

Steam System Repair

Heating System

- Missing vent (re-tapped and replaced)



Heating System

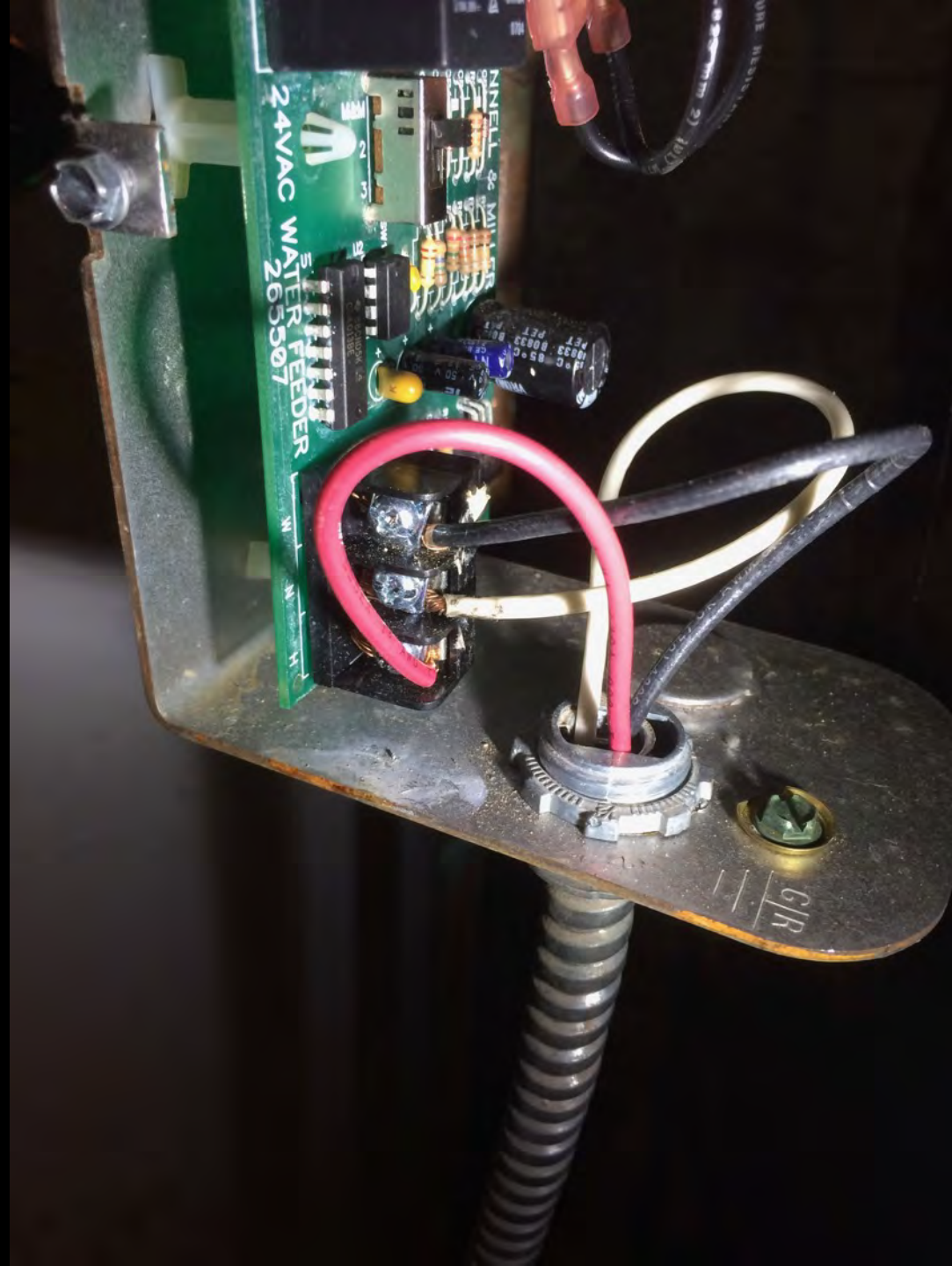
- Missing vent



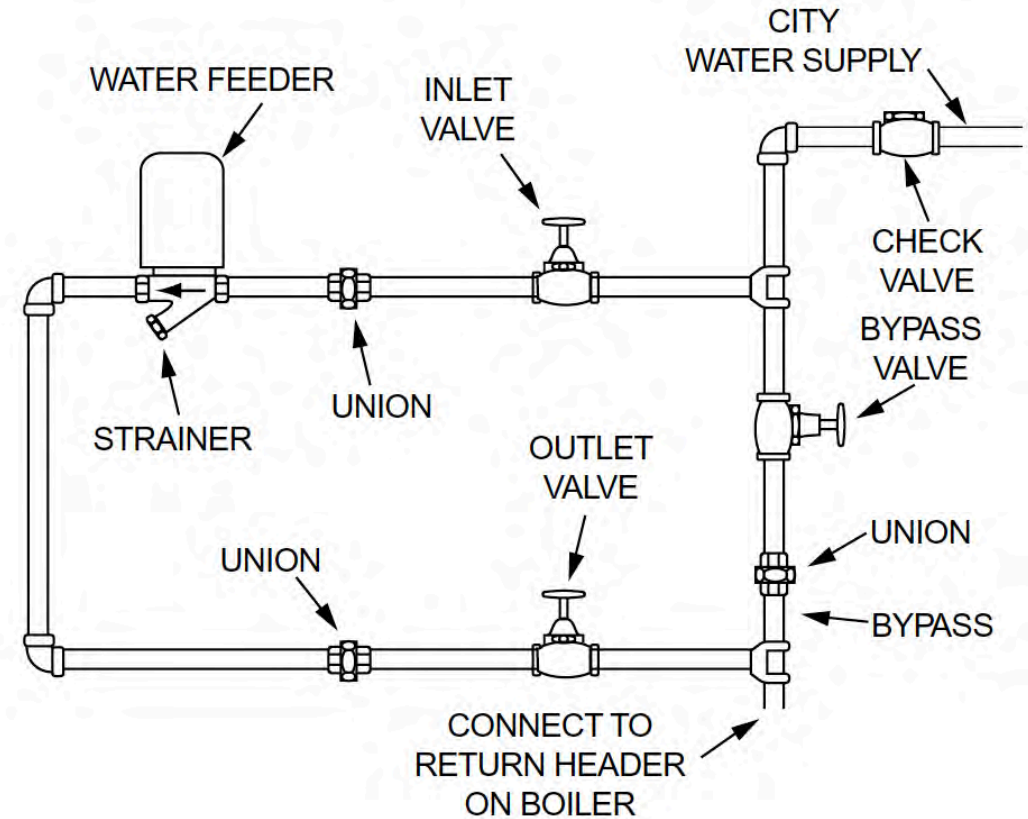
Steam System Repair

Heating System

- Missing vent
- Water feeder installed incorrectly (wiring)



- 3 a.** Control must be installed within eyesight of boiler.
- b.** Clearance must be provided on all sides to service control.
- c.** Unit must be installed in a horizontal pipe in an **upright position.**
- d.** Arrow on feeder must point in the direction of flow into the boiler.
- e.** Install isolation valves and unions on the inlet and outlet piping for easier troubleshooting and repair/replacement.
- f.** Install manual fill valve and bypass line for removal while the boiler is in service.



Heating System

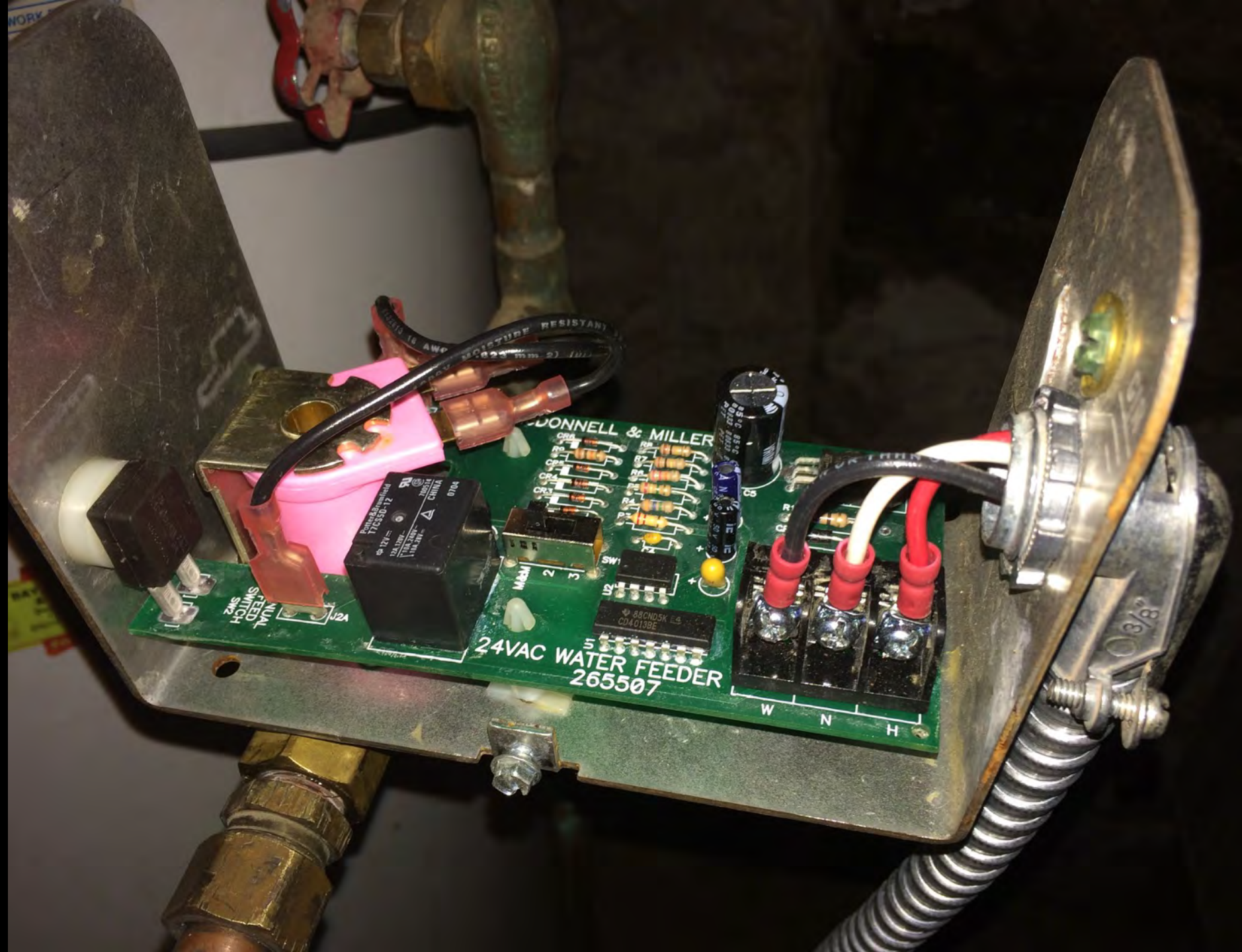
- Missing vent
- Water feeder installed incorrectly (wiring and mounting)



Steam System Repair

Heating System

- Missing vent
- Water feeder installed incorrectly (wiring and mounting)



Heating System

- Missing vent
- Water feeder installed incorrectly
- Boiler underfired; gas valve was the culprit.



Steam System Repair

Construction

Hit easy targets, hard. Look for cost savings and synergies. Aim to get projected energy use under PV size.

Shell

- Attic air sealing & insulation (Jason)
- EIFS on side wall
- New triple glazed windows
- New skylight

Systems

- New split system for heating & cooling
- Heat pump water heater
- Replacement LED A-lamps
- 9.9 kW PV system (McGowan)

User behavior

- Charm users (McGowan)

Construction

Air Sealing (Jason)



Construction

Air Sealing

- Service shafts open to basement



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Construction

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- Service shafts open to basement
- Gaps at perimeter basement level



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- Radiator pipe penetrations



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DG-700 Pressure & Flow Gauge

DEVICE		CONFIG	
BD 3		A1	
-	50.2	2223	
CRUISE	Pa	CFM@50	
PR/ FL @50		10	

MODE

TIME AVG

DEVICE

MODE

CONFIG

Air Sealing

- 35% reduction in leakage
- ~2,500 would be 5 ach, so mechanical ventilation officially required by common standard

Construction

EIFS on side wall

- Least expensive surface for over-insulation
- Used to bury refrigerant & condensate that run along exterior in order to avoid interior demo
- Over-insulates new window frames



Construction

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- Big surface, easy to apply EIFS
- Used to bury refrigerant & condensate that run along exterior in order to avoid interior demo
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New Windows

- Triple glazed wood Marvin
- Double hung front (historic), tilt-turn side & rear



Construction

New Skylight

- Old skylight removed, stained glass cleaned, replaced with Velux double paned
- Sides of shaft insulated (Jason)



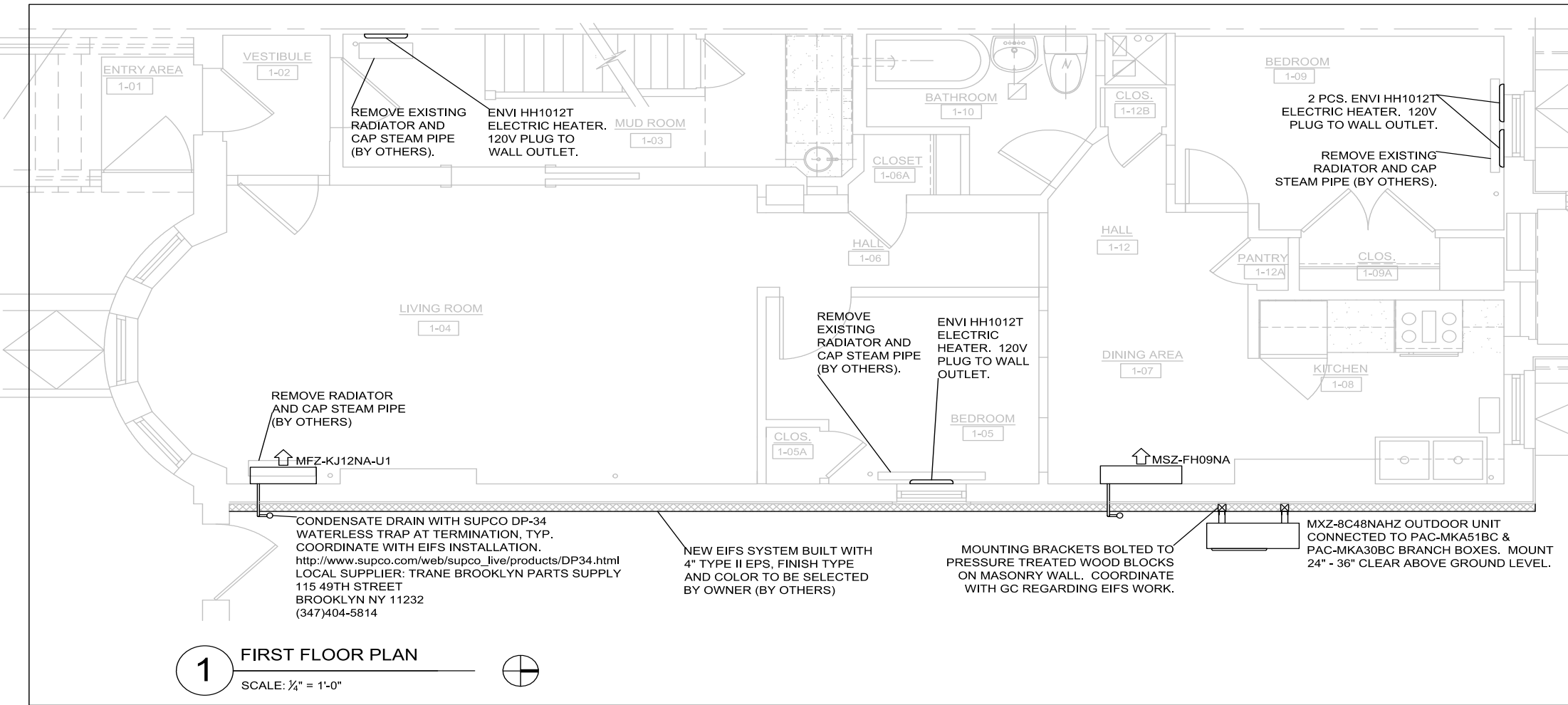
Roof Hatch

- 1" polyiso around sides, 2" top
- Nashua exterior foil tape
- Not easy, especially at hatch handle.





Construction



1 FIRST FLOOR PLAN
 SCALE: 1/4" = 1'-0"

NOTES

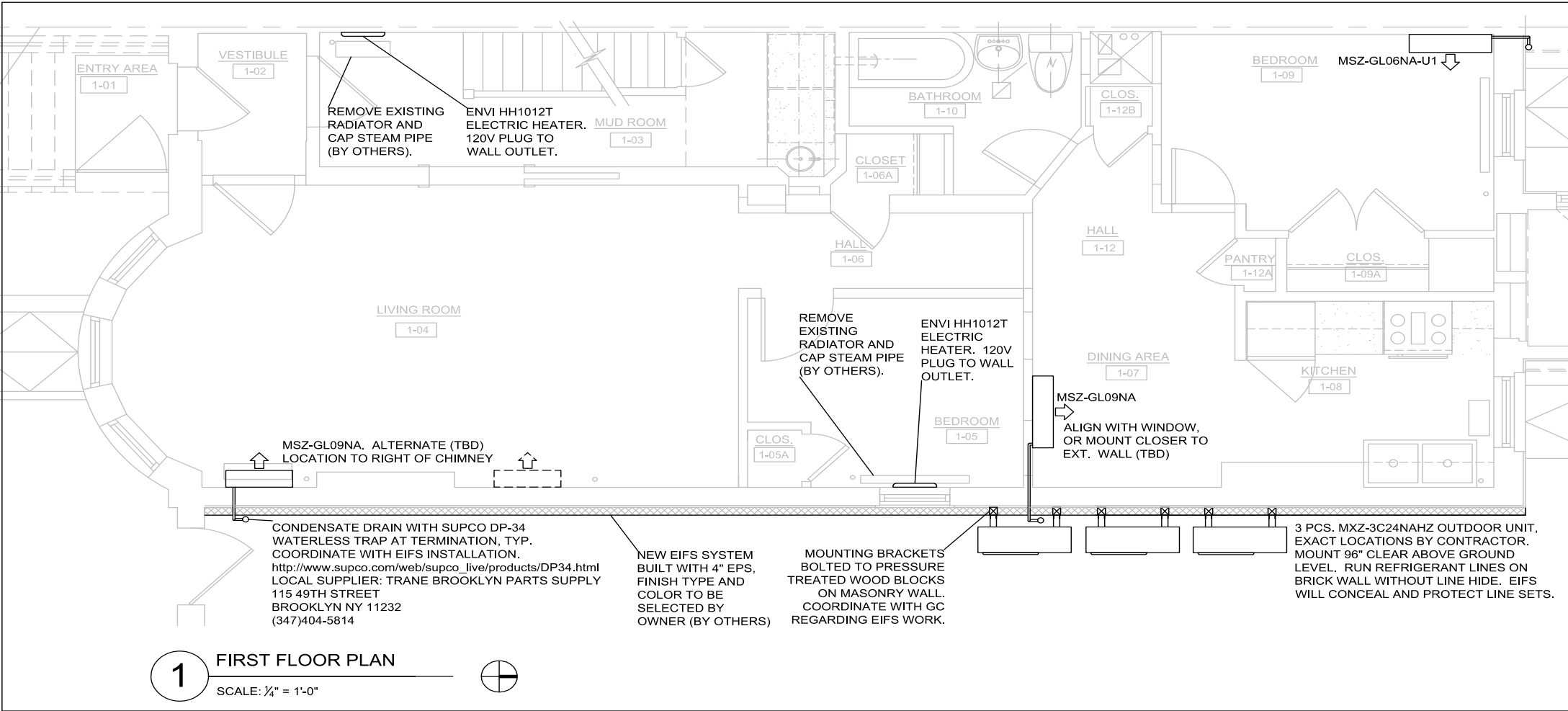
Right Environments
 917-588-0378
 david@rightenviroments.com

REVISION	DESCRIPTION	DATE

635 41st Street

DATE: AUGUST 30, 2017
 SCALE: 1/2" = 1'-0"

M-01
 First Floor
 Mechanical Plan



1 FIRST FLOOR PLAN
 SCALE: 1/4" = 1'-0"

NOTES

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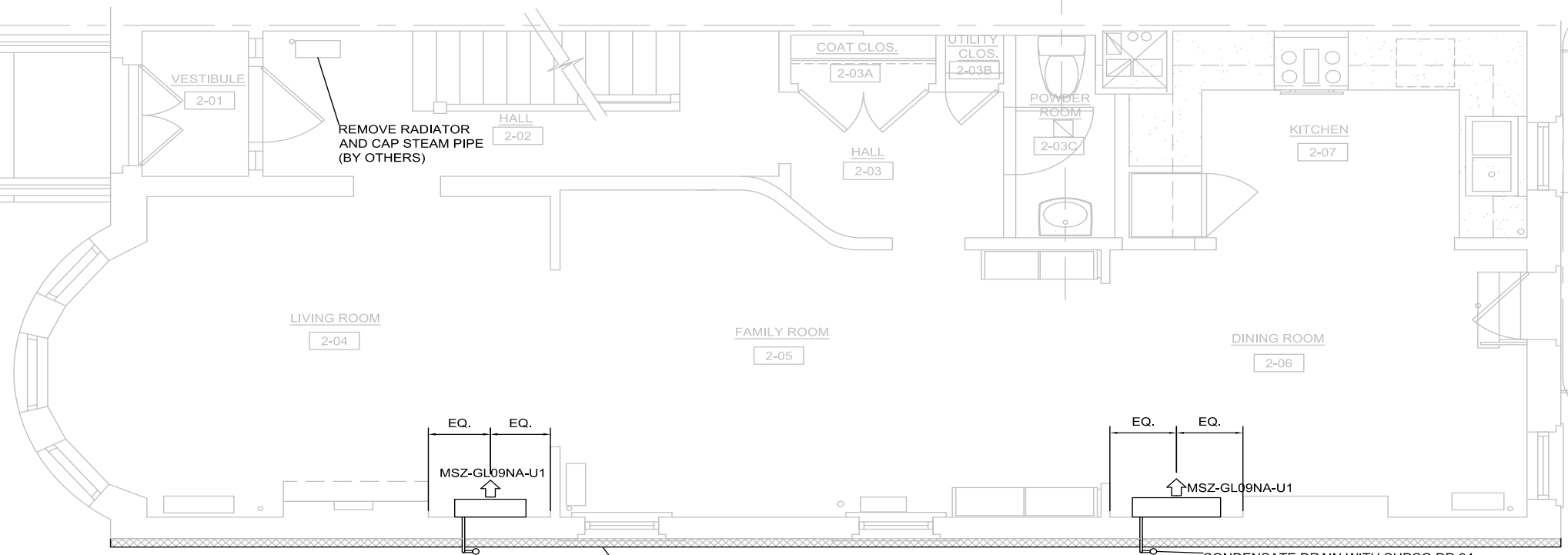
SEPT 15 2017	
REVISION 1	DESCRIPTION

635 41st Street

DATE: AUGUST 30, 2017
 SCALE: 1/2" = 1'-0"

M-01
 First Floor
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REMOVE RADIATOR
 AND CAP STEAM PIPE
 (BY OTHERS)

NEW EIFS SYSTEM BUILT WITH 4" TYPE II
 EPS, FINISH TYPE AND COLOR TO BE
 SELECTED BY OWNER (BY OTHERS)

CONDENSATE DRAIN WITH SUPCO DP-34
 WATERLESS TRAP AT TERMINATION, TYP.
 COORDINATE WITH EIFS INSTALLATION.
http://www.supco.com/web/supco_live/products/DP34.html
 LOCAL SUPPLIER: TRANE BROOKLYN PARTS SUPPLY
 115 49TH STREET
 BROOKLYN NY 11232
 (347)404-5814

1 SECOND FLOOR PLAN
 SCALE: 1/4" = 1'-0"

NOTES

SEPT 15 2017

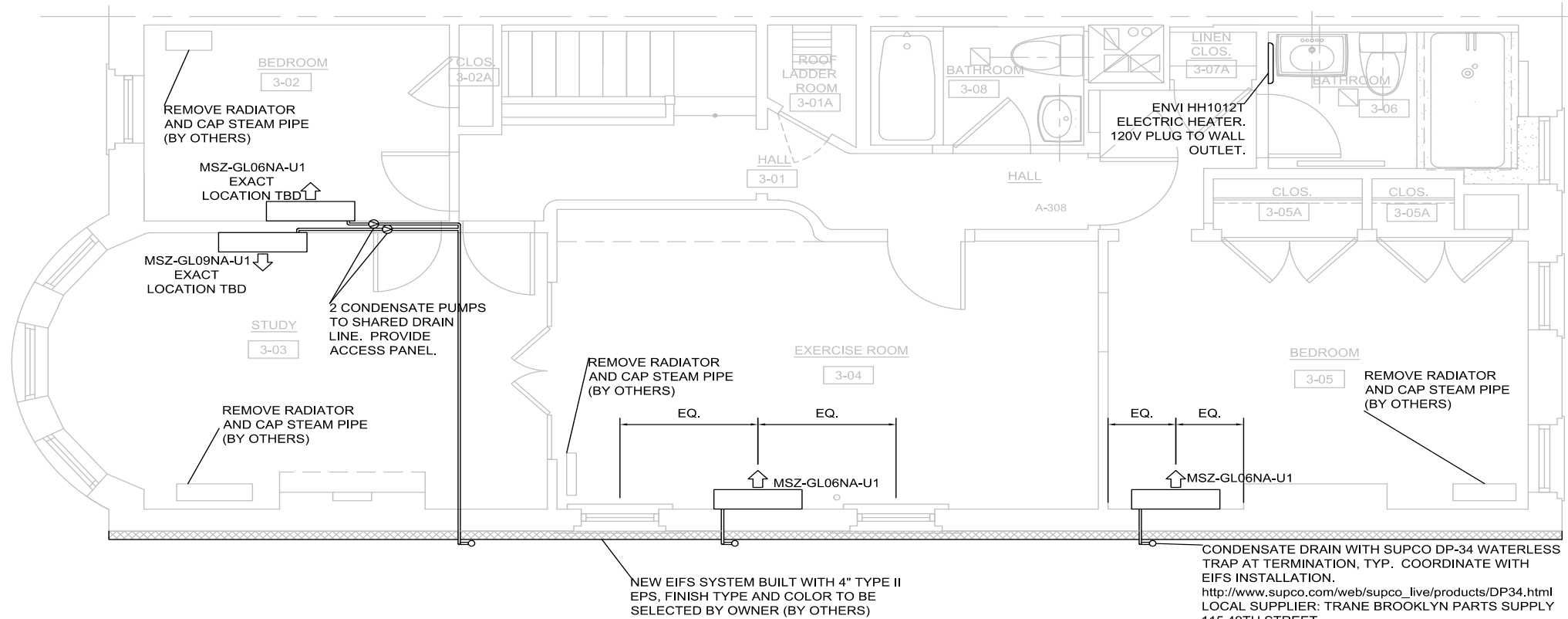
REVISION 1 DESCRIPTION

635 41st Street

DATE: AUGUST 30, 2017

SCALE: 1/2" = 1'-0"

M-02
Second Floor
Mechanical Plan



1 THIRD FLOOR PLAN
 SCALE: 1/4" = 1'-0"

NOTES

SEPT 15 2017

DESCRIPTION

635 41st Street

DATE: AUGUST 30, 2017
 SCALE: 1/2" = 1'-0"

REVISION 1

M-03
 Third Floor
 Mechanical Plan

Split System

- Design change from branch box to ported type
- Services run along side wall
- Next time, seal penetrations behind indoor units



Construction

Heat Pump Water Heater

- Gas water heater died
- Consider drain water heat recovery – Ecodrain is cheap!
- Verify correct install – esp. clearances for air outlet, filter access.
- Insulate hot trunks



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Heat Pump Water Heater

- Gas water heater died
- Consider drain water heat recovery – Ecodrain is cheap!
- Verify correct install – esp. clearances for air outlet, filter access.
- Insulate hot trunks
- Set to heat pump operation only, 120 F



Ventilation

- Aeroseal of kitchen and bath ducts.
Limited to 20 cfm25!



Construction

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- CAR dampers w/ constantly running fan at end of bath riser
- Incorrect CARs installed; corrected



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- Back draft damper on kitchen exhaust



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- CAR dampers w/ constantly running fan at end of bath riser
- Incorrect CARs installed; corrected
- Back draft damper on kitchen exhaust
- Rooftop fan on variable speed controller; set to achieve flow through CARs at lowest possible speed.



Construction

Dryer Exhaust

- Note: badly built drier duct is a health and safety issue – lint, CO, CO₂, fire – and may be more problematic in a tighter house.
- Hard Duck product used to connect to dryer. Just buy the parts from Stamped Fittings.
- Mastic/mesh/mastic – use Vana when necessary or for easy cleaning
- Only 2 elbows, both smooth

Construction



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Construction

Jason Taylor
Byggmeister



Construction