

# City of Portland, Maine - Building or Use Permit Application

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No: 10-0904	Issue Date:	CBL: 214A A002001
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Location of Construction: 52 CITY LINE DR	Owner Name: TRANSPORT LEASING CORP	Owner Address: 35 BRADLEY DR	Phone:
Business Name:	Contractor Name: AAA Energy Service	Contractor Address: 4 Commercial Road, Po Box 908 Scar	Phone: 2077725719
Lessee/Buyer's Name	Phone:	Permit Type: HVAC	Zone: B-4

Past Use: Eastpoint Christian Church	Proposed Use: Eastpoint Christian Church - install a Gas Separated Combustion makeup air handler	Permit Fee: \$260.00	Cost of Work: \$23,510.00	CEO District: 3
		FIRE DEPT: <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Denied * See Conditions	INSPECTION: Use Group: HVAC Type: Signature: <i>[Signature]</i>	

Proposed Project Description:  
install a Gas Separated Combustion makeup air handler

Signature: <i>[Signature]</i>	Signature: <i>[Signature]</i>
PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)	
Action: <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied	
Signature:	Date:

Permit Taken By: Idobson	Date Applied For: 07/28/2010
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## Zoning Approval

- This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.
- Building permits do not include plumbing, septic or electrical work.
- Building permits are void if work is not started within six (6) months of the date of issuance. False information may invalidate a building permit and stop all work..

Special Zone or Reviews
<input type="checkbox"/> Shoreland
<input type="checkbox"/> Wetland
<input type="checkbox"/> Flood Zone
<input type="checkbox"/> Subdivision
<input type="checkbox"/> Site Plan
Maj <input type="checkbox"/> Minor <input type="checkbox"/> MM <input checked="" type="checkbox"/>
Date: <i>[Signature]</i>

Zoning Appeal
<input type="checkbox"/> Variance
<input type="checkbox"/> Miscellaneous
<input type="checkbox"/> Conditional Use
<input type="checkbox"/> Interpretation
<input type="checkbox"/> Approved
<input type="checkbox"/> Denied
Date:

Historic Preservation
<input checked="" type="checkbox"/> Not in District or Landmark
<input type="checkbox"/> Does Not Require Review
<input type="checkbox"/> Requires Review
<input type="checkbox"/> Approved
<input type="checkbox"/> Approved w/Conditions
<input type="checkbox"/> Denied
Date: <i>[Signature]</i>

### PERMIT ISSUED

AUG 18 2010

City of Portland

### CERTIFICATION

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT ADDRESS DATE PHONE

RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE DATE PHONE

**City of Portland, Maine - Building or Use Permit**

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Permit No: 10-0904	Date Applied For: 07/28/2010	CBL: 214A A002001
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Location of Construction: 52 CITY LINE DR	Owner Name: TRANSPORT LEASING CORP	Owner Address: 35 BRADLEY DR	Phone:
Business Name:	Contractor Name: AAA Energy Service	Contractor Address: 4 Commercial Road, Po Box 908 Scar	Phone (207) 772-5719
Lessee/Buyer's Name	Phone:	Permit Type: HVAC	

Proposed Use: Eastpoint Christian Church - install a Gas Separated Combustion makeup air handler	Proposed Project Description: install a Gas Separated Combustion makeup air handler
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**Dept:** Zoning      **Status:** Approved      **Reviewer:** Marge Schmuckal      **Approval Date:** 08/09/2010  
**Note:**      **Ok to Issue:** ✓

**Dept:** Building      **Status:** Approved with Conditions      **Reviewer:** Tammy Munson      **Approval Date:** 08/18/2010  
**Note:**      **Ok to Issue:** ✓

1) The installation must comply with the State of Maine Gas Regulations.

**Dept:** Fire      **Status:** Approved with Conditions      **Reviewer:** Capt Keith Gautreau      **Approval Date:** 08/11/2010  
**Note:**      **Ok to Issue:** ✓

1) Install shall comply with all manufacture's specifications.

2) Install shall comply with NFPA 54.  
A compliance letter is required

**PERMIT ISSUED**

AUG 18 2010

City of Portland



FILL IN AND SIGN WITH INK

PERMIT ISSUED

# APPLICATION FOR PERMIT HEATING OR POWER EQUIPMENT

AUG 18 2010

City of Portland

To the INSPECTOR OF BUILDINGS, PORTLAND, ME.

The undersigned hereby applies for a permit to install the following heating, cooking or power equipment in accordance with the Laws of Maine, the Building Code of the City of Portland, and the following specifications:

Location / CBL 9 CITY LINE DRIVE S2 City Line Use of Building CHURCH Date 7/28/10  
 Name and address of owner of appliance M H SANBORN  
4 CANTERBURY LANE, N READING MA 01864  
 Installer's name and address AAA ENERGY SERVICE CO  
4 COMMERCIAL RD SCARBOROUGH ME 04070 Telephone 883-1473  
10 BOX 909

### Location of appliance:

- Basement
- Floor x SPACE
- Attic
- Roof

### Type of Fuel:

- Gas
- Oil
- Solid

Appliance Name: MAKE UP AIR

U.L. Approved  Yes  No

Will appliance be installed in accordance with the manufacture's installation instructions?  Yes  No

IF NO Explain: \_\_\_\_\_

### The Type of License of Installer:

- Master Plumber # \_\_\_\_\_
- Solid Fuel # \_\_\_\_\_
- Oil # \_\_\_\_\_
- Gas # ~~XXXXXX~~ PNT 1022
- Other \_\_\_\_\_

### Type of Chimney:

- Masonry Lined
- Factory built \_\_\_\_\_

Metal  
Factory Built U.L. Listing # \_\_\_\_\_

Direct Vent  
Type \_\_\_\_\_

RECEIVED

### Type of Fuel Tank

- Oil
- Gas NATURAL

JUL 28 2010  
Dept. of Building Inspections  
City of Portland Maine

Size of Tank \_\_\_\_\_

Number of Tanks \_\_\_\_\_

Distance from Tank to Center of Flame \_\_\_\_\_ feet.

Cost of Work: \$ 23,510.00

Permit Fee: \$ \_\_\_\_\_

Approved

Approved with Conditions

Fire: \_\_\_\_\_

See attached letter or requirement

Ele.: \_\_\_\_\_

Bldg.: \_\_\_\_\_

Inspector's Signature \_\_\_\_\_

Date Approved \_\_\_\_\_

Signature of Installer E. Bourne

SALES ENGINEER

White - Inspection

Yellow - File

Pink - Applicant's

Gold - Assessor's Copy



# CITY OF PORTLAND, MAINE

Department of Building Inspections

## Original Receipt

7.23 20 10

Received from AAA Energy Service

Location of Work 9 City Line Dr. ALA 52

Cost of Construction \$ 23,510 Building Fee: \_\_\_\_\_

Permit Fee \$ \_\_\_\_\_ Site Fee: \_\_\_\_\_

Certificate of Occupancy Fee: \_\_\_\_\_

Total: 260

Building (U) Plumbing (U) Electrical (U) Site Plan (U)

Other HVAC

CBL: 214AA2001

Check #: V. 3 Total Collected \$ 260

**No work is to be started until permit issued.  
Please keep original receipt for your records.**

Taken by: F. J.

WHITE - Applicant's Copy  
YELLOW - Office Copy  
PINK - Permit Copy



# ENERGY SERVICE CO.

4 Commercial Road • P.O. Box 908 • Scarborough, ME 04070-0908 • (207) 883-1473 FAX (207) 883-8371

July 26, 2010

Mr. Mark Sanborn

**RE: DHL Building renovations Make Up Air System**

Dear Mark:

We have redesigned a make up air system for the chapel at the above referenced location. With some creative thinking we have been able to get this system price and sized reduced to what we consider to be the minimum required to satisfy ventilation requirements.

**Inclusions**

- DIRECT VENTED MAKE UP AIR SYSTEM
- INTAKE AIR LOUVER
- MINIMAL DUCTWORK
- FIR DAMPERS AS REQUIRED
- GAS VENT AND INTAKE PIPING
- INTERLOCK TO EXISTING WALL DAMPER
- DUCTING EXISTING EXHAUST DAMPER TO TOP OF WALL  
(Wall top needs to be sheet rocked by others)

- START UP
- MATERIALS/LABOR/TRAVEL EXPENSES
- PERMITS AS REQUIRED
- ENGINEERING

**Exclusions**

- GAS PIPING
- POWER WIRING
- SHEET ROCK CUTTING AND PATCHING

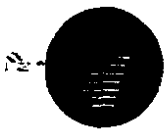
The cost of this work is Twenty-Three Thousand Five Hundred Ten Dollars and No Cents  
.....\$23,510.00.

Pricing is subject to review after thirty days.

Thank you for the opportunity to be of service to you. If you have any questions, or if I may be of further service, please do not hesitate to contact me.

Sincerely,

Ed Bonenfant  
Project Sales Engineer



**TRANE**

# Submittal

**Prepared For: Ed Bonenfant**

**Date: July 27, 2010**

**Customer P.O. Number:**  
**Customer Project Number:**

**Sold To:AAA Energy**

**Job Number:**  
**Job Name:**  
**AAA Energy - Ed - - MUA**

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Trane U.S. Inc. is pleased to provide the enclosed submittal for your review and approval.

### Product Summary

Qty	Product
1	Separated Combustion Makeup Air Handler - Gas Heating

*The attached information describes the equipment we propose to furnish for this project, and is submitted for your approval.*

**Dan Broderick**  
Trane  
30 Thomas Drive  
Westbrook, ME 04092-3824  
Phone: (207) 828-1777  
Fax: (207) 828-1511

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**Tag Data - Separated Combustion Makeup Air Handler - Gas Heating (Qty: 1)**

Item	Tag(s)	Qty	Description	Model Number
A1	No Tag	1	Separated Combustion Makeup Air Handler	GXBA25PDJF

**Product Data - Separated Combustion Makeup Air Handler - Gas Heating**

Item: A1 Qty: 1

Separated Combustion Indoor Make-up Air Handler  
 Standard temp rise furnace (20-60 F Deg) right hand  
 250 MBH input  
 Power venting  
 208/60/3 main power supply  
 Electronic modulating gas control w/duct thermostat & room override  
 Natural gas  
 409 stainless steel heat exchanger (first furnace only)  
 Arrangement B - Standard blower  
 1-1/2 HP supply fan motor with magnetic starter  
 Single speed open drip proof motor  
 Outside air (OA) horizontal inlet  
 2-position outside air damper/spring return  
 2" (51mm) 30% Pleated Media filter  
 Horizontal concentric vent kit (Fld)  
 5" Vent Cap (Fld)

**Performance Data - Separated Combustion Makeup Air Handler - Gas Heating**

Tags	No Tag
Airflow (cfm)	2500
Revolution per minute (rpm)	945
External static pressure (ESP; duct) (in H2O)	.7
TSP(plenum,filter,dampers,etc) (in H2O)	1
Brake horsepower (hp)	.98



**Mechanical Specifications - Separated Combustion Makeup Air Handler - Gas Heating**

Item: A1 Qty: 1

**General**

Units are completely factory assembled, piped, wired and test fired. All units contain duct furnaces that are A.G.A and C.G.A. certified and conform with the latest ANSI Standards for safe and efficient performance. Units are provided with 4 point suspension hangers and shall be available for operation on either natural or LP (propane) gas. The firing rate of each furnace will not exceed 400 MBh and contains its own heat exchanger, flue collector, venting, burners, safety and ignition controls. All units are in compliance with FM (Factory Mutual) requirements. Standard control relays are socket mounted with terminal block connections.

All control wiring terminates at terminal strips (single point connection) and includes an identifying marker corresponding to the wiring diagram. Motor and control wiring is harnessed with terminal block connections. Casings are die formed, 18 gauge [1.3mm] galvanized steel and finished in air dry enamel. Service and access panels shall be provided through easily removable side access panels with captive fasteners. Fan sections and supply plenums are insulated with fire resistant, odorless, matte faced 1" [25 mm] glass fiber material. Standard heat exchanger construction consists of 20 gauge [1.0 mm] aluminized steel tubes and 18 gauge [1.3mm] aluminized steel headers. Burners are die formed, corrosion resistant aluminized steel, with stamped porting and stainless steel port protectors. Port protectors prevent foreign matter from obstructing the burner ports. Burners are individually removable for ease of inspection and servicing.

The entire burner assembly is easily removed with its slide out drawer design. The pilot is accessible through an access plate without removing the burner drawer assembly. All motors are ball bearing type with resilient base mount and NEMA frame sizes from 48 to 256T. Windings are Class "B", with service factors of 1/2, 3/4hp = 1.25 and 1/15hp = 1.15. Filter rack is of V-bank design for minimal pressure drop and is constructed of galvanized steel with access through the side service panel.

Standard filters are 1"[25 mm] permanent washable type. Electrical cabinet is isolated from the air stream with a non removable access panel interior to the outer service panel. There is provision in this cabinet for component mounting, wire routing and high voltage isolation. Motor and control wiring is harnessed with terminal block connections. Standard units are provided with 24 volt combination single stage automatic gas valves, including main operating valve and pilot safety shutoff, pressure regulator, manual main and pilot shutoff valve, and adjustable pilot valve. Gas valves are suitable for NEC Class 2 use for a maximum inlet gas pressure of 0.5 psi [3.5kPa] 14" W.C.[3487 Pa] in natural gas. All rooftop units are provided with a low voltage circuit breaker rated for 150% of the units normal 24 volt operating load.

Each duct furnace is provided with a 24 volt high temperature limit switch, a (redundant) combination gas valve and a fan time delay relay. The fan time delay relay delays the fan start until the heat exchanger reaches a predetermined temperature. It also allows the fan to operate after burner shutdown, removing residual heat from the heat exchanger. Double and triple furnace units contain a reverse airflow interlock switch. The normally closed switch, when activated, cause the gas valves to close and continue blower operation. All units provided with a solid state ignition control system which ignites the intermittent pilot by spark during each cycle of operation. When pilot flame is proven, main burner valve opens to allow gas flow to the burners. Pilot and burners are extinguished during the off cycle. Dampers shall be of the opposed blade type, constructed of galvanized steel with neoprene nylon bushings, blades to be mechanically interlocked.

**Air Handling Fan(s)**

Centrifugal fan is belt driven, forward curved with double inlet, statically and dynamically balanced. The blower wheel is fixed on a keyed shaft, supported with rubber grommet on bearing only and ball bearing secured. An access interlock switch is installed in the blower compartment and will disengage the blower upon removing the service panel. An override is incorporated into the access interlock switch for serviceability.

**Electronic Modulating Duct stat with Room override gas control**

Provides modulated heat output. An automatic valve in series with the modulating valve shall be provided to cycle the unit. Ignition is at full fire [100% input] and modulates the gas input from 100% to 40% rated input. Available for use with a duct thermostat with remote set point adjustment. Override room thermostat causes the unit to go to full fire when the room temperature falls below the override room thermostat's set point.

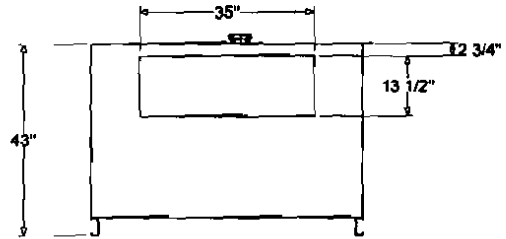
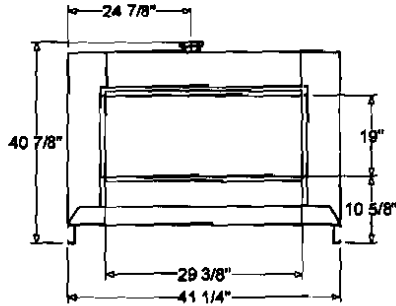
**Dampers General**

Dampers are of the opposed blade type, constructed of galvanized steel with neoprene nylon bushings, blades to be mechanically interlocked. Optional low leak dampers are of the opposed blade type, construction of galvanized steel with neoprene nylon bushings and vinyl blade edge seals, blades to be mechanically interlocked.

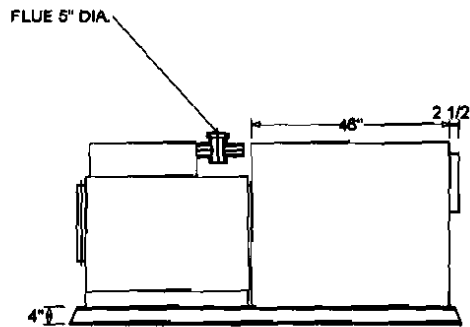
**Unit Dimensions - Separated Combustion Makeup Air Handler - Gas Heating**

Item: A1 Qty: 1

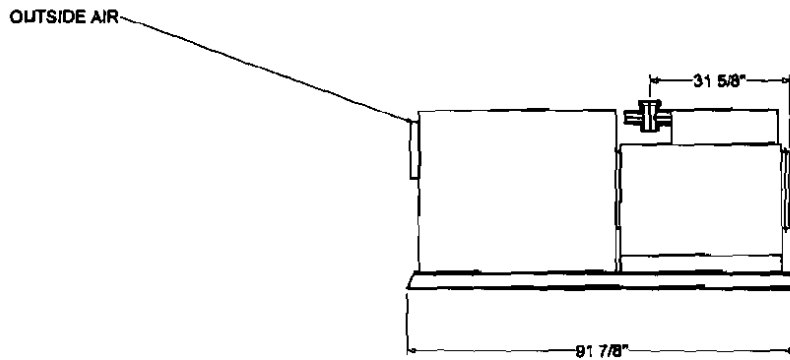
NOTE:  
RECOMMENDED SERVICE CLEARANCE  
18" ON ALL SIDES  
36" ON TOP  
17-1/2" BOTTOM



BACK VIEW



RIGHT VIEW



LEFT VIEW

SHIP WEIGHT
962 lb

**Field Installed Options - Part/Order Number Summary**

This is a report to help you locate field installed options that arrive at the jobsite. This report provides part or order numbers for each field installed option, and references it to a specific product tag. It is NOT intended as a bill of material for the job.

**Product Family - Separated Combustion Makeup Air Handler - Gas Heating**

Item	Tag(s)	Qty	Description	Model Number
A1	No Tag	1	Separated Combustion Makeup Air Handler	GXBA25PDJF

Field Installed Option Description	Part/Ordering Number
Horizontal concentric vent kit	0350-0152-01-00
5" Vent Cap	0134-0219-01-00

MH Sanborn  
 9 City Line Drive  
 East Point Christian Church  
 Sanborn hdl building

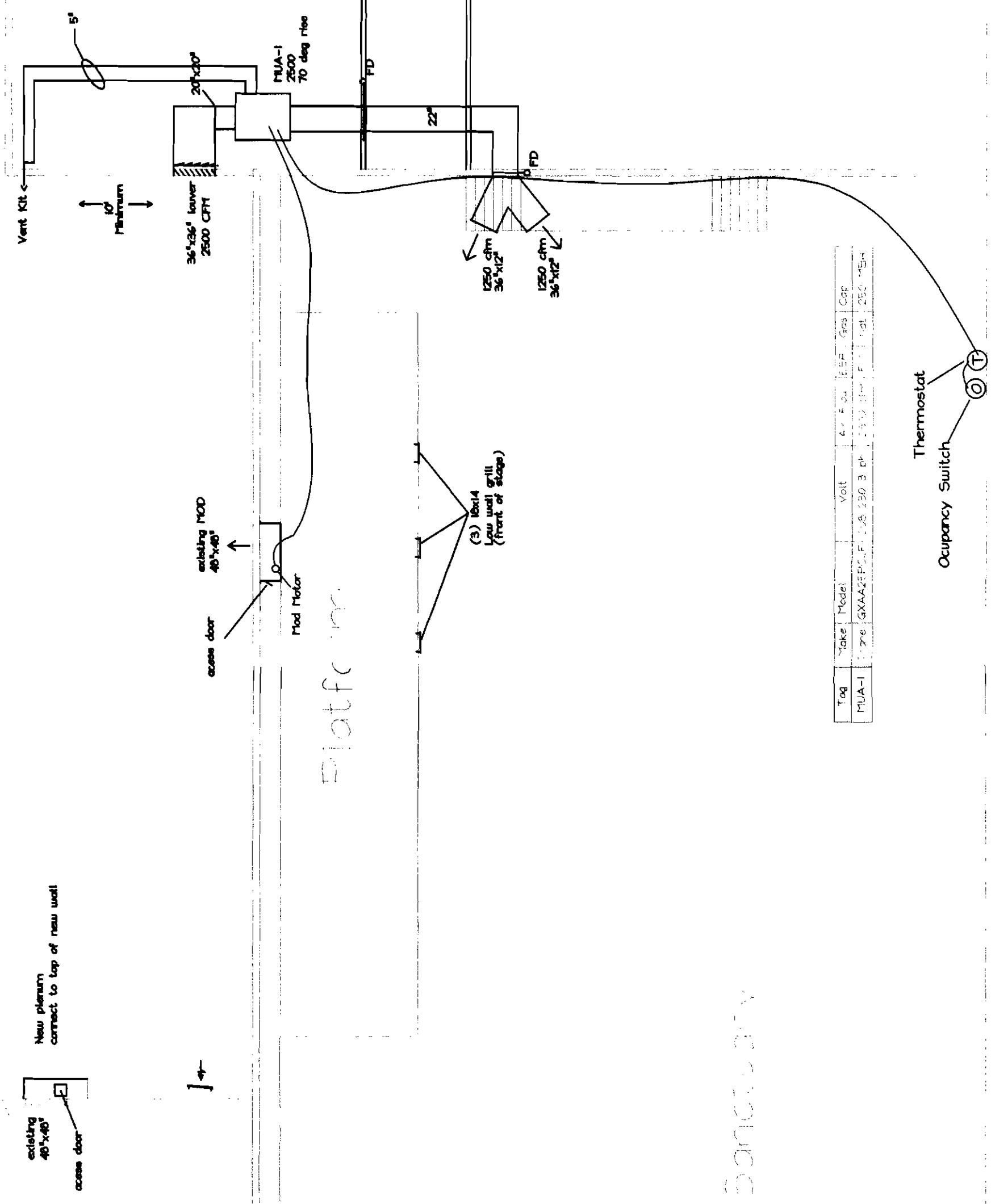
**ENERGY SERVICE CO.**  
 Commercial Road • P.O. Box 908  
 Scarborough, ME 04070-0908  
 (207) 883-1473 • FAX (207) 883-8371

REVISIONS

#	REVISIONS	DATE

Platform

Sanctuary



Tag	Make	Model	Volt	4-20 mA	EEP	Gas	Cap
MUA-1	Trane	GXA425PC-F	230 B ph	230V	100	100	250

existing 48"x48" access door

↑

New plenum connect to top of new wall

Minimum

(3) MUA Low wall grill (front of slope)

Thermostat  
 Occupancy Switch

MUA-1  
 2500  
 70 deg rise

36"x36" louver  
 2500 CFM

existing MOD  
 48"x48"

Mod Motor

FD

FD

1250 cfm  
 36"x12"

1250 cfm  
 36"x12"

5"

20"x20"

22"

3"

existing 48"x48" access door