreement between the Town of Berlin, Connecticut (“Berlin”) and NORESO, LLC dated December 3, 2015 (“ESA”). Pursuant to Section 15 of the ESA, Berlin hereby notifies NORESO, LLC that Berlin is exercising its right to terminate the ESA.

This correspondence constitutes Berlin’s formal notice of termination in accordance with Section 15 of the ESA. If NORESO has any questions, please contact me. Berlin thanks NORESO for its past services.

Very truly yours,

Ryan Curley, Town Manager

Agenda Item No. 12
Request for Town Council Action

TO: The Honorable Mayor and Town Council

FROM: Ryan Curley, Town Manager *RC*

DATE: November 17, 2025

SUBJECT: Purchase of Replacement HVAC Equipment AHU & CU 2 for the Children's Section of the Library

Summary of Agenda Item:

During the late summer of 2025, the original air conditioning compressor that serves the children's section of the library failed after 35 years. This system provides heating, cooling, fresh air and ventilation for that section of the library and is scheduled to be replaced as part of the STEAP grant project, however there is a 3–4-month lead time for the replacement equipment once the order is approved and purchase order issued. There is substantial rigging required to replace the system along with other retrofits and new components required for the electrical, piping, ductwork and controls. The project is currently under design with the goal of bidding out in early 2026 once the bid package is reviewed and approved by the State. Due to the timing of the bidding process, and the need for mechanical cooling typically by April, the request is to purchase the equipment directly from the manufacturer, Trane U.S. Inc., utilizing the OMNIA Racine contract no. 3341, with the goal of having the equipment onsite in the late winter or early spring so the system can be replaced and operational at the start of the 2026 cooling season. The installation portion of the system replacement is scheduled to be included in the grant bid documents, however if there is a delay in the grant bidding, the project can be bid separately or done with on-call or State contract vendors. The replacement system specified has been approved by the engineer, manufacturer and PBC. The State of CT DECD who is administering the Grant, is aware of our intent and said that this approach is acceptable as the equipment purchase would be with local share.

Funding:

500.20.2038.0.54000.00382 HVAC-Library/Community Center

Action Needed:

Move to utilize OMNIA Racine Contract no. 3341 for the purchase of the specified replacement HVAC equipment AHU and CU 2 for the children's section of the library from Trane U.S. Inc. for \$107,045.00 as approved by the engineer, manufacturer and PBC.

Attachments:

Trane Submittal & Proposal
Sufficiency of Funds

Prepared By: Douglas Solek, Director of Facilities





Proposal

Proposal is valid for 15 days.

Customer must obtain credit approval and release order to production within 60 days of proposal date.

PROPRIETARY AND CONFIDENTIAL PROPERTY OF Trane U.S. Inc.
DISTRIBUTION TO OTHER THAN THE NAMED RECIPIENT IS PROHIBITED

Prepared For: Berlin, Town of

Date: November 5, 2025

Job Name:

Berlin-Peck Memorial Library - AHU-CU-2
Replacement

Proposal Number: B2-155034-17444-1

Opportunity ID: 8459506

Delivery Terms:

Freight Allowed and Prepaid - F.O.B. Factory

Payment Terms: Net 30 Days

Trane U.S. Inc. is pleased to provide the following proposal for your review and approval.

Tag Data - Performance Climate Changer (CSAA) (Qty: 1)

Item	Tag(s)	Qty	Description	Model Number
A1	AHU-2	1	Performance Climate Changer (CSAA)	CSAA021UA

Product Data - Performance Climate Changer (CSAA)

Item: A1 Qty: 1 Tag(s): AHU-2

Unit level options

Unit size 21
6in. integral base frame
UL listed unit
1st year parts & labor warranty

Controls and VFD/starter

No DDC controller (all controls by others)
External junction box for supply fan motor

Air mixing section (Pos #1)

Door- right side
Back damper - parallel blade
Front full face opening
Top damper - parallel blade
2in. filter frame
Pleated media (Field Installed)

Coil section (Pos #2)

Refrigerant coil (R-454B)
6 rows
Galvanized steel drain pan
Refrigerant leak sensor

Access section (Pos #3)

Small

Coil section (Pos #3)

Hot gas reheat coil (R-454B)
2 rows
Refrigerant leak sensor

Access section (Pos #5)

Small

Coil section (Pos #6)

Hot water

1 row

Fan section (Pos #7)

Supply fan

Door- right side

Outward swing

22.25in. dd plenum, full width, H press

Internal spring vibration isolators

Voltage 200-208/3

10 max applied hp

Inverter balance with shaft grounding

Not Included:

- **Product/Accessories:** VFDs, Disconnects, External Vibration Isolators, Smoke Dampers, Convenience Outlets, Marine Lights, Refrigerant Piping, Refrigerant Specialties, TXV's, Refrigerant Charge, Extra Gaskets/Belts/Filters
- **Controls:** BMS Integration, DDC Controls, Sensors, Freezestats, Damper Actuators, Smoke Detectors, Humidity Sensor, Airflow Measuring Stations, Mounting of Such
- **Labor:** Installation, Field Testing, Start-up, Owner Training, Commissioning

Tag Data - IntelliCore 20-120T Air-Cooled Cond (Qty: 1)

Item	Tag(s)	Qty	Description	Model Number
B1	CU-2	1	IntelliCore 20-120T Air-Cooled Cond (RAS	RAUKC25EB*00A0DF00001300010

Product Data - IntelliCore 20-120T Air-Cooled Cond**Item: B1 Qty: 1 Tag(s): CU-2**

Air Cooled Condensing Unit

R-454B

25 Tons

200/60/3

Non-fused disconnect switch (5,000A SCCR)

Modulating hot gas reheat valve

Modulating Hot Gas Reheat

Dehumidification Controls

Suction service valve

Pressure Gauges and Piping

Powered 15A convenience outlet

Symbio 800 DDC Controller

Wi-Fi adapter and 7-inch user interface touch display

Symbio controls expansion module

BACnet Interface

1st Year Labor warranty whole unit

2nd-5th Year Compressor Warranty

Not Included:

- **Product/Accessories:** External Vibration Isolators, Refrigerant Piping, Refrigerant Specialties, TXV's, Refrigerant Charge, Extra Gaskets/Belts/Filters
- **Labor:** Installation, Field Testing, Start-up, Owner Training, Commissioning

Total Net Price (excluding sales tax) \$107,044.69
Includes Freight and Shipping costs
Pricing compliant with
OMNIA Racine #3341
Proposal B2-Vc6AAG-25-002

Current Lead Time: 16 weeks

Trane shall have the right, at its discretion, to pass along any related increases should (1) its costs related to the manufacture, supply, and shipping for any product or service materially increase. This includes, but is not limited to, cost increases in raw materials, supplier components, labor, utilities, freight, logistics, wages and benefits, regulatory compliance, or any other event beyond Company's control and/or (2) any tariffs, taxes, levies or fees affecting, placed on or related to any product or service materially increases.

Tax Status: Taxable ☐ Exempt ☐	If you are claiming an exemption from sales tax on this project, please submit a completed exemption certificate for both the jobsite location state and the state where the equipment will be delivered (if different from the jobsite). You can submit the relevant state exemption certificate at the following link: https://trane.certifytax.com/custportals.aspx . You will receive an email indicating approval or rejection within 1-2 business days. If your exemption claim is rejected, sales tax will be billed based on the state where the equipment was delivered. For any questions, please email: financial_services-tax_department@tranetechnologies.com .
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Sincerely,

Alan Berard
Trane U.S. Inc.
716 Brook Street, Suite 130
Rocky Hill, CT 06067
Office Phone: (860) 616-6514

This proposal is subject to your acceptance of the attached Trane terms and conditions.

TERMS AND CONDITIONS - COMMERCIAL EQUIPMENT

"Company" shall mean Trane U.S. Inc. for sales in the United States and Trane Canada ULC for sales in Canada.

1. **Acceptance.** These terms and conditions are an integral part of Company's offer and form the basis of any agreement (the "Agreement") resulting from Company's proposal (the "Proposal") for the sale of the described commercial equipment and any ancillary services (the "Equipment"). **COMPANY'S TERMS AND CONDITIONS AND EQUIPMENT PRICES ARE SUBJECT TO PERIODIC CHANGE OR AMENDMENT.** The Proposal is subject to acceptance in writing by the party to whom this offer is made or an authorized agent ("Customer") delivered to Company within 15 days from the date of the Proposal. Prices in the Proposal are subject to change at any time upon notice to Customer. If Customer accepts the Proposal by placing an order, without the addition of any other terms and conditions of sale or any other modification, Customer's order shall be deemed acceptance of the Proposal subject to Company's terms and conditions. If Customer's order is expressly conditioned upon Company's acceptance or assent to terms and/or conditions other than those expressed herein, return of such order by Company with Company's terms and conditions attached or referenced serves as Company's notice of objection to Customer's terms and as Company's counteroffer to provide Equipment in accordance with the Proposal and the Company's terms and conditions. If Customer does not reject or object in writing to Company within 10 days, Company's counteroffer will be deemed accepted. Notwithstanding anything to the contrary herein, Customer's acceptance of the Equipment will in any event constitute an acceptance by Customer of Company's terms and conditions. This Agreement is subject to credit approval by Company. Upon disapproval of credit, Company may delay or suspend performance or, at its option, renegotiate prices and/or terms and conditions with Customer. If Company and Customer are unable to agree on such revisions, this Agreement shall be cancelled without any liability.

2. **Connected Services.** In addition to these terms and conditions, the Connected Services Terms of Service ("Connected Services Terms"), available at <https://www.trane.com/TraneConnectedServicesTerms>, as updated from time to time, are incorporated herein by reference and shall apply to the extent that Company provides Customer with Connected Services, as defined in the Connected Services Terms.

3. **Title and Risk of Loss.** All Equipment sales with destinations to Canada or the U.S. shall be made as follows: FOB Company's U.S. manufacturing facility or warehouse (full freight allowed). Title and risk of loss or damage to Equipment will pass to Customer upon tender of delivery of such to carrier at Company's U.S. manufacturing facility or warehouse.

4. **Pricing and Taxes.** Within forty-five (45) days following Customer acceptance of the Proposal without addition of any other terms and conditions of sale or any modification, Customer shall provide notification of release for immediate production at Company's factory. Prices for Equipment are subject to change at any time prior to shipment to reflect any cost increases related to the manufacture, supply, and shipping of Equipment. This includes, but is not limited to, cost increases in raw materials, supplier components, labor, utilities, freight, logistics, wages and benefits, regulatory compliance, or any other event beyond Company's control. If shipment is delayed due to Customer's actions, Company may also charge Customer with storage fees. If a release is not received within 6 months following order acceptance, Company reserves the right to cancel any order. Company shall be entitled to equitable adjustments in the contract price to reflect any cost increases as set forth above and will provide notice to Customer prior to the date for which the increased price is to be in effect for the applicable customer contract. In no event will prices be decreased. The price of Equipment does not include any present or future foreign, federal, state, or local property, license, privilege, sales, use, excise, value added, gross receipts or other like taxes or assessments. Such amounts will be itemized separately to Customer, who will make prompt payment to Company. Company will accept valid exemption documentation for such taxes and assessments from Customer, if applicable. All prices include packaging in accordance with Company's standard procedures. Charges for special packaging, crating or packing are the responsibility of Customer.

5. **Delivery and Delays.** Delivery dates are approximate and not guaranteed. Company will use commercially reasonable efforts to deliver the Equipment on or before the estimated delivery date, will notify Customer if the estimated delivery dates cannot be honored, and will deliver the Equipment and services as soon as practicable thereafter. In no event will Company be liable for any damages or expenses caused by delays in delivery.

6. **Performance.** Company shall be obligated to furnish only the Equipment described in the Proposal and in submittal data (if such data is issued in connection with the order). Company may rely on the acceptance of the Proposal and submittal data as acceptance of the suitability of the Equipment for the particular project or location. Unless specifically stated in the Proposal, compliance with any local building codes or other laws or regulations relating to specifications or the location, use or operation of the Equipment is the sole responsibility of Customer. If Equipment is tendered that does not fully comply with the provisions of this Agreement and Equipment is rejected by Customer, Company will have the right to cure within a reasonable time after notice thereof by substituting a conforming tender whether or not the time for performance has passed.

7. **Force Majeure.** Company's duty to perform under this Agreement and the Equipment prices are contingent upon the non-occurrence of an Event of Force Majeure. If the Company shall be unable to carry out any material obligation under this Agreement due to an Event of Force Majeure, this Agreement shall at Company's election (i) remain in effect but Company's obligations shall be suspended until the uncontrollable event terminates or (ii) be terminated upon 10 days' notice to Customer, in which event Customer shall pay Company for all parts of the Work furnished to the date of termination. An "Event of Force Majeure" shall mean any cause or event beyond the control of Company. Without limiting the foregoing, "Event of Force Majeure" includes: acts of God; acts of terrorism, war or the public enemy; flood; earthquake; tornado; storm; fire; civil disobedience; pandemic insurrections; riots; labor/labour disputes; labor/labour or material shortages; sabotage; restraint by court order or public authority (whether valid or invalid); and action or non-action by or inability to obtain or keep in force the necessary governmental authorizations, permits, licenses, certificates or approvals if not caused by Company; and the requirements of any applicable government in any manner that diverts either the material or the finished product to the direct or indirect benefit of the government.

8. **Limited Warranty.** Company warrants the Equipment manufactured by Company for a period of the lesser of 12 months from initial start-up or 18 months from date of shipment, whichever is less, against failure due to defects in material and manufacture and that it has the capacities and ratings set forth in Company's catalogs and bulletins ("Warranty"). **Equipment manufactured by Company that includes required start-up and sold in North America will not be warranted by Company unless Company performs the Equipment startup.** Exclusions from this Warranty include damage or failure arising from: wear and tear; corrosion, erosion, deterioration; modifications made by others to the Equipment; repairs or alterations by a party other than Company that adversely affects the stability or reliability of the Equipment; vandalism; neglect; accident; adverse weather or environmental conditions; abuse or improper use; improper installation; commissioning by a party other than Company; unusual physical or electrical or mechanical stress; operation with any accessory, equipment or part not specifically approved by Company; refrigerant not supplied by Company; and/or lack of proper maintenance as recommended by Company. Company shall not be obligated to pay for the cost of lost refrigerant or lost product. Company's obligations and liabilities under this Warranty are limited to furnishing replacement equipment or parts, at its option, FCA (Incoterms 2000) factory or warehouse (f.o.b. factory or warehouse for US domestic purposes) at Company-designated shipping point, freight-allowed to Company's warranty agent's stock location, for all non-conforming Company-manufactured Equipment (which have been returned by Customer to Company). Returns must have prior written approval by Company and are subject to restocking charge where applicable. Equipment, material and/or parts that are not manufactured by Company ("Third-Party Product(s)") are not warranted by Company and have such warranties as may be extended by the respective manufacturer. **CUSTOMER UNDERSTANDS THAT COMPANY IS NOT THE MANUFACTURER OF ANY THIRD-PARTY PRODUCT(S) AND ANY WARRANTIES, CLAIMS, STATEMENTS, REPRESENTATIONS, OR SPECIFICATIONS ARE THOSE OF THE THIRD-PARTY MANUFACTURER, NOT COMPANY AND CUSTOMER IS NOT RELYING ON ANY WARRANTIES, CLAIMS, STATEMENTS, REPRESENTATIONS, OR SPECIFICATIONS REGARDING THE THIRD-PARTY PRODUCT THAT MAY BE PROVIDED BY COMPANY OR ITS AFFILIATES, WHETHER ORAL OR WRITTEN. COMPANY MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND, INCLUDING WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE. ADDITIONALLY, COMPANY MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND REGARDING PREVENTING, ELIMINATING, REDUCING OR INHIBITING ANY MOLD, FUNGUS, BACTERIA, VIRUS, MICROBIAL GROWTH, OR ANY OTHER CONTAMINANTS (INCLUDING COVID-19 OR ANY SIMILAR VIRUS) (COLLECTIVELY, "CONTAMINANTS"), WHETHER INVOLVING OR IN CONNECTION WITH EQUIPMENT, ANY COMPONENT THEREOF, SERVICES OR OTHERWISE. IN NO EVENT SHALL COMPANY HAVE ANY LIABILITY FOR THE PREVENTION, ELIMINATION, REDUCTION OR INHIBITION OF THE GROWTH OR SPREAD OF SUCH CONTAMINANTS INVOLVING OR IN CONNECTION WITH ANY EQUIPMENT, THIRD-PARTY PRODUCT, OR ANY COMPONENT THEREOF, SERVICES OR OTHERWISE AND CUSTOMER HEREBY SPECIFICALLY ACKNOWLEDGES AND AGREES THERETO.** No warranty liability whatsoever shall attach to Company until Customer's complete order has been paid for in full and Company's liability under this Warranty shall be limited to the purchase price of the Equipment shown to be defective. Additional warranty protection is available on an extra-cost basis and must be in writing and agreed to by an authorized signatory of the Company. **EXCEPT FOR COMPANY'S WARRANTY EXPRESSLY SET FORTH HEREIN, COMPANY DOES NOT MAKE, AND HEREBY EXPRESSLY DISCLAIMS, ANY WARRANTIES, EXPRESS OR IMPLIED CONCERNING ITS PRODUCTS, EQUIPMENT OR SERVICES, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF DESIGN, MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, OR OTHERS THAT ARE ALLEGED TO ARISE FROM COURSE OF DEALING OR TRADE.**

9. **Indemnity.** To the fullest extent permitted by law, Company and Customer shall indemnify, defend and hold harmless each other from any and all claims, actions, costs, expenses, damages and liabilities, including reasonable attorneys' fees, resulting from death or bodily injury or damage to real or personal property, to the extent caused by the negligence or misconduct of their respective employees or other authorized agents in connection with their activities within the scope of this Agreement. Neither party shall indemnify the other against claims, damages, expenses or liabilities to the extent attributable to the acts or omissions of the other party. If the parties are both at fault, the obligation to indemnify shall be proportional to their relative fault. The duty to indemnify will continue in full force and effect, notwithstanding the expiration or early termination hereof, with respect to any claims based on facts or conditions that occurred prior to expiration or termination.

10. Insurance. Upon request, Company will furnish evidence of its standard insurance coverage. If Customer has requested to be named as an additional insured under Company's insurance policy, Company will do so but only subject to Company's manuscript additional insured endorsement under its primary Commercial General Liability policies. In no event does Company waive any rights of subrogation.

11. Customer Breach. Each of the following events or conditions shall constitute a breach by Customer and shall give Company the right, without an election of remedies, to terminate this Agreement, require payment prior to shipping, or suspend performance by delivery of written notice: (1) Any failure by Customer to pay amounts when due; (2) any general assignment by Customer for the benefit of its creditors, or if Customer becomes bankrupt or insolvent or takes the benefit of any statute for bankrupt or insolvent debtors, or makes or proposes to make any proposal or arrangement with creditors, or if any steps are taken for the winding up or other termination of Customer or the liquidation of its assets, or if a trustee, receiver, or similar person is appointed over any of the assets or interests of Customer; (3) Any representation or warranty furnished by Customer in connection with this Agreement is false or misleading in any material respect when made; or (4) Any failure by Customer to perform or comply with any material provision of this Agreement. Customer shall be liable to the Company for all Equipment furnished and all damages sustained by Company (including lost profit and overhead).

12. Limitation of Liability. NOTWITHSTANDING ANYTHING TO THE CONTRARY, IN NO EVENT SHALL COMPANY BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT CONSEQUENTIAL, PUNITIVE, EXEMPLARY DAMAGES (INCLUDING WITHOUT LIMITATION REFRIGERANT LOSS, BUSINESS INTERRUPTION, LOST DATA, LOST REVENUE, LOST PROFITS), OR CONTAMINANTS LIABILITIES, EVEN IF A PARTY HAS BEEN ADVISED OF SUCH POSSIBLE DAMAGES OR IF SAME WERE REASONABLY FORESEEABLE AND REGARDLESS OF WHETHER THE CAUSE OF ACTION IS FRAMED IN CONTRACT, NEGLIGENCE, ANY OTHER TORT, WARRANTY, STRICT LIABILITY, OR PRODUCT LIABILITY. In no event will Company's liability in connection with the provision of products or services or otherwise under this Agreement exceed the entire amount paid to Company by Customer under this Agreement.

13. CONTAMINANTS LIABILITY

The transmission of COVID-19 may occur in a variety of ways and circumstances, many of the aspects of which are currently not known. HVAC systems, products, services and other offerings have not been tested for their effectiveness in reducing the spread of COVID-19, including through the air in closed environments. **IN NO EVENT WILL COMPANY BE LIABLE UNDER THIS AGREEMENT OR OTHERWISE FOR ANY INDEMNIFICATION, ACTION, OR CLAIM, WHETHER BASED ON WARRANTY, CONTRACT, TORT OR OTHERWISE, FOR ANY BODILY INJURY (INCLUDING DEATH), DAMAGE TO PROPERTY, OR ANY OTHER LIABILITIES, DAMAGES OR COSTS RELATED TO CONTAMINANTS (INCLUDING THE SPREAD, TRANSMISSION, MITIGATION, ELIMINATION, OR CONTAMINATION THEREOF) (COLLECTIVELY, "CONTAMINANTS LIABILITIES") AND CUSTOMER HEREBY EXPRESSLY RELEASES COMPANY FROM ANY SUCH CONTAMINANTS LIABILITIES.**

14. Nuclear Liability. In the event that the Equipment sold hereunder is to be used in a nuclear facility, Customer will, prior to such use, arrange for insurance or governmental indemnity protecting Company against all liability and hereby releases and agrees to indemnify Company and its suppliers for any nuclear damage, including loss of use, in any manner arising out of a nuclear incident, whether alleged to be due, in whole or in part to the negligence or otherwise of Company or its suppliers.

15. Intellectual Property; Patent Indemnity. Company retains all ownership, license and other rights to all patents, trademarks, copyrights, trade secrets and other intellectual property rights related to the Equipment, and, except for the right to use the Equipment sold, Customer obtains no rights to use any such intellectual property. Company agrees to defend any suit or proceeding brought against Customer so far as such suit or proceeding is solely based upon a claim that the use of the Equipment provided by Company constitutes infringement of any patent of the United States of America, provided Company is promptly notified in writing and given authority, information and assistance for defense of same. Company will, at its option, procure for Customer the right to continue to use said Equipment, or modify it so that it becomes non-infringing, or replace same with non-infringing Equipment, or to remove said Equipment and to refund the purchase price. The foregoing will not be construed to include any Agreement by Company to accept any liability whatsoever in respect to patents for inventions including more than the Equipment furnished hereunder, or in respect of patents for methods and processes to be carried out with the aid of said Equipment. The provision of Equipment by Company does not convey any license, by implication, estoppel, or otherwise, under patent claims covering combinations of said Equipment with other devices or elements. The foregoing states the entire liability of Company with regard to patent infringement. Notwithstanding the provisions of this paragraph, Customer will hold Company harmless against any expense or loss resulting from infringement of patents or trademarks arising from compliance with Customer's designs or specifications or instructions.

16. Cancellation. Equipment is specially manufactured in response to orders. An order placed with and accepted by Company cannot be delayed, canceled, suspended, or extended except with Company's written consent and upon written terms accepted by Company that will reimburse Company for and indemnify Company against loss and provide Company with a reasonable profit for its materials, time, labor, services, use of facilities and otherwise. Customer will be obligated to accept any Equipment shipped, tendered for delivery or delivered by Company pursuant to the order prior to any agreed delay, cancellation, suspension or extension of the order. Any attempt by Customer to unilaterally revoke, delay or suspend acceptance for any reason whatever after it has agreed to delivery of or accepted any shipment shall constitute a breach of this Agreement. For purposes of this paragraph, acceptance occurs by any waiver of inspection, use or possession of Equipment, payment of the invoice, or any indication of exclusive control exercised by Customer.

17. Invoicing and Payment. Unless otherwise agreed to in writing by Company, equipment shall be invoiced to Customer upon tender of delivery thereof to the carrier. Customer shall pay Company's invoices within net 30 days of shipment date. Company reserves the right to add to any account outstanding for more than 30 days a service charge equal to the lesser of the maximum allowable legal interest rate or 1.5% of the principal amount due at the end of each month. Customer shall pay all costs (including attorneys' fees) incurred by Company in attempting to collect amounts due and otherwise enforcing these terms and conditions. If requested, Company will provide appropriate lien waivers upon receipt of payment. Company may at any time decline to ship, make delivery or perform work except upon receipt of cash payment, letter of credit, or security, or upon other terms and conditions satisfactory to Company. Customer agrees that, unless Customer makes payment in advance, Company will have a purchase money security interest in all Equipment to secure payment in full of all amounts due Company and its order for the Equipment, together with these terms and conditions, form a security agreement (as defined by the UCC in the United States and as defined in the Personal Property Security Act in Canada). Customer shall keep the Equipment free of all taxes and encumbrances, shall not remove the Equipment from its original installation point and shall not assign or transfer any interest in the Equipment until all payments due Company have been made. The purchase money security interest granted herein attaches upon Company's acceptance of Customer's order and on receipt of the Equipment described in the accepted Proposal but prior to its installation. The parties have no agreement to postpone the time for attachment unless specifically noted in writing on the accepted order. Customer will have no rights of set off against any amounts, which become payable to Company under this Agreement or otherwise.

18. Claims. Company will consider claims for concealed shortages in shipments or rejections due to failure to conform to an order only if such claims or rejections are made in writing within 15 days of delivery and are accompanied by the packing list and, if applicable, the reasons in detail why the Equipment does not conform to Customer's order. Upon receiving authorization and shipping instructions from authorized personnel of Company, Customer may return rejected Equipment, transportation charges prepaid, for replacement. Company may charge Customer any costs resulting from the testing, handling, and disposition of any Equipment returned by Customer which are not found by Company to be nonconforming. All Equipment damaged during shipment and all claims relating thereto must be made with the freight carrier in accordance with such carrier's policies and procedures. Claims for Equipment damaged during shipment are not covered under the warranty provision stated herein.

19. Export Laws. The obligation of Company to supply Equipment under this Agreement is subject to the ability of Company to supply such items consistent with applicable laws and regulations of the United States and other governments. Company reserves the right to refuse to enter into or perform any order, and to cancel any order, under this Agreement if Company in its sole discretion determines that performance of the transaction to which such order relates would violate any such applicable law or regulation. Customer will pay all handling and other similar costs from Company's factories including the costs of freight, insurance, export clearances, import duties and taxes. Customer will be "exporter of record" with respect to any export from the United States of America and will perform all compliance and logistics functions in connection therewith and will also comply with all applicable laws, rules and regulations. Customer understands that Company and/or the Equipment are subject to laws and regulations of the United States of America which may require licensing or authorization for and/or prohibit export, re-export or diversion of Company's Equipment to certain countries, and agrees it will not knowingly assist or participate in any such diversion or other violation of applicable United States of America laws and regulations. Customer agrees to hold harmless and indemnify Company for any damages resulting to Customer or Company from a breach of this paragraph by Customer.

20. General. Except as provided below, to the maximum extent provided by law, this Agreement is made and shall be interpreted and enforced in accordance with the laws of the state of New York for Equipment shipped to a U.S. location and the laws of the province to which Equipment is shipped within Canada, without regard to its conflict of law principles that might otherwise call for the application of a different state's or province's law, and not including the United Nations Convention on Contracts for the International Sale of Goods. To the extent the Equipment is being used at a site owned and/or operated by any agency of the Federal Government, determination of any substantive issue of law shall be according to the Federal common law of Government contracts as enunciated and applied by Federal judicial bodies and boards of contract appeals of the Federal Government. This Agreement contains all of the agreements, representations and understandings of the parties and supersedes all previous understandings, commitments or agreements, oral or written, related to the subject matter hereof. This Agreement may not be amended, modified or terminated except by a writing signed by the parties hereto. No documents shall be incorporated herein by reference except to the extent Company is a signatory thereon. If any term or condition of this Agreement is invalid, illegal or incapable of being enforced by any rule of law, all other terms and conditions of this Agreement will nevertheless remain in full force and effect as long as the economic or legal substance of the transaction contemplated hereby is not affected in a manner adverse to any party hereto. Customer may not assign, transfer, or convey this Agreement, or any part hereof, or its right, title or interest herein, without the written consent of the Company. Subject to the foregoing, this Agreement shall be binding upon and inure to the benefit of Customer's permitted successors and assigns. This Agreement may be executed in several

counterparts, each of which when executed shall be deemed to be an original, but all together shall constitute but one and the same Agreement. A fully executed facsimile copy hereof or the several counterparts shall suffice as an original.

21. Federal Requirements. The Parties shall comply with all United States federal labor law obligations under 29 CFR part 471, appendix A to subpart A. THE FOLLOWING PROVISIONS ARE INCORPORATED HEREIN BY REFERENCE: Executive Order 11701 and 41 CFR §§ 60-250.5(a), 60-300.5; Executive Order 11758 and 41 CFR § 60-741.5(a); U.S. immigration laws, including the L-1 Visa Reform Act of 2004 and the H-1B Visa Reform Act of 2004; and Executive Order 13496. The Parties shall abide by the requirements of 41 CFR 60-300.5(a) and 60-741.5(a). These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities. Moreover, these regulations require that covered prime contractors and subcontractors take affirmative action to employ and advance in employment individuals without regard to protected veteran status or disability. The Parties certify that they do not operate any programs promoting DEI that violate any applicable United States anti-discrimination laws and acknowledge and agree that their compliance with all applicable federal anti-discrimination laws is material to the federal government's payment decisions. The Parties acknowledge and agree that their employment, procurement, and contracting practices shall not consider race, color, sex, sexual preference, religion, or national origin in ways that violate United States federal civil rights laws.

22. U.S. Government Work.

The following provision applies only to direct sales by Company to the US Government. The Parties acknowledge that Equipment ordered and delivered under this Agreement are Commercial Items as defined under Part 12 of the Federal Acquisition Regulation (FAR). In particular, Company agrees to be bound only by those Federal contracting clauses that apply to "commercial" suppliers and that are contained in FAR 52.212-5(e)(1).

The following provision applies only to indirect sales by Company to the US Government. As a Commercial Item Subcontractor, Company accepts only the following mandatory flow down provisions: 52.219-8; 52.222-26; 52.222-35; 52.222-36; 52.222-39; 52.247-64. If the sale of the Equipment is in connection with a U.S. Government contract, Customer certifies that it has provided and will provide current, accurate, and complete information, representations and certifications to all government officials, including but not limited to the contracting officer and officials of the Small Business Administration, on all matters related to the prime contract, including but not limited to all aspects of its ownership, eligibility, and performance. Anything herein notwithstanding, Company will have no obligations to Customer unless and until Customer provides Company with a true, correct and complete executed copy of the prime contract. Upon request, Customer will provide copies to Company of all requested written communications with any government official related to the prime contract prior to or concurrent with the execution thereof, including but not limited to any communications related to Customer's ownership, eligibility or performance of the prime contract. Customer will obtain written authorization and approval from Company prior to providing any government official any information about Company's performance of the work that is the subject of the Proposal or this Agreement, other than the Proposal or this Agreement.

23. Limited Waiver of Sovereign Immunity. If Customer is an Indian tribe (in the U.S.) or a First Nation or Band Council (in Canada), Customer, whether acting in its capacity as a government, governmental entity, a duly organized corporate entity or otherwise, for itself and for its agents, successors, and assigns: (1) hereby provides this limited waiver of its sovereign immunity as to any damages, claims, lawsuit, or cause of action (herein "Action") brought against Customer by Company and arising or alleged to arise out of the furnishing by Company of any product or service under this Agreement, whether such Action is based in contract, tort, strict liability, civil liability or any other legal theory; (2) agrees that jurisdiction and venue for any such Action shall be proper and valid (a) if Customer is in the U.S., in any state or United States court located in the state in which Company is performing this Agreement or (b) if Customer is in Canada, in the superior court of the province or territory in which the work was performed; (3) expressly consents to such Action, and waives any objection to jurisdiction or venue; (4) waives any requirement of exhaustion of tribal court or administrative remedies for any Action arising out of or related to this Agreement; and (5) expressly acknowledges and agrees that Company is not subject to the jurisdiction of Customer's tribal court or any similar tribal forum, that Customer will not bring any action against Company in tribal court, and that Customer will not avail itself of any ruling or direction of the tribal court permitting or directing it to suspend its payment or other obligations under this Agreement. The individual signing on behalf of Customer warrants and represents that such individual is duly authorized to provide this waiver and enter into this Agreement and that this Agreement constitutes the valid and legally binding obligation of Customer, enforceable in accordance with its terms.

1-26.130-4 (0225)

Supersedes 1-26.130-4(1024)

SECURITY ADDENDUM

This Addendum shall be applicable to the sale, installation and use of Trane equipment and the sale and provision of Trane services. "Trane" shall mean Trane U.S. Inc. for sales and services in the United States, or Trane Canada ULC for sales and services in Canada.

1. **Definitions.** All terms used in this Addendum shall have the meaning specified in the Agreement unless otherwise defined herein. For the purposes of this Addendum, the following terms are defined as follows:
"Customer Data" means Customer account information as related to the Services only and does not include HVAC Machine Data or personal data. Trane does not require, nor shall Customer provide personal data to Trane under the Agreement. Such data is not required for Trane to provide its Equipment and/or Services to the Customer.
"Equipment" shall have the meaning set forth in the Agreement.
"HVAC Machine Data" means data generated and collected from the product or furnished service without manual entry. HVAC Machine Data is data relating to the physical measurements and operating conditions of a HVAC system, such as but not limited to, temperatures, humidity, pressure, HVAC equipment status. HVAC Machine Data does not include Personal Data and, for the purposes of this agreement, the names of users of Trane's controls products or hosted applications shall not be Personal Data, if any such user chooses to use his/her name(s) in the created accounts within the controls product (e.g., firstname.lastname@address.com). HVAC Machine Data may be used by Trane: (a) to provide better support services and/or products to users of its products and services; (b) to assess compliance with Trane terms and conditions; (c) for statistical or other analysis of the collective characteristics and behaviors of product and services users; (d) to backup user and other data or information and/or provide remote support and/or restoration; (e) to provide or undertake: engineering analysis; failure analysis; warranty analysis; energy analysis; predictive analysis; service analysis; product usage analysis; and/or other desirable analysis, including, but not limited to, histories or trends of any of the foregoing; and (f) to otherwise understand and respond to the needs of users of the product or furnished service. **"Personal Data"** means data and/or information that is owned or controlled by Customer, and that names or identifies, or is about a natural person, such as: (i) data that is explicitly defined as a regulated category of data under any data privacy laws applicable to Customer; (ii) non-public personal information ("NPI") or personal information ("PI"), such as national identification number, passport number, social security number, social insurance number, or driver's license number; (iii) health or medical information, such as insurance information, medical prognosis, diagnosis information, or genetic information; (iv) financial information, such as a policy number, credit card number, and/or bank account number; (v) personally identifying technical information (whether transmitted or stored in cookies, devices, or otherwise), such as IP address, MAC address, device identifier, International Mobile Equipment Identifier ("IMEI"), or advertising identifier; (vi) biometric information; and/or (vii) sensitive personal data, such as, race, religion, marital status, disability, gender, sexual orientation, geolocation, or mother's maiden name.
"Security Incident" shall refer to (i) a compromise of any network, system, application or data in which Customer Data has been accessed or acquired by an unauthorized third party; (ii) any situation where Trane reasonably suspects that such compromise may have occurred; or (iii) any actual or reasonably suspected unauthorized or illegal Processing, loss, use, disclosure or acquisition of or access to any Customer Data.
"Services" shall have the meaning set forth in the Agreement.
2. **HVAC Machine Data: Access to Customer Extranet and Third Party Systems.** If Customer grants Trane access to HVAC Machine Data via web portals or other non-public websites or extranet services on Customer's or a third party's website or system (each, an "Extranet"). Trane will comply with the following:
 - a. **Accounts.** Trane will ensure that Trane's personnel use only the Extranet account(s) designated by Customer and will require Trane personnel to keep their access credentials confidential.
 - b. **Systems.** Trane will access the Extranet only through computing or processing systems or applications running operating systems managed by Trane that include: (i) system network firewalls; (ii) centralized patch management; (iii) operating system appropriate anti-malware software; and (iv) for portable devices, full disk encryption.
 - c. **Restrictions.** Unless otherwise approved by Customer in writing, Trane will not download, mirror or permanently store any HVAC Machine Data from any Extranet on any medium, including any machines, devices or servers.
 - d. **Account Termination.** Trane will terminate the account of each of Trane's personnel in accordance with Trane's standard practices after any specific Trane personnel who has been authorized to access any Extranet (1) no longer needs access to HVAC Machine Data or (2) no longer qualifies as Trane personnel (e.g., the individual leaves Trane's employment).
 - e. **Third Party Systems.** Trane will provide Customer prior notice before it uses any third party system that stores or may otherwise have access to HVAC Machine Data, unless (1) the data is encrypted and (2) the third party system will not have access to the decryption key or unencrypted "plain text" versions of the HVAC Machine Data.
3. **Customer Data: Confidentiality.** Trane shall keep confidential, and shall not access or use any Customer Data and information that is marked confidential or by its nature is considered confidential ("Customer Confidential Information") other than for the purpose of providing the Equipment and Services, and will disclose Customer Confidential Information only: (i) to Trane's employees and agents who have a need to know to perform the Services, (ii) as expressly permitted or instructed by Customer, or (iii) to the minimum extent required to comply with applicable law, provided that Trane (1) provides Customer with prompt written notice prior to any such disclosure, and (2) reasonably cooperate with Customer to limit or prevent such disclosure.
4. **Customer Data: Compliance with Laws.** Trane agrees to comply with laws, regulations governmental requirements and industry standards and practices relating to Trane's processing of Customer Confidential Information (collectively, "**Laws**").
5. **Customer Data: Information Security Management.** Trane agrees to establish and maintain an information security and privacy program, consistent with applicable HVAC equipment industry practices that complies with this Addendum and applicable Laws ("**Information Security Program**"). The Information Security Program shall include appropriate physical, technical and administrative safeguards, including any safeguards and controls agreed by the Parties in writing, sufficient to protect Customer systems, and Customer's Confidential Information from unauthorized access, destruction, use, modification or disclosure. The Information Security Program shall include appropriate, ongoing training and awareness programs designed to ensure that Trane's employees and agents, and others acting on Trane's, behalf are aware of and comply with the Information Security Program's policies, procedures, and protocols.
6. **Monitoring.** Trane shall monitor and, at regular intervals consistent with HVAC equipment industry practices, test and evaluate the effectiveness of its Information Security Program. Trane shall evaluate and promptly adjust its Information Security Program in light of the results of the testing and monitoring, any material changes to its operations or business arrangements, or any other facts or circumstances that Trane knows or reasonably should know may have a material impact on the security of Customer Confidential Information, Customer systems and Customer property.
7. **Audits.** Customer acknowledges and agrees that the Trane SOC2 audit report will be used to satisfy any and all audit/inspection requests/requirements by or on behalf of Customer. Trane will make its SOC2 audit report available to Customer upon request and with a signed nondisclosure agreement.
8. **Information Security Contact.** Trane's information security contact is Local Sales Office.
9. **Security Incident Management.** Trane shall notify Customer after the confirmation of a Security Incident that affects Customer Confidential Information, Customer systems and Customer property. The written notice shall summarize the nature and scope of the Security Incident and the corrective action already taken or planned.
10. **Threat and Vulnerability Management.** Trane regularly performs vulnerability scans and addresses detected vulnerabilities on a risk basis. Periodically, Trane engages third-parties to perform network vulnerability assessments and penetration testing. Vulnerabilities will be reported in accordance with Trane's cybersecurity vulnerability reported process. Trane periodically provides security updates and software upgrades.
11. **Security Training and Awareness.** New employees are required to complete security training as part of the new hire process and receive annual and targeted training (as needed and appropriate to their role) thereafter to help maintain compliance with Security Policies, as well as other corporate policies, such as the Trane Code of Conduct. This includes requiring Trane employees to annually re-acknowledge the Code of Conduct and other Trane policies as appropriate. Trane conducts periodic security awareness campaigns to educate personnel about their responsibilities and provide guidance to create and maintain a secure workplace.

12. Secure Disposal Policies. Trane will maintain policies, processes, and procedures regarding the disposal of tangible and intangible property containing Customer Confidential Information so that wherever possible, Customer Confidential Information cannot be practicably read or reconstructed.
13. Logical Access Controls. Trane employs internal monitoring and logging technology to help detect and prevent unauthorized access attempts to Trane's corporate networks and production systems. Trane's monitoring includes a review of changes affecting systems' handling authentication, authorization, and auditing, and privileged access to Trane production systems. Trane uses the principle of "least privilege" (meaning access denied unless specifically granted) for access to customer data.
14. Contingency Planning/Disaster Recovery. Trane will implement policies and procedures required to respond to an emergency or other occurrence (i.e. fire, vandalism, system failure, natural disaster) that could damage Customer Data or any system that contains Customer Data. Procedures include the following
 - (i) Data backups; and
 - (ii) Formal disaster recovery plan. Such disaster recovery plan is tested at least annually.
15. Return of Customer Data. If Trane is responsible for storing or receiving Customer Data, Trane shall, at Customer's sole discretion, deliver Customer Data to Customer in its preferred format within a commercially reasonable period of time following the expiration or earlier termination of the Agreement or, such earlier time as Customer requests, securely destroy or render unreadable or undecipherable each and every original and copy in every media of all Customer's Data in Trane's possession, custody or control no later than [90 days] after receipt of Customer's written instructions directing Trane to delete the Customer Data.
16. Background Checks. Trane shall take reasonable steps to ensure the reliability of its employees or other personnel having access to the Customer Data, including the conducting of appropriate background and/or verification checks in accordance with Trane policies.
17. DISCLAIMER OF WARRANTIES. EXCEPT FOR ANY APPLICABLE WARRANTIES IN THE AGREEMENT, THE SERVICES ARE PROVIDED "AS IS", WITH ALL FAULTS, AND THE ENTIRE RISK AS TO SATISFACTORY QUALITY, PERFORMANCE, ACCURACY AND EFFORT AS TO SUCH SERVICES SHALL BE WITH CUSTOMER. TRANE DISCLAIMS ANY AND ALL OTHER EXPRESS OR IMPLIED REPRESENTATIONS AND WARRANTIES WITH RESPECT TO THE SERVICES AND THE SERVICES PROVIDED HEREUNDER, INCLUDING ANY EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR THAT THE SERVICES WILL OPERATE ERROR-FREE OR UNINTERRUPTED OR RETURN/RESPONSE TO INQUIRIES WITHIN ANY SPECIFIC PERIOD OF TIME.

October 2024
Supersedes: November 2023v2



Job Name: Berlin-Peck Memorial Library
HVAC Replacement 2.3
Prepared For:

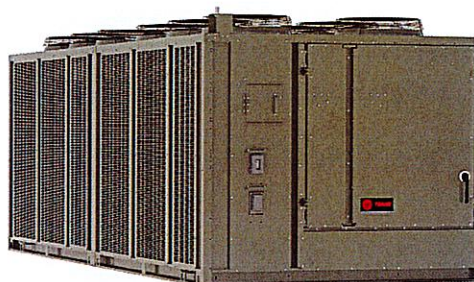
Unit Tag: CU-2
Quantity: 1

IntelliCore 20-120 Ton Air-Cooled Condenser

Unit Overview

Unit Type	Nominal Capacity	Refrigerant	Unit Weight	Total Power (Condenser Only)	Elevation
Air Cooled Condensing Unit	25 Tons	R-454B	1898.0 lb	28.66 kW	0.00 ft

Unit Features



Unit Electrical

Voltage/Phase/Hz	200/60/3	MCA	141.00 A
Unit Mounted Power Connection	Non-Fused Disc Switch (High SCCR)	MOP	200.00 A
Convenience Outlet	Powered 15A Convenience Outlet	Compressor 1 RLA	62.10 A
Condenser Fan FLA	4.10 A	Compressor 2 RLA	40.10 A
Condenser Motor Count	3.00 Each	Compressor Power	26.19 kW
Condenser Fan Motor Power	2.48 kW		

Note: Connect properly sized and protected power supply wiring to the unit (copper wiring only to the unit)

Condensing Section

Service Valves	Suction Service Valve	Net Total Capacity	315.68 MBh
Design Ambient Temp	95.00 F	Saturated Suction Temp	45.87 F
EER @ AHRI (Condenser Only)	10.9 EER	Leaving Compressor Temp	124.34 F
IEER	15.5 EER	Entering Expansion Device Temp	106.52 F

Refrigerant Line Information

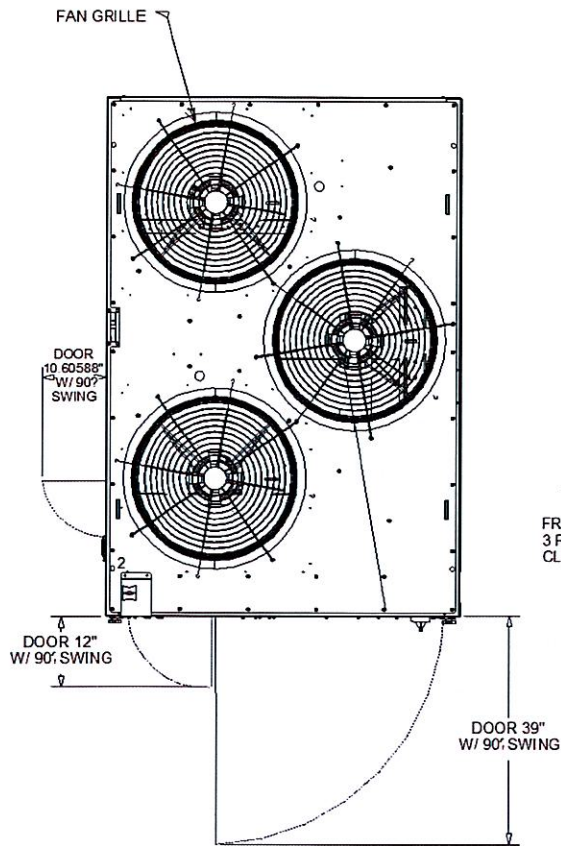
Suction Line Size - Horizontal	1 5/8 in	Est Refrigerant Charge Per Unit	6.7 lb
Suction Line Size - Vertical	1 5/8 in	Refrigerant Charge (no evap) - 50 ft	18.0 lb
Liquid Line Size	7/8 in	Refrigerant Charge (no evap) - 100 ft	30.0 lb
Line Options	Pressure Gauges and Piping	Refrigerant Charge (no evap) - 150 ft	41.0 lb

**TRANE**

Job Name: Berlin-Peck Memorial Library
HVAC Replacement 2.3.
Prepared For:

Unit Tag: CU-2
Quantity: 1

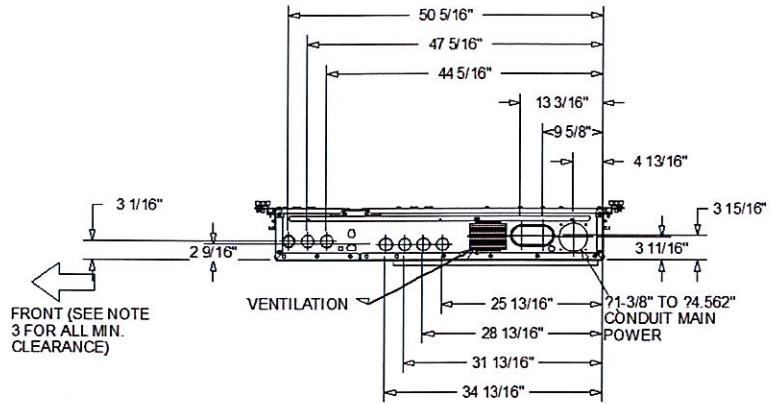
Unit Dimensions- 25 and 30 ton



NOTES:

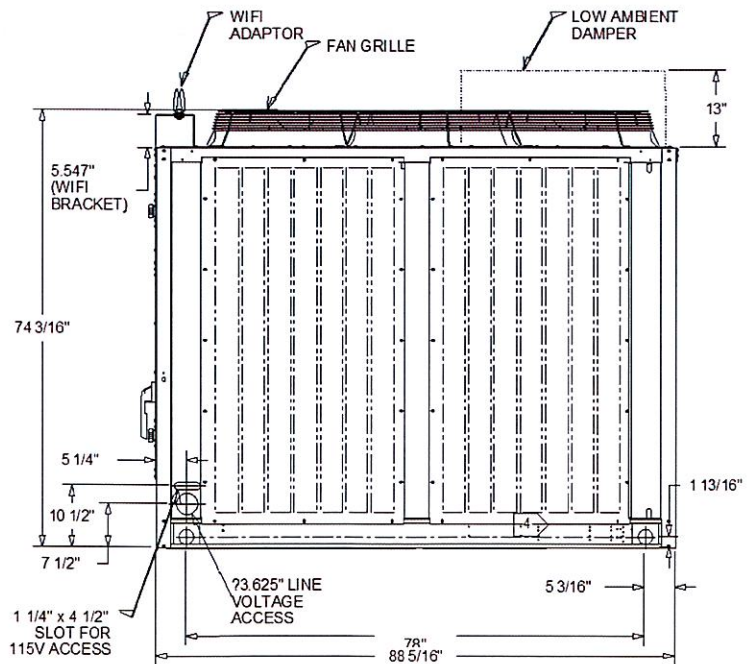
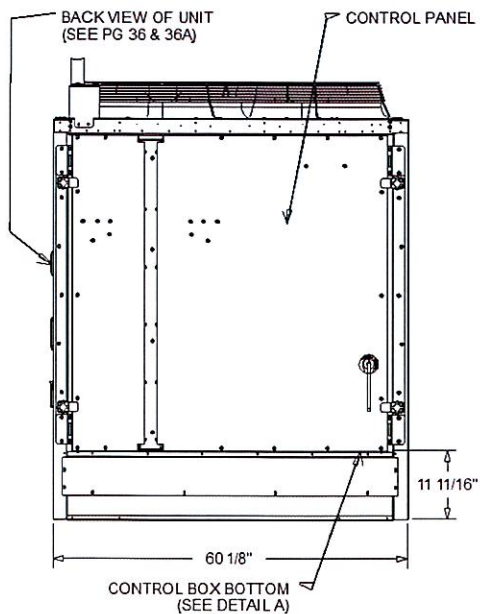
1. SEE CONNECTION DRAWING FOR CONNECTION LOCATION AND SIZES.
OPTIONS ONLY COME WITH SELECTED UNITS.

VOLTAGE ACCESS HOLES IN OUTER PANEL MUST BE COVERED
AFTER UNIT INSTALLATION



DETAIL A

CONTROL BOX BOTTOM

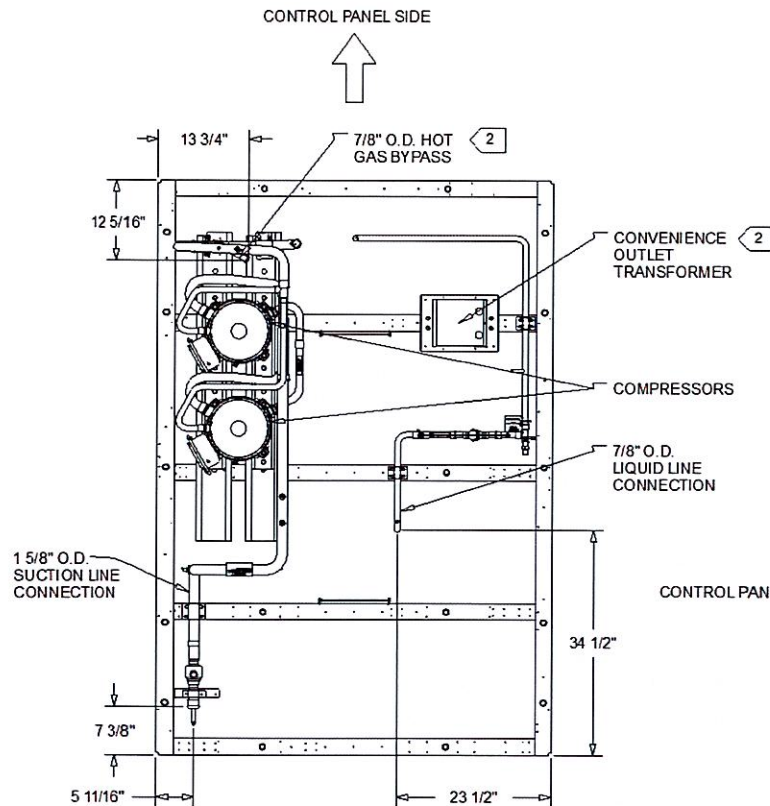




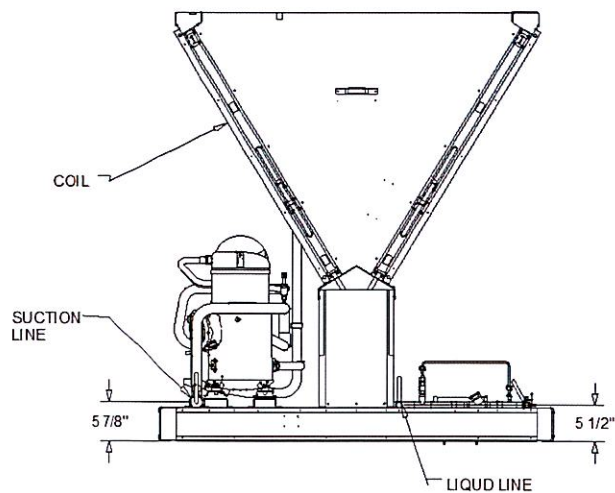
TRANE

Job Name: Berlin-Peck Memorial Library
HVAC Replacement 2.3
Prepared For:

Unit Tag: CU-2
Quantity: 1



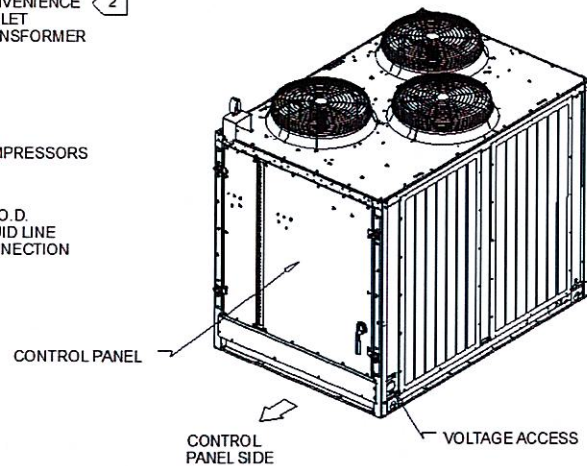
PLAN VIEW OF UNIT
CONNECTION DRAWING



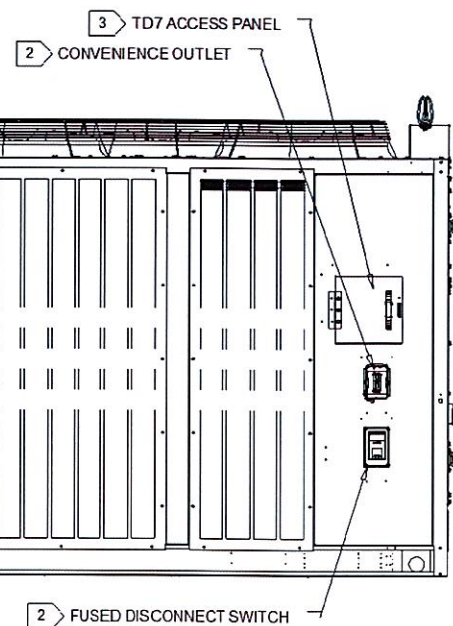
VIEW OPPOSITE OF CONTROL PANEL
CONNECTION DRAWING

NOTES:

1. VERIFY WEIGHT, CONNECTION, AND ALL DIMENSIONS WITH
 2. INSTALLER DOCUMENTS BEFORE INSTALLATION.
 3. OPTIONS ONLY COME WITH SELECTED UNITS.
- TD7 CONTROL ONLY COMES WITH SELECTED UNITS.



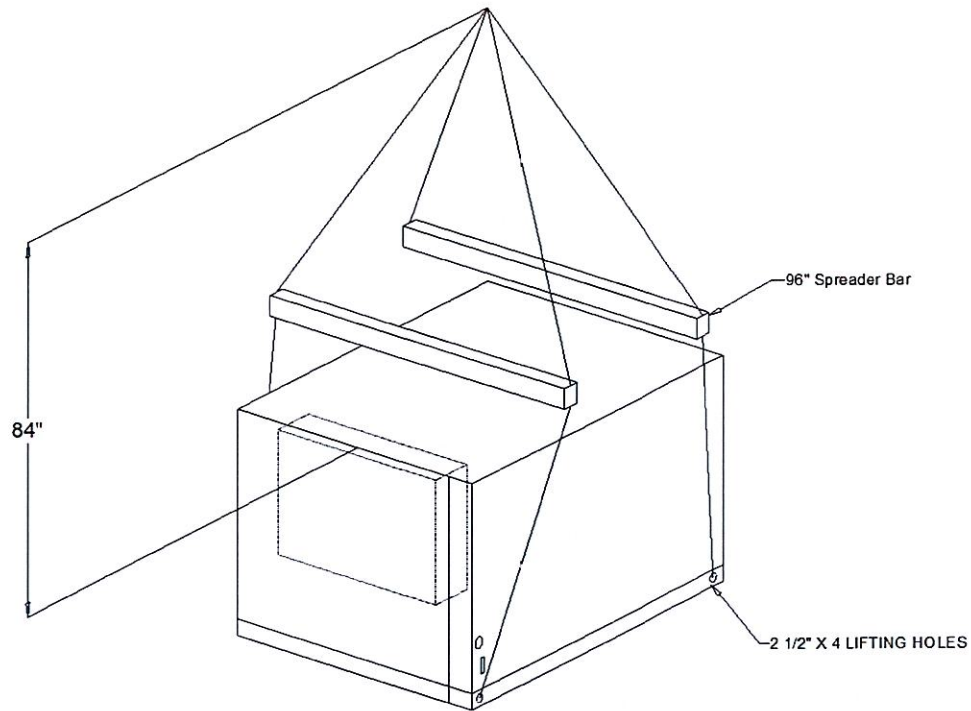
ORIENTATION VIEW OF UNIT
ISOMETRIC DRAWING



BACK VIEW OF UNIT

25 TON UNIT

DIMENSION CONNECTION DRAWING



25 TON RIGGING

WEIGHT AND RIGGING

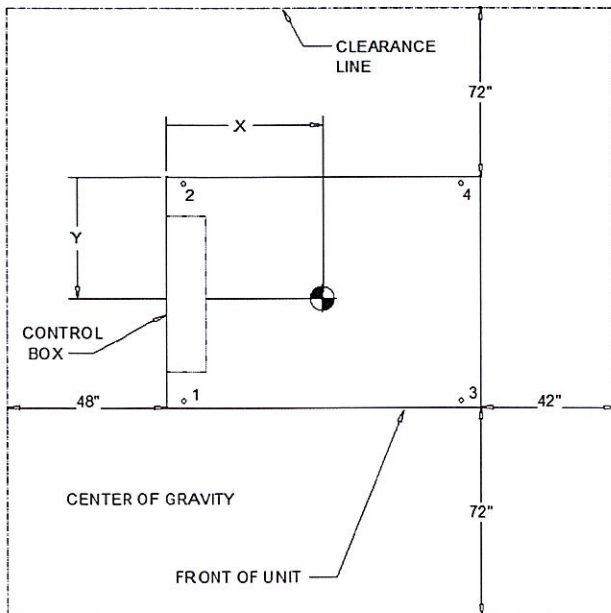
LOAD POINT WEIGHTS AND PLACEMENT

OPERATING: 1810.0 lb

LOAD POINTS 1	580.9 lb	X: 8"	Y: 58 3/4"
LOAD POINTS 2	478.0 lb	X: 8"	Y: 1 1/4"
LOAD POINTS 3	427.0 lb	X: 80 1/8"	Y: 58 3/4"
LOAD POINTS 4	324.1 lb	X: 80 1/8"	Y: 1 1/4"

*ALL WEIGHTS ARE APPROXIMATE
CENTER OF GRAVITY

X: 37 7/8"
Y: 33 5/16"



NOTES:

1. OPERATING WEIGHT INCLUDES REFRIGERANT, OIL AND WATER.
2. SHIPPING WEIGHT INCLUDES REFRIGERANT AND OIL CHARGES
3. THE ACTUAL WEIGHT IS SHOWN ON THE NAMEPLATE. WEIGHT SHOWN REPRESENT TYPICAL SHIPPING AND OPERATING WEIGHTS FOR THE UNIT SELECTED.
4. ADD WEIGHT TO TOTAL WEIGHT OF UNIT
5. IF UNITS IS INSTALLED IN A WELL, THE DEPTH OF THE WELL MUST NOT EXCEED THE TOP HEIGHT OF THE UNIT. THE TOP OF THE UNIT MUST HAVE UNRESTRICTED AIRFLOW. PLEASE REFERENCE RECOMMENDED CLEARANCES.

WARNING!

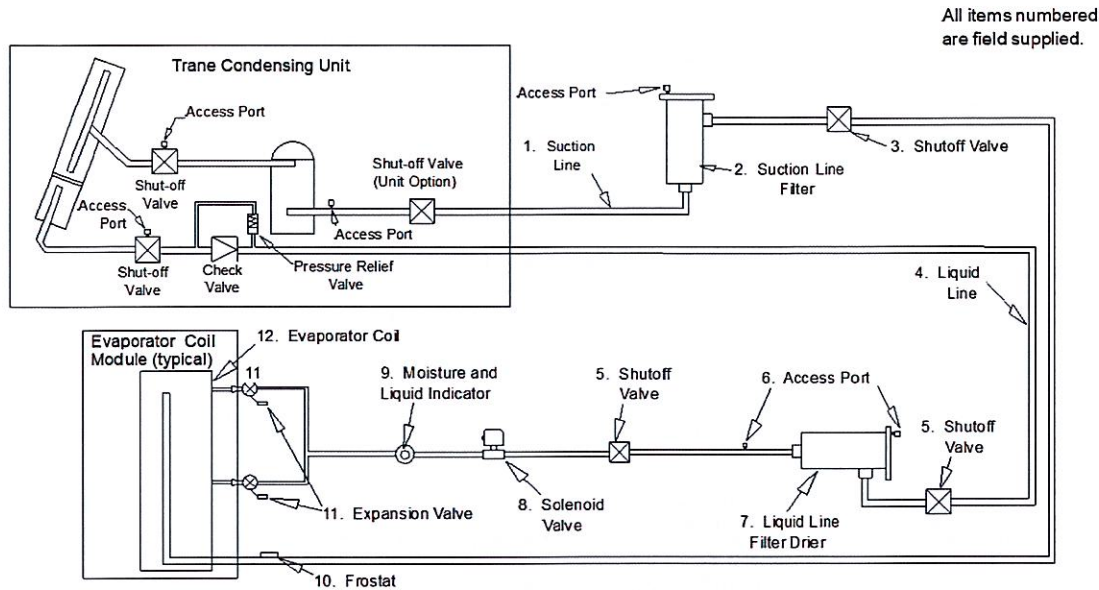
TO PREVENT INJURY OR DEATH AND POSSIBLE EQUIPMENT DAMAGE, DO NOT USE CHAIN (CABLES) OR SLINGS EXCEPT AS SHOWN AND USE CABLES STRONG ENOUGH TO SUPPORT UNIT WEIGHT. TEST LIFT UNIT TO ENSURE PROPER BALANCE AND RIGGING.

25 TON CENTER OF GRAVITY AND CLEARANCES

WEIGHT AND RIGGING



Required Components for Refrigerant Circuits



SUCTION LINE

1. Interconnected Tubing (Suction line)

Maximum of 50 feet if condenser is above evaporator (If risers are more than 50 feet, the application must be viewed by Trane) Refer to SSAPG018*-EN for more details

2. Suction Line

Filter Drier 1 / ckt suction filter should be the replaceable-core type, and a clean core should be installed after the system is cleaned up

3. Shut-Off Valve

Manual ball valves for 1 5/8" tubing.

LIQUID LINE

4. Interconnected Tubing (Liquid Line)

Refer to applications guide SSAPG018*-EN for vertical & horizontal piping limitations.

5. Shut-Off Valve

2 Manual ball valves

6. Access Port

Port used to determine suction pressure. This port is usually a Schraeder valve with a core.

7. Liquid Line

Filter Drier 1 / ckt liquid filter should be the replaceable-core type, and a clean core should be installed after the system is cleaned up.

8. Solenoid Valves

Liquid line requires a field supplied and installed isolation solenoid valve within 10 feet of the evaporator. The suggested solenoid uses a 120-volt service and requires code-compliant wiring to the RAUK condensing unit.

Note: Trim solenoids cannot be used. They are not compatible with Microchannel condenser coils

9. Moisture and Liquid Indicator

One moisture-indicating sight glass is to be installed in the main liquid line.

EVAPORATOR

10. Froststat (not required) - The control is mechanically attached to the outside of the refrigerant line, near the evaporator, and wired to the unit control panel See application guide SSAPG018*-EN for selection information.

11. Expansion Valves - See application guide SSAPG018*-EN for selecting valve quantity and size.

Note: Units with Microchannel condenser coils applied with DX systems will require 30 percent bleed valves.



Table 2. Expansion valve selection, 20 to 60 ton MCHE (30 % bleed)

Min Tonnage	Max Tonnage	Manufacturer	Selection(a)	Trane Part
2.0	3.0	Sporlan	BBIYE 1.5-CP (BP/30)	VAL21647
2.5	3.5	Sporlan	BBIYE 2.5-CP (BP/30)	VAL21648
3.5	5.0	Sporlan	BBIYE 3-CP (BP/30)	VAL21469
4.5	7.0	Sporlan	BBIYE 4.5-CP (BP/30)	VAL21650
6.0	8.5	Sporlan	BBIYE 6-CP (BP/30)	VAL 21651
7.0	10.0	Sporlan	BBIYE 7-CP (BP/30)	VAL21652
8.0	13.5	Sporlan	BBIYE 8.5-CP (BP/30)	VAL21653
11.0	17.5	Sporlan	BBIYE 11.5-CP (BP/30)	VAL21654
14.0	21.5	Sporlan	BBIYE 15.5-CP (BP/30)	VAL21655
17.0	28.5	Sporlan	OYE 20-CP (BP/30)	VAL21657
22.0	30.0	Sporlan	OYE 25-CP (BP/30)	VAL21658

(a) Valve part numbers with "-ZGA" in place of "-GA", may be used interchangeably.

Note: When sizing TXVs, select the TXV where the design tonnage is close to the middle of the device.

Table 3. Expansion valve selection, 80 to 120 ton MCHE (15 % bleed)

Min Tonnage	Max Tonnage	Manufacturer	Selection(a)	Trane Part
2.5	3.0	Sporlan	BBIYE 2.5-CP (BP/15)	VAL21660
3.0	4.5	Sporlan	BBIYE 3-CP (BP/15)	VAL21661
4.0	6.0	Sporlan	BBIYE 4.5-CP (BP/15)	VAL21662
5.0	7.5	Sporlan	BBIYE 6-CP (BP/15)	VAL21663
6.0	9.0	Sporlan	BBIYE 7-CP (BP/15)	VAL21664
7.0	12.0	Sporlan	BBIYE 8.5-CP (BP/15)	VAL21665
9.5	15.5	Sporlan	BBIYE 11.5-CP (BP/15)	VAL21666
12.5	19.0	Sporlan	BBIYE 15.5-CP (BP/15)	VAL21667
15.0	25.0	Sporlan	OYE-20-CP (BP/15)	VAL21669
19.5	30.0	Sporlan	OYE-25-CP (BP/15)	VAL21670
23.5	45.0	Sporlan	OYE-35-CP (BP/15)	VAL21671
35.0	68.0	Sporlan	OYE-55-CP (BP/15)	VAL21672

(a) Valve part numbers with "-ZGA" in place of "-GA", may be used interchangeably.

Note: When sizing TXVs, select the TXV where the design tonnage is close to the middle of the device.

Table 4. Expansion valve selection, any BPHE

Min Tonnage	Max Tonnage	Selection(a)	Alternate
13.0	22.0	OYE 20-CP	n/a
17.0	26.0	OYE 25-CP	n/a
20.5	39.0	OYE 35-CP	n/a
30.5	59.0	OYE 55-CP	n/a

(a) Valve part numbers with "-ZGA" in place of "-GA", may be used interchangeably.

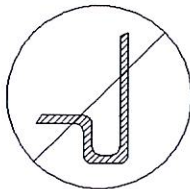


Required Components for Refrigerant Circuits Continued

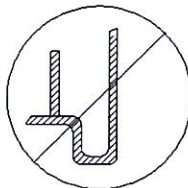
Installation Guidelines

Suction Line Piping

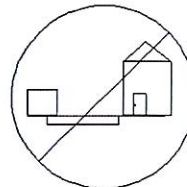
1. Do not use suction line traps.



2. Do not use double risers.



3. Avoid putting suction lines underground.



4. Route suction lines as short and direct as possible.

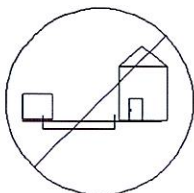
5. Slope suction line away from the condensing unit 1 inch for every 10 feet.

6. Insulate suction line.

7. The suction filter should be located as close to the compressors as possible.

Liquid Line Piping

1. Avoid putting liquid lines underground.



2. Route liquid lines as short and direct as possible.

3. Slope liquid line away from the condensing unit 1 inch for every 10 feet.

4. Only insulate liquid lines that pass through heated areas.

5. Wire solenoid valve per field connection diagram.

6. The liquid line filter drier should be as close to the solenoid valve as possible.

Evaporator Piping

1. Install TXV directly to unit liquid connection.

2. Locate TXV bulb midway between 90° bends on top of suction tube as shown.

3. Secure bulb to tube with the two clamps provided by the manufacturer and insulate bulb.

4. Install the TXV equalizer line close to & downstream of the bulb, on top of the horizontal suction line.

5. Install froststat per kit instructions on the common suction line as close to the evaporator as possible.

See SSAPG018*-EN for DX evaporator piping details.



General - R-454B

All air-cooled condensing units shall have scroll compressors and are factory assembled and wired. Each unit shall ship from the factory with a nitrogen holding charge. Units shall be constructed of 14-gauge welded galvanized steel frame with 14 and 16-gauge galvanized steel panels and access doors.

Units shall have factory mounted, louvered, full-length steel grilles to protect the condenser coils and piping. Unit surface shall be finished with an air-dry paint. This air-dry paint finish shall be durable enough to withstand a minimum of 672-consecutive-hour salt spray application in accordance with standard ASTM B117.

Symbio 800 controller

The Symbio 800 controller is an application-specific, programmable controller that is factory installed and designed to control packaged HVAC equipment. A seven-inch user interface features a touch sensitive color screen that provides facility managers with at-a-glance operating status, performance monitoring, scheduling changes, and operating adjustments. Other advanced features include automated controller backup and optional features such as secure remote connectivity, wireless building communications, mobile device connectivity, and custom programming with expandable I/O.

Unit Control

Factory shall provide 115-volt control circuit which includes fusing and control power transformer. The unit shall be wired with magnetic contactors for compressor and condenser motors and high pressure cutouts. Charge isolation, reset relay and anti-recycle compressor timer shall be provided. Across-the-line start is standard

Phase Monitor

The unit shall be equipped with a phase monitor in the control box. The phase monitor shall protect against phase loss, imbalance and reversal of the line voltage.

Compressors

Trane® 3-D Scroll compressors shall have a simple mechanical design. Scroll type compression shall provide low vibration. 3-D compressors shall provide a completely enclosed compression chamber with no leakage paths. The compressor shall be suction gas cooled, direct drive, with 3600 RPM hermetic motors. The Scroll compressor shall include a centrifugal oil pump, oil level sight glass, and an oil charging valve.

Refrigerant Management

Split systems can have significantly more refrigerant than packaged systems and thus require controls to reliably manage this excess refrigerant. Each compressor shall have crankcase heaters installed, properly sized to minimize the amount of liquid refrigerant present in the oil sump during off cycles. Additionally, the condensing unit shall have controls to initiate refrigerant isolation at system shut down on each refrigerant circuit. To be operational, the refrigerant isolation cycle requires a field-installed isolation solenoid valve on the common liquid line near the evaporator.

Note: Under extreme conditions, R-454B refrigerant can present special challenges with piping and system design. Whenever refrigerant line set lengths approach 150 equivalent feet and/or design ambient temperature exceeds 115 degrees F, contact your Trane Account Executive to review application requirements.

Single Refrigerant Circuit w/Five Capacity Steps for 25 Ton Units - R-454B

Each unit has a single refrigerant circuit with two (2) compressors manifolded together utilizing a passive oil system. Each unit has five capacity stages. Capacity modulation is accomplished by turning compressors on and off.

Leak Detection

The condenser section shall accept an isolated closure input suitable for customer connection to hard wire the leak detection system in the paired air handler or mechanical room.



Condenser Fans

Condenser fans shall be vertical discharge, direct drive fans, statically balanced, with aluminum blades and zinc plated steel hubs. Condenser fan motors shall be three-phase motors with permanently lubricated ball bearings, built in current and thermal overload protection and weather-tight slingers over motor bearings.

No System Control

Compressor run request is wired to the terminal strip inside the main control panel. Symbio 800 will start compressors based on compressor request once the Interlock has been proven. There is not a prescribed staging sequence. The standard No System Control unit is provided with Adaptive Control for longer life and compressor reliability.

Standard Ambient Control

Standard ambient operating range: 40°F to 125°F (In certain cases 115°F max ambient for Evaporator chiller)

Suction Service Valve

Option shall consist of a refrigerant shutoff valve to isolate the compressor for servicing.

Pressure Gauges

Pressure gauges shall be provided for monitoring suction and discharge pressure. One set shall be provided for each circuit. The gauges shall be ship-with for field installation.

Powered convenience outlet

Option shall include a factory installed 15 amp, 115 volt ground fault interrupter convenience outlet with a single point power entry from a factory mounted transformer. Option shall meet NEC 210-63 requirements. This outlet shall include a separate disconnect switch so that the outlet is powered when the unit disconnect switch is off. The unit mounted non-fused disconnect switch option with external handle is required when ordering the convenience outlet.

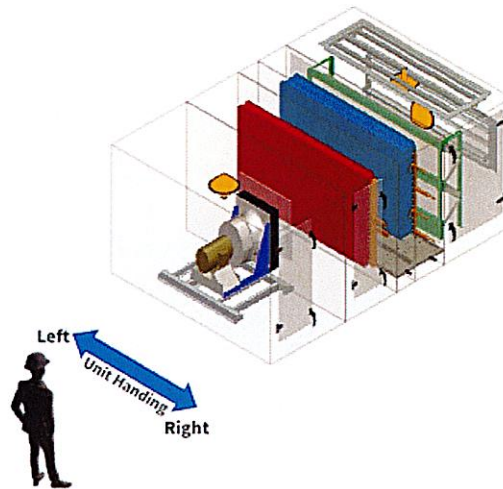
Trane Performance Climate Changer Air Handler

Unit Overview - AHU-2

Application	Unit Size	External Dimensions			Weight	
		Height	Width	Length	Installed	Rigging
Indoor unit	CSAA021	56.3 in	80.0 in	121.781 in	2486 lb	2458 lb
Quantity of Shipping Sections		Largest Ship Split			Heaviest Ship Split	Elevation
		Height	Width	Length		
4 piece(s)		56.3 in	80.0 in	37.7 in	1172 lb	0.00 ft
Supply Fan						
Airflow	9500 cfm	Total Static Pressure		3.420 in H2O		

Construction Features

Panel	2in. foam injected R-13 with thermal break
Panel Material	All unit inner panels - galvanized
Integral Base Frame	6in. integral base frame
Agency Approval	UL listed unit



Unit Electrical

Circuit	Voltage/Phase/Frequency	FLA	MCA	Max Fuse Size
Circuit number 1 Supply fan motor(s)	200-208/3/60	29.50 A	-	-

Note: No factory motor interface provided. MCA and MOP to be determined by the Electrical Contractor.

Unit Controls

Controller Type	No controller
-----------------	---------------

Warranty

Warranty section	Std. warranty only
------------------	--------------------

Air mixing section - Position: 1

Openings							
Face	Path	Type	Airflow	Face Velocity	Area	Pressure Drop	Hood
Back	Return	Parallel blade damper	9500 cfm	1100 ft/min	8.64 sq ft	0.131 in H2O	N/A
Top	Outside	Parallel blade damper	9500 cfm	1100 ft/min	8.64 sq ft	0.131 in H2O	N/A
Filter							
Type		Frame	MERV Rating	Quantity		Size	
Pleated media - MERV 8		2"	MERV 8	12.00		16in.x25in.	
Pressure Drop		Condition	Face Velocity	Airflow		Area	
0.568		Mid-life	285 ft/min	9500 cfm		33.33 sq ft	
Section Options							
Door Location			Right				

**Cooling coil section - Position: 2**

Coil Construction		Coil Performance	
Model	Refrigerant - 3/8" Unit Optimized, General (3F)	Capacity	
Rows	6	Total	315.61 MBh
Tube Diameter	3/8in. tube diameter (9.5 mm)	Sensible	229.28 MBh
Tube Matl/Wall Thickness	3/8" Internally enhanced copper tubes	Air	
Fin Spacing	136 Per Foot	Flow	9500 cfm
Fin Material	Aluminum fins	Entering Dry Bulb	76.70 F
Fin Type	Omega flo H (Hi efficient)	Entering Wet Bulb	64.80 F
Face Area	20.45 sq ft	Leaving Dry Bulb	54.70 F
Coil (top/single) H x L	43 in. (1092 mm) X 69" (1753 mm) finned length	Leaving Wet Bulb	53.70 F
Casing	Galvanized	Pressure Drop	0.836 in H2O
Rigging Weight	274.6 lb	Face Velocity	464 ft/min
Coil Section Options		Refrigerant	
Drain Pan	Galvanized	Type	R-454B
Drain Connection	Right	Liquid Temperature	115.00 F
Minimum Trap Height (L)	6.201 in	Suction Temperature	47.87 F
H Trap Dimension	3.467 in	Suction superheat	8.00 F
J Trap Dimension	1.734 in	Circuiting Type	Intertwined circuits
		Capacity Circuits	Full circuiting
		Number of Distributors	4
		AHRI 410 Classification	
		AHRI 410 Classification	Outside Scope of AHRI 410
		Data Generation Date	10/27/2025
		Trane Select Assist update number	3000

Note: Coil is NOT certified by AHRI. Coil is outside the scope of AHRI Standard 410.

No coil section - Position: 3

Coil Construction		Coil Performance	
Coil Section Options		Capacity	
Drain Pan	Galvanized	Air	
Drain Connection	Right	Flow	9500 cfm
Minimum Trap Height (L)	7.101 in		
H Trap Dimension	4.067 in		
J Trap Dimension	2.034 in		

Heating coil section - Position: 4

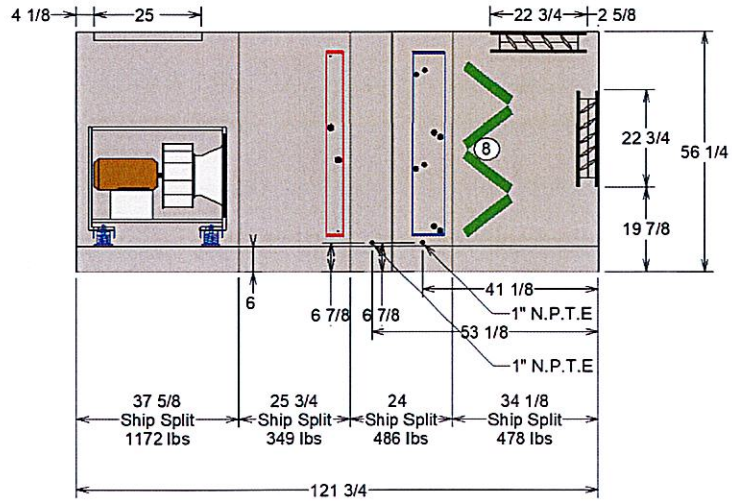
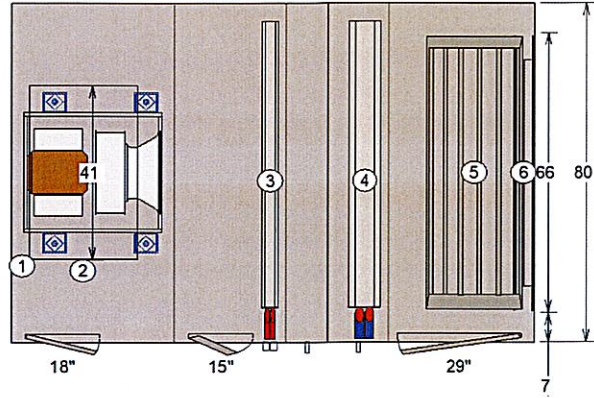
Coil Construction		Coil Performance	
Model	Hot water - 5/8" Shipping Coil, General (5W)	Capacity	
Rows	1	Total	280.35 MBh
Tube Diameter	5/8in. tube diameter (15.875 mm)	Air	
Coil Connection	Standard	Flow	9500 cfm
Tube Matl/Wall Thickness	.020" (0.508 mm) copper tubes	Entering Dry Bulb	55.00 F
Fin Spacing	80 Per Foot	Leaving Dry Bulb	82.21 F
Fin Material	Aluminum fins	Pressure Drop	0.063 in H2O
Fin Type	Prima flo E (energy efficient)	Face Velocity	479 ft/min
Face Area	19.83 sq ft	Fluid	
Coil (top/single) H x L	42 in. (1067 mm) X 68" (1727 mm) finned length	Flow	28.00 gpm
Casing	Galvanized	Entering	180.00 F
Turbulators	Not Included	Leaving	160.00 F
Rigging Weight	85.3 lb	Pressure Drop	1.88 ft fluid
Installed Weight	113.3 lb	Tube Velocity	2.21 ft/s
Coil Section Options		Reynolds Number	28871.14
Extended Drain and Vent	Holes only	Type	Water
Drain Pan Size	Small	Fouling Factor	0.00025 hr-sq ft-deg F/Btu
Door Location	Right	Volume	3.36 gal
		AHRI 410 Classification	
		AHRI 410 Classification	AHRI ACHC Certified
		Data Generation Date	10/27/2025

Standard Rating Conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org.**Supply fan section - Position: 5**

Fan Data				Motor Data			
Wheel Diameter/Type/Class	22.25in. dd plenum, full width, H press			Power / Fan	10 hp		
Fan Quantity	1			Voltage	200-208/3		
Discharge Location	Top front			Speed	1800		
Motor Location	Right side drive			Class	NEMA premium compliant ODP		
Blades	Improved sound(lowest overall,less spike			Efficiency	91.98 %		
Drive Service Factor	Direct drive			Part Load Efficiency	88.04 %		
Fan K-factor	2649.00			Fan electrical power (FEP)	6.87 kW		
FEI	1.22			Wire to air static efficiency	55.51 %		
Fan Performance				Note: Field provided VFD efficiency not included. DOL motor fan electrical power calculated in accordance with AHRI 430.			
Airflow	9500 cfm			Note: Certified airflow performance per AHRI 430			
Total Static Pressure	3.420 in H2O			Fan Section Options			
Total Brake Power	8.478 hp			Fan Wheel Balance	Inverter balance with shaft grounding		
Operating Speed	1963 rpm			Door Location	Right		
AMCA FEG	FEG75			Door Guard	Yes		
Bare fan peak total efficiency	68.60 %						
Unit Static Efficiency	60.42 %						
Motor Interface Options							
Selection Type	Field provided VFD						
Voltage	200-208/3						
VFD Frequency	67.00 Hz						
Fan Discharge Options							
Face	Type	Airflow	Face Velocity	Area	Pressure Drop	Exhaust Hood	Damper Torque Requirement
Top Face Feature	Sizeable rectangular opening	9500 cfm	1335 ft/min	7.12 sq ft	0.222 in H2O	N/A	N/A

Note: Certified by the AHRI Central Station Air-Handling Unit (AHU) Certification Program, based on AHRI Standard 430/431. AHRI certified units are subject to rigorous and continuous testing, have performance ratings independently measured and are third party verified. Certified units may be found in the AHRI Directory at www.ahridirectory.org.**Pressure Drop in (in w.g.)**

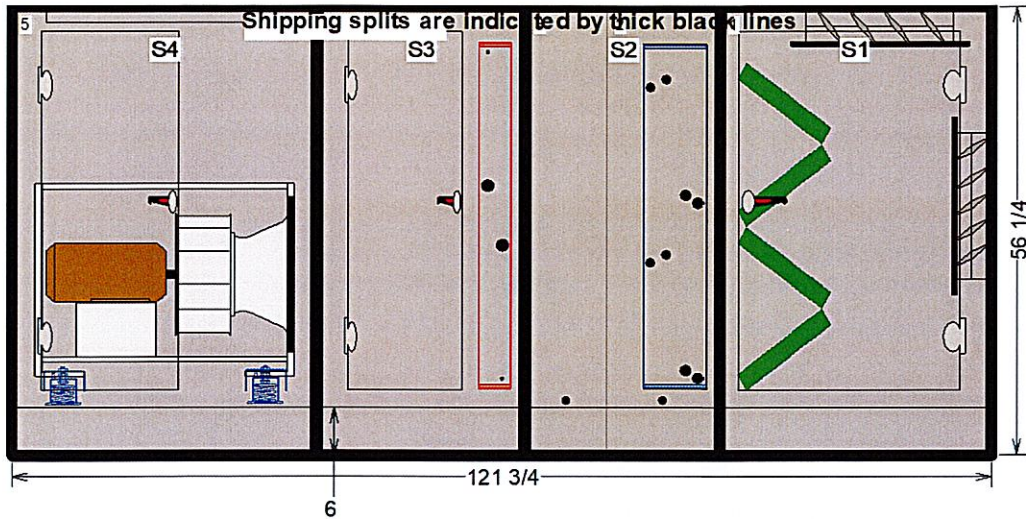
Supply fan	
Air mixing section	0.70
Coil section	0.84
Coil section	0.60
Coil section	0.06
Fan section	0.22
Internal Static Pressure	2.42
External Static Pressure	1.00
Total Static Pressure	3.42



For maneuvering purposes, include 1.125 inches to each ship split length for overlapping panel flange. Flange will not add to overall installed unit length shown

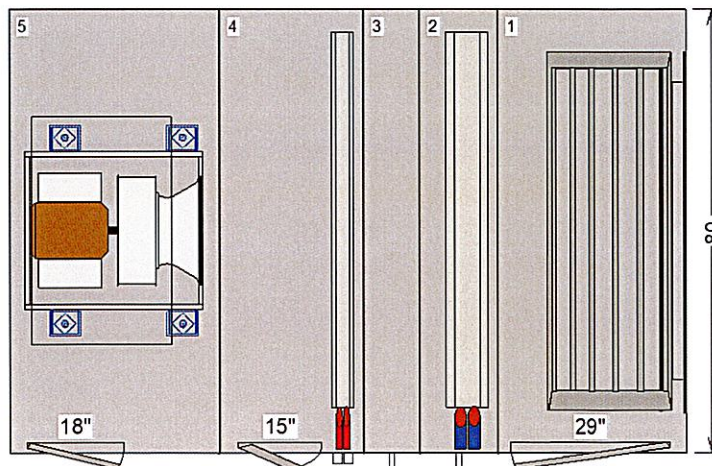
OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE

Unit size: 21	Job Name: Berlin-Peck Memorial Library HVAC Replacement 2.3.	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	9500 cfm	Proposal Number:
Integral base frame: 6in. integral base frame	Sales Office:	Tags: AHU-2
Paint:		2457.7 lb / 2485.7 lb



For maneuvering purposes, include 1.125 inches to each ship split length for overlapping panel flange. Flange will not add to overall installed unit length shown.

Pos #	Module	Length	Weight
1	Air mixing section	34 1/8	478.42
2	Coil section	14 1/8	395.95
3	Coil section	10	90.28
4	Coil section	25 3/4	348.53
5	Fan section	37 5/8	1172.50
Installed Unit Weight 2485.68 lbs			



Basic Overall Plan View: Top - Measurements in inches

OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 21

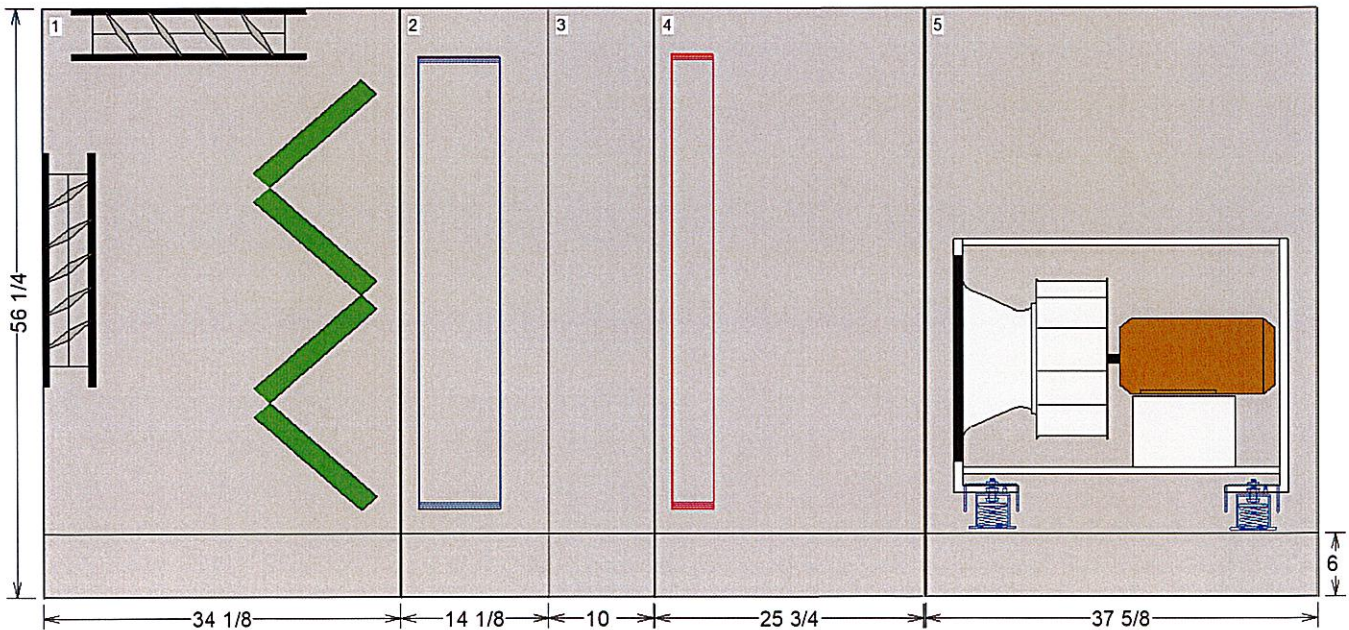
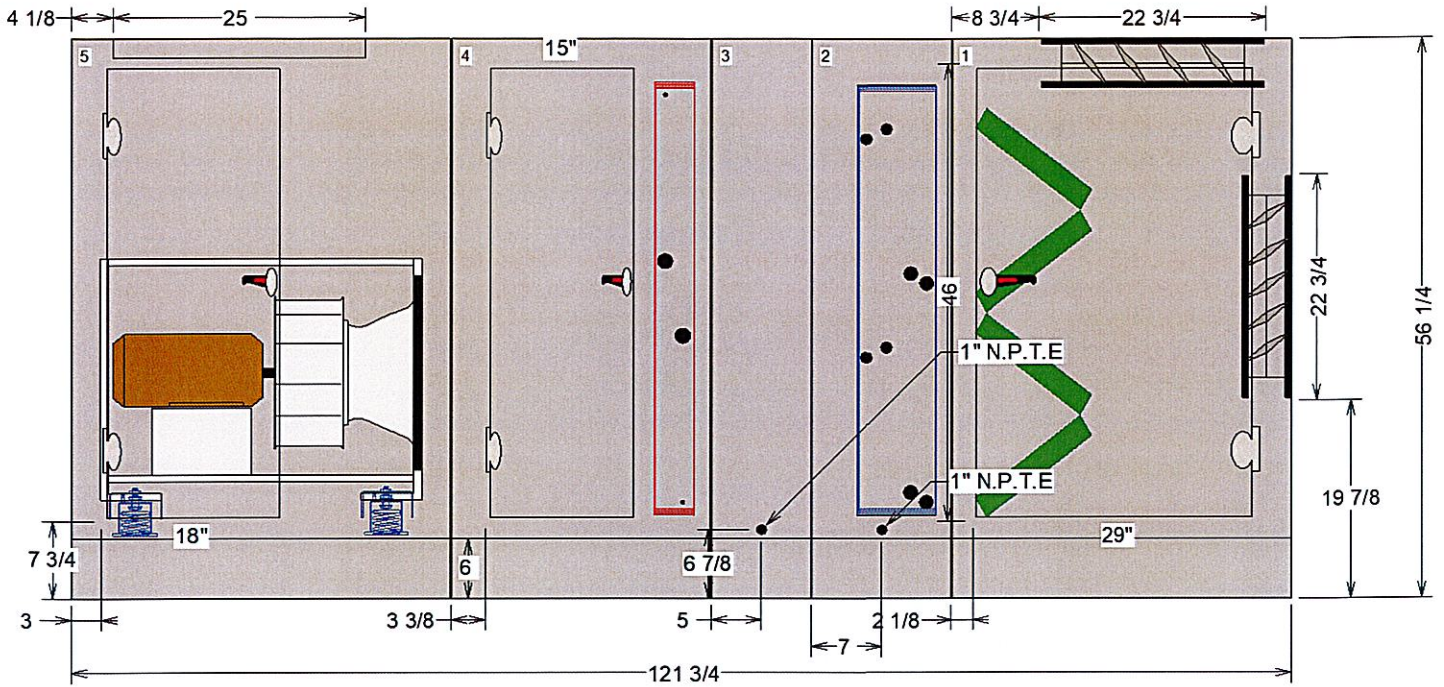
Job Name: Berlin-Peck
Memorial Library HVAC
Replacement 2.3.

Unit Casing: 2in Double Wall Foam

Product group: Indoor unit

9500 cfm

Proposal Number:



Detailed Elevation View: Left - Measurements in inches

OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 21

Job Name: Berlin-Peck
Memorial Library HVAC
Replacement 2.3.

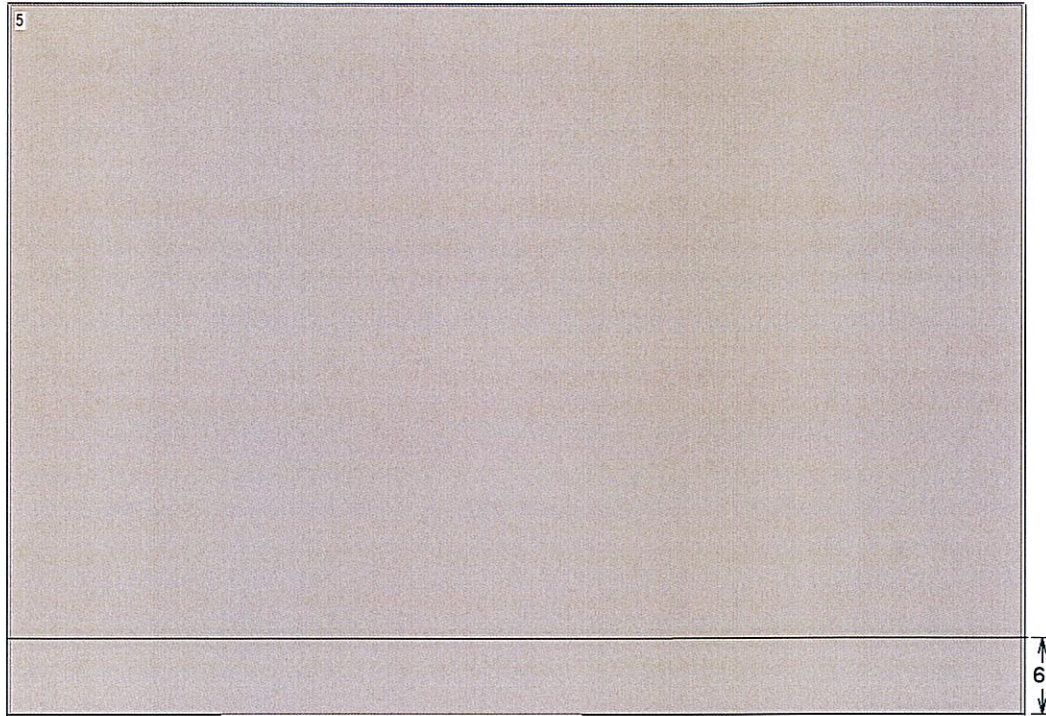
Unit Casing: 2in Double Wall Foam

Product group: Indoor unit

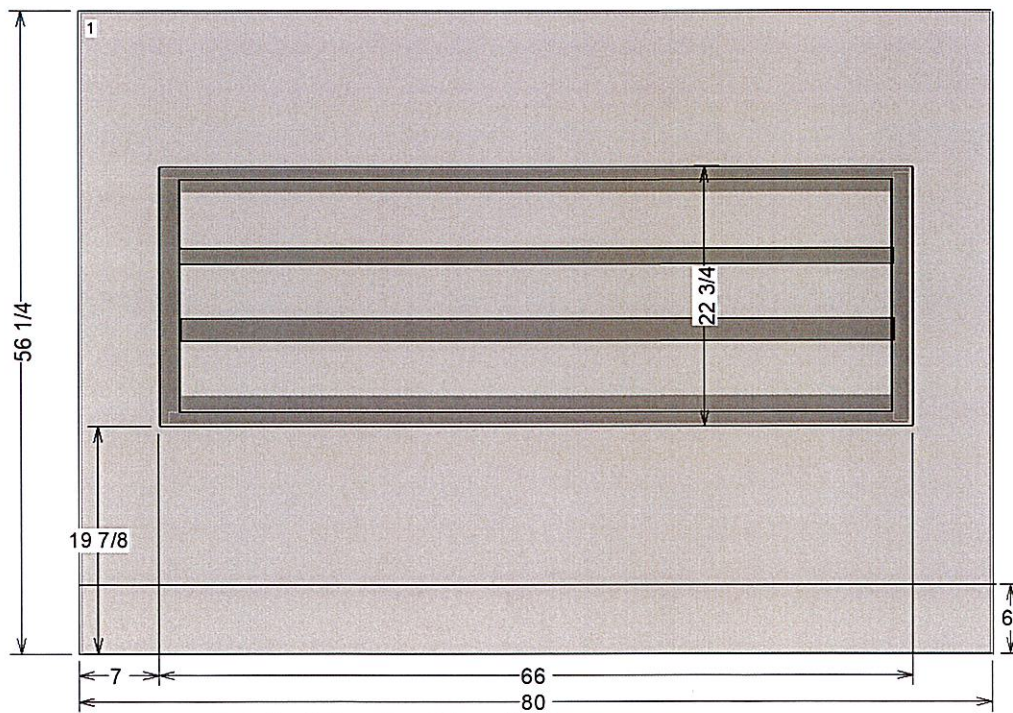
19500 cfm

Proposal Number:





Detailed Elevation View: Front - Measurements in inches



Detailed Elevation View: Back - Measurements in inches

OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 21

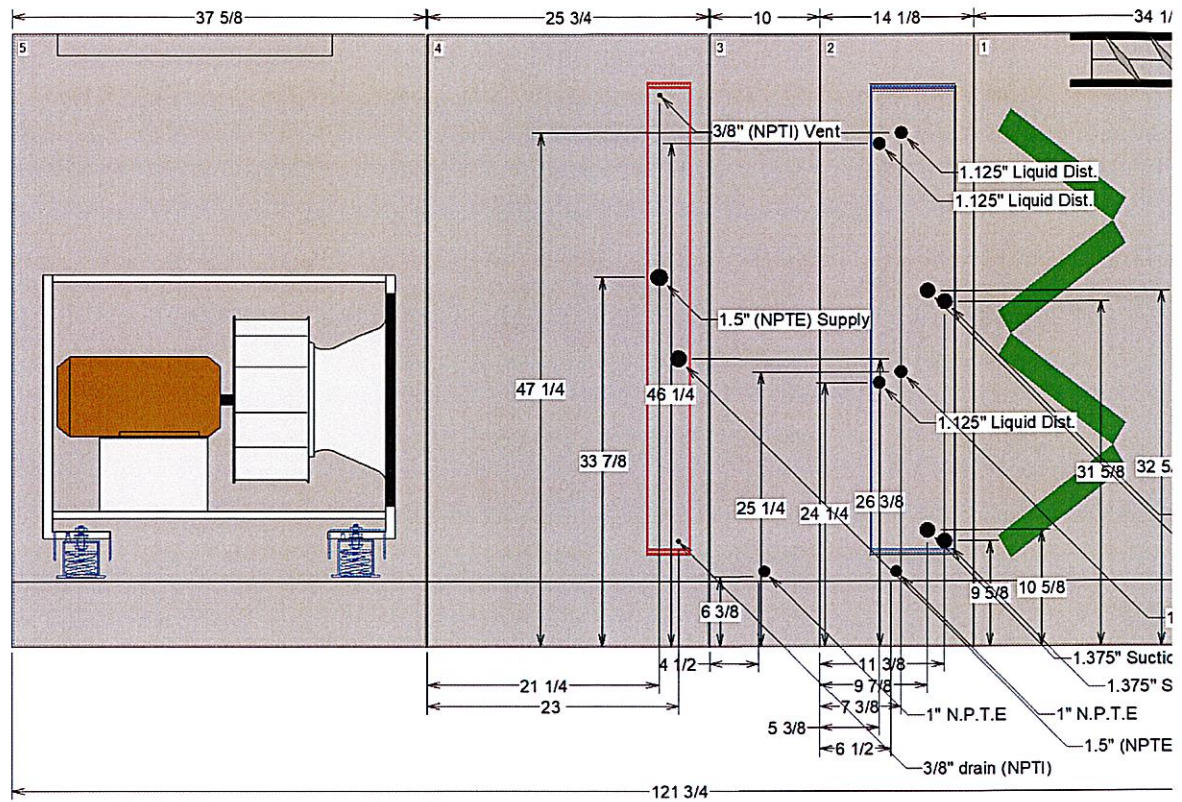
Job Name: Berlin-Peck
Memorial Library HVAC
Replacement 2.3.

Unit Casing: 2in Double Wall Foam

Product group: Indoor unit

9500 cfm

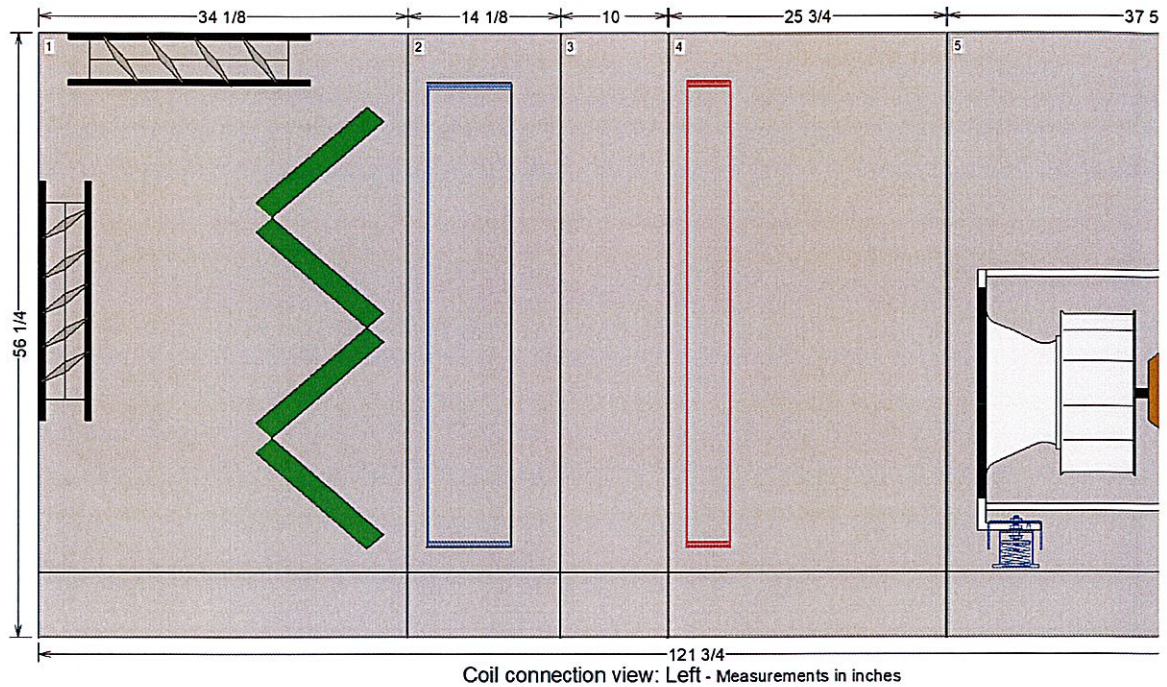
Proposal Number:



NPTI : National Pipe Thread Internal Connection
NPTE : National Pipe Thread External Connection

OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE

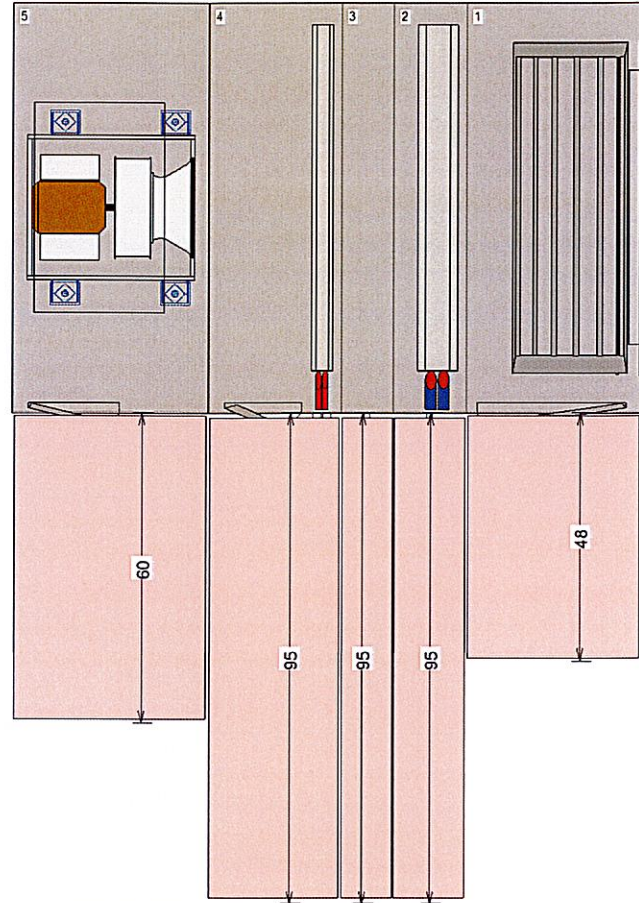
Unit size: 21	Job Name: Berlin-Peck Memorial Library HVAC Replacement 2.3.	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	9500 cfm	Proposal Number:
Integral base frame: 6in. integral base frame	Sales Office:	Tags: AHU-2
Paint:		2457.7 lb / 2485.7 lb



NPTI : National Pipe Thread Internal Connection
NPTE : National Pipe Thread External Connection

OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE

Unit size: 21	Job Name: Berlin-Peck Memorial Library HVAC Replacement 2.3.	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	9500 cfm	Proposal Number:
Integral base frame: 6in. integral base frame	Sales Office:	Tags: AHU-2
Paint:		2457.7 lb / 2485.7 lb

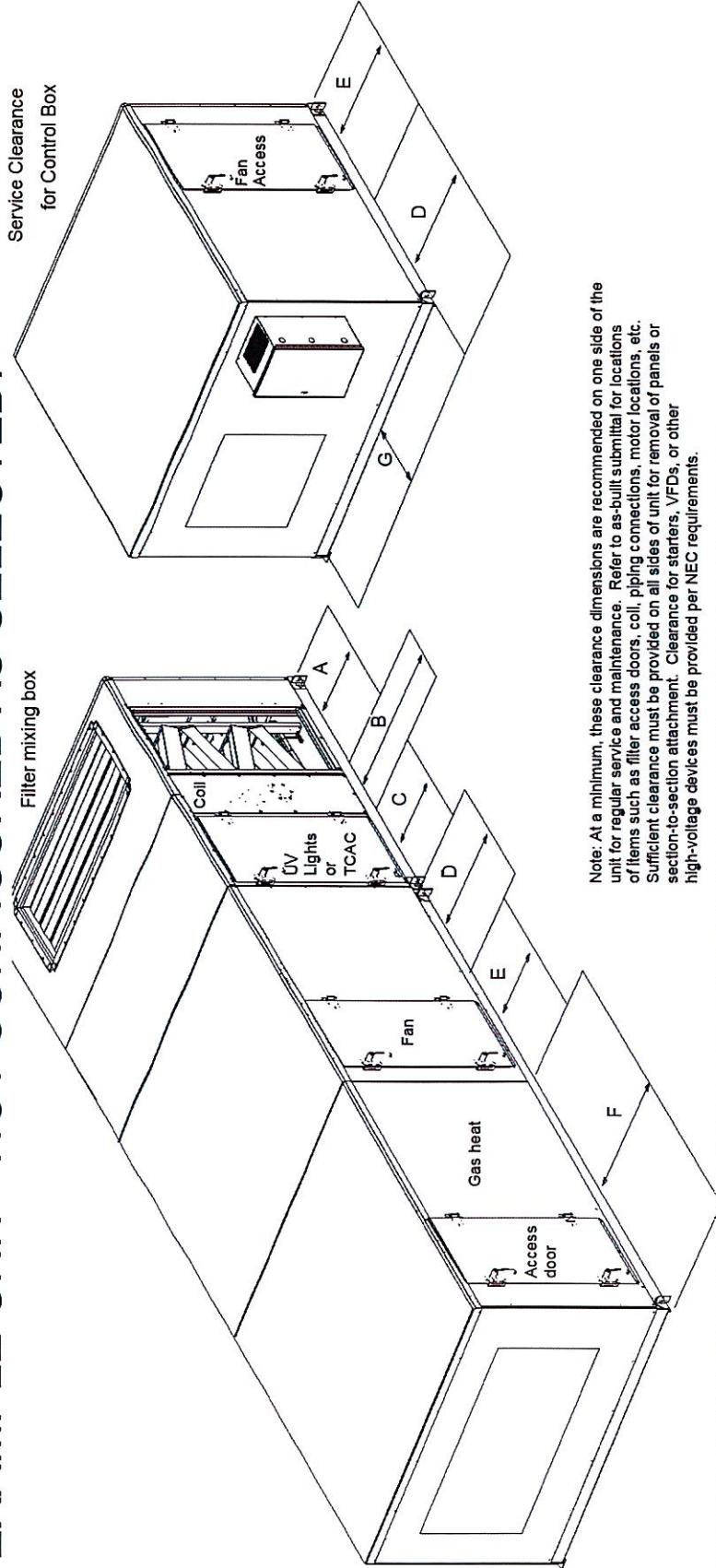


Basic Service Clearance - Plan - Measurements in inches

OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE

Unit size: 21	Job Name: Berlin-Peck Memorial Library HVAC Replacement 2.3.	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	9500 cfm	Proposal Number:
Integral base frame: 6in. integral base frame	Sales Office:	Tags: AHU-2
Paint:		2457.7 lb / 2485.7 lb

EXAMPLE UNIT - NOT CONFIGURED AS SELECTED.



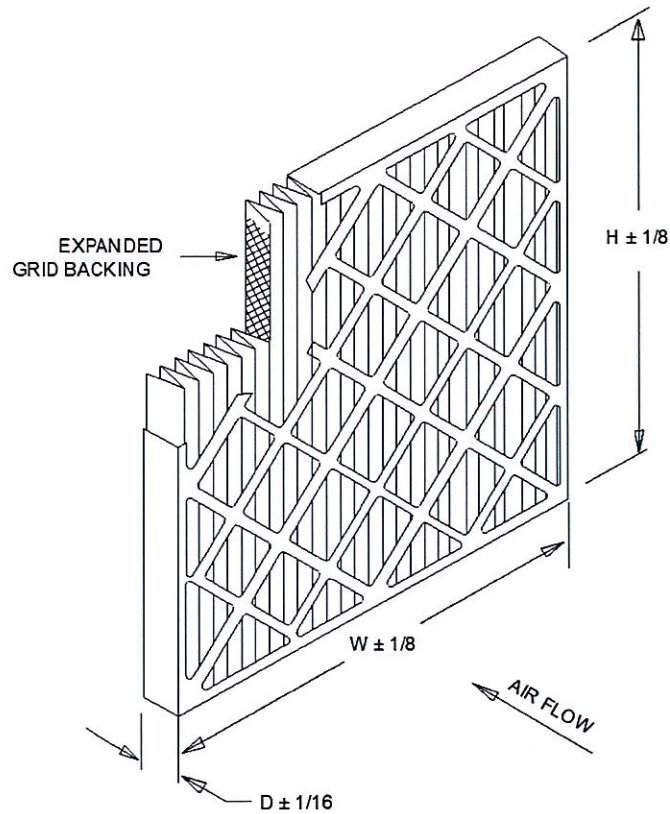
Note: At a minimum, these clearance dimensions are recommended on one side of the unit for regular service and maintenance. Refer to as-built submittal for locations of items such as filter access doors, coll. piping connections, motor locations, etc. Sufficient clearance must be provided on all sides of unit for removal of panels or section-to-section attachment. Clearance for starters, VFDs, or other high-voltage devices must be provided per NEC requirements.

Component	3	4	6	8	10	12	14	17	21	25	30	35	40	50	57	66	80	100	120
A (filter)	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	52	56	58	58
B (coil, humidifier)	48	59	59	66	77	82	87	87	95	95	109	115	128	141	141	156	156	170	197
B (staggered coil)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	67	67	76	80	88	96	96	105	105	113	129
C (UV Lights)	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	52	56	58	58
C (TCAC)	43	59	59	63	75	81	83	83	58	58	83	75	83	83	83	83	83	75	83
D (External Starter, VFD, LV box or Overload box)	61	61	61	61	61	61	61	61	64	64	64	64	64	64	64	64	64	64	64
D (Internal Starter or VFD)	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
E (fan)	48	48	48	48	51	54	58	61	60	66	66	66	70	77	77	93	93	101	101
F (Gas Heat Ext Vestible)	N/A	N/A	89	90	108	100	100	105	115	115	118	136	140	156	156	170	179	180	N/A
F (Gas Heat Int Vestible)	N/A	N/A	56	63	74	79	84	84	92	92	106	112	125	138	138	153	153	167	194

Component	All Sizes
G (Side mount LV box)	36
G (Front mount LV box)	13

Base Detail





STANDARD CONSTRUCTION

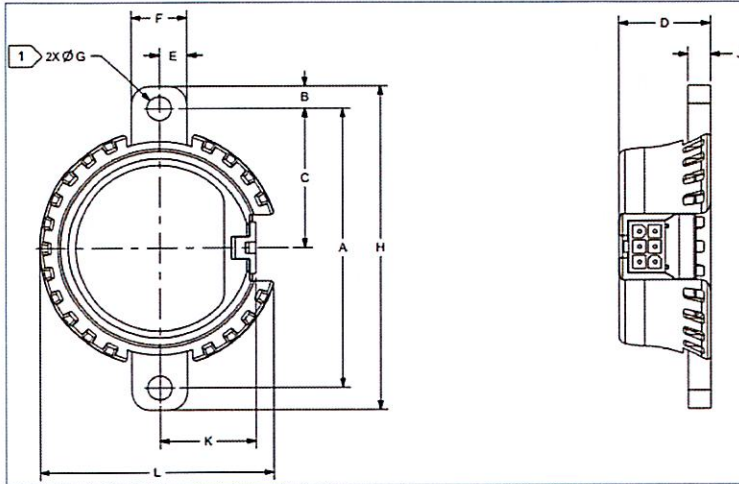
1. 100 % Synthetic White Un-Dyed Media
2. 10.0 Pleats Per Foot
3. Expanded Metal Pleat Supports
4. Moisture Resistant Beverage Board Frame
5. Double Wall Frame

NOTES

1. MERV 8-A Per ASHRAE 52.2-2007 Appendix J.
2. Final Resistance: 1/0" W.G.
3. Rated Velocity: 500 FPM
4. Class 2 Filter Per U.L. Standard 900
5. Maximum Operating Temperature: 225 DEG. F

MODEL NUMBER	NOMINAL SIZE IN. W X H X D	ACTUAL SIZE IN. W X H X D	RATED AIR FLOW CFM	INITIAL RESISTANCE IN. W.G.	MEDIA AREA SQ. FT.
MX40-STD2-217	10 X 20 X 2	9-1/2 X 19-1/2 X 1-3/4	700	0.29	4.7
MX40-STD2-220	12 X 20 X 2	11-1/2 X 19-1/2 X 1-3/4	840	0.29	5.5
MX40-STD2-210	12 X 24 X 2	11-3/8 X 23-3/8 X 1-3/4	1000	0.29	6.2
MX40-STD2-239	14 X 20 X 2	13-1/2 X 19-1/2 X 1-3/4	980	0.29	5.7
MX40-2TD2-241	14 X 25 X 2	13-1/2 X 24-1/2 X 1-3/4	1220	0.29	7.1
MX40-STD2-245	15 X 20 X 2	14-1/2 X 19-1/2 X 1-3/4	1050	0.29	6.2
MX40-STD2-201	16 X 20 X 2	15-1/2 X 19-1/2 X 1-3/4	1120	0.29	6.7
MX40-STD2-216	16 X 24 X 2	15-3/8 X 23-3/8 X 1-3/4	1340	0.29	8.0
MX40-STD2-202	16 X 24 X 2	15-1/2 X 24-1/2 X 1-3/4	1400	0.29	8.0
MX40-STD2-280	15 X 20 X 2	17-1/2 X 19-1/2 X 1-3/4	1250	0.29	7.8
MX40-STD2-212	18 X 24 X 2	17-3/8 X 23-3/8 X 1-3/4	1500	0.29	9.3
MX40-STD2-285	18 X 25 X 2	17-1/2 X 24-1/2 X 1-3/4	1570	0.29	9.7
MX40-STD2-203	20 X 20 X 2	19-1/2 X 19-1/2 X 1-3/4	1400	0.29	8.3
MX40-STD2-211	20 X 24 X 2	19-3/8 X 23-3/8 X 1-3/4	1670	0.29	9.9
MX40-STD2-204	20 X 25 X 2	19-1/2 X 24-1/2 X 1-3/4	1750	0.29	10.3
MX40-STD2-205	24 X 24 X 2	23-3/8 X 23-3/8 X 1-3/4	2000	0.29	11.7
MX40-STD2-225	25 X 25 X 2	24-1/2 X 24-1/2 X 1-3/4	2170	0.29	13.6

R454B Leak Detection Sensor



A	B	C	D	E	F	G	H	J	K	L
2.99	0.24	1.5	0.97	0.3	0.59	0.25	3.47	0.24	1.02	2.48

1. Mounting: #10-32 x 1/2" Phillips head screw, Max Torque 6.2 in-lbs

Output Mode	Relay Specification	MODBus Specification
Supply Voltage	24 VAC +/- 10% and 24VDC (8-32VDC)	5VDC +/-10% 24 VAC +/- 10% and 24VDC (8-32VDC)
Current Requirements	300mA max	300mA max
Digital Output	-	RS485, 120 Ohm Termination included in sensor

Measuring Range	0 - 25% LFL
Detection Threshold Limit	15% LFL
Operating Temperature	-40F to 175F (-40C to 80C)
Intermittent Temperature	-40F to 203F (-40C to 95C)
Storage Temperature	-67F to 203F (-55C to 95C)
Operating Pressure	700 to 1200 mbar
Operating Humidity	0-100% RH with Condensation
Enclosure Protection (EN 60529)	IP54
Connector Protection (EN 60529)	IP56 and IP57
Flame Rating	UL 94 V-0

Accuracy at Ambient 15C to 25C, 30-70%	±2.5% LFL
Accuracy across Operating Range	±5.0% LFL
Response Time	< 15 s
Sensor Recovery Time	< 5 min in clean air
Lifetime	Min 15-yr Lifetime
Mitigation Recovery Timer	0-6000s
Alarm Response	Relay Open - LED Red - Alarm Flag
Alarm Reset	2.5% LFL Hysteresis

Materials - Enclosure	PA66 25%GF
Materials - Electrical Connection	Nylon
Net Weight	0.04-0.06kg



GENERAL

Per ASHRAE 62.1 recommendation, indoor air handling units will be wrapped to protect unit from in-transit rain and debris.

Installing contractor is responsible for long term storage in accordance with the Installation, Operation, and Maintenance manual (CLCH-SVX07*-EN).

Unit shall be UL and C-UL Listed.

Supply fans within the scope of AHRI Standard 430 are "Certified by the AHRI Central Station Air-Handling Unit (AHU) Certification Program, based on AHRI Standard 430/431. AHRI certified units are subject to rigorous and continuous testing, have performance ratings independently measured and are third-party verified. Certified units may be found in the AHRI Directory at www.ahridirectory.org".

Unit sound performance data shall be reported as sound power. Trane, in providing this program and data, does not certify or warrant NC levels. These levels are affected by factors specific to each application and/or installation and therefore unable to be predicted or certified by Trane. Refer to product data for specific fan footnote references.

Refer to product data for AHRI certification status. Propylene glycol and calcium chloride, or mixtures thereof, are outside the scope of AHRI Standard 410 and, therefore, do not require AHRI rating or certification. For coils within the scope of AHRI Standard 410 cooling coil performance is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org. Heating performance for heat pump or condenser mode is not certified.

Unit Construction

All unit panels shall be 2" solid, double-wall construction to facilitate cleaning of unit interior. Unit panels shall be provided with a mid-span, no-through-metal, internal thermal break. Casing thermal performance shall be such that under 55°F supply air temperature and design conditions on the exterior of the unit of 81°F dry bulb and 73°F wet bulb, condensation shall not form on the casing exterior. Casing construction will comply with NFPA 90A.

All exterior and interior indoor AHU panels will be made of galvanized steel.

Unit Paint

Unit to ship unpainted from factory. If required, unit to be painted by 3rd party finisher, or by painting contractor at job site.

Casing Deflection

The casing shall not exceed 0.0042 inch deflection per inch of panel span at 1.00 times design static pressure. Maximum design static shall not exceed +8 inches w.g. in all positive pressure sections and -8 inches w.g. in all negative pressure sections.

Floor Construction

The unit floor shall be of sufficient strength to support a 300.0 lb load during maintenance activities and shall deflect no more than 0.0042 inch per inch of panel span.

Unit Base

Manufacturer to provide a full perimeter integral base frame for either ceiling suspension of units or to support and raise all sections of the unit for proper trapping. Indoor unit base frame will either be bolted construction or welded construction. All outdoor unit base frames shall be welded construction. For indoor units, refer to schedule for base height and construction type. Contractor will be responsible for providing a housekeeping pad when unit base frame is not of sufficient height to properly trap unit. Unit base frames not constructed of galvanized steel shall be chemically cleaned and coated with both



Insulation

Panel insulation shall provide a minimum thermal resistance (R) value of 13 ft²-h-°F/Btu throughout the entire unit. Insulation shall completely fill the panel cavities in all directions so that no voids exist and settling of insulation is prevented.

Drain Pan

In sections provided with a drain pan, the drain pan shall be designed in accordance with ASHRAE 62.1. To address indoor air quality (IAQ) the drain pan shall be sloped in two planes promoting positive drainage to eliminate stagnant water conditions. Drain pan shall be insulated, and of double wall construction. The outlet shall be the lowest point on the pan, and shall be of sufficient diameter to preclude drain pan overflow under normally expected operating conditions. All drain pans connections shall have a threaded connection, extending a minimum of 2-1/2" beyond the unit base, and shall be made from the same material as the drain pan. Drain pan located under a cooling coil shall be of sufficient size to collect all condensate produced from the coil.

Refer to Product Data for specific information on which sections are supplied with a drain pan, the drain pan material and connection location.

Access Door Construction

Access doors shall be 2" double wall construction. Interior and exterior door panels shall be of the same construction as the interior and exterior wall panels respectively. All doors shall be provided with a thermal break construction of door panel and door frame. Gasketing shall be provided around the full perimeter of the doors to prevent air leakage. Surface mounted handles shall be provided to allow quick access to the interior of the functional section and to prevent through cabinet penetrations that could likely weaken the casing leakage and thermal performance. Handle hardware shall be designed to prevent unintended closure. Outswing doors shall have easily removable hinges and handles that can be relocated to change the door swing if needed. Door hinges shall be made of galvanized steel.

All doors shall be a minimum of 60" high when sufficient height is available or the maximum height allowed by the unit height.

Door handles shall be provided for each latching point of the door necessary to maintain the specified air leakage integrity of the unit. An optional shatterproof window shall be provided in access doors where indicated on the plans. Window shall either be single pane, or thermal dual pane, as defined on schedule. Window shall be capable of withstanding unit operating pressures and shall be safe for viewing UV-C lamps.

Refer to Product Data for specific information on which sections are supplied with an access door, the door location, a single handle and a window.

Lifting Instructions

The air handling units must be rigged, lifted, and installed in strict accordance with the Installation, Operation, and Maintenance manual (CLCH-SVX07G-EN). The units are also to be installed in strict accordance with the specifications. Units may be shipped fully assembled or disassembled to the minimum functional section size in accordance with shipping and job site requirements.

Indoor units shall be shipped on an integral base frame (variable from the standard 2.5" to 8" height) for the purpose of mounting units to a housekeeping pad and providing additional height to properly trap condensate from the unit. The integral base frame may be used for ceiling suspension, external isolation, or as a housekeeping pad. Indoor sizes 3 to 30 will also be shipped with a shipping skid designed for forklift transport. Refer to the unit As-Built or Product Data section of the submittal for the base frame height of each unit.

All units will be shipped with an integral base frame designed with the necessary number of lift points for safe installation. All lifting lugs are to be utilized during lift. The lift points will be designed to accept standard rigging devices and be removable after installation.

MIXING SECTION

A mixing section shall be provided to support the damper assembly for outdoor, return, and/or exhaust air.



Dampers

Dampers shall modulate the volume of outdoor, return, or exhaust air. The dampers shall be of double-skin airfoil design with metal, compressible jamb seals and flexible blade-edge seals on all blades. The blades shall rotate on stainless-steel sleeve bearings. The dampers shall be rated for a maximum leakage rate of 3 cfm/ft² at 1 in. w.g. complying with ASHRAE 90.1 maximum damper leakage. All leakage testing and pressure ratings shall be based on AMCA Standard 500-D. Dampers may be arranged in a parallel or opposed-blade configuration.

Title 24

The following specifications apply only to units with outside air and return air dampers, with actuators. The 5 year warranty applies only to these items.

This unit contains Economizer that meets or exceeds all mandatory requirements prescribed by Title 24, including but not limited to:

- 5 yr parts only warranty
- Successfully tested to 60,000 Actuations
- Less than 10 cfm/sq.ft. of damper leakage at 1" WG per AMCA 500L

Filters

Mixing sections shall be provided with a filter rack as indicated in the Product Data and As-Built sections of the submittal.

2-inch pleated media filters made with 100% synthetic fibers that are continuously laminated to a supported steel-wire grid with water repellent adhesive shall be provided. Filters shall be capable of operating up to 625 fpm face velocity without loss of filter efficiency and holding capacity. The filters shall have a MERV 8 rating when tested in accordance with the ANSI/ASHRAE Standard 52.2.

COIL SECTION WITH FACTORY INSTALLED COIL

The coil section shall be provided complete with coil and coil holding frame. The coils shall be installed such that headers and return bends are enclosed by unit casings. If two or more cooling coils are stacked in the unit, an intermediate drain pan shall be installed between each coil and be of the same material as the primary drain pan. Like the primary drain pan, the intermediate drain pan shall be designed being of sufficient size to collect all condensation produced from the coil and sloped to promote positive drainage to eliminate stagnant water conditions. The intermediate pan shall begin at the leading face of the water-producing device and be of sufficient length extending downstream to prevent condensate from passing through the air stream of the lower coil. Intermediate drain pan shall include downspouts to direct condensate to the primary drain pan. The outlet shall be located at the lowest point of the pan and shall be sufficient diameter to preclude drain pan overflow under any normally expected operating condition.

COIL SECTION WITHOUT FACTORY INSTALLED COIL

The coil section shall be provided complete with coil holding frame. Blockoffs around perimeter of field installed coil shall be responsibility of the installing contractor. Contractor shall field install coil(s) such that headers and return bends are enclosed by unit casings. If two or more cooling coils are stacked in the unit, contractor shall fabricate an intermediate drain pan which shall be installed between each coil and be of the same material as the primary drain pan. Like the primary drain pan, the intermediate drain pan shall be designed being of sufficient size to collect all condensation produced from the coil and sloped to promote positive drainage to eliminate stagnant water conditions. The intermediate pan shall begin at the leading face of the water-producing device and be of sufficient length extending downstream to prevent condensate from passing through the air stream of the lower coil. Intermediate drain pan shall include downspouts to direct condensate to the primary drain pan. The outlet shall be located at the lowest point of the pan and shall be sufficient diameter to preclude drain pan overflow under any normally expected operating condition.



Coil with Inspection

The coil section complete with a double-wall, shall include a removable door downstream of the coil for inspection, cleaning, and maintenance. Interior and exterior door panels shall be of the same construction as the interior and exterior wall panels, respectively. All doors shall be provided with a thermal break construction of door panel and door frame.

Casing penetrations supplied for hydronic drain and vents. Piping contractor shall provide extended piping.

No casing penetrations supplied for hydronic drain and vents. If required, piping contractor will need to drill drain and vent penetrations using factory located features provided in coil panel.

Refrigerant Cooling Coils

The coils shall have aluminum fins and seamless copper tubes. The fins shall have collars drawn, belled, and firmly bonded to tubes by mechanical expansion of the tubes. Suction and liquid line connections shall extend to the unit exterior. The coil casing may be galvanized or stainless steel. Refer to the Product Data section of the submittal for the coil casing material.

The coils shall be proof-tested to 715 psig and leak-tested to 650 psig air pressure under water or equivalent gas leak test. After testing, the inside of the coils shall be dried, all connections shall be sealed, and the coil shall be shipped with a charge of dry air or nitrogen.

Suction headers and liquid connections shall be constructed of copper tubing with connections penetrating unit casings to permit sweat connections to refrigerant lines. The coils shall have equalizing vertical distributors sized according to the capacities of the coils. Refer to the Product Data section of the submittals for AHRI certification status.

Tubes are 3/8" [9.5 mm] OD 0.0132" [0.335 mm] thick copper.

R454B Leak Detection Sensor

A factory-installed A2L class gas sensor designed for R454B refrigerant detection will be installed in the DX coil sections selected with R454B refrigerant. It utilizes thermal conductivity technology for quick and accurate leak detection and features automated self-calibration, self-diagnostics, immunity to poisoning and a 15 year life. The sensor comes set with a 15% LFL alarm threshold with +/-2.5% accuracy at 68F (20C) and +/-5% accuracy across the rest of the operating range of -40F - 175F (-40C - 80C).

Water Coils (UP, WP, UW, UU, UA, 3W, 3U, W, 5W, 5A, WD, 5D, D1, D2, P, or TT)

The coils shall have aluminum fins and seamless copper tubes. Copper fins may be applied to coils with 5/8-inch tubes. Fins shall have collars drawn, belled, and firmly bonded to tubes by mechanical expansion of the tubes. The coil casing may be galvanized or stainless steel. Refer to the Product Data section of the submittal for the coil casing material.

The coils shall be proof-tested to 300 psig and leak-tested under water to 200 psig. Refer to the Product Data section of the submittals for AHRI certification status.

Coil connections are constructed of cast iron with female connections, steel block with female connections or steel pipe with male connections. Type P or TT coil connections do not extend out of unit casing. All other water coil types have connections that extend out beyond unit casing. Headers on downstream coil bank of staggered coil sections do not extend beyond the unit casing and must be completed by the on-site piping contractor.

Tubes are 5/8" [16 mm] OD 0.020" [0.508 mm] thick copper.



DIRECT-DRIVE PLENUM FAN SECTION

The fan type shall be provided as required for stable operation and optimum energy efficiency. The fan shall be a single-width, single-inlet, multiblade-type direct-drive plenum fan. Motor bearing life of the direct-drive plenum fan shall be not less than L-10 250,000 hrs. *Refer to the Product Data section for fan quantity and number of blades selected within each unit.* Central Station Air Handling Unit Supply Fans are "Certified by the AHRI Central Station Air-Handling Unit (AHU) Certification Program, based on AHRI Standard 430/431. AHRI certified units are subject to rigorous and continuous testing, have performance ratings independently measured and are third-party verified. Certified units may be found in the AHRI Directory at www.ahrirectory.org" Central Station Air Handling Unit Supply Fans shall be tested and rated in-accordance with AHRI Standard 260 for sound performance.

Fans that are selected with inverter balancing shall first be dynamically balanced at design RPM. The fans then will be checked in the factory from 25% to 100% of design RPM to insure they are operating within vibration tolerance specifications, and that there are no resonant frequency issues throughout this operating range. Inverter balancing that requires lockout frequencies inputted into a variable frequency drive to in order to bypass resonant frequencies shall not be acceptable. If supplied in this manner by the unit manufacturer, the contractor will be responsible for rebalancing in the field after unit installation. Fans selected with inverter balancing shall have a maintenance free grounding assembly installed on the fan motor to discharge both static and induced shaft currents to ground.

On units supplied with plenum or motorized impeller fans, door guard(s) shall be supplied on the access door(s) to the fan and those downstream access door(s) where unintended access to the plenum or motorized impeller fan could occur. Door guard is intended to deter unauthorized entry and incidental contact with rotating components. *Refer to the Product Data section for fans with access door guard(s).*

Motor Frame

The motor shall be mounted integral to the isolated fan assembly and furnished by the unit manufacturer. The motor is mounted inside the unit casing on an adjustable base to permit adjustment of drive belt tension (not applicable for direct drive plenum fans). The motor shall meet or exceed all NEMA Standards Publication MG 1 requirements and comply with NEMA Premium efficiency levels when applicable except for fractional horsepower motors which are not covered by the NEMA classification. The motor shall be T-frame, squirrel cage with size, type, and electrical characteristics as shown on the equipment schedule. *Refer to the Product Data section for selected fan motors within each unit.*

Two-Inch Spring Isolators

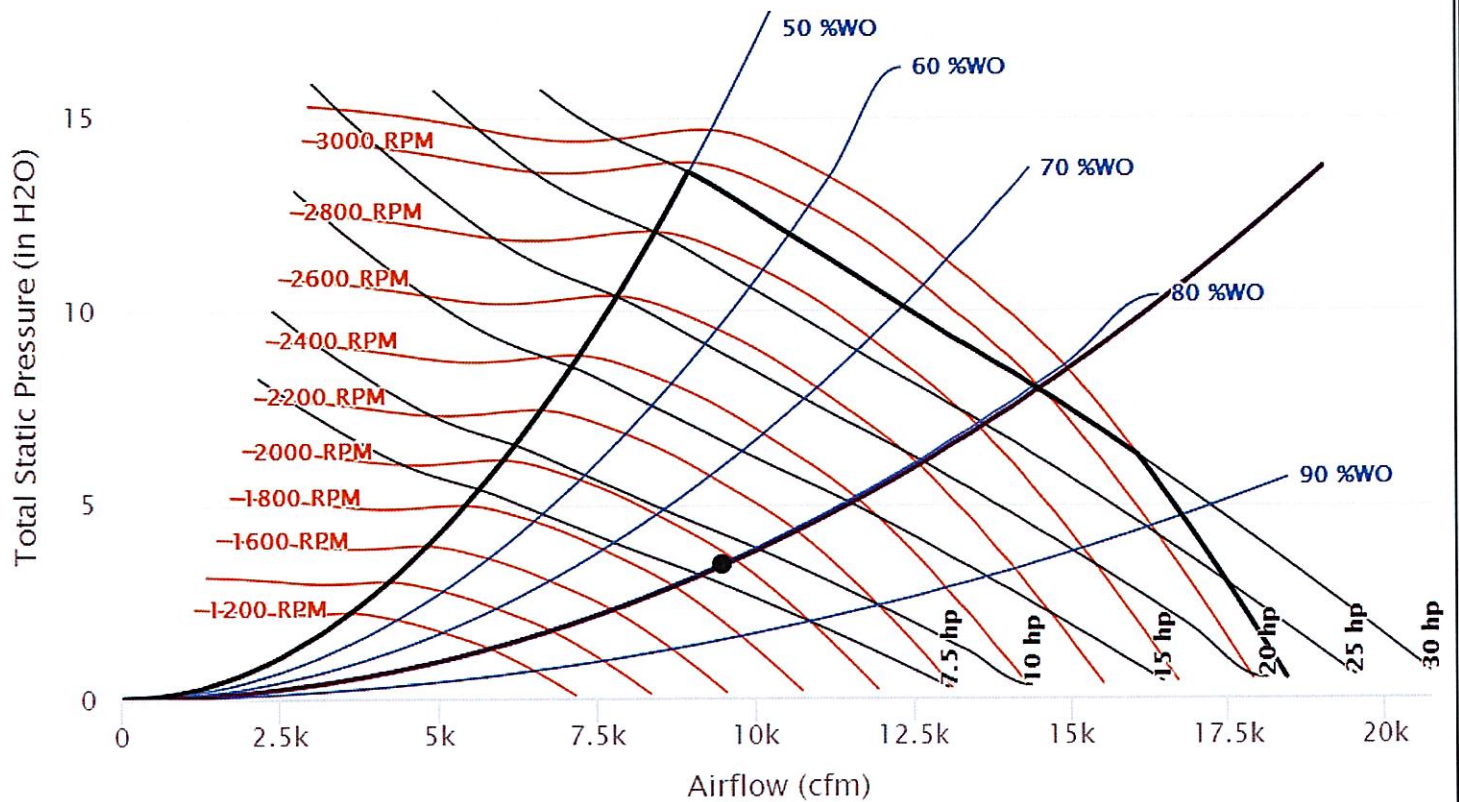
Direct-drive fan and motor assemblies shall be internally isolated from the unit casing with 2-inch (50.8 mm) deflection spring isolators. The isolation system shall be designed to resist loads produced by external forces, such as earthquakes, and conform to the current IBC seismic requirements.

Fan Details

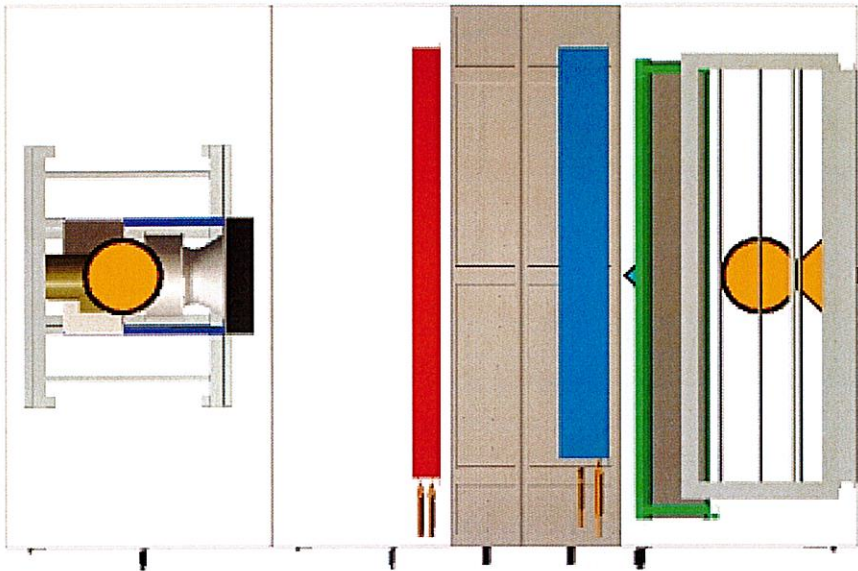
Unit Size	22UF	Operating Brake Power	8.478 hp
Motor Frequency	67.00 Hz	Altitude	0.00 ft
Operating Airflow	9,500 cfm	Design Temp.	70.00 F
Operating Static Pressure	3.420 in H2O	Efficiency	60.42 %
Operating RPM	1,963 rpm		

AHU-2 – Supply – Single Fan

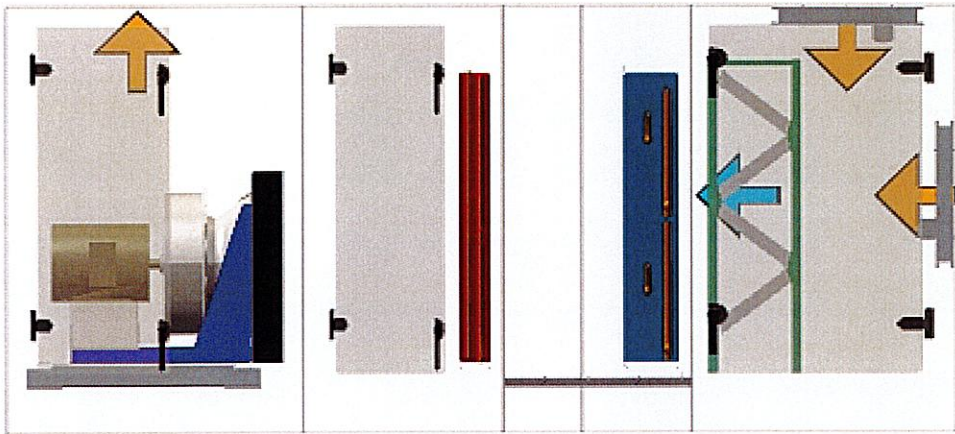
Trane DDP 22in. 100% Width Class 3 1x1 Array 12 blades



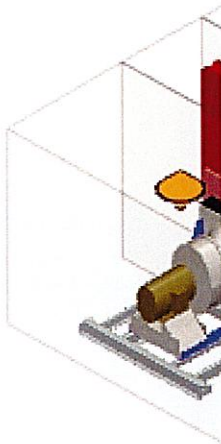
Module
Air mixing s
Cooling coi
No coil #3
Heating coi
Supply fan



Width:
80.0 in



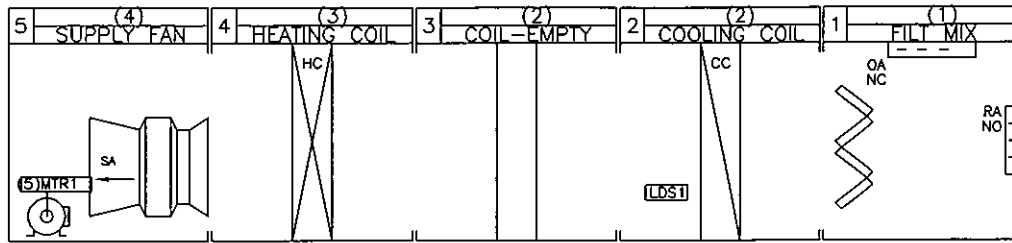
Height:
56.3 in



Length: 121.8 in

Unit size: 21	Job Name: Berlin-Peck Memorial Library HVAC Replacement 2.3.	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	Actual airflow: 9500	Proposal Number:
Integral base frame: 6in. integral base frame	Sales Office:	Tags: AHU-2
Paint:		Rigging weight: 2457.7249 / Installed weight: 2485.679

WIRING DETAIL 1



LEGEND DETAIL 1

POS#	BUILD GROUP	DESCRIPTION	PT	LABEL	PWR HR-WIRE	SIGNAL HR-WIRE	XFMR	POWER VA
2	2	Leak Detection Sensor R454B		LDS1				



TOWN OF BERLIN

CERTIFICATION OF SUFFICIENCY OF FUNDS

(Sec. 6-10-2 of the Town Charter)

DATE 17-Nov-25

Purchase of Replacement HVAC Equipment AHU & CU 2 for the Children's Section of the Library

Requested by: Facilities

QUANTITY	DESCRIPTION	PRICE PER UNIT	\$ AMOUNT
1.00	Replacement HVAC Equipment- Library	\$107,045.00	\$107,045.00
TOTAL			\$107,045.00

Account No. 500.20.2038.0.54000.00382- HVAC- Library / Community Center

Budgeted Amount.....	\$1,000,000.00	Available balance.....	\$1,000,000.00
Encumbrances to Date.....	\$0.00	Amount Needed for This Package.....	\$107,045.00
Expenditures to Date.....	\$0.00	Available Balance After Purchase.....	\$892,955.00

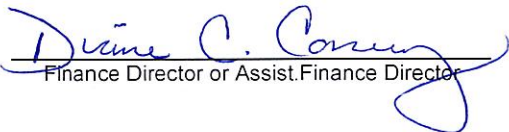
Is a budget change needed? ☐ Yes ☒ No

If so, has a budget change been prepared? ☐ Yes ☐ No

☒ I certify that there ARE sufficient funds available to support the purchase of the items described above.

or:

☐ I certify that a budget change in the amount of \$_____ must be processed concurrently with this certification to support this commitment.


Finance Director or Assist.Finance Director

Finance Director or Assist.Finance Director

Agenda Item No. 154
Request for Town Council Action

TO: The Honorable Mayor and Town Council
FROM: Ryan Curley, Town Manager *RC*
DATE: November 19, 2025
SUBJECT: HB 7287 “local option” expansion of existing totally disabled veterans

SUMMARY:

This act allows local legislative bodies to expand on previous legislation that was passed for the October 1, 2024 Grand List pertaining to those individuals who were deemed 100% permanent and totally disabled through the Veterans Administration.

This act will provide an exemption to two (2) acres of land, spouse who survives a veteran who passed away prior to October 1, 2024 to receive such exemption, veterans that are unemployable, and finally review using median assessed values.

FUNDING

None

ACTION NEEDED:

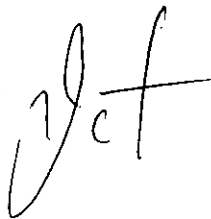
Move to send to Ordinance Committee for review and recommendations of HB 7287.

ATTACHMENTS:

- Attached HB 7287

PREPARED BY:

Joseph Ferraro, Assessor

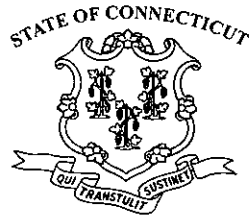
A handwritten signature in black ink, appearing to be 'JCF', written over the printed name of Joseph Ferraro.

Name	Building @70%	Land Size Land Value @70%	Land value @ 70%	
	\$ 160,600.00		0.36 \$	90,800.00
	\$ 185,200.00		1.19 \$	130,900.00
	\$ 124,000.00		0.43 \$	87,400.00
	\$ 206,100.00		1.17 \$	91,800.00
	\$ 104,000.00		0.4 \$	74,500.00
	\$ 77,300.00		0.76 \$	83,600.00
	\$ 72,700.00		0.26 \$	87,200.00
	\$ 67,300.00		0.35 \$	90,700.00
	\$ 263,100.00		1.02 \$	114,700.00
	\$ 179,300.00		0.6 \$	94,200.00
	\$ 104,200.00		0.23 \$	83,100.00
	\$ 98,900.00		0.31 \$	88,100.00
	\$ 123,900.00		1.01 \$	96,600.00
	\$ 258,200.00		2.1 \$	101,300.00
	\$ 167,900.00		0.36 \$	90,800.00
	\$ 151,500.00		0.63 \$	95,100.00
	\$ 211,500.00		0.67 \$	95,800.00
	\$ 113,100.00		0.26 \$	97,600.00
	\$ 90,300.00		0.21 \$	73,900.00
	\$ 156,200.00		0.3 \$	87,900.00
	\$ 119,600.00		0.26 \$	99,000.00
	\$ 88,300.00		0.35 \$	77,700.00
	\$ 218,000.00		0.43 \$	90,200.00
	\$ 240,300.00		0.46 \$	90,700.00
	\$ 194,700.00		0 \$	-
	\$ 113,800.00		1.32 \$	99,300.00
	\$ 147,100.00		0.79 \$	103,000.00
	\$ 111,800.00		0.48 \$	97,300.00
	\$ 228,100.00		0 \$	-
	\$ 332,800.00		4 \$	110,400.00
	\$ 206,100.00		1.17 \$	91,800.00
	\$ 196,500.00		1.52 \$	114,000.00
	\$ 221,100.00		0.53 \$	82,000.00
	\$ 113,700.00		0.4 \$	89,700.00
Total	\$ 5,447,200.00	Total \$	3,001,100.00	@70% Land Assesmnt

Condo no land value

Condo no land value

	Assessed Values	Projected Cost to Town at 30.65 mill rate
BUILDING	5,447,200.00	\$ 166,956.68
LAND	3,001,100.00	\$ 91,983.72
TOTAL	8,448,300.00	\$ 258,940.40



House Bill No. 7287

Public Act No. 25-168

**AN ACT CONCERNING THE STATE BUDGET FOR THE BIENNIUM
ENDING JUNE 30, 2027, AND MAKING APPROPRIATIONS
THEREFOR, AND PROVISIONS RELATED TO REVENUE AND
OTHER ITEMS IMPLEMENTING THE STATE BUDGET.**

Be it enacted by the Senate and House of Representatives in General
Assembly convened:

Section 1. (*Effective July 1, 2025*) The following sums are appropriated
from the GENERAL FUND for the annual periods indicated for the
purposes described.

	2025-2026	2026-2027
LEGISLATIVE		
LEGISLATIVE MANAGEMENT		
Personal Services	60,694,802	64,296,079
Other Expenses	22,660,836	24,954,131
Equipment	3,295,000	3,295,000
Flag Restoration	65,000	65,000
Minor Capital Improvements	4,000,000	4,000,000
Interim Salary/Caucus Offices	750,556	591,748
Connecticut Academy of Science and Engineering	219,000	226,000
Old State House	850,000	900,000
Translators	150,000	150,000
Wall of Fame	10,000	10,000

House Bill No. 7287

intention to foreclose the lien if the amounts set forth pursuant to subdivisions (1) and (2) of this subsection are not paid to the assignee on or before sixty days after the date on which the notice is provided; (4) the assignee's contact information, including, but not limited to, the assignee's name, mailing address, telephone number and electronic mail address, if any; and (5) instructions concerning the acceptable means of making a payment on the amounts owed to the assignee as set forth pursuant to subdivisions (1) and (2) of this subsection. Any notice required under this subsection shall be effective upon the date such notice is provided.

(h) When providing the written notice required under subsection (g) of this section, the assignee may rely on the last recorded security interest of record in identifying the name and mailing address of the holder of such interest, unless the holder of such interest is the plaintiff in an action pending in Superior Court to enforce such interest, in which case the assignee shall provide the written notice to the attorney appearing on behalf of the plaintiff.

(i) Each aspect of a foreclosure, sale or other disposition under this section, including, but not limited to, the costs, [attorney] attorney's fees, method, advertising, time, date, place and terms, shall be commercially reasonable, and, for actions commenced on or after July 1, 2026, such attorney's fees shall not exceed fifteen per cent of the amount of any judgment that is entered.

Sec. 233. Subdivision (83) of section 12-81 of the general statutes, as amended by section 4 of public act 25-2, is repealed and the following is substituted in lieu thereof (*Effective October 1, 2025, and applicable to assessment years commencing on or after October 1, 2025*):

(83) (A) (i) [A] That fractional share of a dwelling, including a condominium, as defined in section 47-68a, [and] a unit in a common interest community, as defined in section 47-202, [that is (I) owned by]

House Bill No. 7287

and a mobile manufactured home, as defined in section 12-63a, (I) that belongs to or is held in trust for any resident of this state who has served in the Army, Navy, Marine Corps, Coast Guard, Air Force or Space Force of the United States and has been determined by the United States Department of Veterans Affairs to be permanently and totally disabled based on a service-connected disability rating of one hundred per cent, or that is possessed by such a resident as a tenant for life or tenant for a term of years liable for property tax under section 12-48, and (II) that is occupied by such resident as the resident's primary residence, or (ii) lacking such residence, one motor vehicle [owned by] that belongs to or is held in trust for such resident and is garaged in this state. As used in this subdivision, "dwelling" does not include any portion of the unit or structure used by such resident for commercial purposes or from which such resident derives any rental income.

(B) If such resident lacks such dwelling or motor vehicle in such resident's name, the dwelling or motor vehicle, as applicable, belonging to or held in trust for such resident's spouse, or possessed by such resident's spouse as a tenant for life or tenant for a term of years liable for property tax under section 12-48, who is domiciled with such resident, shall be so exempt. When any resident entitled to an exemption under the provisions of this subdivision has died, the dwelling or motor vehicle, as applicable, belonging to [,] or held in trust for [,] such deceased resident's surviving spouse, or possessed by such deceased resident's spouse as a tenant for life or tenant for a term of years liable for property tax under section 12-48, while such spouse remains a widow or widower, or belonging to or held in trust for such deceased resident's minor children during their minority, or both, while they are residents of this state, shall be so exempt as that to which such resident was or would have been entitled at the time of such resident's death.

(C) No individual entitled to the exemption under this subdivision and under one or more of subdivisions (19), (22), (23), (25) and (26) of

House Bill No. 7287

this section or sections 240 and 241 of this act shall receive more than one exemption.

(D) (i) No individual shall receive any exemption to which such individual is entitled under this subdivision until such individual has complied with section 12-95, and has submitted proof of such individual's determination by the United States Department of Veterans Affairs, to the assessor of the town in which the exemption is sought. If there is no change to an individual's determination, such proof shall not be required for any assessment year following that for which the exemption under this subdivision is granted initially. If the United States Department of Veterans Affairs modifies an individual's determination to other than permanently and totally disabled based on a service-connected disability rating of one hundred per cent, such modification shall be deemed a waiver of the right to the exemption under this subdivision. Any such individual whose determination was modified to other than permanently and totally disabled based on a service-connected disability rating of one hundred per cent may seek the exemption under subdivision (20) of this section.

(ii) Any individual who has been unable to submit evidence of such determination by the United States Department of Veterans Affairs in the manner required by this subdivision, or who has failed to submit such evidence as provided in section 12-95, may, when such individual obtains such evidence, make application to the tax collector not later than one year after such individual obtains such proof or not later than one year after the expiration of the time limited in section 12-95, as the case may be, for abatement in case the tax has not been paid, or for refund in case the whole tax or part of the tax has been paid. Such abatement or refund may be granted retroactively to include the assessment day next succeeding the date as of which such individual was entitled to such determination by the United States Department of Veterans Affairs, but in no case shall any abatement or refund be made

House Bill No. 7287

for a period greater than three years.

(iii) The tax collector shall, after examination of such application, refer the same, with the tax collector's recommendations thereon, to the board of selectmen of a town or to the corresponding authority of any other municipality, and shall certify to the amount of abatement or refund to which the applicant is entitled. Upon receipt of such application and certification, the selectmen or other duly constituted authority shall, in case the tax has not been paid, issue a certificate of abatement or, in case the whole tax or part of the tax has been paid, draw an order upon the treasurer in favor of such applicant for such amount, without interest. Any action so taken by such selectmen or other authority shall be a matter of record and the tax collector shall be notified in writing of such action.

(E) For assessment years commencing on and after October 1, 2025, any municipality may, by vote of its legislative body or, in a municipality where the legislative body is a town meeting, by vote of the board of selectmen, provide that, for any individual receiving the exemption under this subdivision for a dwelling described in subparagraph (A)(i) of this subdivision, not more than two acres of the lot upon which such dwelling sits shall be exempt from taxation.

(F) For assessment years commencing on and after October 1, 2025, any municipality may, by vote of its legislative body or, in a municipality where the legislative body is a town meeting, by vote of the board of selectmen, provide that the surviving spouse of any resident of this state who (i) had served in the Army, Navy, Marine Corps, Coast Guard, Air Force or Space Force of the United States, (ii) had been determined by the United States Department of Veterans Affairs to be permanently and totally disabled based on a service-connected disability rating of one hundred per cent, and (iii) died prior to October 1, 2024, but after a date to be determined by such legislative body or board of selectmen, as applicable, shall, while such spouse

House Bill No. 7287

remains a widow or widower, be entitled to the exemption or exemptions under this subdivision.

(G) Notwithstanding the provisions of this section, for assessment years commencing on and after October 1, 2025, any municipality may, by vote of its legislative body or, in a municipality where the legislative body is a town meeting, by vote of the board of selectmen, limit the total amount of the exemption or exemptions granted under this subdivision to the median assessed valuation of residential real property in such municipality.

Sec. 234. Subdivision (20) of section 12-81 of the general statutes, as amended by section 5 of public act 25-2, is repealed and the following is substituted in lieu thereof (*Effective October 1, 2025, and applicable to assessment years commencing on or after October 1, 2025*):

(20) (A) Subject to the provisions hereinafter stated, property not exceeding three thousand five hundred dollars in amount shall be exempt from taxation, which property belongs to, or is held in trust for, any resident of this state who has served, or is serving, in the Army, Navy, Marine Corps, Coast Guard, Air Force or Space Force of the United States and (i) has a disability rating as determined by the United States Department of Veterans Affairs amounting to ten per cent or more of total disability, other than a determination of (I) being permanently and totally disabled based on a service-connected disability rating of one hundred per cent, or (II) in any municipality providing the exemption under section 240 of this act, having a service-connected total disability based on individual unemployability, provided such exemption shall be two thousand dollars in any case in which such rating is between ten per cent and twenty-five per cent; two thousand five hundred dollars in any case in which such rating is more than twenty-five per cent but not more than fifty per cent; three thousand dollars in any case in which such rating is more than fifty per cent but not more than seventy-five per cent; and three thousand five

House Bill No. 7287

hundred dollars in any case in which such resident has attained sixty-five years of age or such rating is more than seventy-five per cent; or (ii) is receiving a pension, annuity or compensation from the United States because of the loss in service of a leg or arm or that which is considered by the rules of the United States Pension Office or the Bureau of War Risk Insurance the equivalent of such loss.

(B) If such veteran lacks such amount of property in such veteran's name, so much of the property belonging to, or held in trust for, such veteran's spouse, who is domiciled with such veteran, as is necessary to equal such amount shall also be so exempt. When any veteran entitled to an exemption under the provisions of this subdivision has died, property belonging to, or held in trust for, such deceased veteran's surviving spouse, while such spouse remains a widow or widower, or belonging to or held in trust for such deceased veteran's minor children during their minority, or both, while they are residents of this state, shall be exempt in the same aggregate amount as that to which the disabled veteran was or would have been entitled at the time of such veteran's death.

(C) No individual entitled to the exemption under this subdivision and under one or more of subdivisions (19), (22), (23), (25) and (26) of this section or sections 240 and 241 of this act shall receive more than one exemption.

(D) (i) No individual shall receive any exemption to which such individual is entitled under this subdivision until such individual has complied with section 12-95 and has submitted proof of such individual's disability rating, as determined by the United States Department of Veterans Affairs, to the assessor of the town in which the exemption is sought. If there is no change to an individual's disability rating, such proof shall not be required for any assessment year following that for which the exemption under this subdivision is granted initially. If the United States Department of Veterans Affairs

House Bill No. 7287

modifies a veteran's disability rating, such modification shall be deemed a waiver of the right to the exemption under this subdivision until proof of disability rating is submitted to the assessor and the right to such exemption is established as required initially, except that (I) if such disability rating is modified to a determination that such veteran is permanently and totally disabled based on a service-connected disability rating of one hundred per cent, such veteran may seek the exemption under subdivision (83) of this section, or (II) if such disability rating is modified to a determination that such veteran has a service-connected total disability based on individual unemployability and if such veteran resides in a municipality that provides the exemption under section 240 of this act, such veteran may seek the exemption under section 240 of this act.

(ii) Any individual who has been unable to submit evidence of disability rating in the manner required by this subdivision, or who has failed to submit such evidence as provided in section 12-95, may, when such individual obtains such evidence, make application to the tax collector not later than one year after such individual obtains such proof or not later than one year after the expiration of the time limited in section 12-95, as the case may be, for abatement in case the tax has not been paid, or for refund in case the whole tax has been paid, of such part or the whole of such tax as represents the service exemption. Such abatement or refund may be granted retroactively to include the assessment day next succeeding the date as of which such person was entitled to such disability rating as determined by the United States Department of Veterans Affairs, but in no case shall any abatement or refund be made for a period greater than three years.

(iii) The tax collector shall, after examination of such application, refer the same, with the tax collector's recommendations thereon, to the board of selectmen of a town or to the corresponding authority of any other municipality, and shall certify to the amount of abatement or refund to

House Bill No. 7287

which the applicant is entitled. Upon receipt of such application and certification, the selectmen or other duly constituted authority shall, in case the tax has not been paid, issue a certificate of abatement or, in case the whole tax has been paid, draw an order upon the treasurer in favor of such applicant for the amount, without interest, that represents the service exemption. Any action so taken by such selectmen or other authority shall be a matter of record and the tax collector shall be notified in writing of such action;

Sec. 235. Section 12-93 of the general statutes is repealed and the following is substituted in lieu thereof (*Effective October 1, 2025, and applicable to assessment years commencing on or after October 1, 2025*):

Any person who claims an exemption from taxation under the provisions of section 12-81 or 12-82 by reason of service in the Army, Navy, Marine Corps, Coast Guard, Air Force or Space Force of the United States shall give notice to the town clerk of the town in which he resides that he is entitled to such exemption. Any person who has performed such service may establish his right to such exemption by exhibiting to the town clerk an honorable discharge, or a certified copy thereof, from such service or, in the absence of such discharge or copy, by appearing before the assessors for an examination under oath, supported by two affidavits of disinterested persons, showing that the claimant is a veteran, as defined in section 27-103, or is serving or, if he is unable to appear by reason of such service, he may establish such right, until such time as he appears personally and exhibits his discharge or copy, by forwarding to the town clerk annually a written statement, signed by the commanding officer of his unit, ship or station or by some other appropriate officer, or where such claimant is currently serving in an active theater of war or hostilities, by the presentation of a notarized statement of a parent, guardian, spouse or legal representative of such claimant, stating that he is personally serving and is unable to appear in person by reason of such service, which statement shall be received

House Bill No. 7287

before the assessment day of the town wherein the exemption is claimed. In the case of any person claiming exemption under subdivision (83) of section 12-81, such claimant shall annually, not later than January first, submit such claim to the assessors for approval, on an application form prepared for such purpose by the Secretary of the Office of Policy and Management and to be used for assessment years commencing on and after October 1, 2025, which submission shall include (1) all documentation necessary to demonstrate that the resident described in subparagraph (A) of subdivision (83) of section 12-81 has been determined by the United States Department of Veterans Affairs to be permanently and totally disabled based on a service-connected disability rating of one hundred per cent, and (2) an attestation that such claimant has not submitted, and will not submit, a claim for the exemption under subdivision (83) of section 12-81 in another town. The assessors shall report to the town clerk all claims so established. Any person claiming exemption by reason of the service of a relative as a soldier, sailor, marine or member of the Coast Guard, Air Force or Space Force may establish his right thereto by at least two affidavits of disinterested persons showing the service of such relative, his honorable discharge or death in service, and the relationship of the claimant to him; and the assessors may further require such person to be examined by them under oath concerning such facts. The town clerk of the town where the honorable discharge or certified copy thereof and each affidavit is originally presented for record shall record such discharge or certified copy or affidavits thereof in full and shall list the names of such claimants and such service shall be performed by the town clerk without remuneration therefor. Thereafter if any person entitled to such exemption changes his legal residence, the town clerk in the town of former residence and in which such honorable discharge or certified copy thereof or any such affidavit in respect to such person was originally presented for record shall, upon request and payment of a fee by such person to said town of former residence in an amount determined by the town treasurer as necessary to cover the cost of such

House Bill No. 7287

procedure, prepare and mail to the town in which such person resides, a copy of the record of such discharge or certified copy thereof or affidavits, or he may establish his right to such exemption in the town in which he resides by exhibiting to the town clerk thereof the original discharge or a certified copy thereof or such affidavits. Said clerk shall take therefrom sufficient data to satisfy the exemption requirements of the general statutes and shall record the same and shall note the town where the original complete recording of discharge papers was made. No board of assessors or board of assessment appeals or other official shall allow any such claim for exemption unless evidence as herein specified has been filed in the office of the town clerk, provided, if any claim for exemption has been allowed by any board of assessors or board of assessment appeals prior to July 1, 1923, the provisions of this section shall not apply to such claim. Each claim granted prior to July 1, 1923, shall be recorded with those presented subsequent thereto, and a list of such names, alphabetically arranged, shall be furnished the assessors by the town clerk.

Sec. 236. Section 12-94 of the general statutes is repealed and the following is substituted in lieu thereof (*Effective October 1, 2025, and applicable to assessment years commencing on or after October 1, 2025*):

The exemptions granted in sections 12-81 and 12-82 to soldiers, sailors, marines and members of the Coast Guard, Air Force and Space Force, and their spouses, widows, widowers, fathers and mothers, and to blind or totally disabled persons and their spouses shall first be made in the town in which the person entitled thereto resides, and any person asking such exemption in any other town shall annually make oath before, or forward his or her affidavit to, the assessors of such town, deposing that such exemptions, except the exemption provided in subdivision (55) of section 12-81, if allowed, will not, together with any other exemptions granted under sections 12-81 and 12-82, exceed the amount of exemption thereby allowed to such person. Such affidavit

House Bill No. 7287

shall be filed with the assessors within the period the assessors have to complete their duties in the town where the exemption is claimed. The assessors of each town shall annually make a certified list of all persons who are found to be entitled to exemption under the provisions of said sections, which list shall be filed in the town clerk's office, and shall be prima facie evidence that the persons whose names appear thereon and who are not required by law to give annual proof, except as provided in section 12-93, for persons claiming exemption under subdivision (83) of section 12-81, are entitled to such exemption as long as they continue to reside in such town; but such assessors may, at any time, require any such person to appear before them for the purpose of furnishing [additional] evidence that demonstrates such person's entitlement to such exemption, provided [,] (1) any person who by reason of such person's disability is unable to so appear may furnish such assessors a statement from such person's attending physician, physician assistant or an advanced practice registered nurse certifying that such person is totally disabled and is unable to make a personal appearance and such other evidence of total disability as such assessors may deem appropriate, and (2) any person claiming exemption under subdivision (83) of section 12-81 may furnish documentation from the United States Department of Veterans Affairs certifying that such person is permanently and totally disabled based on a service-connected disability rating of one hundred per cent and is unable to make a personal appearance.

Sec. 237. Section 12-95 of the general statutes is repealed and the following is substituted in lieu thereof (*Effective October 1, 2025, and applicable to assessment years commencing on or after October 1, 2025*):

No individual shall receive any exemption to which such individual is entitled by any one of subdivisions (19), (20), (22), (23), (25), (26), (28) and (83) of section 12-81, [or] section 12-82 or sections 240 and 241 of this act until such individual has proved such individual's right to such

House Bill No. 7287

exemption in accordance with the provisions of sections 12-93 and 12-94, together with such further proof as is necessary under the provisions of any of said sections, including any modification by the United States Department of Veterans Affairs of (1) a veteran's disability rating as described in subdivision (20) of section 12-81, (2) a resident's determination as permanently and totally disabled based on a one hundred per cent disability rating as described in subdivision (83) of section 12-81, or (3) a resident's determination of having a service-connected total disability based on individual unemployability as described in section 240 of this act. Exemptions so proved by residents shall take effect on the next succeeding assessment day, provided individuals entitled to an exemption under the provisions of subdivision (20) or (83) of section 12-81 or section 240 of this act may prove such right at any time before the expiration of the time limited by law for the board of assessment appeals of the town wherein the exemption is claimed to complete its duties and such exemption shall take effect on the assessment day next preceding the date of the proof thereof. For purposes of any tax payable in accordance with the provisions of section 12-71b, any such exemption referred to in this section shall take effect on the first day of January next following the date on which the right to such exemption has been proved.

Sec. 238. Section 12-93a of the general statutes is repealed and the following is substituted in lieu thereof (*Effective October 1, 2025, and applicable to assessment years commencing on or after October 1, 2025*):

(a) Any person entitled to an exemption from property tax in accordance with any provision of subdivisions (19) to (26), inclusive, and (83) of section 12-81 who is the owner of a residential dwelling on leased land, including any such person who is a sublessee under terms of the lease, shall be entitled to claim such exemption in respect to the assessment of the dwelling for purposes of the property tax, provided (1) the dwelling is such person's principal place of residence, (2) such

House Bill No. 7287

lease or sublease requires that such person as the lessee or sublessee, whichever is applicable, pay all property taxes related to the dwelling and (3) such lease or sublease is recorded in the land records of the town.

(b) Any person entitled to an exemption from property tax in accordance with the provisions of subdivisions (19) to (26), inclusive, and (83) of section 12-81 shall be entitled to claim such exemption with respect to the assessment of a motor vehicle that is leased by such person. Notwithstanding the provisions of this chapter, any person claiming the exemption under this section for a leased motor vehicle shall be entitled to a refund of tax paid with respect to such vehicle whether such tax was paid by the lessee or by the lessor pursuant to the terms of the lease. Such refund shall equal the amount of such person's exemption multiplied by the applicable mill rate. Any such person claiming the exemption for a leased vehicle under this subdivision for any assessment year shall, not later than the thirty-first day of December next following the assessment year during which the tax for such leased vehicle has been paid, file with the assessor or board of assessors, in the town in which such motor vehicle tax has been paid, written application claiming such exemption on a form approved for such purpose by such assessor or board. Upon approving such person's exemption claim, the assessor shall certify the amount of refund to which the applicant is entitled and shall notify the tax collector of such amount. The tax collector shall refer such certification to the board of selectmen in a town or to the corresponding authority in any other municipality. Upon receipt of such certification, the selectmen or such other authority shall draw an order on the Treasurer in favor of such person for the amount of refund so certified. Failure to file such application as prescribed in this subsection with respect to any assessment year shall constitute a waiver of the right to such exemption for such assessment year.

Sec. 239. Section 12-81cc of the general statutes is repealed and the following is substituted in lieu thereof (*Effective October 1, 2025, and*

House Bill No. 7287

applicable to assessment years commencing on or after October 1, 2025):

Any person who has established his or her entitlement to a property tax exemption under subdivision (19), (20), (22), (23), (24), (25), (26), (28), [or] (53) or (83) of section 12-81 or section 12-81g for a particular assessment year shall be issued a certificate as to such entitlement by the tax assessor of the relevant municipality. Such person shall be entitled to such exemption in any municipality in this state for such assessment year provided a copy of such certificate is provided to the tax assessor of any municipality in which such exemption is claimed and further provided such person would otherwise have been eligible for such exemption in such municipality if he or she had filed for such exemption as provided under the general statutes.

Sec. 240. (NEW) (*Effective October 1, 2025*) (a) Any municipality, upon approval by its legislative body, may provide that, in lieu of the exemption prescribed under subdivision (20) of section 12-81 of the general statutes, any resident of this state who has served in the Army, Navy, Marine Corps, Coast Guard, Air Force or Space Force of the United States and has been determined by the United States Department of Veterans Affairs to have a service-connected total disability based on individual unemployability shall be entitled to an exemption from property tax on (1) that fractional share of a dwelling, including a condominium, as defined in section 47-68a of the general statutes, a unit in a common interest community, as defined in section 47-202 of the general statutes, and a mobile manufactured home, as defined in section 12-63a of the general statutes, (A) that belongs to or is held in trust for such resident, or that is possessed by such a resident as a tenant for life or tenant for a term of years liable for property tax under section 12-48 of the general statutes, and (B) that is occupied by such resident as the resident's primary residence, or (2) lacking such residence, one motor vehicle that belongs to or is held in trust for such resident and is garaged in this state. As used in this subsection, "dwelling" does not include any

House Bill No. 7287

portion of the unit or structure used by such resident for commercial purposes or from which such resident derives any rental income.

(b) If such resident lacks such dwelling or motor vehicle in such resident's name, the dwelling or motor vehicle, as applicable, belonging to or held in trust for such resident's spouse, or possessed by such resident's spouse as a tenant for life or tenant for a term of years liable for property tax under section 12-48 of the general statutes, who is domiciled with such resident, shall be so exempt. When any resident entitled to an exemption under the provisions of this section has died, the dwelling or motor vehicle, as applicable, belonging to or held in trust for such deceased resident's surviving spouse, or possessed by such deceased resident's surviving spouse as a tenant for life or tenant for a term of years liable for property tax under section 12-48 of the general statutes, while such spouse remains a widow or widower, or belonging to or held in trust for such deceased resident's minor children during their minority, or both, while they are residents of this state, shall be so exempt as that to which such resident was or would have been entitled at the time of such resident's death.

(c) No individual entitled to the exemption under this section and under one or more of subdivisions (19), (22), (23), (25) and (26) of section 12-81 of the general statutes or section 241 of this act shall receive more than one exemption.

(d) (1) No individual shall receive any exemption to which such individual is entitled under this section until such individual has complied with section 12-95 of the general statutes and has submitted proof of such individual's determination by the United States Department of Veterans Affairs, to the assessor of the town in which the exemption is sought. If there is no change to an individual's determination, such proof shall not be required for any assessment year following that for which the exemption under this section is granted initially. If the United States Department of Veterans Affairs modifies

House Bill No. 7287

an individual's determination to other than a service-connected total disability based on individual unemployability, such modification shall be deemed a waiver of the right to the exemption under this section. Any such individual whose determination was modified to other than a service-connected total disability based on individual unemployability may seek the exemption under subdivision (20) or (83) of section 12-81 of the general statutes, as applicable.

(2) Any individual who has been unable to submit evidence of such determination by the United States Department of Veterans Affairs in the manner required by this section, or who has failed to submit such evidence as provided in section 12-95 of the general statutes, may, when such individual obtains such evidence, make application to the tax collector not later than one year after such individual obtains such proof or not later than one year after the expiration of the time limited in section 12-95 of the general statutes, as the case may be, for abatement in case the tax has not been paid, or for refund in case the whole tax or part of the tax has been paid. Such abatement or refund may be granted retroactively to include the assessment day next succeeding the date as of which such individual was entitled to such determination by the United States Department of Veterans Affairs, but in no case shall any abatement or refund be made for a period greater than three years.

(3) The tax collector shall, after examination of such application, refer the same, with the tax collector's recommendations thereon, to the board of selectmen of a town or to the corresponding authority of any other municipality, and shall certify to the amount of abatement or refund to which the applicant is entitled. Upon receipt of such application and certification, the selectmen or other duly constituted authority shall, in case the tax has not been paid, issue a certificate of abatement or, in case the whole tax or part of the tax has been paid, draw an order upon the treasurer in favor of such applicant for such amount, without interest. Any action so taken by such selectmen or other authority shall be a

House Bill No. 7287

matter of record and the tax collector shall be notified in writing of such action.

(e) (1) In any municipality that provides the exemption under subsections (a) to (d), inclusive, of this section, such municipality may, upon approval by its legislative body, further provide that, for any individual receiving the exemption under said subsections for a dwelling described in subdivision (1) of subsection (a) of this section, not more than two acres of the lot upon which such dwelling sits shall be exempt from taxation.

(2) In any municipality that provides the exemption under subsections (a) to (d), inclusive, of this section, such municipality may, upon approval of its legislative body, further provide that the surviving spouse of any resident of this state who (A) had served in the Army, Navy, Marine Corps, Coast Guard, Air Force or Space Force of the United States, (B) had been determined by the United States Department of Veterans Affairs to have a service-connected total disability based on individual unemployability, and (C) died prior to October 1, 2025, but after a date to be determined by such legislative body, shall, while such spouse remains a widow or widower, be entitled to the exemption under this section.

(3) In any municipality that provides the exemption or exemptions under this section, such municipality may, upon approval of its legislative body, limit the total amount of the exemption or exemptions granted under this section to the median assessed valuation of residential real property in such municipality.

Sec. 241. (NEW) (*Effective October 1, 2025*) (a) Any municipality, upon approval by its legislative body, may provide that the surviving spouse, while such person remains a widow or widower, of a person who was killed in action while performing active military duty with the armed forces, as defined in subsection (a) of section 27-103 of the general

House Bill No. 7287

statutes, which surviving spouse is a resident of such municipality, shall be entitled to an exemption from property tax on (1) that fractional share of a dwelling, including a condominium, as defined in section 47-68a of the general statutes, a unit in a common interest community, as defined in section 47-202 of the general statutes, and a mobile manufactured home, as defined in section 12-63a of the general statutes, (A) that belongs to or is held in trust for such surviving spouse, or that is possessed by such a surviving spouse as a tenant for life or tenant for a term of years liable for property tax under section 12-48 of the general statutes, and (B) that is occupied by such surviving spouse as the surviving spouse's primary residence, or (2) lacking such residence, one motor vehicle that belongs to or is held in trust for such surviving spouse and is garaged in this state. As used in this subsection, "dwelling" does not include any portion of the unit or structure used by such surviving spouse for commercial purposes or from which such surviving spouse derives any rental income.

(b) No surviving spouse entitled to the exemption under this section and under one or more of subdivisions (19), (20), (22), (23), (25), (26) and (83) of section 12-81 of the general statutes, section 12-81ii of the general statutes or section 240 of this act shall receive more than one exemption.

(c) (1) A surviving spouse described in subsection (a) of this section who claims an exemption from taxation under this section shall give notice to the town clerk of such municipality that he or she is entitled to such exemption.

(2) Any such surviving spouse submitting a claim for such exemption shall be required to file an application, on a form prepared for such purpose by the assessor, not later than the assessment date with respect to which such exemption is claimed, which application shall include at least two affidavits of disinterested persons showing that the deceased person was performing such active military duty, that such deceased person was killed in action while performing such active military duty

House Bill No. 7287

and the relationship of such deceased person to such surviving spouse, provided the assessor may further require such surviving spouse to be examined by such assessor under oath concerning such facts. Such town clerk shall record each such affidavit in full and shall list the name of such surviving spouse claimant, and such service shall be performed by such town clerk without remuneration. No assessor, board of assessment appeals or other official shall allow any such claim for exemption unless evidence as herein specified has been filed in the office of such town clerk. When any such surviving spouse has filed for such exemption and received approval for the first time, such surviving spouse shall be required to file for such exemption biennially thereafter.

(3) The assessor of such municipality shall annually make a certified list of all such surviving spouses who are found to be entitled to exemption under the provisions of this section, which list shall be filed in the town clerk's office, and shall be prima facie evidence that such surviving spouses whose names appear thereon are entitled to such exemption as long as they continue to reside in such municipality and as long as the legislative body of such municipality continues to provide for such exemption. Such assessor may, at any time, require any such surviving spouse to appear before such assessor for the purpose of furnishing additional evidence, provided, any such surviving spouse who by reason of disability is unable to so appear may furnish such assessor a statement from such surviving spouse's attending physician or an advanced practice registered nurse certifying that such surviving spouse is totally disabled and is unable to make a personal appearance and such other evidence of total disability as such assessor may deem appropriate.

(4) No such surviving spouse may receive such exemption until such surviving spouse has proven his or her right to such exemption in accordance with the provisions of this section, together with such further proof as may be necessary under said provisions. Exemptions so

House Bill No. 7287

proven shall take effect on the next succeeding assessment day.

(d) Any such surviving spouse who has submitted an application and been approved in any year for the exemption provided in this section shall, in the year immediately following approval, be presumed to be qualified for such exemption. During the year immediately following such approval, the assessor shall notify, in writing, each surviving spouse presumed to be qualified pursuant to this subsection.

(e) (1) In any municipality that provides the exemption under subsections (a) to (d) of this section, such municipality may, upon approval by its legislative body, further provide that, for any individual receiving the exemption under said subsections for a dwelling described in subdivision (1) of subsection (a) of this section, not more than two acres of the lot upon which such dwelling sits shall be exempt from taxation.

(2) In any municipality that provides the exemption or exemptions under this section, such municipality may, upon approval of its legislative body, limit the total amount of the exemption or exemptions granted under this section to the median assessed valuation of residential real property in such municipality.

Sec. 242. Section 12-81ii of the general statutes is repealed and the following is substituted in lieu thereof (*Effective October 1, 2025*):

(a) (1) Except as provided in subdivision (2) of this subsection, any municipality, upon approval by its legislative body, may provide that any parent whose child was killed in action, or the surviving spouse of a person who was killed in action, while performing active military duty with the armed forces, as defined in subsection (a) of section 27-103, which parent or surviving spouse is a resident of such municipality, shall be entitled to an exemption from property tax, provided such parent's or surviving spouse's qualifying income does not exceed (A) the

House Bill No. 7287

maximum amount applicable to an unmarried person as provided under section 12-81l, or (B) an amount established by the municipality, not exceeding the maximum amount under section 12-81l by more than twenty-five thousand dollars. The exemption provided for under this section shall be applied to the assessed value of an eligible parent's or surviving spouse's property and, at the municipality's option, may be in an amount up to twenty thousand dollars or in an amount up to ten per cent of such assessed value.

(2) (A) If both parents of any such child killed in action while performing active military duty with the armed forces are domiciled together, only one such parent shall be entitled to an exemption from property tax provided for under this section.

(B) The exemption provided for under this section shall be in addition to any exemption to which an eligible parent or surviving spouse may be entitled under section 12-81. No such eligible parent or surviving spouse entitled to the exemption under this section and under one or more of section 12-81f or 12-81g [and this section] or section 241 of this act shall receive more than one such exemption.

(b) (1) Any parent whose child was killed in action, or the surviving spouse of a person who was killed in action, while performing active military duty with the armed forces and who claims an exemption from taxation under this section shall give notice to the town clerk of such municipality that he or she is entitled to such exemption.

(2) Any such parent or surviving spouse submitting a claim for such exemption shall be required to file an application, on a form prepared for such purpose by the assessor, not later than the assessment date with respect to which such exemption is claimed, which application shall include at least two affidavits of disinterested persons showing that the deceased child or person was performing such active military duty, that such deceased child or person was killed in action while performing

House Bill No. 7287

such active military duty and the relationship of such deceased child to such parent, or such deceased person to such surviving spouse, provided the assessor may further require such parent or surviving spouse to be examined by such assessor under oath concerning such facts. Each such application shall include a copy of such parent's or surviving spouse's federal income tax return, or in the event such a return is not filed such evidence related to income as may be required by the assessor, for the tax year of such parent or surviving spouse ending immediately prior to the assessment date with respect to which such exemption is claimed. Such town clerk shall record each such affidavit in full and shall list the name of such parent or surviving spouse claimant, and such service shall be performed by such town clerk without remuneration. No assessor, board of assessment appeals or other official shall allow any such claim for exemption unless evidence as herein specified has been filed in the office of such town clerk. When any such parent or surviving spouse has filed for such exemption and received approval for the first time, such parent or surviving spouse shall be required to file for such exemption biennially thereafter, subject to the provisions of subsection (c) of this section.

(3) The assessor of such municipality shall annually make a certified list of all such parents or surviving spouses who are found to be entitled to exemption under the provisions of this section, which list shall be filed in the town clerk's office, and shall be prima facie evidence that such parents or surviving spouses whose names appear thereon are entitled to such exemption as long as they continue to reside in such municipality and as long as the legislative body of such municipality continues to provide for such exemption, subject to the provisions of subsection (c) of this section. Such assessor may, at any time, require any such parent or surviving spouse to appear before such assessor for the purpose of furnishing additional evidence, provided, any such parent or surviving spouse who by reason of disability is unable to so appear may furnish such assessor a statement from such parent's or surviving

House Bill No. 7287

spouse's attending physician or an advanced practice registered nurse certifying that such parent or surviving spouse is totally disabled and is unable to make a personal appearance and such other evidence of total disability as such assessor may deem appropriate.

(4) No such parent or surviving spouse may receive such exemption until such parent or surviving spouse has proven his or her right to such exemption in accordance with the provisions of this section, together with such further proof as may be necessary under said provisions. Exemptions so proven shall take effect on the next succeeding assessment day.

(c) Any such parent or surviving spouse who has submitted an application and been approved in any year for the exemption provided in this section shall, in the year immediately following approval, be presumed to be qualified for such exemption. During the year immediately following such approval, the assessor shall notify, in writing, each parent or surviving spouse presumed to be qualified pursuant to this subsection. If any such parent or surviving spouse has qualifying income in excess of the maximum allowed under subsection (a) of this section, such parent or surviving spouse shall notify the assessor on or before the next filing date for such exemption and shall be denied such exemption for the assessment year immediately following and for any subsequent year until such parent or surviving spouse has reapplied and again qualified for such exemption. Any such parent or surviving spouse who fails to notify the assessor of such disqualification shall make payment to the municipality in the amount of property tax loss related to such exemption improperly taken.

Sec. 243. Section 17a-114 of the general statutes is repealed and the following is substituted in lieu thereof (*Effective July 1, 2025*):

(a) As used in this section, (1) "approval" or "approved" means that a person has been approved to adopt or provide foster care by a child-

Mrs JAMIE AUDETTE

VNA

Status

Name Mrs JAMIE AUDETTE
Application Date 10/30/2025
Expiration Date 10/30/2124
Status Received

Board	Vacancies	Status
Visiting Nursing Association Board (VNA)	4	Pending

Basic Information

Name
Mrs JAMIE AUDETTE

Contact Information

Address
41 CHRISTOPHER WAY
BERLIN, CT 06037
Yes, I am a resident
Yes
Email
JAMIEAUDETTE1017@YAHOO.COM
Phone
8608191642

Occupation

Employer
DAV-CO FINISHING, LLC
Job Title
ADMINISTRATIVE ASSISTANT

What is your political party affiliation?
Independent

Number of years in Berlin
MOST RECENTLY 4, BUT GREW UP HERE AS WELL AS A CHILD.

Educational Background (optional)
I HAVE AN MSW IN SOCIAL WORK AND FOR A MAJORITY OF MY CAREER I WORKED WITH ELDERLY INDIVIDUALS IN THE COMMUNITY AS A DSS SOCAIL WOREKR INBVESTIGATING ELDER ABUSE/NEGLECT.

Current and Past Civic/Community Involvement
N/;A

Tell us why you feel qualified for this appointment
I FEEL LIKE I COULD BRING A SOCIAL WORK PERSPECTIVE TO THE APPOINTMENT. I HAVE ADVOCATED AND WORKED WITH THE ELDERLY POPULATION FOR A SIGNIFICANT PORTION OF MY SOCIAL WORK CAREER AND HAVE DEDICATED A GOOD PORTION OF MY ADULT LIFE ENSURING SAFETY AND PERMANENCY FOR ELDER ADULTS. I FEEL THEY ARE A FORGOTTEN POPULATION AND WOULD LOVE TO CONTINUE TO ADVOCATE OR THEM.

Can you think of any reason that a conflict of interest could arise if you were appointed?
N/A

Are you a Registered Voter? (To apply, you must be a Registered Voter in Berlin)
YES

RECEIVED FOR RECORD
BERLIN TOWN CLERK
2025 OCT 30 AM 8: 25
Kathryn Wall
BERLIN, CT.

9Join Zoom Meeting

<https://berlinc-t-gov.zoom.us/j/83598990268?pwd=2kNWDCunv2moUQuuLZWcT5g0bzdVbv.1>

Meeting ID: 835 9899 0268

Passcode: 705888

+1-309-205-3325

**TOWN OF BERLIN
TOWN COUNCIL MEETING
Tuesday, October 21, 2025
Town Council Chambers (in person)
Remote Meeting
7:00 P.M.**

A. CALL TO ORDER:

Mayor Kaczynski called the Town Council meeting to order at 7:00 p.m.

B. PLEDGE OF ALLEGIANCE

C. ROLL CALL:

Those in attendance were:

Councilor Kate Atkinson
Councilor Sandra Coppola
Mayor Mark Kaczynski
Councilor Charles Paonessa
Councilor Mark Pruzin
Councilor Peter Rosso
Councilor Donna Veach

Also in attendance:

Town Manager Ryan Curley
Corporation Counsel Jeffrey Donofrio

D. AUDIENCE OF CITIZENS:

Cornel Boudria, 115 Skinner Road – Mr. Boudria stated that his nonpartisan community organization, Grassroots Berlin, was previously denied the ability to host bingo at the Berlin Senior Center. He questioned why the proposed Senior Center Event Policy was not on tonight's agenda and asked that the Council clarify its' position on the Policy and ensure that no organization regardless of viewpoint is ever excluded from civic participation.

Sallie Caliadri, 60 Apple Tree Crossing, via Zoom – Ms. Caliadri stated that she is the Town's Historian, a member of the Berlin Historical Society, and supports the Berlin Land Trust's efforts to purchase the Augustus Moore Homestead.

Rich Gagliardi, 1278 High Road – Mr. Gagliardi stated that he was asked to read a letter addressed to the Town Council from Lorraine Stub of the Berlin Historical Society. Ms. Stub's letter is attached to these minutes.

Mr. Gagliardi stated that he is also the Vice President of the Berlin Land Trust and asks for the Town Council's support of the Nelson Augustus Moore house preservation efforts.

David Vogt, 14 Canoe Birch Court – Mr. Vogt stated that he is on the Board of the Berlin Land Trust and supports the preservation of the Nelson Augustus Moore property.

Marie Lipski, 405 Southington Road – Ms. Lipski stated that the Nelson Augustus Moore property is a gem and once it's gone it's gone forever.

John Loughery, 33 Quarry Lane – Mr. Loughery stated that he is a teacher of Art History but was unaware that a significant 19th century American painter was born and spent his life in Kensington. The home on the property certainly deserves to be on list of historic homes in Connecticut. Mr. Loughery supports the efforts of the Berlin Land Trust to preserve this property, adding that it would be a great addition to Berlin's cultural heritage.

Melissa Davis, 53 Westview Terrace – Ms. Davis stated that she volunteers for the Berlin Land Trust and agrees with what others before he said adding that the 27 acres includes habitat for wildlife.

Joseph Porcaro, 22 Robbins Road – Mr. Porcaro stated he is the Treasurer of the Berlin Land Trust and strongly advocates for the preservation of the Moore property on High Road as it contains an historical component of the stone house.

Mary Kathryn LaRose, 26 Woodruff Lane – Ms. LaRose stated that she is a member of the Berlin Land Trust and as Berlin grows it is still important to preserve its' history. Modern homes have been constructed across from the Moore property on High Road which has changed the character of the area.

Ms. LaRose added that she is also a member of the Conservation Commission and the Fontanella property purchase, which is on tonight's agenda, was discussed at the last meeting. Discussion included public access to the property which is a requirement of the grant. Ms. LaRose is hoping that parking with close access to the trails will be considered that won't infringe on the neighboring homeowners on Summit Wood Drive.

Greg Starr, 59 Hudson Street – Mr. Starr stated that he is a member of the nonpartisan Grassroots Berlin, and he still questions why the group was not allowed to call bingo at the Senior Center. Mayor Kaczynski stated that the Policy is still being reviewed.

Mr. Starr also expressed disappointment with Councilor Paonessa's comments at a prior Town Council meeting regarding Grassroots Berlin and questioned why the Mayor did not contact the Senior Center Director or the Commission on Aging if he had concerns about the group holding an event at the Center.

Mr. Starr questioned comments that Mayor Kaczynski made regarding the YMCA constructing a facility in Berlin. Mayor Kaczynski gave a brief synopsis of the Town's Community Center/Senior

Center exploration process which became cost prohibitive. The YMCA has approached the Town with interest in building in Berlin so that option is currently being explored.

David Wemett, Newington – Mr. Wemett stated that he is the Program Chair of the Appalachian Mountain Club and a member of the Berlin Land Trust. He also supports the acquisition of the Moore property.

Carmelina Cooper, 222 Summit Wood Drive – Ms. Cooper stated that she does not support the placement of a parking lot for trail access from Summit Wood Drive. The area is dark and remote and already used by people for gatherings and parties. Ms. Cooper added that it currently takes police 20 to 30 minutes to respond when she has called about activity on the street. She suggests that parking should be placed in a more visible area such as along the Chamberlain Highway.

Councilor Veach stated that she has walked the property, and she has the same concerns that Ms. Cooper has regarding parking in that area, adding that no decision has been made regarding parking.

Lt. Jobs of the Berlin Police Department – Lt. Jobs stated that he will research the response times for the Summit Wood Drive area tomorrow. He will also inform the Patrol Division to make more checks in that area.

Doug Sanders, 336 Summit Wood Drive – Mr. Sanders stated that he uses the hiking trails in the Summit Wood Drive area and wanted to make sure to differentiate between the hikers and parking. He added that he met with the Town Planner to discuss issues in the area including access as well as refuse including burned out cars left in the area.

Betsy Piskorski, 249 Winesap Road – Ms. Piskorski stated that she lives on the street that is used to access Bicentennial Park, so she understands the concerns about traffic and gatherings adding that it is a problem when parking area is placed in a residential area. Cars do still come to the area at night, and she would prefer that the park entrance from her street be removed as there are other entrances that do not impact neighborhoods like hers.

Councilor Veach stated that she has been a resident of High Road for many years and that the beauty of the Moore property was what brought her to the area. She believes that it is important to try to preserve the heritage in this community and she gives her full support of the preservation project.

E. MAYOR'S UPDATE:

The Worthington Meeting House 250th Anniversary celebration was held on Saturday. A proclamation was presented by the Mayor.

Today is the one-year anniversary of the Hawthorne Fire.

F. MEETING AGENDA – Immediately Following the Mayor's Update

G. CONSENT AGENDA:

1. **Topic re: Accept donations to the Berlin Animal Control Donation Account for \$305.00 and supplies/medical care valued at \$350.00. – Animal Control**
2. **Topic re: Accept monetary donations totaling \$850.14 and deposit \$732.22 into the Friends of the Library Miscellaneous account for one children’s program, coffee supplies and child/teen program supplies, and deposit \$117.92 into the Friends of the Library Credit Card account for the purchase of program supplies and move to accept the donation of puzzles with an estimated value of \$225.00 to be used for programs. – Berlin-Peck Memorial Library**
3. **Topic re: Accept the donations of \$350.00 and appropriate the funds to the Police K9 Program Expenditure Account. – Police**
4. **Topic re: Approve waiving the Police Traffic Control and Town fees in the approximate amount of \$ 2, 235.60 for the Theatre Guild of Berlin’s Winter Children’s Show-Annie, Jr. which will take place on December 7, 2025 at Berlin High School Auditorium. - Police**
5. **Topic re: Approve waiving the Police Traffic Control fees for the Hungerford Nature Center 2025 Pumpkin Palooza in the approximate amount of \$1,278.80. - Police**
6. **Topic re: Approve waiving the Police Traffic Control fees for the Annual Christmas Tree Lighting in the approximate amount of \$2,475.60 that will take place on November 29, 2025 on Main Street. - Police**
7. **Topic re: Approve waiving the Police Traffic Control fees in the estimated amount of \$ 5,670.10 for the Powerhouse Gym Thanksgiving Day 5K that will take place on Thursday, November 27,2025 in Berlin. – Police**
8. **Topic re: Approve Berlin High School Class of 2026 to sell merchandise at Berlin High School events at Sage Park during the remainder of the 2025 – 2026 school year.**

Councilor Paonessa moved to accept the Consent Agenda as presented.

Seconded by Councilor Veach.

Vote being 7-0 (MOTION CARRIED)

H. NEW BUSINESS:

1. **Topic re: Waive the Town’s purchasing requirements and approve Turnpike Motors of Newington, CT to repair MP#0335 Engine #10’s rust as outlined in their quote #074497 and #054012 for an amount not to exceed \$46,151.95, as this is in the best interest of the town. – Fire Administration**

Fire Manager Jim Simmons stated that the Town Council previously approved funding for rust repair to the main body of Engine 10 which is stationed at the Fleet Garage. Additional rust was discovered by Turnpike Motors during the body disassembly leading to additional costs. This request

is to increase the previously approved funding by \$12,570.18 for those added repairs. Funding is available in the Vehicle Reserve account.

Councilor Paonessa moved to waive the Town's purchasing requirements and approve Turnpike Motors of Newington, CT to repair MP#0335 Engine #10's rust as outlined in their quote #074497 and #054012 for an amount not to exceed \$46,151.95, as this is in the best interest of the town.

Seconded by Councilor Veach.

Vote being 7-0 (MOTION CARRIED)

2. **Topic re: Rescind authorization for the Town Manager to apply for a State of Connecticut LOCIP grant approved by the Town Council at their January 9, 2024, Special Meeting and authorize the Town Manager to apply for a State of Connecticut LOCIP grant for \$327,563.68 for renovations to the Sage Park parking lot and Suranna Drive and appropriate the funds to the LOCIP – Sage Park Parking Lot Project account, pending OPM approval. – Public Works**

Town Manager Curley introduced this item stating that the State of Connecticut Office of Policy and Management is working with towns to expend remaining balances in old entitlement grant programs. The Town of Berlin has \$327,563.68 in entitlement funds and this motion proposes to use those remaining funds to renovate the Sage Park parking lot, and if funds remain, renovate Suranna Drive which is the entrance to Sage Park.

Public Works Director Mike Ahern added that after applying for LOCIP grant funds for the replacement of on-course bridges at Timberlin Golf Course, the Town was notified that approvals would be required from the Army Corps of Engineers, as well as other State and Local authorities which would take considerable time.

The Town was advised that by using local funds the approval process would be more streamlined and could be funded using the existing Athletic Facilities (2025) bond ordinance when all approvals are obtained. Therefore, the first part of this request is to rescind the prior authorization for the Town Manager to apply for the LOCIP grant.

State Representative Donna Veach stated that the State Bond Commission has not held their last two meetings, so she is uncertain if funding is still available. She suggests moving forward with approval of this item and coming back to it if there are any funding issues. Representative Veach stated she will reach out to the Bond Commission again.

Councilor Paonessa moved to rescind authorization for the Town Manager to apply for a State of Connecticut LOCIP grant approved by the Town Council at their January 9, 2024, Special Meeting.

Seconded by Councilor Veach.

Vote being 7-0 (MOTION CARRIED)

Councilor Paonessa moved to authorize the Town Manager to apply for a State of Connecticut LOCIP grant for \$327,563.68 for renovations to the Sage Park parking lot and Suranna Drive and

appropriate the funds to the LOCIP – Sage Park Parking Lot Project account, pending OPM approval.

Seconded by Councilor Veach.

Vote being 7-0 (MOTION CARRIED)

3. **Topic re: Award the Connectivity funded Sidewalk Project No. 2026-02 with segments on Four Rod Road, Kensington Road, Norton Road, Percival Avenue, and Robbins Road to the low bidder, Detour Construction of Lowell, MA in the amount of \$477,485.00, and to authorize the Town Manager to enter into change orders not to exceed \$47,748 and to sign related documents after Corporation Counsel review (including a Project Authorization Letter) as required by the CT Department of Transportation for the base contract. – Public Works**

Public Works Director Ahern stated that the Town received a 2023 Connectivity Grant in the amount of \$780,000 which was based on the Engineer's original 2023 construction cost estimate. The Town was required to provide a local match of \$131,500. The base project currently includes sidewalk sections on Four Rod Road, Kensington Road, Norton Road, Percival Avenue, and Robbins Road.

Nine bids were received for the project with the low bidder being Detour Construction of Ludlow, MA. Their bid of \$477,485 was substantially lower than most other bidders so a thorough review was done to make sure there were no unit cost or other errors made. Staff checked Detour's references and found that they recently completed a \$1 million project with the City of West Hartford which was very satisfied with Detour's work.

With over \$900,000 of available funding this leaves funds that could be applied to other sidewalk sections and/or construction administration if approved by the Department of Transportation. Once approved Mr. Ahern will return to the Town Council with a recommended plan for use of the remaining project funds.

Councilor Paonessa moved to award the Connectivity funded Sidewalk Project No. 2026-02 with segments on Four Rod Road, Kensington Road, Norton Road, Percival Avenue, and Robbins Road to the low bidder, Detour Construction of Lowell, MA in the amount of \$477,485.00, and to authorize the Town Manager to enter into change orders not to exceed \$47,748 and to sign related documents after Corporation Counsel review (including a Project Authorization Letter) as required by the CT Department of Transportation for the base contract.

Seconded by Councilor Veach.

Vote being 7-0 (MOTION CARRIED)

4. **Topic re: Authorize the execution by the Town Manager of an extension to a Connecticut Department of Mental Health and Addiction Services grant for Community Center Planning. – Public Works/Economic Development**

Town Manager Curley stated that the Town received a \$750,000 grant from the Connecticut Department of Mental Health and Addiction Services (the Department) for Community Center

planning. The grant period is set to expire on December 31, 2025 and the Town requested an extension to December 31, 2029 which the Department agreed to. Over \$500,000 of those funds remain.

The Town Manager explained to the State the conversations the Town had with the YMCA on the project and inquired if the funds could be used as a pass-through to the YMCA so they could conduct a feasibility study on the property. The State stated that as long as it fits into the criteria of the bond authorization those funds can be used.

Town Manager Curley stated that the YMCA would like to have another meeting with the Town.

Councilor Paonessa moved to authorize the execution by the Town Manager of an extension to a Connecticut Department of Mental Health and Addiction Services grant for Community Center Planning.

Seconded by Councilor Veach.

Vote being 7-0 (MOTION CARRIED)

5. Topic re: Authorize the execution by the Town Manager of an extension to a STEAP Grant through the Connecticut Department of Economic and Community Development for the Steele Boulevard Park Project. – Economic Development/Public Works

Town Manager Curley stated that the Town received a \$500,000 STEAP Grant for the Steele Boulevard Park Project and that grant is set to expire on December 8, 2025. The Town requested an extension of that grant to December 8, 2027.

Councilor Paonessa moved to authorize the execution by the Town Manager of an extension to a STEAP Grant through the Connecticut Department of Economic and Community Development for the Steele Boulevard Park Project.

Seconded by Councilor Veach.

Vote being 7-0 (MOTION CARRIED)

6. Topic re: Discussion of Efforts to Preserve the Augustus Moore Homestead. – Economic Development/Planning and Zoning

Town Planner Maureen Guisti introduced Honor Lawler, Project Manager for the Trust for Public Land.

Ms. Lawler stated that the Trust for Public Land (TPL) creates parks and protects land throughout the country. TPL does not hold land, but they help local land trusts, municipalities, State and Federal governments acquire the properties they wish to protect. In doing so TPL takes away a lot of the risk that land trusts and communities are often burdened with. They have created access to over 4.5 million acres of public land.

TPL will negotiate with the current landowner, secure financing, work with communities to organize support, carry out the contract, and convey the property to the final owner. By doing so, they remove the uncertainties of bureaucracy.

The Nelson Augustus Moore Homestead acquisition would protect 27 acres of rolling hills and forest, and create an open space and nature preserve for all to enjoy. The stone house on the property will be part of the purchase. Opportunities for the property include recreational use, community connections through farmer's markets or historic interest, and the ability to connect nature with the arts.

TPL is under contract to purchase the property by early 2026 at a cost of \$1.7 million which is fair market value. They have secured a State grant of \$822,500 in partnership with the Berlin Land Trust which is 65% of the value of 20 of the 27 acres as structures are not included. Ms. Lawler stated that TPL has a good outlook for funding, especially after Berlin recently joined the Federal Highlands Conservation Act program.

Ms. Lawler added that funding could also come from private foundations and individuals, as well as possible municipal contribution. There are circumstances when it is necessary that TPL can purchase the land and hold it until all funding is obtained. In the case of the Moore property there was a developer with a right of first refusal that required TPL to make an offer with such a short time to close. They will be borrowing money for the purchase, and they will need to determine if they will be purchasing by the end of this year but if prospects for additional funding do not look good, they will need to make a tough choice about moving forward.

Councilor Veach offered letters of support in her position of State Representative. The Mayor and Town Council offered support for the property's preservation.

NO ACTION TAKEN

7. **Topic re: Authorize the Town Manager to enter into an amendment to the agreement to buy the property known as Map 25-4, Block 74 Lot 49, 0 Chamberlain Highway for a reduced purchase price of \$95,000, subject to review and approval of Corporation Counsel, and to authorize use of \$7,000 in additional funds from the local grant match account for costs related to the property acquisition. – Economic Development**

Town Manager Curley stated that the Town Council previously authorized the Town Manager to enter into a purchase agreement to acquire the Fontanella property on Chamberlain Highway for \$100,000 and to apply for a grant from the State for 65% of fair market value.

The property appraisal came in at \$95,000 therefore reducing the State grant, and the survey, appraisal, and appraisal reviews costs were more than projected. The sellers did agree to lower the purchase price to the appraised value which leaves a funding gap of \$6,700 however funds are available in the local grant match account.

Town Planner Maureen Guisti stated that parking for property access is a requirement of the grant and that is being researched by staff, CFPA, and the Conservation Commission. Councilor Veach stated that she confirmed with Public Grounds Supervisor Steve Wood that no parking lot or parking spaces have been planned for the area at the end of Summit Wood Drive.

Councilor Paonessa moved to authorize the Town Manager to enter into an amendment to the agreement to buy the property known as Map 25-4, Block 74 Lot 49, 0 Chamberlain Highway for a reduced purchase price of \$95,000, subject to review and approval of Corporation Counsel, and to authorize use of \$7,000 in additional funds from the local grant match account for this purpose.

Seconded by Councilor Veach.

Vote being 7-0 (MOTION CARRIED)

8. Topic re: Approve the Project Manager position within the Public Works Department. – Town Manager

Town Manager Curley stated that in recent years the Town has taken on a significantly greater number of infrastructure and capital improvement projects, many of which require coordination between the Public Works Department, the Public Building Commission, vendors, and other departments. The Town previously maintained a Project Manager position within the Public Works Department to assist with oversight and coordination of these construction and improvement projects.

There is also additional need for assistance with the preparation and administration of various grant programs. A Project Manager will strengthen the Town's ability to manage these programs and ensure continued success utilizing external funding. The Project Manager will report directly to the Public Works Director and will be a part of the Middle Management Union.

Mr. Curley added that if Town Council approves this position tonight it would then need to go to the Board of Finance. He would like the position to begin at the beginning of 2026. Funding is available in the Economic Development Professional Services as well as townwide accounts.

Councilor Paonessa believes this is an important position, adding that contracts are getting more complex and there could provide cost savings in the long run. Town Manager Curley added that he is hopeful that Economic Development Coordinator Jim Mahoney will remain in his reduced hours for the foreseeable future to assist with grant writing, however the Assistant Town Planner has worked with him on a recent grant, and the new Project Manager will assist going forward.

Councilor Paonessa moved to approve the Project Manager position within the Public Works Department.

Seconded by Councilor Veach.

Vote being 7-0 (MOTION CARRIED)

I. TOWN MANAGER'S REPORT:

- The YMCA has been provided with their requested documentation. Don Rittman will be setting up a meeting with YMCA CEO John Benigni. The Town Manager and Mayor Kaczynski participated in meetings with Don Rittman and the YMCA's architect engineer over the summer. The Town has received confirmation from the State that grant funds

received in the past can be used as a pass-through to the YMCA to do a feasibility study. He hopes the next meeting with the YMCA will be in the next few weeks.

- Scope reviews for architect engineers for the Splash Pad project are going to be conducted next week.
- A noise complaint about Bright Feeds was received from a resident and an unannounced sound check was conducted by SHA, the Town's sound engineer, both at the facility as well as on Worthington Ridge. The results for the nighttime testing showed that Bright Feeds was one decibel above Berlin's ordinance which SHA deems negligible. The Town Manager spoke with Bright Feeds about adding some type of noise barrier wall as well as additional noise mitigation at their plant. He will also inquire about the possibility of a relation between the sound complaints and Eversource switching from wood to metal poles.
- Early voting began on October 20th.
- Board of Education Finance Director Ashley Dorsey identified additional eligibility for Open Choice Funding which will soon bring in additional funding from the State.
- The Town Manager and Corporation Counsel received a request from an individual that has a Tax Abatement agreement with the Town requesting the Town revisit the Tax Abatement Ordinance.

Corporation Counsel Donofrio added that the Town's Tax Abatement program was revised in January 2024 and the Statute changes periodically therefore the program as well as the concerns of the individual need to be reviewed.

J. SPECIAL COMMITTEE REPORTS:

The Ordinance Committee will meet on November 25th at 6:00 p.m.

K. COUNCILORS' COMMUNICATION:

Councilor Pruzin stated that there was no communication sent out regarding the ribbon cutting at Chipotle. Councilors stated that it was discussed at the last Town Council meeting, however it was agreed that it was an oversight that an email was not sent out.

Councilor Pruzin stated that he has reviewed the Town's Purchasing Policy, and he believes that the Council should receive documentation that the Town Manager and the Finance Director approve of any bid waivers being requested. It was stated that the Finance Director provides Sufficiency of Funds with the agenda items, and the Town Manager approves the agenda item. Councilor Pruzin added that Sections 2.1 and 2.2 of the Purchasing Policy need to be modified as they contain errors related to the Town's bidding procedures.

Councilor Pruzin expressed his displeasure with bid waivers. Town Manager Curley stated that many times you need to consider the relationship that you have with a vendor as part of the process as it could be in the Town's best interest. He added that for each bid waiver that has been done there has always been a reason behind it.

Corporation Counsel Donofrio stated that some larger municipalities identify conditions under which bids can be waived, and typically they are related to specialized services. There should also be limitations on the number of consecutive years a contract can be in place without putting it out to bid as there are changes in the market.

Councilor Coppola asked if the Town Manager had any information regarding the lack of water in Stockings Brook. The Town Manager stated that Water Control Manager Ray Jarema stated that the state is experiencing a drought which could be contributing to it. He will continue to monitor it with Mr. Jarema.

Councilor Coppola stated that the original plans for the H2O Farm on Chamberlain Highway called for underground electrical, however the electrical installed appears to be running up not down. There is concern because the owners have not followed a number of items in their original plans. Town Manager Curley stated that he will follow up with the Town Planner.

L. ACCEPTANCE OF MINUTES:

October 7, 2025

Councilor Paonessa moved to accept the Town Council meeting minutes of October 7, 2025 as presented.

Seconded by Councilor Veach.

Those voting in favor: Councilor Atkinson, Councilor Coppola, Councilor Paonessa, Councilor Pruzin, Councilor Veach, Mayor Kaczynski.

Abstain: Councilor Rosso

Vote being 6-0-1 (MOTION CARRIED)

M. ADJOURNMENT:

Councilor Paonessa moved to adjourn the meeting at 9:47 p.m.

Seconded by Councilor Rosso.

Vote being 7-0 (MOTION CARRIED)

Submitted by,

Kathryn J. Wall
Clerk of the Meeting

ELECTED OFFICIALS WILL BE SWORN INTO OFFICE AT 6:00 P.M. IN THE ROTUNDA OF THE BERLIN TOWN HALL. THIS WILL BE DONE IN PERSON.

Berlin Town Council Chambers is inviting you to a scheduled Zoom meeting.

Join Zoom Meeting

<https://berlinct-gov.zoom.us/j/88161808962?pwd=m76ayRzRAAcQc3lnhl5Wq691zPOoHg.1>

Meeting ID: 881 6180 8962

Passcode: 073864

+1-301-715-8592

**TOWN OF BERLIN
TOWN COUNCIL MEETING
November 18, 2025
Town Council Chambers
7:00 P.M.**

A. CALL TO ORDER:

Mayor Kaczynski called the Town Council meeting to order at 7:00 p.m.

B. PLEDGE OF ALLEGIANCE

C. ROLL CALL:

Those in attendance were:

Councilor Sandra Coppola
Mayor Mark Kaczynski
Councilor Charles Paonessa
Councilor Mark Pruzin
Councilor Peter Rosso
Councilor Donna Veach

Absent:

Councilor Kate Atkinson

Also in attendance:

Town Manager Ryan Curley
Corporation Counsel Jeffrey Donofrio

D. MEETING AGENDA

E. NEW BUSINESS:

1. Topic re: Approve an extension of Ciulla & Donofrio LLP to continue as Corporation Counsel of the Town of Berlin for a period of two years, through and including the organizational meeting of the Town Council following the 2027 general municipal election. – Town Council

Town Manager Curley congratulated the Town Council on their reappointment and stated that with that the Charter calls for the reappointment of a Corporation Counsel for the Town.

The proposal from current Corporation Counsel Ciulla & Donofrio LLP includes a slight rate increase adding that there have only been two rate increases in the past ten years.

Councilor Veach stated that she supports the extension of the contract, adding that the rate increase percentage is minimal and she appreciates the work they do for the Town.

Councilor Paonessa moved to approve an extension of Ciulla & Donofrio LLP to continue as Corporation Counsel of the Town of Berlin for a period of two years, through and including the organizational meeting of the Town Council following the 2027 general municipal election.

Seconded by Councilor Veach.

Those voting in favor: Councilor Coppola, Councilor Paonessa, Councilor Pruzin, Councilor Rosso, Councilor Veach, Mayor Kaczynski.

Vote being 6-0 (MOTION CARRIED)

2. Topic re: Appointment of Town Council members to Sub-Committees

Town Manager Curley stated that the appointment of Town Council members to Sub-Committees is another task of the organizational meeting. A list of the current sub-committees and their members was provided and is attached to these minutes.

The Council members present stated that they would like to continue in their current roles.

Standing Committees:

- a. Ordinance Committee (3-5 members)
- b. Rules and Procedures Committee (2-3 members)

Other Committees:

- c. Calendar Committee (1 member)
- d. Community Conversations (1-2 members)

2025-11-18 Town Council Meeting Minutes

- e. Connecticut Conference of Municipalities (1member)
- f. Fire Services Committee (4 members)
- g. Manager's Evaluation (7 members)
- h. Mattabessett Watershed (1 member)
- i. Meeting House (1 member)
- j. Playing Fields Committee (2-4 members)

Councilor Paonessa moved to approve the standing Sub-Committees as presented.

Seconded by Councilor Veach.

Those voting in favor: Councilor Coppola, Councilor Paonessa, Councilor Pruzin, Councilor Rosso, Councilor Veach, Mayor Kaczynski.

Vote being 6-0 (MOTION CARRIED)

Councilor Veach stated she is looking forward to working with the Town Council for another two years, adding that she feels everyone works well together.

Councilor Paonessa congratulated everyone stating that it was a good campaign and everyone worked hard.

Councilor Rosso stated that the Town Council is here to cooperate and do what is best for the Town.

Mayor Kaczynski stated that local government is where things get done and where you can see things through from beginning to end for residents and for the good of the town.

F. ADJOURNMENT:

Councilor Paonessa moved to adjourn the meeting at 7:11 p.m.

Seconded by Councilor Veach.

Those voting in favor: Councilor Coppola, Councilor Paonessa, Councilor Pruzin, Councilor Rosso, Councilor Veach, Mayor Kaczynski.

Vote being 6-0 (MOTION CARRIED)

Submitted by,

Kathryn J. Wall
Clerk of the Meeting