MODERN BUILDING SYSTEMS

PO Box 110 • 9493 Porter Rd • Aumsville, OR 97325
800.682.1422 ModernBuildingSystems.com

JOB #2023-LU 2514-2515 Puyallup SD	
CALCULATED BY MCL	DATE 5/30/2023
CHECKED BY	DATE
SCALE	

PRPF20241042

STRUCTURAL FOUNDATION CALCULATIONS (PER 2021 IBC) FOR 28' X 64' MODULAR

MATERIAL SUMMARY	MS-1
FOUNDATION ANALYSIS	FDN-1 --> FDN-8
LOADING ANALYSIS	L-1 --> L-6

City of Puyallup
Building
REVIEWED FOR COMPLIANCE
SKinnear
10/16/2024
9:13:32 AM

CITY OF PUYALLUP STATE OF WASHINGTON

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

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

5/31/2023

MICHAEL C LEWIS
STATE OF WASHINGTON
52967
REGISTERED
PROFESSIONAL ENGINEER

MODERN BUILDING SYSTEMS
PO Box 110 • 9493 Porter Rd • Aumsville, OR 97325
800.682.1422 ModernBuildingSystems.com

JOB #2023-LU 2514-2515 Puyallup SD		
SHEET NO MS-1	OF MS-1	
CALCULATED BY MCL	DATE	5/30/2023
CHECKED BY	DATE	
SCALE		

MATERIAL SUMMARY FOR
28' X 64' MODULAR

FOUNDATION:

TYP EXT FTG	USE	USE +/- 16 in. SQ. PADS OR 2 x 12 x 24 in. P.T. PADS AT 6' O.C.	SEE FDN-1
TYP INTERIOR FTG	USE	USE +/- 16 in. SQ. PADS OR 2 x 12 x 24 in P.T. PADS AT 6' O.C.	SEE FDN-1
ENDWALL COLUMN FTG	USE	(2) (FLAT) P.T. HF #2, 6 x 8 x 4 ' L	SEE FDN-3,5
CNTR COLUMN FTG	USE	(5) (FLAT) P.T. HF #2, 4 x 8 x 4 ' L	SEE FDN-3,6
CNTR COLUMN FTG POST	USE	(2) DF #2, 6 x 10 x 3 ' L	SEE FDN-3,7
MOD TRANSVERSE ANCHORS	USE	USE MIN (4) HOLD DOWNS AT EA SIDEWALL	SEE FDN-4
MOD LONGITUDINAL ANCHORS	USE	USE MIN (3) HOLD DOWNS AT EA ENDWALL	SEE FDN-4

MODERN BUILDING SYSTEMS

PO Box 110 • 9493 Porter Rd • Aumsville, OR 97325
800.682.1422 ModernBuildingSystems.com

JOB # 2023-LU 2514-2515 Puyallup SD	
SHEET NO FDN-1	OF FDN-8
CALCULATED BY MCL	5/30/2023
CHECKED BY	DATE

FOUNDATION DESIGN MODULAR

BUILDING LENGTH (L) =	64.00 '	SITE TYPE =	GRAVEL
BUILDING WIDTH (B) =	27.67 '	MAX BRG PRESSURE =	1800 psf
FRAME RAIL OFFSET =	N/A		
FLOOR TRIB WIDTH =	6.92 '		
ROOF OVERHANG =	0.50 '		
ROOF TRIB WIDTH =	7.42 '		
WALL PLATE HEIGHT =	8.00 ' (ABOVE F.F.)		
TRANSVERSE WIND/SEIS. =	7987 #		
LONGIT. WIND/SEIS. =	4778 #		
WIND UPLIFT =	18772 #		
SNOW LOAD =	25 psf		
BUILDING WEIGHT =	44363 # (No solar or snow)		
F.F. HEIGHT	2.50 ' (ABOVE GRADE)		
AVG. ROOF HEIGHT	13.00 ' (ABOVE GRADE)		
PIER PAD AREA	1.78 ft^2		

AT EXTERIOR FTG

LOAD TO SKIRTWALL 0 plf

DL = 7.42'(12 psf)+8'(10 psf)+6.92'/2(10 psf) = 204 plf
LL = 6.92' / 2 X 50 psf = 173 plf
SL = 7.42' X 25 psf = 185 plf
D + L = 376 plf
D + S = 389 plf
D + 0.75L +0.75S = 472 plf **CONTROLS**

PIER SPACING = 6.00 '
q = (472plf - 0plf) X (6') / 1.78 ft^2 = 1592 psf
∴ OK on GRAVEL

USE +/- 16 in. SQ. PADS OR 2 x 12 x 24 in. P.T. PADS AT 6' O.C.

AT INTERIOR FTG - (U.N.O.)

DL = 6.92' (10 psf) = 69 plf
LL = 6.92' (50 psf) = 346 plf

D + L = 415 plf **CONTROLS**

PIER SPACING = 6.00 '
q = 415plf X (6') / 1.78 ft^2 = 1399 psf
∴ OK on GRAVEL

USE +/- 16 in. SQ. PADS OR 2 x 12 x 24 in P.T. PADS AT 6' O.C.

MODERN BUILDING SYSTEMS
PO Box 110 • 9493 Porter Rd • Aumsville, OR 97325
800.682.1422 ModernBuildingSystems.com

AT ENDWALL COLUMN FTG

COLUMN DL = 1992 #
COLUMN SL = 4149 #
DL = [3' (10 psf) + 10.5' (10 psf)] X 6.92' = 934 #
LL = 3' (50 psf) X 6.92' = 1037 #

D + L = 3963 #
D + S = 7075 # **CONTROLS**
D + 0.75L +0.75S = 6815 #
<9000# Therefore OK. (See FDN- 3,5)

AT MIDSPAN COLUMN FTG

COLUMN DL = 6638 #
COLUMN SL = 13830 #
DL = 6.92' (10 psf) (6') = 415 #
LL = 6.92' (50 psf) (6') = 2075 #

D + L = 9127 #
D + S = 20883 # **CONTROLS**
D + 0.75L +0.75S = 18981 #
<21600# Therefore OK. (See FDN- 3,6,7)

MODERN BUILDING SYSTEMS
PO Box 110 • 9493 Porter Rd • Aumsville, OR 97325
800.682.1422 ModernBuildingSystems.com

@ ENDWALL COLUMN FOOTING

TRY 2 (FLAT) P.T. HF #2, 6 x 8 x 4.00 ' L
Width (b) each = 0.63 '

Pmax = 1800psf X 2 X 0.63' X 4' = 9000 #

DL % = 41%
SL % = 59%

w_{DL} = 1800psf X 0.63' X 0.41 = 465 plf
w_{SL} = 1800psf X 0.63' X 0.59 = 660 plf

@ MIDSPAN COLUMN FOOTING

TRY 5 (FLAT) P.T. HF #2, 4 x 8 x 4.00 ' L
Width (b) each = 0.60 '

Pmax = 1800psf X 5 X 0.6' X 4' = 21600 #

DL % = 34%
SL % = 66%

W_{DL} = 1800psf X 0.6' X 0.34 = 365 plf

W_{SL} = 1800psf X 0.6' X 0.66 = 715 plf

@ MIDSPAN INTERMEDIATE POST

TRY 2 DF #2, 6 x 10 x 3.00 ' L
Width (b) each = 0.46 '

w_{DL} = 1800psf X 4' X 0.34 / 2 MEMBERS = 1216 plf
w_{SL} = 1800psf X 4' X 0.66 / 2 MEMBERS = 2384 plf

MODERN BUILDING SYSTEMS
PO Box 110 • 9493 Porter Rd • Aumsville, OR 97325
800.682.1422 ModernBuildingSystems.com

JOB # 2023-LU 2514-2515 Puyallup SD	
SHEET NO FDN-4	OF FDN-8
CALCULATED BY MCL	5/30/2023
CHECKED BY	DATE
SCALE	

MOD TRANSVERSE LOADING ANCHORAGE

Sliding: N = 7987# /2094# = 4 ANCHORS

Overturning:

Mot = 7987# / 2 X 13' + 7987# / 2 X 2.5' + 18772# X 27.67' / 2 = 322 k-ft

Mr = 44363# X 27.67' / 2 = 614 k-ft

w/ ANCHORS = 4 X 2094# X 27.67' = 232 k-ft

TOTAL = (614k-ft X 0.6) + 232k-ft = 600 k-ft
> 322k-ft therefore OK

MIN NUMBER = 4 ANCHORS

USE MIN (4) HOLD DOWNS AT EA SIDEWALL

MOD LONGITUDINAL LOADING ANCHORAGE

Sliding: N = 4778# /2094# = 3 ANCHORS

Overturning:

Mot = 4778# / 2 X 13' + 4778# / 2 X 2.5 ' + 18772# X 64' / 2 = 638 k-ft

Mr = 44363# X 64' / 2 = 1420 k-ft

w/ ANCHORS = 3 X 2094# X 64' = 402 k-ft

TOTAL = (1420k-ft X 0.6) + 402k-ft = 1254 k-ft
> 638k-ft therefore OK

MIN NUMBER = 3

USE MIN (3) HOLD DOWNS AT EA ENDWALL

MOBILE UNIT CONNECTION TO CHASSIS

(TRANSVERSE LOADING) T = 322 k-ft - (0.6) X 614 k-ft / 27.67 ft /2 = ~~-843 #~~
PER STRAP

PER NAIL VALUE ~~(SIMP C-2019 PG 263)~~ 211 # DF

N= 12 NAILS ~~12~~
(MIN)

N/A

Wood Beam

Project File: 2023-LU 2514-2515 2021 IBC Struct Calcs.ec6

LIC# : KW-06013980, Build:20.23.05.22 MODERN BUILDING SYSTEMS (c) ENERCALC INC 1983-2023

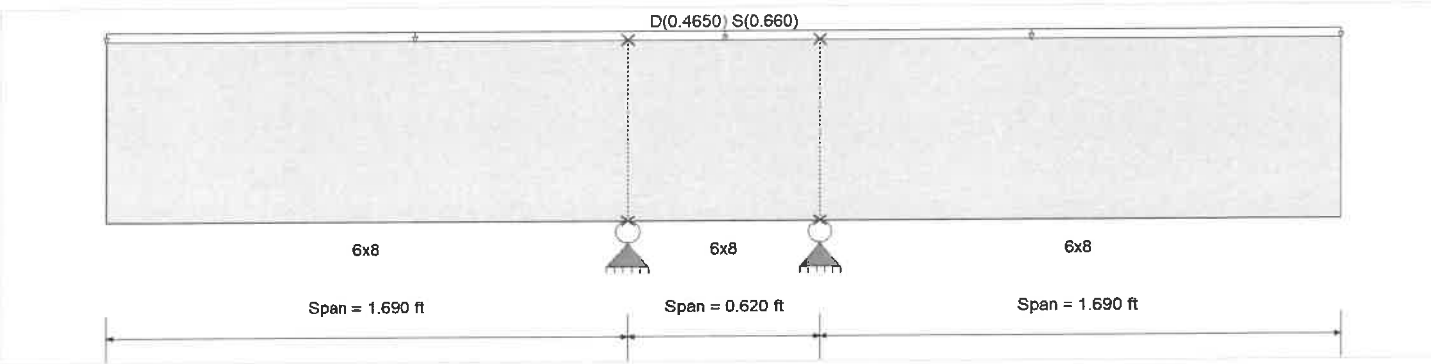
DESCRIPTION: ENDWALL COLUMN FTG - 2023-LU 2514-2515

CODE REFERENCES

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

Material Properties

Analysis Method :	Allowable Stress Design	Fb +	575.0 psi	*E : Modulus of Elasticity*	
Load Combination	IBC 2021	Fb -	575.0 psi	Ebend- xx	1,100.0 ksi
		Fc - Prll	575.0 psi	Eminbend - xx	400.0 ksi
Wood Species :	Hem-Fir	Fc - Perp	405.0 psi		
Wood Grade :	No.2	Fv	140.0 psi		
		Ft	375.0 psi	Density	26.840 pcf
Beam Bracing :	Completely Unbraced				



Applied Loads

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

Beam self weight NOT internally calculated and added
Loads on all spans...
Uniform Load on ALL spans : D = 0.4650, S = 0.660 k/ft

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio	=	**0.771**: 1	Maximum Shear Stress Ratio	=	**0.271** : 1
Section used for this span		**6x8**	Section used for this span		**6x8**
fb: Actual	=	509.85 psi	fv: Actual	=	43.64 psi
F'b	=	661.25 psi	F'v	=	161.00 psi
Load Combination		+D+S	Load Combination		+D+S
Location of maximum on span	=	1.690 ft	Location of maximum on span	=	1.067 ft
Span # where maximum occurs	=	Span # 1	Span # where maximum occurs	=	Span # 1

Maximum Deflection

Max Downward Transient Deflection	0.017 in	Ratio =	2318 >=360	Span: 3 : S Only
Max Upward Transient Deflection	0 in	Ratio =	0 <360	n/a
Max Downward Total Deflection	0.030 in	Ratio =	1358 >=240	Span: 3 : +D+S
Max Upward Total Deflection	-0.001 in	Ratio =	6490 >=240	Span: 2 : +D+S

Vertical Reactions

Support notation : Far left is #1 Values in KIPS

Load Combination	Support 1	Support 2	Support 3	Support 4
Max Upward from all Load Conditions		2.250	2.250	
Max Upward from Load Combinations		2.250	2.250	
Max Upward from Load Cases		1.320	1.320	
D Only		0.930	0.930	
+D+S		2.250	2.250	
+D+0.750S		1.920	1.920	
+0.60D		0.558	0.558	
S Only		1.320	1.320	

Wood Beam

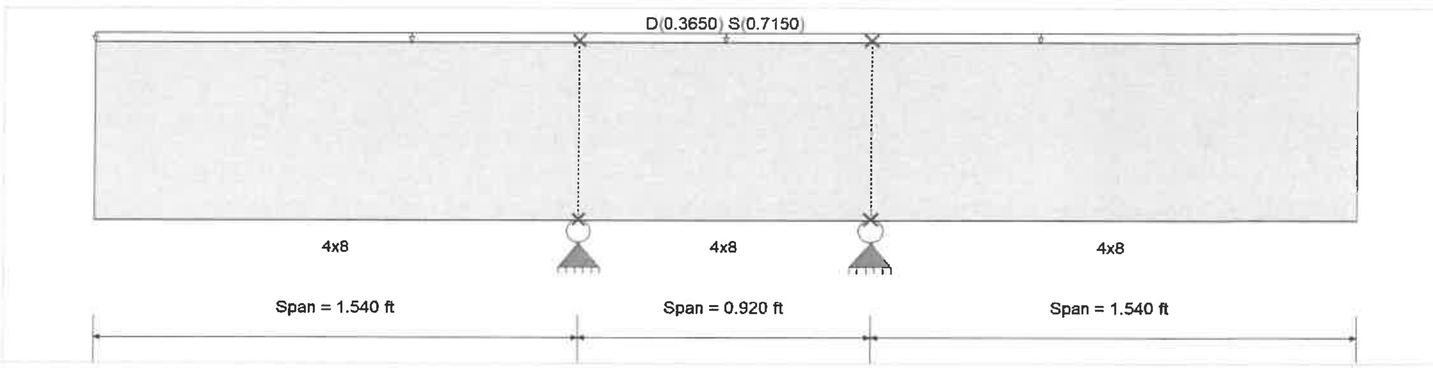
DESCRIPTION: CNTR COLUMN FTG - 2023-LU 2514-2515

CODE REFERENCES

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

Material Properties

Analysis Method :	Allowable Stress Design	Fb +	850.0 psi	*E : Modulus of Elasticity*	
Load Combination	IBC 2021	Fb -	850.0 psi	Ebend- xx	1,300.0 ksi
		Fc - Prll	1,300.0 psi	Eminbend - xx	470.0 ksi
Wood Species	: Hem-Fir	Fc - Perp	405.0 psi		
Wood Grade	: No.2	Fv	150.0 psi		
		Ft	525.0 psi	Density	26.840 pcf
Beam Bracing	: Completely Unbraced			Repetitive Member Stress Increase	



Applied Loads

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

Beam self weight NOT internally calculated and added
Loads on all spans...
Uniform Load on ALL spans : D = 0.3650, S = 0.7150 k/ft

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio	=	**0.846: 1**	Maximum Shear Stress Ratio	=	**0.434** : 1
Section used for this span		**4x8**	Section used for this span		**4x8**
fb: Actual	=	1,038.23 psi	fv: Actual	=	59.87 psi
F'b	=	1,227.54 psi	F'v	=	138.00 psi
Load Combination		+D+S	Load Combination		+D+S
Location of maximum on span	=	1.540 ft	Location of maximum on span	=	0.938 ft
Span # where maximum occurs	=	Span # 1	Span # where maximum occurs	=	Span # 1

Maximum Deflection

Max Downward Transient Deflection	0.058 in	Ratio =	638 >=360	Span: 3 : S Only
Max Upward Transient Deflection	-0.005 in	Ratio =	2433 >=360	Span: 2 : S Only
Max Downward Total Deflection	0.087 in	Ratio =	422 >=240	Span: 3 : +D+S
Max Upward Total Deflection	-0.007 in	Ratio =	1611 >=240	Span: 2 : +D+S

Vertical Reactions

Support notation : Far left is #1 Values in KIPS

Load Combination	Support 1	Support 2	Support 3	Support 4
Max Upward from all Load Conditions		2.160	2.160	
Max Upward from Load Combinations		2.160	2.160	
Max Upward from Load Cases		1.430	1.430	
D Only		0.730	0.730	
+D+S		2.160	2.160	
+D+0.750S		1.803	1.803	
+0.60D		0.438	0.438	
S Only		1.430	1.430	

Wood Beam

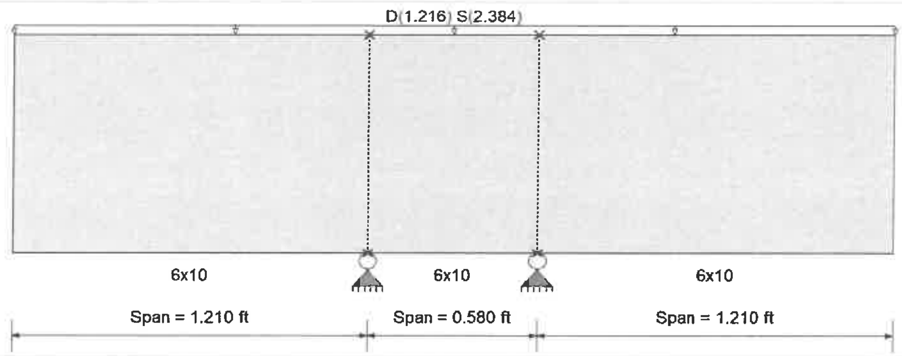
DESCRIPTION: CNTR COLUMN FTG INTERMEDIATE POST- 2023-LU 2514-2515

CODE REFERENCES

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

Material Properties

Analysis Method :	Allowable Stress Design	Fb +	875.0 psi	*E : Modulus of Elasticity*	
Load Combination	IBC 2021	Fb -	875.0 psi	Ebend- xx	1,300.0 ksi
		Fc - Prll	600.0 psi	Eminbend - xx	470.0 ksi
Wood Species :	Douglas Fir - Larch	Fc - Perp	625.0 psi		
Wood Grade :	No.2	Fv	170.0 psi		
		Ft	425.0 psi	Density	31.210 pcf
Beam Bracing :	Completely Unbraced				



Applied Loads

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

Beam self weight NOT internally calculated and added
Loads on all spans...
Uniform Load on ALL spans : D = 1.216, S = 2.384 k/ft

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio	=	**0.380**: 1	Maximum Shear Stress Ratio	=	**0.422** : 1
Section used for this span		**6x10**	Section used for this span		**6x10**
fb: Actual	=	382.27 psi	fv: Actual	=	82.44 psi
F'b	=	1,005.39 psi	F'v	=	195.50 psi
Load Combination		+D+S	Load Combination		+D+S
Location of maximum on span	=	1.210 ft	Location of maximum on span	=	0.798 ft
Span # where maximum occurs	=	Span # 1	Span # where maximum occurs	=	Span # 1

Maximum Deflection

Max Downward Transient Deflection	0.004 in	Ratio =	6978 >=360	Span: 3 : S Only
Max Upward Transient Deflection	0 in	Ratio =	0 <360	n/a
Max Downward Total Deflection	0.006 in	Ratio =	4620 >=240	Span: 3 : +D+S
Max Upward Total Deflection	-0.000 in	Ratio =	19282 >=240	Span: 2 : +D+S

Vertical Reactions

Support notation : Far left is #1 Values in KIPS

Load Combination	Support 1	Support 2	Support 3	Support 4
Max Upward from all Load Conditions		5.400	5.400	
Max Upward from Load Combinations		5.400	5.400	
Max Upward from Load Cases		3.576	3.576	
D Only		1.824	1.824	
+D+S		5.400	5.400	
+D+0.750S		4.506	4.506	
+0.60D		1.094	1.094	
S Only		3.576	3.576	

Wood Beam

Project File: 2023-LU 2514-2515 2021 IBC Struct Calcs.ec6

LIC# : KW-06013980, Build:20.23.05.22 MODERN BUILDING SYSTEMS (c) ENERCALC INC 1983-2023

DESCRIPTION: (2) LVL RIDGE BEAM - 2023-LU 2514-2515

CODE REFERENCES

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

Material Properties

Analysis Method : Allowable Stress Design
Load Combination : IBC 2021

Wood Species : Murphy LVL 3100Fb-2.0E x 24" Deep
Wood Grade : Manufactured

Beam Bracing : Beam bracing is defined as a set spacing over all spans

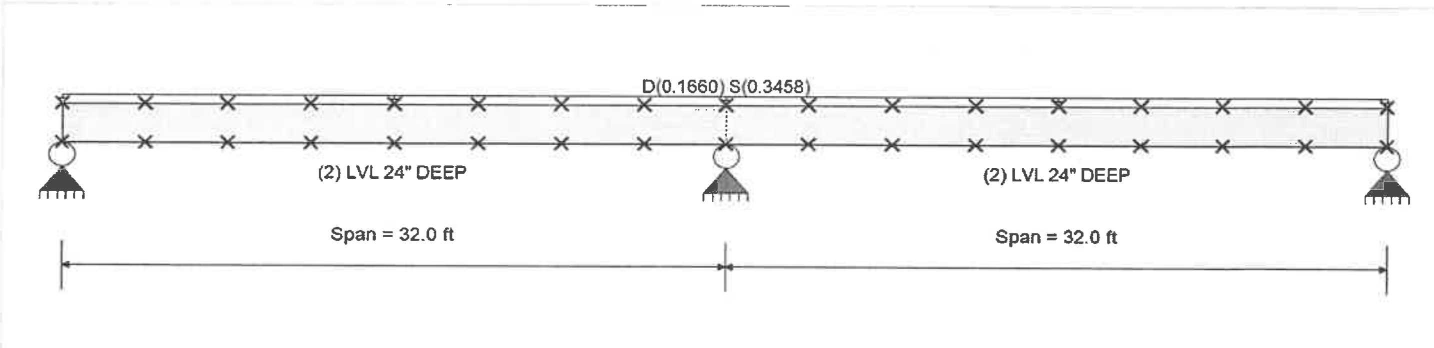
Fb +	2,736.0 psi
Fb -	2,736.0 psi
Fc - Prll	3,200.0 psi
Fc - Perp	750.0 psi
Fv	290.0 psi
Ft	2,100.0 psi

E : Modulus of Elasticity

Ebend- xx	2,000.0 ksi
Eminbend - xx	1,800.0 ksi
Density	35.0 pcf

Unbraced Lengths

First Brace starts at ft from Left-Most support
Regular spacing of lateral supports on length of beam = 4.0 ft



Applied Loads

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

Beam self weight NOT internally calculated and added
Loads on all spans...
Uniform Load on ALL spans : D = 0.0120, S = 0.0250 ksf, Tributary Width = 13.830 ft

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio	=	0.894: 1	Maximum Shear Stress Ratio	=	0.576 : 1
Section used for this span		(2) LVL 24" DEEP	Section used for this span		(2) LVL 24" DEEP
fb: Actual	=	2,729.12 psi	fv: Actual	=	192.25 psi
F'b	=	3,051.71 psi	F'v	=	333.50 psi
Load Combination		+D+S	Load Combination		+D+S
Location of maximum on span	=	32.000 ft	Location of maximum on span	=	30.034 ft
Span # where maximum occurs	=	Span # 1	Span # where maximum occurs	=	Span # 1

Maximum Deflection

Max Downward Transient Deflection	0.496 in	Ratio =	773 >=360	Span: 2 : S Only
Max Upward Transient Deflection	0 in	Ratio =	0 <360	n/a
Max Downward Total Deflection	0.734 in	Ratio =	522 >=240	Span: 2 : +D+S
Max Upward Total Deflection	0 in	Ratio =	0 <240	n/a

Vertical Reactions

Support notation : Far left is #1 Values in KIPS

Load Combination	Support 1	Support 2	Support 3
Max Upward from all Load Conditions	6.141	20.468	6.141
Max Upward from Load Combinations	6.141	20.468	6.141
Max Upward from Load Cases	4.149	13.830	4.149
D Only	1.992	6.638	1.992
+D+S	6.141	20.468	6.141
+D+0.750S	5.103	17.011	5.103
+0.60D	1.195	3.983	1.195
S Only	4.149	13.830	4.149

RXTS ONLY

MODERN BUILDING SYSTEMS
PO Box 110 • 9493 Porter Rd • Aumsville, OR 97325
800.682.1422 ModernBuildingSystems.com

JOB #	2023-LU 2514-2515 Puyallup SD		
SHEET NO	L-1	OF	L-6
CALCULATED BY	MCL	DATE	5/30/2023
CHECKED BY		DATE	
SCALE			

WIND ANALYSIS FOR ENCLOSED SIMPLE DIAPHRAGM LOW-RISE BUILDINGS - BASED ON IBC 2021 / ASCE 7-16 CHAPTER 28, PART 2

INPUT DATA

Risk Category =	RC	II		(Table 1.5-1)
Basic Wind Speed =	Vult	120	Vasd =93	mph (3 sec gust)(Fig 26.5-1)
Exposure Category =	EC	B		(Sec. 26.7)
Topographic Factor =	Kzt	1.00		(Sec. 26.8 & 26.8-1)
Adjustment Factor =	Lambda	1.00		(Sec 28.6-1)
Building Length =	L	64.00	ft	
Building width =	B	27.67	ft	8:23:07 AM
Building Height to Eave =	he	11.00	ft	
Building Height to Ridge =	hr	15.00	ft	
Eave Overhang	oh	0.50	ft	
Building End Zone =	a	3.00	ft	
Roof Pitch =	RP	2.0	:12	
Approx. Roof Angle =	RA	10	degrees	(Ref. Fig. 28.6-1)

OUTPUT

Wind Pressure, ps30 (Fig. 28.6-1)

Horizontal	A-ps30	25.80	psf
Horizontal	B-ps30	-10.70	psf
Horizontal	C-ps30	17.10	psf
Horizontal	D-ps30	-6.20	psf
Vertical	E-ps30	-27.40	psf
Vertical	F-ps30	-16.80	psf
Vertical	G-ps30	-19.10	psf
Vertical	H-ps30	-12.90	psf
O.H.	Eoh-ps30	-38.40	psf
O.H.	Goh-ps30	-30.10	psf

MODERN BUILDING SYSTEMS

PO Box 110 • 9493 Porter Rd • Aumsville, OR 97325
800.682.1422 ModernBuildingSystems.com

JOB #	2023-LU 2514-2515 Puyallup SD
SHEET NO	L-2 OF L-6
CALCULATED BY	MCL DATE 5/30/2023
CHECKED BY	DATE
SCALE	

Wind Pressure, ps

ps = Lambda * Kzt * ps30

				Min Loading
Horizontal	A-ps	25.80	psf	16.00
Horizontal	B-ps	-10.70	psf	8.00
Horizontal	C-ps	17.10	psf	16.00
Horizontal	D-ps	-6.20	psf	8.00
Vertical	E-ps	-27.40	psf	0.00
Vertical	F-ps	-16.80	psf	0.00
Vertical	G-ps	-19.10	psf	0.00
Vertical	H-ps	-12.90	psf	0.00
O.H.	Eoh-ps	-38.40	psf	
O.H.	Goh-ps	-30.10	psf	

CASE A - Transverse Wind				Min Loading	
	A-tw	1703	lbs	1056	lbs
Set to 0	B-tw	-257	lbs	192	lbs
	C-tw	10910	lbs	10208	lbs
Set to 0	D-tw	-1438	lbs	1856	lbs
Total		12613	lbs (SD)	13312	lbs
Convert to ASD x		0.6		0.6	
Total Force on building side L =		**7568**	**lbs (ASD)**	**7987**	lbs

CASE B - Longitudinal Wind					
	A-lw	890	lbs	552	lbs
	C-lw	5587	lbs	5227	lbs
Total		6477	lbs (SD)	5779	lbs
Convert to ASD x		0.6		0.6	
Total Force on building end B =		**3886**	**lbs (ASD)**	**3468**	**lbs**

CASE A - Transverse Uplift			
w/ gable end OH uplift	E-up	-2464	lbs
w/ gable end OH uplift	F-up	-1511	lbs
w/ gable end OH uplift	G-up	-15459	lbs
w/ gable end OH uplift	H-up	-10441	lbs
sidewall eaves OH uplift	Eoh-up	-166	lbs
sidewall eaves OH uplift	Goh-up	-1247	lbs
Total		**-31287**	**lbs (SD)**
Convert to ASD x		0.6	
Total Uplift Force =		**-18772**	**lbs (ASD)**

MODERN BUILDING SYSTEMS
PO Box 110 • 9493 Porter Rd • Aumsville, OR 97325
800.682.1422 ModernBuildingSystems.com

JOB #2023-LU 2514-2515 Puyallup SD			
SHEET NO L-3		OF	L-6
CALCULATED BY MCL		DATE	5/30/2023
CHECKED BY		DATE	
SCALE			

28' x 64' MODULAR

SEISMIC per IBC 2021 / ASCE 7-16, Sec. 12.8 Equivalent Lateral Force Procedure

ASCE 7-16 Table 1.5-1	Risk Category		II	
ASCE 7-16 Table 1.5-2	Seismic Importance Factor	Ie =	1.00	
ASCE 7-16 Table 12.2-1	Response Modification Factor	R =	6.50	
ASCE 7-16 11.4.3	Site Class		D	
USGS Data	Short Spectral Response Accel.	Ss =	1.500	
ASCE 7-16 Table 11.4-1 & Sec 11.4.4	Site Coefficient	Fa =	1.200	
ASCE 7-16 Eqn. 11.4-1	Sms = Ss * Fa	Sms =	1.800	
ASCE 7-16 Eqn 11.4-3	Sds = 2/3 * Sms	Sds =	1.200	
ASCE 7-16 Sec. 12.8.1.3		Sds Max =	1.000	
USGS Data	Long Spectral Response Accel.	S1 =	0.600	
ASCE 7-16 Table 11.4-2	Site Coefficient	Fv =	1.700	
ASCE 7-16 Eqn. 11.4-2	Sm1 = S1 * Fv	Sm1 =	1.020	
ASCE 7-16 Eqn 11.4-4	Sd1 = 2/3 * Sm1	Sd1 =	0.680	
Short Period Transition Sec 11.4.6	Ts = Sd1 / Sds	Ts=	0.680	
Building Period Eqn. 12.8-7	Ta= Ct*hn^(x)= 0.02*13'^0.75	Ta=	0.137	
ACSE 7-16 Sec. 11.4.8	Check Ta <= 1.5*Ts, 0.137<=1.02		OK	
ASCE 7-16 Eqn. 12.8-2	Cs = Sds/(R/Ie)= 1.000/(6.50/1.00)	Cs =	0.154	
ASCE 7-16 Eqn. 12.8-3	Csmax: Not checked (conservative)			
ASCE 7-16 Eqn. 12.8-5	Csmin = 0.044*Sds*Ie >= 0.01	Csmin =	0.044	
ASCE 7-16 Eqn. 12.8-6	If S1> 0.6 Csmin = 0.5*S1/(R/Ie)	Csmin =	N/A	
ASCE 7-16 Table 11.6-1	Seismic Design Cat.		D	
	Base Shear			
ASCE 7-16 Eqn 12.8-1	V = Cs * W * 0.7	V =	0.108	W
ASCE 7-16 Eqn 12.8-5	V = Csmin * W * 0.7	Vmin =	0.031	W
IBC 2021 1605.3.1	Note: 0.7 converts to ASD			

MODERN BUILDING SYSTEMS

PO Box 110 • 9493 Porter Rd • Aumsville, OR 97325
800.682.1422 ModernBuildingSystems.com

JOB #2023-LU 2514-2515 Puyallup SD

SHEET NO L-4		OF	L-6
CALCULATED BY MCL		DATE	5/30/2023
CHECKED BY		DATE	
SCALE			

Building Weight Estimate

	Roof (psf)		Exterior Wall (psf)
Comp	2.5	15/32 T1-11	1.7
7/16 Shtg	1.5	2x6 @ 16	1.7
2x10 @24	1.9	R-21U	1.3
R-42L	2.0	5/8 Gyp	2.8
Drp Grd	1.8		0
	0		0
	0		0
Total	9.7		7.5

	Interior Wall (psf)		Floor (psf)
5/8 Gyp	2.8	Misc	1.0
2x4 @ 16	1.1	23/32 Shtg	2.5
5/8 Gyp	2.8	2x8 @ 16	2.2
	0	R-30U	1.6
	0		0
	0		0
Total	6.7		7.3

MODERN BUILDING SYSTEMS
PO Box 110 • 9493 Porter Rd • Aumsville, OR 97325
800.682.1422 ModernBuildingSystems.com

Building Weight (con't)

No Snow	28.67 '	65.00 '	0.0 psf	=	0	lbs
Roof =	28.67 '	65.00 '	9.7 psf	=	18076	lbs
Ext. Wall =	8.00 '	183.34 '	7.5 psf	=	11000	lbs
Int. Wall =	8.00 '	44.00 '	6.7 psf	=	2358	lbs
Floor =	27.67 '	64.00 '	7.3 psf	=	12927	lbs
Chassis =				=	0	lbs
Solar =	28.67 '	65.00 '	0.0 psf	x 40% =	0	lbs
			Enter 0 or 5			

Total **Includes snow and solar, if any ->** **W=** **44363** **lbs**

Wr = Total DL tributary to roof 24756 lbs
W1 = Total DL tributary to floor 19607 lbs

Fx Story (Shearwall) Force Table

Story	Height	Weight		Story Force - k Fx= wx*hx/ (∑ wx*hx)*V	Fx Coef = V*hx/(∑ wx*hx)	Story Shear
	(hx)	(wx)	(wx*hx)			(Vx)
R	11.00 '	24.76 k	272 k-ft	**4.05 k**	0.164	4.05 k
1	2.50 '	19.61 k	49 k-ft	**0.73 k**	0.037	4.78 k
Grade	0.00 '					
Sum (∑)		**44.36 k**	**321 k-ft**	**V= 4.78 k**	**= Base Shear**	

Shear Value Comparison	OK

ATC Hazards by Location

L-6 OF L-6

Search Information

Address: 105 7th Ave SW, Puyallup, WA 98371, USA

Coordinates: 47.186201, -122.2937556

Elevation: 39 ft

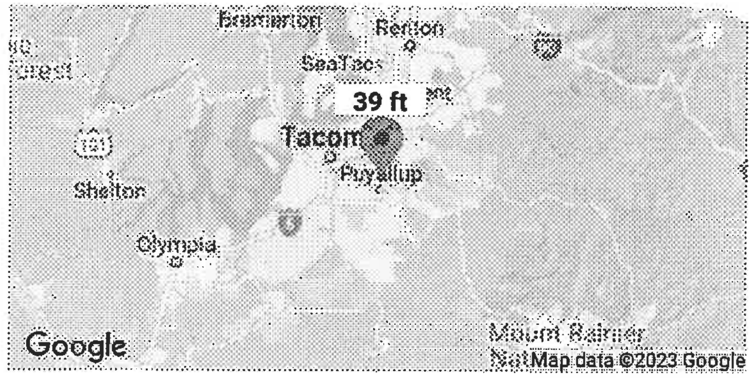
Timestamp: 2023-05-30T14:59:11.361Z

Hazard Type: Seismic

Reference Document: ASCE7-16

Risk Category: II

Site Class: D-default



Basic Parameters

Name	Value	Description
S_S	1.27	MCE_R ground motion (period=0.2s)
S_1	0.437	MCE_R ground motion (period=1.0s)
S_{MS}	1.524	Site-modified spectral acceleration value
S_{M1}	* null	Site-modified spectral acceleration value
S_{DS}	1.016	Numeric seismic design value at 0.2s SA
S_{D1}	* null	Numeric seismic design value at 1.0s SA

≤ 0.600 ∴ OK

= 1.000 PER ASCE 7-16 SEC 12.8.1.3

* See Section 11.4.8

▾Additional Information

Name	Value	Description
SDC	* null	Seismic design category
F_a	1.2	Site amplification factor at 0.2s
F_v	* null	Site amplification factor at 1.0s
CR_S	0.914	Coefficient of risk (0.2s)
CR_1	0.898	Coefficient of risk (1.0s)
PGA	0.5	MCE_G peak ground acceleration
F_{PGA}	1.2	Site amplification factor at PGA
PGA_M	0.6	Site modified peak ground acceleration

ULTIMATE FRICTION FACTORS AND ADHESION FOR DISSIMILAR MATERIALS
(NAVFAC DM 7.2, Table 1, p7.2-63)

Interface Materials	Friction factor	Friction angle, degrees
Mass concrete on the following foundation materials:		
Clean sound rock	0.70	35
Clean gravel, gravel-sand mixtures, coarse sand	0.55 to 0.60	29 to 31
Clean fine to medium sand, silty medium to coarse sand, silty or clayey gravel	0.45 to 0.55	24 to 29
Clean fine sand, silty or clayey fine to medium sand	0.35 to .045	19 to 24
Fine sandy silt, non-plastic silt	0.30 to 0.35	17 to 19
Very stiff and hard residual or pre-consolidated clay	0.40 to 0.50	22 to 26
Medium stiff and stiff clay and silty clay	0.30 to 0.35	17 to 19
(Masonry on foundation materials has same friction factors.)		
Steel sheet piles against the following soils:		
Clean gravel, gravel-sand mixtures, well-graded rock fill with spalls	0.40	22
Clean sand, silty sand-gravel mixture, single size hard rock fill	0.30	17
Silty sand, gravel or sand mixed with silt or clay	0.25	14
Fine sandy silt, non-plastic silt	0.20	11
Formed concrete or concrete sheet piling against the following soils:		
Clean gravel, gravel-sand mixtures, well-graded rock fill with spalls	0.40 to 0.50	22 to 26
Clean sand, silty sand-gravel mixture, single size hard rock fill	0.30 to 0.40	17 to 22
Silty sand, gravel or sand mixed with silt or clay	0.30	17
Fine sandy silt, non-plastic silt	0.25	14
Various structural materials:		
Masonry on masonry, igneous and metamorphic rocks:		
Dressed soft rock on dressed soft rock	0.70	35
Dressed hard rock on dressed soft rock	0.65	33
Dressed hard rock on dressed hard rock	0.55	29
Masonry on wood (cross grain)	0.50	26
Steel on steel at sheet pile interlocks	0.30	17

Interface Materials (Cohesion)	Adhesion C_a (psf)
Very soft cohesive soil (0 - 250 psf)	0 - 250
Soft cohesive soil (250 - 500 psf)	250 - 500
Medium stiff cohesive soil (500 - 1000 psf)	500 - 750
Stiff cohesive soil (1000 - 2000 psf)	750 - 950
Very stiff cohesive soil (2000 - 4000 psf)	950 - 1,300

Continental Supply NW, LLC

TIE DOWNS

ENGINEERED TIE DOWN SYSTEM

GENERAL NOTES

ENGINEERS APPROVAL

OR

REGISTERED PROFESSIONAL ENGINEER 7462 OREGON JULY 14, 1972 DAVID A. DAHMEN

EXP 12/31/23

WA

DAVID A. DAHMEN STATE OF WASHINGTON 14176 REGISTERED PROFESSIONAL ENGINEER

EXP 7-17-23

ID

REGISTERED PROFESSIONAL ENGINEER 2541 STATE OF IDAHO DAVID A. DAHMEN

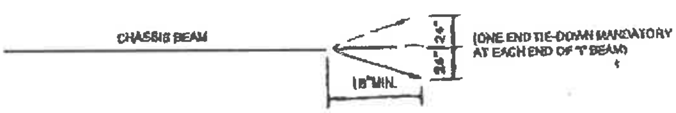
UT

EXP 7-31-22

DESIGN LOADS:

- WIND ———— COMPLIES WITH 2018 IBC Vult = 115 MPH Exp C
- SOIL BEARING ——— 1000 PSF
- TIE DOWN STRAP ——— 3150# WORKING LOAD
- SEISMIC ZONE ——— 2018 IBC Ss=1.5 Fa=1.4 Sds1.41 Site Class D
- TIE DOWN STRAPS TO BE MIN. 1 1/4" WIDE x 0.035 THICKNESS ZINC PLATED AND MEET ASTM D-3953-97 ALT. STRAP; 1 1/4" WIDE X 0.029" THICK ZINC PLATED F'ult' =5400 LBS
- EARTH AUGERS ——— 2962 # (TESTED TO 4750# MIN.)
- CROSS DRIVES ——— 2962 # (TESTED TO 4750# MIN.)
- CONCRETE SLAB ANCHORS ——— 2962 # (CALCULATED)

1. THE CHARTS SHOW THE REQUIRED NUMBER OF TIE DOWNS ON THE SIDES AND ENDS OF THE MANUFACTURED HOME.
2. COMBINATIONS OF THE DIFFERENT TYPES OF TIE DOWNS CAN BE USED.
3. FOR ALL TIE DOWN INSTALLATIONS, THE MANUFACTURED HOME CHASSIS MEMBERS ARE SHOWN AS "I" BEAMS, (FOR ILLUSTRATION PURPOSE ONLY) CHASSIS BEAMS
4. SIDE TIE DOWNS ARE REQUIRED ALONG THE OUTSIDE CHASSIS BEAMS. END TIE DOWNS ARE REQUIRED AT EACH END OF EACH TRANSPORTABLE SECTION OF THE MANUFACTURED HOME.
5. END TIE DOWNS CAN BE LOCATED WITHIN 18" OF EITHER SIDE OF CHASSIS BEAM



6. THE SIZES, TYPES, LENGTHS, ECT, OF MATERIALS SHOWN HEREON ARE MINIMUM, LARGER, LONGER, HEAVIER MATERIALS SUPPLIED BY SAC INDUSTRIES, INC. MAY BE USED AT THE SAME SPACING AND LOCATION SHOWN.
7. ALL PARTS ARE COATED WITH RUST RESISTANT INDUSTRIAL SHOP PRIMER

STATE APPROVAL

Continental Supply NW, LLC
1570 Bishop Road
Chehalis, WA 98532
888-265-8981

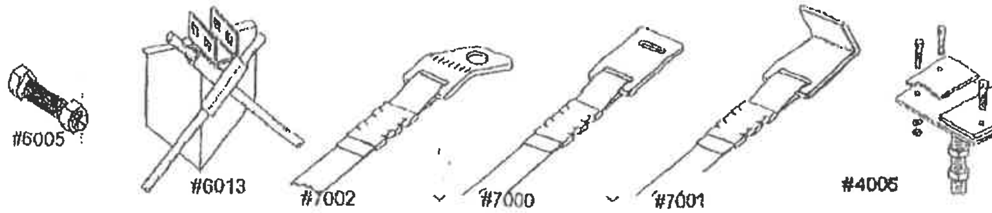
AZ

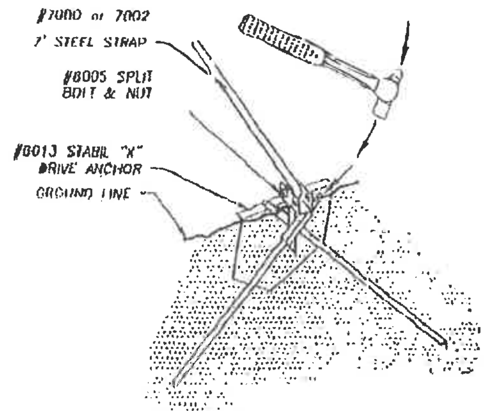
CA

NV

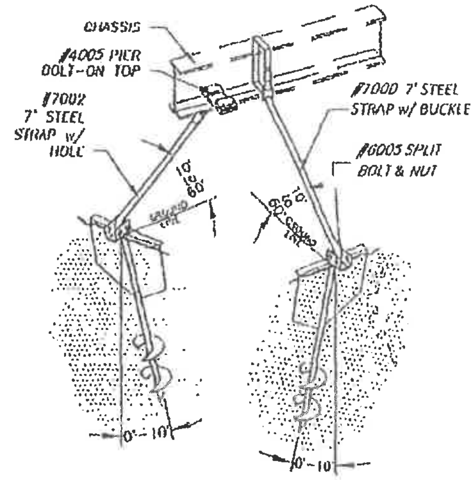
PACIFIC CONSULTING ENGINEERS
9739 North Vista Drive
Kingman, AZ 86401
PH 916-296-7376

STABIL-X DRIVE TIE DOWN ANCHORS





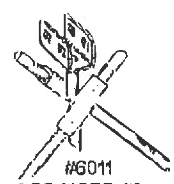
DETAIL "A"



STABIL-X DRIVE TIE DOWN
SEE DETAIL "A"

INSTALLATION INSTRUCTIONS

1. <u>CONTRACTORS WARNING:</u> CHECK FIRST FOR UNDERGROUND UTILITIES.
2. DRIVE STABILIZER PLATE INTO GROUND.
3. DRIVE CROSS RODS THROUGH HEAD TUBES INTO SOIL AS SHOWN.
4. ATTACH STRAPS TO CHASSIS BEAM IN MANNER SHOWN.
5. IF ANGLE OF SIDE STRAP IS GREATER THEN 60°, STRAP CONNECTION CAN BE MADE FROM ANCHOR TO OPPOSITE CHASSIS BEAM.
6. INSERT STRAP THROUGH SPLIT BOLT. CUT OFF EXCESS STRAP AND TIGHTEN BOLT UNTIL STRAP IS SNUG.
7. #6011 ANCHOR CAN BE USED WHERE HARD OR ROCKY SOIL OCCURS. IF THE GROUND SURFACE IS OTHER THAN ROCKY SOIL OR MINIMUM 2" ASPHALT, USE STABIL-X ANCHOR OR ENCASE ANCHOR WITH 12"x12"x12" CUBE OF CONCRETE.
8. WHEN #6011 ANCHOR IS USED FOR ANY REQUIRED ANCHOR – (2) ANCHORS MUST BE USED AT THAT LOCATION.



SEE NOTE #7
AND NOTE #8

EARTH AUGERS						CROSS DRIVE ANCHORS						CONCRETE SLAB ANCHORS					
MAX. LENGTH OF MFG'D HOME	36'	64'	72'			MAX. LENGTH OF MFG'D HOME	36'	64'	72'			MAX. LENGTH OF MFG'D HOME	36'	64'	72'		
MIN. NO. OF SIDE TIE DOWNS	2	3	4			MIN. NO. OF SIDE TIE DOWNS	2	3	4			MIN. NO. OF SIDE TIE DOWNS	2	3	4		

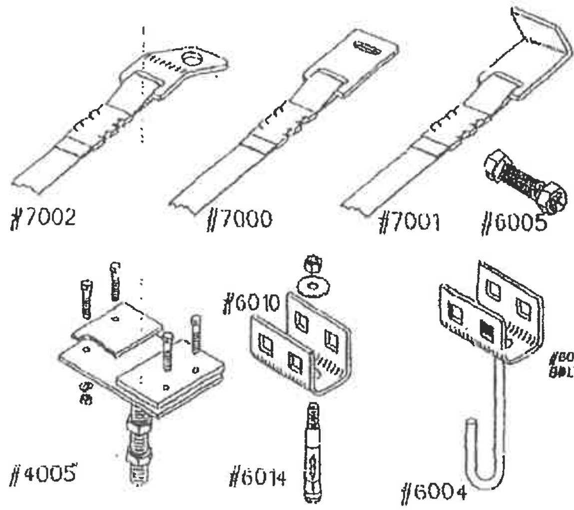
NOTE:

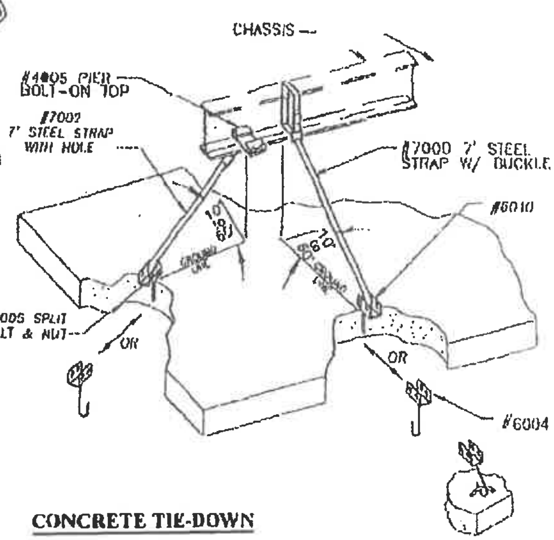
SIDE TIE-DOWNS: MUST BE WITHIN 24" OF THE END OF THE CHASSIS BEAM.

END TIE-DOWNS: CAN BE LOCATED WITHIN 24" OF EITHER SIDE OF CHASSIS BEAM ONE TIE-DOWN IS MANDATORY AT EACH END OF "I"BEAM (SEE PAGE #1 GENERAL NOTE #6).

IF SIDE WALL TIE-DOWN GROUND ANCHOR LOCATION IS SUCH THAT THE ANGLE BETWEEN THE GROUND AND STRAP EXCEEDS 60°, CONNECT THE TIE STRAP TO THE INSIDE CHASSIS BEAM ON DOUBLE AND TRIPLE WIDES AND THE OPPOSITE CHASSIS BEAM ON SINGLE WIDES.

CONCRETE TIE DOWN ANCHORS





CONCRETE TIE-DOWN

ALTERNATE CONNECTION

INSTALLATION INSTRUCTIONS

NEW CONCRETE - #6004
1. PLACE CONCRETE ANCHOR INTO WET CONCRETE, AND ALLOW TO PROPERLY CURE.
2. ALTERNATE CONNECTION REQUIRES #5 REBAR PROPERLY EMBEDDED IN CONCRETE.

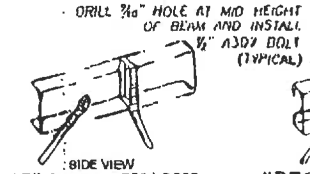
EXSISTING CONCRETE - #6010
1. CONCRETE MUST BE A MINIMUM 3½" THICK AND IN GOOD CONDITION.
2. MINIMUM SLAB AREA OF EACH ANCHOR IS 28 SQUARE FEET.
3. DRILL PROPER SIZE HOLE IN SLAB, A MINIMUM OF 12" FROM ANY SIDE.
4. EXPANSION BOLT IS ⅝" x 3½" WITH MINIMUM 2¾" EMBEDMENT AND 6,180 POUNDS PULL OUT, 7,160 POUNDS SHEAR.

CHASSIS CONNECTION
1. ATTACH STRAPS TO CHASSIS BEAM IN MANNER SHOWN.
2. IF ANGLE OF SIDE STRAP IS GREATER THAN 60°, STRAP CONNECTION CAN BE MADE FROM ANCHOR TO OPPOSITE CHASSIS BEAM.
3. INSERT STRAP THROUGH SPLIT BOLT, CUT OFF EXCESS STRAP AND TIGHTEN BOLT UNTIL STRAP IS SNUG.

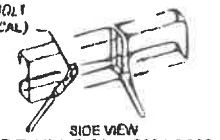
NOTE: SIDE TIE DOWNS ARE REQUIRED ALONG THE OUTSIDE CHASSIS BEAMS. END TIE DOWNS ARE REQUIRED AT EACH END OF EACH TRANSPORTABLE SECTION ~~OF THE~~ MANUFACTURED HOME.

NOTE: A COMBINATION OF DIFFERENT TYPES OF TIE DOWNS CAN BE USED.

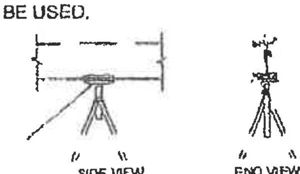
DRILL 9/16" HOLE AT MID HEIGHT OF BEAM AND INSTALL ½" A307 BOLT (TYPICAL)



"C" BEAM CHASSIS
SEE GENERAL NOTE #3



"RFC" BEAM CHASSIS
SEE GENERAL NOTE #3



END TIE DOWN

NOTE: END TIE DOWN CAN BE LOCATED WITHIN 18" OF EITHER SIDE OF CHASSI BEAM AXIS.

CONTRACTORS CERTIFICATION

I CERTIFY THAT I HAVE INSTALLED THE ANCHORING SYSTEM AS PER THE INSTALLATION INSTRUCTIONS. I HAVE MADE NO MODIFICATIONS TO THE ANCHORING SYSTEM OR THE BUILDING STRUCTURE.

COMPANY NAME: ______________________ CONTRACTORS LIC. # ______________

PGM Inc.

Soil Class	Soil Description	Test Probe Values (in lbs.)	Recommended PGM Part	PGM part description
1	Hard Rock or Rocky	N/A	# 6011 or # 6002	Cross Drive Anchor W/ 30" Rods Cross Drive Anchor W/ 30" Rods
2	Very Dense and or Cemented Sands, Coarse Gravel, Cobbles and Clays	550+	# 6000 # 6006 # 6013	30" Auger Anchor W/2 4" Helix 12" Stabilizer Plate Stabil X - Drive
3	Medium Dense Coarse Sands, Sandy Gravels, Very Very Stiff Silts & Clays	351 to 550	Available Upon Request	
4a	Loose to Medium Dense Sands, Firm to Stiff Clays & Silts, Alluvial Fill	276 to 350	Available Upon Request	
4b	Very Loose Sands, Firm Clays & Silts Alluvial Fill	175 to 275	Available Upon Request	

Please Note : Each State, County or Municipality may require a specific anchor from the groups shown above for each soil classification.

Check local and stata regulations first.

CONTINENTAL SUPPLY NW, LLC

STEEL PIERS

ADJUSTABLE STEEL PIERS & TOPS

ENGINEER APPROVAL

DAVID A. DAHMEN
STATE OF WASHINGTON
14176
REGISTERED
PROFESSIONAL ENGINEER

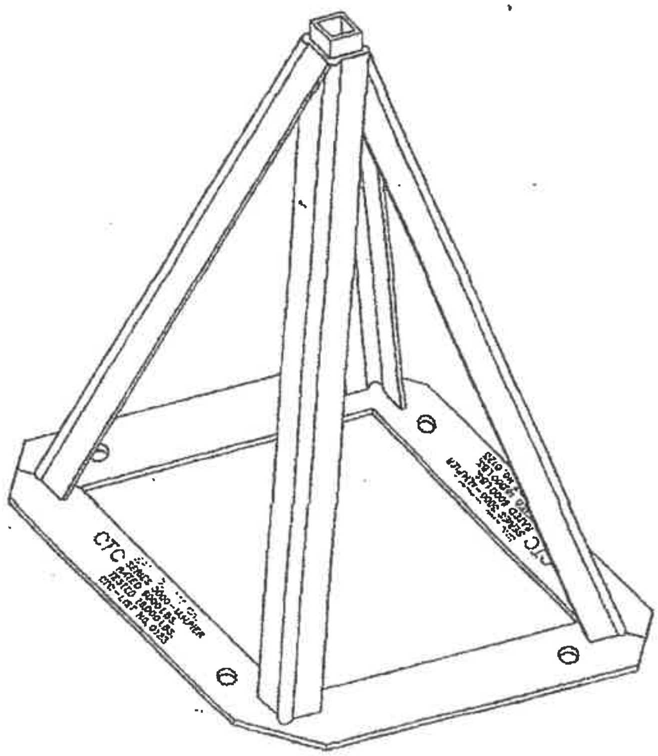
Exp 7-17-23

GENERAL NOTES

DESIGN LOADS:

* STEEL PIERS ------------ 6,000 LB, RATED LOAD CAPACITY
18,000 LB. MINIMUM TESTED LOAD CAPACITY

* STEEL PIERS SHALL BE COATED WITH RUST RESISTANT COATING AND SHALL BE LISTED AND LABELED FOR THE FOLLOWING LOAD:
VERTICAL=6,000 POUNDS MAXIMUM



REGISTERED PROFESSIONAL ENGINEER
7462
OREGON
JULY 14, 1972
DAVID A. DAHMEN

Exp 12-31-23

REGISTERED PROFESSIONAL ENGINEER
2541
STATE OF IDAHO
DAVID A. DAHMEN

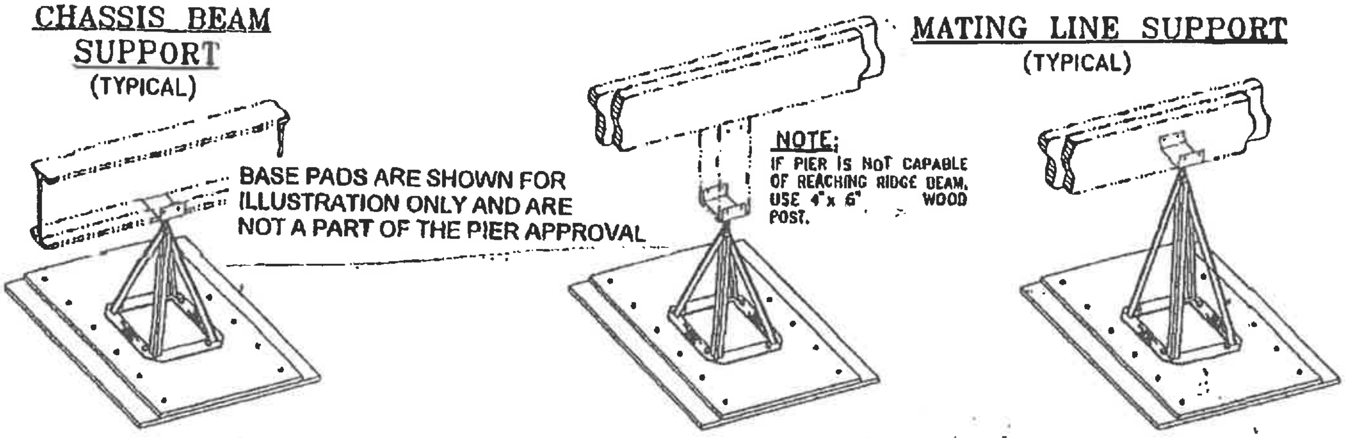
Exp 7-31-~~22~~

STATE APPROVAL

Continental Supply NW, LLC
1570 Bishop Road
Chehalis, WA 98532
888-265-8981

PACIFIC CONSULTING ENGINEERS
9739 North Vista Drive
Kingman, AZ 86401
PH 916-296-7376

ADJUSTABLE STEEL PIERS



INSTALLATION INSTRUCTIONS

1. PREPARE A LEVEL SURFACE AT THE LOCATION OF EACH PIER TO INSURE A FULL CONTACT FOR THE FOOTING PAD. USE THE APPROPRIATE SIZE PAD FOR THE LOAD REQUIRED. REFER TO THE MANUFACTURERS SET UP MANUAL FOR SPECIFIC LOADS AND FOOTING SIZES.

2. SELECT THE APPROPRIATE SIZE PIERS FOR THE INSTALLATION BY DETERMINING THE PIER HEIGHT AT EACH SUPPORT LOCATION. MEASURE FROM THE TOP OF THE PAD TO THE BOTTOM OF THE CHASSIS BEAM TO INSURE THAT HEIGHT IS NO GREATER THAN 32".

3. SELECT THE APPROPRIATE TOP FOR THE CHASSIS BEAM OR MATING LINE. THE MAXIMUM ADJUSTMENT ON THE THREADED ROD ADJUSTER FOR CHASSIS BEAM SUPPORT IS 2". WHEN MORE HEIGHT IS NEEDED USE THE NEXT TALLER SIZE SUPPORT PIER.

4. PLACE THE PIER SUPPORT IN THE CENTER OF THE SUPPORT PAD. WHERE REQUIRED BY LOCAL CODE, ATTATCH THE SUPPORT PIER TO THE PAD USING APPROPRIATE FASTENERS. CAREFULLY ALIGN THE SUPPORT PIER AND TOP UNDER THE CHASSIS BEAM OR MATING LINE AND TIGHTEN UNTIL SNUG PLUS 1/2 TURN.

5. REPEAT THIS INSTALLATION PROCEDURE WITH EACH SUPPORT PIER. AFTER ALL THE SUPPORT PIERS HAVE BEEN INSTALLED, AND THE HOME SET UP HAS BEEN COMPLETED PER THE MANUFACTURERS SET UP INSTRUCTIONS, YOU MAY THEN REMOVE THE SAFTEY BLOCKING OF OTHER DEVICES USED TO LEVEL THE CHASSIS.

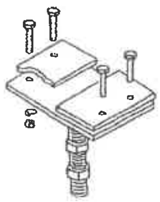
LABORATORY TESTING REPORT

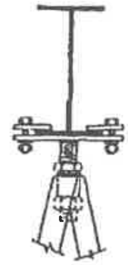
PART No.	STAND SIZE	SAMPLE #1	SAMPLE #2	SAMPLE #3
3008	8"	23,100 Lbs.	24,600 Lbs.	23,200 Lbs.
3010	10"	25,130 Lbs.	25,950 Lbs.	24,320 Lbs.
3012	12"	27,200 Lbs.	26,500 Lbs.	26,300 Lbs.
3014	14"	27,700 Lbs.	28,175 Lbs.	26,175 Lbs.
3016	16"	28,250 Lbs.	27,700 Lbs.	23,400 Lbs.
3018	18"	26,400 Lbs.	33,300 Lbs.	25,500 Lbs.
3020	20"	24,950 Lbs.	25,000 Lbs.	23,225 Lbs.
3022	22"	20,500 Lbs.	22,400 Lbs.	24,200 Lbs.
3024	24"	22,225 Lbs.	21,650 Lbs.	23,000 Lbs.
3026	26"	22,250 Lbs.	21,500 Lbs.	19,700 Lbs.
3028	28"	20,550 Lbs.	23,720 Lbs.	21,310 Lbs.
3030	30'	22,950 Lbs.	26,550 Lbs.	21,500 Lbs.

PIER IDENTIFICATION STAMP

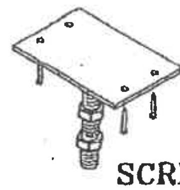
PGM Inc.
SERIES 3000–M H PIER
RATED 6,000 LBS.
TESTED 18,000 LBS
C.T.C. LIST NO. 0123

ADJUSTABLE STEEL TOPS

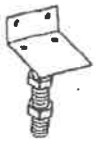


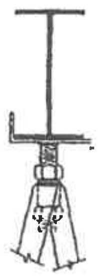


BOLT ON TOP
#4005

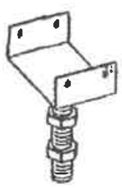


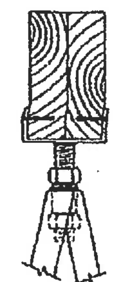
SCREW ON TOP
#4006





"L" TOP
#4003





5" SADDLE TOP
#4002

5" LOCK TOP SLIDER
#4004

INSTALLATION INSTRUCTIONS

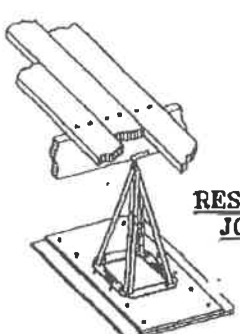
#4002 – PLACE SADDLE TOP FLUSH AGAINST MAIN CHASSIS BEAM AND OR MATING LINE – MAXIMUM HEIGHT ADJUSTMENT OF TOP IS 2".

#4004 – 5" LOCK TOP SLIDER ATTACH BOLT ON TOP TO "I" BEAM WITH (2) 3/8" BOLTS AND NUTS – WITH 2ND 3/4" NUT, ATTACH BOLT ON TOP TO PIER – MAXIMUM HEIGHT ADJUSTMENT OF TOP IS 2.

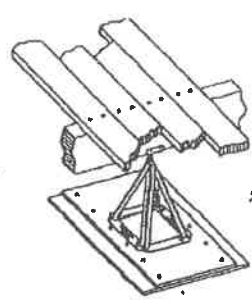
#4005 – ATTACH BOLT ON TOP TO "I" BEAM WITH (4) 3/8" BOLTS AND NUTS – WITH 2nd 3/4" NUT, ATTACH BOLT ON TOP TO PIER – MAXIMUM HEIGHT ADJUSTMENT OF TOP IS 2".

#4003 – PLACE "L" TOP FLUSH AGAINST MAIN BEAM – ALTERNATE "L" TOP DIRECTION EVERY OTHER PIER – MAXIMUM HEIGHT ADJUSTMENT OF TOP IS 2".

#4006 – ATTACH SCREW ON TOP TO MAIN CHASSIS BEAM WITH (4) #12 SMS TEK SCREWS. WHEN USED AT MATING LINE, ATTACH WITH NAILS OR SCREWS. MAXIMUM HEIGHT ADJUSTMENT OF TOP IS 2".



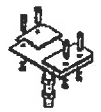
RESIDENTIAL FLOOR JOINT SUPPORT



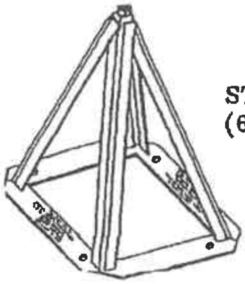
DECK SUPPORT

BASE PADS ARE SHOWN FOR ILLUSTRATION ONLY AND ARE NOT A PART OF THE PIER APPROVAL

CONTINENTAL SUPPLY NW LLC
SYSTEM SET
(TYPICAL)



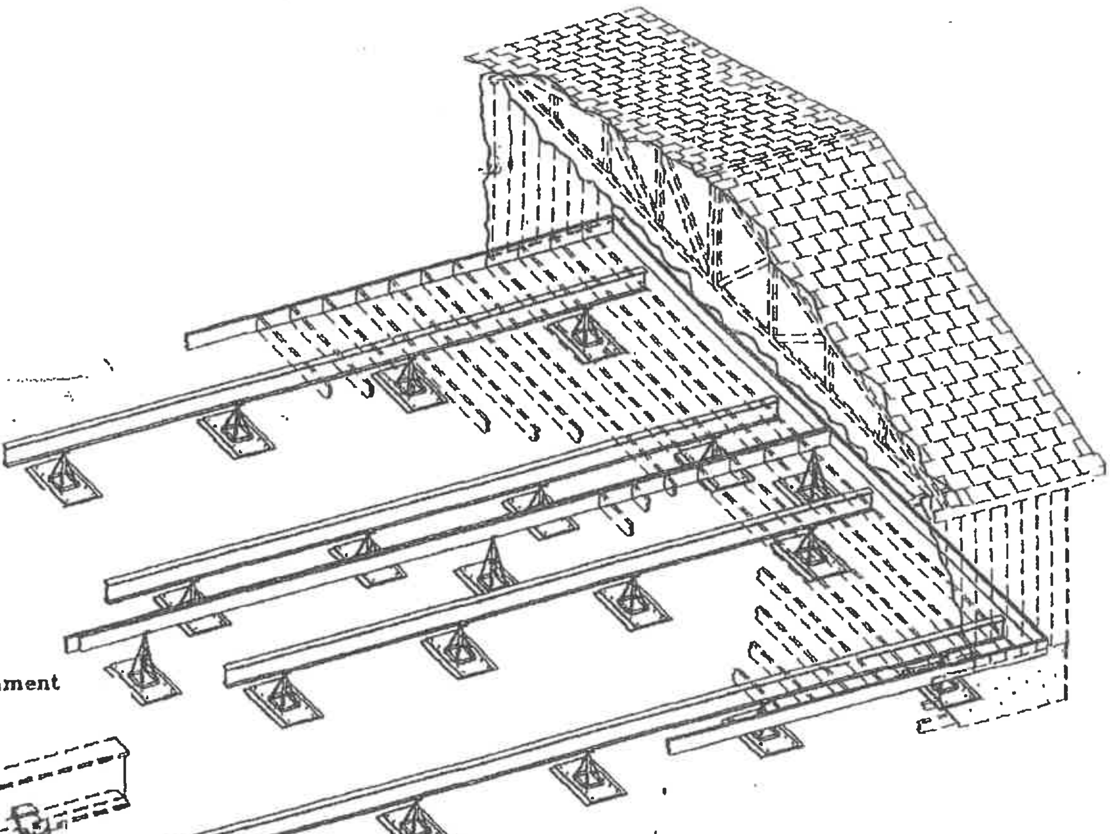
BOLT–ON TOP



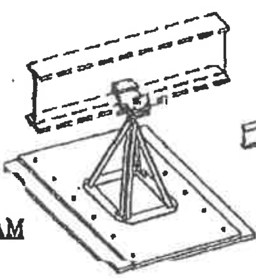
STEEL PIER
(6,000 LB RATED)

NOTES

CHECK MANUFACTURED HOME SET UP INSTRUCTIONS FOR LOADS AND LOCATIONS.

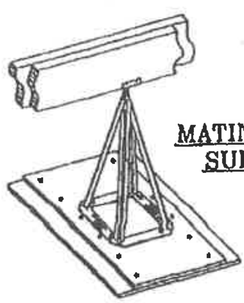


- **STATE APPROVED**
  Tested–Listed–Labeled
  Stamped in Base Plate
- **6,000 LB. RATED**
  3–1 Safety Factor
- ***HOLES PRE–PUNCHED***
  In base for easy attachment to pad or footing

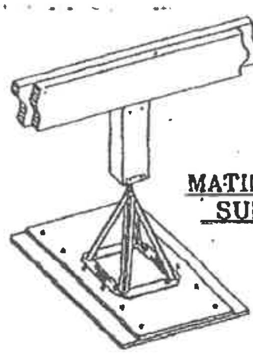


CHASSIS BEAM SUPPORT

BASE PADS ARE SHOWN FOR ILLUSTRATION ONLY AND ARE NOT A PART OF THE PIER APPROVAL



MATING LINE SUPPORT



MATING LINE SUPPORT