

Petrie Residence/M.I./main residence

Dek rim above kitchen window

REV2 DEK jst # 26-alt #

Prepared by: LA

Date: 6/11/21

Selection 2x 8 HF #2 @ 12 in oc Lu = 0.0 Ft Lu @OH = 0.0 Ft

Conditions NDS 2015, Overhang, Repetitive Use, Uplift @ R1

Min Bearing Area R1= -0.6 in² R2= 1.8 in² (1.5) DL Defl= 0.05 in.

Data

Beam Span	2.0 ft	Reaction 1 LL	-195 #	Reaction 2 LL	585 #
Beam Wt per ft	0 #	Reaction 1 TL	-240 #	Reaction 2 TL	720 #
Bm Wt Included	0 #	Maximum V	400 #	Overhang Length	4.0 ft
Max Moment	640 #	Max V (Reduced)	352 #	Total Beam Length	6.0 ft
TL Max Defl	L / 240	TL Actual Defl	L / < -1000	OH TL Actual Defl	L / 468
LL Max Defl	L / 360	LL Actual Defl	L / < -1000	OH LL Actual Defl	L / 630

Attributes

	Section (in ³)	Shear (in ²)	TL Defl (in)	LL Defl	OH TL Defl	OH LL Defl
Actual	13.14	10.88	0.00	0.00	0.21	0.15
Critical	6.55	3.52	0.10	0.07	0.40	0.27
Status	OK	OK	OK	OK	OK	OK
Ratio	50%	32%	4%	5%	51%	57%

Values

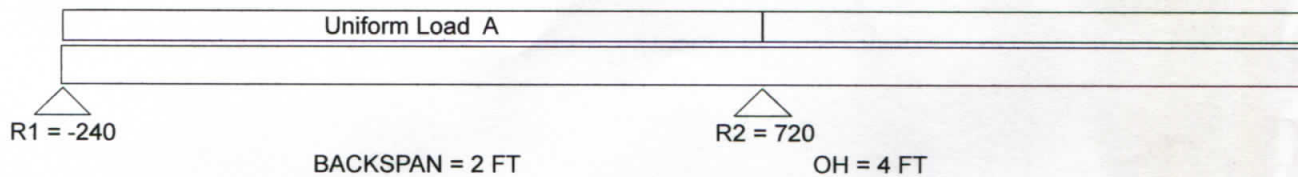
	Fb (psi)	Fv (psi)	E (psi x mil)	Fc _L (psi)
Reference Values	850	150	1.3	405
Adjusted Values	1173	150	1.3	405

Adjustments

CF Size Factor	1.200			
Cd Duration	1.00	1.00		
Cr Repetitive	1.15			
Ch Shear Stress		N/A		
Cm Wet Use	1.00	1.00	1.00	1.00
CI Stability	1.0000	Rb = 0.00	Le = 0.00 Ft	
CI Stability @ OH	1.0000	Rb = 0.00	Le = 0.00 Ft	

Loads

	Uniform LL: 65	Uniform TL: 80 = A	(Uniform Ld on Backspan)	
	Par Unif LL	Par Unif TL	Start	End
	65	K = 80 (OH)	0	4.0



Uniform and partial uniform loads are lbs per lineal ft. Overhanging load distances are from R2.

Petrie Residence/M.I./main residence

Dek rim above kitchen window

REV2 DEK jst # 26A-alt#

Prepared by: LA

Date: 6/11/21

Selection 2x 8 HF #2 @ 16 in oc Lu = 0.0 Ft Lu @OH = 0.0 Ft

Conditions NDS 2015, Overhang, Repetitive Use, Uplift @ R1

Min Bearing Area R1= -0.8 in² R2= 2.4 in² (1.5) DL Defl= 0.07 in.

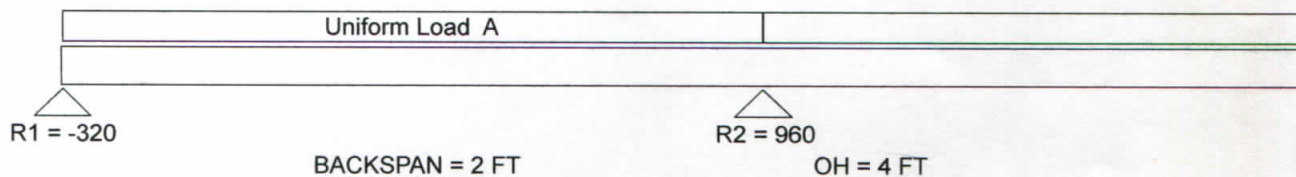
<u>Data</u>					
Beam Span	2.0 ft	Reaction 1 LL	-260 #	Reaction 2 LL	780 #
Beam Wt per ft	0 #	Reaction 1 TL	-320 #	Reaction 2 TL	960 #
Bm Wt Included	0 #	Maximum V	533 #	Overhang Length	4.0 ft
Max Moment	853 #	Max V (Reduced)	469 #	Total Beam Length	6.0 ft
TL Max Defl	L / 240	TL Actual Defl	L / < -1000	OH TL Actual Defl	L / 351
LL Max Defl	L / 360	LL Actual Defl	L / < -1000	OH LL Actual Defl	L / 473

<u>Attributes</u>	Section (in ³)	Shear (in ²)	TL Defl (in)	LL Defl	OH TL Defl	OH LL Defl
Actual	13.14	10.88	-0.01	0.00	0.27	0.20
Critical	8.73	4.69	0.10	0.07	0.40	0.27
Status	OK	OK	OK	OK	OK	OK
Ratio	66%	43%	6%	7%	68%	76%

<u>Values</u>	Fb (psi)	Fv (psi)	E (psi x mil)	Fc _⊥ (psi)
Reference Values	850	150	1.3	405
Adjusted Values	1173	150	1.3	405

<u>Adjustments</u>	CF Size Factor	Cd Duration	Cr Repetitive	Ch Shear Stress	Cm Wet Use	CI Stability	Rb = 0.00	Le = 0.00 Ft
	1.200	1.00	1.15	N/A	1.00	1.0000	0.00	0.00 Ft
						1.0000	0.00	0.00 Ft

<u>Loads</u>	Uniform LL: 87	Uniform TL: 107 = A	(Uniform Ld on Backspan)	
	Par Unif LL	Par Unif TL	Start	End
	87	K = 107 (OH)	0	4.0



Uniform and partial uniform loads are lbs per lineal ft. Overhanging load distances are from R2.

Petrie Residence/M.I./main residence

fl bm above kitchen sink

REV2 BM # 27-alt#

Prepared by: LA

Date: 6/11/21

Selection

5-1/4x 11-7/8 2.0E TJ Parallam W.S. PSL

Lu = 0.0 Ft

Conditions

NDS 2015

Min Bearing Area R1= 5.1 in² R2= 5.1 in² (1.5) DL Defl= 0.11 in

Data

Beam Span	15.0 ft	Reaction 1 LL	2200 #	Reaction 2 LL	2200 #
Beam Wt per ft	19.48 #	Reaction 1 TL	3174 #	Reaction 2 TL	3174 #
Bm Wt Included	292 #	Maximum V	3174 #		
Max Moment	6839 #	Max V (Reduced)	2722 #		
TL Max Defl	L / 240	TL Actual Defl	L / 692		
LL Max Defl	L / 360	LL Actual Defl	L / >1000		

Attributes

	Section (in ³)	Shear (in ²)	TL Defl (in)	LL Defl
Actual	123.39	62.34	0.26	0.15
Critical	28.26	14.08	0.75	0.50
Status	OK	OK	OK	OK
Ratio	23%	23%	35%	31%

Values

	Fb (psi)	Fv (psi)	E (psi x mil)	Fc _I (psi)
Reference Values	2900	290	2.2	625
Adjusted Values	2903	290	2.2	625

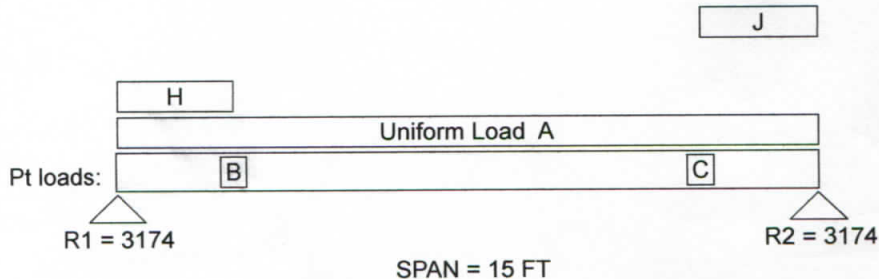
Adjustments

CF Size Factor	1.001			
Cd Duration	1.00	1.00		
Cr Repetitive	1.00			
Ch Shear Stress		N/A		
Cm Wet Use	1.00	1.00	1.00	1.00
CI Stability	1.0000	Rb = 0.00	Le = 0.00 Ft	

Loads

Uniform TL: 7 = A

Point LL	Point TL	Distance	Par Unif LL	Par Unif TL	Start	End
1425	B = 1900	2.5	310	H = 430	0	2.5
1425	C = 1900	12.5	310	J = 430	12.5	15.0



Uniform and partial uniform loads are lbs per lineal ft.

Petrie Residence/M.I./main residence

fl bm above kitchen sink

REV2 BM # 27-alt# 1

Prepared by: LA

Date: 6/11/21

Selection 7x 11-7/8 2.0E TJ Parallam W.S. PSL Lu = 0.0 Ft

Conditions NDS 2015

Min Bearing Area R1= 5.2 in² R2= 5.2 in² (1.5) DL Defl= 0.09 in

Data

Beam Span	15.0 ft	Reaction 1 LL	2200 #	Reaction 2 LL	2200 #
Beam Wt per ft	25.98 #	Reaction 1 TL	3222 #	Reaction 2 TL	3222 #
Bm Wt Included	390 #	Maximum V	3222 #		
Max Moment	7021 '#	Max V (Reduced)	2764 #		
TL Max Defl	L / 240	TL Actual Defl	L / 899		
LL Max Defl	L / 360	LL Actual Defl	L / >1000		

Attributes

	Section (in ³)	Shear (in ²)	TL Defl (in)	LL Defl
Actual	164.52	83.13	0.20	0.11
Critical	29.02	14.30	0.75	0.50
Status	OK	OK	OK	OK
Ratio	18%	17%	27%	23%

Values

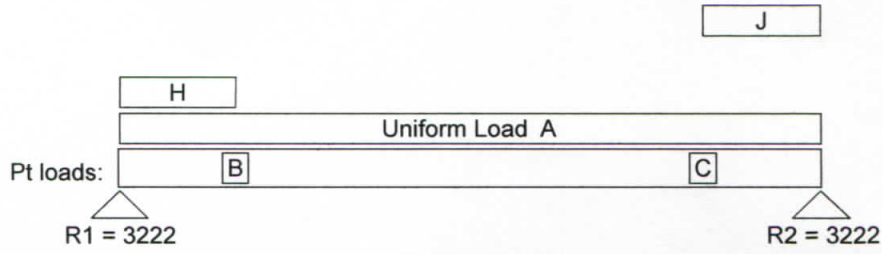
	Fb (psi)	Fv (psi)	E (psi x mil)	Fc _I (psi)
Reference Values	2900	290	2.2	625
Adjusted Values	2903	290	2.2	625

Adjustments

CF Size Factor	1.001			
Cd Duration	1.00	1.00		
Cr Repetitive	1.00			
Ch Shear Stress		N/A		
Cm Wet Use	1.00	1.00	1.00	1.00
CI Stability	1.0000	Rb = 0.00	Le = 0.00 Ft	

Loads Uniform TL: 7 = A

Point LL	Point TL	Distance	Par Unif LL	Par Unif TL	Start	End
1425	B = 1900	2.5	310	H = 430	0	2.5
1425	C = 1900	12.5	310	J = 430	12.5	15.0



SPAN = 15 FT
 Uniform and partial uniform loads are lbs per lineal ft.

Petrie Residence/M./main residence

fl bm above kitchen sink

REV2 BM # 27-alt# 1

Prepared by: LA

Date: 6/11/21

Selection

7x 11-7/8 2.0E TJ Parallam W.S. PSL

Lu = 0.0 Ft

Conditions

NDS 2015

Min Bearing Area R1= 5.2 in² R2= 5.2 in² (1.5) DL Defl= 0.09 in

Data

Beam Span	15.0 ft	Reaction 1 LL	2200 #	Reaction 2 LL	2200 #
Beam Wt per ft	25.98 #	Reaction 1 TL	3222 #	Reaction 2 TL	3222 #
Bm Wt Included	390 #	Maximum V	3222 #		
Max Moment	7021 #	Max V (Reduced)	2764 #		
TL Max Defl	L / 240	TL Actual Defl	L / 899		
LL Max Defl	L / 360	LL Actual Defl	L / >1000		

Attributes

	Section (in ³)	Shear (in ²)	TL Defl (in)	LL Defl
Actual	164.52	83.13	0.20	0.11
Critical	29.02	14.30	0.75	0.50
Status	OK	OK	OK	OK
Ratio	18%	17%	27%	23%

Values

	Fb (psi)	Fv (psi)	E (psi x mil)	Fc _I (psi)
Reference Values	2900	290	2.2	625
Adjusted Values	2903	290	2.2	625

Adjustments

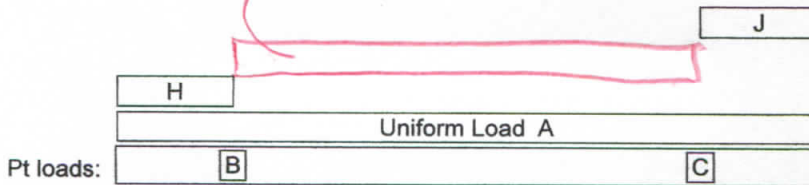
CF Size Factor	1.001			
Cd Duration	1.00	1.00		
Cr Repetitive	1.00			
Ch Shear Stress		N/A		
Cm Wet Use	1.00	1.00	1.00	1.00
CI Stability	1.0000	Rb = 0.00	Le = 0.00 Ft	

Loads

Uniform TL: 7 = A

Point LL	Point TL	Distance	Par Unif LL	Par Unif TL	Start	End
1425	B = 1900	2.5	310	H = 430	0	2.5
1425	C = 1900	12.5				
			310	J = 430	12.5	15.0

$I = -195/4 LL$



TL = R1 = 3222 #
LL = 2200 #

SPAN = 15 FT

TL = R2 = 3222 #
LL = 2200 #

Uniform and partial uniform loads are lbs per lineal ft.

$-LL = -975 #$
 (5×-195)
 $LL = 1225 #$

$-LL = -975 #$
 $LL = 1225 #$

Petrie Residence/M.I./main residence

wdw hdr @ kitchen sink

REV2 HDR # 28-alt#

Prepared by: LA

Date: 6/11/21

Selection **4x 10 DF-L #2** Lu = 0.0 Ft

Conditions NDS 2015

Min Bearing Area R1= 3.8 in² R2= 3.8 in² (1.5) DL Defl= 0.02 in

Data

Beam Span	6.5 ft	Reaction 1 LL	1901 #	Reaction 2 LL	1901 #
Beam Wt per ft	7.87 #	Reaction 1 TL	2366 #	Reaction 2 TL	2366 #
Bm Wt Included	51 #	Maximum V	2366 #		
Max Moment	3844 #	Max V (Reduced)	1805 #		
TL Max Defl	L / 240	TL Actual Defl	L / 899		
LL Max Defl	L / 360	LL Actual Defl	L / >1000		

Attributes

	Section (in ³)	Shear (in ²)	TL Defl (in)	LL Defl
Actual	49.91	32.38	0.09	0.06
Critical	42.71	15.04	0.33	0.22
Status	OK	OK	OK	OK
Ratio	86%	46%	27%	29%

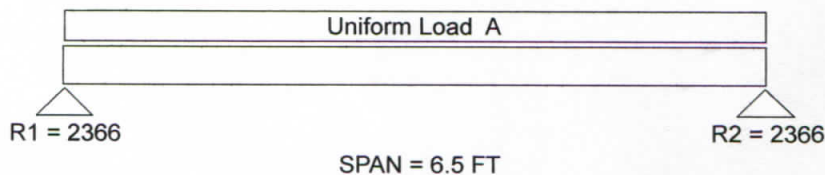
Values

	Fb (psi)	Fv (psi)	E (psi x mil)	Fc _L (psi)
Reference Values	900	180	1.6	625
Adjusted Values	1080	180	1.6	625

Adjustments

CF Size Factor	1.200			
Cd Duration	1.00	1.00		
Cr Repetitive	1.00			
Ch Shear Stress		N/A		
Cm Wet Use	1.00	1.00	1.00	1.00
Cl Stability	1.0000	Rb = 0.00	Le = 0.00 Ft	

Loads Uniform LL: 585 Uniform TL: 720 = A



Uniform and partial uniform loads are lbs per lineal ft.