MECHANICAL PERMIT APPLICATION

City of Portland, Oregon - Bureau of Development Services

1900 SW 4th Avenue, Portland, Oregon 97201 • 503-823-7363 • TTY 503-823-6868 • www.portlandoregon.gov/bds

This permit application expires if a permit is not obtained within 180 days after it has been accepted as complete.

Type of work

- ☐ New construction
- ☑ Addition/alteration/replacement
- ☐ Demolition
- ☐ Other:

Category of construction

- ☐ 1 & 2 family dwelling
- ☑ Commercial/industrial
- ☐ Accessory building
- ☐ Multifamily
- ☐ Master builder
- ☐ Other:

Job site information and location

Job no.:	Job address: 825 N Cook St.
City/State/ZIP: Portland, OR 97227	
Suite/bldg./apt. no.:	Project name: ECLIPTIC BREWING
Cross street/directions to job site: Fremont St.	
Subdivision:	Lot no. / Tax map/parcel no.

Description of work (example: upstairs bath fan/dryer exhaust)

Install 3 new gas package units with new ductwork. Vent bathrooms.

Provide RS permit no.

☐ Property owner / ☐ Tenant

Name:	E-mail:
Address:	
City/State/ZIP:	
Phone:	FAX:

Owner installation: This installation is being made on property that I own, which is not intended for sale, lease, rent, or exchange.

Owner signature: Date:

☐ Contractor / ☒ Subcontractor

Business name: Viking Heating & Sheet Metal	E-mail: [redacted]
Address: P.O Box 2610	
City/State/ZIP: Estacada, OR 97023	
Phone: 503 888-1692	FAX: 888-422-9677
Lic. no. 695119	CCB lic. no. 190282

Authorized signature: [signature]

Print name: Milo Coy Date: 8/15/13

☒ Applicant / ☐ Contact Person

Business name: Viking Heating & Sheetmetal	
Contact name: Milo Coy	
Address: PO Box 2610	
City/State/ZIP: Estacada, OR 97023	
Phone: 503 888-1692	FAX: 888 422-9677
E-mail: Milo@VikingSheetmetal.com	

RS Permit/No Fees Due ☐

Commercial Fee Schedule - Use Checklist

Mechanical permit fees* are based on the value of the work performed. Indicate the value (rounded to the nearest dollar of all mechanical materials, equipment, labor, overhead and profit.

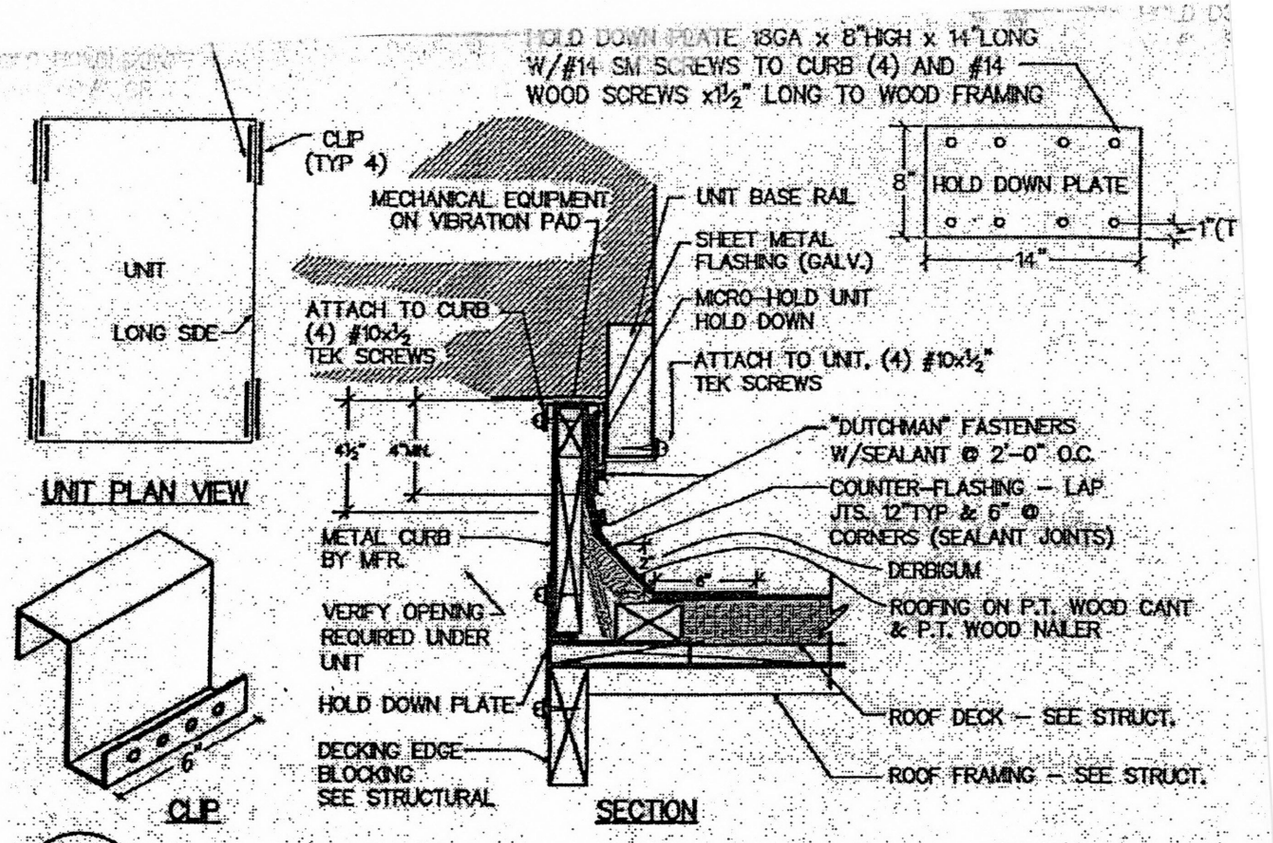
Value: $ 38,000

Residential Equipment / Systems Fees

For special information use checklist

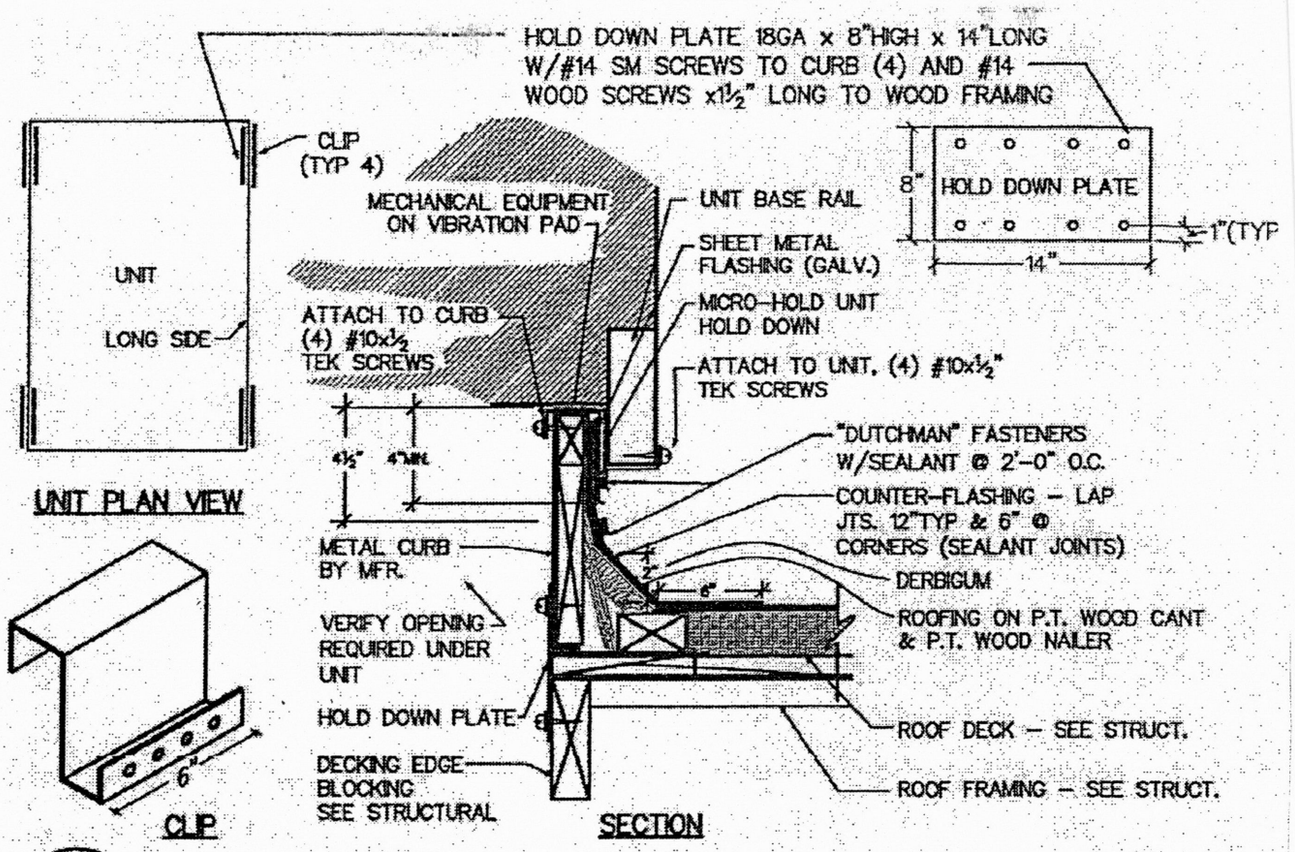
Description	Qty.	Fee	Total
Heating / cooling			
Air conditioner (site plan required)		$26	
Furnace / burner including duct work / vent / liner		$55	
Heat pump (site plan required)		$51	
Air handling unit		$26	
Hydronic hot water system		$32	
Residential boiler (radiator or hydronic) includes piping		$32	
Unit heaters (fuel type, not electric) in-wall, in-duct, suspended, etc.		$26	
Vent for appliance other than furnace		$22	
Alteration of existing HVAC system		$32	
Other fuel appliances			
Decorative gas fireplace		$26	
Flue vent for water heater or gas fireplace		$22	
Wood / pellet stove		$57	
Gas or wood fireplace / insert		$57	
Chimney / liner / flue / vent		$22	
Other:		$32	
Environmental exhaust and ventilation			
Range hood / other kitchen equipment		$14	
Clothes dryer exhaust		$14	
Single-duct exhaust (bathrooms, toilet compartments, utility rooms)		$14	
Attic / crawl space fans		$14	
Other:		$32	
Gas fuel piping			
$14 for the first four, $2.57 for each additional. Please indicate number of fuel gas piping outlets below:			
Furnace, etc.			
Gas heat pump			
Wall / suspended / unit heater			
Water heater / boiler			
Fireplace			
Range			
Barbecue			
Clothes dryer			
Other:			
Other appliances			
Including oil tanks, gas and diesel generators, gas and electric kilns, gas appliances / equipment not included above		$32	
Mechanical permit fees			
		Subtotal	
		Minimum permit fee ($95)	
		Commercial plan review (60% of permit fee)	
		State surcharge (12% of permit fee)	
		TOTAL PERMIT FEE	

Residential Combo permit subcontractor submittals only can be faxed to 503-823-7693 or e-mailed to BDSSublabels@portlandoregon.gov.



6 / M1 MECHANICAL EQUIPMENT CURB W/SEISMIC BRACING SUPPORT

NO SCALE



6 / M1 MECHANICAL EQUIPMENT CURB W/SEISMIC BRACING SUPPORT

NO SCALE

AG Rolin Consulting
11300 SE Linny Lane, Boring, OR 97009
(503) 663-9960 Fax (503) 663-5647
AGROLIN@AOL.COM
STRUCTURAL DESIGN, ENGINEERING & CONSULTING

STRUCTURAL CALCULATIONS

PROJECT: Ecliptic Brewing RTUs

ADDRESS: Portland, Oregon

CLIENT: Viking Heating

JOB NUMBER: E1303

ATTACHED PLEASE FIND CALCULATIONS, SHEETS 1 THROUGH 6, DATED AUGUST 2013, WHICH VERIFY THE STRUCTURAL ADEQUACY OF THE ROOF FRAMING TO SUPPORT THE PROPOSED ROOFTOP UNITS FOR THE ABOVE REFERENCED PROJECT. DESIGN WAS BASED ON THE REQUIREMENTS OF THE 2010 OREGON STRUCTURAL SPECIALTY CODE.

AG Rolin Consulting STRUCTURAL DESIGN & ENGINEERING	Project ECLIPTIC RTU	By AGR	Sheet No. 1
	Location	Date 9 AUG	
	Client VIKING	Revised	Job No. E1303
		Date	

RUUD RTU

76 1/4" x 48" x 35" $W_T = 590^{\#}$

CURB - 14"

SEISMIC ANCHORAGE

$$F_p = \frac{.4 a_p S_{DS} W_T}{R_p/I}\left(1 + 2\frac{z}{h}\right) = \frac{.4(1.0)(.753)(590^{\#})}{(2.5/1.0)}(3)$$

$= 213^{\#}$

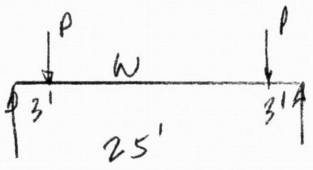
$F_{p/CORNER} = 53^{\#}$

$V_{\#3/16ga} = 120(1.33) = 160^{\#} > 53^{\#}$ ∴ ok

USE: (1) #3 x 1 1/2" @ EA CORNER

CHECK PURLINS 4x14 @ 48" o/c

MAX



$P = 147^{\#}$

$M = 10597^{\#'}$

$w = 40^{plf}$ / 100^{plf}

$f_b = 1196$ psi

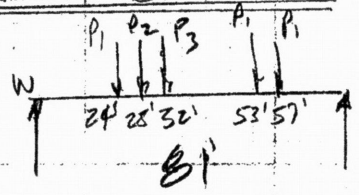
$F_b = 1523$ psi ok.

EX PURLINS OK

AG Rolin Consulting
STRUCTURAL DESIGN & ENGINEERING

Project ECLIPTIC RTU	By AGR	Sheet No. 2
Location	Date 9 AUG	
Client VIKING	Revised	Job No. E1303
	Date	

CHECK GIRDER 10"ϕ x #35, GLB



$P_1 = 18^{\#}$ $P_2 = 312^{\#}$ $P_3 = 294^{\#}$

$W = 250$
625

$M = 748093^{\#'}$ $f_b = 2177$ psi

$F_b = 2700$ psi ok.

EX GIRDER OK

ECLIPTIC BREWING

MCE Parameters - Conterminous 48 States
Zip Code - 97227 Central Latitude = 45.544734
Central Longitude = -122.676362

MCE MAP VALUES
Short Period Map Value - Ss = 104.3% g
1.0 sec Period Map Value - S1 = 34.2% g

RESIDENTIAL DESIGN INFORMATION
Short Period Map Value - Ss = 104.3% g
Soil Factor for Site Class D - Fa = 1.08
Residential Site Value = 2/3 x Fa x Ss = 75.3% g
Residential Seismic Design Category = D1

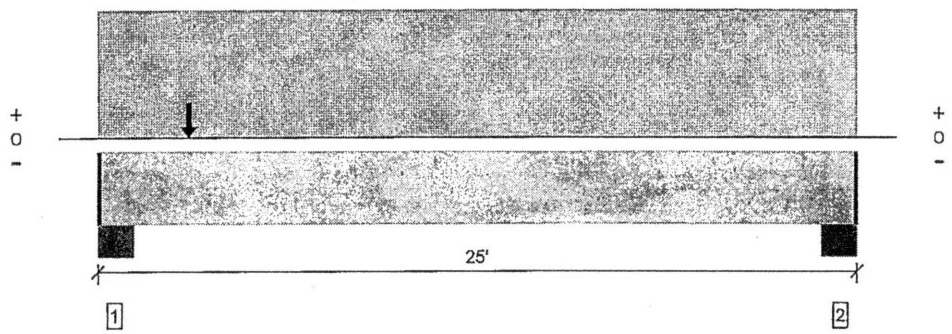
4
FAILED

FORTE® **MEMBER REPORT** *ROOF FRAMING, EX PURLIN*

1 piece(s) ~~4 x 12 Douglas Fir-Larch No. 1~~ 4x14

SEE PG 1

Overall Length: 25'



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	1993 @ 8 1/2"	19141 (8.75")	Passed (10%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	1743 @ 1' 9 1/4"	5434	Passed (32%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	10597 @ 12' 4 7/8"	7783	Failed (136%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.986 @ 12' 6"	0.786	Failed (L/287)	--	1.0 D + 1.0 S (All Spans)
Total Load Defl. (in)	1.507 @ 12' 5 5/8"	1.179	Failed (L/188)	--	1.0 D + 1.0 S (All Spans)

System : Roof
Member Type : Flush Beam
Building Use : Residential
Building Code : IBC
Design Methodology : ASD
Member Pitch: 0/12

- Deflection criteria: LL (L/360) and TL (L/240).
- Bracing (Lu): All compression edges (top and bottom) must be braced at 6" o/c unless detailed otherwise. Proper attachment and positioning of lateral bracing is required to achieve member stability.
- Applicable calculations are based on NDS 2005 methodology.

Supports	Bearing Length			Loads to Supports (lbs)			Accessories
	Total	Available	Required	Dead	Snow	Total	
1 - Beam - DF	10.00"	8.75"	1.50"	757	1250	2007	1 1/4" Rim Board
2 - Beam - DF	10.00"	8.75"	1.50"	638	1250	1888	1 1/4" Rim Board

- Rim Board is assumed to carry all loads applied directly above it, bypassing the member being designed.

Loads	Location	Tributary Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PLF)	0 to 25'	N/A	40.0	100.0	Snow
2 - Point (lb)	3'	N/A	148	-	
3 - Point (lb)	22'	N/A	-	-	

Weyerhaeuser Notes

Weyerhaeuser warrants that the sizing of its products will be in accordance with Weyerhaeuser product design criteria and published design values. Weyerhaeuser expressly disclaims any other warranties related to the software. Refer to current Weyerhaeuser literature for installation details. (www.woodbywy.com) Accessories (Rim Board, Blocking Panels and Squash Blocks) are not designed by this software. Use of this software is not intended to circumvent the need for a design professional as determined by the authority having jurisdiction. The designer of record, builder or framer is responsible to assure that this calculation is compatible with the overall project. Products manufactured at Weyerhaeuser facilities are third-party certified to sustainable forestry standards.

The product application, input design loads, dimensions and support information have been provided by Forte Software Operator

SUSTAINABLE FORESTRY INITIATIVE

Forte Software Operator	Job Notes
ADAM ROLIN AG ROLIN CONSULTING (503) 663-9960 AGROLIN@AOL.COM	ECLIPTIC BREWING

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Forte v4.1, Design Engine: V5.7.0.245

5

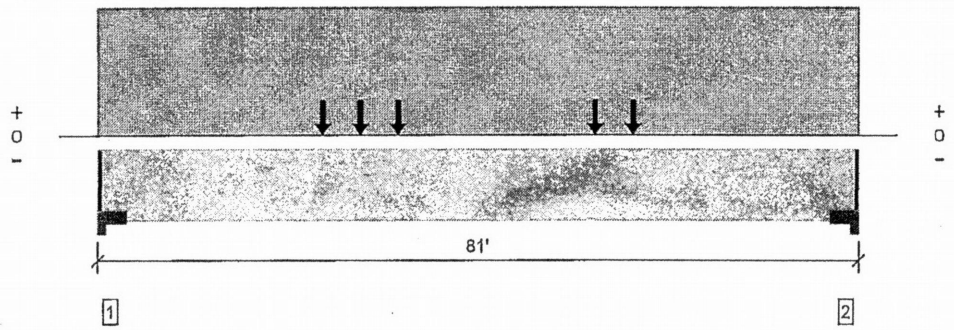
FAILED

FORTE® MEMBER REPORT *ROOF FRAMING, GIRDER*

1 piece(s) ~~8 3/4" x 24" 24F-V4 DF Glulam~~ 10 3/4 x 48

SEE PG 2

Overall Length: 81'



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	37815 @ 6 1/2"	38391 (6.75")	Passed (99%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	35442 @ 2' 8"	42665	Passed (83%)	1.15	1.0 D + 1.0 S (All Spans)
Pos Moment (Ft-lbs)	748893 @ 40' 1 15/16"	149496	Failed (501%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	31.614 @ 40' 6"	2.664	Failed (L/30)	--	1.0 D + 1.0 S (All Spans)
Total Load Defl. (in)	47.439 @ 40' 5 9/16"	3.996	Failed (L/20)	--	1.0 D + 1.0 S (All Spans)

System : Roof
Member Type : Flush Beam
Building Use : Residential
Building Code : IBC
Design Methodology : ASD
Member Pitch: 0/12

- Deflection criteria: LL (L/360) and TL (L/240).
- Bracing (Lu): All compression edges (top and bottom) must be braced at 6" o/c unless detailed otherwise. Proper attachment and positioning of lateral bracing is required to achieve member stability.
- Critical positive moment adjusted by a volume factor of 0.77 that was calculated using length L = 79' 11".
- The effects of positive or negative camber have not been accounted for when calculating deflection.
- The specified glulam is assumed to have its strong laminations at the bottom of the beam. Install with proper side up as indicated by the manufacturer.
- Applicable calculations are based on NDS 2005 methodology.

Supports	Bearing Length			Loads to Supports (lbs)			Accessories
	Total	Available	Required	Dead	Snow	Total	
1 - Column Cap - steel	8.00"	6.75"	6.65"	12594	25312	37906	1 1/4" Rim Board
2 - Column Cap - steel	8.00"	6.75"	6.62"	12440	25312	37752	1 1/4" Rim Board

- Rim Board is assumed to carry all loads applied directly above it, bypassing the member being designed.

Loads	Location	Tributary Width	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PLF)	0 to 81'	N/A	250.0	625.0	Snow
2 - Point (lb)	28'	N/A	312	-	
3 - Point (lb)	32'	N/A	294	-	
4 - Point (lb)	24'	N/A	18	-	
5 - Point (lb)	57'	N/A	18	-	
6 - Point (lb)	53'	N/A	18	-	

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SUSTAINABLE FORESTRY INITIATIVE

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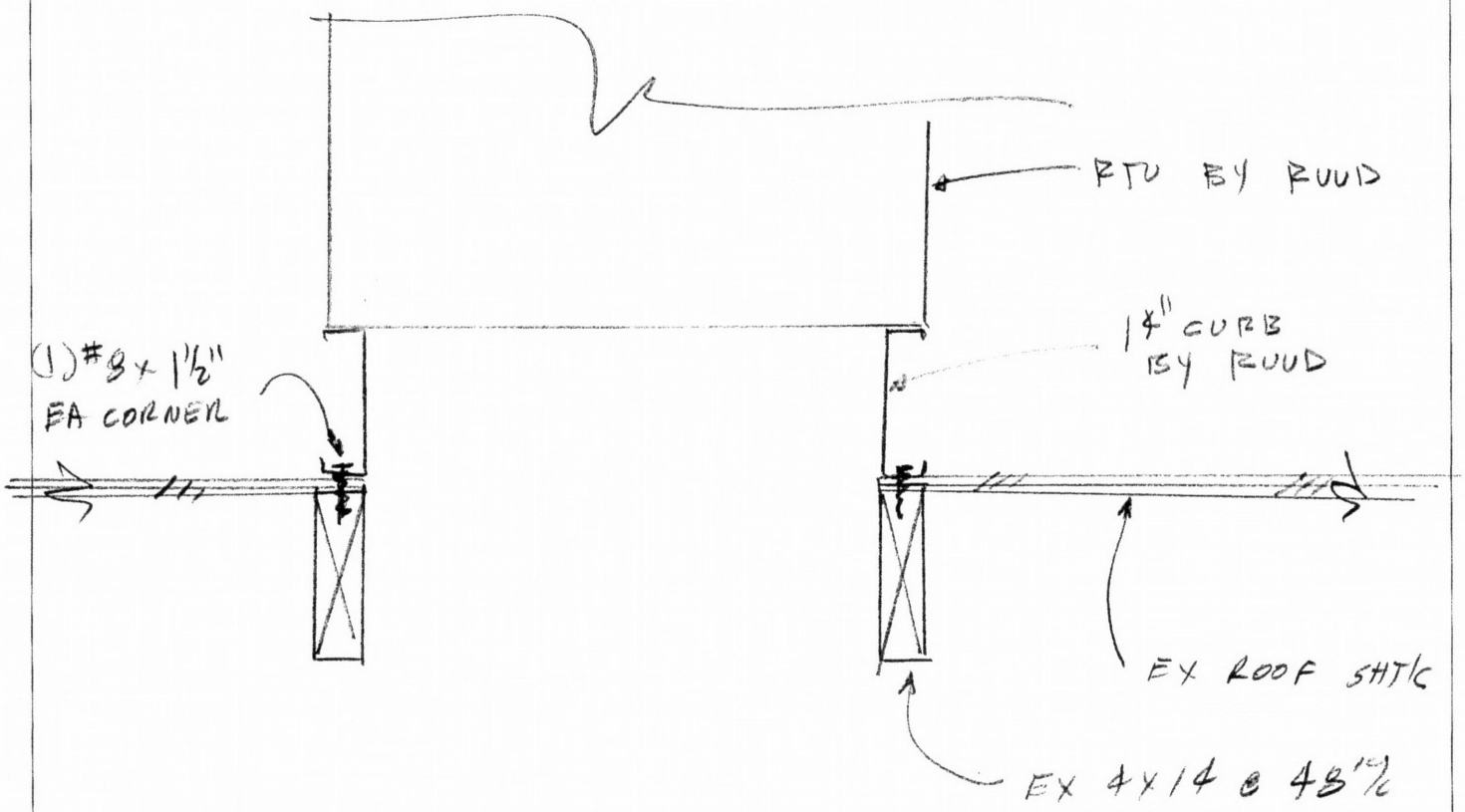
AG Rolin Consulting STRUCTURAL DESIGN & ENGINEERING	Project EQUITIC RTU	By AGR	Sheet No. 6
	Location	Date 9D AVG	
	Client VIKING	Revised	Job No. E1303
		Date	

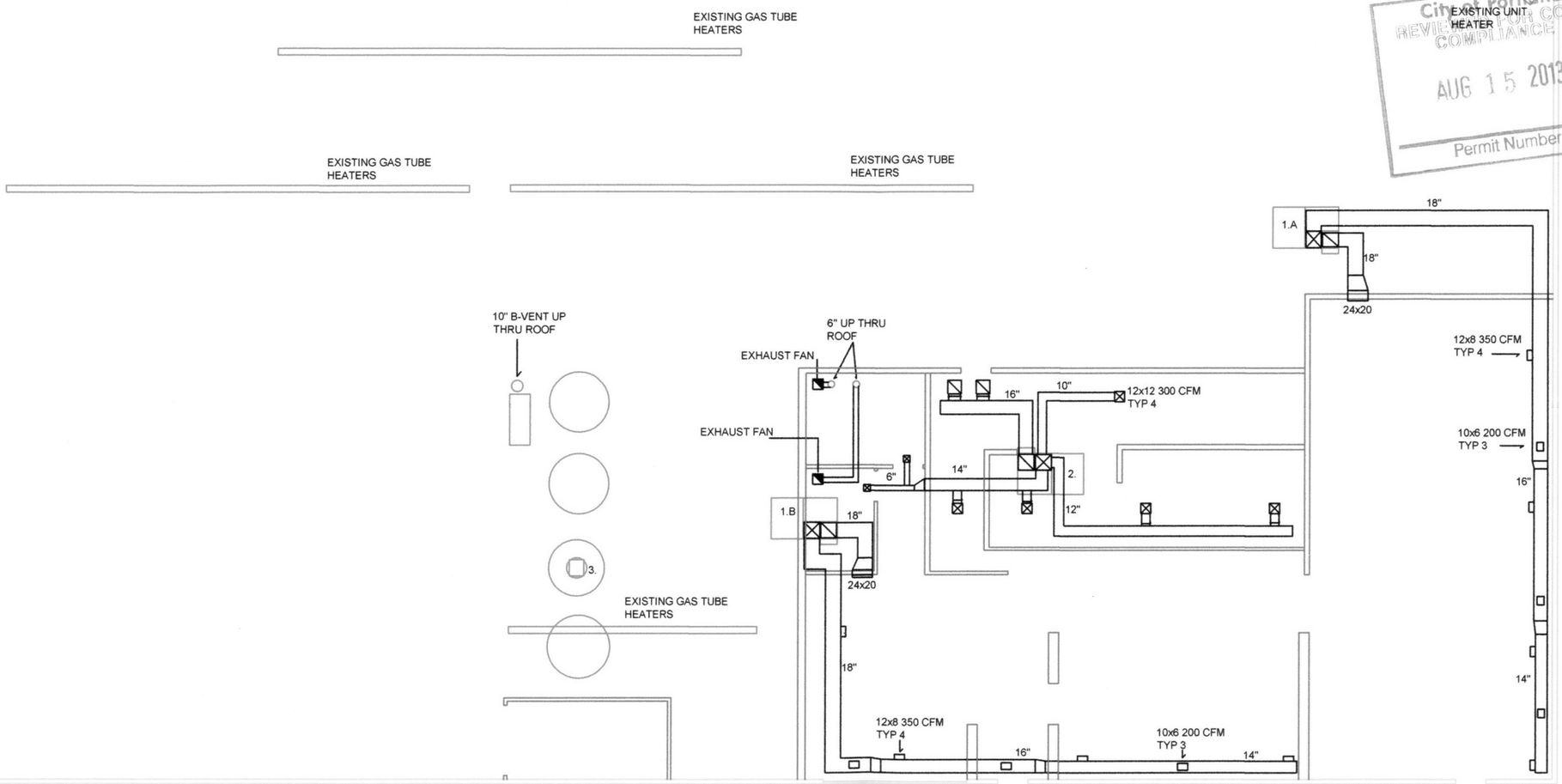


TYP SECTION

1.A-B 5TON PACKAGE UNIT MODEL RKNL-A060CK10E
5TON 13 SEER VOLTAGE 208-230 3PH WITH 100K BTU
ECONOMIZER AND SMOKE DETECTOR
SA 2000 CFM RA 1800 CFM OSA 200 CFM

2. 4TON PACKAGE UNIT MODEL RKNL-A048CK10E
4TON 13 SEER VOLTAGE 208-230 3PH WITH 100K BTU
ECONOMIZER AND SMOKE DETECTOR
SA 1600 CFM RA 1440 CFM OSA 160 CFM

3. GREENHECK FAN G95 5OO CFM



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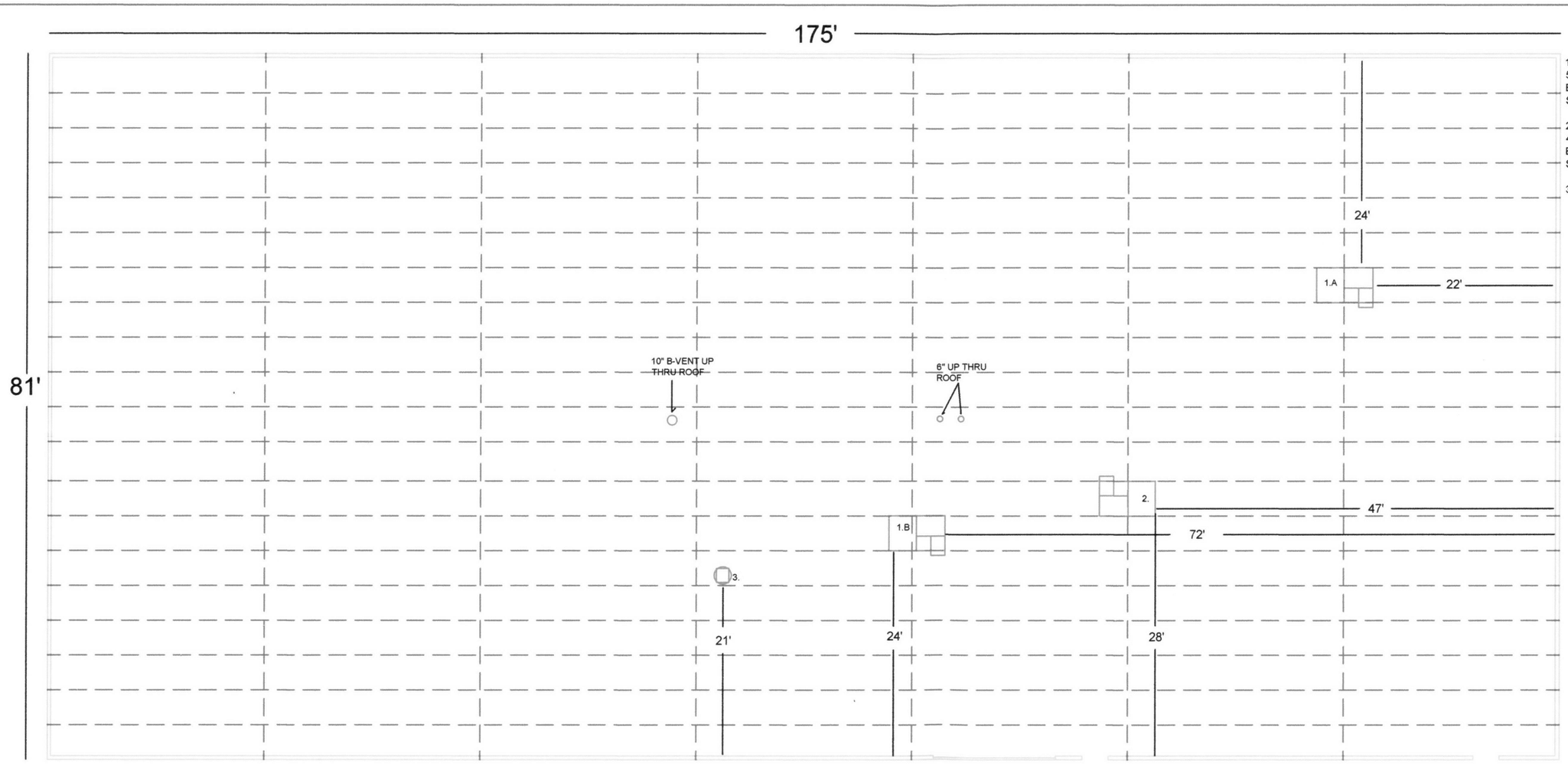
FLOOR PLAN

ECLIPTIC BREWING
825 N COOK ST

VIKING HEATING AND SHEETMETAL

13-19323

M1



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5TON 13 SEER VOLTAGE 208-230 3PH WITH 100K BTU
ECONOMIZER AND SMOKE DETECTOR
SA 2000 CFM RA 1800 CFM OSA 200 CFM

2. 4TON PACKAGE UNIT MODEL RKNL-A048CK10E
4TON 13 SEER VOLTAGE 208-230 3PH WITH 100K BTU
ECONOMIZER AND SMOKE DETECTOR
SA 1600 CFM RA 1440 CFM OSA 160 CFM

3. GREENHECK FAN G95 5OO CFM

ROOF PLAN

ECLIPTIC BREWING
825 N COOK ST

VIKING HEATING AND SHEETMETAL

M2