

17469 TACO TIME | EAST MAIN PUYALLUP

DESIGN

1115 E MAIN, PUYALLUP 98372

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# PRSG20250425

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

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engineering must be posted on the job at all inspections in a

Approval of submitted plans is not an approval of omissions or oversights by this office or non compliance with any applicable regulations of local government. The contractor is responsible for making sure that the building complies with all applicable

PLUM 909 SC TACOD	PLUMB SIGNS, INC	SALES CARIN TAYLOR	SCALE NA	SHEET 1 OF 7
UND	TEL# 253-473-3323	CARTER / PETERSEN	START DATE 09.23.24	UPDATED R2 02.04.25





RTFORD GREEN

DESIGN 17469 TACO TIME | EAST MAIN PUYALLUP

PROJECT

1115 E MAIN, PUYALLUP 98372

INSTALL LOCATION

APPROVED BY/DATE

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# PRSG20250425

City of Puyallup Development & Permitting Services ISSUED PERMIT				
Building	Planning			
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Fire	Traffic			



# PRSG20250425





PRSG20250425

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	ENG	<u> SINE</u>	<u>ERI</u>	NG						
PROJECT: TACO TIME									DATE: 02/28/2025	
	PROJ. NO.:	50191A						E	ENGI	NEER: JC
	CLIENT:	PLUMB SI	IGNS							
V5.5								units; po	ounds,	feet unless noted otherwise
Δnn	lied Wind	l oads <sup>,</sup> f	rom Δ	SCF 7-	16 (I RF	יוס.			,	
<u> </u>	$F=q_*G*C*A$		with a	= 0.002	56K_K_K	$V^2$	(29328	294)		
	$C_{z} = C_{z}$	יי 1 // 2 2	(Fig 29	3_1)		f factor-	0.96	5 625	s r	max_beight= 6.50
	K =	1.400	(1 19. 20	-1 0 unlos			0.00			nax. noight 0.00
	K –	from toble	(20.0.2)	-1.0 unles	s unusuai iai		(DOOLIFO-	0		
	K –		20.J-1	a (tabla (		L/	(posure-	C		
	rt <sub>d</sub> -	0.0	ior sign	s (table .	20.0-1)					
	V=	110	mpn							
	G=	0.85	(26.9)				weight=	0.556	kips	
	s/h=	0.923					M <sub>DL</sub> =	0.000		
	B/s=	1.56								
Pole	structure	height at			pressure			Wind		
Loads	component	section c.a.	Kz	qz	g₂*G*C <sub>f</sub>	A <sub>f</sub>	shear	Moment M <sub>w</sub>		
	1	0.25	0.85	22.38	27.25	0.00	0	0	-	
	2	1.42	0.85	22.38	27.25	16.81	458	649		
	3	2.42	0.85	22.38	27.25	1.56	42	102		
	4	2.58	0.85	22.38	27.25	1.50	41	106		
	5	4.58	0.85	22.38	27.25	35.78	975	4469		
					sums:	55.64	1516	5.33	(M <sub>w</sub> )	k-ft arm= 3.5
tv	vo pole distributi	on factor *b*s	asce fig.	. 29.4-1 ):	x 0.74		1129	3.97		
	for s/	/h=1, add 10%	6 (asce fig	J. 29.4 <b>-</b> 1):	x 1.10			4.36		0
		$P_u =$	0.67	kip			M=	4.36	k-ft	M=sqrt(M <sub>DL</sub> <sup>2</sup> +M <sub>w</sub> <sup>2</sup> )
	M <sub>u</sub> =sqrt(1.2M <sub>DI</sub>	$L^2 + 1.0 M_W^2) =$	4.36	k-ft						
Pole	e Design		section	; tube						
		f <sub>y</sub> =	46	ksi	φ=	0.9				
	Н	M <sub>u</sub> (k-ft)	Z req	'd. (in)	Size(in)	t (in)	Z	USE		
	6" below grade	4.36	1.	26	2.5	0.188	1.3	8x8x1/8" Sq.	HSS, d	<u>−</u> ∲Mn = 24.8 k-ft
Foot	ting Desig	n		footp	rint: roun	d				
	ω=	1.33	IBC 1605.3	.2	IBC Tab	ole 1806.2,	sections 180	06.3.4, 1807.3.2		S=(2x1.33x150 psf/ft)
	P=	0.90	kip		S1 = S	x d / 3		A = 2.34 x P	/ (S1 x	(b) S= 399
	S1=	525			d =0.5	xA (1+ (1	+4.36x h/A	) ^.5)		IBC 1807.3.2.1
	A=	2.01								
					footing:	2' - 0	" dia.		3' -	- 11" deep
					Ũ					·
		City of Development & I	Puyallup Permitting Serv	vices						
		Building	Planning							
		Engineering	Public Wor	ks						
		Fire	Traffic							

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# SULLAWAY ENGINEERING

PROJECT: TACO TIME

PROJ. NO.: 50191A

V5.5

CLIENT: PLUMB SIGNS

DATE: 02/28/2025 ENGINEER: JC

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

units; pounds, f	eet unless	noted	otherwise
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#### Check 12x12x0.25" Steel Base Plate, A36 (LRFD):

arm =1.200 in	b = 12.00 in t = 0.375 in	n=2
Mplate =	T per bolt * arm * n=	6.091 k-in (T= 2.538 k from Simpson)
Z=	bt^2/4=	0.422 in <sup>3</sup>
φMn =	φ*Fy*Z = 0.9*36ksi*Z =	13.669 k-in <b>OK</b>

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# SIMPSON

Strong-Tie

## Anchor Designer™ Software Version 3.1.2301.3

# Company:Date:2/28/2025Engineer:Page:1/6Project:Address:Phone:E-mail:

#### 1.Project information

Customer company: Customer contact name: Customer e-mail: Comment:

#### 2. Input Data & Anchor Parameters

**General** Design method:ACI 318-14 Units: Imperial units

#### Anchor Information:

Anchor type: Cast-in-place Material: AB Diameter (inch): 0.500 Effective Embedment depth, h<sub>ef</sub> (inch): 24.000 Anchor category: -Anchor ductility: Yes h<sub>min</sub> (inch): 25.88 Cmin (inch): 3.00 S<sub>min</sub> (inch): 3.00

Recommended Anchor Anchor Name: PAB Pre-Assembled Anchor Bolt - PAB4 (1/2"Ø)



Prior to installation:

Review anchor product's ICC-ES Report and install the product per the report. If the report states special inspection(s) are required - the final special inspection report must be on site during City inspections.

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Input data and results must be checked for agreement with the existing circumstances, the standards and guidelines must be checked for plausibility. Simpson Strong-Tie Company Inc. 5956 W. Las Positas Boulevard Pleasanton, CA 94588 Phone: 925.560.9000 Fax: 925.847.3871 www.strongtie.com

Project description: Location: Fastening description:

#### Base Material

Concrete: Normal-weight Concrete thickness, h (inch): 47.00 State: Cracked Compressive strength, f'<sub>c</sub> (psi): 2500  $\Psi_{c,V}$ : 1.0 Reinforcement condition: B tension, B shear Supplemental edge reinforcement: Not applicable Reinforcement provided at corners: No Ignore concrete breakout in tension: No Ignore concrete breakout in shear: No Ignore 6do requirement: No Build-up grout pad: No

#### **Base Plate**

Length x Width x Thickness (inch): 12.00 x 12.00 x 0.37 Yield stress: 36000 psi

Profile type/size: HSS8X8X1/8





Company:	Date:	2/28/2025
Engineer:	Page:	2/6
Project:		
Address:		
Phone:		
E-mail:		

#### Load and Geometry

Load factor source: ACI 318 Section 5.3 Load combination: not set Seismic design: No Anchors subjected to sustained tension: Not applicable Apply entire shear load at front row: No Anchors only resisting wind and/or seismic loads: No

Strength level loads:

 $\begin{array}{l} N_{ua} \; [lb]: \; 0 \\ V_{uax} \; [lb]: \; 0 \\ V_{uay} \; [lb]: \; 1129 \\ M_{ux} \; [ft-lb]: \; -4360 \\ M_{uy} \; [ft-lb]: \; 0 \\ M_{uz} \; [ft-lb]: \; 0 \end{array}$ 





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Anchor Designer™ Software Version 3.1.2301.3

-		
Company:	Date:	2/28/2025
Engineer:	Page:	3/6
Project:		
Address:		
Phone:		
E-mail:		

<Figure 2>



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# PRSG20250425

# SIMPSON Anchor Designer™ Strong-Tie Software Version 3.1.2301.3

nor Designer™ ware	Company:	Date:	2/28/2025	
	Engineer:	Page:	4/6	
	Project:			
n 3.1.2301.3	Address:			
	Phone:			
	E-mail:			

<Figure 3>

### 3. Resulting Anchor Forces

Anchor	Tension load, N <sub>ua</sub> (Ib)	Shear load x, V <sub>uax</sub> (lb)	Shear load y, V <sub>uay</sub> (Ib)	Shear load combined, $\sqrt{(V_{uax})^2 + (V_{uay})^2}$ (lb)
1	0.0	0.0	282.3	282.3
2	2537.1	0.0	282.3	282.3
3	0.0	0.0	282.3	282.3
4	2537.1	0.0	282.3	282.3
Sum	5074.3	0.0	1129.0	1129.0

Maximum concrete compression strain (‰): 0.09 Maximum concrete compression stress (psi): 408 Resultant tension force (lb): 5074 Resultant compression force (lb): 5074 Eccentricity of resultant tension forces in x-axis, e'<sub>Nx</sub> (inch): 0.00 Eccentricity of resultant tension forces in y-axis, e'<sub>Ny</sub> (inch): 0.00

Eccentricity of resultant shear forces in x-axis,  $e'_{Vx}$  (inch): 0.00 Eccentricity of resultant shear forces in y-axis,  $e'_{Vy}$  (inch): 0.00



#### 4. Steel Strength of Anchor in Tension (Sec. 17.4.1)

N <sub>sa</sub> (lb)	$\phi$	$\phi N_{sa}$ (lb)
8235	0.75	6176

#### 5. Concrete Breakout Strength of Anchor in Tension (Sec. 17.4.2)

$N_b = 16 \lambda_a \sqrt{2}$	f' <sub>c</sub> h <sub>ef</sub> <sup>5/3</sup> (Eq. 17.	4.2.2b)							
λa	f′₀ (psi)	<i>h</i> ef (in)	N <sub>b</sub> (Ib	)					
1.00	2500	9.953	3684	4					
$\phi N_{cbg} = \phi (A$	Nc / ANco) Yec,N Y	Ved,N ¥c,N ¥cp,NN	b (Sec. 17.3.	l & Eq. 17.4.2	.1b)				
$A_{Nc}$ (in <sup>2</sup> )	$A_{Nco}$ (in <sup>2</sup> )	c <sub>a,min</sub> (in)	$\Psi_{ec,N}$	$\Psi_{ed,N}$	$\Psi_{c,N}$	$\Psi_{cp,N}$	N <sub>b</sub> (lb)	$\phi$	$\phi N_{cbg}$ (lb)
394.42	891.62	4.93	1.000	0.799	1.00	1.000	36844	0.70	9117

#### 6. Pullout Strength of Anchor in Tension (Sec. 17.4.3)

$\phi N_{pn} = \phi$	$\Psi_{c,P}N_{p} = \phi \Psi_{c,P} 8A_{brg}f'$	c (Sec. 17.3.1	, Eq. 17.4.3.1 8	4 17.4.3.4)
$\Psi_{c,P}$	Abrg (in <sup>2</sup> )	f'c (psi)	$\phi$	$\phi N_{pn}$ (Ib)
1.0	1.57	2500	0.70	21994

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				Comp	anv:			Date <sup>.</sup>	2/28/2025	
SIIVIP	SON And	hor Desig	gner™	Engine	er:			Page:	5/6	
Strong	Soft	ware		Projec	t:			1		
Num	Versic	on 3.1.2301.3	3	Addres	ss:					
	ß			Phone	:					
				E-mail	:					
$\frac{7. \text{ Side-Fac}}{\phi N_{sbg}} = \phi\{(1 \\ s \text{ (in)} \\ 10.00 \end{bmatrix}$	$\frac{\text{ce Blowout Str}}{1+c_{a2}/c_{a1}}/4}(1+s)$ $\frac{c_{a1}}{4}(1+s)$	$\frac{ength of An}{c_{a1}}N_{sb} = \phi_{1}$ $\frac{c_{a2} (in)}{4.93}$	$\frac{\text{chor in Tensic}}{(1+c_{a2}/c_{a1})/4}(1)$ $\frac{A_{brg} (\text{in}^2)}{1.57}$	on (Sec. 17.4.4 +s/6ca1)(160ca1 λa 1.00	) √A <sub>brg</sub> )λ√f' <sub>c</sub> (Sec f' <sub>c</sub> (psi) 2500	c. 17.3.1	l, Eq. 17.4.4.1 a	& 17.4.4.2)		
10.00	4.00	4.00	1.07	1.00	2000		0.10	20101		
8. Steel St	renath of Anch	or in Shear	(Sec. 17.5.1)							
V <sub>sa</sub> (lb)	darout	φ	φαrout ΦV sa	(lb)						
4940	1.0	0.65	3211	()					City of Puy Development & Perm	allup itting Service
1010		0.00	0211						ISSUED PE	RMIT
9. Concret	e Breakout Str	ength of An	chor in Shear	(Sec. 17.5.2)					Engineering	
Shear perp	pendicular to e	dge in y-dir	ection:						Fire	Traffic
$V_{by} = \min[7]$	$(I_e / d_a)^{0.2} \sqrt{d_a \lambda_a} \sqrt{f}$	"c <b>C</b> a1 <sup>1.5</sup> ; 9λa√ <b>f</b>	/c <b>c</b> a1 <sup>1.5</sup>   (Eq. 17.5	5.2.2a & Eq. 17	.5.2.2b)				THO OF MISS	
le (in)	d <sub>a</sub> (in)	λa	f'c (psi)	Ca1 (in)	V <sub>by</sub> (lb)	1				
4.00	0.500	1.00	2500	14.93	21640		_			
$\phi V_{cbgy} = \phi (\mu$	Avc / Avco) Ψec, v Ψ	led, V Ψc, V Ψh, VVt	y (Sec. 17.3.1 8	Eq. 17.5.2.1b)						
Avc (in <sup>2</sup> )	Avco (in <sup>2</sup> )	$\Psi_{ec,V}$	$\Psi_{ed,V}$	Ψ <sub>c,V</sub>	$\Psi_{h,V}$		V <sub>by</sub> (lb)	φ	$\phi V_{cbgy}$ (lb)	
444.76	1003.07	1.000	0.766	1.000	1.000		21640	0.70	5145	
$v_{by} = \min\{7\}$ $l_e$ (in)	$\frac{d_a (in)}{0.500}$	$\lambda_a$	<i>c</i> ca1 <sup>m</sup> (Eq. 17.5 <i>f</i> ' <sub>c</sub> (psi)	C <sub>a1</sub> (in)	.5.2.20) V <sub>by</sub> (lb)		_			
4.00	$\frac{1}{2}\left(A_{14},A_{14},W\right)$	1.00	2300	4.93 1 17521(c) 8	4100					
$\varphi v cog x - \varphi (x - Q x)$	$\frac{A_{Vco}(in^2)}{4}$	V I ed, V I C, V I II,	Ψ <sub>-1</sub> γ	Ψ.V	Ψ <sub>L</sub> , 17.3.2.10)		V <sub>bv</sub> (lb)	ø	dVatary (lb)	
146.86	109 37	1 000	1 000	1 000	1 000		4106	$\varphi$	7719	_
$\frac{10. \text{ Concre}}{\phi V_{cpg}} = \phi k_{cp}$ $k_{cp}$	ete Pryout Stre N <sub>cbg</sub> = φk <sub>cp</sub> (A <sub>Nc</sub> / A <sub>Nc</sub> (in <sup>2</sup> )	<mark>ngth of Anc</mark> Ά <sub>Νco</sub> ) Ψ <sub>ec,Ν</sub> Ψ <sub>e</sub> Α <sub>Nco</sub> (in <sup>2</sup> )	<mark>hor in Shear (</mark> <sub>d,N</sub> Ψ <sub>c,N</sub> Ψ <sub>cp,N</sub> N <sub>b</sub> (S Ψ <sub>ec,N</sub>	<mark>Sec. 17.5.3)</mark> Sec. 17.3.1 & E¢ <i>Ψ<sub>ed,N</sub></i>	q. 17.5.3.1b) <i>Ψ<sub>c,N</sub></i>	$\Psi_{cp,N}$	<i>N</i> ь (Ib)	φ	$\phi V_{cpg}$ (Ib)	
2.0	394.42	100.00	1.000	0.996	1.000	1.000	5951	0.70	32720	
<u>11. Results</u> Interaction	<u>§</u>	d Shaar Ear	(5 47.0)							
	of Tensile and	a Shear Ford	ces (Sec. 17.6)							
Tension	of Tensile and	Factored Lo	bad, Nua (Ib)	Design Stren	gth, øN₁ (lb)	Ratio		Status		
Tension Steel		Factored Lo	ces (Sec. 17.6) bad, Nua (Ib)	Design Stren 6176	gth, øNn (lb)	Ratio		Status Pass	0	
Tension Steel Concrete	breakout	Factored Lo 2537 5074	oad, N <sub>ua</sub> (Ib)	Design Stren 6176 <b>9117</b>	gth, øN₁ (lb)	Ratio 0.41 <b>0.56</b>		Status Pass <b>Pass (</b>	Governs)	
Tension Steel Concrete Pullout	breakout	Factored Lo 2537 5074 2537	ces (Sec. 17.6) bad, Nua (Ib)	Design Stren 6176 <b>9117</b> 21994 23151	gth, øN₁ (lb)	Ratio 0.41 <b>0.56</b> 0.12		Status Pass <b>Pass</b> ( Pass	Governs)	
Tension Steel Concrete Pullout Side-face	breakout	Factored Lo 2537 5074 2537 5074	bad, Nua (Ib)	Design Stren 6176 <b>9117</b> 21994 23151	gth, ø№ (lb)	Ratio 0.41 0.56 0.12 0.22		Status Pass Pass ( Pass Pass	Governs)	
Tension Steel <b>Concrete</b> Pullout Side-face Shear	breakout	Factored Lo 2537 5074 2537 5074 Factored Lo	bad, N <sub>ua</sub> (Ib)	Design Stren 6176 <b>9117</b> 21994 23151 Design Stren	gth, øNn (lb) gth, øVn (lb)	Ratio 0.41 0.56 0.12 0.22 Ratio		Status Pass Pass ( Pass Pass Status	Governs)	
Tension Steel <b>Concrete</b> Pullout Side-face Shear Steel	breakout blowout	Factored Lo 2537 5074 2537 5074 Factored Lo 282	oad, N <sub>ua</sub> (Ib)	Design Stren 6176 <b>9117</b> 21994 23151 Design Stren 3211	gth, øNn (lb) gth, øVn (lb)	Ratio 0.41 0.56 0.12 0.22 Ratio 0.09		Status Pass Pass ( Pass Pass Status Pass	Governs)	
Tension Steel Concrete Pullout Side-face Shear Steel T Concre	breakout blowout	Factored Lo 2537 5074 2537 5074 Factored Lo 282 1129 565	bad, N <sub>ua</sub> (Ib)	Design Stren 6176 9117 21994 23151 Design Stren 3211 5145 7719	gth, øNn (lb) gth, øVn (lb)	Ratio 0.41 0.56 0.12 0.22 Ratio 0.09 0.22 0.27		Status Pass Pass ( Pass Pass Status Pass Pass (	Governs) Governs)	

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SIMPSON	SIMPSON Anchor Designer™			Company:					2/28/2025	
				Engineer:					6/6	
Strong-Tie Software				Project:			·			
	Version 3.1.2301.3			Address:						]
6				Phone:						]
				E-mail:						]
Pryout	1129		3272	20	0.0	)3	Pa	SS		
Interaction check	Nua/øNn	Vua/øVn		Combine	d Ratio	Permissible	Sta	atus		
Sec. 17.6.1	0.56	0.00		55.7%		1.0	Pa	SS		

PAB4 (1/2"Ø) with hef = 24.000 inch meets the selected design criteria.

#### 12. Warnings

- Designer must exercise own judgement to determine if this design is suitable.

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