



STRUCTURAL CALCULATIONS FOR DANA POINT HARBOR BUILDING 10

KPFF Job #1900799



October 17, 2022

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Building&Safety: OCPWAzarvandB 12/29/2025
Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0898

DPH – BUILDING 10

KPFF Job #1900799
October 17, 2022



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18400 Von Karman Ave., Suite 600
Irvine, CA 92612
(949) 252-1022 Fax (949) 252-8082

project	Dana Point Harbor (BLDG 10)	by	AS	sheet no.
location	Dana Point, CA	date	10/17/2022	
client	SMS ARCH	job no.	1900799	

Building&Safety: OCPWArayandB 12/29/2025
Permits: BNR21-0244, ELE21-0850, MEC21-0812, PLB21-0898

Dead Load Takeoff & Live Load

Glass Scullary/Kitchen

Exterior Wall Dead Load

1" Glass Panels	13.17	psf
STL Col.	3.91	psf
Total:	17	psf

Roof Dead Load

Glass Panels	13.17	psf
STL Beams	5.08	psf
STL Rafters	3.76	psf
MISC.	3	psf
Total:	25	psf

Wall Live Load

Code Min	5	psf
Total:	5	psf

Roof Live Load

Code Min	20	psf
Total:	20	psf

Open Trellis

Roof Dead Load

CLOTH	1.00	psf
STL Beams	9.47	psf
STL Rafters		psf
MISC.	3	psf
Total:	15	psf

Roof Live Load

Code Min	10	psf
Total:	10	psf

Closed Trellis (Above Bar)

Roof Dead Load

CLOTH	1.00	psf
STL Beams	9.47	psf
STL Deck	1.31	psf
MISC.	3	psf
Total:	15	psf

Roof Live Load

Code Min	20	psf
Total:	20	psf





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Kitchen + Sculery

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Building & Safety - OCPWAZayvandR 12/29/2025
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Seismic Response Coefficient Calculation

(ASCE/SEI 7-16 Equivalent Lateral Force Procedure - Section 12.8)



Risk Category	III
Ground Hazard Motion Analysis?	Yes
Site Class	C
Seismic Design Category	D

Table 1.5-1
report no.: GMU Project No. 17-206-02
per soils report (D "Default" assumed, without soils report)
Table 11.6-1 & 11.6-2

System Type	Cantilevered Column Systems Detailed to Conform to the Requirements For	Table 12.2-1
SFRS System	Steel Ordinary Cantilever Column Systems	Table 12.2-1
Flexible Diaphragm?	Yes	Table 12.2-1, Footnote B

R	1 1/4	Table 12.2-1
Ω_0	1 1/4	Table 12.2-1
C_d	1 1/4	Table 12.2-1
I_e	1.25	Table 1.5-2
S_s	1.266 g	2% in 50 years
S_1	0.455 g	2% in 50 years
h_n	13.0 ft	
C_t	0.02	Table 12.8-2
x	0.75	Table 12.8-2
T_L	8 s	
T_a	0.14 s	Eq. 12.8-7
$C_u T_a$	0.19 s	Sec. 12.8.2
$T_{modeled}$	No	
T_0	0.09 s	Sec. 11.4.6
T_s	0.45 s	Sec. 11.4.6
T	0.14 s	Sec. 12.8.2
k	1.00	Sec. 12.8.3
F_a	1.20	Table 11.4-1
F_v	1.50	Table 11.4-2
S_{MS}	1.519 g	Eq. 11.4-3
S_{M1}	0.683 g	Eq. 11.4-4
S_{DS}	1.013 g	Eq. 11.4-1
S_{D1}	0.455 g	Eq. 11.4-2
C_s	1.01	Eq. 12.8-2
$C_{s,min}$	0.06	Eq. 12.8-5
$C_{s,max}$	3.32	Eq. 12.8-3
$C_{s,design}$	1.01	
Seismic Weight, W	13 kips	
$V = C_s W$	13 kips	Eq. 12.8-1, Strength Level Base Shear

Table 12.2-1
Table 12.2-1
Table 12.2-1
Table 1.5-2
2% in 50 years
2% in 50 years
Table 12.8-2
Table 12.8-2
Eq. 12.8-7
Eq. 12.8-7
Sec. 12.8.2
Sec. 11.4.6
Sec. 11.4.6
Sec. 12.8.2
Sec. 12.8.3
Table 11.4-1
Table 11.4-2
Eq. 11.4-3
Eq. 11.4-4
Eq. 11.4-1
Eq. 11.4-2
Eq. 12.8-2
Eq. 12.8-5
Eq. 12.8-3
Eq. 12.8-1, Strength Level Base Shear

$$T_a = C_t h_n^x \quad \text{Eq. 12.8-7}$$

$$S_{MS} = F_a S_s \quad \text{Eq. 11.4-3}$$

$$S_{M1} = F_v S_1 \quad \text{Eq. 11.4-4}$$

$$S_{DS} = 2/3 S_{MS} \quad \text{Eq. 11.4-1}$$

$$S_{D1} = 2/3 S_{M1} \quad \text{Eq. 11.4-2}$$

$$C_s = \frac{S_{DS}}{\left(\frac{R}{I_e}\right)} \quad \text{Eq. 12.8-2}$$

$$C_{s,min} = 0.044 S_{DS} I_e \geq 0.01 \quad \text{Eq. 12.8-5}$$

$$C_{s,min} = \frac{0.5 S_1}{(R/I_e)} \text{ where } S_1 \geq 0.6 \quad \text{Eq. 12.8-6}$$

$$C_{s,max} = \frac{S_{D1}}{T(R/I_e)} \text{ for } T \leq T_L \quad \text{Eq. 12.8-3}$$

$$C_{s,max} = \frac{S_{D1} T_L}{T^2 (R/I_e)} \text{ for } T > T_L \quad \text{Eq. 12.8-4}$$

$$F_x = C_{vx} V \quad \text{Eq. 12.8-11}$$

$$C_{vx} = \frac{w_x h_x^k}{\sum_{i=1}^n w_i h_i^k} \quad \text{Eq. 12.8-12}$$

$$V_x = \sum_{i=x}^n F_i \quad \text{Eq. 12.8-13}$$

$$F_{px} = \frac{\sum_{i=x}^n F_i w_{px}}{\sum_{i=x}^n w_i} \quad \text{Eq. 12.10-1}$$

$$F_{px,min} = 0.2 S_{DS} I_e w_{px} \quad \text{Eq. 12.10-2}$$

$$F_{px,max} = 0.4 S_{DS} I_e w_{px} \quad \text{Eq. 12.10-3}$$

Levels Above Base	1
ρ	1.0
Design	Strength

Diaph. No.	Level Name	Fl to Fl Height ft	Height h_x ft	Weight w_x k	$w_x h_x^k$ k-ft	C_{vx}	Lateral Force @ Each Level			Diaphragm Force ($\rho = 1.0$)			F_{px}/F_x
							F_x k	V_x k	M_{OT} k-ft	$V_x = \Sigma F_i$ k	ΣW_i k	F_{px} k	
1	Roof	13.0	13.0	13.05	170	1.000	13.22	13.2	172	13.2	13	6.6	0.50
Sum:				13	170	1.000	13.2						



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client	SMS ARCH	job no.	1900799	
	Kitchen+Sculery			

Building&Safety: OCPWAZarvandB 12/29/2025
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Components & Cladding Wind Loads

(ASCE 7-16 - Ch 30, Part 1)

County of Orange - OC Public Works
OC Development Services
APPROVED
This set of plans and specifications must be kept on the job at all times. It is unlawful to make any changes or alterations to these plans without a written permission from OC Public Works, OC Development Services of Orange County. The stamping of these plans and specifications SHALL NOT be held to permit or seal approval of the violation of any provisions of any County Ordinance or State law.
Jared Tibbitts
BUILDING OFFICIAL

Wind Coefficients

Risk Category	III	Table 1.5-1
Basic Wind Speed	102	mph, Fig. 26.5-1C
Enclosure Classification	Enclosed	Sec. 26.2
Gcpi	0.18	Table 26.13-1
Kd	0.85	Table 26.6-1
Exposure Category	D	Sec. 26.7.3
G	0.85	Sec. 26.11.1
Ke	1.00	Table 26.9-1
Kz @ h	1.18	Table 26.10-1
qh	26.8	psf, Eq. 26.10-1

Elevation and Structure Dimensions

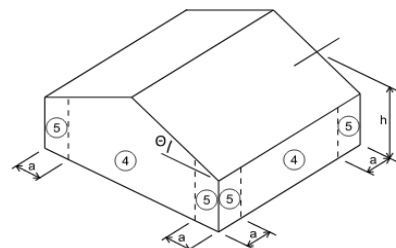
Ground Elevation Above Sea Level	0	ft
Ground to Top of Roof	34.0	ft
Bottom of Roof to Top of Roof	1.0	ft
Mean Roof Height, h	33.5	ft
Roof Angle, θ	40	Degrees
Width of Structure, B	12	ft
Length of Structure, L	43.5	ft
Width of Pressure Coefficient, a	3.0	ft
Parapet?	No	h _{parapet}
Calculate K _{zt} ?	No	K _{zt}

Strength or Allowable	Strength
Roof Type	Gable Roof
Roof Overhang	No

Strength Level Wall Pressures (psf)

Fig. 30.3-1

Zone	Effective Wind Area (ft ²)						
	10	20	50	100	200	500	10
4	31.6	30.2	28.3	26.9	25.5	23.6	31.6
	-34.3	-32.9	-31.0	-29.6	-28.2	-26.3	-34.3
5	31.6	30.2	28.3	26.9	25.5	23.6	31.6
	-42.4	-39.5	-35.8	-32.9	-30.1	-26.3	-42.4



Strength Level Roof Pressures (psf)

Fig. 30.3-2D

Zone	Effective Wind Area (ft ²)							
	2	10	20	50	100	200	300	10
1	29.0	29.0	25.7	21.5	18.2	18.2	18.2	29.0
	-53.1	-53.1	-45.0	-34.4	-26.3	-26.3	-26.3	-53.1
2e	29.0	29.0	25.7	21.5	18.2	18.2	18.2	29.0
	-53.1	-53.1	-45.0	-34.4	-26.3	-26.3	-26.3	-53.1
2n	29.0	29.0	25.7	21.5	18.2	18.2	18.2	29.0
	-53.1	-53.1	-45.0	-34.4	-26.3	-26.3	-26.3	-53.1
2r	29.0	29.0	25.7	21.5	18.2	18.2	18.2	29.0
	-58.5	-58.5	-52.3	-44.1	-37.9	-31.6	-31.6	-58.5
3e	29.0	29.0	25.7	21.5	18.2	18.2	18.2	29.0
	-58.5	-58.5	-52.3	-44.1	-37.9	-31.6	-31.6	-58.5
3r	29.0	29.0	25.7	21.5	18.2	18.2	18.2	29.0
	-90.7	-71.7	-63.5	-52.7	-44.6	-36.4	-31.6	-71.7

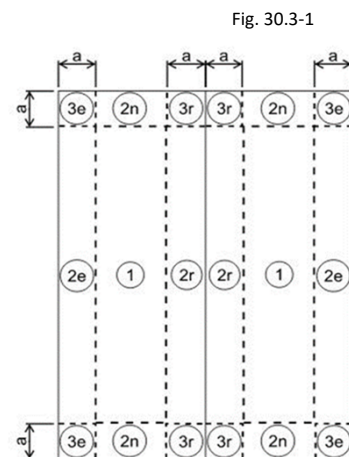


Fig. 30.3-2D

$$q_h = 0.00256K_zK_{zt}K_dK_eV^2 \quad \text{Eq. 26.10-1}$$

$$K_{zt} = (1 + K_1K_2K_3)^2 \quad \text{Eq. 26.8-1}$$

$$p = q_h[(GC_p) - (GC_{pi})] \quad \text{Eq. 30.3-1}$$

$$p = q_p[(GC_p) - (GC_{pi})] \quad \text{Eq. 30.8-1}$$

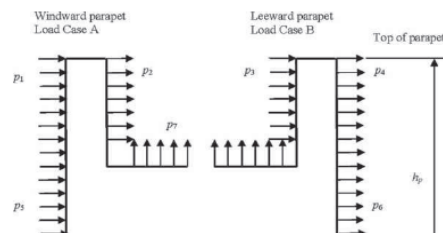


Fig. 30.8-1



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Kitchen + Scullery

Building & Safety: QCPWAzayvandB

12/29/2025

Permits: BNR21-0244, ELE21-0850, MGC21-0512, PLB21-0898

Horizontal Column lateral force distribution

(ASCE/SEI 7-16 Equivalent Lateral Force Procedure - Section 12.8)



Kitchen Scullery:

Story Force:

13.22 lbs

		1.653	3.305	3.305	3.305	1.653
N-S		1	2	3	4	5
1		0.826	1.652	1.652	1.652	0.826
2		0.826	1.652	1.652	1.652	0.826
E-W		1	2	3	4	5
1	6.610	1.322	1.322	1.322	1.322	1.322
2	6.610	1.322	1.322	1.322	1.322	1.322

Steel Column

Project File: BEAMS.ecb

LIC# : KW-06015364, Build:20.22.8.17

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12/29/2025

DESCRIPTION: (10) Kitchen+Scullery-STL COL.

Permits: ENR21-0244, ELE21-0850, MEC21-0512, PLB21-0898



Code References

Calculations per AISC 360-16, IBC 2018, CBC 2019, ASCE 7-16
 Load Combinations Used : IBC 2018

General Information

Steel Section Name : **HSS8x8x1/2** Overall Column Height 12.0 ft
 Analysis Method : Load Resistance Factor Top & Bottom Fixity Top Free, Bottom Fixed
 Steel Stress Grade Brace condition for deflection (buckling) along columns :
 Fy : Steel Yield 50.0 ksi X-X (width) axis :
 E : Elastic Bending Modulus 29,000.0 ksi Unbraced Length for buckling ABOUT Y-Y Axis = 12.0 ft, K = 2.1
 Y-Y (depth) axis :
 Unbraced Length for buckling ABOUT X-X Axis = 12.0 ft, K = 2.1

Applied Loads

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

Column self weight included : 586.20 lbs * Dead Load Factor
 AXIAL LOADS . . .
 ROOF: Axial Load at 12.0 ft, D = 1.624, LR = 1.299, W = 1.884 k
 BENDING LOADS . . .
 ROOF DIAPHRAGM LOADS: Lat. Point Load at 10.750 ft creating Mx-x, E = 1.30 k
 WALL - IN PLANE: Lat. Point Load at 12.0 ft creating My-y, E = 0.6120 k
 WALL - OUT OF PLANE: Lat. Point Load at 12.0 ft creating Mx-x, E = 0.8870 k
 ROOF DIAPHRAGM LOADS: Lat. Point Load at 12.0 ft creating My-y, E = 1.70 k

DESIGN SUMMARY

Bending & Shear Check Results

PASS Max. Axial+Bending Stress Ratio =	0.4865 : 1	Maximum Load Reactions . .	
Load Combination	+0.6468D+1.30E	Top along X-X	0.0 k
Location of max.above base	0.0 ft	Bottom along X-X	4.080 k
At maximum location values are . . .		Top along Y-Y	0.0 k
Pu	1.430 k	Bottom along Y-Y	4.080 k
0.9 * Pn	294.670 k	Maximum Load Deflections . . .	
Mu-x	-32.005 k-ft	Along Y-Y	1.115 in at 12.0ft above base
0.9 * Mn-x :	140.625 k-ft	for load combination : E Only	
Mu-y	-36.067 k-ft	Along X-X	1.115 in at 12.0ft above base
0.9 * Mn-y :	140.625 k-ft	for load combination : E Only	
PASS Maximum Shear Stress Ratio	0.02175 : 1		
Load Combination	+0.6468D+1.30E		
Location of max.above base	0.0 ft		
At maximum location values are . . .			
Vu : Applied	3.006 k		
Vn * Phi : Allowable	138.210 k		

Load Combination Results

Load Combination	Maximum Axial + Bending Stress Ratios				CbX	CbY	KxLx/Ry	KyLy/Rx	Maximum Shear Ratios			
	Stress Ratio	Status	Location						Stress Ratio	Status	Location	

Maximum Reactions

Note: Only non-zero reactions are listed.

Load Combination	Axial Reaction @ Base	X-X Axis Reaction @ Base	X-X Axis Reaction @ Top	k	Y-Y Axis Reaction @ Base	Y-Y Axis Reaction @ Top	Mx - End Moments @ Base	Mx - End Moments @ Top	k-ft	My - End Moments @ Base	My - End Moments @ Top
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Extreme Reactions

Item	Extreme Value	Axial Reaction @ Base	X-X Axis Reaction @ Base	X-X Axis Reaction @ Top	k	Y-Y Axis Reaction @ Base	Y-Y Axis Reaction @ Top	Mx - End Moments @ Base	Mx - End Moments @ Top	k-ft	My - End Moments @ Base	My - End Moments @ Top
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Maximum Deflections for Load Combinations

Load Combination	Max. X-X Deflection	Distance	Max. Y-Y Deflection	Distance
------------------	---------------------	----------	---------------------	----------

Steel Section Properties : HSS8x8x1/2

Steel Section Properties : HSS8x8x1/2

Steel Column

Project File: BEAMS.ecb

LIC# : KW-06015364, Build:20.22.8.17

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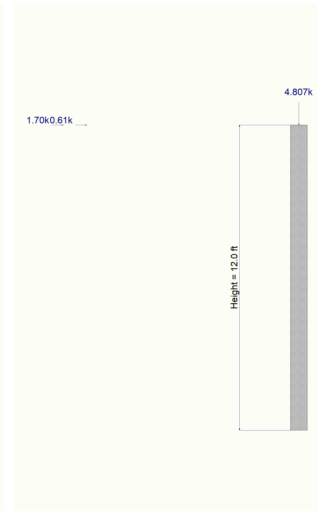
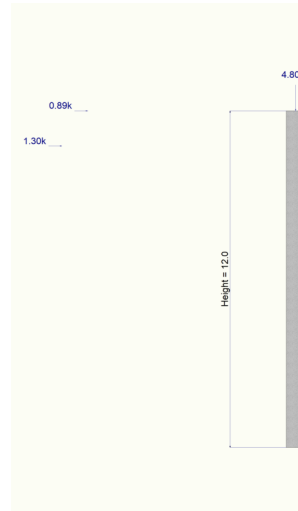
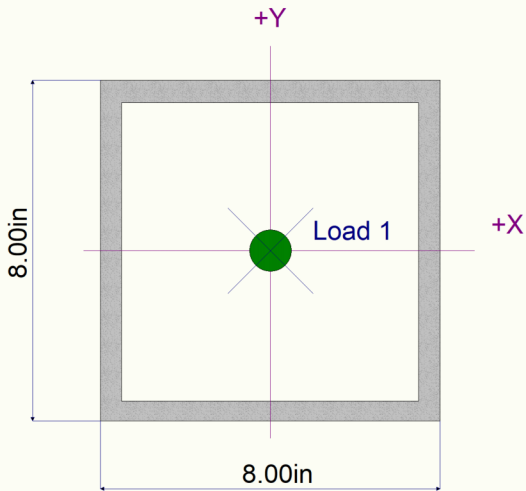
DESCRIPTION: (10) Kitchen+Scullyery-STL COL.

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0898

Depth	=	8.000 in	I xx	=	125.00 in ⁴	J	=	204.000 in ⁴
Design Thick	=	0.465 in	S xx	=	31.20 in ³			
Width	=	8.000 in	R xx	=	3.040 in			
Wall Thick	=	0.500 in	Zx	=	37.500 in ³			
Area	=	13.500 in ²	I yy	=	125.000 in ⁴	C	=	52.400 in ⁴
Weight	=	48.850 plf	S yy	=	31.200 in ³			
			R yy	=	3.040 in			
Ycg	=	0.000 in						



Sketches



Steel Beam

Project File: BEAMS.ec6

LIC# : KW-06015364, Build:20.22.8.17

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12/29/2025

DESCRIPTION: Kitchen+Scullery- Rafter Horiz

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0898

CODE REFERENCES

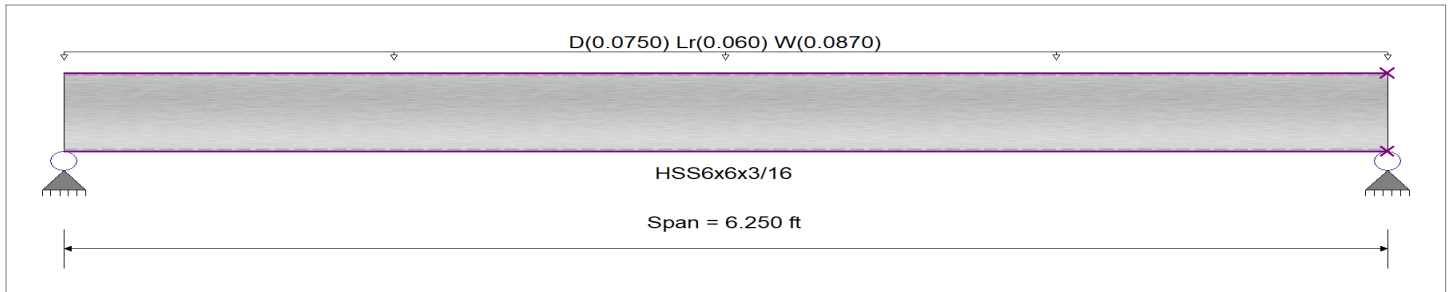
Calculations per AISC 360-16, IBC 2018, CBC 2019, ASCE 7-16
 Load Combination Set : IBC 2018



Material Properties

Analysis Method Load Resistance Factor Design
 Beam Bracing : Beam is Fully Braced against lateral-torsional buckling
 Bending Axis : Major Axis Bending

Fy : Steel Yield : 50.0 ksi
 E: Modulus : 29,000.0 ksi



Applied Loads

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

Beam self weight NOT internally calculated and added
 Uniform Load : D = 0.0250, Lr = 0.020, W = 0.0290 ksf, Tributary Width = 3.0 ft, (ROOF)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	0.038 : 1	Maximum Shear Stress Ratio =	0.014 : 1
Section used for this span	HSS6x6x3/16	Section used for this span	HSS6x6x3/16
Mu : Applied	1.121 k-ft	Vu : Applied	0.7172 k
Mn * Phi : Allowable	29.337 k-ft	Vn * Phi : Allowable	51.471 k
Load Combination	+1.20D+1.60Lr+0.50W	Load Combination	+1.20D+1.60Lr+0.50W
Span # where maximum occurs	Span # 1	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	0.005 in Ratio = 16,164	>=360	
Max Upward Transient Deflection	0.000 in Ratio = 0	<360	Span: 1 : W Only
Max Downward Total Deflection	0.008 in Ratio = 8836	>=240.	Span: 1 : +D+0.750Lr+0.450W
Max Upward Total Deflection	0.000 in Ratio = 0	<240.0	

Maximum Forces & Stresses for Load Combinations

Load Combination	Segment Length	Span #	Max Stress Ratios		Summary of Moment Values					Summary of Shear Values			
			M	V	max Mu +	max Mu -	Mu Max	Mnx	Phi*Mnx	Cb	Rm	VuMax	Vnx
+1.40D	Dsgn. L = 6.25 ft	1	0.017	0.006	0.51	0.51	32.60	29.34	1.00	1.00	0.33	57.19	51.47
+1.20D+0.50Lr	Dsgn. L = 6.25 ft	1	0.020	0.007	0.59	0.59	32.60	29.34	1.00	1.00	0.38	57.19	51.47
+1.20D	Dsgn. L = 6.25 ft	1	0.015	0.005	0.44	0.44	32.60	29.34	1.00	1.00	0.28	57.19	51.47
+1.20D+1.60Lr	Dsgn. L = 6.25 ft	1	0.031	0.011	0.91	0.91	32.60	29.34	1.00	1.00	0.58	57.19	51.47
+1.20D+1.60Lr+0.50W	Dsgn. L = 6.25 ft	1	0.038	0.014	1.12	1.12	32.60	29.34	1.00	1.00	0.72	57.19	51.47
+1.20D+0.50W	Dsgn. L = 6.25 ft	1	0.022	0.008	0.65	0.65	32.60	29.34	1.00	1.00	0.42	57.19	51.47
+1.20D+0.50Lr+W	Dsgn. L = 6.25 ft	1	0.034	0.013	1.01	1.01	32.60	29.34	1.00	1.00	0.65	57.19	51.47
+1.20D+W	Dsgn. L = 6.25 ft	1	0.029	0.011	0.86	0.86	32.60	29.34	1.00	1.00	0.55	57.19	51.47
+0.90D+W	Dsgn. L = 6.25 ft	1	0.026	0.009	0.75	0.75	32.60	29.34	1.00	1.00	0.48	57.19	51.47
+0.90D	Dsgn. L = 6.25 ft	1	0.011	0.004	0.33	0.33	32.60	29.34	1.00	1.00	0.21	57.19	51.47

Project Title:
 Engineer:
 Project ID:
 Project Descr:

A8/23

Steel Beam

Project File: BEAMS.ec6

LIC# : KW-06015364, Build:20.22.8.17

KPFF CONSULTING ENGINEERS

(c) ENERCALC INC 1983-2022

12/29/2025

DESCRIPTION: Kitchen+Scullery- Rafter Horiz

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0898

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl
+D+0.750Lr+0.450W	1	0.0085	3.143		0.0000

Vertical Reactions

Load Combination	Support 1	Support 2
Overall MAXimum	0.497	0.497
Overall MINimum	0.141	0.141
D Only	0.234	0.234
+D+Lr	0.422	0.422
+D+0.750Lr	0.375	0.375
+D+0.60W	0.398	0.398
+D+0.750Lr+0.450W	0.497	0.497
+D+0.450W	0.357	0.357
+0.60D+0.60W	0.304	0.304
+0.60D	0.141	0.141
Lr Only	0.188	0.188
W Only	0.272	0.272

County of Orange - OC Public Works
 OC Development Services

APPROVED

Location in Span

0.0000

This seal, plan and specifications must be kept on the job at all times. It is unlawful to make any changes or alterations to these specifications without the written permission from OC Public Works or the Planning Services of Orange County. The stamping of these plan specifications SHALL NOT be held to permit or be an approval of the violation of any provisions of any County Ordinance or State law.

J. Paul Liberman
 BUILDING OFFICIAL

Steel Beam

Project File: BEAMS.ec6

LIC# : KW-06015364, Build:20.22.8.17

KPFF CONSULTING ENGINEERS

(c) ENERCALC INC 1983-2022

12/29/2025

DESCRIPTION: Kitchen+Scullery- Rafter Vert

Permits: ENR21-0244, ELE21-0850, MEC21-0512, PLB21-0898

Maximum Forces & Stresses for Load Combinations

Load Combination		Max Stress Ratios		Summary of Moment Values							Summary of Shear Values		
Segment Length	Span #	M	V	max Mu +	max Mu -	Mu Max	Mnx	Phi*Mnx	Cb	Rm	VuMax	Vn	Phi*Vn
Dsgn. L = 6.25 ft	1	0.034	0.010	0.99		0.99	32.60	29.34	1.00	1.00	0.53	57.19	51.47



Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+0.750Lr+0.450W	1	0.0238	3.143		0.0000	0.000

Vertical Reactions

Load Combination	Support notation : Far left is #'		Values in KIPS
	Support 1	Support 2	
Overall MAXimum	1.243	1.243	
Overall MINimum	0.351	0.351	
D Only	0.586	0.586	
+D+Lr	1.055	1.055	
+D+0.750Lr	0.938	0.938	
+D+0.60W	0.994	0.994	
+D+0.750Lr+0.450W	1.243	1.243	
+D+0.450W	0.892	0.892	
+0.60D+0.60W	0.759	0.759	
+0.60D	0.351	0.351	
Lr Only	0.469	0.469	
W Only	0.680	0.680	

Project Title:
 Engineer:
 Project ID:
 Project Descr:

A12/23

Steel Beam

Project File: BEAMS.ec6

LIC# : KW-06015364, Build:20.22.8.17

KPFF CONSULTING ENGINEERS

(c) ENERCALC INC 1983-2022

12/29/2025

DESCRIPTION: Kitchen+Scullery-Ridge Beam

Permits: ENR21-0244, ELE21-0850, MEC21-0512, PLB21-0898

Maximum Forces & Stresses for Load Combinations

Load Combination		Max Stress Ratios		Summary of Moment Values						Summary of Shear Values			
Segment Length	Span #	M	V	max Mu +	max Mu -	Mu Max	Mnx	Phi*Mnx	Cb	Rm	VuMax	Vn	Phi*Vn
Dsgn. L = 11.00 ft	1	0.054	0.009	2.47		2.47	50.59	45.53	1.00	1.00	0.63	78.07	70.26



Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+0.750Lr+0.450W	1	0.0713	5.531		0.0000	0.000

Vertical Reactions

Load Combination	Support notation : Far left is #'		Values in KIPS
	Support 1	Support 2	
Overall MAXimum	1.497	1.497	
Overall MINimum	0.423	0.423	
D Only	0.706	0.706	
+D+Lr	1.270	1.270	
+D+0.750Lr	1.129	1.129	
+D+0.60W	1.197	1.197	
+D+0.750Lr+0.450W	1.497	1.497	
+D+0.450W	1.074	1.074	
+0.60D+0.60W	0.914	0.914	
+0.60D	0.423	0.423	
Lr Only	0.565	0.565	
W Only	0.819	0.819	

Project Title:
 Engineer:
 Project ID:
 Project Descr:

A14/23

Steel Beam

Project File: BEAMS.ec6

LIC# : KW-06015364, Build:20.22.8.17

KPFF CONSULTING ENGINEERS

(c) ENERCALC INC 1983-2022

12/29/2025

DESCRIPTION: Kitchen+Scullery-Edge Beam

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0898

Maximum Forces & Stresses for Load Combinations

Load Combination		Max Stress Ratios		Summary of Moment Values						Summary of Shear Values			
Segment Length	Span #	M	V	max Mu +	max Mu -	Mu Max	Mnx	Phi*Mnx	Cb	Rm	VuMax	Vn	Phi*Vn
Dsgn. L = 11.00 ft	1	0.054	0.009	2.47		2.47	50.59	45.53	1.00	1.00	0.63	78.07	70.26



Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+0.750Lr+0.450W	1	0.0713	5.531		0.0000	0.000

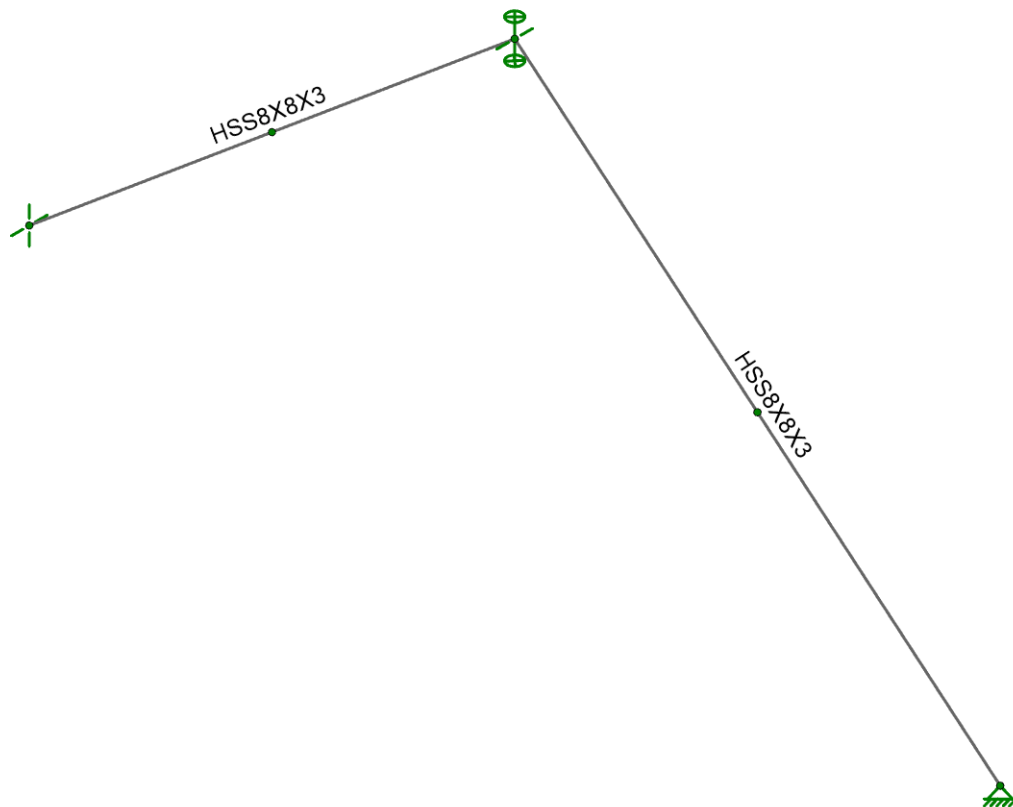
Vertical Reactions

Load Combination	Support notation : Far left is #'		Values in KIPS
	Support 1	Support 2	
Overall MAXimum	1.497	1.497	
Overall MINimum	0.423	0.423	
D Only	0.706	0.706	
+D+Lr	1.270	1.270	
+D+0.750Lr	1.129	1.129	
+D+0.60W	1.197	1.197	
+D+0.750Lr+0.450W	1.497	1.497	
+D+0.450W	1.074	1.074	
+0.60D+0.60W	0.914	0.914	
+0.60D	0.423	0.423	
Lr Only	0.565	0.565	
W Only	0.819	0.819	



Building&Safety: OCPWAzarvandB 12/29/2025
 Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0898

**County of Orange - OC Public Works
 OC Development Services
 APPROVED**
 This set of plans and specifications must be kept on the job at all times. It is unlawful to make any changes or alterations to these plans without written permission from OC Public Works, OC Development Services of Orange County. The stamping of these plan specifications SHALL NOT be held to permit or be an approval of the violation of any provisions of any County Ordinance or State law.
 Paul Tibbitts
 BUILDING OFFICIAL



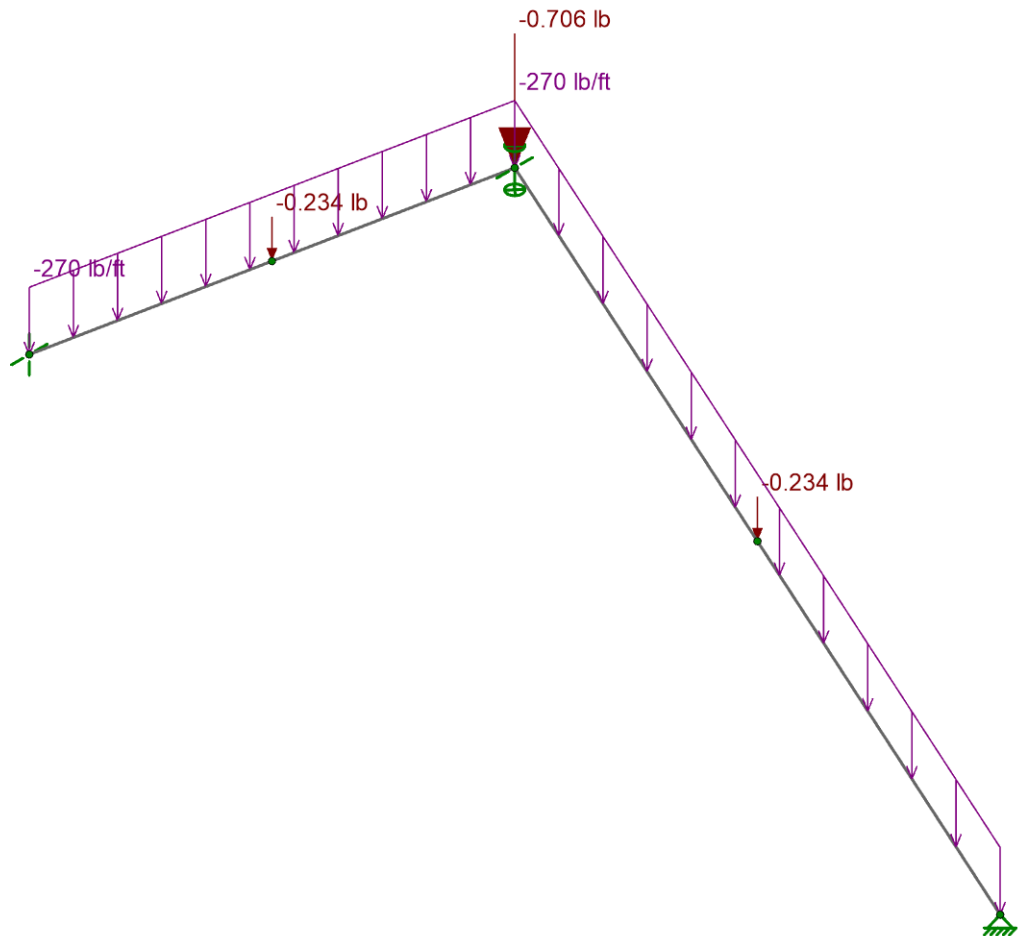
Envelope Only Solution

KPFF	DBH BLDG 10-Amendment	SK-1
Alex.Sanchez		Oct 17, 2022
1900799		RISA Bent Beam Model_.r3d



Building&Safety: OCPWAzarvandB 12/29/2025
 Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0898

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 OC Development Services
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 J. Paul Tibbitts
 BUILDING OFFICIAL



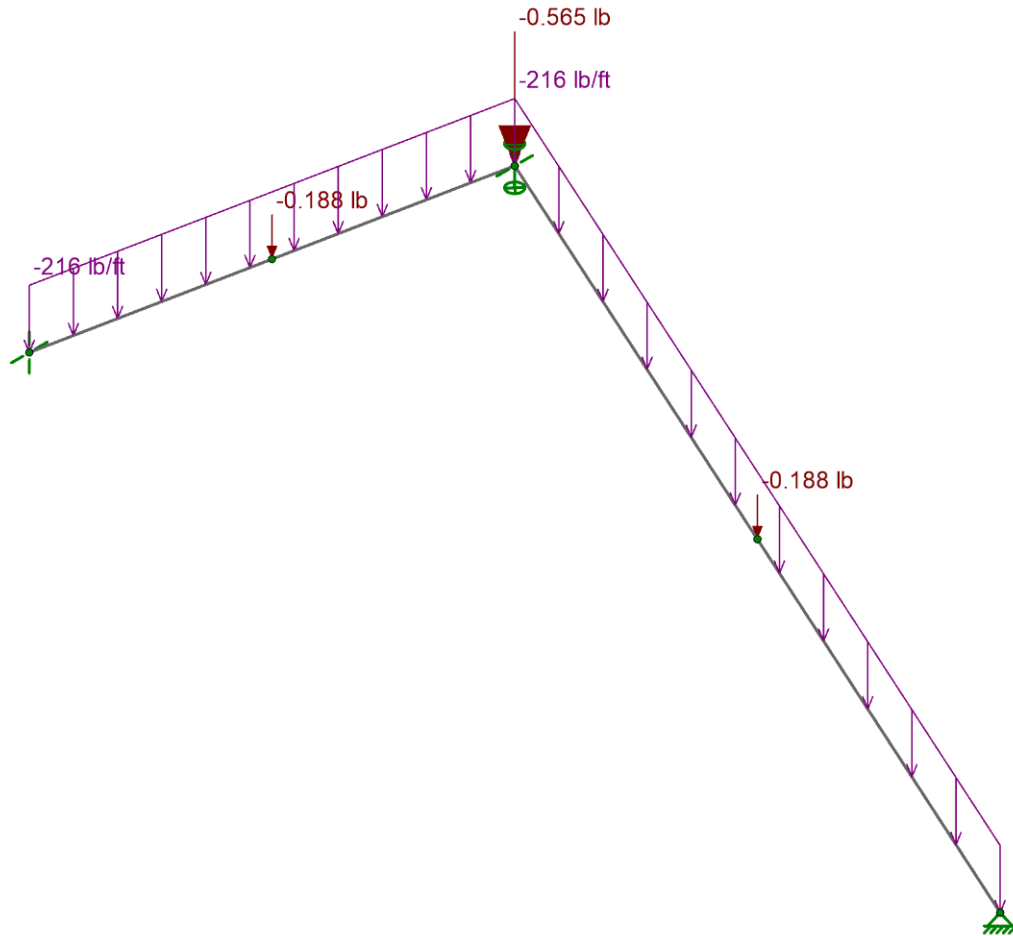
Loads: BLC 1, DL
 Envelope Only Solution

KPFF	DBH BLDG 10-Amendment	SK-2
Alex.Sanchez		Oct 17, 2022
1900799		RISA Bent Beam Model_.r3d



Building&Safety: OCPWAzarvandB 12/29/2025
 Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0898

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 J. Paul Tibbitts
 BUILDING OFFICIAL



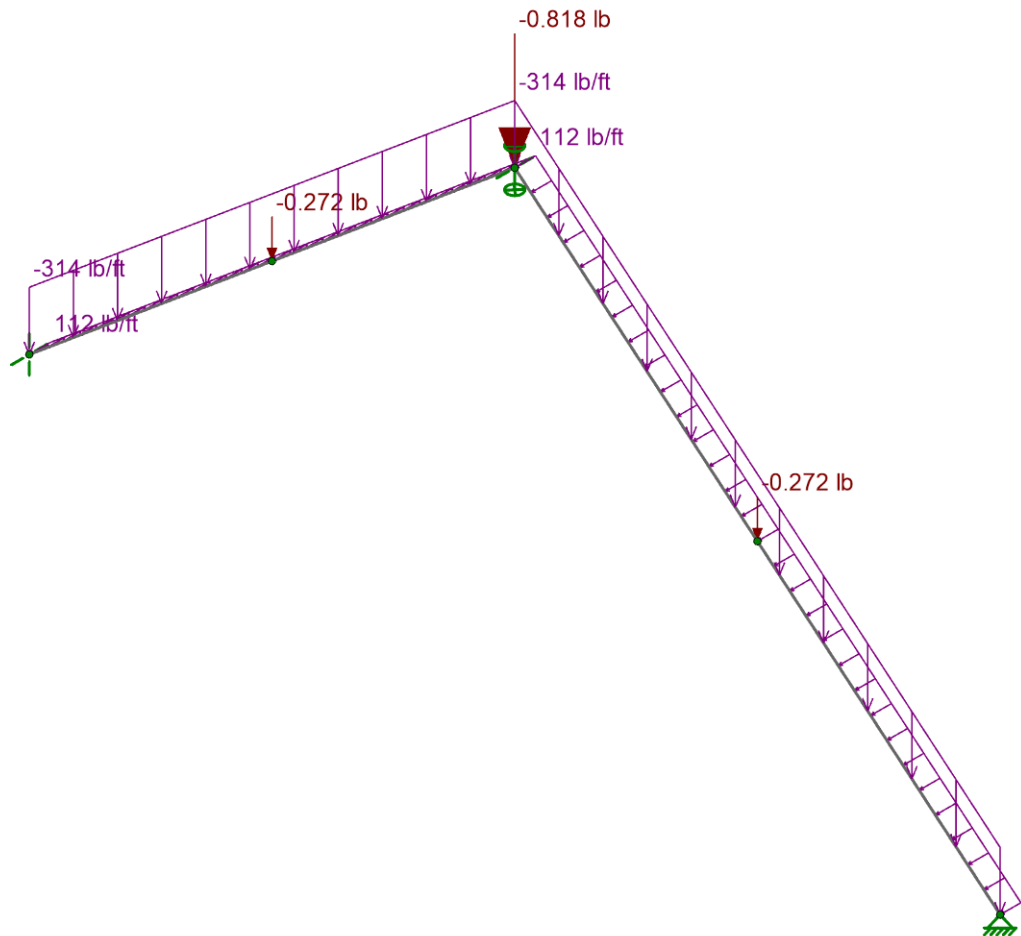
Loads: BLC 2, Lr
 Envelope Only Solution

KPFF	DBH BLDG 10-Amendment	SK-3
Alex.Sanchez		Oct 17, 2022
1900799		RISA Bent Beam Model_.r3d



Building&Safety: OCPWAzarvandB 12/29/2025
 Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0898

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 Paul Tibbitts
 BUILDING OFFICIAL



Loads: BLC 5, WL+X
 Envelope Only Solution

KPFF	DBH BLDG 10-Amendment	SK-4
Alex.Sanchez		Oct 17, 2022
1900799		RISA Bent Beam Model_.r3d



Shear Check

(Env)

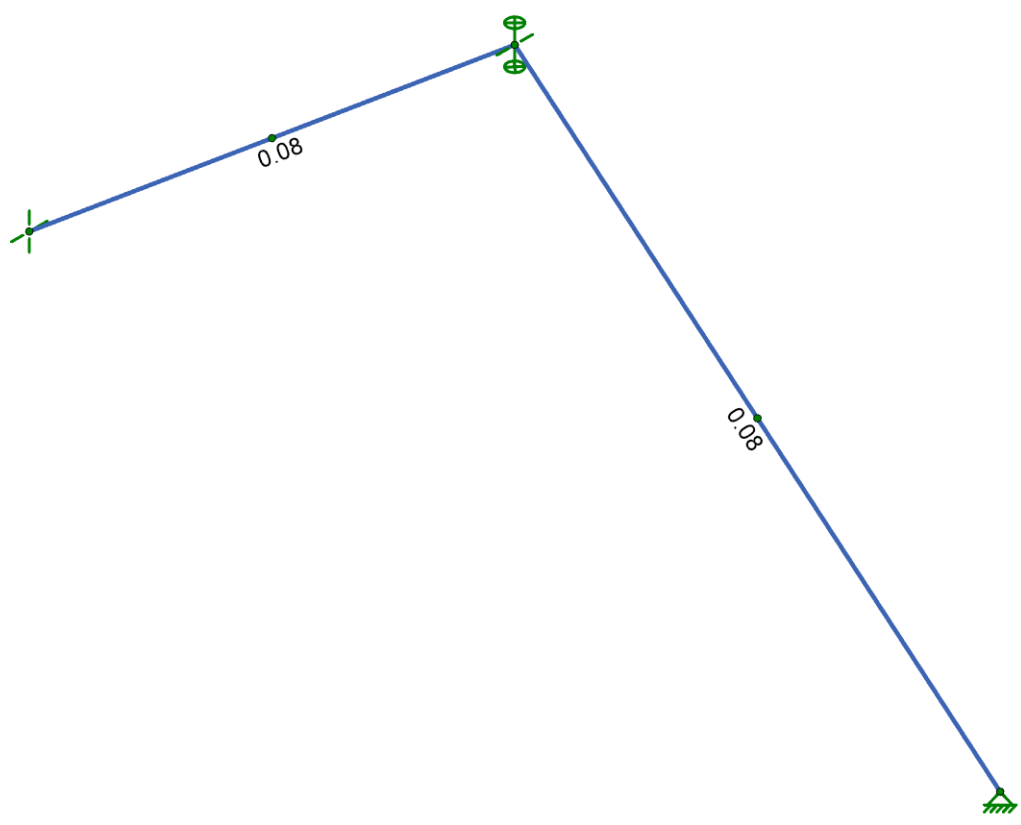
- No Calc
- > 1.0
- .90-1.0
- .75-.90
- .50-.75
- 0 - .50

Building Code: 75-90 and B 12/29/2025
 Permits: ENR21-040-PLF-00850, ME21-0512, PLE21-0535

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 OC Development Services
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Jared Tibbitts
 BUILDING OFFICIAL



Member Shear Checks Displayed (Enveloped)
 Envelope Only Solution

KPFF	DBH BLDG 10-Amendment	SK-6
Alex.Sanchez		Oct 17, 2022
1900799		RISA Bent Beam Model_.r3d



Company : KPPF
 Designer : Alex.Sanchez
 Job Number : 1900799
 Model Name : DBH BLDG 10-Amendment

10/17/2022
 8:15:12 AM
 Checked By : _____

Hot Rolled Steel Properties

Building&Safety: OCPWAzarvandB 12/29/2025

Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e ⁵ F ⁻¹]	Density [k/ft ³]	Yield [ksi]	Ry	Fu [ksi]	Rt
1 A992	29000	11154	0.3	0.65	0.49	50	1.1	65	1.2
2 A36 Gr.36	29000	11154	0.3	0.65	0.49	36	1.5	58	1.2
3 A572 Gr.50	29000	11154	0.3	0.65	0.49	50	1.1	65	1.2
4 A500 Gr.B RND	29000	11154	0.3	0.65	0.527	42	1.4	58	1.3
5 A500 Gr.B RECT	29000	11154	0.3	0.65	0.527	46	1.4	58	1.3
6 A500 Gr.C RND	29000	11154	0.3	0.65	0.527	46	1.4	62	1.3
7 A500 Gr.C RECT	29000	11154	0.3	0.65	0.527	50	1.4	62	1.3
8 A53 Gr.B	29000	11154	0.3	0.65	0.49	35	1.6	60	1.2
9 A1085	29000	11154	0.3	0.65	0.49	50	1.4	65	1.3
10 A913 Gr.65	29000	11154	0.3	0.65	0.49	65	1.1	80	1.1

County of Orange, OC Public Works
 OC Development Services
 APPROVED
 The seal of this office and specifications must be kept on the file at all times. It is unlawful to make any changes or additions to these plans without the written permission of the County Engineer. The authority of these plans is limited to the specific project and location as stated on the plans. Any violation of these plans without the approval of the County Engineer is a violation of the Building Code of the County of Orange, California.

Hot Rolled Steel Section Sets

Label	Shape	Type	Design List	Material	Design Rule	Area [in ²]	Iyy [in ⁴]	Izz [in ⁴]	J [in ⁴]
1 Beam	HSS8X8X3	Beam	Tube	A500 Gr.C RND	Typical	5.37	54.4	54.4	84.5

Member Primary Data

Label	I Node	J Node	Section/Shape	Type	Design List	Material	Design Rule
1 M1	N1	N3	Beam	Beam	Tube	A500 Gr.C RND	Typical
2 M3	N3	N2	Beam	Beam	Tube	A500 Gr.C RND	Typical

Hot Rolled Steel Design Parameters

Label	Shape	Length [ft]	Lcomp top [ft]	Channel Conn.	a [ft]	Function
1 M1	Beam	7.81	Lbyy	N/A	N/A	Lateral
2 M3	Beam	7.81	Lbyy	N/A	N/A	Lateral

Node Loads and Enforced Displacements (BLC 1 : DL)

Node Label	L, D, M	Direction	Magnitude [(lb, lb-ft), (in, rad), (lb*s ² /ft, lb*s ² *ft)]
1 N3	L	Y	0.706
2 N3	L	Y	-0.706
3 N3	L	Y	-0.706
4 N4	L	Y	-0.234
5 N5	L	Y	-0.234

Node Loads and Enforced Displacements (BLC 2 : Lr)

Node Label	L, D, M	Direction	Magnitude [(lb, lb-ft), (in, rad), (lb*s ² /ft, lb*s ² *ft)]
1 N4	L	Y	-0.188
2 N5	L	Y	-0.188
3 N3	L	Y	-0.565

Node Loads and Enforced Displacements (BLC 5 : WL+X)

Node Label	L, D, M	Direction	Magnitude [(lb, lb-ft), (in, rad), (lb*s ² /ft, lb*s ² *ft)]
1 N4	L	Y	-0.272
2 N5	L	Y	-0.272
3 N3	L	Y	-0.818



Company : KPPF
 Designer : Alex.Sanchez
 Job Number : 1900799
 Model Name : DBH BLDG 10-Amendment

10/17/2022
 8:15:12 AM
 Checked By : _____

Member Distributed Loads (BLC 1 : DL)

Building&Safety: OCPWAzarvandB 12/29/2025

Member	Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/ft]	End Magnitude [lb/ft, F, psf, lb-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	M3	Y	-270	-270	0	%100
2	M1	Y	-270	-270	0	%100

Permits: 2021-0244, 22-01-0000, 22-01-0512, PLB21-0898
 County of Orange - OC Public Works
 Development Services
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Member Distributed Loads (BLC 2 : Lr)

Member	Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/ft]	End Magnitude [lb/ft, F, psf, lb-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	M3	Y	-216	-216	0	%100
2	M1	Y	-216	-216	0	%100

Member Distributed Loads (BLC 5 : WL+X)

Member	Label	Direction	Start Magnitude [lb/ft, F, psf, lb-ft/ft]	End Magnitude [lb/ft, F, psf, lb-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	M3	Y	-314	-314	0	%100
2	M3	Z	112	112	0	%100
3	M1	Y	-314	-314	0	%100
4	M1	Z	112	112	0	%100

Member Area Loads

No Data to Print...

Basic Load Cases

	BLC Description	Category	Y Gravity	Nodal	Distributed
1	DL	DL	-1	5	2
2	Lr	RLL		3	2
3	ELX	ELX			
4	ELZ	ELZ			
5	WL+X	WL+X		3	4
6	WL-X	WL-X			
7	WL+Z	WL+Z			
8	WL-Z	WL-Z			

Load Combinations

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	Service: DL	Yes	Y	DL	1								
2	Service: RLL	Yes	Y	RLL	1								
3	Service: ELX	Yes	Y	ELX	-1								
4	Service: ELZ	Yes	Y	ELZ	1								
5	Service: WL+X	Yes	Y	WL+X	1								
6	Service: WL-X	Yes	Y	WL-X	1								
7	Service: WL+Z	Yes	Y	WL+Z	1								
8	Service: WL-Z	Yes	Y	WL-Z	1								
9	Deflection: DL	Yes	Y	DL	1								
10	Deflection: L	Yes	Y	RLL	1								
11	Deflection: D+L	Yes	Y	DL	1	RLL	1						
12	Deflection: ELX	Yes	Y	ELX	3.5								
13	Deflection: ELZ	Yes	Y	ELZ	3.5								
14	Deflection: WL+X	Yes	Y	WL+X	0.478								
15	Deflection: WL-X	Yes	Y	WL-X	0.478								
16	Deflection: WL+Z	Yes	Y	WL+Z	0.478								
17	Deflection: WL-Z	Yes	Y	WL-Z	0.478								
18	IBC 16-1	Yes	Y	DL	1.4								



Company : KPPF
 Designer : Alex.Sanchez
 Job Number : 1900799
 Model Name : DBH BLDG 10-Amendment

10/17/2022
 8:15:12 AM
 Checked By : _____

Load Combinations (Continued)

Building&Safety: OCPWArzarvandB 12/29/2025

Permits: UNWET-0247, ELLET-0050, REC21-0512, PLB21-0898

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
19	IBC 16-2 (a)	Yes	Y	DL	1.2	LL	1.6	LLS	1.6	RLL	0.5		
20	IBC 16-2 (b)	Yes	Y	DL	1.2	RLL	1.6	LLS	1.6				
21	IBC 16-3 (a)	Yes	Y	DL	1.2	RLL	1.6	LL	0.5	LLS	1		
22	IBC 16-5 (a)	Yes	Y	DL	1.2	Sds*DL	0.2	ELX	1	LL	0.5		
23	IBC 16-5 (b)	Yes	Y	DL	1.2	Sds*DL	0.2	ELZ	1	LL	0.5		
24	IBC 16-5 (c)	Yes	Y	DL	1.2	Sds*DL	0.2	ELX	-1	LL	0.5	LLS	1
25	IBC 16-5 (d)	Yes	Y	DL	1.2	Sds*DL	0.2	ELZ	-1	LL	0.5	LLS	1
26	IBC 16-7 (a)	Yes	Y	DL	0.9	Sds*DL	-0.2	ELX	1				
27	IBC 16-7 (b)	Yes	Y	DL	0.9	Sds*DL	-0.2	ELZ	1				
28	IBC 16-7 (c)	Yes	Y	DL	0.9	Sds*DL	-0.2	ELX	-1				
29	IBC 16-7 (d)	Yes	Y	DL	0.9	Sds*DL	-0.2	ELZ	-1				
30	IBC 16-3 (b) (a)	Yes	Y	DL	1.2	RLL	1.6	WL+X	0.5				
31	IBC 16-3 (b) (b)	Yes	Y	DL	1.2	RLL	1.6	WL+Z	0.5				
32	IBC 16-3 (d) (a)	Yes	Y	DL	1.2	WL+X	0.5						
33	IBC 16-3 (d) (b)	Yes	Y	DL	1.2	WL+Z	0.5						
34	IBC 16-4 (a) (a)	Yes	Y	DL	1.2	WL+X	1	LL	0.5	LLS	1	RLL	0.5
35	IBC 16-4 (a) (b)	Yes	Y	DL	1.2	WL+Z	1	LL	0.5	LLS	1	RLL	0.5
36	IBC 16-4 (b) (a)	Yes	Y	DL	1.2	WL+X	1	LL	0.5	LLS	1		
37	IBC 16-4 (b) (b)	Yes	Y	DL	1.2	WL+Z	1	LL	0.5	LLS	1		
38	IBC 16-6 (a)	Yes	Y	DL	0.9	WL+X	1						
39	IBC 16-6 (b)	Yes	Y	DL	0.9	WL+Z	1						
40	IBC 16-3 (b) (a)	Yes	Y	DL	1.2	RLL	1.6	WL-X	0.5				
41	IBC 16-3 (b) (b)	Yes	Y	DL	1.2	RLL	1.6	WL-Z	0.5				
42	IBC 16-3 (d) (a)	Yes	Y	DL	1.2	WL-X	0.5						
43	IBC 16-3 (d) (b)	Yes	Y	DL	1.2	WL-Z	0.5						
44	IBC 16-4 (a) (a)	Yes	Y	DL	1.2	WL-X	1	LL	0.5	LLS	1	RLL	0.5
45	IBC 16-4 (a) (b)	Yes	Y	DL	1.2	WL-Z	1	LL	0.5	LLS	1	RLL	0.5
46	IBC 16-4 (b) (a)	Yes	Y	DL	1.2	WL-X	1	LL	0.5	LLS	1		
47	IBC 16-4 (b) (b)	Yes	Y	DL	1.2	WL-Z	1	LL	0.5	LLS	1		
48	IBC 16-6 (a)	Yes	Y	DL	0.9	WL-X	1						
49	IBC 16-6 (b)	Yes	Y	DL	0.9	WL-Z	1						
50	DL		Y	1	1								
51	Lr		Y	2	1								
52	ELX		Y	3	1								
53	ELZ		Y	4	1								
54	WL+X		Y	5	1								
55	WL-X		Y	6	1								
56	WL+Z		Y	7	1								
57	WL-Z		Y	8	1								

County of Orange - OC Public Works
 OC Development Services
APPROVED
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 Date: 10/17/2022
 Signature: _____
 Title: _____

Envelope Node Reactions

Node Label	X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1 N3 max	0	49	0	49	0	49	0	49	0	49	0	49
2 min	0	1	0	1	-875.069	34	0	1	0	34	0	1
3 N1 max	0	49	6641.941	30	0	49	0	49	0	49	0	49
4 min	0	1	0	3	-437.309	5	0	1	0	1	0	1
5 N2 max	0	17	6641.941	30	0	49	0	49	0	49	0	49
6 min	0	30	0	3	-437.309	5	0	1	0	1	0	1
7 Totals: max	0	17	13283.882	30	0	49						
8 min	0	30	0	3	-1749.496	38						



18400 Von Karman Ave., Suite 600
Irvine, CA 92612
(949) 252-1022 Fax (949) 252-8082

project Dana Point Harbor (BLDG 10)

by AS

sheet no.

location Dana Point, CA

date 10/17/2022

client SMS ARCH

job no. 1900799

Building&Safety: OCPWArayandB 12/29/2025

Permits: BNR21-0244, ELE21-0850, MEC21-0812, PLB21-0898

Dead Load Takeoff & Live Load

Glass Scullary/Kitchen

Exterior Wall Dead Load

1" Glass Panels	13.17	psf
STL Col.	3.91	psf
Total:		17 psf

Roof Dead Load

Glass Panels	13.17	psf
STL Beams	5.08	psf
STL Rafters	3.76	psf
MISC.	3	psf
Total:		25 psf

Wall Live Load

Code Min	5	psf
Total:		5 psf

Roof Live Load

Code Min	20	psf
Total:		20 psf

Open Trellis

Roof Dead Load

CLOTH	1.00	psf
STL Beams	9.47	psf
STL Rafters		psf
MISC.	3	psf
Total:		15 psf

Roof Live Load

Code Min	10	psf
Total:		10 psf

Closed Trellis (Above Bar)

Roof Dead Load

CLOTH	1.00	psf
STL Beams	9.47	psf
STL Deck	1.31	psf
MISC.	3	psf
Total:		15 psf

Roof Live Load

Code Min	20	psf
Total:		20 psf





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project	Dana Point Harbor (BLDG 10)	by	AS	sheet no.
location	Dana Point, CA	date	10/17/2022	
client	SMS ARCH	job no.	1900799	
	Trellis			

Building&Safety: OCPWAzayvandB 12/29/2025

Permits: BNR21-0244, ELE21-0850, MEC21-0812, PLB21-0898

Seismic Response Coefficient Calculation

(ASCE/SEI 7-16 Equivalent Lateral Force Procedure - Section 12.8)



Risk Category	III
Ground Hazard Motion Analysis?	Yes
Site Class	C
Seismic Design Category	D

Table 1.5-1
report no.: GMU Project No. 17-206-02
per soils report (D "Default" assumed, without soils report)
Table 11.6-1 & 11.6-2

System Type	Cantilevered Column Systems Detailed to Conform to the Requirements For	Table 12.2-1
SFRS System	Steel Ordinary Cantilever Column Systems	Table 12.2-1
Flexible Diaphragm?	Yes	Table 12.2-1, Footnote B

R	1 1/4	Table 12.2-1
Ω ₀	1 1/4	Table 12.2-1
C _d	1 1/4	Table 12.2-1
I _e	1.25	Table 1.5-2
S _s	1.266 g	2% in 50 years
S ₁	0.455 g	2% in 50 years
h _n	9.0 ft	
C _t	0.02	Table 12.8-2
x	0.75	Table 12.8-2
T _L	8 s	
T _a	0.10 s	Eq. 12.8-7
C _u T _a	0.15 s	Sec. 12.8.2
T _{modeled}	No	
T ₀	0.09 s	Sec. 11.4.6
T _S	0.45 s	Sec. 11.4.6
T	0.10 s	Sec. 12.8.2
k	1.00	Sec. 12.8.3
F _a	1.20	Table 11.4-1
F _v	1.50	Table 11.4-2
S _{MS}	1.519 g	Eq. 11.4-3
S _{M1}	0.683 g	Eq. 11.4-4
S _{DS}	1.013 g	Eq. 11.4-1
S _{D1}	0.455 g	Eq. 11.4-2
C _s	1.01	Eq. 12.8-2
C _{s,min}	0.06	Eq. 12.8-5
C _{s,max}	4.38	Eq. 12.8-3
C _{s,design}	1.01	
Seismic Weight, W	32 kips	
V = C _s W	33 kips	Eq. 12.8-1, Strength Level Base Shear

$$T_a = C_t h_n^x \quad \text{Eq. 12.8-7}$$

$$S_{MS} = F_a S_s \quad \text{Eq. 11.4-3}$$

$$S_{M1} = F_v S_1 \quad \text{Eq. 11.4-4}$$

$$S_{DS} = 2/3 S_{MS} \quad \text{Eq. 11.4-1}$$

$$S_{D1} = 2/3 S_{M1} \quad \text{Eq. 11.4-2}$$

$$C_s = \frac{S_{DS}}{\left(\frac{R}{I_e}\right)} \quad \text{Eq. 12.8-2}$$

$$C_{s,min} = 0.044 S_{DS} I_e \geq 0.01 \quad \text{Eq. 12.8-5}$$

$$C_{s,min} = \frac{0.5 S_1}{(R/I_e)} \text{ where } S_1 \geq 0.6 \quad \text{Eq. 12.8-6}$$

$$C_{s,max} = \frac{S_{D1}}{T(R/I_e)} \text{ for } T \leq T_L \quad \text{Eq. 12.8-3}$$

$$C_{s,max} = \frac{S_{D1} T_L}{T^2 (R/I_e)} \text{ for } T > T_L \quad \text{Eq. 12.8-4}$$

$$F_x = C_{vx} V \quad \text{Eq. 12.8-11}$$

$$C_{vx} = \frac{w_x h_x^k}{\sum_{i=1}^n w_i h_i^k} \quad \text{Eq. 12.8-12}$$

$$V_x = \sum_{i=x}^n F_i \quad \text{Eq. 12.8-13}$$

$$F_{px} = \frac{\sum_{i=x}^n F_i}{\sum_{i=x}^n w_i} w_{px} \quad \text{Eq. 12.10-1}$$

$$F_{px,min} = 0.2 S_{DS} I_e w_{px} \quad \text{Eq. 12.10-2}$$

$$F_{px,max} = 0.4 S_{DS} I_e w_{px} \quad \text{Eq. 12.10-3}$$

Levels Above Base	1
ρ	1.0
Design	Strength

Diaph. No.	Level Name	Fl to Fl Height ft	Height h _x ft	Weight w _x k	w _x h _x ^k k-ft	C _{vx}	Lateral Force @ Each Level			Diaphragm Force (ρ = 1.0)			F _{px} /F _x
							F _x k	V _x k	M _{OT} k-ft	V _x = ΣF _i k	ΣW _i k	F _{px} k	
1	Roof	9.0	9.0	32.25	290	1.000	32.66	32.7	294	32.7	32	16.3	0.50
Sum:				32	290	1.000	32.7						



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project	Dana Point Harbor (BLDG 10)	by	AS	sheet no.
location	Dana Point, CA	date	10/17/2022	
client	SMS ARCH	job no.	1900799	
	Trellis			

Building&Safety: OCPWAZarvandB 12/29/2025
Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0898

Components & Cladding Wind Loads

(ASCE 7-16 - Ch 30, Part 1)

County of Orange - OC Public Works
OC Development Services
APPROVED
This set of plans and specifications must be kept on the job at all times. It is unlawful to make any changes or alterations to these plans without a written permission from OC Public Works, OC Development Services of Orange County. The stamping of these plans and specifications SHALL NOT be held to permit or seal approval of the violation of any provisions of any County Ordinance or State law.
Jared Tibbitts
BUILDING OFFICIAL

Wind Coefficients

Risk Category	III	Table 1.5-1
Basic Wind Speed	102	mph, Fig. 26.5-1C
Enclosure Classification	Enclosed	Sec. 26.2
Gcpi	0.18	Table 26.13-1
Kd	0.85	Table 26.6-1
Exposure Category	D	Sec. 26.7.3
G	0.85	Sec. 26.11.1
Ke	1.00	Table 26.9-1
Kz @ h	1.18	Table 26.10-1
qh	26.8	psf, Eq. 26.10-1

Elevation and Structure Dimensions

Ground Elevation Above Sea Level	0	ft
Ground to Top of Roof	34.0	ft
Bottom of Roof to Top of Roof	1.0	ft
Mean Roof Height, h	33.5	ft
Roof Angle, θ	40	Degrees
Width of Structure, B	12	ft
Length of Structure, L	43.5	ft
Width of Pressure Coefficient, a	3.0	ft
Parapet?	No	h _{parapet} 1.00 ft
Calculate Kzt?	No	Kzt

Strength or Allowable	Strength
Roof Type	Flat Roof
Roof Overhang	No

Strength Level Wall Pressures (psf)

Fig. 30.3-1

Zone	Effective Wind Area (ft ²)						
	10	20	50	100	200	500	10
4	31.6	30.2	28.3	26.9	25.5	23.6	31.6
	-34.3	-32.9	-31.0	-29.6	-28.2	-26.3	-34.3
5	31.6	30.2	28.3	26.9	25.5	23.6	31.6
	-42.4	-39.5	-35.8	-32.9	-30.1	-26.3	-42.4

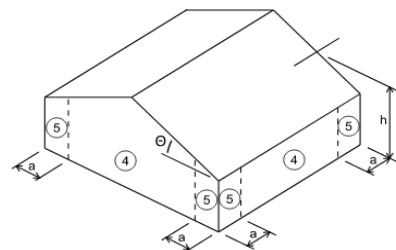


Fig. 30.3-1

Strength Level Roof Pressures (psf)

Fig. 30.3-2A

Zone	Effective Wind Area (ft ²)						
	10	20	50	100	200	500	10
1'	16.0	16.0	16.0	16.0	16.0	16.0	16.0
	-29.0	-29.0	-29.0	-29.0	-24.9	-19.6	-29.0
1	16.0	16.0	16.0	16.0	16.0	16.0	16.0
	-50.4	-47.1	-42.7	-39.4	-36.0	-31.6	-50.4
2	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
	-66.5	-62.2	-56.6	-52.3	-48.0	-42.4	-66.5
3	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!

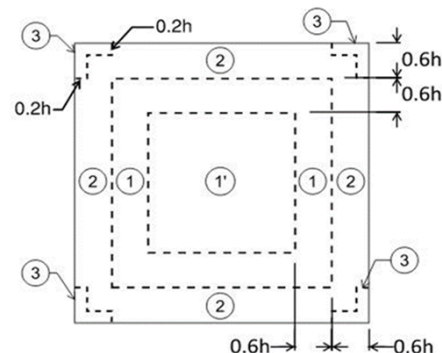


Fig. 30.3-2A

$$q_h = 0.00256K_zK_{zt}K_dK_eV^2 \quad \text{Eq. 26.10-1}$$

$$K_{zt} = (1 + K_1K_2K_3)^2 \quad \text{Eq. 26.8-1}$$

$$p = q_h[(GC_p) - (GC_{pi})] \quad \text{Eq. 30.3-1}$$

$$p = q_p[(GC_p) - (GC_{pi})] \quad \text{Eq. 30.8-1}$$

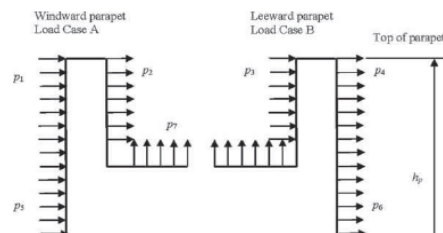


Fig. 30.8-1

Steel Column

Project File: BEAMS.ec6

LIC# : KW-06015364, Build:20.22.8.17

KPFF CONSULTING ENGINEERS

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12/29/2025

DESCRIPTION: (16) Trellis Stl Cant'l Col. - Case 1

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0898

Code References

Calculations per AISC 360-16, IBC 2018, CBC 2019, ASCE 7-16
 Load Combinations Used : IBC 2018

General Information

Steel Section Name : **HSS8x8x1/2** Overall Column Height 12.0 ft
 Analysis Method : Load Resistance Factor Top & Bottom Fixity Top Free, Bottom Fixed
 Steel Stress Grade Brace condition for deflection (buckling) along columns :
 Fy : Steel Yield 50.0 ksi X-X (width) axis :
 E : Elastic Bending Modulus 29,000.0 ksi Unbraced Length for buckling ABOUT Y-Y Axis = 12.0 ft, K = 2.1
 Y-Y (depth) axis :
 Unbraced Length for buckling ABOUT X-X Axis = 12.0 ft, K = 2.1



Applied Loads

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

Column self weight included : 586.20 lbs * Dead Load Factor
 AXIAL LOADS . . .
 Roof: Axial Load at 12.0 ft, D = 1.530, LR = 1.020, W = 1.122 k
 BENDING LOADS . . .
 Roof Diaphragm: Lat. Point Load at 12.0 ft creating Mx-x, E = 4.080 k
 Roof Diaphragm: Lat. Point Load at 12.0 ft creating My-y, E = 4.080 k

DESIGN SUMMARY

Bending & Shear Check Results

PASS Max. Axial+Bending Stress Ratio = **0.9104** : 1
 Load Combination +1.453D+1.30E
 Location of max.above base 0.0 ft
 At maximum location values are . . .
 Pu 3.075 k
 0.9 * Pn 294.670 k
 Mu-x -63.648 k-ft
 0.9 * Mn-x : 140.625 k-ft
 Mu-y -63.648 k-ft
 0.9 * Mn-y : 140.625 k-ft

PASS Maximum Shear Stress Ratio **0.03838** : 1
 Load Combination +1.453D+1.30E
 Location of max.above base 0.0 ft
 At maximum location values are . . .
 Vu : Applied 5.304 k
 Vn * Phi : Allowable 138.210 k

Maximum Load Reactions . .

Top along X-X 0.0 k
 Bottom along X-X 4.080 k
 Top along Y-Y 0.0 k
 Bottom along Y-Y 4.080 k

Maximum Load Deflections . . .

Along Y-Y 1.115 in at 12.0ft above base
 for load combination : E Only
 Along X-X 1.115 in at 12.0ft above base
 for load combination : E Only

Load Combination Results

Load Combination	Maximum Axial + Bending Stress Ratios			Cbx	Cby	KxLx/Ry	KyLy/Rx	Maximum Shear Ratios	
	Stress Ratio	Status	Location					Stress Ratio	Status

Maximum Reactions

Note: Only non-zero reactions are listed.

Load Combination	Axial Reaction @ Base	X-X Axis Reaction @ Base @ Top	k	Y-Y Axis Reaction @ Base @ Top	Mx - End Moments k-ft @ Base @ Top	My - End Moments @ Base @ Top
------------------	-----------------------	--------------------------------	---	--------------------------------	------------------------------------	-------------------------------

Extreme Reactions

Item	Extreme Value	Axial Reaction @ Base	X-X Axis Reaction @ Base @ Top	k	Y-Y Axis Reaction @ Base @ Top	Mx - End Moments k-ft @ Base @ Top	My - End Moments @ Base @ Top
------	---------------	-----------------------	--------------------------------	---	--------------------------------	------------------------------------	-------------------------------

Maximum Deflections for Load Combinations

Load Combination	Max. X-X Deflection	Distance	Max. Y-Y Deflection	Distance
------------------	---------------------	----------	---------------------	----------

Steel Section Properties : HSS8x8x1/2

Steel Section Properties : HSS8x8x1/2

Steel Column

Project File: BEAMS.ecb

LIC# : KW-06015364, Build:20.22.8.17

KPFF CONSULTING ENGINEERS

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12/29/2025

DESCRIPTION: (16) Trellis Stl Cant'l Col. - Case 1

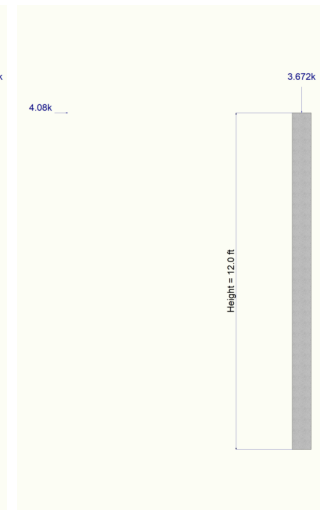
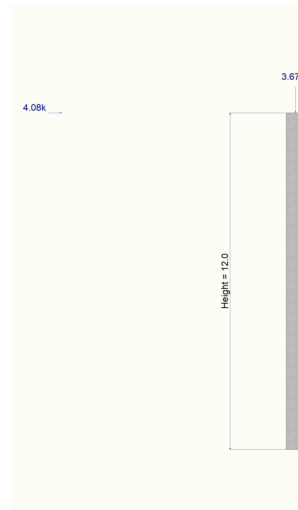
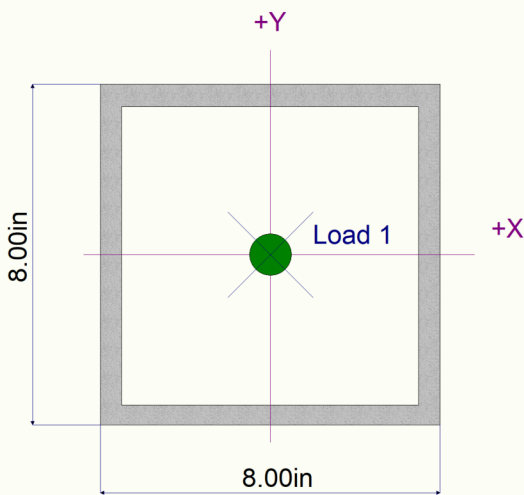
Depth	=	8.000 in	I xx	=	125.00 in ⁴
Design Thick	=	0.465 in	S xx	=	31.20 in ³
Width	=	8.000 in	R xx	=	3.040 in
Wall Thick	=	0.500 in	Zx	=	37.500 in ³
Area	=	13.500 in ²	I yy	=	125.000 in ⁴
Weight	=	48.850 plf	S yy	=	31.200 in ³
			R yy	=	3.040 in

J	=	204.000 in ⁶
C	=	52.400 in ³



Ycg = 0.000 in

Sketches



Steel Beam

Project File: BEAMS.ec6

LIC# : KW-06015364, Build:20.22.8.17

KPFF CONSULTING ENGINEERS

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12/29/2025

DESCRIPTION: 37.5' Span Beam- NS

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0898

CODE REFERENCES

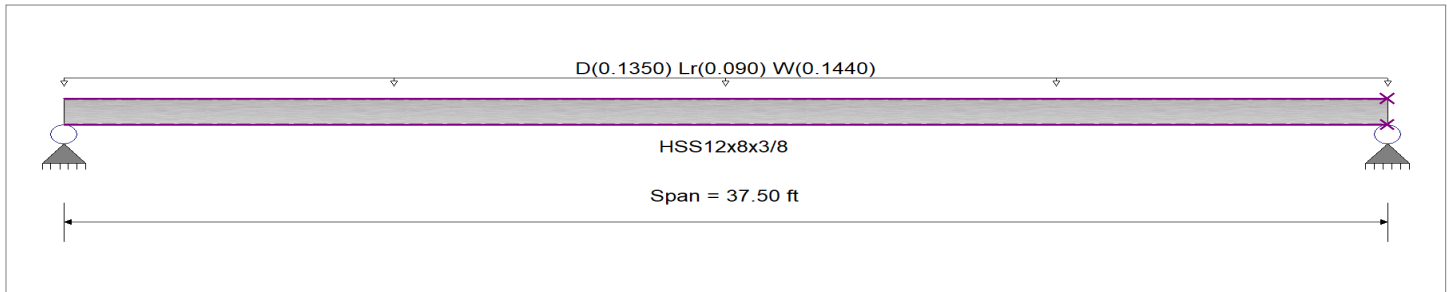
Calculations per AISC 360-16, IBC 2018, CBC 2019, ASCE 7-16
 Load Combination Set : IBC 2018



Material Properties

Analysis Method Load Resistance Factor Design
 Beam Bracing : Beam is Fully Braced against lateral-torsional buckling
 Bending Axis : Major Axis Bending

Fy : Steel Yield : 50.0 ksi
 E: Modulus : 29,000.0 ksi



Applied Loads

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

Beam self weight NOT internally calculated and added
 Uniform Load : D = 0.0150, Lr = 0.010, W = 0.0160 ksf, Tributary Width = 9.0 ft, (Roof)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	0.334 : 1	Maximum Shear Stress Ratio =	0.034 : 1
Section used for this span	HSS12x8x3/8	Section used for this span	HSS12x8x3/8
Mu : Applied	66.445 k-ft	Vu : Applied	7.088 k
Mn * Phi : Allowable	198.750 k-ft	Vn * Phi : Allowable	206.420 k
Load Combination	+1.20D+1.60Lr+0.50W	Load Combination	+1.20D+1.60Lr+0.50W
Span # where maximum occurs	Span # 1	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	0.846 in Ratio =	531	>=360
Max Upward Transient Deflection	0.000 in Ratio =	0	<360
Max Downward Total Deflection	1.572 in Ratio =	286	>=240.
Max Upward Total Deflection	0.000 in Ratio =	0	<240.0

Maximum Forces & Stresses for Load Combinations

Load Combination	Segment Length	Span #	Max Stress Ratios		Summary of Moment Values						Summary of Shear Values			
			M	V	max Mu +	max Mu -	Mu Max	Mnx	Phi*Mnx	Cb	Rm	VuMax	Vnx	Phi*Vnx
+1.40D	Dsgn. L = 37.50 ft	1	0.167	0.017	33.22		33.22	220.83	198.75	1.00	1.00	3.54	229.36	206.42
+1.20D+0.50Lr	Dsgn. L = 37.50 ft	1	0.183	0.019	36.39		36.39	220.83	198.75	1.00	1.00	3.88	229.36	206.42
+1.20D	Dsgn. L = 37.50 ft	1	0.143	0.015	28.48		28.48	220.83	198.75	1.00	1.00	3.04	229.36	206.42
+1.20D+1.60Lr	Dsgn. L = 37.50 ft	1	0.271	0.028	53.79		53.79	220.83	198.75	1.00	1.00	5.74	229.36	206.42
+1.20D+1.60Lr+0.50W	Dsgn. L = 37.50 ft	1	0.334	0.034	66.45		66.45	220.83	198.75	1.00	1.00	7.09	229.36	206.42
+1.20D+0.50W	Dsgn. L = 37.50 ft	1	0.207	0.021	41.13		41.13	220.83	198.75	1.00	1.00	4.39	229.36	206.42
+1.20D+0.50Lr+W	Dsgn. L = 37.50 ft	1	0.310	0.032	61.70		61.70	220.83	198.75	1.00	1.00	6.58	229.36	206.42
+1.20D+W	Dsgn. L = 37.50 ft	1	0.271	0.028	53.79		53.79	220.83	198.75	1.00	1.00	5.74	229.36	206.42
+0.90D+W	Dsgn. L = 37.50 ft	1	0.235	0.024	46.67		46.67	220.83	198.75	1.00	1.00	4.98	229.36	206.42
+0.90D	Dsgn. L = 37.50 ft	1	0.107	0.011	21.36		21.36	220.83	198.75	1.00	1.00	2.28	229.36	206.42

Project Title:
 Engineer:
 Project ID:
 Project Descr:

B8/10

Steel Beam

Project File: BEAMS.ec6

LIC# : KW-06015364, Build:20.22.8.17

KPFF CONSULTING ENGINEERS

(c) ENERCALC INC 1983-2022

12/29/2025

DESCRIPTION: 37.5' Span Beam- NS

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0898

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl
+D+0.750Lr+0.450W	1	1.5725	18.857		0.0000

Vertical Reactions

Load Combination	Support 1	Support 2
Overall MAXimum	5.012	5.012
Overall MINimum	1.519	1.519
D Only	2.531	2.531
+D+Lr	4.219	4.219
+D+0.750Lr	3.797	3.797
+D+0.60W	4.151	4.151
+D+0.750Lr+0.450W	5.012	5.012
+D+0.450W	3.746	3.746
+0.60D+0.60W	3.139	3.139
+0.60D	1.519	1.519
Lr Only	1.688	1.688
W Only	2.700	2.700

County of Orange - OC Public Works
 OC Development Services

APPROVED

Location in Span

0.0000

This seal, plan and specifications must be kept on the job at all times. It is unlawful to make any changes or alterations to these specifications without the written permission from OC Public Works. The stamping of these plans of Orange County. The stamping of these plan specifications SHALL NOT be held to permit or be an approval of the violation of any provisions of any County Ordinance or State law.

J. Paul Liberman
 BUILDING OFFICIAL

Steel Beam

Project File: BEAMS.ec6

LIC# : KW-06015364, Build:20.22.8.17

KPFF CONSULTING ENGINEERS

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12/29/2025

DESCRIPTION: 25.5' Span Beam- EW

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0898

CODE REFERENCES

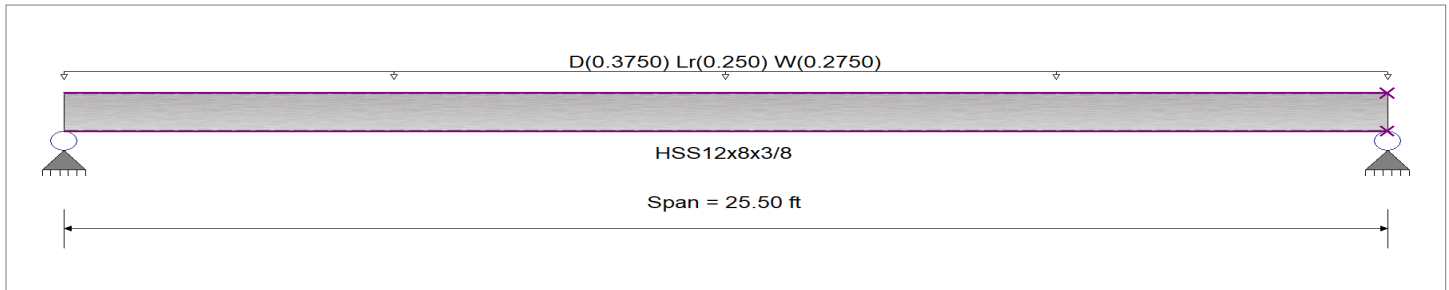
Calculations per AISC 360-16, IBC 2018, CBC 2019, ASCE 7-16
 Load Combination Set : IBC 2018



Material Properties

Analysis Method Load Resistance Factor Design
 Beam Bracing : Beam is Fully Braced against lateral-torsional buckling
 Bending Axis : Major Axis Bending

Fy : Steel Yield : 50.0 ksi
 E: Modulus : 29,000.0 ksi



Applied Loads

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

Beam self weight NOT internally calculated and added

Uniform Load : D = 0.0150, Lr = 0.010, W = 0.0110 ksf, Tributary Width = 25.0 ft, (Roof)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	0.404 : 1	Maximum Shear Stress Ratio =	0.061 : 1
Section used for this span	HSS12x8x3/8	Section used for this span	HSS12x8x3/8
Mu : Applied	80.265 k-ft	Vu : Applied	12.591 k
Mn * Phi : Allowable	198.750 k-ft	Vn * Phi : Allowable	206.420 k
Load Combination	+1.20D+1.60Lr+0.50W	Load Combination	+1.20D+1.60Lr+0.50W
Span # where maximum occurs	Span # 1	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	0.346 in Ratio =	884	>=360
Max Upward Transient Deflection	0.000 in Ratio =	0	<360
Max Downward Total Deflection	0.863 in Ratio =	354	>=240.
Max Upward Total Deflection	0.000 in Ratio =	0	<240.0

Maximum Forces & Stresses for Load Combinations

Load Combination	Segment Length	Span #	Max Stress Ratios		Summary of Moment Values						Summary of Shear Values				
			M	V	max Mu +	max Mu -	Mu Max	Mnx	Phi*Mnx	Cb	Rm	VuMax	Vnx	Phi*Vnx	
+1.40D															
Dsgn. L = 25.50 ft		1	0.215	0.032	42.67		42.67	220.83	198.75	1.00	1.00	6.69	229.36	206.42	
+1.20D+0.50Lr															
Dsgn. L = 25.50 ft		1	0.235	0.036	46.74		46.74	220.83	198.75	1.00	1.00	7.33	229.36	206.42	
+1.20D															
Dsgn. L = 25.50 ft		1	0.184	0.028	36.58		36.58	220.83	198.75	1.00	1.00	5.74	229.36	206.42	
+1.20D+1.60Lr															
Dsgn. L = 25.50 ft		1	0.348	0.053	69.09		69.09	220.83	198.75	1.00	1.00	10.84	229.36	206.42	
+1.20D+1.60Lr+0.50W															
Dsgn. L = 25.50 ft		1	0.404	0.061	80.27		80.27	220.83	198.75	1.00	1.00	12.59	229.36	206.42	
+1.20D+0.50W															
Dsgn. L = 25.50 ft		1	0.240	0.036	47.75		47.75	220.83	198.75	1.00	1.00	7.49	229.36	206.42	
+1.20D+0.50Lr+W															
Dsgn. L = 25.50 ft		1	0.348	0.053	69.09		69.09	220.83	198.75	1.00	1.00	10.84	229.36	206.42	
+1.20D+W															
Dsgn. L = 25.50 ft		1	0.296	0.045	58.93		58.93	220.83	198.75	1.00	1.00	9.24	229.36	206.42	
+0.90D+W															
Dsgn. L = 25.50 ft		1	0.250	0.038	49.78		49.78	220.83	198.75	1.00	1.00	7.81	229.36	206.42	
+0.90D															
Dsgn. L = 25.50 ft		1	0.138	0.021	27.43		27.43	220.83	198.75	1.00	1.00	4.30	229.36	206.42	

Project Title:
 Engineer:
 Project ID:
 Project Descr:

B10/10

Steel Beam

Project File: BEAMS.ec6

LIC# : KW-06015364, Build:20.22.8.17

KPFF CONSULTING ENGINEERS

(c) ENERCALC INC 1983-2022

12/29/2025

DESCRIPTION: 25.5' Span Beam- EW

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0898

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl
+D+0.750Lr+0.450W	1	0.8632	12.823		0.0000

Vertical Reactions

Load Combination	Support 1	Support 2
Overall MAXimum	8.750	8.750
Overall MINimum	2.869	2.869
D Only	4.781	4.781
+D+Lr	7.969	7.969
+D+0.750Lr	7.172	7.172
+D+0.60W	6.885	6.885
+D+0.750Lr+0.450W	8.750	8.750
+D+0.450W	6.359	6.359
+0.60D+0.60W	4.973	4.973
+0.60D	2.869	2.869
Lr Only	3.188	3.188
W Only	3.506	3.506

County of Orange - OC Public Works
 OC Development Services
APPROVED
 Location in Span
 0.0000
 This seal is valid only if the applicant has complied with all applicable codes, ordinances and specifications of Orange County. The stamping of these plans shall not be held to permit or be an approval of the violation of any provisions of any County Ordinance or State law.
 Building Official

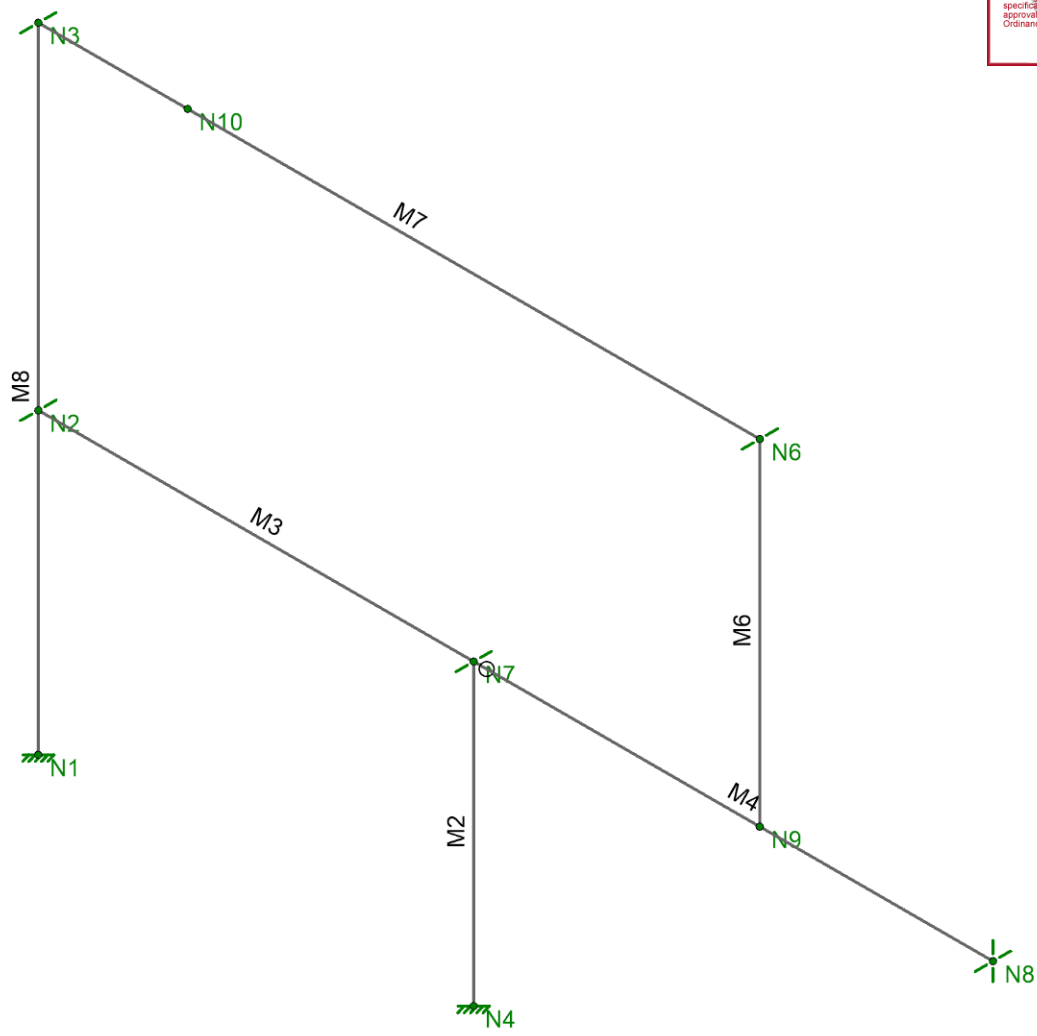


Building&Safety: OCPWAzarvandB 12/29/2025
 Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0898

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[Signature]
 BUILDING OFFICIAL



KPFF	SMF Along Grid 3 (Roof)	SK-2
Alex.Sanchez		Oct 17, 2022
1900799		_SMF Along Grid 3 (Roof).r3d

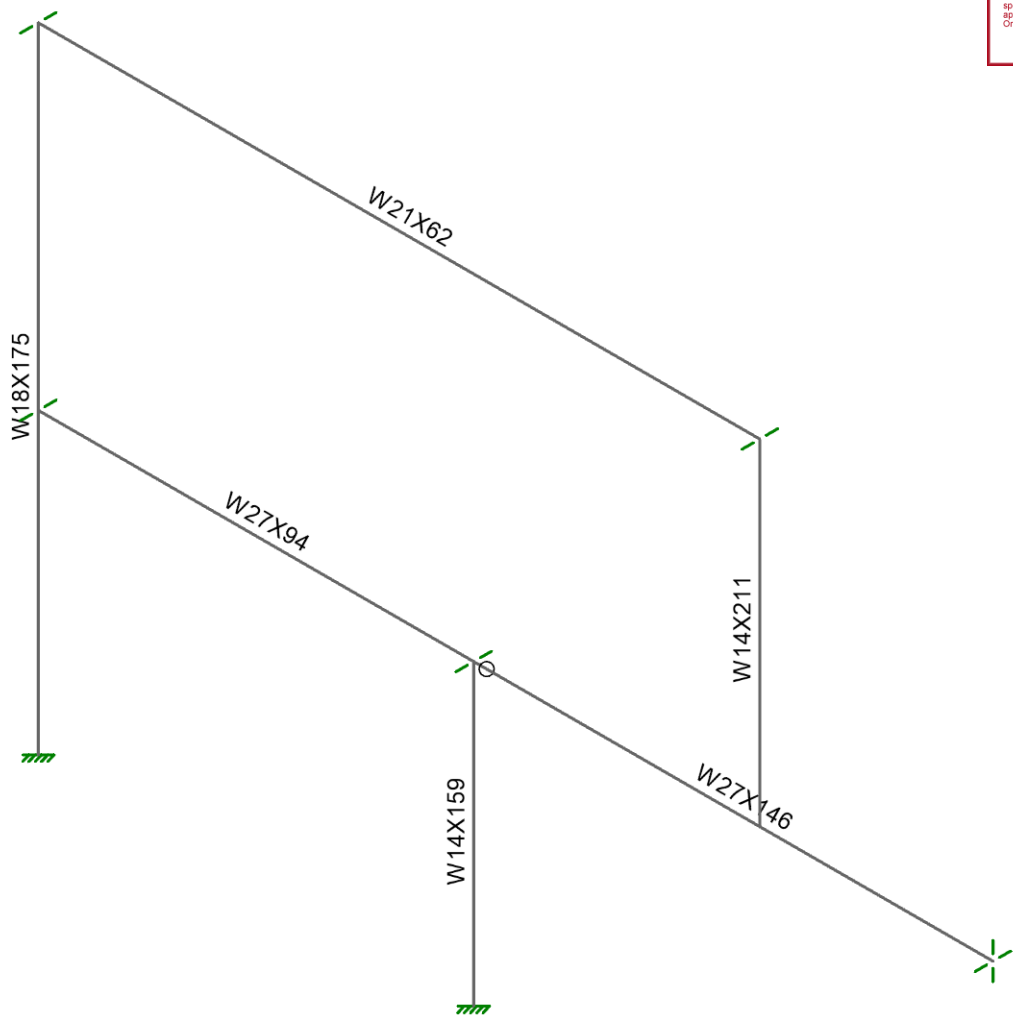


Building&Safety: OCPWAzarvandB 12/29/2025
 Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0898

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Paul Tibbitts
 BUILDING OFFICIAL

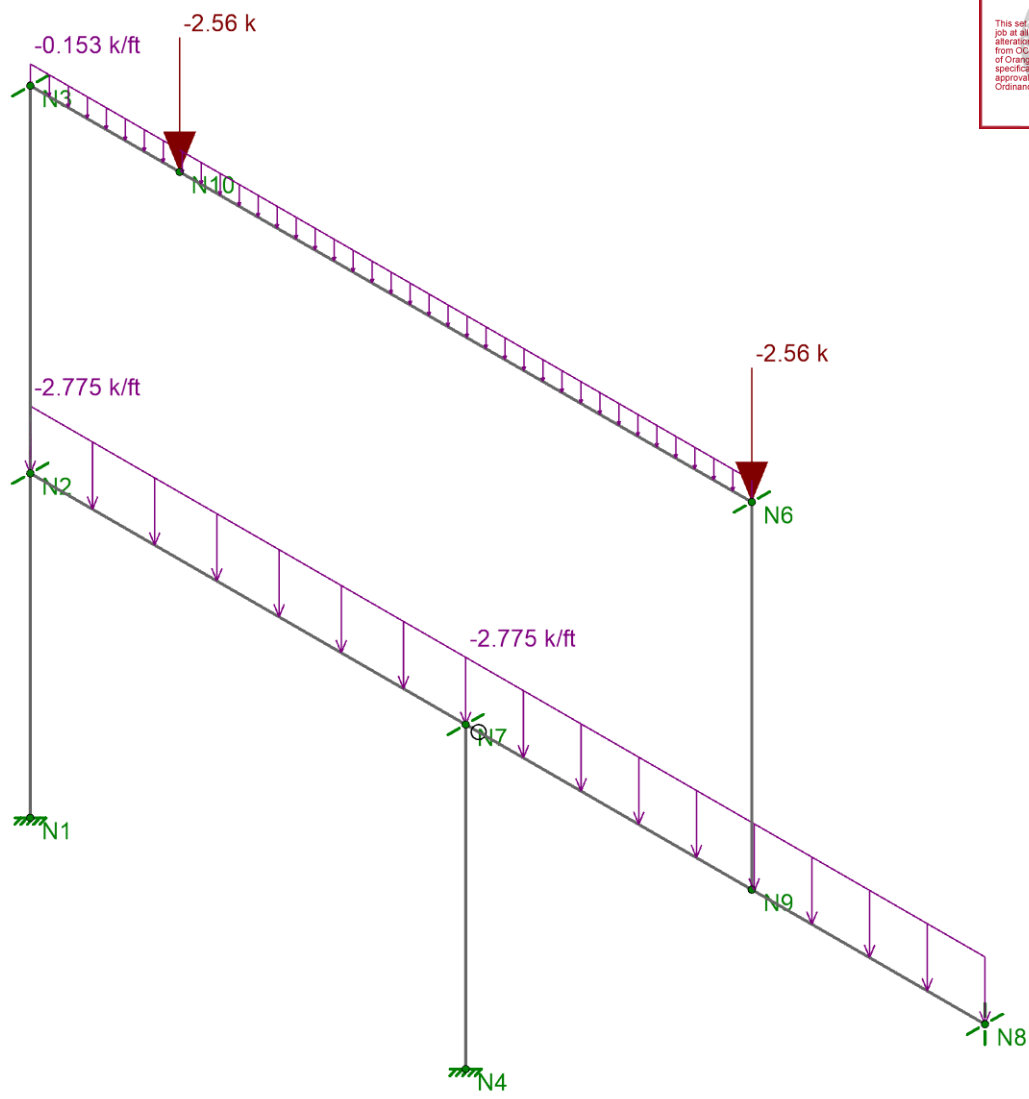


KPFF	SMF Along Grid 3 (Roof)	SK-3
Alex.Sanchez		Oct 17, 2022
1900799		_SMF Along Grid 3 (Roof).r3d



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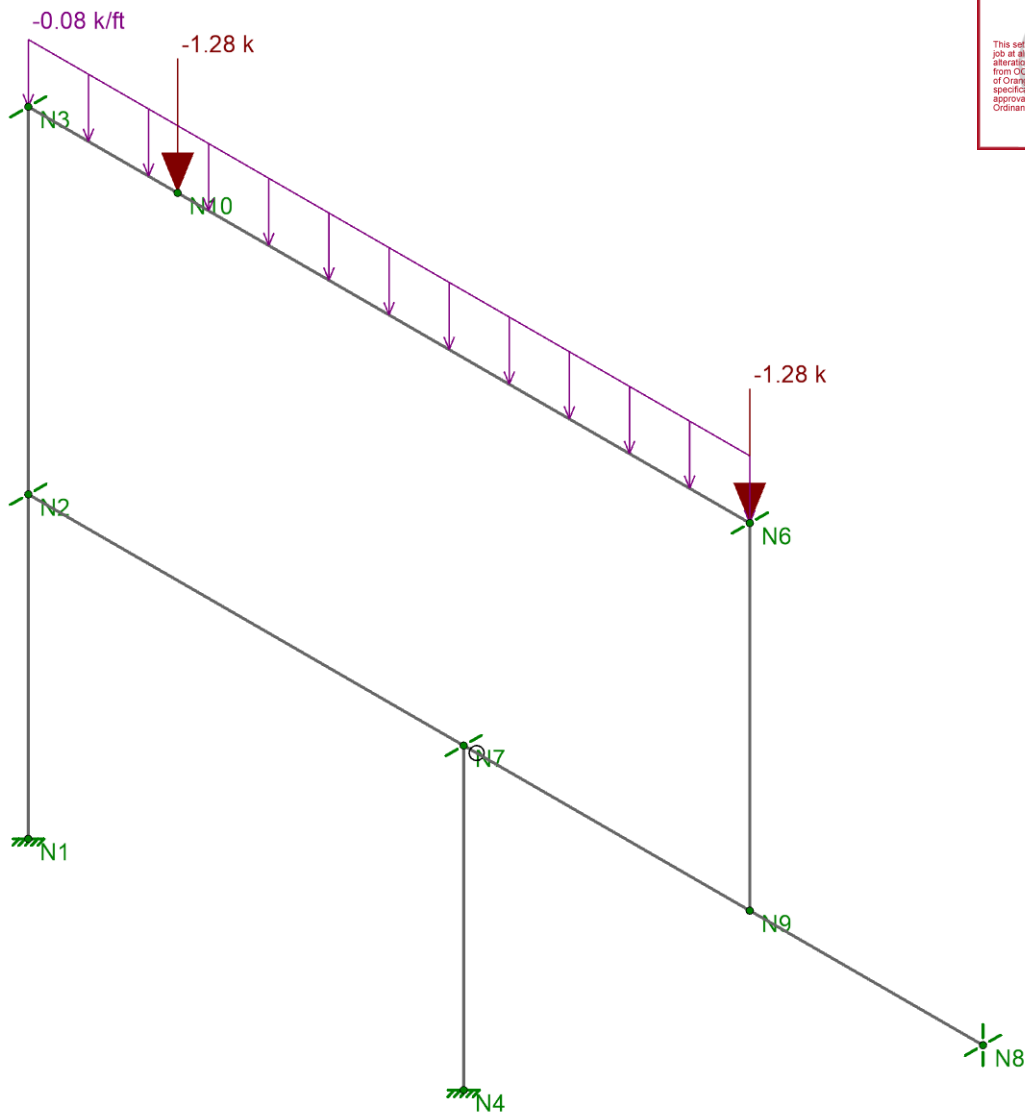
Loads: BLC 2, Dead

KPFF	SMF Along Grid 3 (Roof)	SK-4
Alex.Sanchez		Oct 17, 2022
1900799		_SMF Along Grid 3 (Roof).r3d



Building&Safety: OCPWAzarvandB 12/29/2025
 Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0898

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 Jpaul Tibbitts
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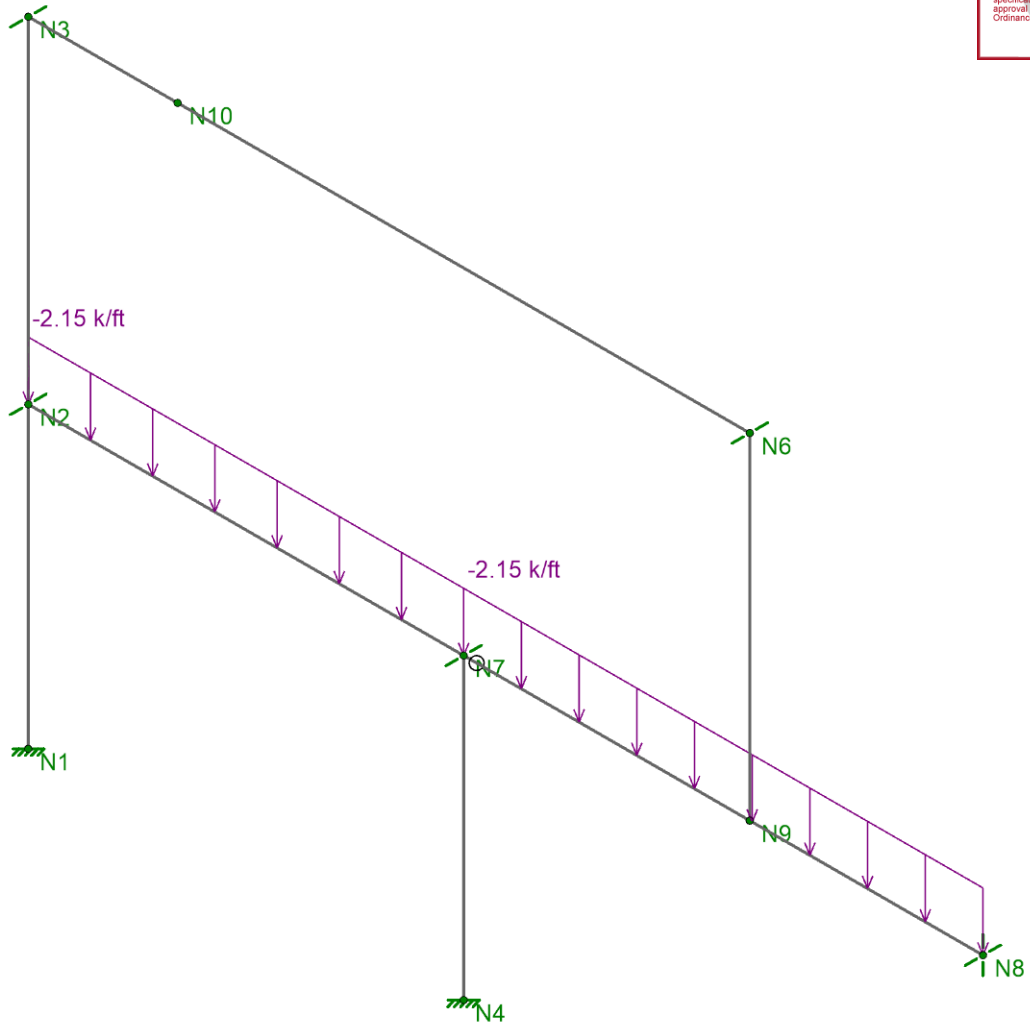
Loads: BLC 3, Roof Live

KPFF	SMF Along Grid 3 (Roof)	SK-5
Alex.Sanchez		Oct 17, 2022
1900799		_SMF Along Grid 3 (Roof).r3d



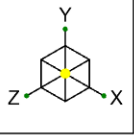
Building&Safety: OCPWAzarvandB 12/29/2025
 Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0898

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Loads: BLC 4, Floor Live

KPFF	SMF Along Grid 3 (Roof)	SK-6
Alex.Sanchez		Oct 17, 2022
1900799		_SMF Along Grid 3 (Roof).r3d

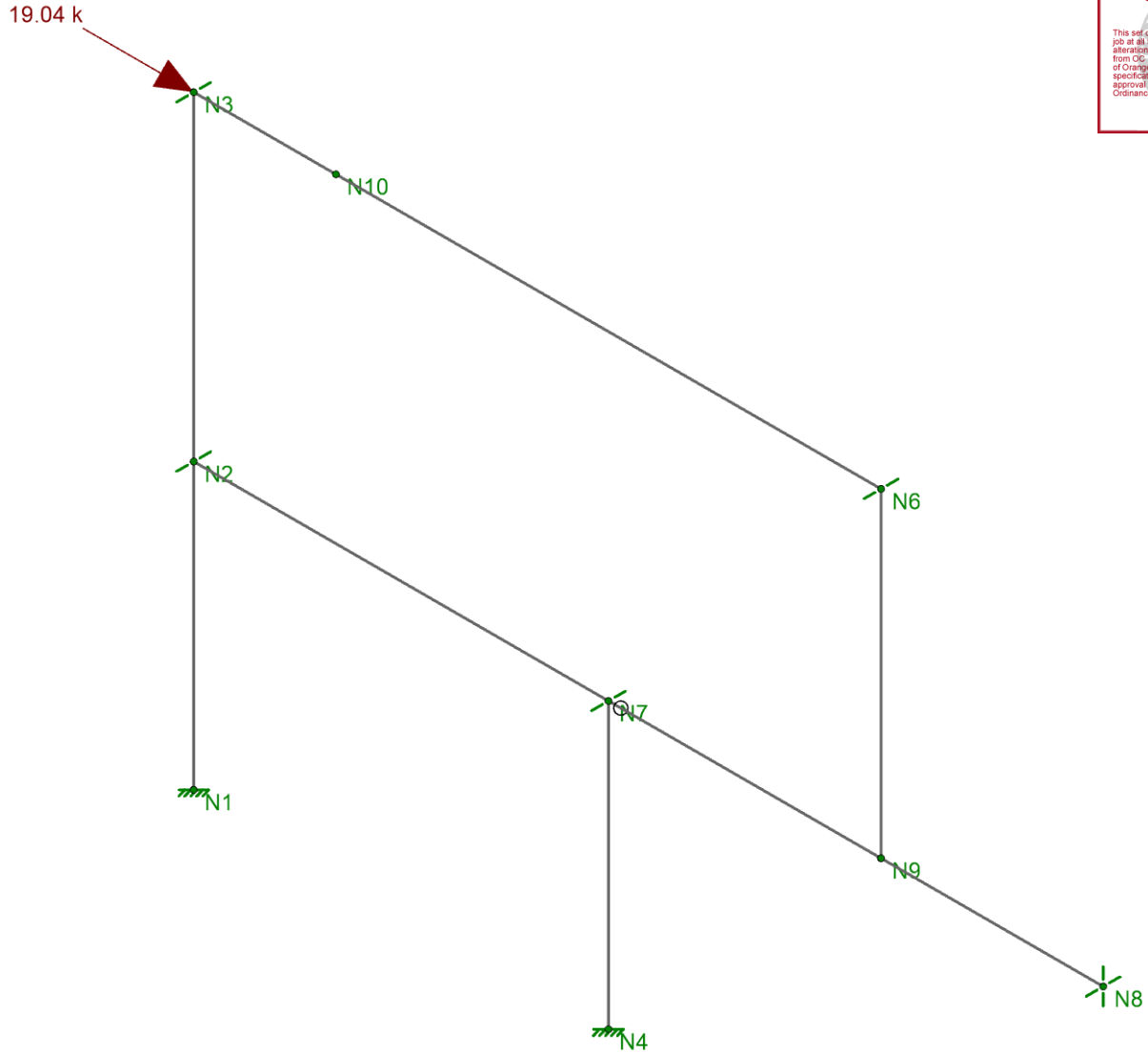


Building&Safety: OCPWAzarvandB 12/29/2025
 Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0898

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Loads: BLC 1, E

KPFF	SMF Along Grid 3 (Roof)	SK-7
Alex.Sanchez		Oct 17, 2022
1900799		_SMF Along Grid 3 (Roof).r3d



Shear Check

(Env)

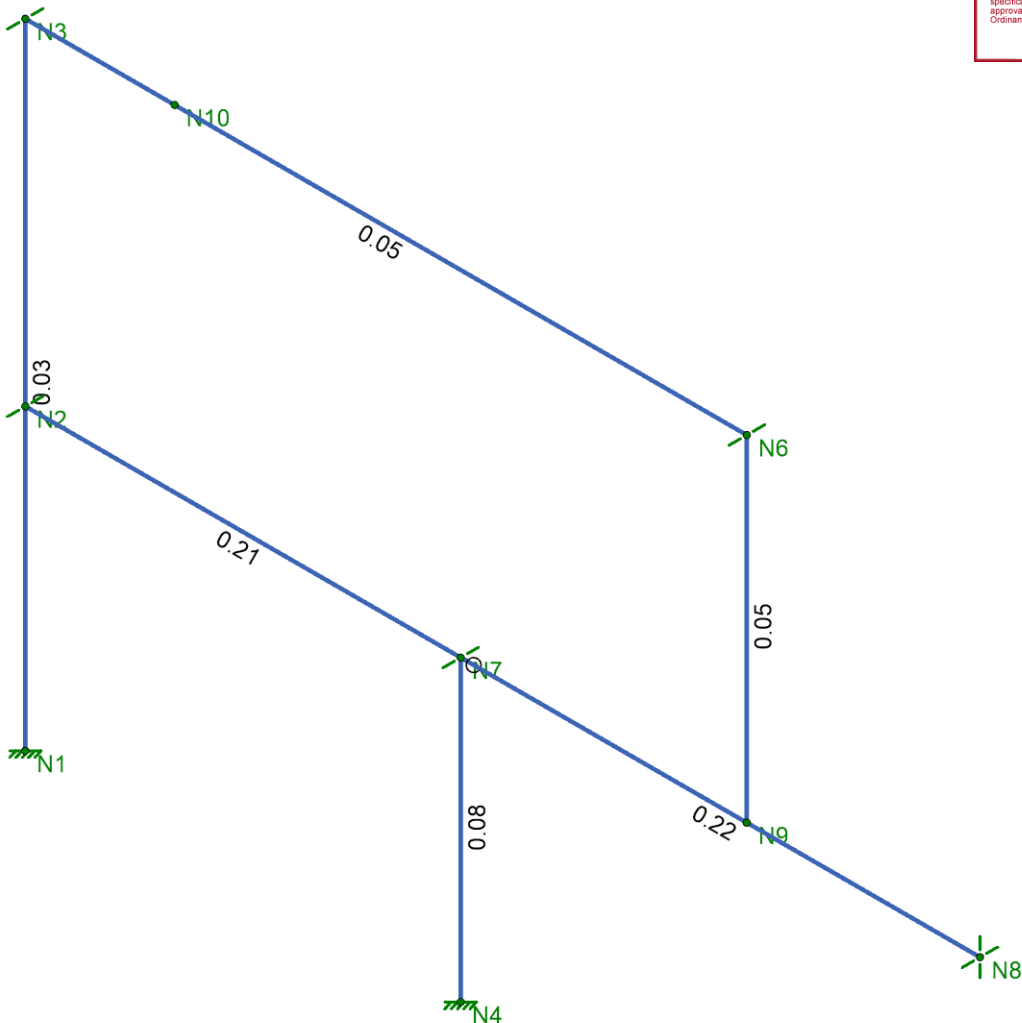
- No Calc
- > 1.0
- .90-1.0
- .75-.90
- .50-.75
- 0 - .50

Building: 75-90 and B 12/29/2025
 Permits: BNR21-000-PL-00850, ME21-0512, PLE21-0535

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Member Shear Checks Displayed (Enveloped)
 Envelope Only Solution

KPFF	SMF Along Grid 3 (Roof)	SK-9
Alex.Sanchez		Oct 17, 2022
1900799		_SMF Along Grid 3 (Roof).r3d



Company : KPPF
 Designer : Alex.Sanchez
 Job Number : 1900799
 Model Name : SMF Along Grid 3 (Roof)

10/17/2022
 9:47:07 AM
 Checked By : _____

Hot Rolled Steel Properties

Building&Safety: OCPWAzarvandB 12/29/2025

Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e ⁵ F ⁻¹]	Density [k/ft ³]	Yield [ksi]	Ry	Fu [ksi]	Rt
1 A36 Gr.36	29000	11154	0.3	0.65	0.49	36	1.5	58	1.3
2 A572 Gr.50	29000	11154	0.3	0.65	0.49	50	1.1	65	1.2
3 A992	29000	11154	0.3	0.65	0.49	50	1.1	65	1.2
4 A500 Gr.B RND	29000	11154	0.3	0.65	0.527	42	1.4	58	1.3
5 A500 Gr.B Rect	29000	11154	0.3	0.65	0.527	46	1.4	58	1.3
6 A53 Gr.B	29000	11154	0.3	0.65	0.49	35	1.6	60	1.2
7 A1085	29000	11154	0.3	0.65	0.49	50	1.4	65	1.3

PLB21-0898
 County of Orange, OC Public Works
 OC Development Services
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 site at all times. It is unlawful to make any changes or
 alterations to these plans without the written permission
 from OC Public Works. OC's employees shall
 be authorized to enforce the provisions of these plans
 and specifications. It is the responsibility of the contractor
 to obtain the approval of any variance of any County
 Ordinance or State law.
 Building Official

Hot Rolled Steel Section Sets

Label	Shape	Type	Design List	Material	Design Rule	Area [in ²]	Iyy [in ⁴]	Izz [in ⁴]	J [in ⁴]
1 BEAM1	W27X94	Beam	None	A992	Typical	27.6	124	3270	4.03
2 COL1	W18X175	Column	None	A992	Typical	51.4	391	3450	33.8
3 BEAM2	W21X62	Beam	None	A992	Typical	18.3	57.5	1330	1.83
4 COL2	W14X159	Column	None	A992	Typical	46.7	748	1900	19.7
5 BEAM3	W27X146	Beam	None	A992	Typical	43.2	443	5660	11.3
6 COL3	W14X211	Column	None	A992	Typical	62	1030	2660	44.6

Member Primary Data

Label	I Node	J Node	Section/Shape	Type	Design List	Material	Design Rule
1 M2	N4	N7	COL2	Column	None	A992	Typical
2 M3	N2	N7	BEAM1	Beam	None	A992	Typical
3 M4	N7	N8	BEAM3	Beam	None	A992	Typical
4 M6	N9	N6	COL3	Column	None	A992	Typical
5 M7	N3	N6	BEAM2	Beam	None	A992	Typical
6 M8	N1	N3	COL1	Column	None	A992	Typical

Hot Rolled Steel Design Parameters

Label	Shape	Length [ft]	Lcomp top [ft]	Channel Conn.	a [ft]	Function
1 M2	COL2	16	Lbyy	N/A	N/A	Lateral
2 M3	BEAM1	23.333	Lbyy	N/A	N/A	Lateral
3 M4	BEAM3	27.833	Lbyy	N/A	N/A	Lateral
4 M6	COL3	18	Lbyy	N/A	N/A	Lateral
5 M7	BEAM2	38.666	Lbyy	N/A	N/A	Lateral
6 M8	COL1	34	Lbyy	N/A	N/A	Lateral

Node Loads and Enforced Displacements (BLC 1 : E)

Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s ² /ft, k*s ² *ft)]
1 N3	L	X	19.04

Node Loads and Enforced Displacements (BLC 2 : Dead)

Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s ² /ft, k*s ² *ft)]
1 N6	L	Y	-1.28
2 N10	L	Y	-1.28
3 N6	L	Y	-1.28
4 N10	L	Y	-1.28



Company : KPPF
 Designer : Alex.Sanchez
 Job Number : 1900799
 Model Name : SMF Along Grid 3 (Roof)

10/17/2022
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 Checked By : _____

Node Loads and Enforced Displacements (BLC 3 : Roof Live)

Building&Safety: OCPWArzarvandB 12/29/2025

	Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s ² /ft, k*s ² *ft)]
1	N6	L	Y	-1.28
2	N10	L	Y	-1.28

Permits: UNWET-0247, ELEC-0609, REC-21-0512, PLB21-0898

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Member Distributed Loads (BLC 2 : Dead)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	M7	Y	-0.152	-0.152	0	% 100
2	M3	Y	-2.415	-2.415	0	% 100
3	M4	Y	-2.415	-2.415	0	% 100
4	M3	Y	-0.36	-0.36	0	% 100
5	M4	Y	-0.36	-0.36	0	% 100

Member Distributed Loads (BLC 3 : Roof Live)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	M7	Y	-0.08	-0.08	0	% 100

Member Distributed Loads (BLC 4 : Floor Live)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	M3	Y	-1.75	-1.75	0	% 100
2	M4	Y	-1.75	-1.75	0	% 100
3	M3	Y	-0.4	-0.4	0	% 100
4	M4	Y	-0.4	-0.4	0	% 100

Basic Load Cases

	BLC Description	Category	Y Gravity	Nodal	Distributed
1	E	EL		1	
2	Dead	DL	-1	4	5
3	Roof Live	RLL		2	1
4	Floor Live	LL			4

Load Combinations

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor
1	(1): 1.4D	Yes	Y	2	1.4				
2	(2): 1.2D + 1.6L + 0.5RLL	Yes	Y	2	1.2	4	1.6	3	0.5
3	(3): 1.2D + 1.6RLL + 1.0L	Yes	Y	2	1.2	3	1.6	4	1
4	(6): 1.40D + 1.3E + 1.0L	Yes	Y	2	1.4	1	1.3	4	1
5	(7): 0.70D + 1.3E	Yes	Y	2	0.7	1	1.3		
6	Drift Check: D + 0.5L + 1.0E	Yes	Y	2	1	4	0.5	1	1
7	D	Yes	Y	2	1				
8	RLL	Yes	Y	3	1				
9	LL	Yes	Y	4	1				
10	E	Yes	Y	1	1				
11	Beam Check: 1.40D + 3E + 1.0L		Y	2	1.4	1	3	4	1



Company : KPPF
 Designer : Alex.Sanchez
 Job Number : 1900799
 Model Name : SMF Along Grid 3 (Roof)

10/17/2022
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Building&Safety: OCPWArzarvandB 12/29/2025

Envelope Node Reactions

Node Label	X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1 N6 max	0	10	0	10	0	10	0	10	0	10	0	10
2 min	0	1	0	1	0	1	0	1	0	1	0	1
3 N7 max	0	10	0	10	0	10	0	10	0	10	0	10
4 min	0	1	0	1	0	1	0	1	0	1	0	1
5 N3 max	0	10	0	10	0	10	0	10	0	10	0	10
6 min	0	1	0	1	0	1	0	1	0	1	0	1
7 N2 max	0	10	0	10	0	10	0	10	0	10	0	10
8 min	0	1	0	1	0	1	0	1	0	1	0	1
9 N1 max	15.812	2	101.695	2	0	10	0	10	0	10	125.121	5
10 min	-8.626	10	-11.368	10	0	1	0	1	0	1	-70.51	2
11 N4 max	0.058	8	176.82	2	0	10	0	10	0	10	191.245	4
12 min	-27.605	4	1.027	8	0	1	0	1	0	1	-0.442	8
13 N8 max	0	10	109.099	2	0	10	0	10	0	10	0	10
14 min	0	1	1.88	8	0	1	0	1	0	1	0	1
15 Totals: max	0	8	387.613	2	0	10						
16 min	-24.752	4	0	10	0	1						

Permits: 2022-024, 22-024, 22-021-0512, PLB21-0898

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Envelope Node Displacements

Node Label	X [in]	LC	Y [in]	LC	Z [in]	LC	X Rotation [rad]	LC	Y Rotation [rad]	LC	Z Rotation [rad]	LC
1 N1 max	0	10	0	10	0	10	0	10	0	10	0	2
2 min	0	2	0	2	0	1	0	1	0	1	0	5
3 N2 max	0.269	4	0.002	10	0	10	0	10	0	10	1.774e-5	8
4 min	-0.001	8	-0.016	2	0	1	0	1	0	1	-3.046e-3	4
5 N3 max	1.002	4	0.002	10	0	10	0	10	0	10	-1.796e-4	8
6 min	0.005	8	-0.018	2	0	1	0	1	0	1	-3.494e-3	4
7 N4 max	0	4	0	8	0	10	0	10	0	10	0	8
8 min	0	8	0	2	0	1	0	1	0	1	0	4
9 N6 max	0.977	4	-0.009	10	0	10	0	10	0	10	8.618e-5	8
10 min	0.004	8	-0.848	2	0	1	0	1	0	1	-3.709e-3	4
11 N7 max	0.267	4	0	8	0	10	0	10	0	10	2.334e-3	2
12 min	-0.001	8	-0.031	2	0	1	0	1	0	1	-3.393e-4	10
13 N8 max	0.271	4	0	8	0	10	0	10	0	10	7.754e-3	2
14 min	-0.001	8	0	2	0	1	0	1	0	1	1.643e-4	8
15 N9 max	0.271	4	-0.008	10	0	10	0	10	0	10	8.871e-4	2
16 min	-0.001	8	-0.846	2	0	1	0	1	0	1	-3.541e-4	10
17 N10 max	0.997	4	-0.034	9	0	10	0	10	0	10	-4.461e-5	10
18 min	0.005	8	-0.318	4	0	1	0	1	0	1	-2.735e-3	3

Envelope AISC 15TH (360-16): LRFD Member Steel Code Checks

Member	Shape	Code Check	Loc [ft]	LC	Shear Check	Loc [ft]	Dir	LC	phi*Pnc [k]	phi*Pnt [k]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
1 M2	W14X159	0.282	16	4	0.083	16	y	4	1776.01	2101.5	547.5	1076.25	2.223	H1-1b
2 M3	W27X94	0.359	23.333	4	0.214	0	y	2	357.32	1242	145.5	721.208	1.289	H1-1b
3 M4	W27X146	0.52	15.366	2	0.219	27.833	y	2	877.528	1944	366.375	1577.103	1.263	H1-1b
4 M6	W14X211	0.209	0	4	0.049	18	y	4	2272.084	2790	742.5	1462.5	2.147	H1-1b
5 M7	W21X62	0.736	38.666	4	0.05	0	y	3	60.337	823.5	81.375	261.907	2.373	H1-1a
6 M8	W18X175	0.214	15.938	2	0.03	15.938	y	2	530.635	2313	397.5	1492.5	2.27	H1-1b



Company : KPFF
 Designer : Alex.Sanchez
 Job Number : 1900799
 Model Name : SMF Along Grid 3 (Roof)

10/17/2022
 9:49:00 AM
 Checked By : _____

Load Combinations

Building&Safety: OCPWArvandB 12/29/2025

Permits: UNWE10247, ELEC10067, MEC21-0512, PLB21-0898

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor
1	(1): 1.4D		Y	2	1.4				
2	(2): 1.2D + 1.6L + 0.5RLL		Y	2	1.2	4	1.6		
3	(3): 1.2D + 1.6RLL + 1.0L		Y	2	1.2	3	1.6		
4	(6): 1.40D + 1.3E + 1.0L		Y	2	1.4	1	1.3		
5	(7): 0.70D + 1.3E		Y	2	0.7	1	1.3		
6	Drift Check: D + 0.5L + 1.0E	Yes	Y	2	1	4	0.5		
7	D		Y	2	1				
8	RLL		Y	3	1				
9	LL		Y	4	1				
10	E		Y	1	1				
11	Beam Check: 1.40D + 3E + 1.0L		Y	2	1.4	1	3	4	1

County of Orange - OC Public Works
 OC Development Services
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 BUILDING OFFICIAL

Load Combination Design

	Description	Service	Hot Rolled	Cold Formed	Wood	Concrete	Masonry	Aluminum	Stainless	Connection
1	(1): 1.4D		Yes							
2	(2): 1.2D + 1.6L + 0.5RLL		Yes							
3	(3): 1.2D + 1.6RLL + 1.0L		Yes							
4	(6): 1.40D + 1.3E + 1.0L		Yes							
5	(7): 0.70D + 1.3E		Yes							
6	Drift Check: D + 0.5L + 1.0E	Yes								
7	D		Yes							
8	RLL		Yes							
9	LL		Yes							
10	E		Yes							
11	Beam Check: 1.40D + 3E + 1.0L		Yes							

Node Reactions

	LC	Node Label	X [k]	Y [k]	Z [k]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
1	6	N6	0	0	0	0	0	0
2	6	N7	0	0	0	0	0	0
3	6	N3	0	0	0	0	0	0
4	6	N2	0	0	0	0	0	0
5	6	N1	0.369	50.006	0	0	0	72.123
6	6	N4	-19.409	108.229	0	0	0	137.149
7	6	N8	0	70.748	0	0	0	0
8	6	Totals:	-19.04	228.983	0			
9	6	COG (ft):	X: 24.909	Y: 17.142	Z: 0			

Node Displacements

	LC	Node Label	X [in]	Y [in]	Z [in]	X Rotation [rad]	Y Rotation [rad]	Z Rotation [rad]
1	6	N1	0	0	0	0	0	0
2	6	N2	0.204	-0.008	0	0	0	-2.149e-3
3	6	N3	0.744	-0.009	0	0	0	-2.577e-3
4	6	N4	0	0	0	0	0	0
5	6	N6	0.726	-0.512	0	0	0	-2.671e-3
6	6	N7	0.202	-0.019	0	0	0	9.942e-4
7	6	N8	0.205	0	0	0	0	4.799e-3
8	6	N9	0.205	-0.51	0	0	0	1.642e-4
9	6	N10	0.741	-0.225	0	0	0	-1.714e-3



Company : KPPF
 Designer : Alex.Sanchez
 Job Number : 1900799
 Model Name : SMF Along Grid 3 (Roof)

10/17/2022
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Load Combinations

Building&Safety: OCPWAzarvanB 12/29/2025

Permits: 2022-0247, 22-0247, 22-021-0512, PLB21-0898

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor
1	(1): 1.4D		Y	2	1.4				
2	(2): 1.2D + 1.6L + 0.5RLL		Y	2	1.2	4	1.6		
3	(3): 1.2D + 1.6RLL + 1.0L		Y	2	1.2	3	1.6		
4	(6): 1.40D + 1.3E + 1.0L		Y	2	1.4	1	1.3		
5	(7): 0.70D + 1.3E		Y	2	0.7	1	1.3		
6	Drift Check: D + 0.5L + 1.0E		Y	2	1	4	0.5		
7	D		Y	2	1				
8	RLL		Y	3	1				
9	LL		Y	4	1				
10	E		Y	1	1				
11	Beam Check: 1.40D + 3E + 1.0L	Yes	Y	2	1.4	1	3	4	1

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Member End Reactions

LC	Member Label	Member End	Axial[k]	y Shear[k]	z Shear[k]	Torque[k-ft]	y-y Moment[k-ft]	z-z Moment[k-ft]
1	11	M2	I	175.224	45.709	0	0	345.427
2			J	171.664	45.709	0	0	-385.921
3	11	M3	I	4.376	50.822	0	0	-106.848
4			J	4.376	-93.06	0	0	385.921
5	11	M4	I	-40.795	78.434	0	0	0
6			J	0	-118.75	0	0	0
7	11	M6	I	23.654	40.931	0	0	527.798
8			J	18.337	40.931	0	0	-208.963
9	11	M7	I	40.795	0.642	0	0	-105.356
10			J	40.795	-14.714	0	0	208.963
11	11	M8	I	59.604	12.128	0	0	276.018
12			J	0.457	16.343	0	0	-105.356

AISC 15TH (360-16): LRFD Member Steel Code Checks

LC	Member	Shape	UC Max	Loc[ft]	Shear UC	Loc[ft]	Dir	phi*Pnc[k]	phi*Pnt[k]	phi*Mnyy[k-ft]	phi*Mnzz[k-ft]	Cb	Eqn	
1	11	M2	W14X159	0.407	16	0.136	16	y	1776.01	2101.5	547.5	1076.25	2.251	H1-1b
2	11	M3	W27X94	0.455	23.333	0.235	23.333	y	357.32	1242	145.5	860.238	1.538	H1-1b
3	11	M4	W27X146	0.572	15.366	0.239	27.833	y	877.528	1944	366.375	1740	1.627	H1-1b
4	11	M6	W14X211	0.366	0	0.089	18	y	2272.084	2790	742.5	1462.5	2.154	H1-1b
5	11	M7	W21X62	1.395	38.666	0.058	38.666	y	60.337	823.5	81.375	258.355	2.341	H1-1a
6	11	M8	W18X175	0.241	0	0.031	34	y	530.635	2313	397.5	1492.5	1.726	H1-1b



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Irvine, CA 92612
949.252.1022

Project	Dana Point Harbor	By	AS	Sheet	C14/21
Location	Dana Point CA	Date	10/17/22		
Client	SMS ARCH	Job#	1900799		

WUF-W - Welded Unreinforced Flange-Welded Web Moment Conn. - LRFD

(Design of Prequalified Connections for Special Moment Frames per AISC 358-16)

Frame = **Grid 3**
 Building&Safety: OCPWAZarvanB 12/29/2025
 Level = **Permits: BNR21-2244, ELE21-0889, MEC21-0512, PLB21-0898**
 Grid = **County of Orange - OC Public Works**



Span, L (dist. btwn column centerlines)	=	38.7 ft	# of Beams at Joint	=	1	(max 2)
Floor Ht (above)	=	34.0 ft	# of Columns at Joint	=	1	(max 2)
Floor Ht (below)	=	16.0 ft				
P _{DL} (col)	=	48.5 k				
P _{LL} (col)	=	25.6 k				
P _{EQ} (col)	=	-3.3 k				
V _{DL} (bm)	=	4.6 k				
V _{LL} (bm)	=	1.6 k				
V _S (bm)	=					
V _{EQ} (bm)	=	-3.3 k				
M _{DL} (bm)	=	35.3 k-ft				
M _{LL} (bm)	=	9.7 k-ft				
M _{EQ} (bm)	=	-63 k-ft				
P _{EQ} (bm)	=	10.5 k				
Panel Zone Deformation considered in frame stability?		Yes				
					ρ = 1.30	Redundancy Factor
					S_{DS} = 1.266	
					E = 29000 ksi	
					C_{pr} = 1.40	(AISC 358 8.7 Step 1)
					α_s = 1.00	(AISC 341, D1.2a.1(b) Eqn. D1-1)

Col Axial Load: (1.2 + 0.2*S _{DS}) * P _{DL} + 1.0*P _{LL} + ρ * P _{EQ}	=	P _{uc}	=	91.7 k
Beam Axial Load: (1.2 + 0.2*S _{DS}) * P _{DL} + 1.0*P _{LL} + ρ * P _{EQ}	=	P _{ub}	=	13.6 k
Beam Shear: (1.2 + 0.2*S _{DS}) * V _{DL} + 1.0*V _{LL} + ρ * V _{EQ}	=	V _{ub}	=	4.0 k
Beam Moment: (1.2 + 0.2*S _{DS}) * M _{DL} + 1.0*M _{LL} + ρ * M _{EQ}	=	M _{ub}	=	-21.2 k-ft

BEAM SIZE: **W21X62** (AISC 358 8.3.1)

F _{yb}	=	50 ksi
F _{ub}	=	65 ksi
R _{yb}	=	1.1 (AISC 341 Table A3.1)
A _b	=	18.3 in
d _b	=	21 in
b _{fb}	=	8.24 in
t _{fb}	=	0.615 in
t _{wb}	=	0.4 in
Z _b	=	144 in ³
r _{yb}	=	1.77 in ⁴

COLUMN SIZE: **W18X175** (AISC 358 8.3.2)

F _{yc}	=	50 ksi
R _{yc}	=	1.1 (AISC 341 Table A3.1)
A _c	=	51.4 in ²
d _c	=	20 in
b _{fc}	=	11.4 in
t _{fc}	=	1.59 in
t _{wc}	=	0.89 in
Z _c	=	398 in ³
k _c	=	2.4375 in
k ₁	=	1.25 in
r _{c,min}	=	2.76 in

Protected Zone Length (from face of column) = 21.00 in (AISC 358 8.3.1(8))
 Protected Zone Length (from column centerline) = 31.00 in

BEAM LIMITATIONS (AISC 358, 8.3.1(3), (4), (5))

Beam Weight:	62 plf	<	150 plf	OK
Flange thickness:	.62 in	<	1	OK
Clear Span-to-Depth	21.14	>	7	OK

SLENDERNES REQUIREMENTS (AISC 358 8.3.1(6) & 8.3.2(6))

Check Beam:

Flange: $b_{fb} / 2t_{fb}$	=	6.70 < 7.35	=	0.32*sqrt(Es/(Ry*Fy))	OK	AISC 341 Table D1.1
$C_{a,bm} = P_{ub} / \phi_c P_y$	=	0.02 < 0.114		Check $h/tw < 2.57*sqrt(E/(Ry*Fy))$		
Web: h / t_{wb}	=	46.90 < 59.01	OK			AISC 341 Table D1.1

Check Column:

Flange: $b_{fc} / 2t_{fc}$	=	3.58 < 7.35	=	0.32*sqrt(Es/(Ry*Fy))	OK	AISC 341 Table D1.1
$C_{a,col} = P_u / \phi_c P_y$	=	0.04 < 0.114		Check $h/tw < 2.57*sqrt(E/(Ry*Fy))$		
Web: h / t_{wc}	=	18.00 < 59.01	OK			AISC 341 Table D1.1



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Project	Dana Point Harbor	By	AS	Sheet	C15/21
Location	Dana Point CA	Date	10/17/22		
Client	SMS ARCH	Job#	1900799		

BEAM TYPICAL LATERAL BRACING (AISC 358 8.3.1(7))

Maximum Spacing of braces:	$L_b = 0.095 * r_{yb} * E / (R_y * F_{yb}) =$	7.4 ft
Distance between flange centroids:	$h_o = d_b - t_{fb} =$	20.4 in
Design Brace Force:	$P_{br} = 0.02 * R_{yb} * F_{yb} * Z_b * C_d / h_o =$	7.77 k
	$M_r = R_{yb} * F_{yb} * Z_b / \alpha_s =$	7920.00 k-in
Required Brace Stiffness:	$\beta_{br} = 1 / \phi * (10 * M_r * C_d / (L_b * h_o)) =$	58.43 k/in

SUPPLEMENTAL LATERAL BRACING @ PLASTIC HINGES (AISC 358 8.3.1(7))

Required Strength of Lateral Bracing	$P_{br} = 0.06 * R_{yb} * F_{yb} * Z_b * C_d / (\alpha_s * h_o) =$	23.3 k
	$M_r = R_{yb} * F_{yb} * Z_b / \alpha_s =$	7920.00 k-in
Required Brace Stiffness:	$\beta_{br} = 1 / \phi * (10 * M_r * C_d / (L_b * h_o)) =$	58.43 k/in

BEAM WELD ACCESS HOLE CONFIGURATION (AISC 358 5.2(2))

Weld access hole length:	min length = max (1.5 * t _{wb} , 1.5") =	1.5 in	AISC 360 J1.6(b)
Weld access hole height:	min height = max (t _{wb} , 0.75") =	0.75 in	AISC 360 J1.6(c)
	max height =	2 in	
Weld access radius:	min radius =	0.375 in	AISC 360 J1.6(5)

BEAM JOINT CONFIGURATION

S _h	=	0.0 in	AISC 358 8.7 (step 2)
L _h = L - 2S _h - d _c	=	36.99 ft	

FORCES AT PLASTIC HINGES

M _{pr} = C _{pr} * R _y * F _{yb} * Z _b	=	924 k-ft	AISC 358 8.7 (step 1)
V _h = 1.2V _{DL} + 1.0V _{LL} + 0.2V _S + 2M _{pr} /L _h	=	57.1 k	AISC 358 8.7 (step 3)
V' _h = 1.2V _{DL} + 1.0V _{LL} + 0.2V _S - 2M _{pr} /L _h	=	0.0 k	AISC 358 8.7 (step 3)

MOMENT DEMAND AT FACE OF COLUMN

M _f = M _{pr}	=	924 k-ft
M' _f = M _{pr}	=	0 k-ft

CHECK SHEAR STRENGTH AT FACE OF COLUMN

V _u = V _h	=	57.1 k	AISC 358 8.7 (step 5)
$\phi V_n = \phi_v * 0.6 * F_{yb} * A_w * C_{v1}$	=	252 k	AISC 360 Eqn. G2-1
V _u / (ϕV_n)	=	0.23 < 1.0	OK

STRONG COLUMN - WEAK BEAM CHECK (req'd for multi-story frames)

$\Sigma M_{uv} = V_h d_c / 2$	=	48 k-ft	AISC 358 8.4(2)(a)
$\Sigma M_{pb}^* = \Sigma_b * [M_{pr} + M_{uv}]$	=	972 k-ft	AISC 358 5.4(2)
$\Sigma M_{pc}^* = \Sigma_c * [Z_c * (F_{yc} - \alpha_s * P_{uc} / A_g)]$	=	1,599 k-ft	AISC 341 Eqn. E3-2
$\Sigma M_{pc}^* / \Sigma M_{pb}^*$	=	1.65 > 1.0	OK
KL/r _{c,min}	=	69.57	AISC 341 E3.4a(a)
F _e	=	59.1 ksi	AISC 360 Eqn. E3-4
F _{cr}	=	35.1 ksi	AISC 360 Eqn. E3-2 or E3-3
ϕP_n	=	1,624 k	AISC 350 Eqn. E3-1
P _{uc,max}	=	99 k	
P _u / ϕP_n	=	0.06 < 0.3	

Building & Safety: OCPW/Azarvan B 12/29/2025
 Permit #: RNR21-0244, EL E21-0859, MEC21-0512, PLEB2
 AISC 341 D1.2b
 County of Orange - OC Public Works
 OC Development Services
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 AISC 341 Eqn. D1-1
 AISC 360 Eqn. A-6-8a
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AISC 341 Eqn. D1-4
 AISC 341 Eqn. D1-6
 AISC 360 Eqn. A-6-8a



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Project	Dana Point Harbor	By	AS	Sheet	C16/21
Location	Dana Point CA	Date	10/17/22		
Client	SMS ARCH	Job#	1900799		

PANEL ZONES (AISC 358 8.4(1), AISC 340 E3.6e)

Panel Zone Required Shear Strength (AISC 341, E3.6e.1)

$$R_{u,pz} = (M_f + M'_f) / (d_b - t_{fb}) = 544 \text{ k}$$

$$P_{yc} = F_{yc} * A_c = 2570 \text{ k}$$

$$\alpha P_{yc} / P_{yc} = \alpha * P_{uc} / P_{yc} = 0.036$$

$$\phi_v R_{n,col,pz} = 658 \text{ k}$$

Column Strength OK

Panel Zone Thickness (AISC 341 E3.6e.2)

Check column only

$$d_z = d_b - 2 * t_{fb} = 19.77 \text{ in}$$

$$w_z = d_c - 2 * t_{fc} = 16.82 \text{ in}$$

$$t_{pz,min} = (d_z + w_z) / 90 = 0.407 \text{ in}$$

twc > tpz,min, no doubler pl req'd for this reqm't AISC 341 Eqn. E3-7

Panel Zone Doubler Plates (AISC 341 E3.6e.3)

Use plug welds between doubler plate & column web?

Yes

AISC 341, E3.6e.2

$$F_{y,dp} = n/a \text{ ksi}$$

$$L_{net,v} = 19.50 \text{ in}$$

$$t_{pz,req,tot} = n/a \text{ in}$$

$$t_{dp,req,strength} = n/a \text{ in}$$

$$d_{z,dp} = d_b / 3 = n/a \text{ in}$$

$$w_{z,dp} = d_c / 3 = n/a \text{ in}$$

$$t_{pz,dp,min} = (d_z + w_z) / 90 = n/a \text{ in}$$

$$t_{dp} = 1/2 \text{ in}$$

$$t_{pz,tot} = 0.890 \text{ in}$$

$$\phi R_{n,pz} = 658 \text{ k}$$

$$R_{u,pz} / \phi R_{n,pz} = n/a$$

Where cont pl used, Lnet,v = db - 2*tcontpl

Doubler Plate Welding (AISC 341, E3.6e.3)

Vertical edges of doubler plate: Weld to column flanges using PJP weld per AWS D1.8 clause 4.3.

If continuity plates are used, welds are permitted to stop no more than 1" from the continuity plate.

AISC 341 E3.6e.3(b)(2)

Horizontal edges of doubler plate: Weld to continuity plate with CJP weld

AISC 341 E3.6e.3(b)(2)

(75% of the available shear yield strength of the full doubler plate thickness over the contact length with the continuity plate.)

Building&Safety: OCPWAzarvan B 12/29/2025
Permits: BNR21-0244, ELE21-0859, MEC21-0512, PLB21-0898

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AISC 360 Eqn. 10-6
AISC 360 Eqn. 10-11

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Jared Tibsharwan
BUILDING OFFICIAL



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Project	Dana Point Harbor	By	AS	Sheet	C-17/21
Location	Dana Point CA	Date	10/17/22		
Client	SMS ARCH	Job#	1900799		

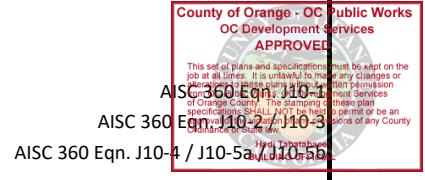
CONTINUITY PLATES (AISC 358 5.8, 2.4.4, AISC 341 E3.6f)

$P_f = 0.85 * M_f / (d_b - t_{fb}) = 462 \text{ k}$

Building&Safety: OCPW&ArvanB 12/29/2025
Permits: BNR21-0244, ELE21-0898, MEC21-0512, PLB21-0898

Conditions Requiring Continuity Plates (AISC 341 E3.6f.1)

- (a) J10.1: Flange Local Bending, $\phi R_n = 355.5 \text{ k}$
- J10.2: Web Local Yielding, $\phi R_n = 298.5 \text{ k}$
- J10.3: Web Crippling, $\phi R_n = 397.2 \text{ k}$
- J10.4: Web Sidesway Buckling, ϕR_n Does Not Apply
- J10.5: Web Compressive Buckling, ϕR_n Does Not Apply
- J10.6: Web Panel Zone Shear, $\phi R_n = 657.5 \text{ k}$
- J10.7: Unframed Ends of Beams & Girders, Does Not Apply
- $\phi R_{n,col,tens} = \min(J10.1, J10.2, J10.6) = 298.5 \text{ k}$
- $\phi R_{n,col,comp} = \min(J10.2, J10.3, J10.6) = 298.5 \text{ k}$



< P_f , Cont. Plate Required
< P_f , Cont. Plate Required

(b) Limiting Column Flg. Thickness, $t_{lim} = b_{fb} / 6 = 1.37 \text{ in}$

< $t_{fc} = 1.59 \text{ in}$, Cont. Plate Not Required AISC 341 Eqn. E3-8

$F_{y,contpl} = 50 \text{ ksi}$
 $t_{contpl, min} = 0.31 \text{ in}$

AISC 341 E3.6f.2(b)

$t_{contpl} = 3/4 \text{ in}$ * larger than KPFF typical detail, need to designate on drawings *
 $b_{contpl,max} = (b_{fc} - t_{wc}) / 2 = 5.26 \text{ in}$
 $b_{contpl,net} = b_{fc} / 2 - k_1 = 4.45 \text{ in}$ AISC 358 3.6
 $A_{pb} = b_{contpl,net} * t_{contpl} = 3.34 \text{ in}^2$
 $L_{contpl,max} = d_c - 2 * t_{fc} = 16.82 \text{ in}$
 $L_{contpl,net} = d_c - (k_{col} + 1.5'') * 2 = 12.13 \text{ in}$ AISC 358 3.6
 $A_{pw} = L_{contpl,net} * t_{contpl} = 9.09 \text{ in}^2$
 $r_{contpl} = \sqrt{I / A} = t_{contpl} / (\sqrt{12}) = 0.217 \text{ in}$
 $KL_{contpl,max} / r_{pl} = 38.84$

J10.8: Additional Requirements

$R_{u,contpl,req,tens} = (P_f - \phi R_{n,col,tens}) / 2 = 81.9 \text{ k}$
 $\phi R_{n,contpl} = \phi * b_{net} * t_{contpl} * F_{ycont} = 150.2 \text{ k}$ OK AISC 360 Eqn. J4-1
 $R_{u,contpl,req,comp} = (P_f - \phi R_{n,col,comp}) / 2 = 81.9 \text{ k}$
 $\phi R_{n,contpl} = 158.8 \text{ k}$ OK AISC 360 Eqn. J4-6 / E3-1
 $(b_{conpl} + t_{wc} / 2) > b_{fb} / 3$ OK AISC 360 J10.8 (a)
 $t_{conpl} > \max(t_{min}, b_{fb} / 16)$ OK AISC 360 J10.8(b) & AISC 341 E3.6f(b)

Continuity Plate Welding (AISC 358, 2.4.4 -> AISC 341 E3.6f(3))

Use CJP groove weld between continuity plates and column flanges.

Weld to web, min of a), b), c), d) below:

- a) $\phi R_{n,contpl} = \phi * F_{y,contpl} * A_{pb} * 2 = 300.4 \text{ k}$ AISC 341 E3.6f.2(c)
- b) $\phi R_{n,contpl} = \phi * 0.6 * F_{y,contpl} * A_{pw} = 272.8 \text{ k}$ AISC 360 Eqn. J4-1
- c) $\phi_v R_{n,col,pz} = 657.5 \text{ k}$ AISC 360 Eqn. J4-3
- d) Expected Bm Flg. Yield Strength = $R_{yb} * F_{yb} * b_{fb} * t_{fb} = 278.7 \text{ k}$
- $R_{u,weld} (\min a,b,c,d) = 272.8 \text{ k}$

Option 1: Use CJP weld at each continuity plate

$\phi R_n = \phi * F_{y,contpl} * t_{contpl} * L_{net} = 341.0 \text{ k}$ AISC 360 Eqn. J2-3
 $R_{u,weld} / \phi R_n = 0.80$ OK



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Project	Dana Point Harbor	By	AS	Sheet	C18/21
Location	Dana Point CA	Date	10/17/22		
Client	SMS ARCH	Job#	1900799		

WUF-W - Welded Unreinforced Flange-Welded Web Moment Conn. - LRFD

(Design of Prequalified Connections for Special Moment Frames per AISC 358-16)

Frame = **Grid 3**
Level = **1.0**
Grid = **1.0**

Permits: BNR21-2244, ELE21-0889, MEC21-0512, PLB21-0898
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Span, L (dist. btwn column centerlines)	=	38.7 ft	# of Beams at Joint	=	1	(max 2)
Floor Ht (above)	=	34.0 ft	# of Columns at Joint	=	1	(max 2)
Floor Ht (below)	=	16.0 ft				
P _{DL} (col)	=	4.2 k				
P _{LL} (col)	=	2.8 k				
P _{EQ} (col)	=	10.5 k				
V _{DL} (bm)	=	-3.7 k				
V _{LL} (bm)	=	.7 k				
V _S (bm)	=					
V _{EQ} (bm)	=	-3.3 k				
M _{DL} (bm)	=	17.3 k-ft				
M _{LL} (bm)	=	-7.7 k-ft				
M _{EQ} (bm)	=	64 k-ft				
P _{EQ} (bm)	=	10.5 k				
Panel Zone Deformation considered in frame stability?		Yes				
			ρ	=	1.30	Redundancy Factor
			S _{DS}	=	1.266	
			E	=	29000 ksi	
			C _{pr}	=	1.40	(AISC 358 8.7 Step 1)
			α _s	=	1.00	(AISC 341, D1.2a.1(b) Eqn. D1-1)

Col Axial Load: (1.2 + 0.2*S _{DS}) * P _{DL} + 1.0*P _{LL} + ρ * P _{EQ}	=	P _{uc}	=	22.5 k
Beam Axial Load: (1.2 + 0.2*S _{DS}) * P _{DL} + 1.0*P _{LL} + ρ * P _{EQ}	=	P _{ub}	=	13.6 k
Beam Shear: (1.2 + 0.2*S _{DS}) * V _{DL} + 1.0*V _{LL} + ρ * V _{EQ}	=	V _{ub}	=	-9.0 k
Beam Moment: (1.2 + 0.2*S _{DS}) * M _{DL} + 1.0*M _{LL} + ρ * M _{EQ}	=	M _{ub}	=	100.8 k-ft

BEAM SIZE: W21X62 (AISC 358 8.3.1)

F _{yb}	=	50 ksi
F _{ub}	=	65 ksi
R _{yb}	=	1.1 (AISC 341 Table A3.1)
A _b	=	18.3 in
d _b	=	21 in
b _{fb}	=	8.24 in
t _{fb}	=	0.615 in
t _{wb}	=	0.4 in
Z _b	=	144 in ³
r _{yb}	=	1.77 in ⁴

COLUMN SIZE: W14X193 (AISC 358 8.3.2)

F _{yc}	=	50 ksi
R _{yc}	=	1.1 (AISC 341 Table A3.1)
A _c	=	56.8 in ²
d _c	=	15.5 in
b _{fc}	=	15.7 in
t _{fc}	=	1.44 in
t _{wc}	=	0.89 in
Z _c	=	355 in ³
k _c	=	2.75 in
k ₁	=	1.6875 in
r _{c,min}	=	4.05 in

Protected Zone Length (from face of column) = 21.00 in (AISC 358 8.3.1(8))
Protected Zone Length (from column centerline) = 28.75 in

BEAM LIMITATIONS (AISC 358, 8.3.1(3), (4), (5))

Beam Weight:	62 plf	<	150 plf	OK
Flange thickness:	.62 in	<	1	OK
Clear Span-to-Depth	21.35	>	7	OK

SLENDERNESS REQUIREMENTS (AISC 358 8.3.1(6) & 8.3.2(6))

Check Beam:						
Flange:	b _{fb} / 2t _{fb}	=	6.70 < 7.35	= 0.32*sqrt(Es/(Ry*Fy))	OK	AISC 341 Table D1.1
	C _{a,bm} = P _{ub} / φ _c P _y	=	0.02 < 0.114	Check h/tw < 2.57*sqrt(E/(Ry*Fy))		
Web:	h / t _{wb}	=	46.90 < 59.01	OK		AISC 341 Table D1.1
Check Column:						
Flange:	b _{fc} / 2t _{fc}	=	5.45 < 7.35	= 0.32*sqrt(Es/(Ry*Fy))	OK	AISC 341 Table D1.1
	C _{a,col} = P _u / φ _c P _y	=	0.01 < 0.114	Check h/tw < 2.57*sqrt(E/(Ry*Fy))		
Web:	h / t _{wc}	=	12.80 < 59.01	OK		AISC 341 Table D1.1



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BEAM TYPICAL LATERAL BRACING (AISC 358 8.3.1(7))

Maximum Spacing of braces:	$L_b = 0.095 * r_{yb} * E / (R_y * F_{yb}) =$	7.4 ft
Distance between flange centroids:	$h_o = d_b - t_{fb} =$	20.4 in
Design Brace Force:	$P_{br} = 0.02 * R_{yb} * F_{yb} * Z_b * C_d / h_o =$	7.77 k
	$M_r = R_{yb} * F_{yb} * Z_b / \alpha_s =$	7920.00 k-in
Required Brace Stiffness:	$\beta_{br} = 1 / \phi * (10 * M_r * C_d / (L_b * h_o)) =$	58.43 k/in

SUPPLEMENTAL LATERAL BRACING @ PLASTIC HINGES (AISC 358 8.3.1(7))

Required Strength of Lateral Bracing	$P_{br} = 0.06 * R_{yb} * F_{yb} * Z_b * C_d / (\alpha_s * h_o) =$	23.3 k
	$M_r = R_{yb} * F_{yb} * Z_b / \alpha_s =$	7920.00 k-in
Required Brace Stiffness:	$\beta_{br} = 1 / \phi * (10 * M_r * C_d / (L_b * h_o)) =$	58.43 k/in

BEAM WELD ACCESS HOLE CONFIGURATION (AISC 358 5.2(2))

Weld access hole length:	min length = max (1.5 * t _{wb} , 1.5") =	1.5 in	AISC 360 J1.6(b)
Weld access hole height:	min height = max (t _{wb} , 0.75") =	0.75 in	AISC 360 J1.6(c)
	max height =	2 in	
Weld access radius:	min radius =	0.375 in	AISC 360 J1.6(5)

BEAM JOINT CONFIGURATION

S _h	=	0.0 in	AISC 358 8.7 (step 2)
L _h = L - 2S _h - d _c	=	37.37 ft	

FORCES AT PLASTIC HINGES

M _{pr} = C _{pr} * R _y * F _{yb} * Z _b	=	924 k-ft	AISC 358 8.7 (step 1)
V _h = 1.2V _{DL} + 1.0V _{LL} + 0.2V _S + 2M _{pr} /L _h	=	45.7 k	AISC 358 8.7 (step 3)
V' _h = 1.2V _{DL} + 1.0V _{LL} + 0.2V _S - 2M _{pr} /L _h	=	0.0 k	AISC 358 8.7 (step 3)

MOMENT DEMAND AT FACE OF COLUMN

M _f = M _{pr}	=	924 k-ft
M' _f = M _{pr}	=	0 k-ft

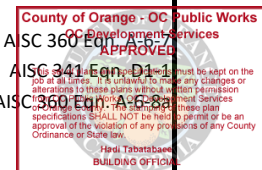
CHECK SHEAR STRENGTH AT FACE OF COLUMN

V _u = V _h	=	45.7 k	AISC 358 8.7 (step 5)
$\phi V_n = \phi_v * 0.6 * F_{yb} * A_w * C_{v1}$	=	252 k	AISC 360 Eqn. G2-1
V _u / (ϕV_n)	=	0.18 < 1.0	OK

STRONG COLUMN - WEAK BEAM CHECK (req'd for multi-story frames)

$\Sigma M_{uv} = V_h d_c / 2$	=	30 k-ft	AISC 358 8.4(2)(a)
$\Sigma M_{pb}^* = \Sigma_b * [M_{pr} + M_{uv}]$	=	954 k-ft	AISC 358 5.4(2)
$\Sigma M_{pc}^* = \Sigma_c * [Z_c * (F_{yc} - \alpha_s * P_{uc} / A_g)]$	=	1,467 k-ft	AISC 341 Eqn. E3-2
$\Sigma M_{pc}^* / \Sigma M_{pb}^*$	=	1.54 > 1.0	OK
KL/r _{c,min}	=	47.41	AISC 341 E3.4a(a)
F _e	=	127.4 ksi	AISC 360 Eqn. E3-4
F _{cr}	=	42.4 ksi	AISC 360 Eqn. E3-2 or E3-3
ϕP_n	=	2,169 k	AISC 350 Eqn. E3-1
P _{uc,max}	=	22 k	
P _u / ϕP_n	=	0.01 < 0.3	

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Permit #: RNR21-0244, EL E21-0859, MEC21-0512, PLEB21-0001, AISC 341 D1.2b



AISC 341 Eqn. D1-4
AISC 341 Eqn. D1-6
AISC 360 Eqn. A-6-8a



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PANEL ZONES (AISC 358 8.4(1), AISC 340 E3.6e)

Panel Zone Required Shear Strength (AISC 341, E3.6e.1)

$$R_{u,pz} = (M_f + M'_f) / (d_b - t_{fb}) = 544 \text{ k}$$

$$P_{yc} = F_{yc} * A_c = 2840 \text{ k}$$

$$\alpha P_u / P_{yc} = \alpha * P_{uc} / P_{yc} = 0.008$$

$$\phi_v R_{n,col,pz} = 553 \text{ k}$$

Column Strength OK

Panel Zone Thickness (AISC 341 E3.6e.2)

Check column only

$$d_z = d_b - 2 * t_{fb} = 19.77 \text{ in}$$

$$w_z = d_c - 2 * t_{fc} = 12.62 \text{ in}$$

$$t_{pz,min} = (d_z + w_z) / 90 = 0.360 \text{ in}$$

twc > tpz,min, no doubler pl req'd for this reqm't AISC 341 Eqn. E3-7

Panel Zone Doubler Plates (AISC 341 E3.6e.3)

Use plug welds between doubler plate & column web?

N/A

AISC 341, E3.6e.2

$$F_{y,dp} = n/a \text{ ksi}$$

$$L_{net,v} = 19.50 \text{ in}$$

$$t_{pz,req,tot} = n/a \text{ in}$$

$$t_{dp,req,strength} = n/a \text{ in}$$

$$d_{z,dp} = d_b / 3 = n/a \text{ in}$$

$$w_{z,dp} = d_c / 3 = n/a \text{ in}$$

$$t_{pz,dp,min} = (d_z + w_z) / 90 = n/a \text{ in}$$

$$t_{dp} = 0 \text{ in}$$

$$t_{pz,tot} = 0.890 \text{ in}$$

$$\phi R_{n,pz} = 553 \text{ k}$$

$$R_{u,pz} / \phi R_{n,pz} = n/a$$

Where cont pl used, Lnet,v = db - 2*tcontpl

Doubler Plate Welding (AISC 341, E3.6e.3)

Vertical edges of doubler plate: Weld to column flanges using PJP weld per AWS D1.8 clause 4.3.

If continuity plates are used, welds are permitted to stop no more than 1" from the continuity plate.

AISC 341 E3.6e.3(b)(2)

Horizontal edges of doubler plate: Weld to continuity plate with CJP weld

AISC 341 E3.6e.3(b)(2)

(75% of the available shear yield strength of the full doubler plate thickness over the contact length with the continuity plate.)

Building&Safety: OCPWAzarvanB 12/29/2025
Permits: BNR21-0244, ELE21-0859, MEC21-0512, PLB21-0898



AISC 360 Eqn. 10-6
AISC 360 Eqn. 10-11



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Project	Dana Point Harbor	By	AS	Sheet	C21/21
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Client	SMS ARCH	Job#	1900799		

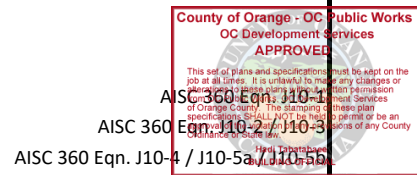
CONTINUITY PLATES (AISC 358 5.8, 2.4.4, AISC 341 E3.6f)

$P_f = 0.85 * M_f / (d_b - t_{fb}) = 462 \text{ k}$

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Conditions Requiring Continuity Plates (AISC 341 E3.6f.1)

- (a) J10.1: Flange Local Bending, $\phi R_n = 291.6 \text{ k}$
- J10.2: Web Local Yielding, $\phi R_n = 333.3 \text{ k}$
- J10.3: Web Crippling, $\phi R_n = 385.0 \text{ k}$
- J10.4: Web Sidesway Buckling, ϕR_n Does Not Apply
- J10.5: Web Compressive Buckling, ϕR_n Does Not Apply
- J10.6: Web Panel Zone Shear, $\phi R_n = 553.4 \text{ k}$
- J10.7: Unframed Ends of Beams & Girders Does Not Apply
- $\phi R_{n,col,tens} = \min(J10.1, J10.2, J10.6) = 291.6 \text{ k}$
- $\phi R_{n,col,comp} = \min(J10.2, J10.3, J10.6) = 333.3 \text{ k}$



< P_f , Cont. Plate Required
< P_f , Cont. Plate Required

- (b) Limiting Column Flg. Thickness, $t_{lim} = b_{fb} / 6 = 1.37 \text{ in}$

< $t_{fc} = 1.44 \text{ in}$, Cont. Plate Not Required AISC 341 Eqn. E3-8

$F_{y,contpl} = 50 \text{ ksi}$
 $t_{contpl, min} = 0.31 \text{ in}$

AISC 341 E3.6f.2(b)

$t_{contpl} = 3/4 \text{ in}$ * larger than KPFF typical detail, need to designate on drawings *
 $b_{contpl,max} = (b_{fc} - t_{wc}) / 2 = 7.41 \text{ in}$
 $b_{contpl,net} = b_{fc} / 2 - k_1 = 6.16 \text{ in}$ AISC 358 3.6
 $A_{pb} = b_{contpl,net} * t_{contpl} = 4.62 \text{ in}^2$
 $L_{contpl,max} = d_c - 2 * t_{fc} = 12.62 \text{ in}$
 $L_{contpl,net} = d_c - (k_{col} + 1.5'') * 2 = 7.00 \text{ in}$ AISC 358 3.6
 $A_{pw} = L_{contpl,net} * t_{contpl} = 5.25 \text{ in}^2$
 $r_{contpl} = \sqrt{I / A} = t_{contpl} / (\sqrt{12}) = 0.217 \text{ in}$
 $KL_{contpl,max} / r_{pl} = 29.14$

J10.8: Additional Requirements

$R_{u,contpl,req,tens} = (P_f - \phi R_{n,col,tens}) / 2 = 85.4 \text{ k}$
 $\phi R_{n,contpl} = \phi * b_{net} * t_{contpl} * F_{ycont} = 208.0 \text{ k}$ OK AISC 360 Eqn. J4-1
 $R_{u,contpl,req,comp} = (P_f - \phi R_{n,col,comp}) / 2 = 64.5 \text{ k}$
 $\phi R_{n,contpl} = 234.9 \text{ k}$ OK AISC 360 Eqn. J4-6 / E3-1
 $(b_{conpl} + t_{wc} / 2) > b_{fb} / 3$ OK AISC 360 J10.8 (a)
 $t_{conpl} > \max(t_{min}, b_{fb} / 16)$ OK AISC 360 J10.8(b) & AISC 341 E3.6f(b)

Continuity Plate Welding (AISC 358, 2.4.4 -> AISC 341 E3.6f(3))

Use CJP groove weld between continuity plates and column flanges.

Weld to web, min of a), b), c), d) below:

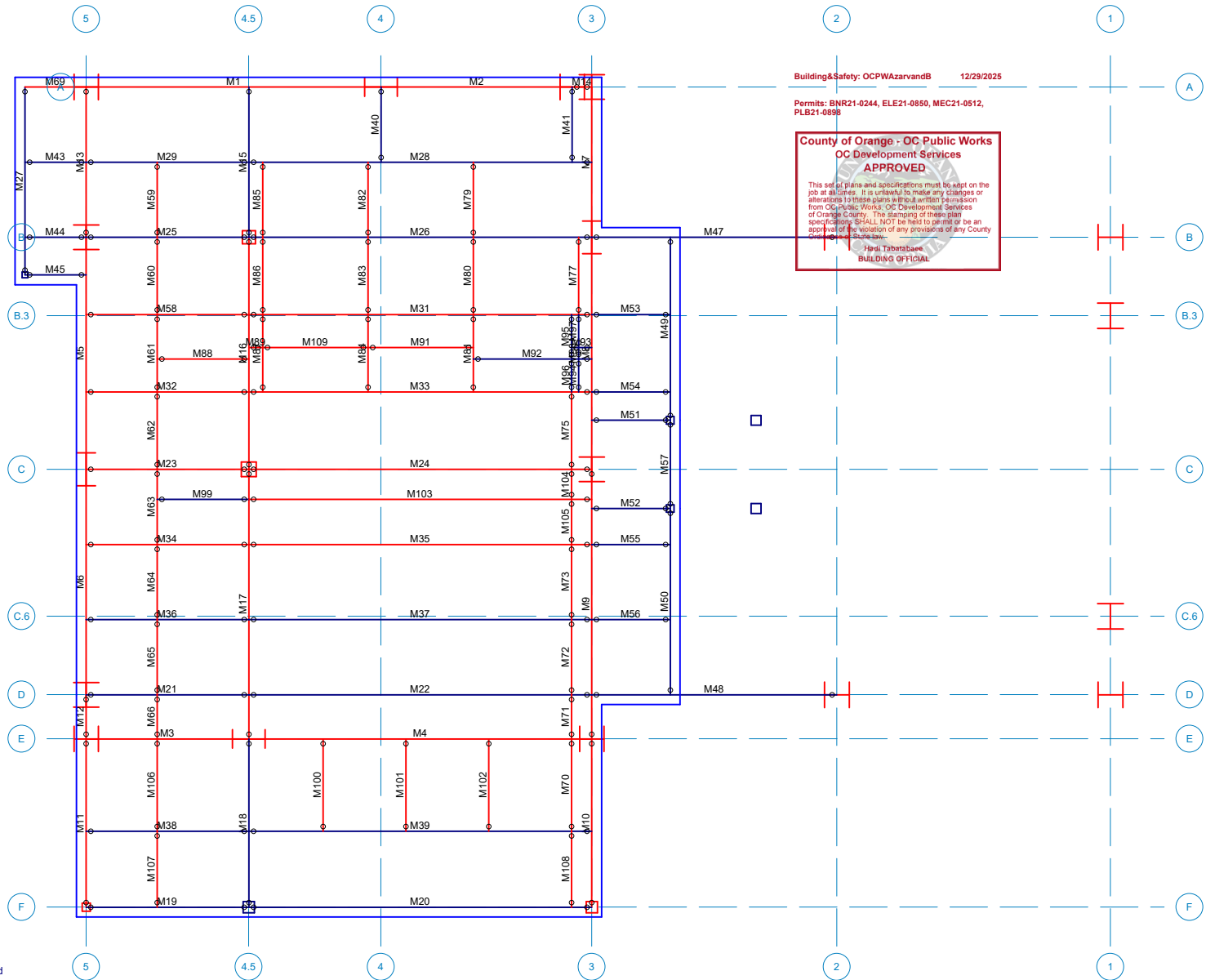
- a) $\phi R_{n,contpl} = \phi * F_{y,contpl} * A_{pb} * 2 = 416.0 \text{ k}$ AISC 341 E3.6f.2(c)
AISC 360 Eqn. J4-1
- b) $\phi R_{n,contpl} = \phi * 0.6 * F_{y,contpl} * A_{pw} = 157.5 \text{ k}$ AISC 360 Eqn. J4-3
- c) $\phi R_{n,col,pz} = 553.4 \text{ k}$
- d) Expected Bm Flg. Yield Strength = $R_{yb} * F_{yb} * b_{fb} * t_{fb} = 278.7 \text{ k}$
- $R_{u,weld} (\min a,b,c,d) = 157.5 \text{ k}$

Option 1: Use CJP weld at each continuity plate

$\phi R_n = \phi * F_{y,contpl} * t_{contpl} * L_{net} = 196.9 \text{ k}$ AISC 360 Eqn. J2-3
 $R_{u,weld} / \phi R_n = 0.80$ OK



Exterior Roof Deck_Member Labels & End Releases



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Permits: ENR21-0244, ELE21-0850, MEC21-0512, PLB21-0898

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Loads: DL PreComp - PreComposite Dead Load
Results for LC 1, Service Dead

KPFF
AS
1900799

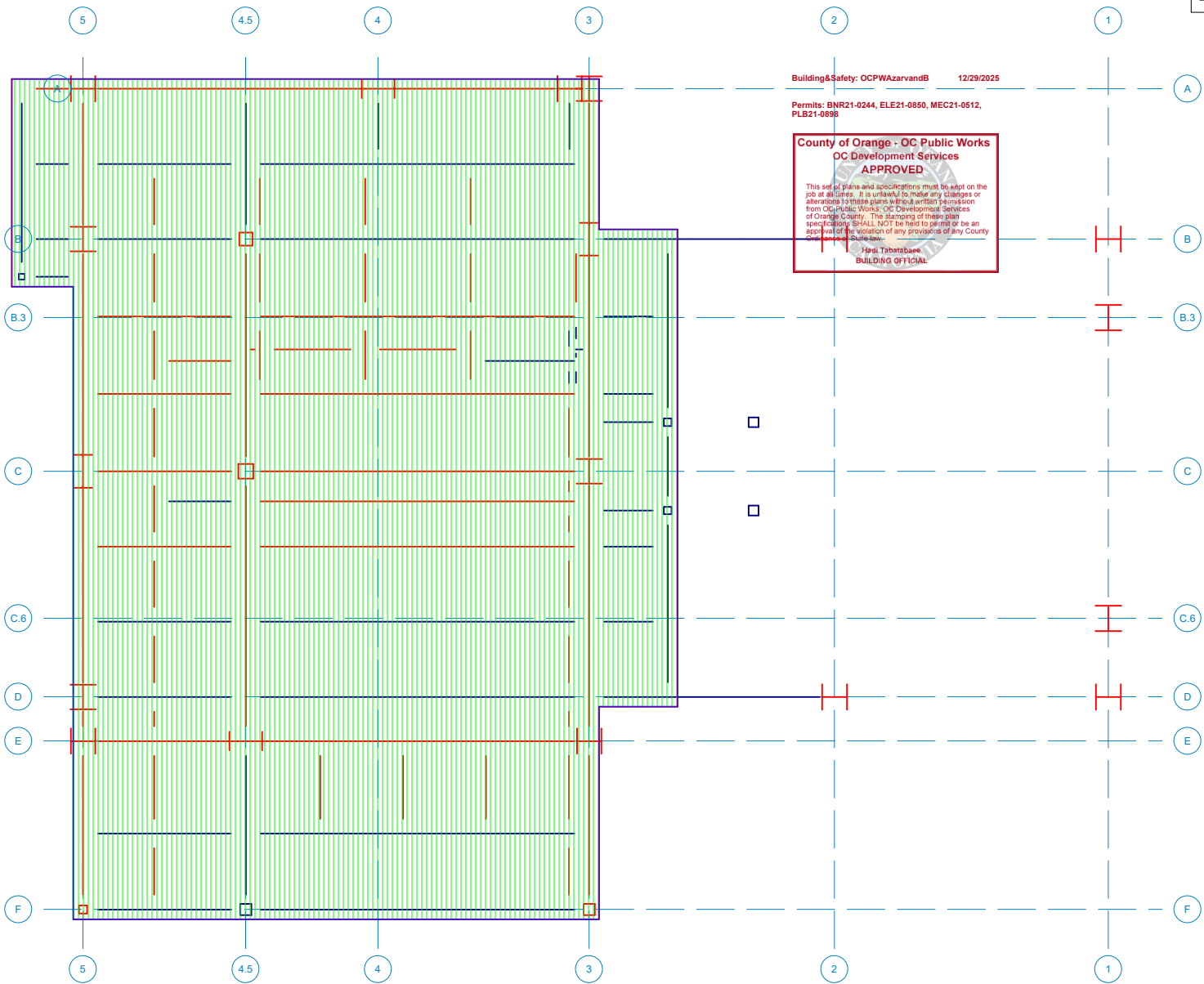
Exterior Roof Deck
 Dana Point Harbor_Bld'g. 10

SK - 1
Oct 17, 2022 at 10:22 AM
2021-05-25_Bldg 10 (Exterior Roof Deck & Slop...



Exterior Roof Deck Deck Assignment

Deck Type w/ Default	Lateral Gravity
<ul style="list-style-type: none"> ■ Concrete Deck ■ Composite D... ■ Metal Deck ■ Wood 	<ul style="list-style-type: none"> ■ Lateral ■ Gravity



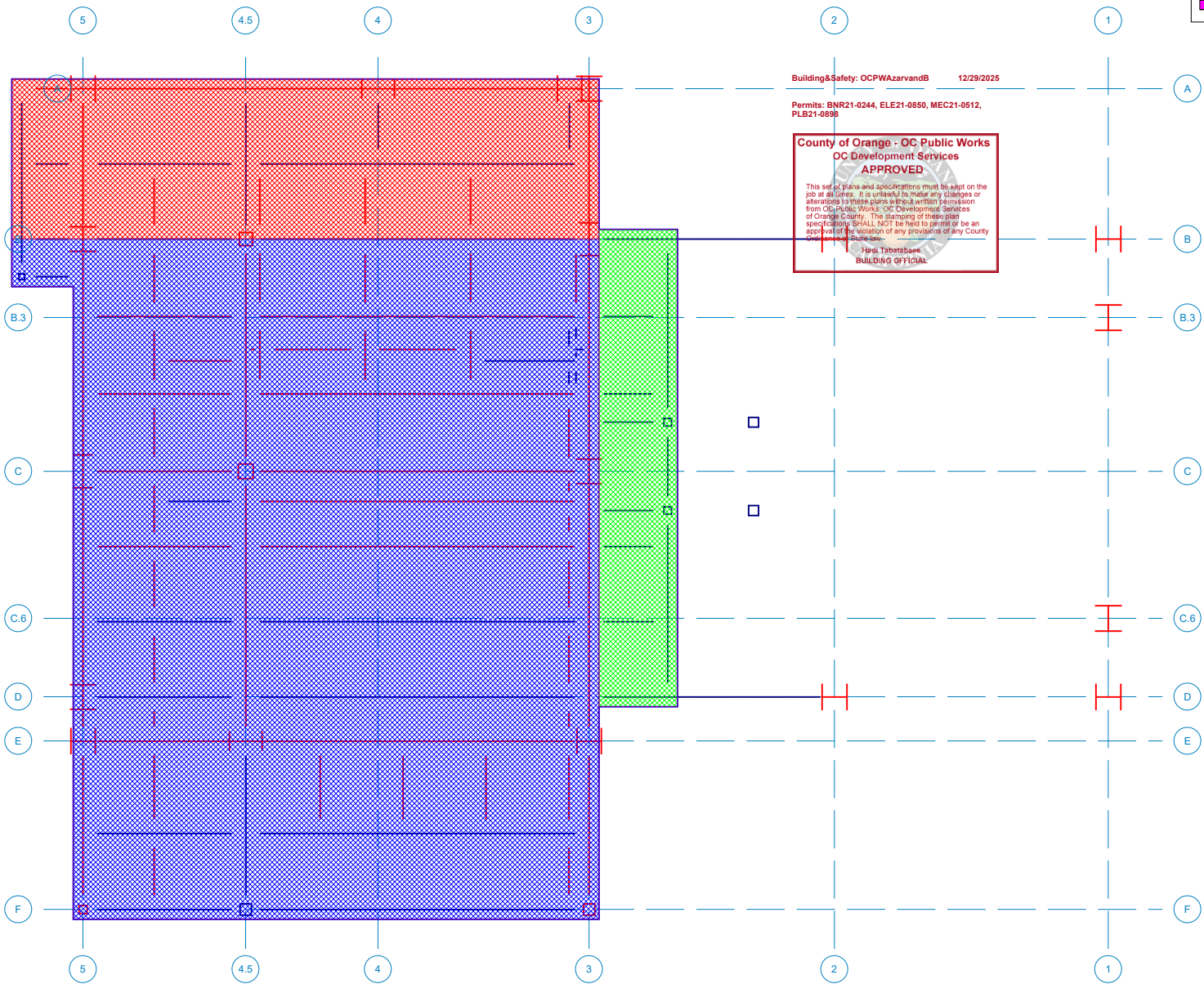
Loads: DL PreComp - PreComposite Dead Load
 Results for LC 1, Service Dead

KPPF	Exterior Roof Deck	SK - 2
AS	Dana Point Harbor_Bld'g. 10	Oct 17, 2022 at 10:23 AM
1900799		2021-05-25_Bldg 10 (Exterior Roof Deck & Slop...



Exterior Roof Deck_Area Load Assignments

Area Load w/o Default		
■	Exterior Roof ...	
■	Floor in Bldg	
■	Flat Roof	
■	Private Dinin...	
■	Sloped Roof	



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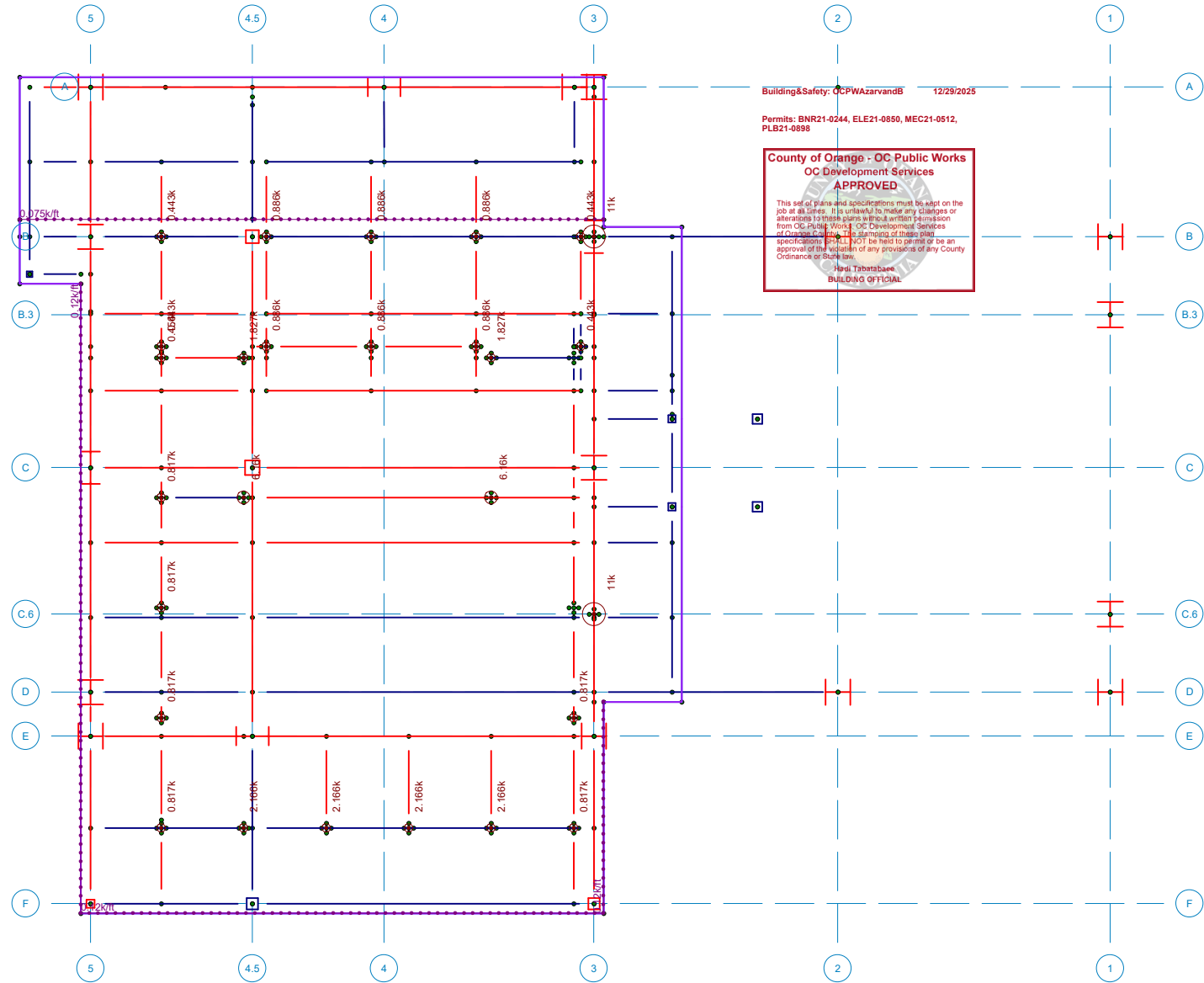
 Building Official

Loads: DL PreComp - PreComposite Dead Load
 Results for LC 1, Service Dead

KPFF AS 1900799	Exterior Roof Deck Dana Point Harbor_Bld'g. 10	SK - 3 Oct 17, 2022 at 10:24 AM 2021-05-25_Bldg 10 (Exterior Roof Deck & Slop...
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Exterior Roof Deck Line & Point Loads (Post DL)



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Head Librarian
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Loads: DL PostComp - PostComposite Dead Load
 Results for LC 1, Service Dead

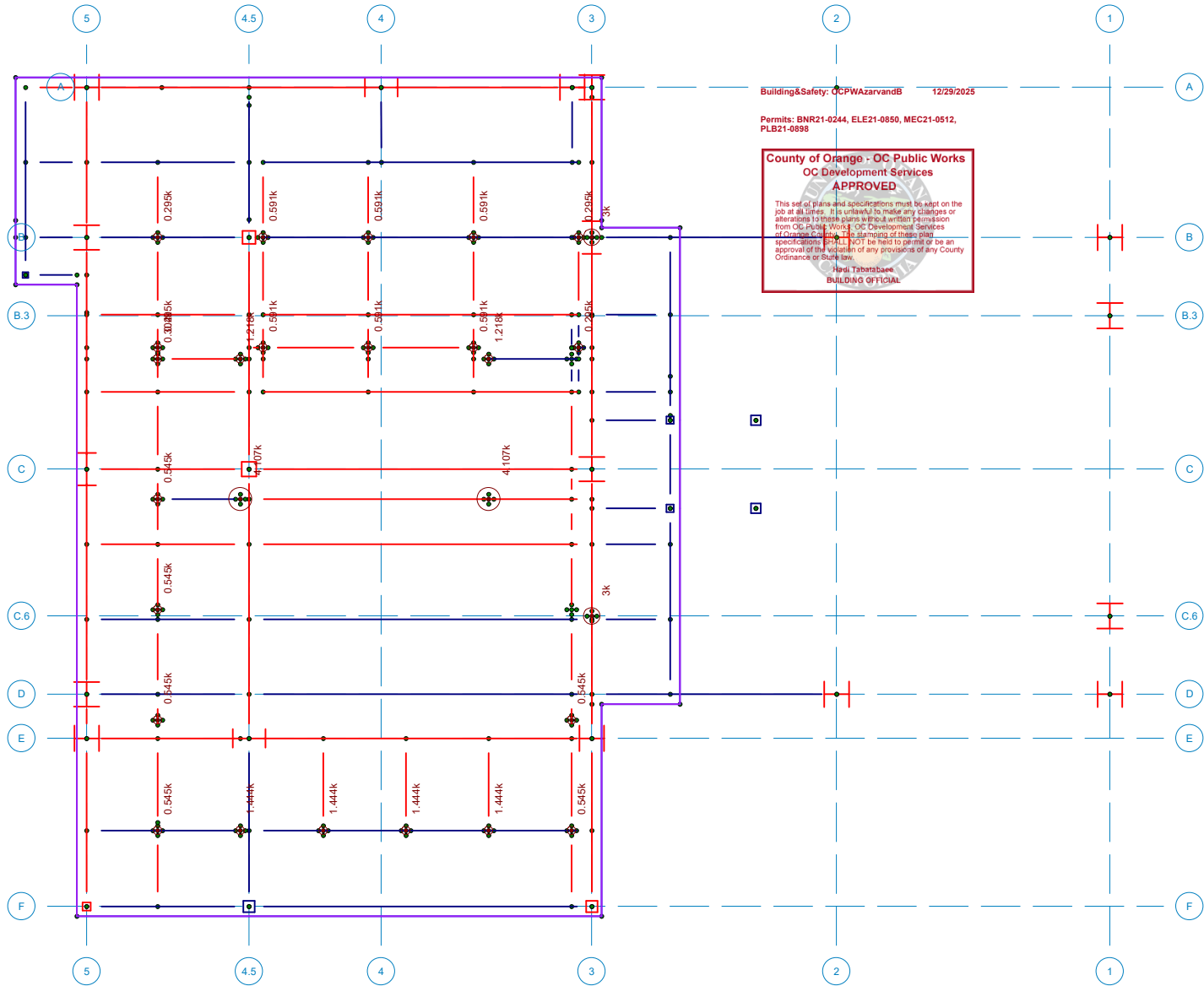
KPFF
AS
1900799

Exterior Roof Deck
 Dana Point Harbor_Bld'g. 10

SK - 4
Oct 17, 2022 at 10:28 AM
2021-05-25_Bldg 10 (Exterior Roof Deck & Slop...



Exterior Roof Deck Line & Point Loads (LL)



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 Javad Tiberabone
 BUILDING OFFICIAL

Loads: LL-Non - Live Load
Results for LC 1, Service Dead

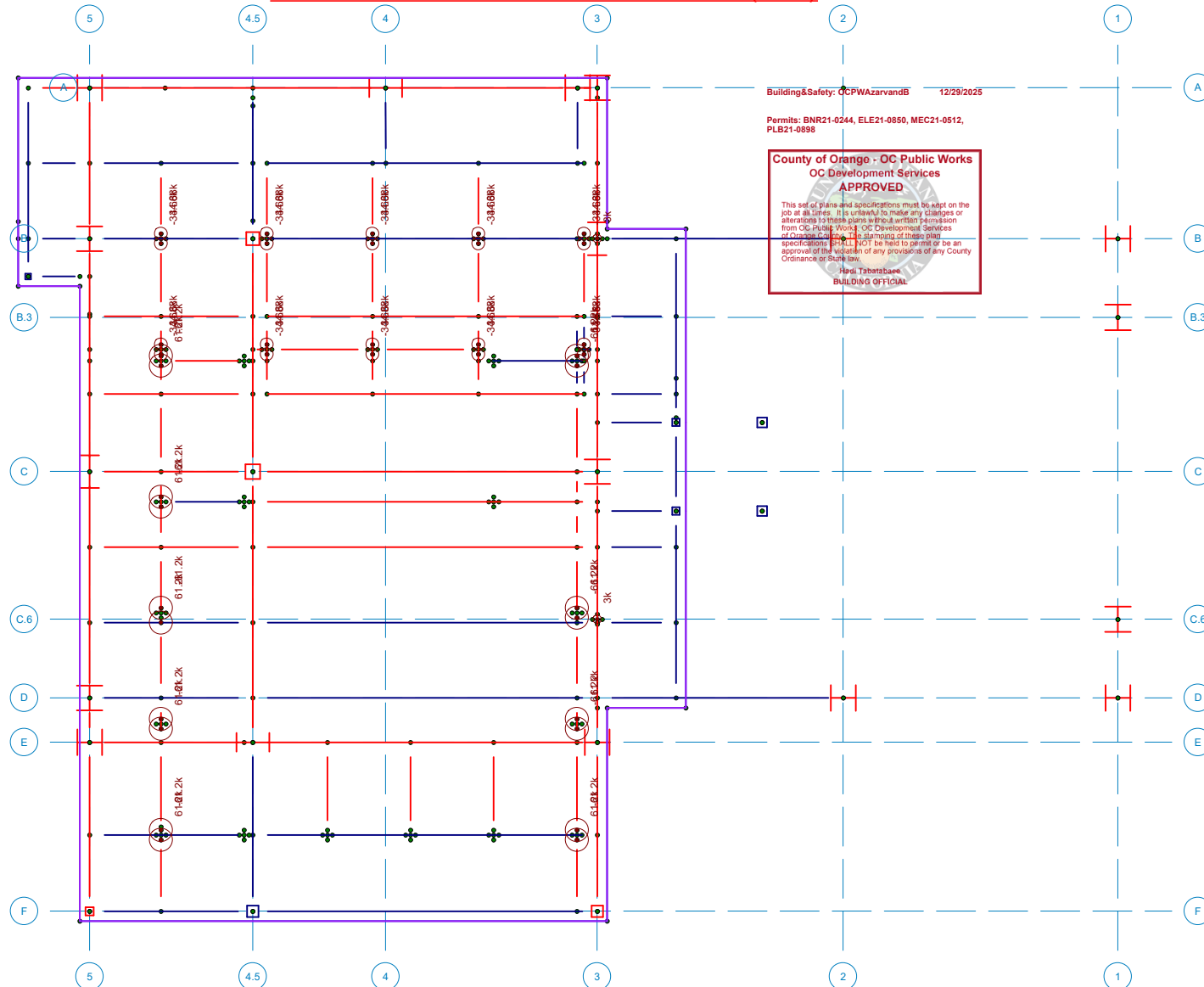
KPFF
AS
1900799

Exterior Roof Deck
 Dana Point Harbor_Bld'g. 10

SK - 5
Oct 17, 2022 at 10:29 AM
2021-05-25_Bldg 10 (Exterior Roof Deck & Slop...



Exterior Roof Deck_Line & Point Loads (OL1)



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Jared Tibertobee
 BUILDING OFFICIAL

Loads: OL1 - Other Load 1
 Results for LC 1, Service Dead

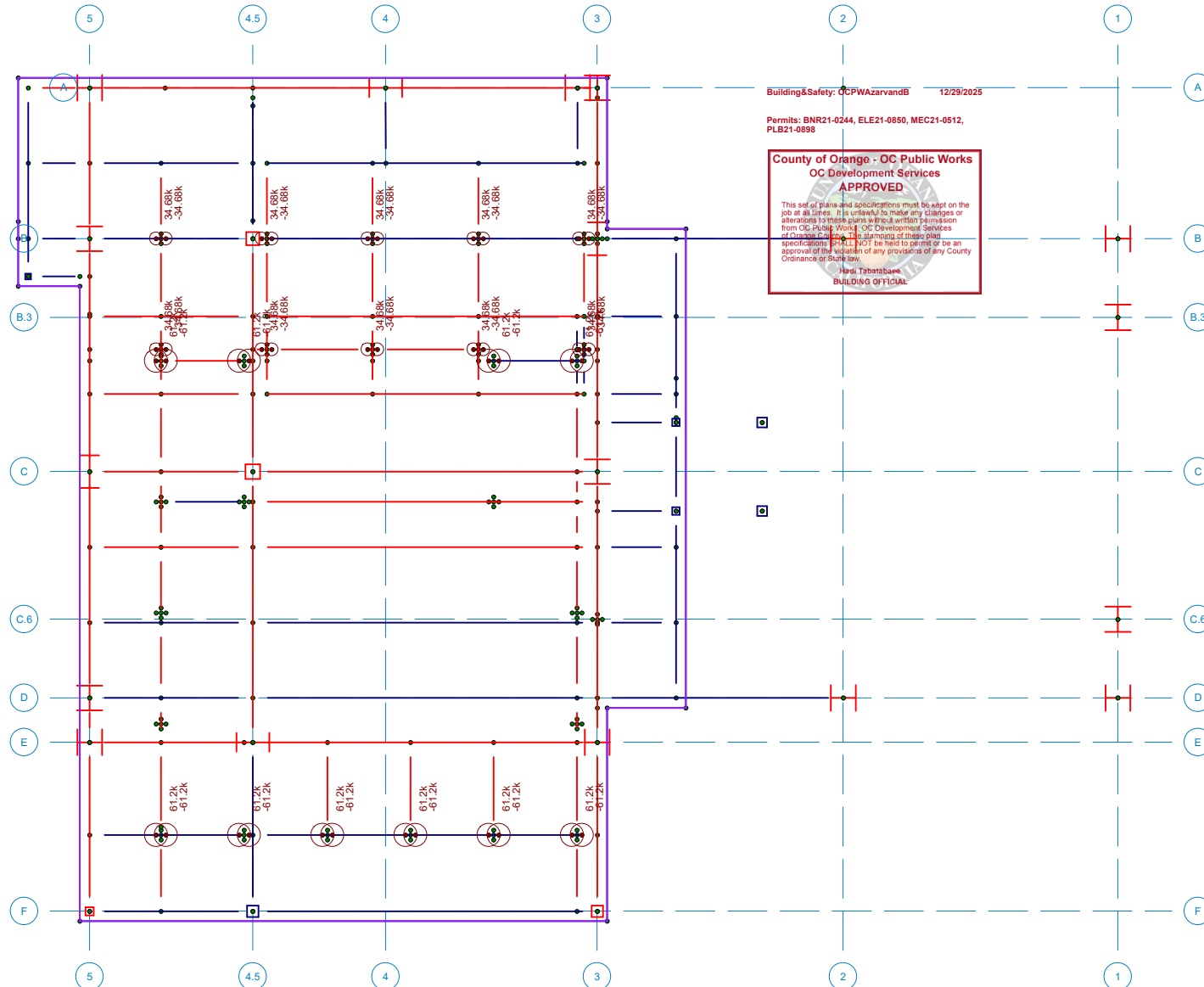
KPFF
AS
1900799

Exterior Roof Deck
 Dana Point Harbor_Bld'g. 10

SK - 6
Oct 17, 2022 at 10:29 AM
2021-05-25_Bldg 10 (Exterior Roof Deck & Slop...



Exterior Roof Deck Line & Point Loads (OL2)



Loads: OL2 - Other Load 2
Results for LC 1, Service Dead

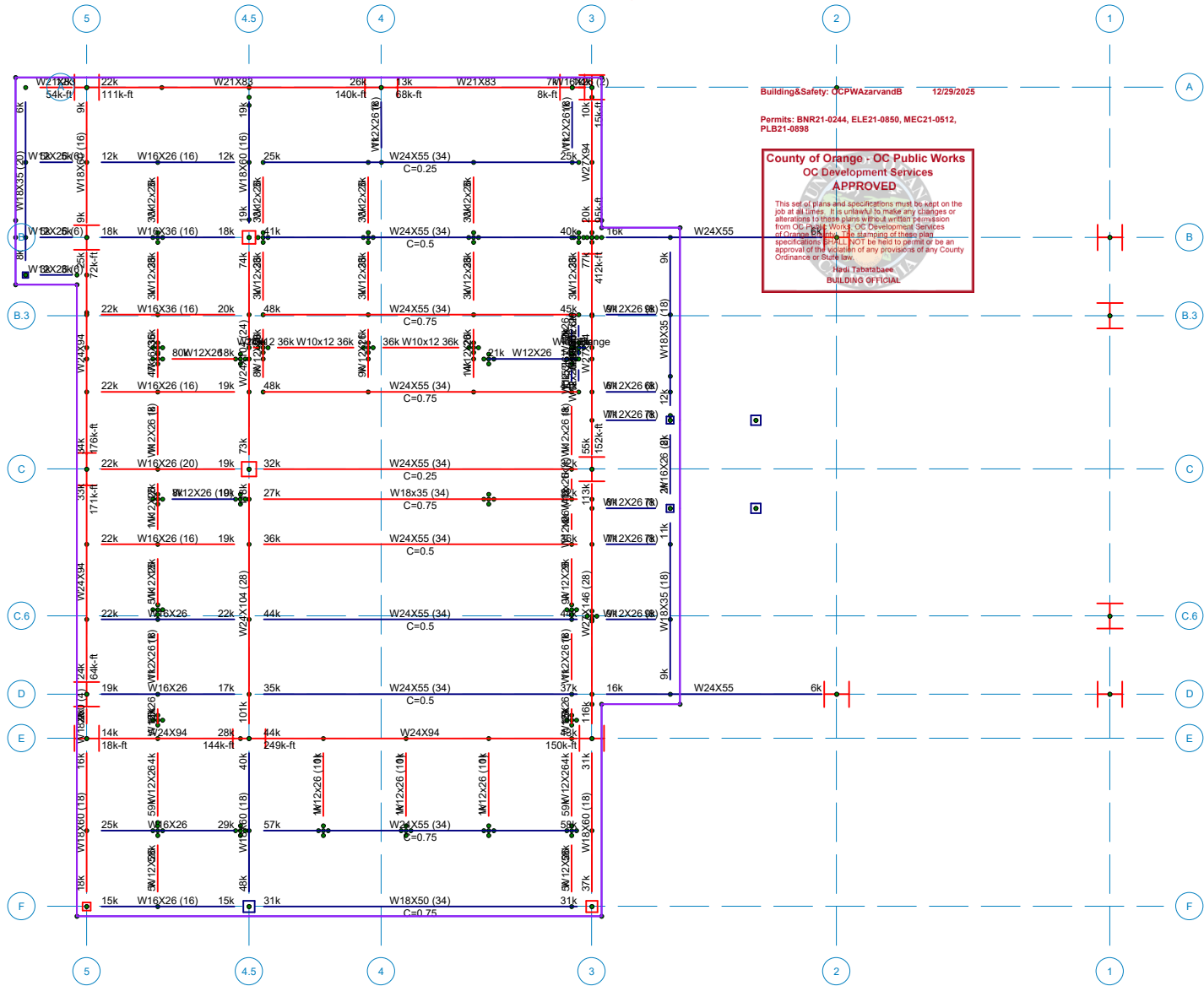
KPFF
AS
1900799

Exterior Roof Deck
Dana Point Harbor_Bld'g. 10

SK - 7
Oct 17, 2022 at 10:29 AM
2021-05-25_Bldg 10 (Exterior Roof Deck & Slop...



Exterior Roof Deck Design Results



Building&Safety: OCPWAzarvandB 12/29/2025

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0898

**County of Orange - OC Public Works
OC Development Services
APPROVED**
This set of plans and specifications must be kept on the job at all times. It is unlawful to make any changes or alterations to these plans without written permission from OC Public Works - OC Development Services of Orange County. The planning of these plans, specifications and their use shall be held to permit or be an approval of the violation of any provisions of any County Ordinance or State Law.
 Jedd Tibbets
BUILDING OFFICIAL

Member Camber and Reactions

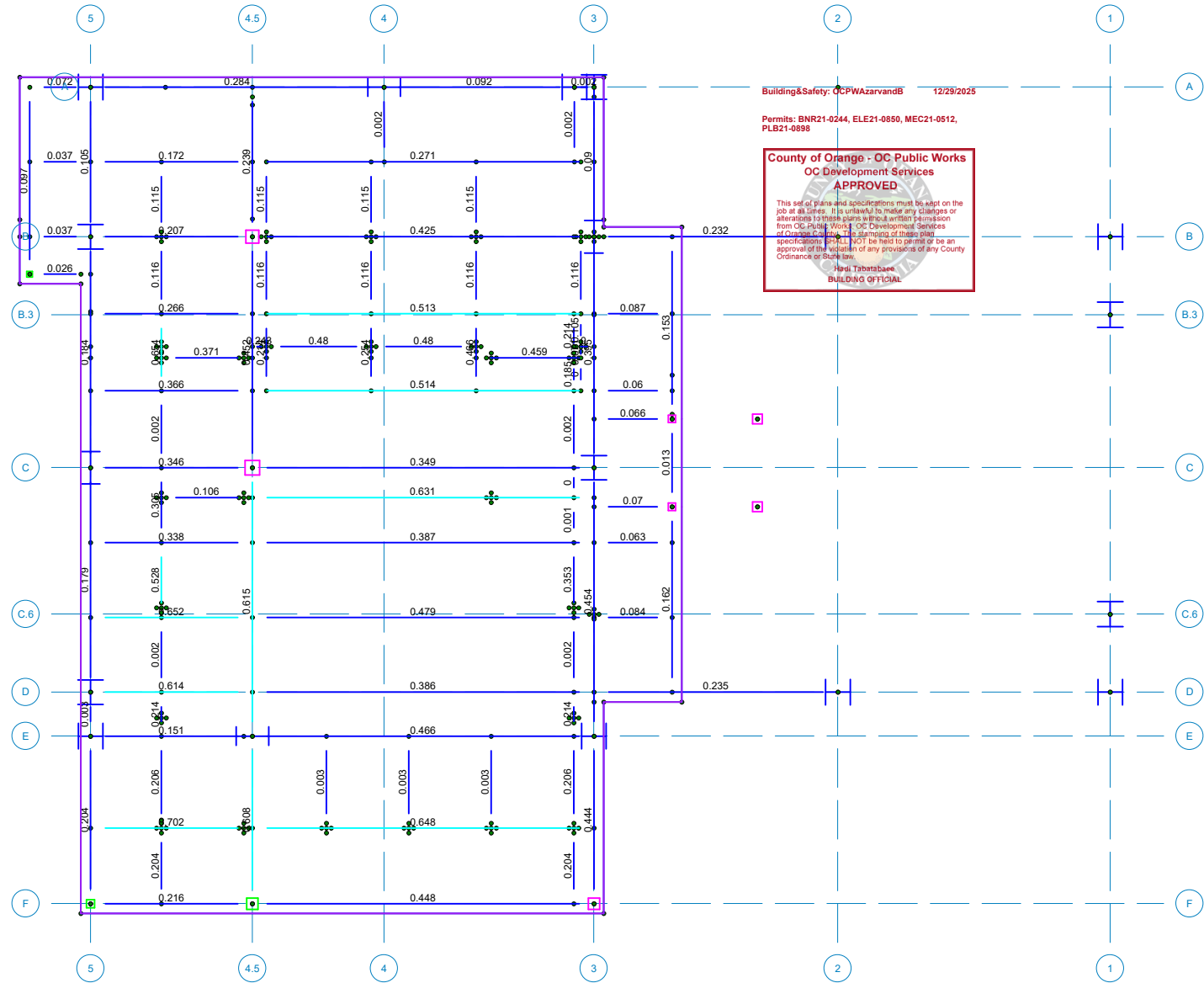
KPFF AS 1900799	Exterior Roof Deck Dana Point Harbor_Bld'g. 10	SK - 8 Oct 17, 2022 at 10:31 AM 2021-05-25_Bldg 10 (Exterior Roof Deck & Slop...
-----------------------	--	--



Exterior Roof Deck_Bending Check

Code Check

- █ No Calc
- █ > 1.0
- █ .50-1.0
- █ .75-.90
- █ .50-.75
- █ 0-.50



Member Bending Check

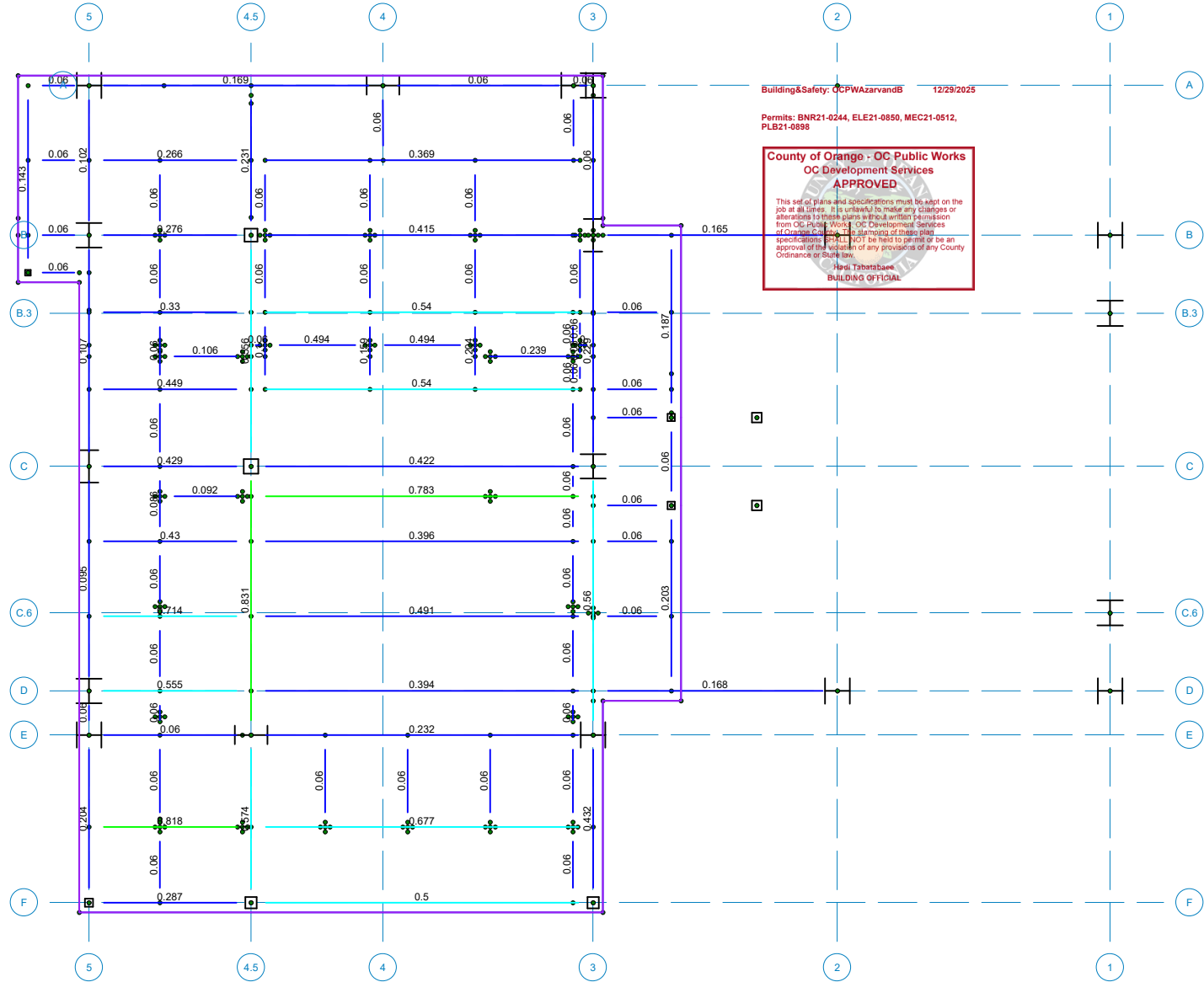
KPFF
AS
1900799

Exterior Roof Deck
Dana Point Harbor_Bld'g. 10

SK - 9
Oct 17, 2022 at 1:18 PM
2021-05-25_Bldg 10 (Exterior Roof Deck & Slop...



Exterior Roof Deck Deflection Check



Member Deflection Check

KPFF
AS
1900799

Exterior Roof Deck
 Dana Point Harbor_Bld'g. 10

SK - 10
Oct 17, 2022 at 1:19 PM
2021-05-25_Bldg 10 (Exterior Roof Deck & Slop...



Company : KPFF
 Designer : AS
 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

Oct 17, 2022
 1:30 PM
 Checked By: _____

Project Grid Lines

Building&Safety: OCPW&Zarv&B 12/29/2025

Label	Start Z [ft]	End Z [ft]	Start X [ft]	End X [ft]	Start Bubble	End Bubble
1	5	0	-4	88	Yes	Yes
2	4.5	16.583	-4	88	Yes	Yes
3	4	30.083	-4	88	Yes	Yes
4	3	51.583	-4	88	Yes	Yes
5	2	76.583	-4	88	Yes	Yes
6	1	104.5	-4	88	Yes	Yes
7	F	-4	110	0	Yes	Yes
8	E	-4	110	17.167	Yes	Yes
9	D	-4	110	21.667	Yes	Yes
10	C.6	-4	110	29.667	Yes	Yes
11	C	-4	110	44.667	Yes	Yes
12	B.3	-4	110	60.333	Yes	Yes
13	B	-4	110	68.333	Yes	Yes
14	A	0	110	83.667	Yes	Yes

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0898

County of Orange - OC Public Works
 OC Development Services
 APPROVED

This set of plans and specifications must be kept on the job at all times. It is the responsibility of the contractor to arrange to have these plans and specifications on the job at all times. If any changes or amendments to these plans and specifications are made, the contractor must obtain the approval of the County of Orange. The contractor must also obtain the approval of the City of Orange. The contractor must also obtain the approval of the State of California. The contractor must also obtain the approval of the Federal Government. The contractor must also obtain the approval of the County of Orange. The contractor must also obtain the approval of the City of Orange. The contractor must also obtain the approval of the State of California. The contractor must also obtain the approval of the Federal Government.

Hot Rolled Steel Properties

Label	E [ksi]	G [ksi]	Nu	Therm (/1E...Density[k/ft...	Yield[ksi]	Ry	Fu[ksi]	Rt		
1	A992	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	0.3	0.65	0.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	0.3	0.65	0.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	0.3	0.65	0.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	0.3	0.65	0.49	35	1.6	60	1.2
7	A1085	29000	11154	0.3	0.65	0.49	50	1.25	65	1.15
8	A913 Gr.65	29000	11154	0.3	0.65	0.49	65	1.1	80	1.1

General Material Properties

Label	E [ksi]	G [ksi]	Nu	Therm (/1E5 F)	Density[k/ft^3]	
1	gen_Conc3NW	3155	1372	0.15	0.6	0.145
2	gen_Conc4NW	3644	1584	0.15	0.6	0.145
3	gen_Conc3LW	2085	906	0.15	0.6	0.11
4	gen_Conc4LW	2408	1047	0.15	0.6	0.11
5	gen_Alum	10100	4077	0.3	1.29	0.173
6	gen_Steel	29000	11154	0.3	0.65	0.49
7	gen_Plywood	1800	38	0	0.3	0.035
8	RIGID	1e+6		0.3	0	0

Deck General Properties

Label	Material Type	Deck	Unbraced[ft]	Max Spa...	
1	Concrete Deck	Conc3000NW	6 in	3	10
2	Composite Deck	Verco PLW3-W3 Formlok	6.25"LW 16ga W3 Formlok, Conc3000LW, 1.5in, ...	2	10
3	Metal Deck	Verco Steel Roof Deck	16ga PLB-36	2	9.5
4	Wood	Wood Deck	1 in	1	4

Deck Loads

Label	Two Way	Self Wt [ksf]	Super DL [ksf]	Const DL [ksf]	Const LL [ksf]
1	Concrete Deck	0.072	0	0	0.02
2	Composite Deck	0.047	0	0	0.02
3	Metal Deck	0.003	0	0	0.02
4	Wood	0.003	0	0	0.02



Company : KPFF
 Designer : AS
 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

Oct 17, 2022
 1:30 PM
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Design Size/U.C. Parameters

Building&Safety: OCPWAZarvandB 12/29/2025

	Label	Max Depth[in]	Min Depth[in]	Max Width[in]	Min Width[in]	Max Bending Chk	Max Shear Chk
1	Typical					1	1
2	R2					1	1

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0889

County of Orange - OC Public Works
 OC Development Services
APPROVED

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Design Deflection Parameters

	Label	DL Defl[in] ... DL Ratio	LL Defl[in] ... LL Ratio	DL+LL ...	DL+LL ...	Category	Defl[in]	Ratio	Category	Defl[in]	Ratio
1	Typical	240	600		360	None	360	None	360	None	
2	R2	240	360		360	None	360	None	360	None	

Design Camber Parameters

	Label	Min Camber[in]	Max Camber[in]	Increment[in]	% DL	DL Included	Min Beam Length[ft]
1	Typical	0	0.75	0.25	75	Total DL	30
2	R2	0	3	0.25	75	SW + SuperDL	30

Uniform Area Loads

	Label	Additive	PreDL[...]	PostDL[ksf]	LL[ksf]	LL Type	VL[ksf]	Dyn Load[ksf]
1	Exterior Roof De..		0.007	0.076	0.1	LL-Non	0.011	0.157
2	Floor in Bld'g		0.005	0.03	0.1	LL-Non	0.011	0.114
3	Flat Roof		0.005	0.025	0.05	LL-Non	0.011	0.107
4	Private Dining R..	Yes				RLL-Non		0.057
5	Sloped Roof			0.027	0.02	RLL-Non	0.011	0.07

Point Locations : Exterior Roof Deck

	Label	Z [ft]	X [ft]	Elev Offset [ft]
1	N1	0	83.667	0
2	N2	30.083	83.667	0
3	N3	49.583	83.667	0
4	N4	0	17.1667	0
5	N5	16.5833	17.1667	0
6	N6	51.583	17.1667	0
7	N7	0	21.667	0
8	N8	0	44.667	0
9	N9	0	68.333	0
10	N10	51.583	44.667	0
11	N11	51.583	68.333	0
12	N12	51.583	83.667	0
13	N13	16.5833	68.333	0
14	N14	16.5833	44.667	0
15	N15	0	0	0
16	N16	16.5833	0	0
17	N17	51.583	0	0
18	N18	-6.25	83.667	0
19	N19	-6.25	64.4997	0
20	N20	16.5833	83.667	0
21	N21	16.5833	21.667	0
22	N22	51.583	21.667	0
23	N23	16.5833	82.667	0
24	N24	51.583	82.667	0
25	N25	16.5833	76	0
26	N26	51.583	76	0
27	N27	0	60.666	0
28	N28	7.667	83.667	0
29	N29	0	76	0
30	N30	16.5833	60.444	0
31	N31	51.583	60.444	0
32	N32	0	52.556	0



Company : KPFF
 Designer : AS
 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

Oct 17, 2022
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 Checked By: _____

Point Locations : Exterior Roof Deck (Continued)

Building&Safety: OCPWArzarvndB 12/29/2025

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB14888

	Label	Z [ft]	X [ft]	Elev Offset [ft]
33	N33	16.5833	52.556	0
34	N34	51.583	52.556	0
35	N35	0	37	0
36	N36	16.5833	37	0
37	N37	51.583	37	0
38	N38	0	29.334	0
39	N39	16.5833	29.334	0
40	N40	51.583	29.334	0
41	N41	0	7.75	0
42	N42	16.5833	7.75	0
43	N43	51.583	7.75	0
44	N44	16.5833	70.168	0
45	N45	16.5833	81.832	0
46	N46	30.0833	76	0
47	N47	49.583	76	0
48	N48	-6.25	76	0
49	N49	-6.25	68.333	0
50	N50	0	64.4997	0
51	N51	76.583	83.667	0
52	N52	76.583	21.667	0
53	N53	76.583	68.333	0
54	N54	59.583	49.667	0
55	N55	59.583	40.667	0
56	N56	59.583	68.333	0
57	N57	59.583	21.667	0
58	N58	51.583	49.667	0
59	N59	51.583	40.667	0
60	N60	59.583	60.444	0
61	N61	59.583	52.556	0
62	N62	59.583	37	0
63	N63	59.583	29.334	0
64	N64	0	60.444	0
65	N65	104.49967	68.333	0
66	N66	104.49967	21.667	0
67	N67	104.49967	60.333	0
68	N68	104.49967	29.667	0
69	N69	51.583	29.667	0
70	N70	51.583	60.333	0
71	N71	-7.25	84.667	0
72	N72	52.583	84.667	0
73	N73	-7.25	68.333	0
74	N74	52.583	69.333	0
75	N75	60.583	69.333	0
76	N76	60.583	20.667	0
77	N77	51.583	20.667	0
78	N78	-7.25	70.083	0
79	N79	52.583	70.083	0
80	N80	-1	63.4997	0
81	N81	-1	-1	0
82	N82	52.583	-1	0
83	N83	52.583	20.667	0
84	N84	59.583	54.167	0
85	N85	59.583	50.167	0
86	N86	-1	64.4997	0
87	N87	68.333	49.667	0
88	N88	68.333	40.667	0
89	N89	7.25	19.03125	0





Company : KPFF
 Designer : AS
 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

D15/67

Oct 17, 2022
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Point Locations : Exterior Roof Deck (Continued)

Building&Safety: OCPW&ZarvandB 12/29/2025

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB148888

	Label	Z [ft]	X [ft]	Elev Offset [ft]	
147	N147	15.203125	7.75	0	
148	N148	15.203125	41.593795	0	
149	N149	15.203125	55.92375	0	
150	N150	23.65625	7.75	0	
151	N151	32.109375	7.75	0	
152	N152	40.5625	7.75	0	
153	N153	40.5625	55.923772	0	
154	N154	40.5625	41.593938	0	
155	N155	49.015625	7.75	0	
156	N156	49.015625	19.03125	0	
157	N157	49.015625	30.3125	0	
158	N158	49.015625	55.923947	0	
159	N159	6.75	57.089753	0	
160	N160	6.75	68.333	0	
161	N161	17.5	57.08975	0	
162	N162	17.5	68.333	0	
163	N163	28.25	57.08975	0	
164	N164	28.25	68.333	0	
165	N165	39	57.08975	0	
166	N166	39	68.333	0	
167	N167	49.75	57.09	0	
168	N168	49.75	68.333	0	
169	N169	7.25	8.25	0	
170	N170	7.25	19.53125	0	
171	N171	7.25	30.8125	0	
172	N172	7.25	42.09375	0	
173	N173	7.25	56.42375	0	
174	N174	15.703125	8.25	0	
175	N175	15.703125	42.09375	0	
176	N176	15.703125	56.42375	0	
177	N177	24.15625	8.25	0	
178	N178	32.609375	8.25	0	
179	N179	41.0625	8.25	0	
180	N180	41.0625	56.42375	0	
181	N181	41.0625	42.09375	0	
182	N182	49.515628	8.25	0	
183	N183	49.515698	19.53125	0	
184	N184	49.515768	30.8125	0	
185	N185	49.515666	56.42375	0	
186	N186	7.25	57.58975	0	
187	N187	7.25	68.83	0	
188	N188	18	57.58975	0	
189	N189	18	68.83	0	
190	N190	28.75	57.58975	0	
191	N191	28.75	68.83	0	
192	N192	39.5	57.58975	0	
193	N193	39.5	68.83	0	
194	N194	50.25	57.58975	0	
195	N195	50.25	68.833	0	
196	N196	7.25	7.25	0	
197	N197	7.25	18.53125	0	
198	N198	7.25	29.8125	0	
199	N199	7.25	41.09375	0	
200	N200	7.25	55.42375	0	
201	N201	15.703125	7.25	0	
202	N202	15.703125	41.09375	0	
203	N203	15.703125	55.42375	0	



Company : KPFF
 Designer : AS
 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

D16/67

Oct 17, 2022
 1:30 PM
 Checked By: _____

Point Locations : Exterior Roof Deck (Continued)

Building&Safety: OCPWArzarvandB 12/29/2025

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB14888

	Label	Z [ft]	X [ft]	Elev Offset [ft]
204	N204	24.15625	7.25	0
205	N205	32.609375	7.25	0
206	N206	41.0625	7.25	0
207	N207	41.0625	55.42375	0
208	N208	41.0625	41.09375	0
209	N209	49.515649	7.25	0
210	N210	49.515691	18.53125	0
211	N211	49.515762	29.8125	0
212	N212	49.515666	55.42375	0
213	N213	7.25	56.58975	0
214	N214	7.25	67.83	0
215	N215	18	56.58975	0
216	N216	18	67.83	0
217	N217	28.75	56.58975	0
218	N218	28.75	67.83	0
219	N219	39.5	56.58975	0
220	N220	39.5	67.83	0
221	N221	50.25	56.58975	0
222	N222	50.25	67.833	0
223	N223	7.25	76	0
224	N224	18	76	0
225	N225	28.75	76	0
226	N226	39.5	76	0
227	N227	50.25	76	0
228	N228	7.25	60.444	0
229	N229	18	60.444	0
230	N230	28.75	60.444	0
231	N231	39.5	60.444	0
232	N232	50.25	60.444	0
233	N233	7.25	52.556	0
234	N234	18	52.556	0
235	N235	28.75	52.556	0
236	N236	39.5	52.556	0
237	N237	50.25	52.556	0
238	N238	7.25	17.1667	0
239	N239	7.25	21.667	0
240	N240	7.25	44.667	0
241	N241	7.25	37	0
242	N242	7.25	29.334	0
243	N243	49.516	60.444	0
244	N244	49.516	68.333	0
245	N245	49.515683	17.1667	0
246	N246	49.515711	21.667	0
247	N247	49.515854	44.667	0
248	N248	49.515902	52.556	0
249	N249	49.515806	37	0
250	N250	49.515759	29.334	0
251	N251	16.5833	57.08975	0
252	N252	16.5833	55.92375	0
253	N253	18	55.92375	0
254	N254	28.75	55.92375	0
255	N255	39.5	55.92375	0
256	N256	51.583	55.924	0
257	N257	51.583	41.594	0
258	N258	16.5833	41.593803	0
259	N259	49.515834	41.593988	0
260	N260	52.083	29.667	0





Company : KPFF
 Designer : AS
 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

Oct 17, 2022
 1:30 PM
 Checked By: _____

Point Locations : Exterior Roof Deck (Continued)

Building&Safety: OCPW&ZarvandB 12/29/2025

	Label	Z [ft]	X [ft]	Elev Offset [ft]
261	N261	51.083	29.667	0
262	N262	51.583	30.167	0
263	N263	51.583	29.167	0
264	N264	52.083	68.333	0
265	N265	51.083	68.333	0
266	N266	51.583	68.833	0
267	N267	51.583	67.833	0
268	N268	7.25	0	0
269	N269	49.516	0	0
270	N270	0	55.92375	0
271	N271	-7.25	63.4997	0
272	N272	50.25	55.923972	0
273	N273	49.515722	57.09	0
274	N274	51.583	57.09	0
275	N275	49.515719	57.053968	0
276	N276	50.25	57.066766	0
277	N277	7.25	7.75	0
278	N279	0	57.0898	0
279	N280	7.25	8.583	0
280	N282	15.703125	17.1667	0
281	N283	24.15625	17.1667	0
282	N284	32.609375	17.1667	0
283	N285	41.0625	17.1667	0
284	N286	52.583	68.333	0

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB1-18888

County of Orange - OC Public Works
 OC Development Services
APPROVED

These plans and specifications must be kept on the job site. It is unlawful to make any changes or additions to these plans without the written permission of the County of Orange Public Works, OC Development Services. The stamping of these plans indicates that the plans have been reviewed and approved by the County of Orange Public Works, OC Development Services. Any violation of any provisions of any County Ordinance or State law.

April 13, 2022
 BUILDING OFFICIAL

Point Locations : Sloped Roof

	Label	Z [ft]	X [ft]	Elev Offset [ft]
1	N1	104.49967	68.333	0
2	N2	104.49967	21.667	0
3	N3	76.583	21.667	7.561457
4	N4	76.583	68.333	7.561457
5	N5	104.49967	60.333	0
6	N6	104.49967	29.667	0
7	N7	51.583	68.333	14.332911
8	N8	51.583	21.667	14.332911
9	N9	51.583	29.667	14.332911
10	N10	51.583	60.333	14.332911
11	N11	51.583	36.667	14.332911
12	N12	104.49967	36.667	0
13	N13	51.583	53.833	14.332911
14	N14	104.49967	53.833	0
15	N15	51.583	45.25	14.332911
16	N16	104.49967	45.25	0
17	N17	76.583	60.444	0
18	N18	76.583	60.333	7.561457
19	N19	76.583	29.667	7.561457
20	N20	59.583	49.667	12.166046
21	N21	68.333	49.667	9.796037
22	N22	68.333	40.667	9.796037
23	N23	59.583	40.667	12.166046
24	N24	59.583	68.333	12.166046
25	N25	68.333	68.333	9.796037
26	N26	59.583	21.667	12.166046
27	N27	68.333	21.667	9.796037
28	N28	104.49967	49.667	0
29	N29	68.333	60.333	9.796037



Company : KPFF
 Designer : AS
 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

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Point Locations : Sloped Roof (Continued)

Building&Safety: OCPW&ZarvandB 12/29/2025

	Label	Z [ft]	X [ft]	Elev Offset [ft]
30	N30	68.333	29.667	9.796037
31	N31	76.583	49.667	0
32	N32	68.333	37.3335	9.796037
33	N33	104.49967	37.3335	0
34	N34	68.333	45	9.796037
35	N35	104.49967	45	0
36	N36	68.333	52.6665	9.796037
37	N37	104.49967	52.6665	0
38	N38	59.583	60.333	12.166046
39	N39	59.583	29.667	12.166046
40	N40	51.583	37.3335	14.332911
41	N41	59.583	37.3335	12.166046
42	N42	51.583	45	14.332911
43	N43	59.583	45	12.166046
44	N44	51.583	52.6665	14.332911
45	N45	59.583	52.6665	12.166046
46	N46	51.583	49.667	14.332911
47	N47	51.583	40.667	14.332911

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB1-18888

Orange - OC Public Works Development Services

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and specifications must be kept on the project site. It is unlawful to make any changes or additions to these plans without written permission of the Public Works, OC Development Services, Orange County. The stamping of these plans by the Public Works Development Services is an acknowledgment of the review of the plans and not a guarantee of any provisions of any County Ordinance.

10/17/2022

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Public Works Development Services

BUILDING OFFICIAL

Columns : Exterior Roof Deck

	Label	Point	Shape	Material	Function	Angle (d...	Orient	Point Desi...	Splice Dist...	Splice Type	Splic...	Parap...	Top F...	Hang...
1	(A-5)_L1	N1	Wide Flange	A992	Lateral	90		Typi...	Yes	Defa..	Default (M...	None	Defa...	Fixed
2	(A-4)_L1	N2	Wide Flange	A992	Lateral	90		Typi...	Yes	Defa..	Default (M...	None	Defa...	Fixed
3	CS3_L1	N3	Wide Flange	A992	Lateral	90		Typi...	Yes	Defa..	Default (M...	None	Defa...	Fixed
4	(E-5)_L1	N4	Wide Flange	A992	Lateral	90		Typi...	Yes	Defa..	Default (M...	None	Defa...	Fixed
5	(E-4.5)_L1	N5	Wide Flange	A992	Lateral	90		Typi...	Yes	Defa..	Default (M...	None	NA	Fixed
6	(E-3)_L1	N6	Wide Flange	A992	Lateral	90		Typi...	Yes	Defa..	Default (M...	None	Defa...	Fixed
7	(D-5)_L1	N7	Wide Flange	A992	Lateral			Typi...	Yes	Defa..	Default (M...	None	Defa...	Fixed
8	(C-5)_L1	N8	Wide Flange	A992	Lateral			Typi...	Yes	Defa..	Default (M...	None	Defa...	Fixed
9	(B-5)_L1	N9	Wide Flange	A992	Lateral			Typi...	Yes	Defa..	Default (M...	None	NA	Fixed
10	(C-3)_L1	N10	Wide Flange	A992	Lateral			Typi...	Yes	Defa..	Default (M...	None	NA	Fixed
11	(B-3)_L1	N11	Wide Flange	A992	Lateral			Typi...	Yes	Defa..	Default (M...	None	NA	NA
12	(A-3)_L1	N12	Wide Flange	A992	Lateral			Typi...	Yes	Defa..	Default (M...	None	Defa...	Fixed
13	(B-4.5)_L1	N13	Tube	A500 Gr...	Lateral			Typi...	Yes	Defa..	Shear	None	NA	Fixed
14	(C-4.5)_L1	N14	Tube	A500 Gr...	Lateral			Typi...	Yes	Defa..	Shear	None	NA	Fixed
15	(4.7-5)_L1	N15	Tube	A500 Gr...	Lateral			Typi...	Yes	19	Shear	None	Defa...	Fixed
16	(4.7-4.5)_L1	N16	SquareTube	A500 Gr...	Gravity			Typi...	Yes	Defa..	Default (M...	None	Defa...	Fixed
17	(4.7-3)_L1	N17	Tube	A500 Gr...	Lateral			Typi...	Yes	19	Shear	None	Defa...	Fixed
18	CS19_L1	N19	SquareTube	A500 Gr...	Gravity			Typi...	Yes	Defa..	Default (M...	None	Defa...	Fixed
19	(D-2)_L1	N52	Wide Flange	A992	Lateral	90		Typi...	Yes	Defa..	Default (M...	None	NA	NA
20	(B-2)_L1	N53	Wide Flange	A992	Lateral	90		Typi...	Yes	Defa..	Default (M...	None	NA	NA
21	CS22_L1	N54	SquareTube	A500 Gr...	Gravity			Typi...	Yes	Defa..	Default (M...	None	NA	NA
22	CS23_L1	N55	SquareTube	A500 Gr...	Gravity			Typi...	Yes	Defa..	Default (M...	None	NA	NA
23	(B-1)_L1	N65	Wide Flange	A992	Lateral	90		Typi...	Yes	Defa..	Default (M...	None	NA	NA
24	(D-1)_L1	N66	Wide Flange	A992	Lateral	90		Typi...	Yes	Defa..	Default (M...	None	NA	NA
25	CS26_L1	N67	Wide Flange	A992	Lateral			Typi...	Yes	Defa..	Default (M...	None	NA	NA
26	CS27_L1	N68	Wide Flange	A992	Lateral			Typi...	Yes	Defa..	Default (M...	None	NA	NA
27	CS28_L1	N87	SquareTube	A500 Gr...	Gravity			Typi...	Yes	19	Default (M...	None	NA	NA
28	CS29_L1	N88	SquareTube	A500 Gr...	Gravity			Typi...	Yes	19	Default (M...	None	NA	NA

Columns : Sloped Roof

	Label	Point	Shape	Material	Function	Angle (d...	Orient	Point Desi...	Splice Dist...	Splice Type	Splic...	Parap...	Top F...	Hang...
1	(B-1)_L1	N1	Wide Flange	A992	Lateral	90		Typi...				Defa...	Fixed	
2	(D-1)_L1	N2	Wide Flange	A992	Lateral	90		Typi...				Defa...	Fixed	
3	(D-2)_L1	N3	Wide Flange	A992	Lateral	90		Typi...				Defa...	Fixed	
4	(B-2)_L1	N4	Wide Flange	A992	Lateral	90		Typi...				Defa...	Fixed	



Company : KPFF
 Designer : AS
 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

Oct 17, 2022
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Column Design Parameters : Sloped Roof (Continued)

Building&Safety: OCPW&Zarv&B 12/29/2025

Label	Lbyy[ft]	Lbzz[ft]	Lcomp Top[ft]	Lcomp Bot[ft]	L-torqu...	Kyy	Kzz	Cb	a[ft]	Channe...
13	CS29_L1									N/A
14	CS23_L1									N/A

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLE21-0598

City of Orange Public Works
 OC Development Services
 APPROVAL

This set of plans and specifications must be kept on the job at all times. It is unlawful to make any changes or alterations to these plans without written permission from OC Public Works, OC Development Services of Orange County. The stamping of these plans constitutes an approval of the validity of any provisions of any County Ordinance or the law.

Column Stacks

Stack	Label	Project	Z [ft]	X [ft]	Lift No.	Length	Bot El.	Top El.	Shape	Material	Function	Design R...	Flexural L...	Shear La...
1	(A-5)	A-5	0	83.667	1	19	0	19	Wide Flan...	A992	Lateral	Typical	N/A	N/A
2	(A-4)	A-4	30.083	83.667	1	19	0	19	Wide Flan...	A992	Lateral	Typical	N/A	N/A
3	CS3	-	49.583	83.667	1	19	0	19	Wide Flan...	A992	Lateral	Typical	N/A	N/A
4	(E-5)	E-5	0	17.167	1	19	0	19	Wide Flan...	A992	Lateral	Typical	N/A	N/A
5	(E-4.5)	E-4.5	16.583	17.167	1	19	0	19	Wide Flan...	A992	Lateral	Typical	N/A	N/A
6	(E-3)	E-3	51.583	17.167	1	19	0	19	Wide Flan...	A992	Lateral	Typical	N/A	N/A
7	(D-5)	D-5	0	21.667	1	19	0	19	Wide Flan...	A992	Lateral	Typical	N/A	N/A
8	(C-5)	C-5	0	44.667	1	19	0	19	Wide Flan...	A992	Lateral	Typical	N/A	N/A
9	(B-5)	B-5	0	68.333	1	19	0	19	Wide Flan...	A992	Lateral	Typical	N/A	N/A
10	(C-3)	C-3	51.583	44.667	1	19	0	19	Wide Flan...	A992	Lateral	Typical	N/A	N/A
11	(B-3)	B-3	51.583	68.333	1	35.283	0	35.283	Wide Flan...	A992	Lateral	Typical	N/A	N/A
12	(A-3)	A-3	51.583	83.667	1	19	0	19	Wide Flan...	A992	Lateral	Typical	N/A	N/A
13	(B-4.5)	B-4.5	16.583	68.333	1	19	0	19	Tube	A500 ...	Lateral	Typical	N/A	N/A
14	(C-4.5)	C-4.5	16.583	44.667	1	19	0	19	Tube	A500 ...	Lateral	Typical	N/A	N/A
15	(4.7-5)	F-5	0	0	1	19	0	19	Tube	A500 ...	Lateral	Typical	N/A	N/A
16	(4.7-4.5)	F-4.5	16.583	0	1	19	0	19	SquareTu...	A500 ...	Gravity	Typical	N/A	N/A
17	(4.7-3)	F-3	51.583	0	1	19	0	19	Tube	A500 ...	Lateral	Typical	N/A	N/A
18	CS19	-	-6.25	64.5	1	19	0	19	SquareTu...	A500 ...	Gravity	Typical	N/A	N/A
19	(D-2)	D-2	76.583	21.667	1	28.511	0	28.511	Wide Flan...	A992	Lateral	Typical	N/A	N/A
20	(B-2)	B-2	76.583	68.333	1	28.511	0	28.511	Wide Flan...	A992	Lateral	Typical	N/A	N/A
21	CS22	-	59.583	49.667	1	33.116	0	33.116	SquareTu...	A500 ...	Gravity	Typical	N/A	N/A
22	CS23	-	59.583	40.667	1	33.116	0	33.116	SquareTu...	A500 ...	Gravity	Typical	N/A	N/A
23	(B-1)	B-1	104.5	68.333	1	20.95	0	20.95	Wide Flan...	A992	Lateral	Typical	N/A	N/A
24	(D-1)	D-1	104.5	21.667	1	20.95	0	20.95	Wide Flan...	A992	Lateral	Typical	N/A	N/A
25	CS26	B.3-1	104.5	60.333	1	20.95	0	20.95	Wide Flan...	A992	Lateral	Typical	N/A	N/A
26	CS27	C.6-1	104.5	29.667	1	20.95	0	20.95	Wide Flan...	A992	Lateral	Typical	N/A	N/A
27	CS28	-	68.333	49.667	1	30.746	0	30.746	SquareTu...	A500 ...	Gravity	Typical	N/A	N/A
28	CS29	-	68.333	40.667	1	30.746	0	30.746	SquareTu...	A500 ...	Gravity	Typical	N/A	N/A
29	(D-3)	D-3	51.583	21.667	1	16.283	19	35.283	Tube	A500 ...	Lateral	Typical	N/A	N/A
30	CS29_1	C.6-3	51.583	29.667	1	16.283	19	35.283	Tube	A500 ...	Lateral	Typical	N/A	N/A
31	CS30	B.3-3	51.583	60.333	1	16.283	19	35.283	Tube	A500 ...	Lateral	Typical	N/A	N/A

Beam Primary Data : Exterior Roof Deck

Label	Start Point	End Point	Shape	Material	Design Rules	Function	Orientation	Start Rel...	End Rel...	Outrigger?
1	M1	N1	N2	Wide Flange	A992	Typical	Lateral	Strong Axis	Fixed	Fixed
2	M2	N2	N3	Wide Flange	A992	Typical	Lateral	Strong Axis	Fixed	Fixed
3	M3	N4	N5	Wide Flange	A992	Typical	Lateral	Strong Axis	Fixed	Fixed
4	M4	N5	N6	Wide Flange	A992	Typical	Lateral	Strong Axis	Fixed	Fixed
5	M5	N9	N8	Wide Flange	A992	Typical	Lateral	Strong Axis	Fixed	Fixed
6	M6	N8	N7	Wide Flange	A992	Typical	Lateral	Strong Axis	Fixed	Fixed
7	M7	N12	N11	Wide Flange	A992	Typical	Lateral	Strong Axis	Fixed	Fixed
8	M8	N11	N10	Wide Flange	A992	Typical	Lateral	Strong Axis	Fixed	Fixed
9	M9	N10	N6	W27X146	A992	Typical	Lateral	Strong Axis	Pinned	Pinned
10	M10	N6	N17	W18X60	A992	Typical	Lateral	Strong Axis	Pinned	Pinned
11	M11	N15	N4	W18X60	A992	Typical	Lateral	Strong Axis	Pinned	Pinned
12	M12	N4	N7	W18X60	A992	Typical	Lateral	Strong Axis	Pinned	Pinned
13	M13	N9	N1	W18X60	A992	Typical	Lateral	Strong Axis	Pinned	Pinned
14	M14	N3	N12	W16X26	A992	Typical	Lateral	Strong Axis	Pinned	Pinned
15	M15	N20	N13	W18X60	A992	Typical	Gravity	Strong Axis	Pinned	Pinned
16	M16	N13	N14	W24X104	A992	Typical	Lateral	Strong Axis	Pinned	Pinned
17	M17	N14	N5	W24X104	A992	Typical	Lateral	Strong Axis	Pinned	Pinned



Company : KPFF
Designer : AS
Job Number : 1900799
Model Name : Dana Point Harbor_Bld'g. 10

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Beam Primary Data : Exterior Roof Deck (Continued)

Building&Safety: OCPWAzarvandB 12/29/2025

Table with columns: Label, Start Point, End Point, Shape, Material, Design Rules, Function, Orientation, Start Rel..., End Rel..., Outrigger? Rows 18-74.

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PE21-0898
Orange - OC Public Works
OC Development Services
APPROVED
I hereby certify that the plans and specifications must be kept on the file. It is unlawful to make any changes or alterations to these plans without the written permission of the Public Works, OC Development Services Department. The stamping of these plans indicates that the plans conform to the provisions of any provisions of any County Ordinance or State law.
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Company : KPFF
Designer : AS
Job Number : 1900799
Model Name : Dana Point Harbor_Bld'g. 10

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Beam Primary Data : Exterior Roof Deck (Continued)

Building&Safety: OCPW&Zarv&B 12/29/2025

Table with 12 columns: Label, Start Point, End Point, Shape, Material, Design Rules, Function, Orientation, Start Rel..., End Rel..., Outrigger?. Rows 75-100.

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PE21-0898
City of Orange - OC Public Works
OC Development Services
APPROVED
The plans and specifications must be kept on the file. It is unlawful to make any changes or alterations to these plans without the permission of the City of Orange, California. The stamping of these plans does not constitute a representation that there is no violation of any provisions of any County or State law.

Beam Primary Data : Sloped Roof

Table with 12 columns: Label, Start Point, End Point, Shape, Material, Design Rules, Function, Orientation, Start Rel..., End Rel..., Outrigger?. Rows 1-27.



Company : KPFF
 Designer : AS
 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

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 Checked By: _____

Beam Primary Data : Sloped Roof (Continued)

Building&Safety: OCPWArvandB 12/29/2025

Label	Start Point	End Point	Shape	Material	Design Rules	Function	Orientation	Start Rel...	End Rel...	Outrigger?
28	PUR28	N40	N41	W16X26	A992	Typical	Gravity	Strong Axis	Pinned	Pinned
29	PUR29	N42	N43	W16X26	A992	Typical	Gravity	Strong Axis	Pinned	Pinned
30	PUR30	N44	N45	W16X26	A992	Typical	Gravity	Strong Axis	Pinned	Pinned
31	M31	N46	N20	W16X26	A992	Typical	Gravity	Strong Axis	Pinned	Pinned
32	M32	N47	N23	W16X26	A992	Typical	Gravity	Strong Axis	Pinned	Pinned

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PE21-0988

City of Orange - OC Public Works
 OC Development Services
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These plans and specifications must be kept on the file. It is unlawful to make any changes or alterations to these plans without written permission of the City of Orange, OC Development Services. The stamping of these plans does not constitute a representation or warranty of any kind, and it is the responsibility of the contractor to be an approved of the violation of any provisions of any County Code of Ordinances.

17/10/2022 11:41:38 AM
 BUILDING OFFICIAL

Hot Rolled : Exterior Roof Deck

Label	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp T...	Lcomp B...	L-torq...	Cb	Compos...	Camber...	B-eff Le...	B-eff Ri...	afft]	Chan...
1	M1	30.083										N/A	N/A
2	M2	19.5										N/A	N/A
3	M3	16.583										N/A	N/A
4	M4	35										N/A	N/A
5	M5	23.666										N/A	N/A
6	M6	23										N/A	N/A
7	M7	15.334										N/A	N/A
8	M8	23.666										N/A	N/A
9	M9	27.5						Yes				N/A	N/A
10	M10	17.167						Yes				N/A	N/A
11	M11	17.167						Yes				N/A	N/A
12	M12	4.5						Yes				N/A	N/A
13	M13	15.334						Yes				N/A	N/A
14	M14	2						Yes				N/A	N/A
15	M15	15.334						Yes				N/A	N/A
16	M16	23.666						Yes				N/A	N/A
17	M17	27.5						Yes				N/A	N/A
18	M18	17.167						Yes				N/A	N/A
19	M19	16.583						Yes				N/A	N/A
20	M20	35						Yes				N/A	N/A
21	M21	16.583						Yes				N/A	N/A
22	M22	35						Yes				N/A	N/A
23	M23	16.583						Yes				N/A	N/A
24	M24	35						Yes				N/A	N/A
25	M25	16.583						Yes				N/A	N/A
26	M26	35						Yes				N/A	N/A
27	M27	19.167						Yes				N/A	N/A
28	M28	35						Yes				N/A	N/A
29	M29	16.583						Yes				N/A	N/A
30	M31	35						Yes				N/A	N/A
31	M32	16.583						Yes				N/A	N/A
32	M33	35						Yes				N/A	N/A
33	M34	16.583						Yes				N/A	N/A
34	M35	35						Yes				N/A	N/A
35	M36	16.583						Yes				N/A	N/A
36	M37	35						Yes				N/A	N/A
37	M38	16.583						Yes				N/A	N/A
38	M39	35						Yes				N/A	N/A
39	M40	7.667						Yes				N/A	N/A
40	M41	7.667						Yes				N/A	N/A
41	M43	6.25						Yes				N/A	N/A
42	M44	6.25						Yes				N/A	N/A
43	M45	6.25						Yes				N/A	N/A
44	M47	25										N/A	N/A
45	M48	25										N/A	N/A
46	M49	18.666						Yes				N/A	N/A
47	M50	19						Yes				N/A	N/A
48	M51	8						Yes				N/A	N/A



Company : KPFF
 Designer : AS
 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

Oct 17, 2022
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Hot Rolled : Exterior Roof Deck (Continued)

Building&Safety: OCPWArvandB 12/29/2025

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0992

Label	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp T...	Lcomp B...	L-torq...	Cb	Compos...	Camber...	B-eff Le...	B-eff Ri...	Chan...
49	M52	8		Framing				Yes				N/A
50	M53	8		Framing				Yes				N/A
51	M54	8		Framing				Yes				N/A
52	M55	8		Framing				Yes				N/A
53	M56	8		Framing				Yes				N/A
54	M57	9		Framing				Yes				N/A
55	M58	16.583		Framing				Yes				N/A
56	M69	6.25		Framing								N/A
57	M59	7.667		Framing				Yes				N/A
58	M60	7.889		Framing				Yes				N/A
59	M61	7.888		Framing				Yes				N/A
60	M62	7.889		Framing				Yes				N/A
61	M63	7.667		Framing				Yes				N/A
62	M64	7.666		Framing				Yes				N/A
63	M65	7.667		Framing				Yes				N/A
64	M66	4.5		Framing				Yes				N/A
65	M70	9.417		Framing				Yes				N/A
66	M71	4.5		Framing				Yes				N/A
67	M72	7.667		Framing				Yes				N/A
68	M73	7.666		Framing				Yes				N/A
69	M75	7.889		Framing				Yes				N/A
70	M77	7.889		Framing				Yes				N/A
71	M79	7.667		Framing				Yes				N/A
72	M80	7.889		Framing				Yes				N/A
73	M81	7.888		Framing				Yes				N/A
74	M82	7.667		Framing				Yes				N/A
75	M83	7.889		Framing				Yes				N/A
76	M84	7.888		Framing				Yes				N/A
77	M85	7.667		Framing				Yes				N/A
78	M86	7.889		Framing				Yes				N/A
79	M87	7.888		Framing				Yes				N/A
80	M88	9.333		Framing				Yes				N/A
81	M89	1.417		Framing				Yes				N/A
82	M91	10.75		Framing				Yes				N/A
83	M92	12.083		Framing				Yes				N/A
84	M94	3.368		Framing				Yes				N/A
85	M95	4.52		Framing				Yes				N/A
86	M96	3.368		Framing				Yes				N/A
87	M93	2.067		Framing				Yes				N/A
88	M97	3.354		Framing				Yes				N/A
89	M98	1.166		Framing				Yes				N/A
90	M99	9.333		Framing				Yes				N/A
91	M100	9.417		Framing				Yes				N/A
92	M101	9.417		Framing				Yes				N/A
93	M102	9.417		Framing				Yes				N/A
94	M103	35		Framing				Yes				N/A
95	M104	3.073		Framing				Yes				N/A
96	M105	4.594		Framing				Yes				N/A
97	M106	9.417		Framing				Yes				N/A
98	M107	7.75		Framing				Yes				N/A
99	M108	7.75		Framing				Yes				N/A
100	M109	10.75		Framing				Yes				N/A

County of Orange Public Works
 Planning & Development Services
APPROVED
 This plan and specifications must be kept on the job site. It is subject to any changes or amendments to these plans without the permission of the County of Orange. The Engineer of these plans shall be responsible for the accuracy of the information provided and shall be an agent of the County of Orange. The violation of any provisions of any County Ordinance shall be a violation of the State law.
 Title: Bldg Deck
 Bldg Deck



Company : KPFF
 Designer : AS
 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

Oct 17, 2022
 1:30 PM
 Checked By: _____

Hot Rolled : Sloped Roof

Building&Safety: OCPWArzarvandB 12/29/2025

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0992

Label	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp T...	Lcomp B...	L-torq...	Cb	Compos...	Camber...	B-eff Le...	B-eff Ri...	Chan...
1	M1	27.917		Framing								N/A
2	M2	27.917		Framing								N/A
3	M3	30.666		Framing								N/A
4	M4	8		Framing								N/A
5	M5	8		Framing								N/A
6	M6	25		Framing								N/A
7	M7	25		Framing								N/A
8	M8	8		Framing								N/A
9	M9	8		Framing								N/A
10	M10	30.666		Framing								N/A
11	M11	18.666		Framing								N/A
12	M12	18.666		Framing								N/A
13	M13	19		Framing								N/A
14	M14	19		Framing								N/A
15	M15	8.75		Framing								N/A
16	M16	9		Framing								N/A
17	M17	8.75		Framing								N/A
18	M18	9		Framing								N/A
19	M19	36.167		Framing								N/A
20	M20	36.167		Framing								N/A
21	PUR21	36.167		Framing								N/A
22	PUR22	36.167		Framing								N/A
23	PUR23	36.167		Framing								N/A
24	M24	8		Framing								N/A
25	M25	8.75		Framing								N/A
26	M26	8		Framing								N/A
27	M27	8.75		Framing								N/A
28	PUR28	8		Framing								N/A
29	PUR29	8		Framing								N/A
30	PUR30	8		Framing								N/A
31	M31	8		Framing								N/A
32	M32	8		Framing								N/A

County of Orange Public Works
 Planning & Development Services
 APPROVED
 This plan and specifications must be kept on the job site. It is subject to any changes or amendments to these plans without the permission of the County. The Engineer of these plans certifies that the information filed is an accurate representation of the project as shown on the plans and specifications. The violation of any provision of any County Ordinance shall be an offense under the law.
 Title: [Blank]
 Building: [Blank]

Diaphragm Parameters : Exterior Roof Deck

Floor	Diaphragm	Type	Region	Design Rule	SGAF	Material Offset	Thickness...
1	Exterior Roof Deck	D1		N/A	N/A	N/A	N/A
2	Sloped Roof	D4		N/A	N/A	N/A	N/A

Diaphragm Parameters : Sloped Roof

Floor	Diaphragm	Type	Region	Design Rule	SGAF	Material Offset	Thickness...
1	Exterior Roof Deck	D1		N/A	N/A	N/A	N/A
2	Sloped Roof	D4		N/A	N/A	N/A	N/A

Point Loads : Exterior Roof Deck

Point Label	PreDL[k]	PostDL[k]	LL[k]	LL Type	Dyn Load[k]
1	N200			LL-Non	
2	N199			LL-Non	
3	N242			LL-Non	
4	N197			LL-Non	
5	N183			LL-Non	
6	N184			LL-Non	
7	N185			LL-Non	
8	N212			LL-Non	
9	N211			LL-Non	
10	N210			LL-Non	



Company : KPFF
 Designer : AS
 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

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Point Loads : Exterior Roof Deck (Continued)

Building&Safety: OCPWArvandB 12/29/2025

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0898

	Point Label	PreDL[k]	PostDL[k]	LL[k]	LL Type	Dyn Load[k]
11	N170				LL-Non	
12	N171				LL-Non	
13	N172				LL-Non	
14	N173				LL-Non	
15	N169				LL-Non	
16	N182				LL-Non	
17	N196				LL-Non	
18	N209				LL-Non	
19	N186				LL-Non	
20	N187				LL-Non	
21	N188				LL-Non	
22	N189				LL-Non	
23	N191				LL-Non	
24	N190				LL-Non	
25	N193				LL-Non	
26	N192				LL-Non	
27	N195				LL-Non	
28	N194				LL-Non	
29	N214				LL-Non	
30	N216				LL-Non	
31	N213				LL-Non	
32	N215				LL-Non	
33	N217				LL-Non	
34	N219				LL-Non	
35	N221				LL-Non	
36	N222				LL-Non	
37	N220				LL-Non	
38	N218				LL-Non	
39	N11		11	3	LL-Non	
40	N69		11	3	LL-Non	
41	N106		0.443	0.295	LL-Non	
42	N105		0.443	0.295	LL-Non	
43	N114		0.443	0.295	LL-Non	
44	N113		0.443	0.295	LL-Non	
45	N112		0.886	0.591	LL-Non	
46	N111		0.886	0.591	LL-Non	
47	N109		0.886	0.591	LL-Non	
48	N110		0.886	0.591	LL-Non	
49	N107		0.886	0.591	LL-Non	
50	N108		0.886	0.591	LL-Non	
51	N92		0.456	0.304	LL-Non	
52	N91		0.817	0.545	LL-Non	
53	N90		0.817	0.545	LL-Non	
54	N89		0.817	0.545	LL-Non	
55	N277		0.817	0.545	LL-Non	
56	N101		0.817	0.545	LL-Non	
57	N102		0.817	0.545	LL-Non	
58	N95		1.827	1.218	LL-Non	
59	N99		1.827	1.218	LL-Non	
60	N94		6.16	4.107	LL-Non	
61	N100		6.16	4.107	LL-Non	
62	N93		2.166	1.444	LL-Non	
63	N96		2.166	1.444	LL-Non	
64	N97		2.166	1.444	LL-Non	
65	N98		2.166	1.444	LL-Non	
66	N160				LL-Non	
67	N162				LL-Non	





Company : KPFF
 Designer : AS
 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

Oct 17, 2022
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Point Loads : Exterior Roof Deck (Continued)

Building&Safety: OCPWArvandB 12/29/2025

	Point Label	PreDL[k]	PostDL[k]	LL[k]	LL Type	Dyn Load[k]
68	N164				LL-Non	
69	N166				LL-Non	
70	N168				LL-Non	
71	N167				LL-Non	
72	N165				LL-Non	
73	N163				LL-Non	
74	N161				LL-Non	
75	N159				LL-Non	
76	N132				LL-Non	
77	N134				LL-Non	
78	N136				LL-Non	
79	N138				LL-Non	
80	N140				LL-Non	
81	N141				LL-Non	
82	N139				LL-Non	
83	N137				LL-Non	
84	N135				LL-Non	
85	N133				LL-Non	
86	N146				LL-Non	
87	N149				LL-Non	
88	N153				LL-Non	
89	N158				LL-Non	
90	N142				LL-Non	
91	N147				LL-Non	
92	N150				LL-Non	
93	N151				LL-Non	
94	N152				LL-Non	
95	N155				LL-Non	
96	N115				LL-Non	
97	N120				LL-Non	
98	N123				LL-Non	
99	N124				LL-Non	
100	N125				LL-Non	
101	N128				LL-Non	
102	N119				LL-Non	
103	N122				LL-Non	
104	N126				LL-Non	
105	N131				LL-Non	

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0898

County of Orange - OC Public Works
 OC Development Services
APPROVED

This set of plans and specifications must be kept on the job at all times. It is unlawful to make any changes or alterations to these plans without the written permission from OC Public Works, OC Development Services of Orange County. The stamping of these plan specifications does not constitute approval of any County Ordinance or State law.

April 13, 2024
 BUILDING OFFICIAL

Point Loads : Sloped Roof

Point Label	PreDL[k]	PostDL[k]	LL[k]	LL Type	Dyn Load[k]
No Data to Print ...					

Other Point Loads : Exterior Roof Deck

	Point Label	OL1[k]	Direction	OL2[k]	Direction	OL3[k]	Direction	OL4[k]	Direction
1	N200	61.2	Y		PY		PY		PY
2	N199	61.2	Y		PY		PY		PY
3	N242	61.2	Y		PY		PY		PY
4	N197	61.2	Y		PY		PY		PY
5	N183	61.2	Y		PY		PY		PY
6	N184	61.2	Y		PY		PY		PY
7	N185	61.2	Y		PY		PY		PY
8	N212	-61.2	Y		PY		PY		PY
9	N211	-61.2	Y		PY		PY		PY
10	N210	-61.2	Y		PY		PY		PY
11	N170	-61.2	Y		PY		PY		PY



Company : KPFF
 Designer : AS
 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

D28/67

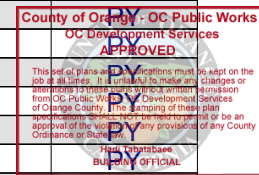
Oct 17, 2022
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Other Point Loads : Exterior Roof Deck (Continued)

Building&Safety: OCPWAzarvandB 12/29/2025

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0898

Point Label	OL1[k]	Direction	OL2[k]	Direction	OL3[k]	Direction	OL4[k]	Direction
12	N171	-61.2	Y		PY		PY	
13	N172	-61.2	Y		PY		PY	
14	N173	-61.2	Y		PY		PY	
15	N169	-61.2	Y		PY		PY	
16	N182	-61.2	Y		PY		PY	
17	N196	61.2	Y		PY		PY	
18	N209	61.2	Y		PY		PY	
19	N186	34.68	Y		PY		PY	
20	N187	34.68	Y		PY		PY	
21	N188	34.68	Y		PY		PY	
22	N189	34.68	Y		PY		PY	
23	N191	34.68	Y		PY		PY	
24	N190	34.68	Y		PY		PY	
25	N193	34.68	Y		PY		PY	
26	N192	34.68	Y		PY		PY	
27	N195	34.68	Y		PY		PY	
28	N194	34.68	Y		PY		PY	
29	N214	-34.68	Y		PY		PY	
30	N216	-34.68	Y		PY		PY	
31	N213	-34.68	Y		PY		PY	
32	N215	-34.68	Y		PY		PY	
33	N217	-34.68	Y		PY		PY	
34	N219	-34.68	Y		PY		PY	
35	N221	-34.68	Y		PY		PY	
36	N222	-34.68	Y		PY		PY	
37	N220	-34.68	Y		PY		PY	
38	N218	-34.68	Y		PY		PY	
39	N11	3	Y		PY		PY	
40	N69	3	Y		PY		PY	
41	N106		Y		PY		PY	
42	N105		Y		PY		PY	
43	N114		Y		PY		PY	
44	N113		Y		PY		PY	
45	N112		Y		PY		PY	
46	N111		Y		PY		PY	
47	N109		Y		PY		PY	
48	N110		Y		PY		PY	
49	N107		Y		PY		PY	
50	N108		Y		PY		PY	
51	N92		Y		PY		PY	
52	N91		Y		PY		PY	
53	N90		Y		PY		PY	
54	N89		Y		PY		PY	
55	N277		Y		PY		PY	
56	N101		Y		PY		PY	
57	N102		Y		PY		PY	
58	N95		Y		PY		PY	
59	N99		Y		PY		PY	
60	N94		Y		PY		PY	
61	N100		Y		PY		PY	
62	N93		Y		PY		PY	
63	N96		Y		PY		PY	
64	N97		Y		PY		PY	
65	N98		Y		PY		PY	
66	N160		PY	34.68	Y		PY	
67	N162		PY	34.68	Y		PY	
68	N164		PY	34.68	Y		PY	





Company : KPFF
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 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

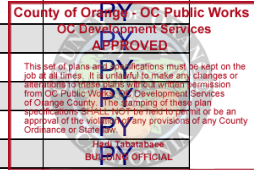
Oct 17, 2022
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Other Point Loads : Exterior Roof Deck (Continued)

Building&Safety: OCPW&ZarvandB 12/29/2025

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0898

Point Label	OL1[k]	Direction	OL2[k]	Direction	OL3[k]	Direction	OL4[k]	Direction
69	N166		PY	34.68	Y		PY	
70	N168		PY	34.68	Y		PY	
71	N167		PY	34.68	Y		PY	
72	N165		PY	34.68	Y		PY	
73	N163		PY	34.68	Y		PY	
74	N161		PY	34.68	Y		PY	
75	N159		PY	34.68	Y		PY	
76	N132		PY	-34.68	Y		PY	
77	N134		PY	-34.68	Y		PY	
78	N136		PY	-34.68	Y		PY	
79	N138		PY	-34.68	Y		PY	
80	N140		PY	-34.68	Y		PY	
81	N141		PY	-34.68	Y		PY	
82	N139		PY	-34.68	Y		PY	
83	N137		PY	-34.68	Y		PY	
84	N135		PY	-34.68	Y		PY	
85	N133		PY	-34.68	Y		PY	
86	N146		PY	61.2	Y		PY	
87	N149		PY	61.2	Y		PY	
88	N153		PY	61.2	Y		PY	
89	N158		PY	61.2	Y		PY	
90	N142		PY	61.2	Y		PY	
91	N147		PY	61.2	Y		PY	
92	N150		PY	61.2	Y		PY	
93	N151		PY	61.2	Y		PY	
94	N152		PY	61.2	Y		PY	
95	N155		PY	61.2	Y		PY	
96	N115		PY	-61.2	Y		PY	
97	N120		PY	-61.2	Y		PY	
98	N123		PY	-61.2	Y		PY	
99	N124		PY	-61.2	Y		PY	
100	N125		PY	-61.2	Y		PY	
101	N128		PY	-61.2	Y		PY	
102	N119		PY	-61.2	Y		PY	
103	N122		PY	-61.2	Y		PY	
104	N126		PY	-61.2	Y		PY	
105	N131		PY	-61.2	Y		PY	



Other Point Loads : Sloped Roof

Point Label	OL1[k]	Direction	OL2[k]	Direction	OL3[k]	Direction	OL4[k]	Direction
No Data to Print ...								

Line Loads : Exterior Roof Deck

Start Point	End Point	Start Pre...	End PreD...	Start Post...	End Post...	Start LL[k]	End LL[k/ft]	LL Type	St Dyn Load[k/ft]	End Dyn Load[...]
1	N78	N79				0.075	0.075	LL-Non		
2	N80	N81				0.12	0.12	RLL-Non		
3	N81	N82				0.12	0.12	RLL-Non		
4	N82	N83				0.12	0.12	RLL-Non		
5	N19	N50						LL-Non	1.675	1.675

Line Loads : Sloped Roof

Start Point	End Point	Start Pre...	End PreD...	Start Post...	End Post...	Start LL[k]	End LL[k/ft]	LL Type	St Dyn Load[k/ft]	End Dyn Load[...]
No Data to Print ...										



Company : KPFF
 Designer : AS
 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

D30/67

Oct 17, 2022
 1:30 PM
 Checked By: _____

Other Line Loads : Exterior Roof Deck

Building&Safety: OCPWArvandB 12/29/2025

Start Po..	End Point	Start O...	End OL...	Direction	Start O...	End OL...	Direction	Start O...	End OL...	Direction	Start O...	End OL...	Direction
1	N78	N79		Y			PY			PY			
2	N80	N81		Y			PY			PY			
3	N81	N82		Y			PY			PY			
4	N82	N83		Y			PY			PY			
5	N19	N50		Y			PY			PY			

Permits: BNR21-0244, ELE21-0850, MEC21-0512, P1B21-0988

County of Orange PWC Public Works
 UC Development Services
APPROVED
 This set of plans and specifications must be kept on the job at all times. It is unlawful to make any changes or alterations to these plans without a written permission from the Public Works Department, Building Division of Orange County. The planning of these plans specifications and construction shall be in accordance with the provisions of any County Ordinance or State law.

Agent: Librarians
 BUILDING OFFICIAL

Other Line Loads : Sloped Roof

Start Po..	End Point	Start O...	End OL...	Direction	Start O...	End OL...	Direction	Start O...	End OL...	Direction	Start O...	End OL...	Direction
No Data to Print ...													

Combinations

Label	Sol...	Cat...	Fa...	Cat...	Fa...	Cat...	Fa...	Cat...	Fa...	Cat...	Fact...	Cat...	Fact...	Cat...	Fact...	Cat...	Fact...	Cat...	Fact...
1	Service Dead	Yes	DL	1															
2	Service Dead ...	Yes	DL	1	LL	1	LLS	1											
3	IBC 16-1 Pre	Yes	DLP..	1.4															
4	IBC 16-2 Pre	Yes	DLP..	1.2	LLC..	1.6													
5	IBC 16-1 Post	Yes	DL	1.4															
6	IBC 16-2 (a) P...	Yes	DL	1.2	LL	1.6	LLS	1.6	RLL	0.5									
7	IBC 16-2 (b) P...	Yes	DL	1.2	LL	1.6	LLS	1.6											
8	IBC 16-3 (a) P...	Yes	DL	1.2	RLL	1.6	LL	1	LLS	1									
9	IBC 16-3 (c) P...	Yes	DL	1.2	LL	0.5	LLS	1											
10	Combination 10	Yes	DL	1.2	LL	0.5	OL1	1											
11	Combination 11	Yes	DL	0.9	OL1	-1													
12	Combination 12	Yes	DL	1.2	LL	0.5	OL1	-1											
13	Combination 13	Yes	DL	0.9	OL1	1													
14	Combination 14	Yes	DL	1.2	LL	0.5	OL2	1											
15	Combination 15	Yes	DL	0.9	OL2	-1													
16	Combination 16	Yes	DL	1.2	LL	0.5	OL2	-1											
17	Combination 17	Yes	DL	0.9	RL	1													

Floors

Label	Elevation[ft]	Floor Type	Area Load Default	Inactive	Splice Dis..	Splice Ty...	No Wind/...	Parapet Hei...
1	Exterior Roof Deck	19	Floor Beam	Exterior Roof De...		19	Moment	0
2	Sloped Roof	20.95	Floor Beam	Sloped Roof		1.95	Moment	0

Beam Floors

Label	Deck Default	Deck Angle Default (deg)	Parent	
1	Exterior Roof Deck	Composite Deck	90	None
2	Sloped Roof	Metal Deck	90	None

Beam Design for Hot Rolled : Exterior Roof Deck

Label	Size	Explicit	Studs	Camber[in]	Material	Max Sta...	Max En...	Min Star...	Min End...	
1	M1	W21X83	No		0	A992	21.477	25.342	8.299	9.425
2	M2	W21X83	No		0	A992	12.183	6.008	5.133	2.436
3	M3	W24X94	No		0	A992	13.596	27.921	-1.144	6.296
4	M4	W24X94	No		0	A992	43.621	42.574	12.636	-0.993
5	M5	W24X94	No		0	A992	24.757	33.306	5.958	8.58
6	M6	W24X94	No		0	A992	32.6	23.336	8.942	5.922
7	M7	W27X94	No		0	A992	9.502	19.837	2.512	6.009
8	M8	W27X94	No		0	A992	76.254	54.093	22.513	13.56
9	M9	W27X146	Yes	28	0	A992	112.402	115.939	29.253	33.067
10	M10	W18X60	Yes	18	0	A992	30.553	36.142	7.344	8.629
11	M11	W18X60	Yes	18	0	A992	17.842	15.492	3.366	3.194
12	M12	W18X60	Yes	4	0	A992	1.197	1.197	0.359	0.359



Company : KPFF
 Designer : AS
 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

Oct 17, 2022
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 Checked By: _____

Beam Design for Hot Rolled : Exterior Roof Deck (Continued)

Building&Safety: OCPWAzarvanB 12/29/2025

Label	Size	Explicit	Studs	Camber[in]	Material	Max Sta...	Max En...	Min Star...	Min End...
13	M13	W18X60	Yes	16	0	A992	8.426	8.426	3.061
14	M14	W16X26	Yes	2	0	A992	0.865	0.865	0.358
15	M15	W18X60	Yes	16	0	A992	18.754	18.754	5.399
16	M16	W24X104	Yes	24	0	A992	73.041	72.985	19.643
17	M17	W24X104	Yes	28	0	A992	117.287	100.884	28.51
18	M18	W18X60	Yes	18	0	A992	39.125	47.407	9.218
19	M19	W16X26	Yes	16	0	A992	14.295	14.28	3.439
20	M20	W18X50	Yes	34	0.75	A992	30.536	30.643	7.683
21	M21	W16X26	Yes		0	A992	18.704	16.907	-1.305
22	M22	W24X55	Yes	34	0.5	A992	34.857	36.552	9.412
23	M23	W16X26	Yes	20	0	A992	21.894	18.227	3.812
24	M24	W24X55	Yes	34	0.25	A992	31.478	31.629	8.614
25	M25	W16X36	Yes	16	0	A992	17.452	17.295	4.966
26	M26	W24X55	Yes	34	0.5	A992	40.201	39.184	12.013
27	M27	W18X35	Yes	20	0	A992	7.75	5.566	3.072
28	M28	W24X55	Yes	34	0.25	A992	24.963	24.932	6.186
29	M29	W16X26	Yes	16	0	A992	11.443	11.458	3.785
30	M31	W24X55	Yes	34	0.75	A992	47.736	44.4	12.423
31	M32	W16X26	Yes	16	0	A992	21.841	18.304	3.166
32	M33	W24X55	Yes	34	0.75	A992	47.195	43.216	8.895
33	M34	W16X26	Yes	16	0	A992	21.363	18.871	5.305
34	M35	W24X55	Yes	34	0.5	A992	35.067	35.237	9.474
35	M36	W16X26	Yes		0	A992	21.392	21.159	1.452
36	M37	W24X55	Yes	34	0.5	A992	43.567	43.779	11.51
37	M38	W16X26	Yes		0	A992	24.204	28.326	1.771
38	M39	W24X55	Yes	34	0.75	A992	56.972	57.565	13.004
39	M40	W12X26	Yes	8	0	A992	0.14	0.14	0.09
40	M41	W12X26	Yes	8	0	A992	0.14	0.14	0.09
41	M43	W12X26	Yes	6	0	A992	4.292	4.292	1.782
42	M44	W12X26	Yes	6	0	A992	4.273	4.273	1.439
43	M45	W12X26	Yes	6	0	A992	2.969	2.828	0.801
44	M47	W24X55	Yes		0	A992	15.236	5.179	5.007
45	M48	W24X55	Yes		0	A992	15.342	5.255	5.043
46	M49	W18X35	Yes	18	0	A992	8.485	11.145	2.657
47	M50	W18X35	Yes	18	0	A992	10.957	8.83	3.398
48	M51	W12X26	Yes	8	0	A992	6.59	6.291	1.892
49	M52	W12X26	Yes	8	0	A992	7.013	6.694	2.007
50	M53	W12X26	Yes	8	0	A992	8.704	8.307	2.464
51	M54	W12X26	Yes	8	0	A992	5.985	5.714	1.729
52	M55	W12X26	Yes	8	0	A992	6.288	6.002	1.811
53	M56	W12X26	Yes	8	0	A992	8.463	8.077	2.398
54	M57	W16X26	Yes	8	0	A992	1.304	1.304	0.438
55	M58	W16X36	Yes	16	0	A992	21.895	19.218	3.984
56	M69	W21X83	Yes		0	A992	11.397	N/A	4.987
57	M59	W12X26	Yes		0	A992	2.368	32.552	-2.158
58	M60	W12X26	Yes		0	A992	32.592	2.334	-32.376
59	M61	W16X36	Yes		0	A992	34.982	46.659	-29.675
60	M62	W12X26	Yes	8	0	A992	0.144	0.144	0.092
61	M63	W12X26	Yes		0	A992	11.682	10.497	-5.819
62	M64	W12X26	Yes		0	A992	12.083	50.609	-11.62
63	M65	W12X26	Yes	8	0	A992	0.14	0.14	0.09
64	M66	W12X26	Yes		0	A992	14.188	14.403	-13.242
65	M70	W12X26	Yes		0	A992	58.098	3.397	-57.84
66	M71	W12X26	Yes		0	A992	14.403	14.188	-13.116
67	M72	W12X26	Yes	8	0	A992	0.14	0.14	0.09
68	M73	W12X26	Yes		0	A992	8.103	8.103	-7.894
69	M75	W12X26	Yes	8	0	A992	0.144	0.144	0.092

Permits: BNR21-0244, ELE21-0850, MEC21-0512, P1921-0288
 Public Works
 City of Orange
 Department Services
 Approved
 This permit is valid only for the project and site described herein. It is not to be used for any other project or site. Any changes or modifications to the permit must be approved by the City of Orange Public Works Department. This permit is subject to the terms and conditions of the City of Orange Building Department.



Company : KPFF
 Designer : AS
 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

Oct 17, 2022
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 Checked By: _____

Beam Design for Hot Rolled : Exterior Roof Deck (Continued)

Building&Safety: OCPWAzarvandB 12/29/2025

Label	Size	Explicit	Studs	Camber[in]	Material	Max Sta...	Max En...	Min Star...	Min End...
70	M77	W12X26	Yes		A992	32.605	2.321	-32.39	-2.106
71	M79	W12X26	Yes		A992	2.368	32.552	-2.158	-32.642
72	M80	W12X26	Yes		A992	32.592	2.334	-32.376	-2.119
73	M81	W12X26	Yes		A992	19.496	13.227	-8.383	-2.919
74	M82	W12X26	Yes		A992	2.368	32.552	-2.158	-32.342
75	M83	W12X26	Yes		A992	32.592	2.334	-32.376	-2.119
76	M84	W12X26	Yes		A992	10.41	8.878	-0.928	-1.806
77	M85	W12X26	Yes		A992	2.368	32.552	-2.158	-32.342
78	M86	W12X26	Yes		A992	32.592	2.334	-32.376	-2.119
79	M87	W12X26	Yes		A992	8.976	7.237	-2.194	-2.743
80	M88	W12X26	Yes		A992	79.921	17.689	-71.518	-4.74
81	M89	W10X12	No		A992	12.825	23.026	-11.905	-22.106
82	M91	W10X12	No		A992	35.899	35.899	-27.009	-28.915
83	M92	W12X26	Yes		A992	20.039	13.036	-4.78	-4.211
84	M94	W12X26	Yes	4	A992	0.061	0.061	0.039	0.039
85	M95	W12X26	Yes		A992	8.706	59.877	-8.181	-58.599
86	M96	W12X26	Yes		A992	52.163	9.142	-52.071	-9.05
87	M93	Not Designed	No		A992	17.755	17.538	-16.2	-16.013
88	M97	W12X26	Yes		A992	5.22	29.565	-5.128	-29.473
89	M98	W12X26	Yes		A992	19.82	14.897	-19.788	-14.865
90	M99	W12X26	Yes	10	A992	7.116	18.445	1.523	1.523
91	M100	W12X26	Yes	10	A992	0.172	0.172	0.11	0.11
92	M101	W12X26	Yes	10	A992	0.172	0.172	0.11	0.11
93	M102	W12X26	Yes	10	A992	0.172	0.172	0.11	0.11
94	M103	W18X35	No	34	A992	26.139	31.814	5.939	6.062
95	M104	W12X26	Yes	4	A992	0.056	0.056	0.036	0.036
96	M105	W12X26	Yes	4	A992	0.084	0.084	0.054	0.054
97	M106	W12X26	Yes		A992	3.397	58.098	-3.139	-57.84
98	M107	W12X26	Yes		A992	57.373	4.069	-57.161	-3.858
99	M108	W12X26	Yes		A992	57.373	4.069	-57.161	-3.858
100	M109	W10X12	No		A992	35.899	35.899	-27.009	-28.915

Permits: BNR21-0244, ELE21-0850, MEC21-0512, P1921-0988
 Public Works
 UC Development Sprinkles
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 County

Beam Design for Hot Rolled : Sloped Roof

Label	Size	Explicit	Studs	Camber[in]	Material	Max Sta...	Max En...	Min Star...	Min End...
1	M1	W8X48	No		A992	6.86	6.452	1.407	1.323
2	M2	W8X48	No		A992	6.86	6.452	1.407	1.323
3	M3	W24X62	No		A992	19.589	19.59	4.36	4.36
4	M4	W18X50	No		A992	1.203	1.203	0.351	0.351
5	M5	W18X50	No		A992	1.203	1.203	0.351	0.351
6	M6	W18X46	Yes		A992	11.775	13.776	2.68	3.025
7	M7	W18X46	Yes		A992	11.945	14.007	2.715	3.071
8	M8	W16X26	Yes		A992	0.744	0.744	0.192	0.192
9	M9	W16X26	Yes		A992	0.744	0.744	0.192	0.192
10	M10	W18X46	Yes		A992	8.056	8.054	1.86	1.857
11	M11	W18X46	Yes		A992	3.931	4.234	1.17	1.212
12	M12	W18X46	Yes		A992	10.243	15.515	2.288	3.237
13	M13	W18X46	Yes		A992	4.239	4.044	1.217	1.194
14	M14	W18X46	Yes		A992	15.281	10.546	3.202	2.347
15	M15	W12X19	Yes		A992	3.003	3.003	0.327	0.327
16	M16	W18X46	Yes		A992	5.426	5.826	1.211	1.282
17	M17	W12X19	Yes		A992	3.052	3.052	0.33	0.33
18	M18	W18X46	Yes		A992	0.965	0.914	0.415	0.406
19	M19	W18X46	Yes		A992	10.556	10.556	1.857	1.857
20	M20	W18X46	Yes		A992	10.556	10.556	1.857	1.857
21	PUR21	W18X46	Yes		A992	10.353	10.353	1.842	1.842
22	PUR22	W18X46	Yes		A992	10.353	10.353	1.842	1.842



Company : KPFF
 Designer : AS
 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

Oct 17, 2022
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Beam Design for Hot Rolled : Sloped Roof (Continued)

Building&Safety: OCPWArzarvanB 12/29/2025

Label	Size	Explicit	Studs	Camber[in]	Material	Max Sta...	Max En...	Min Star...	Min End...
23	PUR23	W18X46	Yes		0.25	A992	10.353	10.353	0.411
24	M24	W18X46	Yes		0	A992	2.335	2.335	0.411
25	M25	W18X46	Yes		0	A992	2.997	2.997	0.481
26	M26	W18X46	Yes		0	A992	2.335	2.335	0.411
27	M27	W18X46	Yes		0	A992	3.046	3.046	0.485
28	PUR28	W16X26	Yes		0	A992	1.61	1.61	0.254
29	PUR29	W16X26	Yes		0	A992	1.34	1.34	0.235
30	PUR30	W16X26	Yes		0	A992	1.565	1.565	0.251
31	M31	W16X26	Yes		0	A992	1.16	1.16	0.221
32	M32	W16X26	Yes		0	A992	1.16	1.16	0.221

Permits: BNR21-0244, ELE21-0850, MEC21-0512, P1921-0988
 Public Works
 Approved
 This permit is valid only for the project and site described in the permit application. Any changes or modifications to the project or site must be approved by the Department of Public Works. This permit is subject to the terms and conditions of the applicable laws and regulations of the County of San Diego.

Beam Code Summary for Hot Rolled : Exterior Roof Deck

Label	Size	Explicit	Studs	Camb...	Material	Bending...	Loc[ft]	LC	Defl Ch...	Loc[ft]	Cat	Shear C...	Loc[ft]	LC	
1	M1	W21X83	No		0	A992	0.284	30.083	6	0.169	15.668	DL+...	0.077	30.0...	6
2	M2	W21X83	No		0	A992	0.092	0	6	0.06	0	LL	0.037	0	6
3	M3	W24X94	No		0	A992	0.151	16.583	6	0.06	0	LL	0.074	16.5...	6
4	M4	W24X94	No		0	A992	0.466	0	6	0.232	18.229	DL+...	0.116	0	6
5	M5	W24X94	No		0	A992	0.184	23.666	6	0.107	10.847	DL+...	0.089	23.6...	6
6	M6	W24X94	No		0	A992	0.179	0	6	0.095	12.458	DL+...	0.087	0	6
7	M7	W27X94	No		0	A992	0.09	15.334	6	0.06	0	LL	0.05	15.3...	6
8	M8	W27X94	No		0	A992	0.395	0	6	0.229	12.573	DL+...	0.193	0	6
9	M9	W27X146	Yes	28	0	A992	0.454	15.182	6	0.56	14.037	DL+...	0.233	27.5	6
10	M10	W18X60	Yes	18	0	A992	0.444	9.477	6	0.432	9.299	DL+...	0.16	17.1...	6
11	M11	W18X60	Yes	18	0	A992	0.204	7.689	6	0.204	7.868	DL+...	0.079	0	6
12	M12	W18X60	Yes	4	0	A992	0.003	2.25	6	0.06	0	LL	0.005	4.5	6
13	M13	W18X60	Yes	16	0	A992	0.105	7.667	6	0.102	7.667	DL+...	0.037	15.3...	6
14	M14	W16X26	Yes	2	0	A992	0.002	1	6	0.06	0	LL	0.008	2	6
15	M15	W18X60	Yes	16	0	A992	0.239	7.667	6	0.231	7.667	DL+...	0.083	15.3...	6
16	M16	W24X104	Yes	24	0	A992	0.452	12.326	6	0.556	11.833	DL+...	0.202	0	6
17	M17	W24X104	Yes	28	0	A992	0.615	15.182	6	0.831	13.75	DL+...	0.324	0	6
18	M18	W18X60	Yes	18	0	A992	0.608	9.477	6	0.574	9.299	DL+...	0.209	17.1...	6
19	M19	W16X26	Yes	16	0	A992	0.216	8.292	6	0.287	7.946	DL+...	0.135	0	6
20	M20	W18X50	Yes	34	0.75	A992	0.448	18.229	6	0.5	18.229	LL	0.16	35	6
21	M21	W16X26	Yes		0	A992	0.614	7.255	12	0.555	7.946	DL+...	0.176	0	12
22	M22	W24X55	Yes	34	0.5	A992	0.386	18.229	6	0.394	18.229	LL	0.145	35	10
23	M23	W16X26	Yes	20	0	A992	0.346	7.255	12	0.429	7.773	DL+...	0.207	0	6
24	M24	W24X55	Yes	34	0.25	A992	0.349	18.229	6	0.422	18.229	DL+...	0.126	35	6
25	M25	W16X36	Yes	16	0	A992	0.207	7.946	6	0.276	7.773	DL+...	0.249	6.91	16
26	M26	W24X55	Yes	34	0.5	A992	0.425	17.5	6	0.415	17.5	LL	0.226	1.094	16
27	M27	W18X35	Yes	20	0	A992	0.097	11.381	6	0.143	9.584	DL+...	0.049	0	6
28	M28	W24X55	Yes	34	0.25	A992	0.271	17.5	6	0.369	17.5	DL+...	0.099	0	6
29	M29	W16X26	Yes	16	0	A992	0.172	8.292	6	0.266	8.637	DL+...	0.108	16.5...	6
30	M31	W24X55	Yes	34	0.75	A992	0.513	17.5	6	0.54	17.5	LL	0.19	0	6
31	M32	W16X26	Yes	16	0	A992	0.366	6.737	14	0.449	7.773	DL+...	0.45	6.91	16
32	M33	W24X55	Yes	34	0.75	A992	0.514	17.864	6	0.54	17.5	LL	0.188	0	6
33	M34	W16X26	Yes	16	0	A992	0.338	7.255	6	0.43	7.773	DL+...	0.202	0	6
34	M35	W24X55	Yes	34	0.5	A992	0.387	18.229	6	0.396	18.229	LL	0.14	35	6
35	M36	W16X26	Yes		0	A992	0.652	7.255	10	0.714	7.946	DL+...	0.202	0	6
36	M37	W24X55	Yes	34	0.5	A992	0.479	18.229	6	0.491	18.229	LL	0.174	35	6
37	M38	W16X26	Yes		0	A992	0.702	6.737	14	0.818	8.119	DL+...	0.676	16.0...	14
38	M39	W24X55	Yes	34	0.75	A992	0.648	16.771	6	0.677	17.5	LL	0.354	33.1...	14
39	M40	W12X26	Yes	8	0	A992	0.002	3.834	3	0.06	0	LL	0.002	7.667	3
40	M41	W12X26	Yes	8	0	A992	0.002	3.834	3	0.06	0	LL	0.002	7.667	3
41	M43	W12X26	Yes	6	0	A992	0.037	3.125	6	0.06	0	LL	0.051	6.25	6
42	M44	W12X26	Yes	6	0	A992	0.037	3.125	6	0.06	0	LL	0.051	6.25	6
43	M45	W12X26	Yes	6	0	A992	0.026	3.06	6	0.06	0	LL	0.035	0	6



Company : KPFF
 Designer : AS
 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

Oct 17, 2022
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 Checked By: _____

Beam Code Summary for Hot Rolled : Sloped Roof

Building&Safety: OCPW&Zarv&B 12/29/2025

Label	Size	Explicit	Studs	Camb...	Material	Bending...	Loc[ft]	LC	Defl Ch...	Loc[ft]	Cat	Shear C...	Loc[ft]	LC
1	M1	W8X48	No		A992	0.185	0	8	0.098	14.461	DL+...	0.067	0	8
2	M2	W8X48	No		A992	0.185	0	8	0.098	14.461	DL+...	0.067	0	8
3	M3	W24X62	No		A992	0.65	30.666	8	0.194	15.333	DL+...	0.064	0	8
4	M4	W18X50	No		A992	0.006	4	8	0.06	0	LL	0.006	0	8
5	M5	W18X50	No		A992	0.006	4	8	0.06	0	LL	0.006	0	8
6	M6	W18X46	Yes		A992	No Val			0.519	13.22	DL+...	0.07	25.9...	8
7	M7	W18X46	Yes		A992	No Val			0.528	13.49	DL+...	0.072	25.9...	8
8	M8	W16X26	Yes		A992	0.009	4	8	0.06	0	LL	0.007	8	8
9	M9	W16X26	Yes		A992	0.009	4	8	0.06	0	LL	0.007	8	8
10	M10	W18X46	Yes		A992	0.208	15.333	8	0.43	15.333	DL+...	0.041	0	8
11	M11	W18X46	Yes		A992	0.087	7.972	8	0.099	8.944	DL+...	0.022	18.6...	8
12	M12	W18X46	Yes		A992	0.235	7.972	8	0.278	9.333	DL+...	0.079	18.6...	8
13	M13	W18X46	Yes		A992	0.089	10.885	8	0.104	9.896	DL+...	0.022	0	8
14	M14	W18X46	Yes		A992	0.242	10.885	8	0.294	9.5	DL+...	0.078	0	8
15	M15	W12X19	Yes		A992	0.074	4.533	8	0.06	0	LL	0.035	9.065	8
16	M16	W18X46	Yes		A992	0.072	4.688	8	0.06	0	LL	0.03	9	8
17	M17	W12X19	Yes		A992	0.075	4.533	8	0.06	0	LL	0.035	9.065	8
18	M18	W18X46	Yes		A992	0.011	4.313	8	0.06	0	LL	0.005	0	8
19	M19	W18X46	Yes	0.25	A992	No Val			0.531	19.125	DL+...	0.054	37.47	8
20	M20	W18X46	Yes	0.25	A992	No Val			0.531	19.125	DL+...	0.054	37.47	8
21	PUR21	W18X46	Yes	0.25	A992	No Val			0.51	18.735	DL+...	0.053	37.47	8
22	PUR22	W18X46	Yes	0.25	A992	No Val			0.508	18.735	DL+...	0.053	37.47	8
23	PUR23	W18X46	Yes	0.25	A992	No Val			0.51	18.735	DL+...	0.053	37.47	8
24	M24	W18X46	Yes		A992	0.014	4.144	8	0.06	0	LL	0.012	8.288	8
25	M25	W18X46	Yes		A992	0.02	4.533	8	0.06	0	LL	0.015	9.065	8
26	M26	W18X46	Yes		A992	0.014	4.144	8	0.06	0	LL	0.012	8.288	8
27	M27	W18X46	Yes		A992	0.02	4.533	8	0.06	0	LL	0.016	9.065	8
28	PUR28	W16X26	Yes		A992	0.02	4.144	8	0.06	0	LL	0.015	8.288	8
29	PUR29	W16X26	Yes		A992	0.017	4.144	8	0.06	0	LL	0.013	8.288	8
30	PUR30	W16X26	Yes		A992	0.02	4.144	8	0.06	0	LL	0.015	8.288	8
31	M31	W16X26	Yes		A992	0.015	4.317	8	0.06	0	LL	0.011	8.288	8
32	M32	W16X26	Yes		A992	0.015	4.317	8	0.06	0	LL	0.011	8.288	8

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0887
 County of Orange Public Works
 Development Services
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Beam Shear Results for Hot Rolled : Exterior Roof Deck

Label	Size	Fy[ksi]	PhiVn[k]	Vu[k]	Shear Check	Loc[ft]	LC	
1	M1	W21X83	50	330.63	25.342	0.077	30.083	6
2	M2	W21X83	50	330.63	12.183	0.037	0	6
3	M3	W24X94	50	375.435	27.921	0.074	16.583	6
4	M4	W24X94	50	375.435	43.621	0.116	0	6
5	M5	W24X94	50	375.435	33.306	0.089	23.666	6
6	M6	W24X94	50	375.435	32.6	0.087	0	6
7	M7	W27X94	50	395.43	19.837	0.05	15.334	6
8	M8	W27X94	50	395.43	76.254	0.193	0	6
9	M9	W27X146	50	497.31	-115.939	0.233	27.5	6
10	M10	W18X60	50	226.59	-36.142	0.16	17.167	6
11	M11	W18X60	50	226.59	17.842	0.079	0	6
12	M12	W18X60	50	226.59	-1.197	0.005	4.5	6
13	M13	W18X60	50	226.59	-8.426	0.037	15.334	6
14	M14	W16X26	50	105.975	-0.865	0.008	2	6
15	M15	W18X60	50	226.59	-18.754	0.083	15.334	6
16	M16	W24X104	50	361.5	73.041	0.202	0	6
17	M17	W24X104	50	361.5	117.287	0.324	0	6
18	M18	W18X60	50	226.59	-47.407	0.209	17.167	6
19	M19	W16X26	50	105.975	14.295	0.135	0	6
20	M20	W18X50	50	191.7	-30.643	0.16	35	6
21	M21	W16X26	50	105.975	18.704	0.176	0	12



Company : KPFF
 Designer : AS
 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

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Beam Shear Results for Hot Rolled : Exterior Roof Deck (Continued)

Building&Safety: OCPW&ZarvandB 12/29/2025

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0898

	Label	Size	Fy[ksi]	PhiVn[k]	Vu[k]	Shear Check	Loc[ft]	LC
22	M22	W24X55	50	251.694	-36.552	0.145	35	6
23	M23	W16X26	50	105.975	21.894	0.207	0	6
24	M24	W24X55	50	251.694	-31.629	0.126	35	6
25	M25	W16X36	50	140.715	35.008	0.249	6.91	16
26	M26	W24X55	50	251.694	56.821	0.226	1.094	6
27	M27	W18X35	50	159.3	7.75	0.049	0	6
28	M28	W24X55	50	251.694	24.963	0.099	0	6
29	M29	W16X26	50	105.975	-11.458	0.108	16.583	6
30	M31	W24X55	50	251.694	47.736	0.19	0	6
31	M32	W16X26	50	105.975	47.674	0.45	6.91	16
32	M33	W24X55	50	251.694	47.195	0.188	0	6
33	M34	W16X26	50	105.975	21.363	0.202	0	6
34	M35	W24X55	50	251.694	-35.237	0.14	35	6
35	M36	W16X26	50	105.975	21.392	0.202	0	6
36	M37	W24X55	50	251.694	-43.779	0.174	35	6
37	M38	W16X26	50	105.975	-71.617	0.676	16.065	14
38	M39	W24X55	50	251.694	-89.158	0.354	33.177	14
39	M40	W12X26	50	84.18	0.14	0.002	7.667	3
40	M41	W12X26	50	84.18	0.14	0.002	7.667	3
41	M43	W12X26	50	84.18	-4.292	0.051	6.25	6
42	M44	W12X26	50	84.18	-4.273	0.051	6.25	6
43	M45	W12X26	50	84.18	2.969	0.035	0	6
44	M47	W24X55	50	251.694	15.236	0.061	0	6
45	M48	W24X55	50	251.694	15.342	0.061	0	6
46	M49	W18X35	50	159.3	-11.145	0.07	18.666	6
47	M50	W18X35	50	159.3	10.957	0.069	0	6
48	M51	W12X26	50	84.18	6.59	0.078	0	6
49	M52	W12X26	50	84.18	7.013	0.083	0	6
50	M53	W12X26	50	84.18	8.704	0.103	0	6
51	M54	W12X26	50	84.18	5.985	0.071	0	6
52	M55	W12X26	50	84.18	6.288	0.075	0	6
53	M56	W12X26	50	84.18	8.463	0.101	0	6
54	M57	W16X26	50	105.975	-1.304	0.012	9	6
55	M58	W16X36	50	140.715	44.666	0.317	6.91	16
56	M69	W21X83	50	330.63	11.397	0.034	0	6
57	M59	W12X26	50	84.18	32.552	0.387	7.667	10
58	M60	W12X26	50	84.18	32.592	0.387	0	12
59	M61	W16X36	50	140.715	-60.981	0.433	5.012	12
60	M62	W12X26	50	84.18	0.144	0.002	7.889	3
61	M63	W12X26	50	84.18	56.835	0.675	2.636	10
62	M64	W12X26	50	84.18	50.609	0.601	7.666	12
63	M65	W12X26	50	84.18	0.14	0.002	7.667	3
64	M66	W12X26	50	84.18	-48.361	0.574	3.094	12
65	M70	W12X26	50	84.18	58.098	0.69	0	12
66	M71	W12X26	50	84.18	48.361	0.574	1.406	10
67	M72	W12X26	50	84.18	0.14	0.002	7.667	3
68	M73	W12X26	50	84.18	53.321	0.633	0.479	10
69	M75	W12X26	50	84.18	0.144	0.002	7.889	3
70	M77	W12X26	50	84.18	32.605	0.387	0	12
71	M79	W12X26	50	84.18	32.552	0.387	7.667	10
72	M80	W12X26	50	84.18	32.592	0.387	0	12
73	M81	W12X26	50	84.18	37.101	0.441	2.876	12
74	M82	W12X26	50	84.18	32.552	0.387	7.667	10
75	M83	W12X26	50	84.18	32.592	0.387	0	12
76	M84	W12X26	50	84.18	36.207	0.43	2.876	12
77	M85	W12X26	50	84.18	32.552	0.387	7.667	10
78	M86	W12X26	50	84.18	32.592	0.387	0	12

County of Orange
 OC Development Services
APPROVED
 This set of plans and specifications must be kept on the job at all times. It is unlawful to make any changes or alterations to these plans without the written permission from OC Development Services. The approval of these plans is based on the information provided and does not constitute an approval of the violation of any provision of any County Ordinance or State law.
 12/29/2025
 Building & Safety



Company : KPFF
 Designer : AS
 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

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Beam Shear Results for Hot Rolled : Exterior Roof Deck (Continued)

Building&Safety: OCPW/AzarvandB 12/29/2025

Label	Size	Fy[ksi]	PhiVn[k]	Vu[k]	Shear Check	Loc[ft]	LC
79	M87	W12X26	50	84.18	33.989	0.404	2.876
80	M88	W12X26	50	84.18	79.921	0.949	0
81	M89	W10X12	50	56.259	23.026	0.409	1.417
82	M91	W10X12	50	56.259	35.899	0.638	0
83	M92	W12X26	50	84.18	-65.012	0.772	10.447
84	M94	W12X26	50	84.18	0.061	0.001	3.368
85	M95	W12X26	50	84.18	59.877	0.711	4.52
86	M96	W12X26	50	84.18	52.163	0.62	0
87	M93	Not Designed	50	1359.6	0.287	0	4
88	M97	W12X26	50	84.18	29.565	0.351	3.354
89	M98	W12X26	50	84.18	19.82	0.235	0
90	M99	W12X26	50	84.18	-18.445	0.219	9.333
91	M100	W12X26	50	84.18	0.172	0.002	9.417
92	M101	W12X26	50	84.18	0.172	0.002	9.417
93	M102	W12X26	50	84.18	0.172	0.002	9.417
94	M103	W18X35	50	159.3	-31.814	0.2	35
95	M104	W12X26	50	84.18	0.056	0.001	3.073
96	M105	W12X26	50	84.18	0.084	0.001	4.594
97	M106	W12X26	50	84.18	58.098	0.69	9.417
98	M107	W12X26	50	84.18	57.373	0.682	0
99	M108	W12X26	50	84.18	57.373	0.682	0
100	M109	W10X12	50	56.259	35.899	0.638	10.75

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0898

County of Orange Public Works
 Development Services
APPROVED

This set of plans and specifications must be kept on the job at all times. It is unlawful to make any changes or alterations to these plans without the written permission from the County of Orange Public Works Department. The opening of these plans to other persons without the written approval of the County of Orange Public Works Department shall be an Ordinance or State law violation.

10/17/2022
 Building Official

Beam Shear Results for Hot Rolled : Sloped Roof

Label	Size	Fy[ksi]	PhiVn[k]	Vu[k]	Shear Check	Loc[ft]	LC
1	M1	W8X48	50	102	6.86	0.067	0
2	M2	W8X48	50	102	6.86	0.067	0
3	M3	W24X62	50	305.73	19.59	0.064	30.666
4	M4	W18X50	50	191.7	1.203	0.006	8
5	M5	W18X50	50	191.7	1.203	0.006	8
6	M6	W18X46	50	195.48	13.776	0.07	25.901
7	M7	W18X46	50	195.48	14.007	0.072	25.901
8	M8	W16X26	50	105.975	0.744	0.007	8
9	M9	W16X26	50	105.975	0.744	0.007	8
10	M10	W18X46	50	195.48	8.056	0.041	0
11	M11	W18X46	50	195.48	4.234	0.022	18.666
12	M12	W18X46	50	195.48	15.515	0.079	18.666
13	M13	W18X46	50	195.48	4.239	0.022	0
14	M14	W18X46	50	195.48	15.281	0.078	0
15	M15	W12X19	50	86.01	3.003	0.035	9.065
16	M16	W18X46	50	195.48	5.826	0.03	9
17	M17	W12X19	50	86.01	3.052	0.035	9.065
18	M18	W18X46	50	195.48	0.965	0.005	0
19	M19	W18X46	50	195.48	10.556	0.054	37.47
20	M20	W18X46	50	195.48	10.556	0.054	37.47
21	PUR21	W18X46	50	195.48	10.353	0.053	37.47
22	PUR22	W18X46	50	195.48	10.353	0.053	37.47
23	PUR23	W18X46	50	195.48	10.353	0.053	37.47
24	M24	W18X46	50	195.48	2.335	0.012	8.288
25	M25	W18X46	50	195.48	2.997	0.015	9.065
26	M26	W18X46	50	195.48	2.335	0.012	8.288
27	M27	W18X46	50	195.48	3.046	0.016	9.065
28	PUR28	W16X26	50	105.975	1.61	0.015	8.288
29	PUR29	W16X26	50	105.975	1.34	0.013	8.288
30	PUR30	W16X26	50	105.975	1.565	0.015	8.288
31	M31	W16X26	50	105.975	1.16	0.011	8.288



Company : KPFF
Designer : AS
Job Number : 1900799
Model Name : Dana Point Harbor_Bld'g. 10

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Beam Shear Results for Hot Rolled : Sloped Roof (Continued)

Building&Safety: OCPWArzarvndB 12/29/2025

Table with 10 columns: Label, Size, Fy[ksi], PhiVn[k], Vu[k], Shear Check, Loc[ft], LC. Row 32: M32, W16X26, 50, 105.975, 1.16, 0.011, 8.288, LC.

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0898

County of Orange, OC Public Works
OC Development Services
APPROVED
This set of plans and specifications must be kept on the job at all times. It is unlawful to make any changes or from OC Public Works, OC Development Services of Orange County. The planning of these plans shall be the responsibility of the contractor. No permit shall be an official of any County of Orange.

Beam Bending Results for Hot Rolled : Exterior Roof Deck

Table with 15 columns: Label, Size, Co..., Studs, Fy[ksi], Lb Top, Lb Bot[ft], L-tor, Cb, Cm, PhiM, Mu[k-ft], Tmax, Cff[ksi], Bending, Loc[ft], LC, Equ. Rows 1-52 detailing beam properties and results.



Company : KPFF
 Designer : AS
 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

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Oct 17, 2022
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Beam Bending Results for Hot Rolled : Exterior Roof Deck (Continued)

Building&Safety: OCPW&ZarvandB 12/29/2025

Label	Size	Co...	Studs	Fy[ksj]	Lb Top[...]	Lb Bot[ft]	L-tor...	Cb	Cm	PhiM...	Mu[k-ft]	Tmax...	Cf[ksj]	Bendin...	Loc[ft]	LC	Equ...
53	M56	W1...	Yes	8	50					192.52	16.208	198.9	68.919	0.084	0.084	3	H1-1b
54	M57	W1...	Yes	8	50					229.4...	2.934	211.3...	69.881	0.013	4.5	6	H1-1b
55	M58	W1...	Yes	16	50					346.75	92.086	412.3...	120.6...	0.266	7.255	6	H1-1b
56	M69	W2...	No		50	2	6.25	6.25	1	0	735	-53.012		0.072	0	6	H1-1b
57	M59	W1...	No		50	2	7.667	7.667	1.083	0	139.5	16.041		0.115	7.108	10	H1-1b
58	M60	W1...	No		50	2	7.889	7.889	1.05	0	139.5	16.238		0.116	0.575	12	H1-1b
59	M61	W1...	No		50	2	7.888	7.888	1.05	0	240	156.8...		0.654	4.519	16	H1-1b
60	M62	W1...	Yes	8	50	2	7.889	7.889	1.061	0	139.5	0.284		0.002	3.944	3	H1-1b
61	M63	W1...	No		50	2	7.667	7.667	1.103	0	139.5	42.496		0.305	3.594	10	H1-1b
62	M64	W1...	No		50	2	7.666	7.666	1.568	0	139.5	73.705		0.528	6.149	12	H1-1b
63	M65	W1...	Yes	8	50	2	7.667	7.667	1.044	0	139.5	0.268		0.002	3.833	3	H1-1b
64	M66	W1...	No		50	2	4.5	4.5	1.871	0	139.5	29.861		0.214	2.11	12	H1-1b
65	M70	W1...	No		50	2	9.417	9.417	1.041	0	139.5	28.769		0.206	0.589	12	H1-1b
66	M71	W1...	No		50	2	4.5	4.5	1.291	0	139.5	29.861		0.214	2.391	10	H1-1b
67	M72	W1...	Yes	8	50	2	7.667	7.667	1.044	0	139.5	0.268		0.002	3.834	3	H1-1b
68	M73	W1...	No		50	2	7.666	7.666	1.693	0	139.5	49.233		0.353	1.517	10	H1-1b
69	M75	W1...	Yes	8	50	2	7.889	7.889	1.061	0	139.5	0.284		0.002	3.945	3	H1-1b
70	M77	W1...	No		50	2	7.889	7.889	1.049	0	139.5	16.141		0.116	0.575	12	H1-1b
71	M79	W1...	No		50	2	7.667	7.667	1.083	0	139.5	16.041		0.115	7.108	10	H1-1b
72	M80	W1...	No		50	2	7.889	7.889	1.05	0	139.5	16.238		0.116	0.575	12	H1-1b
73	M81	W1...	No		50	2	7.888	7.888	1.138	0	139.5	64.96		0.466	3.369	14	H1-1b
74	M82	W1...	No		50	2	7.667	7.667	1.083	0	139.5	16.041		0.115	7.108	10	H1-1b
75	M83	W1...	No		50	2	7.889	7.889	1.05	0	139.5	16.238		0.116	0.575	12	H1-1b
76	M84	W1...	No		50	2	7.888	7.888	1.108	0	139.5	35.489		0.254	3.862	12	H1-1b
77	M85	W1...	No		50	2	7.667	7.667	1.083	0	139.5	16.041		0.115	7.108	10	H1-1b
78	M86	W1...	No		50	2	7.889	7.889	1.05	0	139.5	16.238		0.116	0.575	12	H1-1b
79	M87	W1...	No		50	2	7.888	7.888	1.209	0	139.5	29.837		0.214	3.369	16	H1-1b
80	M88	W1...	No		50	2	9.333	9.333	1.142	0	139.5	51.771		0.371	7.875	14	H1-1b
81	M89	W1...	No		50	1.417	1.417	1.417	1.399	0	46.904	11.389		0.243	0.915	14	H1-1b
82	M91	W1...	No		50	2	10.75	10.75	1.549	0	27.434	-13.175		0.48	0.56	14	H1-1b
83	M92	W1...	No		50	2	12.083	12.0...	1.071	0	139.5	64.071		0.459	9.44	14	H1-1b
84	M94	W1...	Yes	4	50					167.8...	0.052	78.373	34.94	0	1.684	5	I3.2.a
85	M95	W1...	No		50	1.166	4.52	4.52	1.122	0	139.5	29.898		0.214	4.002	10	H1-1b
86	M96	W1...	No		50	2	3.368	3.368	1.154	0	139.5	25.853		0.185	0.526	12	H1-1b
87	M93	Not...	Yes		50	0	0	0	0	0	0			0	0	1	
88	M97	W1...	No		50	2	3.354	3.354	1.146	0	139.5	14.646		0.105	2.83	10	H1-1b
89	M98	W1...	No		50	1.166	1.166	1.166	1.374	0	139.5	9.866		0.071	0.498	12	H1-1b
90	M99	W1...	Yes	10	50					192.9...	20.365	232.0...	68.919	0.106	5.639	6	I3.2.a
91	M100	W1...	Yes	10	50	2	9.417	9.417	1.008	0	139.5	0.404		0.003	4.708	3	H1-1b
92	M101	W1...	Yes	10	50	2	9.417	9.417	1.008	0	139.5	0.404		0.003	4.708	3	H1-1b
93	M102	W1...	Yes	10	50	2	9.417	9.417	1.008	0	139.5	0.404		0.003	4.708	3	H1-1b
94	M103	W1...	Yes	34	50					431.3...	272.3...	381.2...	241.2...	0.631	20.7...	6	I3.2.a
95	M104	W1...	Yes	4	50					167.7...	0.043	76.403	34.94	0	1.537	5	I3.2.a
96	M105	W1...	Yes	4	50					168.4...	0.096	114.2...	34.94	0.001	2.297	5	I3.2.a
97	M106	W1...	No		50	2	9.417	9.417	1.071	0	139.5	28.769		0.206	8.828	12	H1-1b
98	M107	W1...	No		50	2	7.75	7.75	1.055	0	139.5	28.432		0.204	0.565	10	H1-1b
99	M108	W1...	No		50	2	7.75	7.75	1.055	0	139.5	28.432		0.204	0.565	10	H1-1b
100	M109	W1...	No		50	2	10.75	10.75	1.549	0	27.434	-13.175		0.48	0.56	14	H1-1b

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PE21-8998
 County of Orange Public Works
 Department Services
 APPROVED
 The undersigned hereby certifies that the above information is true and correct to the best of his knowledge and belief and that he is an authorized signatory of the County of Orange.

Beam Bending Results for Hot Rolled : Sloped Roof

Label	Size	Co...	Studs	Fy[ksj]	Lb Top[...]	Lb Bot[ft]	L-tor...	Cb	Cm	PhiM...	Mu[k-ft]	Tmax...	Cf[ksj]	Bendin...	Loc[ft]	LC	Equ...
1	M1	W8...	No		50	2	28.923	28.9...	2.277	0	183.75	-33.765		0.185	0	8	H1-1b
2	M2	W8...	No		50	2	28.923	28.9...	2.277	0	183.75	-33.765		0.185	0	8	H1-1b
3	M3	W2...	No		50	2	30.666	30.6...	1.397	0	152.0...	-98.842		0.65	30.6...	8	H1-1b
4	M4	W1...	No		50	2	8	8	1.061	0	378.75	2.405		0.006	4	8	H1-1b
5	M5	W1...	No		50	2	8	8	1.061	0	378.75	2.405		0.006	4	8	H1-1b



Company : KPFF
 Designer : AS
 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

Oct 17, 2022
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Beam Bending Results for Hot Rolled : Sloped Roof (Continued)

Building&Safety: OCPWArvandB 12/29/2025

Label	Size	Co...	Studs	Fy[ksi]	Lb Top	Lb Bot	L-tor	Cb	Cm	PhiM	Mu[k-ft]	Tmax	Cf[ksi]	Bendin	Loc[ft]	LC	Equ...
6	M6	W1...	No	50	2	25.901	25.9...	1.66	0	340.1...	0			114	25.9...	1	H1-1b
7	M7	W1...	No	50	2	25.901	25.9...	1.66	0	340.1...	0			114	25.9...	1	H1-1b
8	M8	W1...	No	50	2	8	8	1.061	0	165.75	1.488			0.009	4	8	H1-1b
9	M9	W1...	No	50	2	8	8	1.061	0	165.75	1.488			0.009	4	8	H1-1b
10	M10	W1...	No	50	2	30.666	30.6...	1.007	0	340.1...	70.82			0.208	15	8	H1-1b
11	M11	W1...	No	50	2	18.666	18.6...	1.109	0	340.1...	29.588			0.087	7.972	8	H1-1b
12	M12	W1...	No	50	2	18.666	18.6...	1.113	0	340.1...	79.907			0.235	7.972	8	H1-1b
13	M13	W1...	No	50	2	19	19	1.044	0	340.1...	30.359			0.089	10.8...	8	H1-1b
14	M14	W1...	No	50	2	19	19	1.032	0	340.1...	82.147			0.242	10.8...	8	H1-1b
15	M15	W1...	No	50	2	9.065	9.065	1.016	0	92.625	6.805			0.074	4.533	8	H1-1b
16	M16	W1...	No	50	2	9	9	1.207	0	340.1...	24.61			0.072	4.688	8	H1-1b
17	M17	W1...	No	50	2	9.065	9.065	1.016	0	92.625	6.917			0.075	4.533	8	H1-1b
18	M18	W1...	No	50	2	9	9	1.031	0	340.1...	3.65			0.011	4.313	8	H1-1b
19	M19	W1...	No	50	2	37.47	37.47	1.364	0	340.1...	0			114	37.47	1	H1-1a
20	M20	W1...	No	50	2	37.47	37.47	1.364	0	340.1...	0			114	37.47	1	H1-1a
21	PUR21	W1...	No	50	2	37.47	37.47	1.364	0	340.1...	0			114	37.47	1	H1-1a
22	PUR22	W1...	No	50	2	37.47	37.47	1.364	0	340.1...	0			114	37.47	1	H1-1a
23	PUR23	W1...	No	50	2	37.47	37.47	1.364	0	340.1...	0			114	37.47	1	H1-1a
24	M24	W1...	No	50	2	8.288	8.288	1.043	0	340.1...	4.838			0.014	4.144	8	H1-1b
25	M25	W1...	No	50	2	9.065	9.065	1.016	0	340.1...	6.792			0.02	4.533	8	H1-1b
26	M26	W1...	No	50	2	8.288	8.288	1.043	0	340.1...	4.838			0.014	4.144	8	H1-1b
27	M27	W1...	No	50	2	9.065	9.065	1.016	0	340.1...	6.903			0.02	4.533	8	H1-1b
28	PUR28	W1...	No	50	2	8.288	8.288	1.043	0	165.75	3.336			0.02	4.144	8	H1-1b
29	PUR29	W1...	No	50	2	8.288	8.288	1.043	0	165.75	2.777			0.017	4.144	8	H1-1b
30	PUR30	W1...	No	50	2	8.288	8.288	1.043	0	165.75	3.243			0.02	4.144	8	H1-1b
31	M31	W1...	No	50	2	8.288	8.288	1.043	0	165.75	2.4			0.015	4.317	8	H1-1b
32	M32	W1...	No	50	2	8.288	8.288	1.043	0	165.75	2.4			0.015	4.317	8	H1-1b

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-8988
 City of Orange, Public Works
 Department, Services
 APPROVED
 This seal of the City of Orange shall not be affixed on the plans or drawings unless the project complies with the provisions of the City of Orange Code. The Planning Commission shall be notified of the project and the project shall be an official project of the City of Orange.

Beam Deflections, Relative for Standard Cats : Exterior Roof Deck

Beam	Camber[in]	PreDL[in]	PreDL Ratio	DL[in]	DL Ratio	LL[in]	LL Ratio	DL+LL[in]	DL+LL Ratio	
1	M1	0	0.079	4559	0.11	3273	0.06	6060	0.17	2125
2	M2	0	-0.003	10000	-0.004	10000	-0.002	10000	-0.007	10000
3	M3	0	-0.002	10000	-0.004	10000	-0.003	10000	-0.006	10000
4	M4	0	0.077	5482	0.16	2618	0.11	3814	0.271	1552
5	M5	0	0.022	10000	0.052	5505	0.033	8708	0.084	3373
6	M6	0	0.019	10000	0.045	6170	0.028	9772	0.073	3782
7	M7	0	0.007	10000	0.009	10000	0.004	10000	0.013	10000
8	M8	0	0.049	5780	0.107	2662	0.074	3824	0.181	1569
9	M9	0	0.147	2248	0.327	1011	0.186	1770	0.513	643
10	M10	0	0.074	2788	0.157	1309	0.09	2291	0.247	833
11	M11	0	0.037	5498	0.076	2711	0.041	5046	0.117	1763
12	M12	0	0	10000	0	10000	0	10000	0	10000
13	M13	0	0.028	6538	0.037	5026	0.016	10000	0.052	3527
14	M14	0	0	10000	0	10000	0	10000	0	10000
15	M15	0	0.063	2905	0.083	2226	0.036	5181	0.118	1557
16	M16	0	0.136	2088	0.272	1046	0.167	1703	0.438	648
17	M17	0	0.243	1356	0.473	698	0.289	1143	0.762	433
18	M18	0	0.097	2114	0.205	1005	0.123	1671	0.328	627
19	M19	0	0.061	3239	0.11	1806	0.048	4108	0.159	1255
20	M20	0.75	0.207	2028	0.061	6867	0.35	1199	0.411	1022
21	M21	0	0.076	2619	0.178	1121	0.129	1538	0.307	648
22	M22	0.5	0.332	1266	0.043	9696	0.276	1523	0.319	1318
23	M23	0	0.093	2136	0.158	1262	0.08	2497	0.237	838
24	M24	0.25	0.304	1384	0.243	1728	0.249	1688	0.492	854
25	M25	0	0.066	3028	0.104	1905	0.048	4138	0.153	1304
26	M26	0.5	0.177	2376	0.169	2490	0.29	1446	0.459	915



Company : KPFF
Designer : AS
Job Number : 1900799
Model Name : Dana Point Harbor_Bld'g. 10

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Beam Deflections, Relative for Standard Cats : Exterior Roof Deck (Continued)

Building&Safety: OCPW&zarvandB 12/29/2025

Table with columns: Beam, Camber[in], PreDL[in], PreDL Ratio, DL[in], DL Ratio, LL[in], LL Ratio, DL+LL[in], DL+LL Ratio. Rows 27-83.

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-4898
County of Orange - Public Works
UC Development Services
APPROVED
This set of plans and specifications must be kept on the job at all times. It is the responsibility of the contractor to obtain all necessary permits from the County of Orange. The contractor shall be responsible for obtaining all necessary permits from the County of Orange. The contractor shall be responsible for obtaining all necessary permits from the County of Orange.



Company : KPFF
 Designer : AS
 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

Oct 17, 2022
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Beam Absolute Deflections : Exterior Roof Deck

Building&Safety: OCPW&Zarv&B 12/29/2025

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLE21-0898

Beam	PreDL[in]	DL[in]	LL[in]	DL+LL[in]
1	M1	0.079	0.11	0.06
2	M2	-0.003	-0.004	-0.002
3	M3	-0.002	-0.004	-0.003
4	M4	0.077	0.16	0.11
5	M5	0.022	0.052	0.033
6	M6	0.019	0.045	0.028
7	M7	0.007	0.009	0.004
8	M8	0.049	0.107	0.074
9	M9	0.147	0.327	0.186
10	M10	0.074	0.157	0.09
11	M11	0.037	0.076	0.041
12	M12	0	0	0
13	M13	0.028	0.037	0.016
14	M14	0	0	0
15	M15	0.106	0.142	0.069
16	M16	0.136	0.272	0.167
17	M17	0.243	0.473	0.289
18	M18	0.097	0.205	0.123
19	M19	0.061	0.11	0.048
20	M20	0.207	0.061	0.35
21	M21	0.126	0.291	0.209
22	M22	0.432	0.247	0.397
23	M23	0.093	0.158	0.08
24	M24	0.304	0.243	0.249
25	M25	0.066	0.104	0.048
26	M26	0.177	0.169	0.29
27	M27	0.047	0.06	0.021
28	M28	0.218	0.332	0.211
29	M29	0.157	0.2	0.08
30	M31	0.269	0.238	0.481
31	M32	0.167	0.311	0.177
32	M33	0.265	0.238	0.486
33	M34	0.211	0.395	0.231
34	M35	0.238	0.372	0.465
35	M36	0.206	0.479	0.342
36	M37	0.352	0.567	0.581
37	M38	0.151	0.382	0.274
38	M39	0.306	0.319	0.581
39	M40	0.452	0.564	0.206
40	M41	0.088	0.109	0.04
41	M43	0.043	0.056	0.019
42	M44	0.029	0.038	0.014
43	M45	0.011	0.025	0.016
44	M47	0.052	0.072	0.066
45	M48	0.091	0.173	0.127
46	M49	0.08	0.105	0.082
47	M50	0.117	0.188	0.133
48	M51	0.031	0.066	0.046
49	M52	0.065	0.144	0.084
50	M53	0.08	0.107	0.082
51	M54	0.045	0.096	0.068
52	M55	0.113	0.249	0.144
53	M56	0.146	0.324	0.185
54	M57	0.001	0.002	0.001
55	M58	0.143	0.274	0.162
56	M69	-0.01	-0.013	-0.007
57	M59	0.09	0.13	0.075

County of Orange - OC Public Works
 OC Development Services
 APPROVED
 This is a preliminary approval. Specifications must be kept on the job site. It is the contractor's responsibility to make any changes or amendments to these plans with a written permission from the County of Orange Development Services. The stamping of these plans does not constitute an approval of any provisions of any County Ordinance or State Statute.
 Date: 10/17/2022
 Signature: [Redacted]
 Title: [Redacted]



Company : KPFF
 Designer : AS
 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

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Beam Absolute Deflections : Exterior Roof Deck (Continued)

Building&Safety: OCPW&zarvandB 12/29/2025

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLE21-0898

	Beam	PreDL[in]	DL[in]	LL[in]	DL+LL[in]
58	M60	0.09	0.208	0.145	0.354
59	M61	0.1	0.232	0.163	0.395
60	M62	0.156	0.288	0.163	0.452
61	M63	0.116	0.271	0.192	0.462
62	M64	0.181	0.426	0.304	0.731
63	M65	0.208	0.453	0.304	0.754
64	M66	0.115	0.265	0.191	0.457
65	M70	0.1	0.263	0.181	0.444
66	M71	0.1	0.234	0.153	0.387
67	M72	0.23	0.463	0.259	0.722
68	M73	0.166	0.399	0.259	0.658
69	M75	0.13	0.243	0.143	0.386
70	M77	0.069	0.155	0.108	0.263
71	M79	0.223	0.412	0.259	0.671
72	M80	0.262	0.605	0.426	1.031
73	M81	0.272	0.638	0.451	1.089
74	M82	0.247	0.414	0.26	0.674
75	M83	0.279	0.644	0.453	1.097
76	M84	0.288	0.668	0.473	1.14
77	M85	0.108	0.154	0.085	0.24
78	M86	0.12	0.275	0.192	0.467
79	M87	0.125	0.29	0.203	0.494
80	M88	0.108	0.253	0.177	0.431
81	M89	0.125	0.29	0.203	0.494
82	M91	0.324	0.754	0.538	1.291
83	M92	0.272	0.638	0.451	1.089
84	M94	0.103	0.207	0.13	0.336
85	M95	0.099	0.228	0.16	0.387
86	M96	0.099	0.228	0.16	0.387
87	M93	0	0	0	0
88	M97	0.079	0.179	0.125	0.304
89	M98	0.082	0.185	0.13	0.315
90	M99	0.133	0.242	0.134	0.376
91	M100	0.391	0.759	0.419	1.178
92	M101	0.553	1.063	0.579	1.642
93	M102	0.464	0.894	0.486	1.381
94	M103	0.378	0.482	0.633	1.115
95	M104	0.159	0.329	0.176	0.505
96	M105	0.182	0.363	0.204	0.567
97	M106	0.147	0.369	0.265	0.634
98	M107	0.147	0.369	0.265	0.634
99	M108	0.1	0.263	0.181	0.444
100	M109	0.288	0.668	0.472	1.14

County of Orange - OC Public Works
 OC Development Services
 APPROVED
 This document contains confidential information. The stamping of these plans shall not constitute an endorsement or approval of any provisions of any County Ordinance or law.
 12/29/2025

Beam Absolute Deflections : Sloped Roof

	Beam	PreDL[in]	DL[in]	LL[in]	DL+LL[in]
1	M1	0.007	0.022	0.011	0.034
2	M2	0.007	0.022	0.011	0.034
3	M3	0.04	0.132	0.066	0.198
4	M4	0	0.001	0	0.001
5	M5	0	0.001	0	0.001
6	M6	0.096	0.301	0.147	0.448
7	M7	0.098	0.306	0.15	0.456
8	M8	0	0.001	0	0.001
9	M9	0	0.001	0	0.001
10	M10	0.094	0.294	0.146	0.44



Company : KPFF
 Designer : AS
 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

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Beam Absolute Deflections : Sloped Roof (Continued)

Building&Safety: OCPWAzarvanB 12/29/2025

Beam	PreDL[in]	DL[in]	LL[in]	DL+LL[in]
11	M11	0.077	0.24	0.117
12	M12	0.085	0.271	0.134
13	M13	0.078	0.244	0.119
14	M14	0.088	0.281	0.139
15	M15	0.001	0.01	0.006
16	M16	0.003	0.009	0.005
17	M17	0.001	0.01	0.006
18	M18	0.001	0.002	0.001
19	M19	0.082	0.488	0.384
20	M20	0.086	0.495	0.388
21	PUR21	0.035	0.429	0.356
22	PUR22	0.041	0.4	0.341
23	PUR23	0.03	0.422	0.353
24	M24	0.061	0.183	0.088
25	M25	0.082	0.266	0.132
26	M26	0.063	0.19	0.092
27	M27	0.086	0.279	0.138
28	PUR28	0.069	0.214	0.106
29	PUR29	0.097	0.302	0.15
30	PUR30	0.069	0.214	0.106
31	M31	0.086	0.269	0.133
32	M32	0.087	0.273	0.135

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLE21-0898
 County of Orange - OC Public Works
 Development Services
 APPROVED
 This drawing and specifications must be kept on the job site. It is unlawful to make any changes or alterations to these plans without a written permission from the County of Orange Development Services of Orange County. The stamping of these plans does not constitute an approval or endorsement of any provisions of any County Ordinance or Law.
 Date: 10/17/2022
 Title: Structural
 Name: DAVIS GRIFFIN

Beam End Reactions : Exterior Roof Deck

Beam	End	PreDL[k]	DL[k]	LL[k]	LLS[k]	Roof[k]	Roof Cat	Max[k]	LC	Min[k]	LC	
1	M1	Start	7.53	10.432	5.599	0	0	RLL	21.477	7	8.299	11
2	M1	End	8.873	12.299	6.615	0	0	RLL	25.342	7	9.425	11
3	M2	Start	4.341	5.936	3.162	0	0	RLL	12.183	7	5.133	11
4	M2	End	2.18	2.94	1.55	0	0	RLL	6.008	7	2.436	13
5	M3	Start	2.308	5.095	3.505	0	0	RLL	13.596	10	-1.144	11
6	M3	End	5.667	12.129	8.354	0	0	RLL	27.921	7	6.296	11
7	M4	Start	9.026	18.955	13.047	0	0	RLL	43.621	7	12.636	3
8	M4	End	7.973	17.032	11.627	0	0	RLL	42.574	12	-0.993	13
9	M5	Start	5.125	11.287	7.008	0	0	RLL	24.757	7	5.958	15
10	M5	End	6.621	15.391	9.273	0	0	RLL	33.306	7	8.58	15
11	M6	Start	6.387	15.061	9.08	0	0	RLL	32.6	7	8.942	3
12	M6	End	4.574	10.846	6.451	0	0	RLL	23.336	7	5.922	11
13	M7	Start	3.742	4.795	2.343	0	-0.063	RLL	9.502	7	2.512	11
14	M7	End	6.648	9.695	5.107	0	0.063	RLL	19.837	6	6.009	11
15	M8	Start	16.081	34.577	21.016	0	2.27	RLL	76.254	6	22.513	3
16	M8	End	11.193	23.435	16.034	0	0.631	RLL	54.093	6	13.56	13
17	M9	Start	20.895	51.037	31.391	0	1.863	RLL	112.402	6	29.253	3
18	M9	End	23.62	55.002	29.846	0	4.366	RLL	115.939	6	33.067	3
19	M10	Start	5.246	13.772	8.767	0	0	RLL	30.553	7	7.344	3
20	M10	End	6.164	16.162	10.467	0	0	RLL	36.142	7	8.629	3
21	M11	Start	3.274	8.238	4.973	0	0	RLL	17.842	7	3.366	15
22	M11	End	2.867	7.251	4.244	0	0	RLL	15.492	7	3.194	15
23	M12	Start	0.256	0.697	0.225	0	0	RLL	1.197	7	0.359	3
24	M12	End	0.256	0.697	0.225	0	0	RLL	1.197	7	0.359	3
25	M13	Start	2.912	4.104	2.188	0	0	RLL	8.426	7	3.061	11
26	M13	End	2.912	4.104	2.188	0	0	RLL	8.426	7	3.061	11
27	M14	Start	0.277	0.398	0.242	0	0	RLL	0.865	7	0.358	17
28	M14	End	0.277	0.398	0.242	0	0	RLL	0.865	7	0.358	17
29	M15	Start	6.344	9.037	4.944	0	0	RLL	18.754	7	5.399	11
30	M15	End	6.344	9.037	4.944	0	0	RLL	18.754	7	5.399	11
31	M16	Start	14.122	31.785	21.812	0	0	RLL	73.041	7	19.771	3



Company : KPFF
Designer : AS
Job Number : 1900799
Model Name : Dana Point Harbor_Bld'g. 10

Oct 17, 2022
1:30 PM
Checked By: _____

Beam End Reactions : Exterior Roof Deck (Continued)

Building&Safety: OCPWAzarvandB 12/29/2025

Table with columns: Beam, End, PreDL[k], DL[k], LL[k], LLS[k], Roof[k], Roof Cat, Max[k], LC, Min[k], LC. Rows 89-145. Includes a red stamp: 'Orange 100 Public Works Development Services APPROVED'.



Company : KPFF
 Designer : AS
 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

Oct 17, 2022
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 Checked By: _____

Beam End Reactions : Exterior Roof Deck (Continued)

Building&Safety: OCPWAzarvanB 12/29/2025

Beam	End	PreDL[k]	DL[k]	LL[k]	LLS[k]	Roof[k]	Roof Cat	Max[k]	LC	Min[k]	LC
146	End	1.462	4.494	3.14	0	0	RLL	13.227	14	-2.219	15
147	M82 Start	0.1	0.1	0	0	0	RLL	2.368	10	-2.158	11
148	End	0.1	0.1	0	0	0	RLL	32.552	10	-32.342	11
149	M83 Start	0.103	0.103	0	0	0	RLL	32.592	12	-32.376	13
150	End	0.103	0.103	0	0	0	RLL	2.334	12	-2.090	13
151	M84 Start	1.493	3.854	2.777	0	0	RLL	10.41	10	-0.928	11
152	End	1.131	2.878	2.054	0	0	RLL	8.878	12	-1.806	13
153	M85 Start	0.1	0.1	0	0	0	RLL	2.368	10	-2.158	11
154	End	0.1	0.1	0	0	0	RLL	32.552	10	-32.342	11
155	M86 Start	0.103	0.103	0	0	0	RLL	32.592	12	-32.376	13
156	End	0.103	0.103	0	0	0	RLL	2.334	12	-2.119	13
157	M87 Start	0.889	2.447	1.719	0	0	RLL	8.976	16	-2.194	11
158	End	0.685	1.837	1.272	0	0	RLL	7.237	12	-2.743	13
159	M88 Start	1.115	2.686	1.955	0	0	RLL	79.921	16	-71.518	14
160	End	1.115	4.169	2.944	0	0	RLL	17.689	16	-4.74	14
161	M89 Start	0.159	0.372	0.279	0	0	RLL	12.825	14	-11.905	15
162	End	0.159	0.372	0.279	0	0	RLL	23.026	14	-22.106	15
163	M91 Start	1.209	2.821	2.12	0	0	RLL	35.899	16	-27.009	14
164	End	1.209	2.821	2.12	0	0	RLL	35.899	14	-28.915	15
165	M92 Start	1.475	4.913	3.468	0	0	RLL	20.039	16	-4.78	14
166	End	1.519	3.611	2.484	0	0	RLL	13.036	12	-4.211	13
167	M94 Start	0.044	0.044	0	0	0	RLL	0.061	5	0.039	17
168	End	0.044	0.044	0	0	0	RLL	0.061	5	0.039	17
169	M95 Start	0.104	0.224	0.109	0	0	RLL	8.706	10	-8.181	11
170	End	0.19	0.534	0.315	0	0	RLL	59.877	10	-58.599	11
171	M96 Start	0.044	0.044	0	0	0	RLL	52.163	12	-52.071	13
172	End	0.044	0.044	0	0	0	RLL	9.142	12	-9.05	13
173	M93 Start	0.177	0.64	0.424	0	0	RLL	17.755	14	-16.2	15
174	End	0.159	0.494	0.338	0	0	RLL	17.538	16	-16.013	14
175	M97 Start	0.044	0.044	0	0	0	RLL	5.22	10	-5.128	11
176	End	0.044	0.044	0	0	0	RLL	29.565	10	-29.473	11
177	M98 Start	0.015	0.015	0	0	0	RLL	19.82	12	-19.788	13
178	End	0.015	0.015	0	0	0	RLL	14.897	12	-14.865	13
179	M99 Start	1.088	3.028	2.176	0	0	RLL	7.116	7	1.523	3
180	End	1.088	8.026	5.509	0	0	RLL	18.445	7	1.523	3
181	M100 Start	0.123	0.123	0	0	0	RLL	0.172	5	0.11	17
182	End	0.123	0.123	0	0	0	RLL	0.172	5	0.11	17
183	M101 Start	0.123	0.123	0	0	0	RLL	0.172	5	0.11	17
184	End	0.123	0.123	0	0	0	RLL	0.172	5	0.11	17
185	M102 Start	0.123	0.123	0	0	0	RLL	0.172	5	0.11	17
186	End	0.123	0.123	0	0	0	RLL	0.172	5	0.11	17
187	M103 Start	4.242	11.192	7.943	0	0	RLL	26.139	7	5.939	3
188	End	4.33	13.737	9.581	0	0	RLL	31.814	7	6.062	3
189	M104 Start	0.04	0.04	0	0	0	RLL	0.056	5	0.036	17
190	End	0.04	0.04	0	0	0	RLL	0.056	5	0.036	17
191	M105 Start	0.06	0.06	0	0	0	RLL	0.084	5	0.054	17
192	End	0.06	0.06	0	0	0	RLL	0.084	5	0.054	17
193	M106 Start	0.123	0.123	0	0	0	RLL	3.397	12	-3.139	13
194	End	0.123	0.123	0	0	0	RLL	58.098	12	-57.84	13
195	M107 Start	0.101	0.101	0	0	0	RLL	57.373	10	-57.161	11
196	End	0.101	0.101	0	0	0	RLL	4.069	10	-3.858	11
197	M108 Start	0.101	0.101	0	0	0	RLL	57.373	10	-57.161	11
198	End	0.101	0.101	0	0	0	RLL	4.069	10	-3.858	11
199	M109 Start	1.209	2.821	2.12	0	0	RLL	35.899	16	-27.009	14
200	End	1.209	2.821	2.12	0	0	RLL	35.899	14	-28.915	15

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0898
 Orange 15 Public Works
 Development Services
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 and specifications must be kept on the
 project site for the duration of the project.
 The contractor shall be responsible for
 obtaining all necessary permits from the
 appropriate agencies. The status of these plan
 sheets shall be an indication of the status of
 the project. No violation of the provisions of any County
 Ordinance shall be deemed to exist by the
 issuance of these plan sheets.
 Title: Structural
 Building Official



Company : KPFF
 Designer : AS
 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

Oct 17, 2022
 1:30 PM
 Checked By: _____

Beam End Reactions : Sloped Roof (Continued)

Building&Safety: OCPWArvandB 12/29/2025

Beam	End	PreDL[k]	DL[k]	LL[k]	LLS[k]	Roof[k]	Roof Cat	Max[k]	LC	Min[k]	LC
58	End	0.168	0.654	0	0	0.347	RLL	1.34	8	0.235	3
59	PUR30 Start	0.179	0.755	0	0	0.412	RLL	1.565	8	0.251	3
60	End	0.179	0.755	0	0	0.412	RLL	1.565	8	0.251	3
61	M31 Start	0.158	0.572	0	0	0.296	RLL	1.16	8	0.221	3
62	End	0.158	0.572	0	0	0.296	RLL	1.16	8	0.221	3
63	M32 Start	0.158	0.572	0	0	0.296	RLL	1.16	8	0.221	3
64	End	0.158	0.572	0	0	0.296	RLL	1.16	8	0.221	3

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLE21-0898
 Orange County Public Works Development Services
 APPROVED
 Plans and specifications must be kept on the file. It is unlawful to make any changes or amendments to these plans without written permission of the County. The signing of these plans constitutes an acknowledgment that the signatory is a duly licensed professional engineer or architect of any County of California.
 Title: Structural Engineer
 BUILDING OFFICIAL

Column Forces/Moments, Dead & Other Categories : Axial Force

Column St...	Lift No.	Floor Label	Coordinate...	Max Base ...	Max Bas...	DLPre[k]	DL[k]	OL1[k]	OL2[k]	OL3[k]	OL4[k]
1	(A-5)	1	Exterior Ro...	0.83,667	44.923	7	17.388	23.097	1.723	0	0
2	(A-4)	1	Exterior Ro...	30.083,83...	41.633	6	16.636	21.658	1.854	0	0
3	CS3	1	Exterior Ro...	49.583,83...	10.616	7	5.576	6.458	-0.21	0	0
4	(E-5)	1	Exterior Ro...	0.17,167	32.034	6	8.451	16.062	5.552	3.332	0
5	(E-4.5)	1	Exterior Ro...	16.583,17...	215.538	7	44.266	94.719	1.916	-0.175	0
6	(E-3)	1	Exterior Ro...	51.583,17...	189.157	6	39.858	88.826	-6.374	-3.158	0
7	(D-5)	1	Exterior Ro...	0.21,667	44.895	6	10.879	21.616	-3.815	-0.444	0
8	(C-5)	1	Exterior Ro...	0.44,667	91.788	6	20.186	43.001	-3.38	5.716	0
9	(B-5)	1	Exterior Ro...	0.68,333	58.53	6	15.917	28.215	-1.092	6.292	0
10	(C-3)	1	Exterior Ro...	51.583,44...	201.747	6	41.385	91.06	-1.981	-2.907	0
11	(B-3)	1	Exterior Ro...	51.583,68...	185.699	6	43.389	91.568	8.729	-8.694	0
12		1	Sloped Roof				5.081	9.633	0	0	0
13	(A-3)	1	Exterior Ro...	51.583,83...	13.99	7	7.039	8.212	1.804	0.177	0
14	(B-4.5)	1	Exterior Ro...	16.583,68...	149.74	7	33.227	67.223	1.645	1.008	0
15	(C-4.5)	1	Exterior Ro...	16.583,44...	240.647	6	44.347	104.059	-7.501	-1.147	0
16	(4.7-5)	1	Exterior Ro...	0,0	32.612	6	5.885	15.157	2.006	4.049	0
17	(4.7-4.5)	1	Exterior Ro...	16.583,0	92.613	6	16.146	41.306	1.769	-0.212	0
18	(4.7-3)	1	Exterior Ro...	51.583,0	67.336	6	11.961	30.782	3.355	-3.837	0
19	CS19	1	Exterior Ro...	-6.25,64.5	10.848	6	2.873	5.042	0	0	0
20	(D-2)	1	Exterior Ro...	76.583,21...	31.909	8	10.017	18.016	0	0	0
21		1	Sloped Roof				10.017	18.016	0	0	0
22	(B-2)	1	Exterior Ro...	76.583,68...	31.611	8	9.966	17.871	0	0	0
23		1	Sloped Roof				9.966	17.871	0	0	0
24	CS22	1	Exterior Ro...	59.583,49...	25.957	6	6.086	11.443	0	0	0
25		1	Sloped Roof				1.668	4.91	0	0	0
26	CS23	1	Exterior Ro...	59.583,40...	26.249	6	6.142	11.563	0	0	0
27		1	Sloped Roof				1.68	4.962	0	0	0
28	(B-1)	1	Exterior Ro...	104.5,68.333	11.854	8	4.808	7.385	0	0	0
29		1	Sloped Roof				1.459	4.036	0	0	0
30	(D-1)	1	Exterior Ro...	104.5,21.667	11.853	8	4.808	7.385	0	0	0
31		1	Sloped Roof				1.459	4.036	0	0	0
32	CS26	1	Exterior Ro...	104.5,60.333	36.139	8	8.677	19.632	0	0	0
33		1	Sloped Roof				5.004	15.96	0	0	0
34	CS27	1	Exterior Ro...	104.5,29.667	36.139	8	8.677	19.632	0	0	0
35		1	Sloped Roof				5.004	15.96	0	0	0
36	CS28	1	Exterior Ro...	68.333,49...	24.428	8	3.724	12.239	0	0	0
37		1	Sloped Roof				3.537	12.051	0	0	0
38	CS29	1	Exterior Ro...	68.333,40...	24.644	8	3.753	12.345	0	0	0
39		1	Sloped Roof				3.566	12.158	0	0	0
40	(D-3)	1	Sloped Roof	51.583,21...	14.408	8	2.956	7.57	0	0	0
41	CS29 1	1	Sloped Roof	51.583,29...	12.529	8	2.581	6.573	0	0	0
42	CS30	1	Sloped Roof	51.583,60...	12.532	8	2.584	6.575	0	0	0



Company : KPFF
 Designer : AS
 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

Oct 17, 2022
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Column Forces/Moments, Dead & Other Categories : Shear z-z

Building&Safety: OCPW&zarv&B 12/29/2025

Column St...	Lift No.	Floor Label	Coordinate...	Max Base ...	Max Bas...	DLPre[k]	DL[k]	OL1[k]	OL2[k]	OL3[k]	OL4[k]
1 (A-5)	1	Exterior Ro...	0,83,667	0	1	0	0	0	0	0	0
2 (A-4)	1	Exterior Ro...	30.083,83...	0	1	0	0	0	0	0	0
3 CS3	1	Exterior Ro...	49.583,83...	0	1	0	0	0	0	0	0
4 (E-5)	1	Exterior Ro...	0,17,167	0	1	0	0	0	0	0	0
5 (E-4.5)	1	Exterior Ro...	16.583,17....	0	1	0	0	0	0	0	0
6 (E-3)	1	Exterior Ro...	51.583,17....	0	1	0	0	0	0	0	0
7 (D-5)	1	Exterior Ro...	0,21,667	0	1	0	0	0	0	0	0
8 (C-5)	1	Exterior Ro...	0,44,667	0	1	0	0	0	0	0	0
9 (B-5)	1	Exterior Ro...	0,68,333	0	1	0	0	0	0	0	0
10 (C-3)	1	Exterior Ro...	51.583,44....	0	1	0	0	0	0	0	0
11 (B-3)	1	Exterior Ro...	51.583,68....	0	7	0	0	0	0	0	0
12	1	Sloped Roof				0	0	0	0	0	0
13 (A-3)	1	Exterior Ro...	51.583,83....	0	1	0	0	0	0	0	0
14 (B-4.5)	1	Exterior Ro...	16.583,68....	0	1	0	0	0	0	0	0
15 (C-4.5)	1	Exterior Ro...	16.583,44....	0	1	0	0	0	0	0	0
16 (4.7-5)	1	Exterior Ro...	0,0	0	1	0	0	0	0	0	0
17 (4.7-4.5)	1	Exterior Ro...	16,583,0	0	1	0	0	0	0	0	0
18 (4.7-3)	1	Exterior Ro...	51,583,0	0	1	0	0	0	0	0	0
19 CS19	1	Exterior Ro...	-6,25,64.5	0	1	0	0	0	0	0	0
20 (D-2)	1	Exterior Ro...	76.583,21....	0	8	0	0	0	0	0	0
21	1	Sloped Roof				0	0	0	0	0	0
22 (B-2)	1	Exterior Ro...	76.583,68....	0	8	0	0	0	0	0	0
23	1	Sloped Roof				0	0	0	0	0	0
24 CS22	1	Exterior Ro...	59.583,49....	0	7	0	0	0	0	0	0
25	1	Sloped Roof				0	0	0	0	0	0
26 CS23	1	Exterior Ro...	59.583,40....	0	10	0	0	0	0	0	0
27	1	Sloped Roof				0	0	0	0	0	0
28 (B-1)	1	Exterior Ro...	104.5,68.333	0	8	0	0	0	0	0	0
29	1	Sloped Roof				0	0	0	0	0	0
30 (D-1)	1	Exterior Ro...	104.5,21.667	0	8	0	0	0	0	0	0
31	1	Sloped Roof				0	0	0	0	0	0
32 CS26	1	Exterior Ro...	104.5,60.333	0	1	0	0	0	0	0	0
33	1	Sloped Roof				0	0	0	0	0	0
34 CS27	1	Exterior Ro...	104.5,29.667	0	1	0	0	0	0	0	0
35	1	Sloped Roof				0	0	0	0	0	0
36 CS28	1	Exterior Ro...	68.333,49....	0	1	0	0	0	0	0	0
37	1	Sloped Roof				0	0	0	0	0	0
38 CS29	1	Exterior Ro...	68.333,40....	0	1	0	0	0	0	0	0
39	1	Sloped Roof				0	0	0	0	0	0
40 (D-3)	1	Sloped Roof	51.583,21....	0	1	0	0	0	0	0	0
41 CS29 1	1	Sloped Roof	51.583,29....	0	1	0	0	0	0	0	0
42 CS30	1	Sloped Roof	51.583,60....	0	1	0	0	0	0	0	0

Permits: BNR21-024, ELE21-0850, MEC21-0512, PL21-0698
 County of Orange - OC Public Works
 OC Development Services
 APPROVED
 This set of plans and specifications must be kept on the job at all times. It is unlawful to make any changes or alterations to these plans without the written permission of Orange County. The stamping of these plans by the County Engineer is not a guarantee of the accuracy of the information provided. It is the responsibility of the applicant to ensure that all plans comply with all applicable laws, codes, and ordinances of any County of Orange.

Column Forces/Moments, Dead & Other Categories : Shear y-y

Column St...	Lift No.	Floor Label	Coordinate...	Max Base ...	Max Bas...	DLPre[k]	DL[k]	OL1[k]	OL2[k]	OL3[k]	OL4[k]
1 (A-5)	1	Exterior Ro...	0,83,667	5.197	7	2.148	2.743	0.513	0	0	0
2 (A-4)	1	Exterior Ro...	30.083,83...	-6.519	6	-2.64	-3.431	-0.585	0	0	0
3 CS3	1	Exterior Ro...	49.583,83...	-0.649	6	-0.281	-0.349	0.07	0	0	0
4 (E-5)	1	Exterior Ro...	0,17,167	1,412	10	0.154	0.317	0.937	0	0	0
5 (E-4.5)	1	Exterior Ro...	16.583,17....	8.987	7	2.32	4.186	-1.28	0	0	0
6 (E-3)	1	Exterior Ro...	51.583,17....	-12.752	7	-3.25	-5.939	1.513	0	0	0
7 (D-5)	1	Exterior Ro...	0,21,667	-5.391	6	-1.276	-2.595	-0.742	0.161	0	0
8 (C-5)	1	Exterior Ro...	0,44,667	-1.528	14	-0.143	-0.221	0.387	-1.204	0	0
9 (B-5)	1	Exterior Ro...	0,68,333	6.056	6	1.486	2.908	-0.331	1.086	0	0
10 (C-3)	1	Exterior Ro...	51.583,44....	-12.955	6	-3.252	-6.054	1.225	0.893	0	0
11 (B-3)	1	Exterior Ro...	51.583,68....	2.504	6	0.562	1.17	-0.069	-0.207	0	0



Company : KPFF
 Designer : AS
 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

Oct 17, 2022
 1:30 PM
 Checked By: _____

Column Forces/Moments, Dead & Other Categories : Shear y-y (Continued)

Building&Safety: OCPW&zarvandB 12/29/2025

Column St...	Lift No.	Floor Label	Coordinate...	Max Base ...	Max Bas...	DLPre[k]	DL[k]	OL1[k]	OL2[k]	OL3[k]	OL4[k]
12	1	Sloped Roof				6.394	10.999	-0.526	-1.567	0	0
13	(A-3)	Exterior Ro...	51.583,83....	1.338	7	0.609	0.729	0.253	0.03	0	0
14	(B-4.5)	Exterior Ro...	16.583,68....	0	1	0	0	0	0	0	0
15	(C-4.5)	Exterior Ro...	16.583,44....	0	1	0	0	0	0	0	0
16	(4.7-5)	Exterior Ro...	0,0	0	1	0	0	0	0	0	0
17	(4.7-4.5)	Exterior Ro...	16.583,0	0	1	0	0	0	0	0	0
18	(4.7-3)	Exterior Ro...	51.583,0	0	1	0	0	0	0	0	0
19	CS19	Exterior Ro...	-6.25,64.5	0	1	0	0	0	0	0	0
20	(D-2)	Exterior Ro...	76.583,21....	-0.131	8	-0.024	-0.068	0	0	0	0
21	1	Sloped Roof				-0.024	-0.068	0	0	0	0
22	(B-2)	Exterior Ro...	76.583,68....	-0.131	8	-0.024	-0.068	0	0	0	0
23	1	Sloped Roof				-0.024	-0.068	0	0	0	0
24	CS22	Exterior Ro...	59.583,49....	0	6	0	0	0	0	0	0
25	1	Sloped Roof				0	0	0	0	0	0
26	CS23	Exterior Ro...	59.583,40....	0	6	0	0	0	0	0	0
27	1	Sloped Roof				0	0	0	0	0	0
28	(B-1)	Exterior Ro...	104.5,68.333	-1.995	8	-0.292	-0.989	0	0	0	0
29	1	Sloped Roof				-0.292	-0.989	0	0	0	0
30	(D-1)	Exterior Ro...	104.5,21.667	-1.995	8	-0.292	-0.989	0	0	0	0
31	1	Sloped Roof				-0.292	-0.989	0	0	0	0
32	CS26	Exterior Ro...	104.5,60.333	7.077	8	1.087	3.545	0	0	0	0
33	1	Sloped Roof				1.087	3.545	0	0	0	0
34	CS27	Exterior Ro...	104.5,29.667	-7.077	8	-1.087	-3.545	0	0	0	0
35	1	Sloped Roof				-1.087	-3.545	0	0	0	0
36	CS28	Exterior Ro...	68.333,49....	0	1	0	0	0	0	0	0
37	1	Sloped Roof				0	0	0	0	0	0
38	CS29	Exterior Ro...	68.333,40....	0	1	0	0	0	0	0	0
39	1	Sloped Roof				0	0	0	0	0	0
40	(D-3)	Exterior Ro...	51.583,21....	0	1	0	0	0	0	0	0
41	CS29 1	Sloped Roof	51.583,29....	0	1	0	0	0	0	0	0
42	CS30	Sloped Roof	51.583,60....	0	1	0	0	0	0	0	0

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PL21-0698
 County of Orange - OC Public Works
 OC Development Services
 APPROVED
 This set of plans and specifications must be kept on the job at all times. It is unlawful to make any changes or alterations to these plans without the written permission from OC Public Works, Development Services of Orange County. The stamping of these plans constitutes acceptance of the project and shall be an approval of the violation of any provisions of any County Ordinance or State law.
 Title Database
 BUILDING OFFICIAL

Column Forces/Moments, Dead & Other Categories : Moment z-z (Top)

Column St...	Lift No.	Floor Label	Coordinate...	Max Base ...	Max Bas...	DLPre[k]	DL[k]	OL1[k]	OL2[k]	OL3[k]	OL4[k]
1	(A-5)	Exterior Ro...	0.83,667	41.075	7	-20.403	-27.945	-6.504	0	0	0
2	(A-4)	Exterior Ro...	30.083,83....	-51.32	6	25.08	35.101	7.413	0	0	0
3	CS3	Exterior Ro...	49.583,83....	-5.181	6	2.673	3.526	-0.881	0	0	0
4	(E-5)	Exterior Ro...	0,17,167	9.529	10	-1.465	-3.532	-11.864	0	0	0
5	(E-4.5)	Exterior Ro...	16.583,17....	65.735	7	-22.039	-45.676	16.213	0	0	0
6	(E-3)	Exterior Ro...	51.583,17....	-93.114	7	30.873	64.938	-19.164	0	0	0
7	(D-5)	Exterior Ro...	0,21,667	-38.989	6	12.12	28.83	9.392	-2.045	0	0
8	(C-5)	Exterior Ro...	0,44,667	-10.223	14	1.359	2.352	-4.902	15.245	0	0
9	(B-5)	Exterior Ro...	0,68,333	44.004	6	-14.118	-32.131	4.187	-13.759	0	0
10	(C-3)	Exterior Ro...	51.583,44....	-94.407	6	30.89	66.384	-15.522	-11.307	0	0
11	(B-3)	Exterior Ro...	51.583,68....	17.995	6	-5.198	-12.739	0.862	2.565	0	0
12	1	Sloped Roof				0	0	0	0	0	0
13	(A-3)	Exterior Ro...	51.583,83....	10.785	7	-5.781	-7.309	-3.2	-0.386	0	0
14	(B-4.5)	Exterior Ro...	16.583,68....	0	1	0	0	0	0	0	0
15	(C-4.5)	Exterior Ro...	16.583,44....	0	1	0	0	0	0	0	0
16	(4.7-5)	Exterior Ro...	0,0	0	1	0	0	0	0	0	0
17	(4.7-4.5)	Exterior Ro...	16.583,0	0	1	0	0	0	0	0	0
18	(4.7-3)	Exterior Ro...	51.583,0	0	1	0	0	0	0	0	0
19	CS19	Exterior Ro...	-6.25,64.5	0	1	0	0	0	0	0	0
20	(D-2)	Exterior Ro...	76.583,21....	-0.924	8	0.223	0.76	0	0	0	0
21	1	Sloped Roof				-2.703	-11.828	0	0	0	0
22	(B-2)	Exterior Ro...	76.583,68....	-0.924	8	0.223	0.76	0	0	0	0



Company : KPFF
 Designer : AS
 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

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Column Forces/Moments, Dead & Other Categories : Moment z-z (Top) (Continued)

Building&Safety: OCPW&zarv&B 12/29/2025

Column St...	Lift No.	Floor Label	Coordinate...	Max Base ...	Max Bas...	DLPre[k]	DL[k]	OL1[k]	OL2[k]	OL3[k]	OL4[k]
23	1	Sloped Roof				-2.703	-11.828	0	0	0	0
24	CS22	1 Exterior Ro...	59.583,49....	0	6	0	0	0	0	0	0
25	1	Sloped Roof				0	0	0	0	0	0
26	CS23	1 Exterior Ro...	59.583,40....	0	6	0	0	0	0	0	0
27	1	Sloped Roof				0	0	0	0	0	0
28	(B-1)	1 Exterior Ro...	104.5,68.333	-13.932	8	3.508	11.876	0	0	0	0
29	1	Sloped Roof				4.082	13.819	0	0	0	0
30	(D-1)	1 Exterior Ro...	104.5,21.667	-13.932	8	3.508	11.876	0	0	0	0
31	1	Sloped Roof				4.082	13.819	0	0	0	0
32	CS26	1 Exterior Ro...	104.5,60.333	49.42	8	-13.043	-42.544	0	0	0	0
33	1	Sloped Roof				-15.177	-49.506	0	0	0	0
34	CS27	1 Exterior Ro...	104.5,29.667	-49.421	8	13.044	42.546	0	0	0	0
35	1	Sloped Roof				15.178	49.508	0	0	0	0
36	CS28	1 Exterior Ro...	68.333,49....	0	1	0	0	0	0	0	0
37	1	Sloped Roof				0	0	0	0	0	0
38	CS29	1 Exterior Ro...	68.333,40....	0	1	0	0	0	0	0	0
39	1	Sloped Roof				0	0	0	0	0	0
40	(D-3)	1 Sloped Roof	51.583,21....	0	1	0	0	0	0	0	0
41	CS29 1	1 Sloped Roof	51.583,29....	0	1	0	0	0	0	0	0
42	CS30	1 Sloped Roof	51.583,60....	0	1	0	0	0	0	0	0

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PL21-0698
 County of Orange - OC Public Works
 OC Development Services
 APPROVED
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 Type: Submittal
 BUILDING OFFICIAL

Column Forces/Moments, Dead & Other Categories : Moment y-y (Top)

Column St...	Lift No.	Floor Label	Coordinate...	Max Base ...	Max Bas...	DLPre[k]	DL[k]	OL1[k]	OL2[k]	OL3[k]	OL4[k]
1	(A-5)	1 Exterior Ro...	0,83.667	0	1	0	0	0	0	0	0
2	(A-4)	1 Exterior Ro...	30.083,83....	0	1	0	0	0	0	0	0
3	CS3	1 Exterior Ro...	49.583,83....	0	1	0	0	0	0	0	0
4	(E-5)	1 Exterior Ro...	0,17.167	0	1	0	0	0	0	0	0
5	(E-4.5)	1 Exterior Ro...	16.583,17....	0	1	0	0	0	0	0	0
6	(E-3)	1 Exterior Ro...	51.583,17....	0	1	0	0	0	0	0	0
7	(D-5)	1 Exterior Ro...	0,21.667	0	1	0	0	0	0	0	0
8	(C-5)	1 Exterior Ro...	0,44.667	0	1	0	0	0	0	0	0
9	(B-5)	1 Exterior Ro...	0,68.333	0	1	0	0	0	0	0	0
10	(C-3)	1 Exterior Ro...	51.583,44....	0	1	0	0	0	0	0	0
11	(B-3)	1 Exterior Ro...	51.583,68....	0	7	0	0	0	0	0	0
12	1	Sloped Roof				0	0	0	0	0	0
13	(A-3)	1 Exterior Ro...	51.583,83....	0	1	0	0	0	0	0	0
14	(B-4.5)	1 Exterior Ro...	16.583,68....	0	1	0	0	0	0	0	0
15	(C-4.5)	1 Exterior Ro...	16.583,44....	0	1	0	0	0	0	0	0
16	(4.7-5)	1 Exterior Ro...	0,0	0	1	0	0	0	0	0	0
17	(4.7-4.5)	1 Exterior Ro...	16.583,0	0	1	0	0	0	0	0	0
18	(4.7-3)	1 Exterior Ro...	51.583,0	0	1	0	0	0	0	0	0
19	CS19	1 Exterior Ro...	-6.25,64.5	0	1	0	0	0	0	0	0
20	(D-2)	1 Exterior Ro...	76.583,21....	0	8	0	0	0	0	0	0
21	1	Sloped Roof				0	0	0	0	0	0
22	(B-2)	1 Exterior Ro...	76.583,68....	0	8	0	0	0	0	0	0
23	1	Sloped Roof				0	0	0	0	0	0
24	CS22	1 Exterior Ro...	59.583,49....	0	7	0	0	0	0	0	0
25	1	Sloped Roof				0	0	0	0	0	0
26	CS23	1 Exterior Ro...	59.583,40....	0	10	0	0	0	0	0	0
27	1	Sloped Roof				0	0	0	0	0	0
28	(B-1)	1 Exterior Ro...	104.5,68.333	0	8	0	0	0	0	0	0
29	1	Sloped Roof				0	0	0	0	0	0
30	(D-1)	1 Exterior Ro...	104.5,21.667	0	8	0	0	0	0	0	0
31	1	Sloped Roof				0	0	0	0	0	0
32	CS26	1 Exterior Ro...	104.5,60.333	0	1	0	0	0	0	0	0
33	1	Sloped Roof				0	0	0	0	0	0



Company : KPFF
Designer : AS
Job Number : 1900799
Model Name : Dana Point Harbor_Bld'g. 10

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Column Forces/Moments, Dead & Other Categories : Moment y-y (Top) (Continued)

Building&Safety: OCPW&ZarvandB 12/29/2025

Table with 13 columns: Column St..., Lift No., Floor Label, Coordinate..., Max Base..., Max Bas..., DLPre[k], DL[k], OL1[k], OL2[k], OL3[k], OL4[k]. Rows 34-42.

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLS21-0698
County of Orange - OC Public Works
OC Development Services
APPROVED
This set of plans and specifications must be kept on the job at all times. It is unlawful to make any changes or alterations to these plans without the written permission from OC Public Works, Development Services of Orange County. The carrying of these plans on the job site without the written approval of the violator is a violation of any provisions of any County Ordinance or State law.
Top Database
BUILDING OFFICIAL

Column Forces/Moments, Dead & Other Categories : Moment z-z (Bot)

Table with 13 columns: Column St..., Lift No., Floor Label, Coordinate..., Max Base..., Max Bas..., DLPre[k], DL[k], OL1[k], OL2[k], OL3[k], OL4[k]. Rows 1-42.



Company : KPFF
 Designer : AS
 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

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Column Forces/Moments, Dead & Other Categories : Moment y-y (Bot)

Building&Safety: OCPW&zarv&B 12/29/2025

Column St...	Lift No.	Floor Label	Coordinate...	Max Base ...	Max Bas...	DLPre[k]	DL[k]	OL1[k]	OL2[k]	OL3[k]	OL4[k]
1	(A-5)	1	Exterior Ro...	0,83.667	0	1	0	0	0	0	0
2	(A-4)	1	Exterior Ro...	30.083,83...	0	1	0	0	0	0	0
3	CS3	1	Exterior Ro...	49.583,83...	0	1	0	0	0	0	0
4	(E-5)	1	Exterior Ro...	0,17.167	0	1	0	0	0	0	0
5	(E-4.5)	1	Exterior Ro...	16.583,17...	0	1	0	0	0	0	0
6	(E-3)	1	Exterior Ro...	51.583,17...	0	1	0	0	0	0	0
7	(D-5)	1	Exterior Ro...	0,21.667	0	1	0	0	0	0	0
8	(C-5)	1	Exterior Ro...	0,44.667	0	1	0	0	0	0	0
9	(B-5)	1	Exterior Ro...	0,68.333	0	1	0	0	0	0	0
10	(C-3)	1	Exterior Ro...	51.583,44...	0	1	0	0	0	0	0
11	(B-3)	1	Exterior Ro...	51.583,68...	0	7	0	0	0	0	0
12		1	Sloped Roof				0	0	0	0	0
13	(A-3)	1	Exterior Ro...	51.583,83...	0	1	0	0	0	0	0
14	(B-4.5)	1	Exterior Ro...	16.583,68...	0	1	0	0	0	0	0
15	(C-4.5)	1	Exterior Ro...	16.583,44...	0	1	0	0	0	0	0
16	(4.7-5)	1	Exterior Ro...	0,0	0	1	0	0	0	0	0
17	(4.7-4.5)	1	Exterior Ro...	16.583,0	0	1	0	0	0	0	0
18	(4.7-3)	1	Exterior Ro...	51.583,0	0	1	0	0	0	0	0
19	CS19	1	Exterior Ro...	-6,25,64.5	0	1	0	0	0	0	0
20	(D-2)	1	Exterior Ro...	76.583,21...	0	8	0	0	0	0	0
21		1	Sloped Roof				0	0	0	0	0
22	(B-2)	1	Exterior Ro...	76.583,68...	0	8	0	0	0	0	0
23		1	Sloped Roof				0	0	0	0	0
24	CS22	1	Exterior Ro...	59.583,49...	0	7	0	0	0	0	0
25		1	Sloped Roof				0	0	0	0	0
26	CS23	1	Exterior Ro...	59.583,40...	0	10	0	0	0	0	0
27		1	Sloped Roof				0	0	0	0	0
28	(B-1)	1	Exterior Ro...	104.5,68.333	0	8	0	0	0	0	0
29		1	Sloped Roof				0	0	0	0	0
30	(D-1)	1	Exterior Ro...	104.5,21.667	0	8	0	0	0	0	0
31		1	Sloped Roof				0	0	0	0	0
32	CS26	1	Exterior Ro...	104.5,60.333	0	1	0	0	0	0	0
33		1	Sloped Roof				0	0	0	0	0
34	CS27	1	Exterior Ro...	104.5,29.667	0	1	0	0	0	0	0
35		1	Sloped Roof				0	0	0	0	0
36	CS28	1	Exterior Ro...	68.333,49...	0	1	0	0	0	0	0
37		1	Sloped Roof				0	0	0	0	0
38	CS29	1	Exterior Ro...	68.333,40...	0	1	0	0	0	0	0
39		1	Sloped Roof				0	0	0	0	0
40	(D-3)	1	Sloped Roof	51.583,21...	0	1	0	0	0	0	0
41	CS29 1	1	Sloped Roof	51.583,29...	0	1	0	0	0	0	0
42	CS30	1	Sloped Roof	51.583,60...	0	1	0	0	0	0	0

Permits: BNR21-0244, ELE21-0850, MEC21-0512, P1421-0698

County of Orange - OC Public Works
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Typed Signature: _____
 Building Official

Column Forces/Moments, Floor Live Load : Axial Force

Column Stack	Lift No.	Floor Label	Coordinat...	Reducible ...	LL Reduce	NonReduc...LL[k] (unre...	LLS Redu...	NonReduc...LLS[k] (un...
1	(A-5)	1	Exterior Roo...	0,83.667	0	1	10.755	0
2	(A-4)	1	Exterior Roo...	30.083,83...	0	1	9.777	0
3	CS3	1	Exterior Roo...	49.583,83...	0	1	1.792	0
4	(E-5)	1	Exterior Roo...	0,17.167	0	1	7.975	0
5	(E-4.5)	1	Exterior Roo...	16.583,17...	0	1	63.672	0
6	(E-3)	1	Exterior Roo...	51.583,17...	0	1	50.239	0
7	(D-5)	1	Exterior Roo...	0,21.667	0	1	11.847	0
8	(C-5)	1	Exterior Roo...	0,44.667	0	1	25.117	0
9	(B-5)	1	Exterior Roo...	0,68.333	0	1	15.42	0
10	(C-3)	1	Exterior Roo...	51.583,44...	0	1	57.017	0
11	(B-3)	1	Exterior Roo...	51.583,68...	0	1	45.63	0



Company : KPFF
Designer : AS
Job Number : 1900799
Model Name : Dana Point Harbor_Bld'g. 10

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Column Forces/Moments, Floor Live Load : Axial Force (Continued)

Building&Safety: OCPW&zarvandB 12/29/2025

Table with columns: Column Stack, Lift No., Floor Label, Coordinat..., Reducible..., LL Reduce, NonReduc., LL[k] (unre., LLS Redu..., NonReduc., LLS[k] (un... and rows 12-42.

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0899
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Top Database
BUILDING OFFICIAL

Column Forces/Moments, Floor Live Load : Shear z-z

Table with columns: Column Stack, Lift No., Floor Label, Coordinat..., Reducible..., LL Reduce, NonReduc., LL[k] (unre., LLS Redu..., NonReduc., LLS[k] (un... and rows 1-22.



Company : KPFF
Designer : AS
Job Number : 1900799
Model Name : Dana Point Harbor_Bld'g. 10

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Column Forces/Moments, Floor Live Load : Shear z-z (Continued)

Building&Safety: OCPW&zarv&B 12/29/2025

Table with columns: Column Stack, Lift No., Floor Label, Coordinat..., Reducible ...LL, Reduce NonReduc., LL[k] (unre., LLS Redu..., NonReduc., LLS[k] (un...)

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0899
County of Orange - OC Public Works
OC Development Services
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This set of plans and specifications must be kept on the job at all times. It is unlawful to make any changes or alterations to these plans without the written permission of Orange County. The stamping of these plans indicates that the plans have been reviewed and approved by the County of Orange. It shall be an approval of the violation of any provisions of any County Ordinance or State law.

Column Forces/Moments, Floor Live Load : Shear y-y

Table with columns: Column Stack, Lift No., Floor Label, Coordinat..., Reducible ...LL, Reduce NonReduc., LL[k] (unre., LLS Redu..., NonReduc., LLS[k] (un...)



Company : KPFF
Designer : AS
Job Number : 1900799
Model Name : Dana Point Harbor_Bld'g. 10

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Column Forces/Moments, Floor Live Load : Shear y-y (Continued)

Building&Safety: OCPW&Zarv&B 12/29/2025

Table with columns: Column Stack, Lift No., Floor Label, Coordinat..., Reducible, LL Reduce, NonReduc., LL[k] (unre.), LLS Redu..., NonReduc., LLS[k] (un...)

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0899
County of Orange - OC Public Works
OC Development Services
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Top Database BUILDING OFFICIAL

Column Forces/Moments, Floor Live Load : Moment z-z (Top)

Table with columns: Column Stack, Lift No., Floor Label, Coordinat..., Reducible, LL Reduce, NonReduc., LL[k] (unre.), LLS Redu..., NonReduc., LLS[k] (un...)



Company : KPFF
Designer : AS
Job Number : 1900799
Model Name : Dana Point Harbor_Bld'g. 10

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Column Forces/Moments, Floor Live Load : Moment y-y (Top)

Building&Safety: OCPWAzarvandB 12/29/2025

Table with columns: Column Stack, Lift No., Floor Label, Coordinat..., Reducible..., LL Reduce, NonReduc., LL[k] (unre., LLS Redu..., NonReduc., LLS[k] (un... and rows 1-42.

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0899
County of Orange - OC Public Works
OC Development Services
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This set of plans and specifications must be kept on the job at all times. It is unlawful to make any changes or alterations to these plans without a written permission from OC Public Works. OC Development Services of Orange County. The stamping of these plans specifies that the contractor must comply with all provisions of the Ordinance of the County of Orange.

Column Forces/Moments, Floor Live Load : Moment z-z (Bot)

Table with columns: Column Stack, Lift No., Floor Label, Coordinat..., Reducible..., LL Reduce, NonReduc., LL[k] (unre., LLS Redu..., NonReduc., LLS[k] (un... and rows 1-11.



Company : KPFF
Designer : AS
Job Number : 1900799
Model Name : Dana Point Harbor_Bld'g. 10

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Column Forces/Moments, Floor Live Load : Moment z-z (Bot) (Continued)

Building&Safety: OCPWAzarvandB 12/29/2025

Table with columns: Column Stack, Lift No., Floor Label, Coordinat..., Reducible..., LL Reduce, NonReduc., LL[k] (unre., LLS Redu..., NonReduc., LLS[k] (un... and rows 12-42.

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0899
County of Orange - OC Public Works
OC Development Services
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Top Database
BUILDING OFFICIAL

Column Forces/Moments, Floor Live Load : Moment y-y (Bot)

Table with columns: Column Stack, Lift No., Floor Label, Coordinat..., Reducible..., LL Reduce, NonReduc., LL[k] (unre., LLS Redu..., NonReduc., LLS[k] (un... and rows 1-22.



Company : KPFF
Designer : AS
Job Number : 1900799
Model Name : Dana Point Harbor_Bld'g. 10

Oct 17, 2022
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Column Forces/Moments, Roof Load : Axial Force (Continued)

Building&Safety: OCPWAzarvandB 12/29/2025

Table with columns: Column Stack, Lift No., Floor Label, Coordinat..., Reducible, RLL Redu..., NonReduc., RLL[k] (un..., SL[k], SLN[k], RL[k]. Rows 34-42.

Permits: BNR21-0244, ELE21-0850, MEC21-0512, P-21-0898
County of Orange - OC Public Works
OC Development Services
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Top Database
BUILDING OFFICIAL

Column Forces/Moments, Roof Load : Shear z-z

Table with columns: Column Stack, Lift No., Floor Label, Coordinat..., Reducible, RLL Redu..., NonReduc., RLL[k] (un..., SL[k], SLN[k], RL[k]. Rows 1-42.



Company : KPFF
 Designer : AS
 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

Oct 17, 2022
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 Checked By: _____

Column Forces/Moments, Roof Load : Shear y-y

Building&Safety: OCPWArzarvandB 12/29/2025

Column Stack	Lift No.	Floor Label	Coordinat...	Reducible	RLL Redu...	NonReduc.	RLL[k] (un...	SL[k]	SLN[k]	RL[k]
1	(A-5)	1	Exterior Roo...	0,83.667	0	1	0	0	0	0
2	(A-4)	1	Exterior Roo...	30.083,83...	0	1	0	0	0	0
3	CS3	1	Exterior Roo...	49.583,83...	0	1	0	0	0	0
4	(E-5)	1	Exterior Roo...	0,17.167	0	1	0	0	0	0
5	(E-4.5)	1	Exterior Roo...	16.583,17...	0	1	0	0	0	0
6	(E-3)	1	Exterior Roo...	51.583,17...	0	1	0	0	0	0
7	(D-5)	1	Exterior Roo...	0,21.667	0	1	0	0	0	0
8	(C-5)	1	Exterior Roo...	0,44.667	0	1	0	0	0	0
9	(B-5)	1	Exterior Roo...	0,68.333	0	1	0	0	0	0
10	(C-3)	1	Exterior Roo...	51.583,44...	0	1	-0.198	0	0	0
11	(B-3)	1	Exterior Roo...	51.583,68...	0	1	0.073	0	0	0
12		1	Sloped Roof		0	1	0.554	0	0	0
13	(A-3)	1	Exterior Roo...	51.583,83...	0	1	-0.011	0	0	0
14	(B-4.5)	1	Exterior Roo...	16.583,68...	0	1	0	0	0	0
15	(C-4.5)	1	Exterior Roo...	16.583,44...	0	1	0	0	0	0
16	(4.7-5)	1	Exterior Roo...	0,0	0	1	0	0	0	0
17	(4.7-4.5)	1	Exterior Roo...	16.583,0	0	1	0	0	0	0
18	(4.7-3)	1	Exterior Roo...	51.583,0	0	1	0	0	0	0
19	CS19	1	Exterior Roo...	-6.25,64.5	0	1	0	0	0	0
20	(D-2)	1	Exterior Roo...	76.583,21...	0	1	-0.031	0	0	0
21		1	Sloped Roof		0	1	-0.031	0	0	0
22	(B-2)	1	Exterior Roo...	76.583,68...	0	1	-0.031	0	0	0
23		1	Sloped Roof		0	1	-0.031	0	0	0
24	CS22	1	Exterior Roo...	59.583,49...	0	1	0	0	0	0
25		1	Sloped Roof		0	1	0	0	0	0
26	CS23	1	Exterior Roo...	59.583,40...	0	1	0	0	0	0
27		1	Sloped Roof		0	1	0	0	0	0
28	(B-1)	1	Exterior Roo...	104.5,68.3...	0	1	-0.505	0	0	0
29		1	Sloped Roof		0	1	-0.505	0	0	0
30	(D-1)	1	Exterior Roo...	104.5,21.6...	0	1	-0.505	0	0	0
31		1	Sloped Roof		0	1	-0.505	0	0	0
32	CS26	1	Exterior Roo...	104.5,60.3...	0	1	1.765	0	0	0
33		1	Sloped Roof		0	1	1.765	0	0	0
34	CS27	1	Exterior Roo...	104.5,29.6...	0	1	-1.765	0	0	0
35		1	Sloped Roof		0	1	-1.765	0	0	0
36	CS28	1	Exterior Roo...	68.333,49...	0	1	0	0	0	0
37		1	Sloped Roof		0	1	0	0	0	0
38	CS29	1	Exterior Roo...	68.333,40...	0	1	0	0	0	0
39		1	Sloped Roof		0	1	0	0	0	0
40	(D-3)	1	Sloped Roof	51.583,21...	0	1	0	0	0	0
41	CS29 1	1	Sloped Roof	51.583,29...	0	1	0	0	0	0
42	CS30	1	Sloped Roof	51.583,60...	0	1	0	0	0	0

Permits: BNR21-0244, ELE21-0850, MEC21-0512, P&B21-0898
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 Title Database
 BUILDING OFFICIAL

Column Forces/Moments, Roof Load : Moment z-z (Top)

Column Stack	Lift No.	Floor Label	Coordinat...	Reducible	RLL Redu...	NonReduc.	RLL[k] (un...	SL[k]	SLN[k]	RL[k]
1	(A-5)	1	Exterior Roo...	0,83.667	0	1	0	0	0	0
2	(A-4)	1	Exterior Roo...	30.083,83...	0	1	0	0	0	0
3	CS3	1	Exterior Roo...	49.583,83...	0	1	0	0	0	0
4	(E-5)	1	Exterior Roo...	0,17.167	0	1	0	0	0	0
5	(E-4.5)	1	Exterior Roo...	16.583,17...	0	1	0	0	0	0
6	(E-3)	1	Exterior Roo...	51.583,17...	0	1	0	0	0	0
7	(D-5)	1	Exterior Roo...	0,21.667	0	1	0	0	0	0
8	(C-5)	1	Exterior Roo...	0,44.667	0	1	0	0	0	0
9	(B-5)	1	Exterior Roo...	0,68.333	0	1	0	0	0	0
10	(C-3)	1	Exterior Roo...	51.583,44...	0	1	2.504	0	0	0
11	(B-3)	1	Exterior Roo...	51.583,68...	0	1	-0.907	0	0	0



Company : KPFF
Designer : AS
Job Number : 1900799
Model Name : Dana Point Harbor_Bld'g. 10

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Column Forces/Moments, Roof Load : Moment z-z (Top) (Continued)

Building&Safety: OCPW&zarv&B 12/29/2025

Permits: BNR21-0244, ELE21-0850, MEC21-0512, P&B21-0898

Table with columns: Column Stack, Lift No., Floor Label, Coordinat..., Reducible..., RLL Redu..., NonReduc..., RLL[k] (un..., SL[k], SLN[k], RL[k]. Rows 12-42.

County of Orange - OC Public Works
OC Development Services
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Top Database BUILDING OFFICIAL

Column Forces/Moments, Roof Load : Moment y-y (Top)

Table with columns: Column Stack, Lift No., Floor Label, Coordinat..., Reducible..., RLL Redu..., NonReduc..., RLL[k] (un..., SL[k], SLN[k], RL[k]. Rows 1-22.



Company : KPFF
 Designer : AS
 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

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Column Forces/Moments, Roof Load : Moment y-y (Top) (Continued)

Building&Safety: OCPW&zarvandB 12/29/2025

Column Stack	Lift No.	Floor Label	Coordinat...	Reducible	RLL Redu...	NonReduc.	RLL[k] (un...	SL[k]	SLN[k]	RL[k]
23		1 Sloped Roof		0	1	0	0	0	0	0
24	CS22	1 Exterior Roo...	59.583,49...	0	1	0	0	0	0	0
25		1 Sloped Roof		0	1	0	0	0	0	0
26	CS23	1 Exterior Roo...	59.583,40...	0	1	0	0	0	0	0
27		1 Sloped Roof		0	1	0	0	0	0	0
28	(B-1)	1 Exterior Roo...	104.5,68.3...	0	1	0	0	0	0	0
29		1 Sloped Roof		0	1	0	0	0	0	0
30	(D-1)	1 Exterior Roo...	104.5,21.6...	0	1	0	0	0	0	0
31		1 Sloped Roof		0	1	0	0	0	0	0
32	CS26	1 Exterior Roo...	104.5,60.3...	0	1	0	0	0	0	0
33		1 Sloped Roof		0	1	0	0	0	0	0
34	CS27	1 Exterior Roo...	104.5,29.6...	0	1	0	0	0	0	0
35		1 Sloped Roof		0	1	0	0	0	0	0
36	CS28	1 Exterior Roo...	68.333,49...	0	1	0	0	0	0	0
37		1 Sloped Roof		0	1	0	0	0	0	0
38	CS29	1 Exterior Roo...	68.333,40...	0	1	0	0	0	0	0
39		1 Sloped Roof		0	1	0	0	0	0	0
40	(D-3)	1 Sloped Roof	51.583,21...	0	1	0	0	0	0	0
41	CS29 1	1 Sloped Roof	51.583,29...	0	1	0	0	0	0	0
42	CS30	1 Sloped Roof	51.583,60...	0	1	0	0	0	0	0

Permits: BNR21-0244, ELE21-0850, MEC21-0512, P&B21-0898
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 Title: Bldg Deck BUILDING OFFICIAL

Column Forces/Moments, Roof Load : Moment z-z (Bot)

Column Stack	Lift No.	Floor Label	Coordinat...	Reducible	RLL Redu...	NonReduc.	RLL[k] (un...	SL[k]	SLN[k]	RL[k]
1	(A-5)	1 Exterior Roo...	0,83.667	0	1	0	0	0	0	0
2	(A-4)	1 Exterior Roo...	30.083,83...	0	1	0	0	0	0	0
3	CS3	1 Exterior Roo...	49.583,83...	0	1	0	0	0	0	0
4	(E-5)	1 Exterior Roo...	0,17.167	0	1	0	0	0	0	0
5	(E-4.5)	1 Exterior Roo...	16.583,17...	0	1	0	0	0	0	0
6	(E-3)	1 Exterior Roo...	51.583,17...	0	1	0	0	0	0	0
7	(D-5)	1 Exterior Roo...	0,21.667	0	1	0	0	0	0	0
8	(C-5)	1 Exterior Roo...	0,44.667	0	1	0	0	0	0	0
9	(B-5)	1 Exterior Roo...	0,68.333	0	1	0	0	0	0	0
10	(C-3)	1 Exterior Roo...	51.583,44...	0	1	-1.252	0	0	0	0
11	(B-3)	1 Exterior Roo...	51.583,68...	0	1	0.463	0	0	0	0
12		1 Sloped Roof		0	1	8.962	0	0	0	0
13	(A-3)	1 Exterior Roo...	51.583,83...	0	1	-0.068	0	0	0	0
14	(B-4.5)	1 Exterior Roo...	16.583,68...	0	1	0	0	0	0	0
15	(C-4.5)	1 Exterior Roo...	16.583,44...	0	1	0	0	0	0	0
16	(4.7-5)	1 Exterior Roo...	0,0	0	1	0	0	0	0	0
17	(4.7-4.5)	1 Exterior Roo...	16.583,0	0	1	0	0	0	0	0
18	(4.7-3)	1 Exterior Roo...	51.583,0	0	1	0	0	0	0	0
19	CS19	1 Exterior Roo...	-6.25,64.5	0	1	0	0	0	0	0
20	(D-2)	1 Exterior Roo...	76.583,21...	0	1	-0.199	0	0	0	0
21		1 Sloped Roof		0	1	0.398	0	0	0	0
22	(B-2)	1 Exterior Roo...	76.583,68...	0	1	-0.199	0	0	0	0
23		1 Sloped Roof		0	1	0.398	0	0	0	0
24	CS22	1 Exterior Roo...	59.583,49...	0	1	0	0	0	0	0
25		1 Sloped Roof		0	1	0	0	0	0	0
26	CS23	1 Exterior Roo...	59.583,40...	0	1	0	0	0	0	0
27		1 Sloped Roof		0	1	0	0	0	0	0
28	(B-1)	1 Exterior Roo...	104.5,68.3...	0	1	-3.525	0	0	0	0
29		1 Sloped Roof		0	1	6.169	0	0	0	0
30	(D-1)	1 Exterior Roo...	104.5,21.6...	0	1	-3.525	0	0	0	0
31		1 Sloped Roof		0	1	6.169	0	0	0	0
32	CS26	1 Exterior Roo...	104.5,60.3...	0	1	12.322	0	0	0	0
33		1 Sloped Roof		0	1	-21.564	0	0	0	0



Company : KPFF
Designer : AS
Job Number : 1900799
Model Name : Dana Point Harbor_Bld'g. 10

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Column Forces/Moments, Roof Load : Moment z-z (Bot) (Continued)

Building&Safety: OCPW&zarv&B 12/29/2025

Table with columns: Column Stack, Lift No., Floor Label, Coordinat..., Reducible, RLL Redu..., NonReduc., RLL[k] (un..., SL[k], SLN[k], RL[k]. Rows 34-42.

Permits: BNR21-0244, ELE21-0850, MEC21-0512, P&B21-0898
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Top Database
BUILDING OFFICIAL

Column Forces/Moments, Roof Load : Moment y-y (Bot)

Table with columns: Column Stack, Lift No., Floor Label, Coordinat..., Reducible, RLL Redu..., NonReduc., RLL[k] (un..., SL[k], SLN[k], RL[k]. Rows 1-42.



Company : KPFF
 Designer : AS
 Job Number : 1900799
 Model Name : Dana Point Harbor_Bld'g. 10

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Hot Rolled Steel Column Code Checks

Building&Safety: OCPW&zarvandB 12/29/2025

Stack	Lift	Shape	Code	Ch...	Elev[ft]	LC	Shear C...	Elev[ft]	Dir	LC	phi*Pnc	phi*Pnt [k]	phi*Mn y	phi*Mn z	Cb	Eqn
1	(A-5)	1	W14X159	0.067	19	7	0.016	19	7	1657.561	2101.5	547.5	1076.25	2.216	H1-1b	
2	(A-4)	1	W18X175	0.076	19	6	0.015	19	6	1403.38	2313	397.5	1492.5	2.205	H1-1b	
3	CS3	1	W14X159	0.01	19	6	0.002	19	6	1657.561	2101.5	547.5	1076.25	2.17	H1-1b	
4	(E-5)	1	W14X159	0.025	19	10	0.004	19	10	1657.561	2101.5	547.5	1076.25	2.184	H1-1b	
5	(E-4.5)	1	W18X175	0.175	19	7	0.024	19	7	1403.38	2313	397.5	1492.5	2.19	H1-1b	
6	(E-3)	1	W14X159	0.196	19	6	0.038	19	7	1657.561	2101.5	547.5	1076.25	2.198	H1-1b	
7	(D-5)	1	W14X159	0.072	19	7	0.016	19	7	1657.561	2101.5	547.5	1076.25	2.196	H1-1b	
8	(C-5)	1	W18X175	0.065	19	7	0.004	19	16	1403.38	2313	397.5	1492.5	2.204	H1-1b*	
9	(B-5)	1	W14X159	0.084	19	7	0.018	19	7	1657.561	2101.5	547.5	1076.25	2.197	H1-1b	
10	(C-3)	1	W14X159	0.202	19	6	0.039	19	6	1657.561	2101.5	547.5	1076.25	2.197	H1-1b	
11	(B-3)	1	W18X175	0.26	19.112	6	0.044	35.283	6	1602.514	2313	397.5	1492.5	1.667	H1-1b	
12	(A-3)	1	W14X159	0.018	19	7	0.004	19	7	1657.561	2101.5	547.5	1076.25	2.22	H1-1b	
13	(B-4.5)	1	HSS8X8X3	0.968	19	7	0	19	17	154.735	222.318	43.381	43.381	1	H1-1a*	
14	(C-4.5)	1	HSS9X9X4	0.953	19	6	0	19	17	252.44	332.442	77.768	77.768	1	H1-1a*	
15	(4.7-5)	1	HSS5X5X2	0.857	19	7	0	19	17	38.059	92.322	11.538	11.538	1	H1-1a*	
16	(4.7-4.5)	1	HSS7X7X3	0.754	19	7	0	19	17	122.832	193.338	34.702	34.702	1	H1-1a*	
17	(4.7-3)	1	HSS7X7X2	0.959	19	7	0	19	17	70.238	130.824	20.185	20.185	1	H1-1a*	
18	CS19	1	HSS3.5X3...	0.861	19	7	0	19	17	12.603	63.756	6.659	6.659	1	H1-1a*	
19	(D-2)	1	W14X176	0.029	28.511	8	0.007	28.511	8	1373.325	2331	611.25	1200	1.617	H1-1b	
20	(B-2)	1	W14X176	0.029	28.511	8	0.007	28.511	8	1373.325	2331	611.25	1200	1.617	H1-1b	
21	CS22	1	HSS4.5X4...	0.941	18.973	6	0	33.116	6	27.596	82.8	9.666	9.666	1	H1-1a*	
22	CS23	1	HSS4.5X4...	0.951	18.973	6	0	33.116	6	27.596	82.8	9.666	9.666	1	H1-1a*	
23	(B-1)	1	W14X176	0.025	20.95	8	0.005	20.95	8	1751.804	2331	611.25	1200	1.053	H1-1b	
24	(D-1)	1	W14X176	0.025	20.95	8	0.005	20.95	8	1751.804	2331	611.25	1200	1.053	H1-1b	
25	CS26	1	W14X193	0.082	20.95	8	0.017	20.95	8	1928.049	2556	675	1331.25	1.053	H1-1b	
26	CS27	1	W14X193	0.082	20.95	8	0.017	20.95	8	1928.049	2556	675	1331.25	1.053	H1-1b	
27	CS28	1	HSS6X6X2	0.95	18.896	8	0	30.746	17	25.724	111.78	15.688	15.688	1	H1-1a*	
28	CS29	1	HSS6X6X2	0.958	18.896	8	0	30.746	17	25.724	111.78	15.688	15.688	1	H1-1a*	
29	(D-3)	1	HSS6X6X10	0.051	35.283	8	0	35.283	17	281.045	484.38	80.04	80.04	1	H1-1b*	
30	CS29	1	HSS6X6X10	0.045	35.283	8	0	35.283	17	281.045	484.38	80.04	80.04	1	H1-1b*	
31	CS30	1	HSS6X6X10	0.045	35.283	8	0	35.283	17	281.045	484.38	80.04	80.04	1	H1-1b*	

Permits: BNR21-0244, ELE21-0850, MEC21-0512, PLB21-0994
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 Department Services
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 file for future
 reference. If
 changes or
 additions to
 the plan
 are required,
 the applicant
 shall file an
 amended plan
 with the
 Department
 of Public
 Works.