PCS Structural Solutions

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PRCTI20260747

STRUCTURAL CALCULATIONS

FOR

MARCOE'S CANDY WA STATE FAIR
110 9TH AVE SW
PUYALLUP, WA 98371

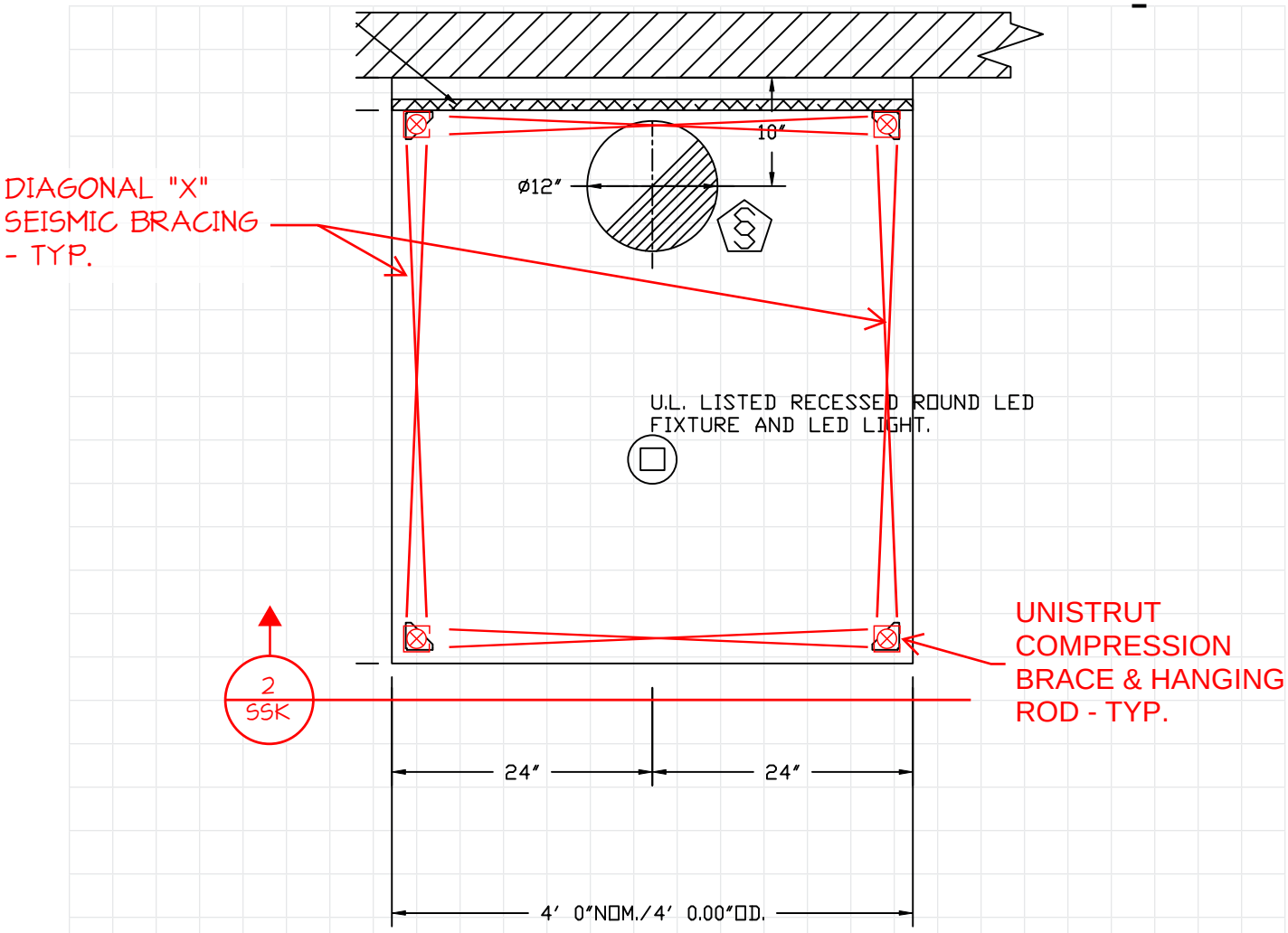
Calculations required to be provided by the Permittee on site for all Inspections

PREPARED BY
PCS STRUCTURAL *SOLUTIONS*

City of Puyallup
Development & Permitting Services
ISSUED PERMIT
Building | Planning
Engineering | Public Works
Fire | Traffic

City of Puyallup
Building
REVIEWED
FOR
COMPLIANCE
SKinnear
06/02/2026
9:51:01 AM
CITY OF PUYALLUP
STATE OF WASHINGTON

MAY 8, 2026
26-304

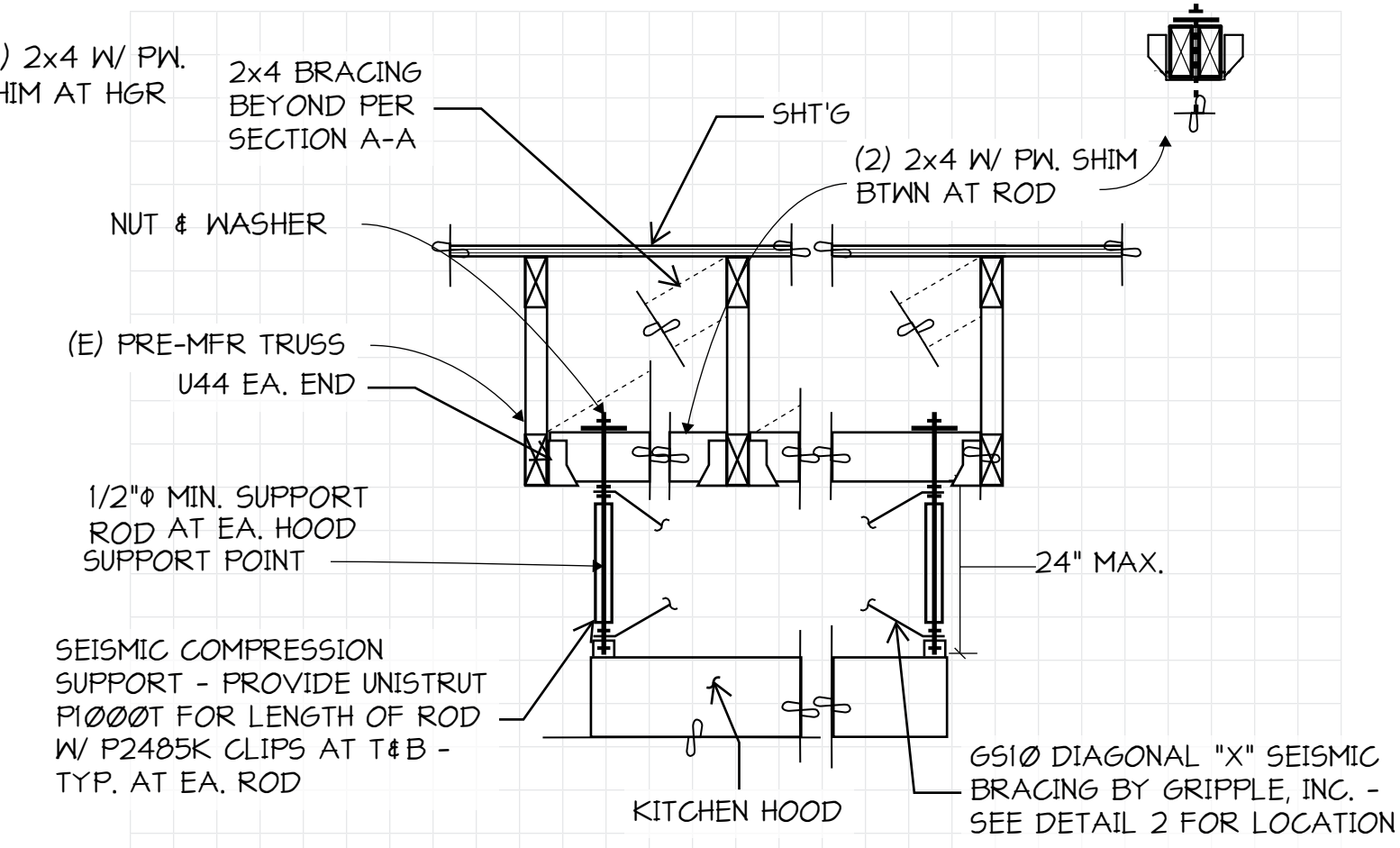


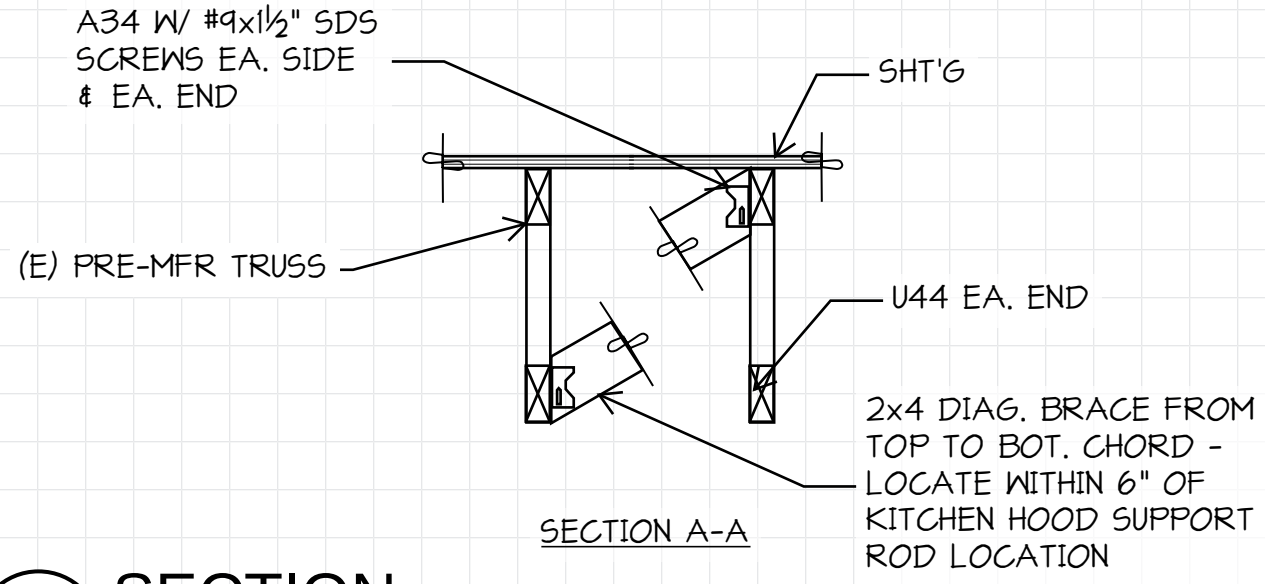
PLAN VIEW – HOOD #1 (KH)
4' 0.00" LONG 5412ESX-2

NOTES:

1. INDICATES SEISMIC BRACE CONNECTION - SEE DETAIL 2. (2) MINIMUM REQUIRED IN EACH DIRECTION FOR EACH KITCHED HOOD ((4) TOTAL MIN. PER KITCHEN HOOD). PROVIDE UNISTRUT COMPRESSION BRACE - TYPICAL EACH END OF SEISMIC BRACE - SEE NOTE 3.
2. INDICATES APPROXIMATE LOCATION OF GRAVITY HANGER CONNECTION - SEE DETAIL 2 FOR FURTHER INFORMATION. LOCATE HANGERS PER MANUFACTURER. FOLLOW HANGING ANGLE ASSEMBLY INSTRUCTIONS BY MANUFACTURER.
3. INDICATES GRAVITY HANGER W/ UNISTRUT P1000T COMPRESSION BRACE W/ P2485K CLIPS T&B

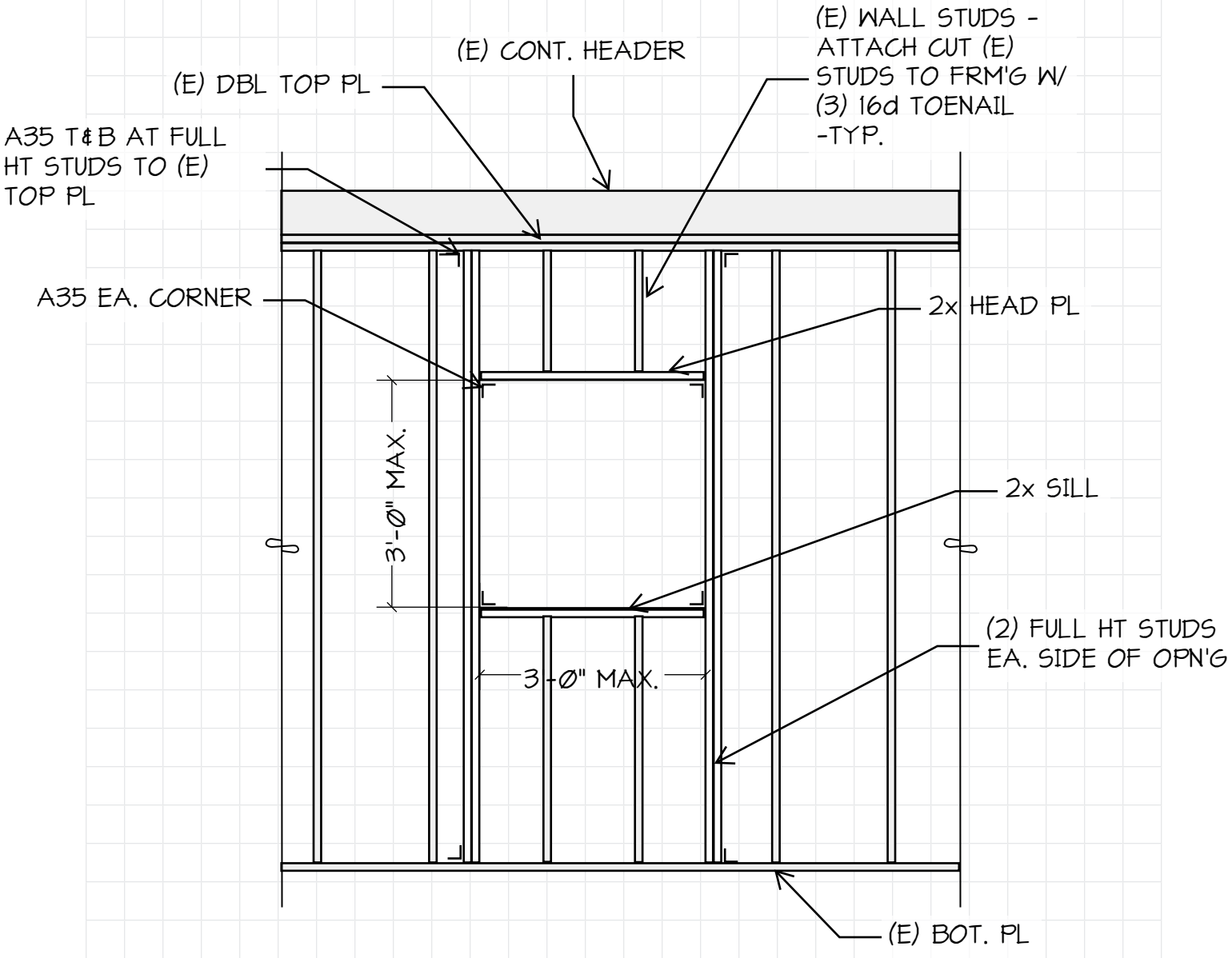
1 / SSK SECTION
NO SCALE





2 / SSK **SECTION**

NO SCALE



NOTES:

1. ATTACH EXISTING SHT'G TO NEW STUDS W/ 10d @ 6" O.C.
2. DEMOLISH AND PATCH WALL FINISHES AS REQUIRED TO INSTALL NEW FRAMING.

NEW LOUVER OPENING (36" MAX. x 36" MAX.)

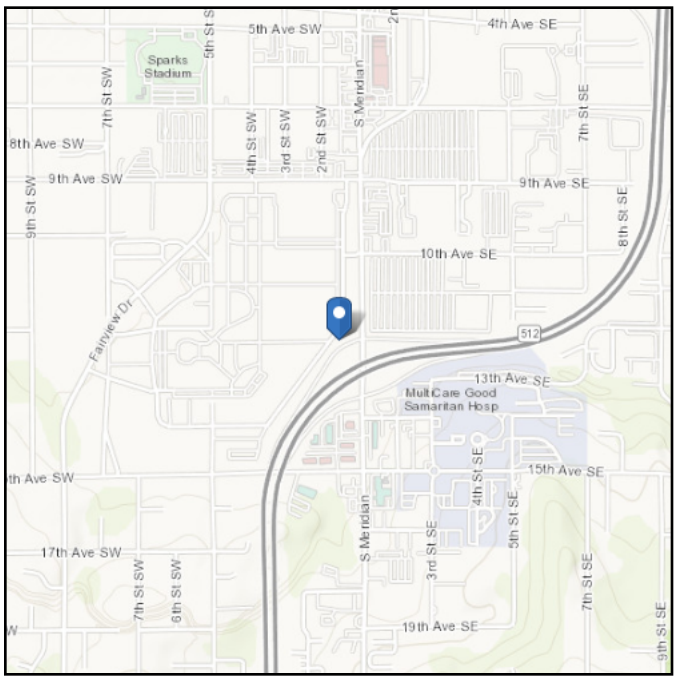
3 / SSK **DETAIL**

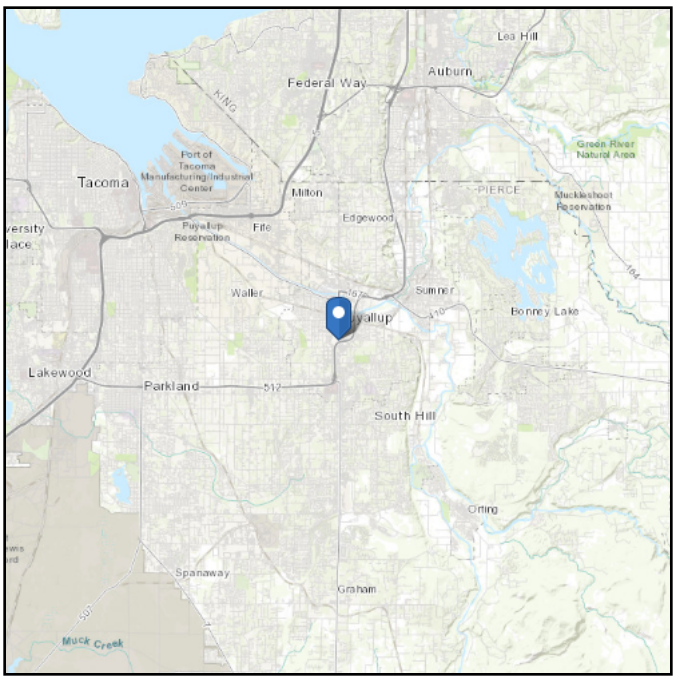
NO SCALE

ASCE Hazards Report

Address:
110 9th Ave SW
Puyallup, Washington
98371

Standard:	ASCE/SEI 7-16	**Latitude:**	47.18057
Risk Category:	II	**Longitude:**	-122.2944
Soil Class:	D - Stiff Soil	**Elevation:**	44.38853781479012 ft (NAVD 88)





Seismic

Site Soil Class: D - Stiff Soil

Results:

S_S :	1.269	S_{D1} :	N/A
S_1 :	0.437	T_L :	6
F_a :	1	PGA :	0.5
F_v :	N/A	PGA_M :	0.55
S_{MS} :	1.269	F_{PGA} :	1.1
S_{M1} :	N/A	I_e :	1
S_{DS} :	0.846	C_v :	1.354

Ground motion hazard analysis may be required. See ASCE/SEI 7-16 Section 11.4.8.

Data Accessed: Mon Apr 20 2026

Date Source: USGS Seismic Design Maps

The ASCE Hazard Tool is provided for your convenience, for informational purposes only, and is provided “as is” and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

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Kitchen Hood Support

Summary

The purpose of these calculations is to demonstrate that the anchorage and support for (1) kitchen hood, each weighing approximately 300 lb, is structurally adequate.

Design Criteria

Risk Category: II

Building Height: $H := 12 \cdot ft$

Unit Weights

Unit Name:	*Weight:*
Kitchen Hood:	$W_{p1} := 301 \cdot lbf$

Design Forces

Seismic Criteria

Site Class: D (Default)

Sds: $S_{DS} := 0.846$

From ASCE 7-16 CH. 13: Air-side HVAC

$a_p := 2.5$ $H = 12\ ft$ $I_p := 1.0$ $S_{DS} = 0.846$

$R_p := 6$ $z := 14 \cdot ft$ $\Omega := 2.0$

$$f_p := \frac{0.4 \cdot a_p \cdot S_{DS}}{\left(\frac{R_p}{I_p}\right)} \cdot \left(1 + 2 \cdot \frac{z}{H}\right) = 0.47 \qquad \text{(ASCE 13.3-1)}$$

$f_{pmax} := 1.6 \cdot S_{DS} \cdot I_p = 1.35$ (ASCE 13.3-2)

$f_{pmin} := 0.3 \cdot S_{DS} \cdot I_p = 0.25$ (ASCE 13.3-3)

Design Force (Horizontal): $f_p := min\left(f_{pmax}, \max\left(f_p, f_{pmin}\right)\right) = 0.47$

Design Force (Vertical): $f_{pv} := 0.2 \cdot S_{DS} = 0.17$

Support Design

Demands:

Weight: $W_p := W_{p1} = 301\ lbf$

Seismic Force (Vertical): $F_{Ev} := f_{pv} \cdot W_p = 50.9\ lbf$

Seismic Force (Horiz): $F_E := f_p \cdot W_p = 141.5\ lbf$

Allowable Axial Demand: $P_a := W_p + 0.7 \cdot F_{Ev} = 336.65\ lbf$

Bracing Angle: $\theta := 30 \cdot deg$

Anchor Rod Design:

Number of Vertical Supports: $n_v := 4$

Demand:

Anchor Rod Axial Demand: $P_{av} := \frac{P_a}{n_v} = 84.16\ lbf$

Capacity:

Anchor Rod Diameter: $D_r := 0.5 \cdot in$

Anchor Rod Area: $A_r := 0.25 \cdot \pi \cdot D_r^{\ 2} = 0.196\ in^2$

Anchor Rod Tensile Strength: $F_y := 36 \cdot ksi$

Reduction Factor: $\Omega := 1.67$

Tensile Capacity: $P_{n\Omega} := \frac{F_y \cdot A_r}{\Omega} = 4232.68\ lbf$ > $P_{av} = 84.16\ lbf$ OK

Unistrut Compression Strut Design:

Number of Braces: $n_b := 2$ (2) Tension only braces in each direction

Root Area of 1/2" Rod: $A_r := 0.126 \cdot in^2$

Comp Loading: $C_a := 0.6 \cdot \left(\frac{W_p - F_{Ev}}{n_v} \right) - \frac{F_E \cdot \tan(\theta)}{n_b} = -3.33\ lbf$

Allowable Compressive Strength of 1/2" Anchor Rod w/ P2485K Cradle Clips @ 21" O.C.

Allowable Rod Stress: $F_{yAR} := 3745 \cdot psi$

$C_{aAR} := \frac{F_{yAR} \cdot A_r}{\Omega} = 282.56\ lbf$ > $|C_a| = 3.33\ lbf$ OK

Use 1/2" Anchor Rod w/ P2485K Cradle Clips @ 21" O.C. w/ P1000T

Tension Brace Design:

Number of Braces: $n_b = 2$ (2) Tension only braces in each direction

Tension Load: $T_a := \frac{0.7\ F_E}{n_b \cdot \cos(\theta)} = 57.17\ lbf$

GS10 Gripple Seismic Brace Capacity: $T_{n\Omega} := 225 \cdot lbf$ > $|T_a| = 57.17\ lbf$ OK

Supporting Framing

Hanging rod attached to (2) 2x4 spanning 24" between trusses.

Span: $l := 24 \cdot in$

$A := 2 \cdot 1.5 \cdot in \cdot 3.5 \cdot in = 10.5\ in^2$

$S := 2 \cdot \frac{1.5 \cdot in \cdot (3.5 \cdot in)^2}{6} = 0.51\ ft \cdot in^2$

Hanging Point Load: $P_a := \frac{W_p + 0.7 \cdot F_{Ev}}{n_v} = 84.16\ lbf$

Moment Demand: $M_a := \frac{P_a \cdot l}{4} = 42.08\ lbf \cdot ft$ $f_b := M_a \cdot S^{-1} = 82.45\ psi$

Shear Demand: $V_a := \frac{P_a}{2} = 42.08\ lbf$ $f_v := \frac{3 \cdot V_a}{2 \cdot A} = 6.01\ psi$

(2) 2x4 DF #2 OK by inspection

Truss Bracing

2x4 Diag bracing from bot. chord to top chord w/ A34 Ea. End

Axial (ASD): $P_a := \frac{0.7 \cdot F_E \cdot {n_v}^{-1} \cdot 2}{\sqrt{2}} = 35.01\ lbf$

2x4 DF #2 diag brace OK by inspection. A34 w/ #9 screws tension allowable = 170# > 35# OK.

Existing Truss Framing Check

We have reviewed the existing truss calculation by MiTek USA, Inc dated June 27, 2025 and these calculations appear to include the hood and fan weight demands on the trusses. The combined hood and fan loading is less than the loading to the truss. Our review of the truss calculations is for loading criteria only and does not include the actual analysis of the truss. The design of the truss is per the truss engineer of record.

Weight of hood: $W_p = 301\ lbf$

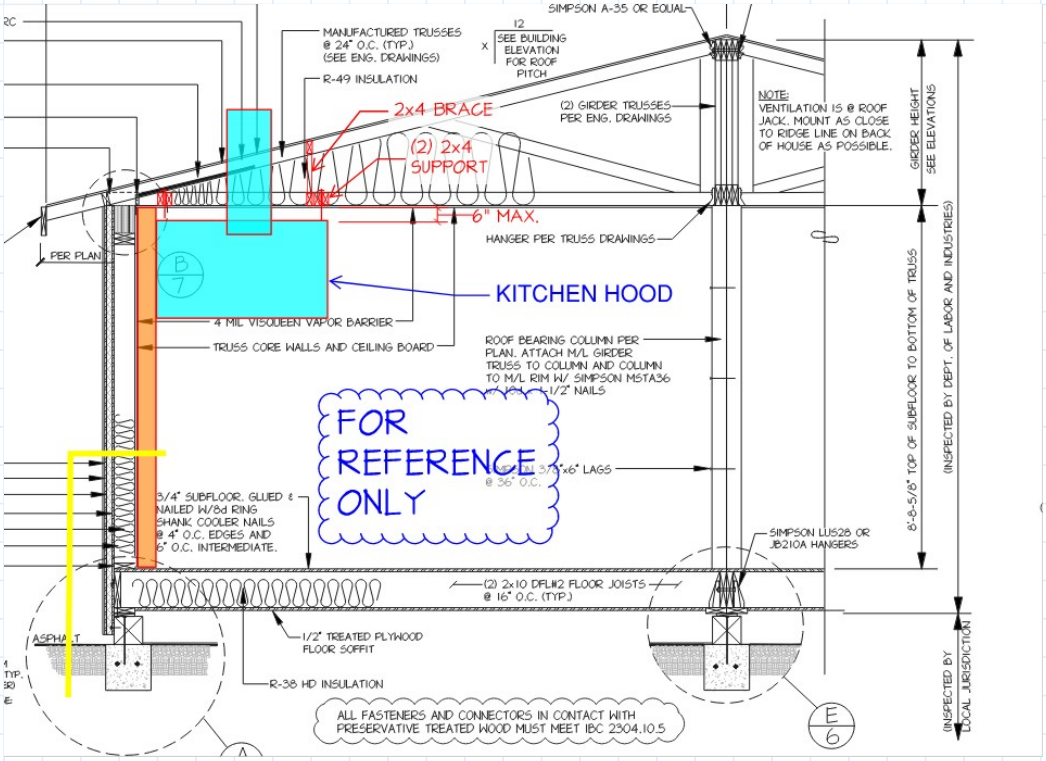
Weight of fan: $W_f := 71 \cdot lbf$

Hood Area: $A := 4 \cdot ft \cdot 4 \cdot ft = 16\ ft^2$

Unit Dead Load: $DL := \frac{W_p + W_f}{A} = 23.25\ psf$

Additional Weight included in Truss Calcs: 30 psf > $DL = 23.25\ psf$

The truss calculations for the supporting trusses have been included for reference



New 36"x36" Louver Check

Shear Wall Check

Checking the reduction of shear capacity using a perforated shear wall check per SDPWS 2021.

Height: $h := 8.67 \cdot ft$

Length: $L_1 := 4.17 \cdot ft$

$L_2 := 5.75 \cdot ft$

$L := L_1 + L_2 = 9.92\ ft$

Opening Area: $A_o := 3 \cdot ft \cdot 3 \cdot ft$

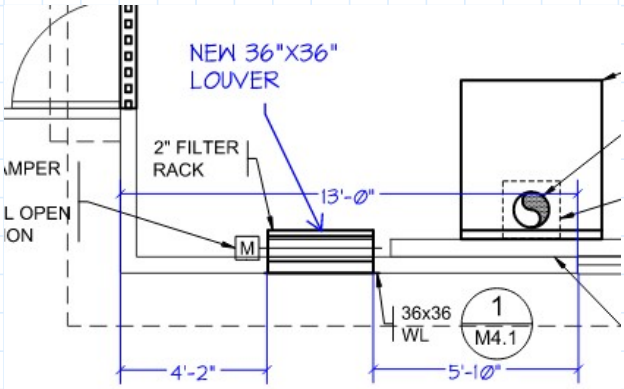
Shear Wall Area: $A_w := 112 \cdot ft^2$

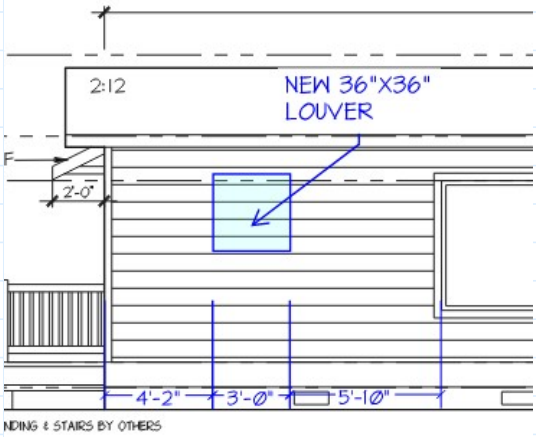
Sheathed Area: $A_{fhs} := h \cdot (L_1 + L_2) = 86.01\ ft^2$

$$WSP := min\left(1, 1.25 - 0.125 \cdot \frac{h}{L_2}\right) = 1$$ Aspect ratio is OK

(SDPWS Eq. 4.3-5) $$C_o := \frac{A_w}{(3 \cdot A_o + A_{fhs})} = 0.991$$

Less than a 1% reduction in shear capacity --> new opening OK by inspection.





Header Check

(3) 1-3/4"x7 1/4" SCL Cont. Header

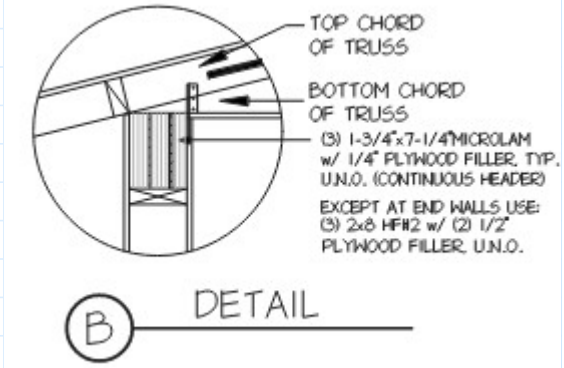
$L := 3 \cdot ft$

$DL := 20 \cdot psf$

$SL := 25 \cdot psf$

$trib := 7.5 \cdot ft$

See Enercalc --> existing header OK



Project Title: Marcoes Candy WA
Engineer: AOB
Project ID: 26304
Project Descr:

Wood Beam

Project File: Existing Truss Check 2026-04-16.ec6

DESCRIPTION: Existing Cont. Header

CODE REFERENCES

Calculations per NDS 2018, IBC 2021
Load Combination Set : ASCE 7-16

Material Properties

Analysis Method : Allowable Stress Design
Load Combination : ASCE 7-16

Wood Species : iLevel Truss Joist
Wood Grade : MicroLam LVL 2.0 E

Beam Bracing : Completely Unbraced

Fb +	2600 psi
Fb -	2600 psi
Fc - Prll	2510 psi
Fc - Perp	750 psi
Fv	285 psi
Ft	1555 psi

E : Modulus of Elasticity

Ebend- xx	2000 ksi
Eminbend - xx	1016.535 ksi
Density	42.01 pcf

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loading
Loads on all spans...
Uniform Load on ALL spans : D = 0.020, S = 0.0250 ksf, Tributary Width = 7.50 ft

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio	=	0.032 : 1	Maximum Shear Stress Ratio	=	0.038 : 1
Section used for this span		3-1.75x7.25	Section used for this span		3-1.75x7.25
fb: Actual	=	102.33 psi	fv: Actual	=	12.33 psi
F'b	=	3,193.50 psi	F'v	=	327.75 psi
Load Combination		+D+S	Load Combination		+D+S
Location of maximum on span	=	1.500 ft	Location of maximum on span	=	0.000 ft
Span # where maximum occurs	=	Span # 1	Span # where maximum occurs	=	Span # 1

Maximum Deflection

Max Downward Transient Deflection	0.001 in	Ratio =	34924	>=360	Span: 1 : S Only
Max Upward Transient Deflection	0 in	Ratio =	0	<360	n/a
Max Downward Total Deflection	0.002 in	Ratio =	18784	>=180	Span: 1 : +D+S
Max Upward Total Deflection	0 in	Ratio =	0	<180	n/a

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Max Stress Ratios M	V	CD	CM	C_t	CLx	C_F	Cfu	C_i	C_r	Moment Values M	fb	F'b	Shear Values V	fv	F'v
D Only														0.0	0.00	0.0	0.0
Length = 3.0 ft	1	0.019	0.022	0.90	1.00	1.00	1.00	1.071	1.00	1.00	1.00	0.18	47.3	2,500.8	0.14	5.7	256.5
+D+S					1.00	1.00	1.00	1.071	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 3.0 ft	1	0.032	0.038	1.15	1.00	1.00	1.00	1.071	1.00	1.00	1.00	0.39	102.3	3,193.5	0.31	12.3	327.8
+D+0.750S					1.00	1.00	1.00	1.071	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 3.0 ft	1	0.028	0.033	1.15	1.00	1.00	1.00	1.071	1.00	1.00	1.00	0.34	88.6	3,193.5	0.27	10.7	327.8
+0.60D					1.00	1.00	1.00	1.071	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 3.0 ft	1	0.006	0.008	1.60	1.00	1.00	1.00	1.071	1.00	1.00	1.00	0.11	28.4	4,438.1	0.09	3.4	456.0

Project Title: Marcoes Candy WA
Engineer: AOB
Project ID: 26304
Project Descr:

Wood Beam

Project File: Existing Truss Check 2026-04-16.ec6

DESCRIPTION: Existing Cont. Header

Overall Maximum Deflections

Span	Load Combination	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
1	+D+S	0.0019	1.511		0.0000	0.000

Vertical Reactions

Support notation : Far left is #1 Values in KIPS

Load Combination	Support 1	Support 2
Max Upward from all Load Conditions	0.523	0.523
Max Upward from Load Combinations	0.523	0.523
Max Upward from Load Cases	0.281	0.281
D Only	0.242	0.242
+D+S	0.523	0.523
+D+0.750S	0.453	0.453
+0.60D	0.145	0.145
S Only	0.281	0.281

Job	Truss	Truss Type	Qty	Ply	7161 MARCOE CANDY
J25001347-A	A2X	Monopitch	38	1	R88936995 Job Reference (optional)

Parr Truss Woodinville #207, Woodinville, WA - 98072,   Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2   Page: 1
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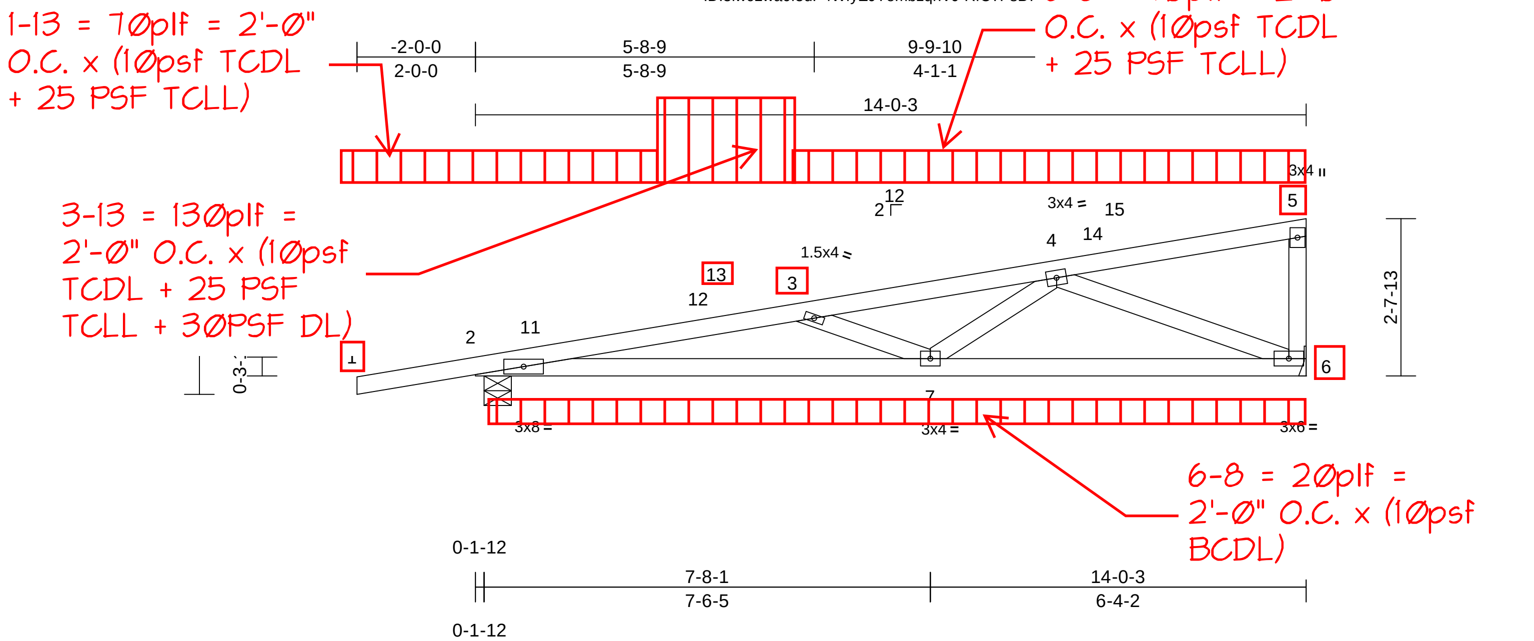


Scale = 1:38.9

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.51	Vert(LL)	-0.13	7-10	>999	360	MT20	220/195
(Roof Snow = 25.0)		Lumber DOL	1.15	BC	0.84	Vert(CT)	-0.24	7-10	>695	240		
TCDL	10.0	Rep Stress Incr	NO	WB	0.47	Horz(CT)	0.04	6	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MS		Wind(LL)	0.08	7-10	>999	240		
BCDL	10.0										Weight: 56 lb	FT = 20%

LUMBER
TOP CHORD 2x4 DF No.2
BOT CHORD 2x4 DF No.2
WEBS 2x4 DF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-2-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 7-10-13 oc bracing.

REACTIONS (size) 2=0-5-8, 6= Mechanical
Max Horiz 2=125 (LC 11)
Max Uplift 2=-227 (LC 10), 6=-148 (LC 11)
Max Grav 2=909 (LC 19), 6=790 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/39, 2-3=-2925/527, 3-4=-2118/334, 4-5=-72/40, 5-6=-163/72
BOT CHORD 2-7=-634/2872, 6-7=-346/1434
WEBS 3-7=-882/252, 4-7=-69/790, 4-6=-1508/338

NOTES
1) Wind: ASCE 7-16; Vult=110mph (3-second gust) Vasd=87mph; TCDL=5.5psf; BCDL=4.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Enclosed; MWFRS (directional) and C-C Exterior(2E) -2-0-0 to 1-0-0, Interior (1) 1-0-0 to 13-10-7 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pf=25.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
5) As requested, plates have not been designed to provide for placement tolerances or rough handling and erection conditions. It is the responsibility of the fabricator to increase plate sizes to account for these factors.
6) Plates checked for a plus or minus 20 degree rotation about its center.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 148 lb uplift at joint 6 and 227 lb uplift at joint 2.
11) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-13=-70, 3-13=-130 (F=-60), 3-5=-70, 6-8=-20

FOR REFERENCE ONLY

3-13 = 130plf = 2'-0" O.C. x (10psf TCDL + 25 PSF TCLL + 30PSF DL)

WEIGHT OF UNIT & FAN = 24 PSF --> OK

June 27,2025

MiTek®
400 Sunrise Ave., Suite 270
Roseville, CA 95661
916.755.3571 / MiTek-US.com

FOR QUESTIONS, CALL THE
Seattle Office
REGION 85
PHONE: (425) 212 - 5996
EMAIL: reg85@econair.com

PATENT NUMBERS

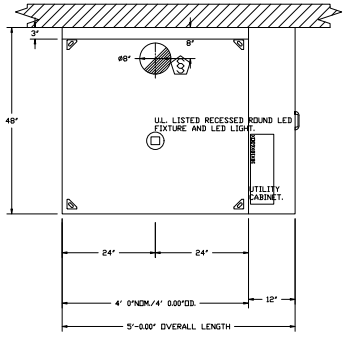
EXHAUST HOODS ND-2/BD-2/SND-2 (CANADA) - CA PATENT 2520435 C.

HOOD INFORMATION - JOB#8622463

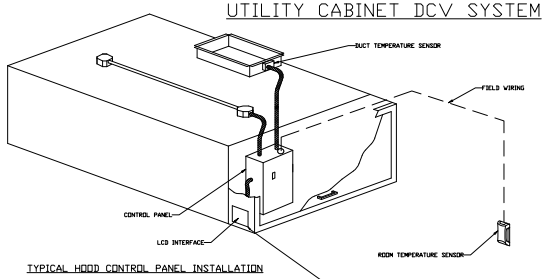
HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S)							HOOD CONSTRUCTION	HOOD CONFIG	
										WIDTH	LENG	HEIGHT	DIA	CFM	VEL	SP		END TO END	ROW
1		4824 EX-2	ECON-AIR	4' 0"	600 DEG	I	HEAVY	200	800			4"	8"	800	2292	-0.882"	430 SS WHERE EXPOSED	ALONE	ALONE

HOOD INFORMATION

HOOD NO	TAG	FILTER(S)					LIGHT(S)				UTILITY CABINET(S)				FIRE SYSTEM PIPING	HOOD HANGING WEIGHT
		TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY	TYPE	WIRE GUARD	LOCATION	SIZE	FIRE SYSTEM TYPE	FIRE SYSTEM SIZE	ELECTRICAL MODEL #	SWITCHES QUANTITY		
1		CAPTRATE SOLID FILTER	2	16"	20"	85% SEE FILTER SPEC	1	RECESSED ROUND	NO	RIGHT	12"x48"x24"			SC-11011000	1 LIGHT 1 FAN	NO	301 LBS

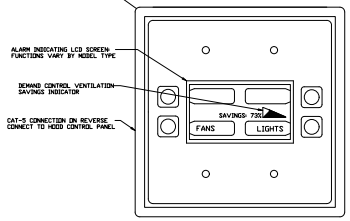


PLAN VIEW - HOOD #1
4' 0.00" LONG 4824EX-2

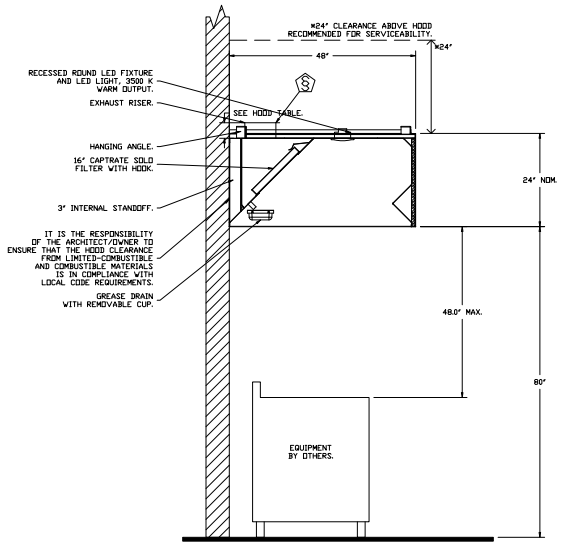


TYPICAL HOOD CONTROL PANEL INSTALLATION

UTILITY CABINET DCV SYSTEM



TYPICAL INTERFACE CONTROL



SECTION VIEW - MODEL 4824EX-2
HOOD - #1

FOR REFERENCE ONLY

SPECIFICATION: CAPTRATE® GREASE-STOP® SOLID FILTER

THE CAPTRATE GREASE-STOP SOLID FILTER IS A SINGLE-STAGE FILTER FEATURING A UNIQUE S-BAFFLE DESIGN IN CONJUNCTION WITH A SLOTTED REAR BAFFLE DESIGN, TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY.

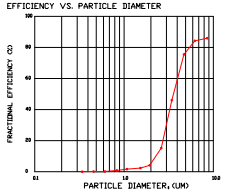
FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNEL(S).

UNITS SHALL INCLUDE STAINLESS STEEL HANDLES AND A FASTENING DEVICE TO SECURE THE TWO COMPONENTS WHEN ASSEMBLED.

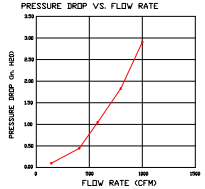
GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 85% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE.

THE CAPTRATE GREASE-STOP SOLID WAS TESTED TO ASTM STANDARD ASTM F2519-05.
MANUFACTURER APPROVED FOR USE IN SOLID FUEL APPLICATIONS AS A SPARK ARRESTER.

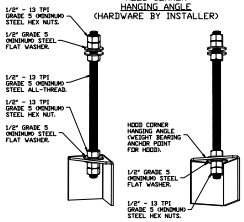
EFFICIENCY VS. PARTICLE DIAMETER



PRESSURE DROP VS. FLOW RATE



CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH:
NFPA #96.
NSF STANDARD #2.
UL STANDARD #1046.
INT. MECH. CODE (IMC).
ULC-S649.



HOOD CORNER HANGING ANGLE (HARDWARE BY INSTALLER)

ASSEMBLY INSTRUCTIONS

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD. SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION BENEATH HOOD HANGING ANGLES AND ABOVE CEILING ANCHORS. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.

REVISIONS

	DESCRIPTION	DATE
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Marcoe Candy Company - Puyallup, WA St For Revl
110 9th Avenue Southwest,
Puyallup, WA, 98371

DATE: 4/17/2026

DWG.#: 8622463

DRAWN BY:

SCALE: 3/4" = 1'-0"

MASTER DRAWING

SHEET NO. 1

EXHAUST FAN INFORMATION – JOB#8622463

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SONES
1	KEF	1	EADU33H	ECDN-AIR	800	0.650	1452	TEAO-ECM	0.333	0.2020	1	208	2.5	396 FPM	71	14.6

FAN ACCESSORIES

FAN UNIT NO	TAG	EXHAUST			SUPPLY			
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT
1	KEF	YES						

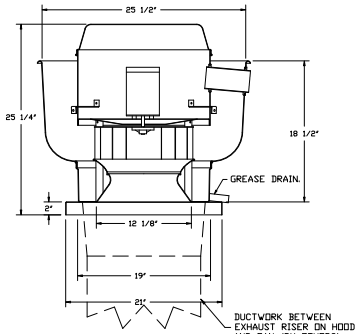
CURB ASSEMBLIES

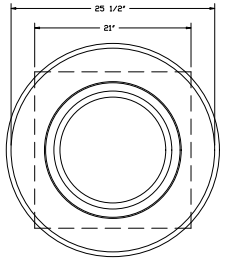
NO	ON FAN	TAG	WEIGHT	ITEM	SIZE
1	# 1	KEF	31 LBS	CURB	19.500"W X 19.500"L X 20.000"H 2.000-12.000 PITCH ALONG LENGTH, RIGHT VENTED HINGED.

FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
1	KEF	1	GREASE BOX
		1	FAN BASE CERAMIC SEAL - DU/DR30/33HFA - INSTALLED AT PLANT - FOR GREASE DUCTS
		1	ECM WIRING PACKAGE - PWM SIGNAL FROM ECPM03 PREWIRE (TELCO MOTOR), CCW ROTATION
		1	2 YEAR PARTS WARRANTY

FAN #1 EADU33H - EXHAUST FAN (KEF)





TOP VIEW

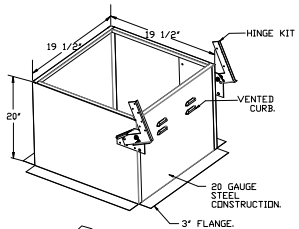
FEATURES:

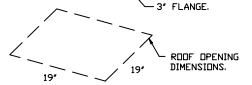
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705 AND UL762 AND ULC-S645
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.
- NEMA 3R SAFETY DISCONNECT SWITCH.

NORMAL TEMPERATURE TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

ABNORMAL FLARE-UP TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

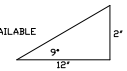
OPTIONS
- GREASE BOX.
- FAN BASE CERAMIC SEAL - DU/DR30/33HFA - INSTALLED AT PLANT - FOR GREASE DUCTS.
- ECM WIRING PACKAGE - PWM SIGNAL FROM ECPM03 PREWIRE (TELCO MOTOR), CCW ROTATION.
- 2 YEAR PARTS WARRANTY.





PITCHED CURBS ARE AVAILABLE FOR PITCHED ROOFS.

SPECIFY PITCH:
EXAMPLE: 7/12 PITCH = 30° SLOPE.



GREASE BOX INSTALLATION

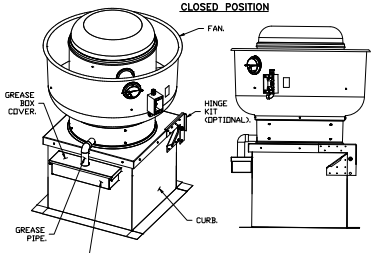
GREASEBOX
REV.02 08/19/02

PARTS INCLUDED

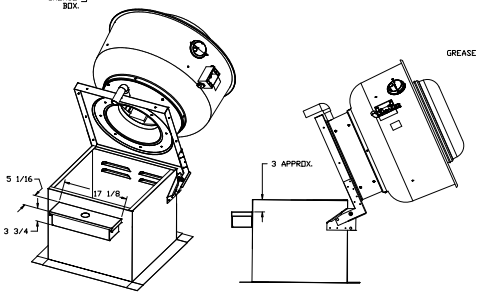
GREASE BOX.
GREASE BOX COVER.
GREASE PIPE.

SHEET METAL SCREWS 3 - LONG (3/4" LG.).

CLOSED POSITION



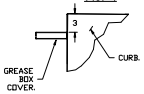
OPEN POSITION



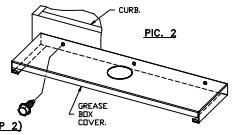
GREASE BOX FIELD INSTALLATION

STEP 1)
ATTACH GREASE BOX COVER TO THE CURB, HOLD 3" DIMENSION AS SHOWN ON PIC. 1. SCREW GREASE BOX COVER TO CURB USING (3) LONG (3/4" LG.) SCREWS AS SHOWN ON PIC. 2.

PIC. 1

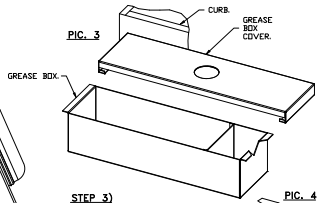


PIC. 2



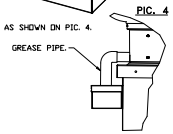
STEP 2)
ATTACH GREASE BOX TO GREASE BOX COVER, SLIDE AND DROP. AS SHOWN ON PIC. 3.

PIC. 3



STEP 3)
INSTALL GREASE PIPE AS SHOWN ON PIC. 4.

PIC. 4



*NOTE: UL 705 INSTALL.

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110 9th Avenue Southwest,
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MASTER DRAWING

SHEET NO. 2