



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Outlookers	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch	No. 2	(1) 1.5 X 5.5	16(in) O.C.	DRY
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BEAM PROPERTIES

Start (ft): 0 End (ft): 4.5 Member Slope: 4/12 Actual Length (ft): 4.74 Roof Pitch: 4/12 O.C. Spacing(in): 16

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
8.25	20.8	1.55	1.88	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1346	748	180	1485	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.3	1.3	1	1.1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1.15

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	2	0	2	0.6666667				
2	2.5	0	2.5	0.8333333				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (51.1%)	101.2	207.0	1.98	D+S	1.15
Bending Stress Y (psi)	PASS (25.8%)	1121.3	1510.5	2.025	D+S	1.15
Deflection Y (in)	PASS (69.5%)	0.107 (=L/505)	0.351 (=L/154)	4.5	S	0
Compressive Stress (psi)	PASS (98.7%)	21.9	1668.9	2.025	D+S	1.15
Tensile Stress (psi)	PASS (97.4%)	22.5	859.6	1.98	D+S	1.15
Bearing Stress (psi)	PASS (80.9%)	127.4	667.6	2	D+S	1.15
Bending-Compression (Unit)	PASS (25.6%)	0.74	1.00	2.025	D+S	1.15
Bending-Tension (Unit)	PASS (24.7%)	0.75	1.00	1.98	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	SNOW	TOTAL
A	-11	-119	-130
B	101	1067	1168
C	0	0	0

Reaction Location

A

B

C

CONNECTORS		(All connectors are Simpson Strong-Tie connectors)*			Header	Joist Nails (in)	Nailer
Support A	Model	Type	Adequacy (%)	Fastening (in)		Thickness (in)	
Primary	LU26	Hanger	-100	(6) 0.162 x 3.5	(4) 0.148 x 3	N/A	

Hanger at support A has seat sloped 0 degrees, skewed 0 degrees.

WSR = web stiffeners required

*Capacity values are adjusted based on specific gravity when members use grades other than those specified in Simpson Strong-Tie's capacity tables.



LOAD LIST							
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft ²)	Uniform	150	150	0	4.5	Snow	Y
Uniform (lb/ft)	Uniform	17	17	0	4.5	Dead	Y
Self Weight (lb/ft)	-	1.88	1.88	0	4.5	Dead	Y



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DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #1	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(1) 1.75 X 9.25	24(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 18 Member Slope: 0/12 Actual Length (ft): 18 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
16.19	115.42	4.13	4.72	1	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2704	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 1.04 C_r = 1.04 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	3	0	3	0				
2	12	0	12	0				
3	3	0	3	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (43.9%)	183.8	327.8	14.94	D+S	1.15
Bending Stress Y (psi)	PASS (32.7%)	2168.2	3221.7	9	D+S	1.15
Deflection Y (in)	PASS (29.9%)	0.280 (=L/771)	0.400 (=L/540)	18	S	0
Bearing Stress (psi)	PASS (40.9%)	490.8	830.4	3	D+S	1.15

REACTIONS

Y axis	Units for V: lbf		Units for M: lbf-ft
	DEAD	SNOW	TOTAL
A	0	0	0
B	306	2700	3006
C	306	2700	3006
D	0	0	0

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	150	150	0	18	Snow	Y
Uniform (lbf/ft ²)	Uniform	17	17	0	18	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #2	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(2) 1.75 X 20	24(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 37 Member Slope: 0/12 Actual Length (ft): 37 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
70	2333.33	17.86	20.42	2	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2704	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 0.93C_r = 1.04 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	4.5	0	4.5	0				
2	28	0	28	0				
3	4.5	0	4.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (70.1%)	98.0	327.8	32.19	D+S	1.15
Bending Stress Y (psi)	PASS (48.0%)	1509.4	2900.8	18.5	D+S	1.15
Deflection Y (in)	PASS (36.6%)	0.381 (=L/1165)	0.600 (=L/740)	37	S	0
Bearing Stress (psi)	PASS (39.3%)	504.4	830.4	4.5	D+S	1.15

REACTIONS

Y axis	Units for V: lbf		Units for M: lbf-ft	
	DEAD	LIVE	SNOW	TOTAL
A	0	0	0	0
B	629	260	5550	6439
C	629	260	5550	6439
D	0	0	0	0

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	150	150	0	37	Snow	Y
Uniform (lbf/ft ²)	Uniform	17	17	0	37	Dead	Y
Uniform (lbf/ft)	Uniform	40	40	12	25	Live	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #3	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(2) 1.75 X 20	24(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 34 Member Slope: 0/12 Actual Length (ft): 34 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
70	2333.33	17.86	20.42	2	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2704	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 0.93 C_r = 1.04 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	3	0	3	0				
2	28	0	28	0				
3	3	0	3	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (69.6%)	99.8	327.8	3.06	D+S	1.15
Bending Stress Y (psi)	PASS (44.6%)	1606.1	2900.8	17	D+S	1.15
Deflection Y (in)	PASS (29.3%)	0.283 (=L/1442)	0.400 (=L/1020)	0	S	0
Bearing Stress (psi)	PASS (44.2%)	463.5	830.4	31	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	0	0	0
B	578	5100	5678
C	578	5100	5678
D	0	0	0

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	150	150	0	34	Snow	Y
Uniform (lbf/ft ²)	Uniform	17	17	0	34	Dead	Y



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DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #4	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(2) 1.75 X 20	24(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 37 Member Slope: 0/12 Actual Length (ft): 37 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
70	2333.33	17.86	20.42	2	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2704	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 0.93 C_r = 1.04 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	4.5	0	4.5	0				
2	28	0	28	0				
3	4.5	0	4.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (70.1%)	98.0	327.8	32.19	D+S	1.15
Bending Stress Y (psi)	PASS (48.0%)	1509.4	2900.8	18.5	D+S	1.15
Deflection Y (in)	PASS (36.6%)	0.381 (=L/1165)	0.600 (=L/740)	37	S	0
Bearing Stress (psi)	PASS (39.3%)	504.4	830.4	4.5	D+S	1.15

REACTIONS

Y axis	Units for V: lbf		Units for M: lbf-ft	
	DEAD	LIVE	SNOW	TOTAL
A	0	0	0	0
B	629	260	5550	6439
C	629	260	5550	6439
D	0	0	0	0

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	150	150	0	37	Snow	Y
Uniform (lbf/ft ²)	Uniform	17	17	0	37	Dead	Y
Uniform (lbf/ft)	Uniform	40	40	12	25	Live	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:	--	REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #5	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(1) 1.75 X 14	24(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 22 Member Slope: 0/12 Actual Length (ft): 22 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
24.5	400.17	6.25	7.15	1	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2704	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 0.98 C_r = 1.04 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	3	0	3	0				
2	16	0	16	0				
3	3	0	3	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (50.6%)	162.0	327.8	3.08	D+S	1.15
Bending Stress Y (psi)	PASS (36.7%)	1928.0	3045.1	11	D+S	1.15
Deflection Y (in)	PASS (36.2%)	0.255 (=L/1035)	0.400 (=L/660)	22	S	0
Bearing Stress (psi)	PASS (27.8%)	599.8	830.4	3	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	0	0	0
B	374	3300	3674
C	374	3300	3674
D	0	0	0

Units for V: lbf Units for M: lbf-ft



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	150	150	0	22	Snow	Y
Uniform (lbf/ft ²)	Uniform	17	17	0	22	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:	--	REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #6	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(1) 1.75 X 5.5	24(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 7 Member Slope: 0/12 Actual Length (ft): 7 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
9.62	24.26	2.46	2.81	1	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2704	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 1.11 C_r = 1.04 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	3	0	3	0				
2	4	0	4	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (50.5%)	162.1	327.8	3.01	D+S	1.15
Bending Stress Y (psi)	PASS (39.7%)	2030.0	3367.6	3.01	D+S	1.15
Deflection Y (in)	PASS (46.2%)	0.215 (=L/391)	0.400 (=L/210)	0	S	0
Bearing Stress (psi)	PASS (59.8%)	334.0	830.4	3	D+S	1.15

REACTIONS

Y axis	Units for V: lbf		Units for M: lbf-ft
	DEAD	SNOW	TOTAL
A	0	0	0
B	208	1838	2046
C	30	262	292

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	150	150	0	7	Snow	Y
Uniform (lbf/ft ²)	Uniform	17	17	0	7	Dead	Y



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STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:	--	REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #7	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(1) 1.75 X 5.5	24(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 10.5 Member Slope: 0/12 Actual Length (ft): 10.5 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
9.62	24.26	2.46	2.81	1	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2704	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 1.11 C_r = 1.04 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	7.5	0	7.5	0				
2	3	0	3	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (31.6%)	224.1	327.8	7.455	D+S	1.15
Bending Stress Y (psi)	PASS (34.8%)	2253.8	3457.8	3.15	D+S	1.15
Deflection Y (in)	PASS (45.3%)	0.273 (=L/462)	0.500 (=L/252)	3.465	S	0
Bearing Stress (psi)	PASS (51.7%)	400.8	830.4	7.5	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	107	945	1052
B	250	2205	2455
C	0	0	0

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	150	150	0	10.5	Snow	Y
Uniform (lbf/ft ²)	Uniform	17	17	0	10.5	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:	--	REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #8	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(1) 1.75 X 14	24(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 20.5 Member Slope: 0/12 Actual Length (ft): 20.5 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
24.5	400.17	6.25	7.15	1	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2704	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 0.98 C_r = 1.04 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	17.5	0	17.5	0				
2	3	0	3	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (44.3%)	182.7	327.8	17.425	D+S	1.15
Bending Stress Y (psi)	PASS (17.0%)	2528.2	3045.1	8.405	D+S	1.15
Deflection Y (in)	PASS (5.9%)	0.376 (=L/654)	0.400 (=L/615)	20.5	S	0
Bearing Stress (psi)	PASS (21.1%)	654.8	830.4	17.5	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	289	2548	2837
B	408	3602	4010
C	0	0	0

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	150	150	0	20.5	Snow	Y
Uniform (lbf/ft ²)	Uniform	17	17	0	20.5	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:	--	REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #9	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(1) 1.75 X 16	24(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 20 Member Slope: 0/12 Actual Length (ft): 20 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
28	597.33	7.15	8.17	1	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2704	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 0.96 C_r = 1.04 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	3	0	3	0				
2	17	0	17	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (53.2%)	153.2	327.8	3.2	D+S	1.15
Bending Stress Y (psi)	PASS (39.1%)	1820.2	2990.2	11.8	D+S	1.15
Deflection Y (in)	PASS (42.8%)	0.229 (=L/1048)	0.400 (=L/600)	0	S	0
Bearing Stress (psi)	PASS (22.7%)	641.5	830.4	3	D+S	1.15

REACTIONS

Y axis	Units for V: lbf		Units for M: lbf-ft
	DEAD	SNOW	TOTAL
A	0	0	0
B	400	3529	3929
C	280	2471	2751

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	150	150	0	20	Snow	Y
Uniform (lbf/ft ²)	Uniform	17	17	0	20	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:	--	REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #10	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(1) 1.75 X 14	24(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 19 Member Slope: 0/12 Actual Length (ft): 19 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
24.5	400.17	6.25	7.15	1	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2704	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 0.98 C_r = 1.04 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	3	0	3	0				
2	16	0	16	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (48.6%)	168.5	327.8	3.04	D+S	1.15
Bending Stress Y (psi)	PASS (31.4%)	2088.4	3045.1	11.21	D+S	1.15
Deflection Y (in)	PASS (30.4%)	0.278 (=L/820)	0.400 (=L/570)	0	S	0
Bearing Stress (psi)	PASS (25.9%)	615.2	830.4	3	D+S	1.15

REACTIONS

Y axis	Units for V: lbf		Units for M: lbf-ft
	DEAD	SNOW	TOTAL
A	0	0	0
B	384	3384	3768
C	262	2316	2578

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	150	150	0	19	Snow	Y
Uniform (lbf/ft ²)	Uniform	17	17	0	19	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:	--	REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #11	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(1) 1.75 X 16	24(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 18.5 Member Slope: 0/12 Actual Length (ft): 18.5 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
28	597.33	7.15	8.17	1	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2704	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 0.96C_r = 1.04 Volume factor Is applied on a load combination basis And Is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	18.5	0	18.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (49.5%)	165.5	327.8	18.5	D+S	1.15
Bending Stress Y (psi)	PASS (23.2%)	2296.4	2990.2	9.25	D+S	1.15
Deflection Y (in)	PASS (46.3%)	0.662 (=L/335)	1.233 (=L/180)	9.25	S	0
Bearing Stress (psi)	PASS (32.7%)	504.4	750.0	0	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	314	2775	3089
B	314	2775	3089

Reaction Location

A	B
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LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	150	150	0	18.5	Snow	Y
Uniform (lbf/ft ²)	Uniform	17	17	0	18.5	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:	--	REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #12	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(1) 1.75 X 16	24(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 18.5 Member Slope: 0/12 Actual Length (ft): 18.5 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
28	597.33	7.15	8.17	1	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2704	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 0.96C_r = 1.04 Volume factor Is applied on a load combination basis And Is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	18.5	0	18.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (49.5%)	165.5	327.8	18.5	D+S	1.15
Bending Stress Y (psi)	PASS (23.2%)	2296.4	2990.2	9.25	D+S	1.15
Deflection Y (in)	PASS (46.3%)	0.662 (=L/335)	1.233 (=L/180)	9.25	S	0
Bearing Stress (psi)	PASS (32.7%)	504.4	750.0	0	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	314	2775	3089
B	314	2775	3089

Reaction Location

A	B
---	---

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	150	150	0	18.5	Snow	Y
Uniform (lbf/ft ²)	Uniform	17	17	0	18.5	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #13	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		

Weyerhaeuser	2.0E Microlam LVL	(1) 1.75 X 7.25	24(in) O.C.	DRY
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BEAM PROPERTIES

Start (ft): 0 End (ft): 9 Member Slope: 0/12 Actual Length (ft): 9 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
12.69	55.57	3.24	3.7	1	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2704	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 1.07 C_r = 1.04 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	9	0	9	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (45.8%)	177.7	327.8	9	D+S	1.15
Bending Stress Y (psi)	PASS (20.5%)	2647.0	3330.3	4.5	D+S	1.15
Deflection Y (in)	PASS (33.6%)	0.398 (=L/271)	0.600 (=L/180)	4.5	S	0
Bearing Stress (psi)	PASS (67.3%)	245.4	750.0	0	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	153	1350	1503
B	153	1350	1503

Units for V: lbf Units for M: lbf-ft
 Reaction Location
 A _____ B

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	150	150	0	9	Snow	Y
Uniform (lbf/ft ²)	Uniform	17	17	0	9	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:	--	REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff

LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #14	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		

Weyerhaeuser	2.0E Microlam LVL	(1) 1.75 X 7.25	24(in) O.C.	DRY
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BEAM PROPERTIES

Start (ft): 0 End (ft): 9.5 Member Slope: 0/12 Actual Length (ft): 9.5 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
12.69	55.57	3.24	3.7	1	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2704	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 1.07 C_r = 1.04 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	9.5	0	9.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (42.8%)	187.6	327.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (11.4%)	2949.3	3330.3	4.75	D+S	1.15
Deflection Y (in)	PASS (21.9%)	0.495 (=L/230)	0.633 (=L/180)	4.75	S	0
Bearing Stress (psi)	PASS (65.5%)	259.0	750.0	0	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	162	1425	1587
B	162	1425	1587

Units for V: lbf Units for M: lbf-ft
Reaction Location

A B

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	150	150	0	9.5	Snow	Y
Uniform (lbf/ft ²)	Uniform	17	17	0	9.5	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #15	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(1) 1.75 X 5.5	24(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 7 Member Slope: 0/12 Actual Length (ft): 7 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
9.62	24.26	2.46	2.81	1	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2704	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 1.11 C_r = 1.04 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	3	0	3	0				
2	4	0	4	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (50.5%)	162.1	327.8	3.01	D+S	1.15
Bending Stress Y (psi)	PASS (39.7%)	2030.0	3367.6	3.01	D+S	1.15
Deflection Y (in)	PASS (46.2%)	0.215 (=L/391)	0.400 (=L/210)	0	S	0
Bearing Stress (psi)	PASS (59.8%)	334.0	830.4	3	D+S	1.15

REACTIONS

Y axis	Units for V: lbf		Units for M: lbf-ft
	DEAD	SNOW	TOTAL
A	0	0	0
B	208	1838	2046
C	30	262	292

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	150	150	0	7	Snow	Y
Uniform (lbf/ft ²)	Uniform	17	17	0	7	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Rafters #1	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch	No. 2	(1) 1.5 X 7.25	16(in) O.C.	DRY
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BEAM PROPERTIES

Start (ft): 0 End (ft): 7 Member Slope: 10/12 Actual Length (ft): 9.11 Roof Pitch: 10/12 O.C. Spacing(in): 16

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
10.88	47.63	2.04	2.48	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1242	690	180	1418	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.2	1.2	1	1.05	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1.15

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	3	0	3	2.5				
2	4	0	4	3.333333				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (53.3%)	96.7	207.0	3.01	D+S	1.15
Bending Stress Y (psi)	PASS (9.8%)	1196.0	1325.9	3.01	D+S	1.15
Deflection Y (in)	PASS (70.1%)	0.155 (=L/542)	0.521 (=L/161)	0	S	0
Compressive Stress (psi)	PASS (96.6%)	53.7	1576.7	3.01	D+S	1.15
Tensile Stress (psi)	PASS (93.6%)	50.7	793.5	2.94	D+S	1.15
Bearing Stress (psi)	PASS (70.8%)	201.8	692.0	3	D+S	1.15
Bending-Compression (Unit)	PASS (9.2%)	0.91	1.00	3.01	D+S	1.15
Bending-Tension (Unit)	PASS (12.6%)	0.87	1.00	2.94	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	SNOW	TOTAL
A	0	0	0
B	200	1595	1795
C	29	228	257

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft ²)	Uniform	150	150	0	7	Snow	Y
Uniform (lb/ft ²)	Uniform	17	17	0	7	Dead	Y
Self Weight (lb/ft)	-	2.48	2.48	0	7	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Rafters #2	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	I-Joists		
Weyerhaeuser	TJI 360	(1) 11.875	16(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 21.5 Member Slope: 10/12 Actual Length (ft): 27.99 Roof Pitch: 10/12 O.C. Spacing(in): 16

						End Rcap	End Rcap	End Rcap	End Rcap	Int Rcap	Int Rcap	Int Rcap	Int Rcap
El x10 ⁶	BSW	Lams	K x10 ⁶	Mcap	Vcap	1.75 NS	3.5 NS	1.75 WS	3.5 WS	3.5 NS	5.25 NS	3.5 WS	5.25 WS
(lbf-in ²)	(lbf/ft)		(lbf)	(lbf-ft)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)
419	3	1	4.5	6180	1705	1080	1505	1440	1705	2460	3000	2815	3360

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		Top	Bottom	Elev. Diff (ft)
1	3	0	3	2.5
2	9.5	0	9.5	7.916667
3	9	0	9	7.5

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Force (lbf)	PASS (38.1%)	1213.5	1960.8	12.685	D+S	1.15
Bending Moment (lbf-ft)	PASS (61.1%)	2762.6	7107.0	12.47	D+S	1.15
Deflection Y (in)	PASS (91.1%)	0.069 (=L/3739)	0.781 (=L/330)	17.63	S	0
Bearing Load (lbf)	PASS (7.7%)	3186.0	3450.0	12.5	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	SNOW	TOTAL
A	0	0	0
B	241	1879	2120
C	362	2824	3186
D	115	895	1010

Reaction Location WS-Web Stiffener Required NSR-No Stiffener Required

A	B	C	D
NSR	NSR	NSR	NSR

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	150	150	0	21.5	Snow	Y
Uniform (lbf/ft ²)	Uniform	17	17	0	21.5	Dead	Y
Self Weight (lbf/ft)	-	3	3	0	21.5	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:	--	REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #16	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(1) 1.75 X 9.25	24(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 11.5 Member Slope: 0/12 Actual Length (ft): 11.5 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
16.19	115.42	4.13	4.72	1	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2704	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 1.04 C_r = 1.04 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	11.5	0	11.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (45.7%)	178.0	327.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (17.6%)	2655.0	3221.7	5.75	D+S	1.15
Deflection Y (in)	PASS (33.3%)	0.511 (=L/270)	0.767 (=L/180)	5.75	S	0
Bearing Stress (psi)	PASS (58.2%)	313.6	750.0	0	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	196	1725	1921
B	196	1725	1921

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	150	150	0	11.5	Snow	Y
Uniform (lbf/ft ²)	Uniform	17	17	0	11.5	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:	--	REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #17	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(2) 1.75 X 20	24(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 31 Member Slope: 0/12 Actual Length (ft): 31 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
70	2333.33	17.86	20.42	2	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2704	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 0.93 C_r = 1.04 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	28	0	28	0				
2	3	0	3	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (69.3%)	100.6	327.8	27.9	D+S	1.15
Bending Stress Y (psi)	PASS (43.3%)	1644.8	2900.8	13.95	D+S	1.15
Deflection Y (in)	PASS (27.6%)	0.290 (=L/1283)	0.400 (=L/930)	31	S	0
Bearing Stress (psi)	PASS (43.7%)	467.9	830.4	28	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	471	4152	4623
B	583	5148	5731
C	0	0	0

Units for V: lbf Units for M: lbf-ft

Reaction Location

A B C

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	150	150	0	31	Snow	Y
Uniform (lbf/ft ²)	Uniform	17	17	0	31	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:	--	REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #18	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(1) 1.75 X 5.5	24(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 11.5 Member Slope: 0/12 Actual Length (ft): 11.5 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
9.62	24.26	2.46	2.81	1	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2704	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 1.11 C_r = 1.04 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	3	0	3	0				
2	8.5	0	8.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (25.8%)	243.3	327.8	3.105	D+S	1.15
Bending Stress Y (psi)	PASS (9.1%)	3143.8	3457.8	7.82	D+S	1.15
Deflection Y (in)	PASS (9.8%)	0.511 (=L/270)	0.567 (=L/243)	7.475	S	0
Bearing Stress (psi)	PASS (48.9%)	424.2	830.4	3	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	0	0	0
B	264	2334	2598
C	126	1116	1242

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	150	150	0	11.5	Snow	Y
Uniform (lbf/ft ²)	Uniform	17	17	0	11.5	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:	--	REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #19	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(1) 1.75 X 9.25	24(in) O.C. DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 12 Member Slope: 0/12 Actual Length (ft): 12 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
16.19	115.42	4.13	4.72	1	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2704	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 1.04 C_r = 1.04 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	12	0	12	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (43.3%)	185.7	327.8	12	D+S	1.15
Bending Stress Y (psi)	PASS (10.3%)	2890.9	3221.7	6	D+S	1.15
Deflection Y (in)	PASS (24.2%)	0.606 (=L/238)	0.800 (=L/180)	6	S	0
Bearing Stress (psi)	PASS (56.4%)	327.2	750.0	0	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	204	1800	2004
B	204	1800	2004

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	150	150	0	12	Snow	Y
Uniform (lbf/ft ²)	Uniform	17	17	0	12	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Rafters #3	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(1) 1.75 X 5.5	24(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 4.5 Member Slope: 0/12 Actual Length (ft): 4.5 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
9.62	24.26	2.46	2.81	1	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2704	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 1.11 C_r = 1.04 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	2	0	2	0				
2	2.5	0	2.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (67.6%)	106.3	327.8	2.025	D+S	1.15
Bending Stress Y (psi)	PASS (73.7%)	897.9	3408.9	1.98	D+S	1.15
Deflection Y (in)	PASS (83.8%)	0.043 (=L/1256)	0.267 (=L/202)	0	S	0
Bearing Stress (psi)	PASS (73.2%)	222.7	830.4	2	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	0	0	0
B	149	1215	1364
C	17	135	152

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	150	150	0	4.5	Snow	Y
Uniform (lbf/ft ²)	Uniform	17	17	0	4.5	Dead	Y
Self Weight (lbf/ft)	-	2.81	2.81	0	4.5	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Girder #1	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(4) 1.75 X 20	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 28 Member Slope: 0/12 Actual Length (ft): 28

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
140	4666.67	35.73	40.83	4	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 0.93C_r = 1 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	28	0	28	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (52.3%)	156.5	327.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (5.8%)	2628.4	2789.3	14	D+S	1.15
Deflection Y (in)	PASS (24.6%)	1.408 (=L/239)	1.867 (=L/180)	14	S	0
Bearing Stress (psi)	PASS (20.5%)	596.0	750.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	SNOW	TOTAL
A	1296	13306	14602
B	1296	13306	14602

Reaction Location

A	B
---	---

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	150	150	0	28	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	28	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Outlookers	B	75.569	75.569	0	28	Dead	Y
Uniform (lbf/ft)	Outlookers	B	800.451	800.451	0	28	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Girder #2	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(4) 1.75 X 20	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 28 Member Slope: 0/12 Actual Length (ft): 28

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
140	4666.67	35.73	40.83	4	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 0.93C_r = 1 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	28	0	28	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (52.3%)	156.5	327.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (5.8%)	2628.4	2789.3	14	D+S	1.15
Deflection Y (in)	PASS (24.6%)	1.408 (=L/239)	1.867 (=L/180)	14	S	0
Bearing Stress (psi)	PASS (20.5%)	596.0	750.0	0	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	1296	13306	14602
B	1296	13306	14602

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	150	150	0	28	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	28	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Outlookers	B	75.569	75.569	0	28	Dead	Y
Uniform (lbf/ft)	Outlookers	B	800.451	800.451	0	28	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #1	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		
Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 5.5 X 24	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 19.5 Member Slope: 0/12 Actual Length (ft): 19.5

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
132	6336	332.75	30.1	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	19.5	0	19.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (27.6%)	220.5	304.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (16.7%)	2145.6	2576.1	9.75	D+S	1.15
Deflection Y (in)	PASS (61.5%)	0.501 (=L/467)	1.300 (=L/180)	9.75	S	0
Bearing Stress (psi)	PASS (13.1%)	486.7	560.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	SNOW	TOTAL
A	2239	10	17168	19417
B	2211	10	16917	19138

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	19.5	Live	Y
Self Weight (lbf/ft)	-	30.1	30.1	0	19.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #9	B	200	200	0	15	Dead	Y
Uniform (lbf/ft)	Trusses #9	B	1764.706	1764.706	0	15	Snow	Y
Uniform (lbf/ft)	Trusses #10	B	191.781	191.781	15	19.5	Dead	Y
Uniform (lbf/ft)	Trusses #10	B	1692.188	1692.188	15	19.5	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #2	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		

Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 5.125 X 13.5	DRY		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 22 Member Slope: 0/12 Actual Length (ft): 22

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
69.19	1050.79	151.44	15.78	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	11	0	11	0				
2	11	0	11	0				

PASS-FAIL

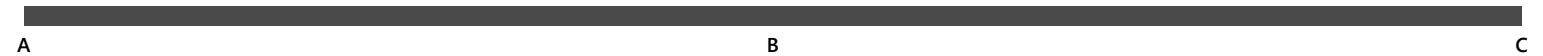
	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (49.2%)	154.8	304.8	11	D+S	1.15
Bending Stress Y (psi)	PASS (42.2%)	1210.7	2092.8	11	D+S	1.15
Deflection Y (in)	PASS (90.9%)	0.067 (=L/3940)	0.733 (=L/360)	4.62	S	0
Bearing Stress (psi)	PASS (33.7%)	371.5	560.0	11	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	SNOW	TOTAL
A	495	3790	4285
B	1649	12632	14281
C	495	3790	4285

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	15.78	15.78	0	22	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Trusses #6	B	104.125	104.125	0	22	Dead	Y
Uniform (lb/ft)	Trusses #6	B	918.75	918.75	0	22	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #3	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		

Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 5.125 X 13.5	DRY		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 23 Member Slope: 0/12 Actual Length (ft): 23

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
69.19	1050.79	151.44	15.78	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _L	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	11.5	0	11.5	0				
2	11.5	0	11.5	0				

PASS-FAIL

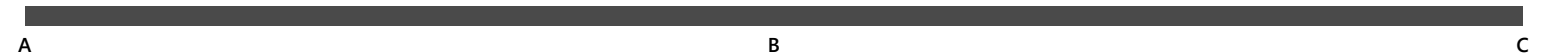
	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (36.4%)	193.7	304.8	11.5	D+S	1.15
Bending Stress Y (psi)	PASS (24.0%)	1583.9	2083.5	11.5	D+S	1.15
Deflection Y (in)	PASS (87.6%)	0.095 (=L/2905)	0.767 (=L/360)	4.83	S	0
Bearing Stress (psi)	PASS (17.0%)	464.9	560.0	11.5	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	SNOW	TOTAL
A	1102	8545	9647
B	2023	15848	17871
C	607	4755	5362

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	15.78	15.78	0	23	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #7	B	124.95	124.95	0	23	Dead	Y
Uniform (lbf/ft)	Trusses #7	B	1102.5	1102.5	0	23	Snow	Y
Point (lbf)	Beam #2	C	494.648	-	0	-	Dead	Y
Point (lbf)	Beam #2	C	3790.159	-	0	-	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Girder #3	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		

Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 10.75 X 21	DRY		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 18.5 Member Slope: 0/12 Actual Length (ft): 18.5

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
225.75	8296.31	2174.02	51.49	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	18.5	0	18.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (40.3%)	182.0	304.8	18.5	D+S	1.15
Bending Stress Y (psi)	PASS (21.6%)	1923.6	2454.4	9.25	D+S	1.15
Deflection Y (in)	PASS (61.9%)	0.469 (=L/473)	1.233 (=L/180)	9.25	S	0
Bearing Stress (psi)	PASS (17.3%)	463.2	560.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	SNOW	TOTAL
A	2788	24598	27386
B	2788	24598	27386

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	150	150	0	18.5	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	18.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #8	A	144.379	144.379	0	18.5	Dead	Y
Uniform (lbf/ft)	Trusses #8	A	1273.928	1273.928	0	18.5	Snow	Y
Uniform (lbf/ft)	Trusses #9	C	140	140	0	18.5	Dead	Y
Uniform (lbf/ft)	Trusses #9	C	1235.295	1235.295	0	18.5	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Girder #5	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(2) 1.75 X 18	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 16 Member Slope: 0/12 Actual Length (ft): 16

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
63	1701	16.08	18.38	2	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 0.95C_r = 1 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	16	0	16	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (46.6%)	175.0	327.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (34.0%)	1866.2	2829.5	8	D+S	1.15
Deflection Y (in)	PASS (66.5%)	0.358 (=L/536)	1.067 (=L/180)	8	S	0
Bearing Stress (psi)	PASS (20.0%)	599.8	750.0	0	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	748	6600	7348
B	748	6600	7348

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	150	150	0	16	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	16	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #13	A	76.5	76.5	0	16	Dead	Y
Uniform (lbf/ft)	Trusses #13	A	675	675	0	16	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Girder #6	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		

Weyerhaeuser	2.0E Microlam LVL	(4) 1.75 X 18	DRY		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 18.5 Member Slope: 0/12 Actual Length (ft): 18.5

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
126	3402	32.16	36.75	4	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 0.95C_r = 1 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	18.5	0	18.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (48.3%)	169.3	327.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (22.2%)	2202.2	2829.5	9.435	D+S	1.15
Deflection Y (in)	PASS (58.4%)	0.514 (=L/432)	1.233 (=L/180)	9.065	S	0
Bearing Stress (psi)	PASS (22.6%)	580.5	750.0	0	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	1448	12773	14221
B	861	7601	8462

Units for V: lbf Units for M: lbf-ft
Reaction Location

A B

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	150	150	0	18.5	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	18.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #10	C	131.219	131.219	0	9.5	Dead	Y
Uniform (lbf/ft)	Trusses #10	C	1157.813	1157.813	0	9.5	Snow	Y
Point (lbf)	Girder #5	B	748	-	9.5	-	Dead	Y

LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Girder #5	B	6600	-	9.5	-	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Girder #7	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(4) 1.75 X 11.875	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 10 Member Slope: 0/12 Actual Length (ft): 10

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
83.12	976.83	21.21	24.25	4	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 1 C_r = 1 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	10	0	10	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (14.4%)	280.7	327.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (15.4%)	2533.7	2994.3	4.7	D+S	1.15
Deflection Y (in)	PASS (56.6%)	0.289 (=L/415)	0.667 (=L/180)	4.9	S	0
Bearing Stress (psi)	PASS (15.3%)	634.9	750.0	0	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	1584	13972	15556
B	1336	11786	13122

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	150	150	0	10	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	10	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #17	A	235.268	235.268	0	10	Dead	Y
Uniform (lbf/ft)	Trusses #17	A	2075.893	2075.893	0	10	Snow	Y
Uniform (lbf/ft)	Trusses #18	C	63.25	63.25	0	3.75	Dead	Y

LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #18	C	558.088	558.088	0	3.75	Snow	Y
Uniform (lbf/ft)	Trusses #20	B	42.5	42.5	0	3.75	Dead	Y
Uniform (lbf/ft)	Trusses #20	B	375	375	0	3.75	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #20	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(1) 1.75 X 5.5	24(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 5 Member Slope: 0/12 Actual Length (ft): 5 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
9.62	24.26	2.46	2.81	1	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2704	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 1.11 C_r = 1.04 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	5	0	5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (60.3%)	130.1	327.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (58.9%)	1419.6	3457.8	2.5	D+S	1.15
Deflection Y (in)	PASS (73.9%)	0.087 (=L/690)	0.333 (=L/180)	2.5	S	0
Bearing Stress (psi)	PASS (81.8%)	136.3	750.0	0	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	85	750	835
B	85	750	835

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	150	150	0	5	Snow	Y
Uniform (lbf/ft ²)	Uniform	17	17	0	5	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Girder #8	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		

Weyerhaeuser	2.0E Microlam LVL	(3) 1.75 X 14	DRY		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 8.5 Member Slope: 0/12 Actual Length (ft): 8.5

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
73.5	1200.5	18.76	21.44	3	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 0.98C_r = 1 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	8.5	0	8.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (38.6%)	201.2	327.8	8.5	D+S	1.15
Bending Stress Y (psi)	PASS (20.3%)	2333.5	2927.9	5.015	D+S	1.15
Deflection Y (in)	PASS (76.9%)	0.131 (=L/779)	0.567 (=L/180)	4.42	S	0
Bearing Stress (psi)	PASS (28.5%)	536.6	750.0	8.5	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	724	6391	7115
B	1004	8857	9861

Units for V: lbf Units for M: lbf-ft
 Reaction Location
 A _____ B

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	150	150	0	8.5	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	8.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Girder #7	A	1583.546	-	5	-	Dead	Y
Point (lbf)	Girder #7	A	13972.47	-	5	-	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:	--	REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Girder #9	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(3) 1.75 X 14	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 12 Member Slope: 0/12 Actual Length (ft): 12

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
73.5	1200.5	18.76	21.44	3	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 0.98C_r = 1 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	12	0	12	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (39.6%)	197.9	327.8	12	D+S	1.15
Bending Stress Y (psi)	PASS (18.4%)	2388.9	2927.9	7.8	D+S	1.15
Deflection Y (in)	PASS (60.6%)	0.315 (=L/457)	0.800 (=L/180)	6.24	S	0
Bearing Stress (psi)	PASS (29.6%)	527.8	750.0	12	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	893	7880	8773
B	987	8711	9698

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	150	150	0	12	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	12	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #16	A	97.75	97.75	0	8	Dead	Y
Uniform (lbf/ft)	Trusses #16	A	862.5	862.5	0	8	Snow	Y
Uniform (lbf/ft)	Trusses #20	A	42.5	42.5	8	12	Dead	Y

LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #20	A	375	375	8	12	Snow	Y
Point (lbf)	Girder #8	A	724.298	-	8	-	Dead	Y
Point (lbf)	Girder #8	A	6390.869	-	8	-	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Girder #10	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(4) 1.75 X 14	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 12 Member Slope: 0/12 Actual Length (ft): 12

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
98	1600.67	25.01	28.58	4	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 0.98C_r = 1 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	12	0	12	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (30.2%)	228.8	327.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (21.2%)	2307.3	2927.9	4.08	D+S	1.15
Deflection Y (in)	PASS (63.8%)	0.290 (=L/497)	0.800 (=L/180)	5.64	S	0
Bearing Stress (psi)	PASS (18.6%)	610.2	750.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	SNOW	TOTAL
A	1522	13429	14951
B	952	8402	9354

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	150	150	0	12	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	12	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #14	B	80.75	80.75	0	12	Dead	Y
Uniform (lbf/ft)	Trusses #14	B	712.5	712.5	0	12	Snow	Y
Uniform (lbf/ft)	Trusses #19	A	102	102	0	4	Dead	Y

LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #19	A	900	900	0	4	Snow	Y
Point (lbf)	Girder #9	A	893.099	-	4	-	Dead	Y
Point (lbf)	Girder #9	A	7880.291	-	4	-	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #4	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		
Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 5.125 X 10.5	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 5 Member Slope: 0/12 Actual Length (ft): 5

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
53.81	494.4	117.79	12.27	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1472	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	5	0	5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (14.1%)	261.8	304.8	5	D+S	1.15
Bending Stress Y (psi)	PASS (56.7%)	1196.0	2760.0	4	D+S	1.15
Deflection Y (in)	PASS (88.5%)	0.038 (=L/1579)	0.333 (=L/180)	2.7	S	0
Bearing Stress (psi)	PASS (40.5%)	333.2	560.0	5	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	SNOW	TOTAL
A	473	2	3902	4377
B	984	2	8408	9394

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	5	Live	Y
Self Weight (lbf/ft)	-	12.27	12.27	0	5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #19	B	102	102	0	4	Dead	Y
Uniform (lbf/ft)	Trusses #19	B	900	900	0	4	Snow	Y
Point (lbf)	Girder #9	B	987.199	-	4	-	Dead	Y
Point (lbf)	Girder #9	B	8710.59	-	4	-	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Girder #11	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(5) 1.75 X 16	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 18.5 Member Slope: 0/12 Actual Length (ft): 18.5

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
140	2986.67	35.73	40.83	5	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 0.96C_r = 1 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	18.5	0	18.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (32.8%)	220.4	327.8	18.5	D+S	1.15
Bending Stress Y (psi)	PASS (13.8%)	2479.3	2875.2	9.62	D+S	1.15
Deflection Y (in)	PASS (47.7%)	0.646 (=L/344)	1.233 (=L/180)	9.62	S	0
Bearing Stress (psi)	PASS (10.5%)	671.6	750.0	18.5	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	910	8029	8939
B	2094	18474	20568

Reaction Location

A	B
---	---

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	150	150	0	18.5	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	18.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #16	B	97.75	97.75	9.5	17	Dead	Y
Uniform (lbf/ft)	Trusses #16	B	862.5	862.5	9.5	17	Snow	Y
Point (lbf)	Girder #8	B	1003.747	-	17	-	Dead	Y

LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Girder #8	B	8856.598	-	17	-	Snow	Y
Point (lbf)	Girder #10	B	952.2	-	9.5	-	Dead	Y
Point (lbf)	Girder #10	B	8401.768	-	9.5	-	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:	--	REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Girder #12	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		
Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 8.75 X 42	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 36 Member Slope: 0/12 Actual Length (ft): 36

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
367.5	54022.5	2344.73	83.82	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	36	0	36	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (29.2%)	215.7	304.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (6.7%)	2040.0	2187.1	14.76	D+S	1.15
Deflection Y (in)	PASS (61.6%)	0.922 (=L/469)	2.400 (=L/180)	17.64	S	0
Bearing Stress (psi)	PASS (17.0%)	464.6	560.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	SNOW	TOTAL
A	5379	47465	52844
B	3891	34333	38224

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
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LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #11	B	157.25	157.25	18.5	36	Dead	Y
Uniform (lbf/ft)	Trusses #11	B	1387.5	1387.5	18.5	36	Snow	Y
Uniform (lbf/ft)	Trusses #12	A	157.25	157.25	0	14	Dead	Y
Uniform (lbf/ft)	Trusses #12	A	1387.5	1387.5	0	14	Snow	Y

LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #13	B	76.5	76.5	0	18.5	Dead	Y
Uniform (lbf/ft)	Trusses #13	B	675	675	0	18.5	Snow	Y
Uniform (lbf/ft)	Trusses #14	A	80.75	80.75	0	14	Dead	Y
Uniform (lbf/ft)	Trusses #14	A	712.5	712.5	0	14	Snow	Y
Point (lbf)	Girder #6	B	861.426	-	18.5	-	Dead	Y
Point (lbf)	Girder #6	B	7600.809	-	18.5	-	Snow	Y
Point (lbf)	Girder #11	A	909.921	-	14	-	Dead	Y
Point (lbf)	Girder #11	A	8028.713	-	14	-	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #12	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		

Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 5.125 X 13.5	DRY		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 12.5 Member Slope: 0/12 Actual Length (ft): 12.5

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
69.19	1050.79	151.44	15.78	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	2.5	0	2.5	0				
2	10	0	10	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (49.7%)	153.2	304.8	2.625	D+S	1.15
Bending Stress Y (psi)	PASS (58.2%)	1153.3	2760.0	7.75	D+S	1.15
Deflection Y (in)	PASS (76.0%)	0.080 (=L/1875)	0.333 (=L/450)	0	S	0
Bearing Stress (psi)	PASS (36.9%)	377.5	598.2	2.5	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	SNOW	TOTAL
A	0	0	0
B	1298	9343	10641
C	779	5606	6385

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	15.78	15.78	0	12.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Rafters #1	B	150.372	150.372	0	12.5	Dead	Y
Uniform (lbf/ft)	Rafters #1	B	1195.947	1195.947	0	12.5	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #13	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		

Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 5.125 X 13.5	DRY		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 12.5 Member Slope: 0/12 Actual Length (ft): 12.5

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
69.19	1050.79	151.44	15.78	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _L	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	2.5	0	2.5	0				
2	10	0	10	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (85.2%)	45.0	304.8	2.625	D+S	1.15
Bending Stress Y (psi)	PASS (87.7%)	339.1	2760.0	7.75	D+S	1.15
Deflection Y (in)	PASS (93.1%)	0.023 (=L/6522)	0.333 (=L/450)	0	S	0
Bearing Stress (psi)	PASS (81.4%)	111.0	598.2	2.5	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	SNOW	TOTAL
A	0	0	0
B	459	2669	3128
C	275	1602	1877

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	15.78	15.78	0	12.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Rafters #1	C	21.481	21.481	0	12.5	Dead	Y
Uniform (lbf/ft)	Rafters #1	C	21.481	21.481	0	12.5	Dead	Y
Uniform (lbf/ft)	Rafters #1	C	170.847	170.847	0	12.5	Snow	Y
Uniform (lbf/ft)	Rafters #1	C	170.847	170.847	0	12.5	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #14	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		

Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 5.125 X 13.5	DRY		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 12.5 Member Slope: 0/12 Actual Length (ft): 12.5

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
69.19	1050.79	151.44	15.78	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _L	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	2.5	0	2.5	0				
2	10	0	10	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (49.7%)	153.2	304.8	2.625	D+S	1.15
Bending Stress Y (psi)	PASS (58.2%)	1153.3	2760.0	7.75	D+S	1.15
Deflection Y (in)	PASS (76.0%)	0.080 (=L/1875)	0.333 (=L/450)	0	S	0
Bearing Stress (psi)	PASS (36.9%)	377.5	598.2	2.5	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	SNOW	TOTAL
A	0	0	0
B	1298	9343	10641
C	779	5606	6385

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	15.78	15.78	0	12.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Rafters #1	B	150.372	150.372	0	12.5	Dead	Y
Uniform (lb/ft)	Rafters #1	B	1195.947	1195.947	0	12.5	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #15	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		
Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 5.125 X 13.5	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 11 Member Slope: 0/12 Actual Length (ft): 11

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
69.19	1050.79	151.44	15.78	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	11	0	11	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (12.6%)	266.5	304.8	11	D+S	1.15
Bending Stress Y (psi)	PASS (67.9%)	886.6	2760.0	5.5	D+S	1.15
Deflection Y (in)	PASS (86.4%)	0.100 (=L/1320)	0.733 (=L/180)	5.5	S	0
Bearing Stress (psi)	PASS (22.1%)	436.1	560.0	11	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	SNOW	TOTAL
A	1614	5	10678	12297
B	1614	6	10678	12298

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	11	Live	Y
Self Weight (lbf/ft)	-	15.78	15.78	0	11	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #12	B	1298.059	-	0.25	-	Dead	Y
Point (lbf)	Beam #12	B	9343.325	-	0.25	-	Snow	Y
Point (lbf)	Beam #13	B	458.924	-	5.5	-	Dead	Y
Point (lbf)	Beam #13	B	2669.483	-	5.5	-	Snow	Y
Point (lbf)	Beam #14	B	1298.059	-	10.75	-	Dead	Y
Point (lbf)	Beam #14	B	9343.325	-	10.75	-	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #21	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(1) 1.75 X 14	24(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 19 Member Slope: 0/12 Actual Length (ft): 19 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
24.5	400.17	6.25	7.15	1	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2704	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 0.98 C_r = 1.04 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	16	0	16	0				
2	3	0	3	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (48.6%)	168.5	327.8	15.96	D+S	1.15
Bending Stress Y (psi)	PASS (31.4%)	2088.4	3045.1	7.79	D+S	1.15
Deflection Y (in)	PASS (30.4%)	0.278 (=L/820)	0.400 (=L/570)	19	S	0
Bearing Stress (psi)	PASS (25.9%)	615.2	830.4	16	D+S	1.15

REACTIONS

Y axis	Units for V: lbf		Units for M: lbf-ft
	DEAD	SNOW	TOTAL
A	262	2316	2578
B	384	3384	3768
C	0	0	0

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	150	150	0	19	Snow	Y
Uniform (lbf/ft ²)	Uniform	17	17	0	19	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:	--	REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #22	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(1) 1.75 X 11.25	24(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 17 Member Slope: 0/12 Actual Length (ft): 17 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
19.69	207.64	5.02	5.74	1	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2704	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 1.01 C_r = 1.04 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	14	0	14	0				
2	3	0	3	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (43.6%)	184.8	327.8	13.94	D+S	1.15
Bending Stress Y (psi)	PASS (22.8%)	2421.3	3137.0	6.63	D+S	1.15
Deflection Y (in)	PASS (15.8%)	0.337 (=L/605)	0.400 (=L/510)	17	S	0
Bearing Stress (psi)	PASS (32.2%)	562.8	830.4	14	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	227	2004	2231
B	351	3096	3447
C	0	0	0

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	150	150	0	17	Snow	Y
Uniform (lbf/ft ²)	Uniform	17	17	0	17	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:	--	REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #23	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(1) 1.75 X 11.25	24(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 15.5 Member Slope: 0/12 Actual Length (ft): 15.5 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
19.69	207.64	5.02	5.74	1	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2704	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 1.01 C_r = 1.04 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	12.5	0	12.5	0				
2	3	0	3	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (49.5%)	165.7	327.8	12.4	D+S	1.15
Bending Stress Y (psi)	PASS (40.0%)	1883.4	3137.0	5.89	D+S	1.15
Deflection Y (in)	PASS (44.5%)	0.222 (=L/838)	0.400 (=L/465)	15.5	S	0
Bearing Stress (psi)	PASS (36.9%)	524.0	830.4	12.5	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	200	1767	1967
B	327	2883	3210
C	0	0	0

Units for V: lbf Units for M: lbf-ft



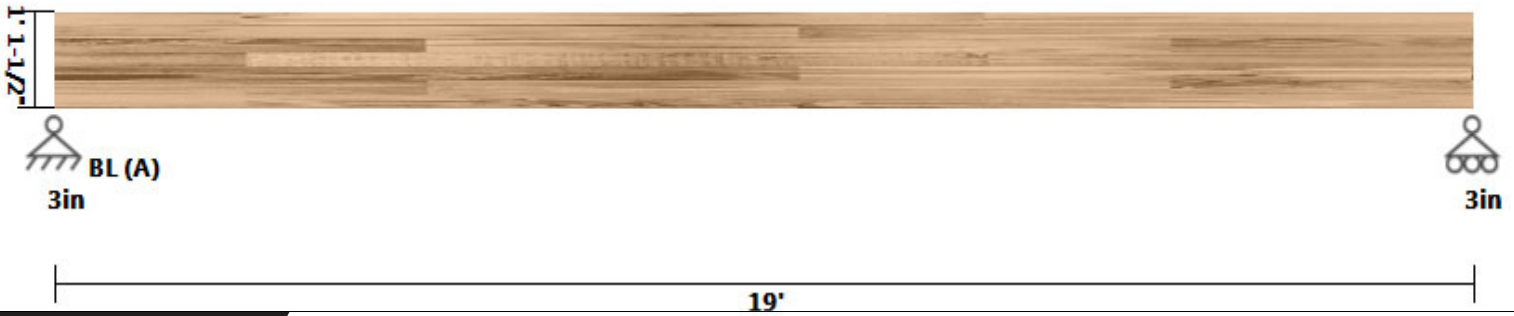
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	150	150	0	15.5	Snow	Y
Uniform (lbf/ft ²)	Uniform	17	17	0	15.5	Dead	Y

PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:	--	REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Girder #13	CODE:	2018 International Building Code
MEMBER TYPE:	HIP BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		
Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 6.75 X 13.5	DRY

Girder #13 DIAGRAM



BEAM PROPERTIES

Start (ft): 0 End (ft): 19 Member Slope: 2.1/12 Actual Length (ft): 19.29

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
91.12	1383.96	345.99	20.78	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	19	0	19	-3.33				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (52.3%)	145.4	304.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (28.7%)	1907.1	2676.2	7.98	D+S	1.15
Deflection Y (in)	PASS (41.2%)	0.756 (=L/302)	1.286 (=L/177)	9.12	S	0
Compressive Stress (psi)	PASS (99.5%)	8.3	1648.2	18.62	D+S	1.15
Tensile Stress (psi)	PASS (98.7%)	17.0	1265.0	0	D+S	1.15
Bearing Stress (psi)	PASS (23.3%)	429.6	560.0	0	D+S	1.15
Bending-Compression (Unit)	PASS (28.8%)	0.71	1.00	8.17	D+S	1.15
Bending-Tension (Unit)	PASS (30.9%)	0.69	1.00	7.98	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	SNOW	TOTAL
A	913	8054	8967
B	446	3934	4380

Reaction Location



A

B

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Trapezoidal (lbf/ft)	Trapezoidal	71.52	0	0	19	Dead	Y
Trapezoidal (lbf/ft)	Trapezoidal	631.1	0	0	19	Snow	Y
Trapezoidal (lbf/ft)	Trapezoidal	71.52	0	0	19	Dead	Y
Trapezoidal (lbf/ft)	Trapezoidal	631.1	0	0	19	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #16	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		

Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 5.125 X 13.5	DRY		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 13 Member Slope: 0/12 Actual Length (ft): 13

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
69.19	1050.79	151.44	15.78	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _L	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	7.5	0	7.5	0				
2	5.5	0	5.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (51.4%)	148.2	304.8	7.41	D+S	1.15
Bending Stress Y (psi)	PASS (33.9%)	1393.9	2109.7	7.54	D+S	1.15
Deflection Y (in)	PASS (69.0%)	0.227 (=L/687)	0.733 (=L/213)	13	S	0
Bearing Stress (psi)	PASS (25.7%)	444.3	598.2	7.5	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	SNOW	TOTAL
A	251	2597	2848
B	1378	11145	12523
C	0	0	0

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Trapezoidal (lbf/ft)	Trapezoidal	146.25	45	0	13	Dead	Y
Trapezoidal (lbf/ft)	Trapezoidal	1462.5	450	0	13	Snow	Y
Self Weight (lbf/ft)	-	15.78	15.78	0	13	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #17	D	180.8455	-	13	-	Dead	Y
Point (lbf)	Beam #17	D	1310.801	-	13	-	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #17	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		

Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 5.125 X 13.5	DRY		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 31 Member Slope: 0/12 Actual Length (ft): 31

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
69.19	1050.79	151.44	15.78	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _L	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	11.5	0	11.5	0				
2	11.5	0	11.5	0				
3	8	0	8	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (19.7%)	244.6	304.8	11.47	D+S	1.15
Bending Stress Y (psi)	PASS (13.0%)	1758.5	2022.3	11.47	D+S	1.15
Deflection Y (in)	PASS (80.7%)	0.148 (=L/2514)	0.767 (=L/485)	4.96	S	0
Bearing Stress (psi)	PASS (0.8%)	555.6	560.0	11.5	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	SNOW	TOTAL
A	806	6500	7306
B	2372	18985	21357
C	1266	9268	10534
D	181	1311	1492

Reaction Location



CONNECTORS

(All connectors are Simpson Strong-Tie connectors)*

	Model	Type	Adequacy (%)	Header Fastening (in)	Joist Nails (in)	Nailer Thickness (in)
Support D						
Primary	HUCQ5.25/9-SDS	Hanger	66.85	(12) 1/4 x 2.5 SDS	(6) 1/4 x 2.5 SDS	N/A

Hanger at support D has seat sloped 0 degrees, skewed 0 degrees.

WSR = web stiffeners required

*Capacity values are adjusted based on specific gravity when members use grades other than those specified in Simpson Strong-Tie's capacity tables.

**LOAD LIST**

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Trapezoidal (lbf/ft)	Trapezoidal	138.75	45	18	31	Dead	Y
Trapezoidal (lbf/ft)	Trapezoidal	1106.25	450	18	31	Snow	Y
Self Weight (lbf/ft)	-	15.78	15.78	0	31	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #23	B	163.37	163.37	0	18	Dead	Y
Uniform (lbf/ft)	Trusses #23	B	1441.501	1441.501	0	18	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #19	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		

Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 6.75 X 21	DRY		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 19 Member Slope: 0/12 Actual Length (ft): 19

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
141.75	5209.31	538.21	32.33	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	17	0	17	0				
2	2	0	2	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (54.5%)	138.7	304.8	16.91	D+S	1.15
Bending Stress Y (psi)	PASS (48.0%)	1332.6	2564.4	8.36	D+S	1.15
Deflection Y (in)	PASS (63.2%)	0.098 (=L/2327)	0.267 (=L/854)	19	S	0
Bearing Stress (psi)	PASS (37.2%)	351.7	560.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	SNOW	TOTAL
A	1725	11331	13056
B	1990	12832	14822
C	0	0	0

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	32.33	32.33	0	19	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Rafters #2	D	86.136	86.136	0	19	Dead	Y
Uniform (lbf/ft)	Rafters #2	D	86.136	86.136	0	17	Dead	Y
Uniform (lbf/ft)	Rafters #2	D	671.191	671.191	0	19	Snow	Y
Uniform (lbf/ft)	Rafters #2	D	671.191	671.191	0	17	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #20	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		

Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 6.75 X 21	DRY		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 19 Member Slope: 0/12 Actual Length (ft): 19

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
141.75	5209.31	538.21	32.33	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _L	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	17	0	17	0				
2	2	0	2	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (28.5%)	217.8	304.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (17.5%)	2115.3	2564.4	8.55	D+S	1.15
Deflection Y (in)	PASS (40.1%)	0.160 (=L/1425)	0.267 (=L/854)	19	S	0
Bearing Stress (psi)	PASS (24.9%)	420.6	560.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	SNOW	TOTAL
A	2581	18001	20582
B	2653	18001	20654
C	0	0	0

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	32.33	32.33	0	19	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Rafters #2	C	271.774	271.774	0	17	Dead	Y
Uniform (lbf/ft)	Rafters #2	C	2117.722	2117.722	0	17	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #21	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		

Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 5.5 X 21	DRY		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 19 Member Slope: 0/12 Actual Length (ft): 19

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
115.5	4244.62	291.16	26.34	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	17	0	17	0				
2	2	0	2	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (41.3%)	179.0	304.8	16.91	D+S	1.15
Bending Stress Y (psi)	PASS (35.6%)	1685.6	2617.5	8.36	D+S	1.15
Deflection Y (in)	PASS (54.0%)	0.123 (=L/1854)	0.267 (=L/854)	19	S	0
Bearing Stress (psi)	PASS (5.2%)	567.3	598.2	17	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	SNOW	TOTAL
A	1736	11812	13548
B	2200	14962	17162
C	0	0	0

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	26.34	26.34	0	19	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Rafters #2	B	180.817	180.817	0	19	Dead	Y
Uniform (lbf/ft)	Rafters #2	B	1409.162	1409.162	0	19	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #22	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		

Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 6.75 X 21	DRY		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 19 Member Slope: 0/12 Actual Length (ft): 19

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
141.75	5209.31	538.21	32.33	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _L	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	17	0	17	0				
2	2	0	2	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (28.3%)	218.5	304.8	16.91	D+S	1.15
Bending Stress Y (psi)	PASS (19.8%)	2057.9	2564.4	8.36	D+S	1.15
Deflection Y (in)	PASS (43.7%)	0.150 (=L/1520)	0.267 (=L/854)	19	S	0
Bearing Stress (psi)	PASS (9.3%)	507.9	560.0	17	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	SNOW	TOTAL
A	2549	17752	20301
B	3229	22485	25714
C	0	0	0

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	32.33	32.33	0	19	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Rafters #2	C	271.774	271.774	0	19	Dead	Y
Uniform (lbf/ft)	Rafters #2	C	2117.722	2117.722	0	19	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #23	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		

Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 5.125 X 18	DRY		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 19 Member Slope: 0/12 Actual Length (ft): 19

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
92.25	2490.75	201.92	21.04	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	17	0	17	0				
2	2	0	2	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (26.7%)	223.4	304.8	16.91	D+S	1.15
Bending Stress Y (psi)	PASS (8.3%)	2454.1	2677.0	8.36	D+S	1.15
Deflection Y (in)	PASS (21.6%)	0.209 (=L/1091)	0.267 (=L/854)	19	S	0
Bearing Stress (psi)	PASS (14.4%)	479.1	560.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	SNOW	TOTAL
A	1692	11812	13504
B	2143	14962	17105
C	0	0	0

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	21.04	21.04	0	19	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Rafters #2	B	180.817	180.817	0	19	Dead	Y
Uniform (lbf/ft)	Rafters #2	B	1409.162	1409.162	0	19	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #24	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		

Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 8.75 X 21	DRY		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 36.5 Member Slope: 0/12 Actual Length (ft): 36.5

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
183.75	6752.81	1172.36	41.91	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	18.25	0	18.25	0				
2	18.25	0	18.25	0				

PASS-FAIL

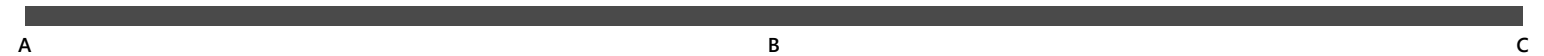
	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (53.1%)	142.9	304.8	18.615	D+S	1.15
Bending Stress Y (psi)	PASS (15.9%)	1516.7	1804.4	18.25	D+S	1.15
Deflection Y (in)	PASS (83.3%)	0.203 (=L/2158)	1.217 (=L/360)	28.105	S	0
Bearing Stress (psi)	PASS (14.9%)	476.3	560.0	18.25	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	SNOW	TOTAL
A	3206	19787	22993
B	7025	40902	47927
C	3514	22553	26067

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	41.91	41.91	0	36.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #19	B	1989.983	-	18.25	-	Dead	Y
Point (lbf)	Beam #19	B	12831.63	-	18.25	-	Snow	Y
Point (lbf)	Beam #20	B	2653.34	-	9.5	-	Dead	Y
Point (lbf)	Beam #20	B	18000.7	-	9.5	-	Snow	Y
Point (lbf)	Beam #21	B	2199.532	-	0	-	Dead	Y
Point (lbf)	Beam #21	B	14962.01	-	0	-	Snow	Y
Point (lbf)	Beam #22	B	3228.88	-	27.5	-	Dead	Y
Point (lbf)	Beam #22	B	22485.24	-	27.5	-	Snow	Y
Point (lbf)	Beam #23	B	2143.235	-	36.5	-	Dead	Y
Point (lbf)	Beam #23	B	14962.01	-	36.5	-	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Headers - 2nd Level	LOADING:	ASD
MEMBER NAME:	Header #2	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		

Weyerhaeuser	2.0E Microlam LVL	(3) 1.75 X 9.25	DRY		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 7 Member Slope: 0/12 Actual Length (ft): 7

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
48.56	346.26	12.39	14.16	3	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 1.04 C_r = 1 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	3.5	0	3.5	0				
2	3.5	0	3.5	0				

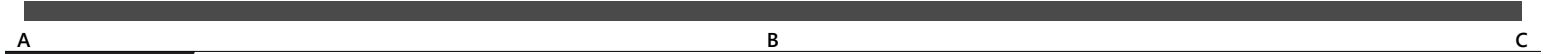
PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (41.2%)	192.8	327.8	3.5	D+S	1.15
Bending Stress Y (psi)	PASS (77.3%)	700.1	3086.0	3.5	D+S	1.15
Deflection Y (in)	PASS (97.8%)	0.005 (=L/16800)	0.233 (=L/361)	1.47	S	0
Bearing Stress (psi)	PASS (6.1%)	792.5	843.8	3.5	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	398	3347	3745
B	1326	11156	12482
C	398	3347	3745

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	14.16	14.16	0	7	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #3	B	289	289	0	7	Dead	Y
Uniform (lbf/ft)	Trusses #3	B	2550.003	2550.003	0	7	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Headers - 2nd Level	LOADING:	ASD
MEMBER NAME:	Header #9	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch	No. 2	(1) 5.5 X 9.5	DRY		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 6.5 Member Slope: 0/12 Actual Length (ft): 6.5

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
52.25	392.96	131.71	11.92	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	875	425	170	600	625	1300	470
Adjusted Values	875	425	170	600	625	1300	470
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	3.25	0	3.25	0				
2	3.25	0	3.25	0				

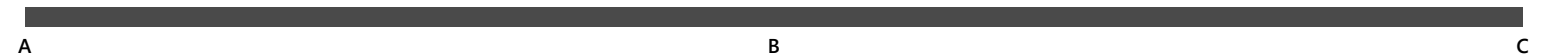
PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (39.8%)	117.6	195.5	3.25	D+S	1.15
Bending Stress Y (psi)	PASS (61.5%)	386.2	1003.9	3.25	D+S	1.15
Deflection Y (in)	PASS (98.3%)	0.004 (=L/19500)	0.217 (=L/359)	1.365	S	0
Bearing Stress (psi)	PASS (29.4%)	496.6	703.1	3.25	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	263	2195	2458
B	878	7317	8195
C	263	2195	2458

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	11.92	11.92	0	6.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #8	B	204.122	204.122	0	6.5	Dead	Y
Uniform (lbf/ft)	Trusses #8	B	1801.078	1801.078	0	6.5	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Headers - 2nd Level	LOADING:	ASD
MEMBER NAME:	Header #10	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		

Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 6.75 X 21	DRY		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 7 Member Slope: 0/12 Actual Length (ft): 7

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
141.75	5209.31	538.21	32.33	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	7	0	7	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (7.9%)	280.8	304.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (18.8%)	2241.6	2760.0	3.5	D+S	1.15
Deflection Y (in)	PASS (86.6%)	0.063 (=L/1333)	0.467 (=L/180)	3.5	S	0
Bearing Stress (psi)	PASS (6.4%)	524.2	560.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE ROOF	SNOW	TOTAL
A	2803	4	23733	26540
B	2803	4	23733	26540

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	7	RoofLive	Y
Self Weight (lbf/ft)	-	32.33	32.33	0	7	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Girder #12	A	5379.372	-	3.5	-	Dead	Y
Point (lbf)	Girder #12	A	47465.04	-	3.5	-	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Headers - 2nd Level	LOADING:	ASD
MEMBER NAME:	Header #14	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(3) 1.75 X 7.25	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 5 Member Slope: 0/12 Actual Length (ft): 5

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
38.06	166.72	9.71	11.1	3	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 1.07 C_r = 1 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	5	0	5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (13.5%)	283.4	327.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (26.7%)	2345.7	3202.2	2.5	D+S	1.15
Deflection Y (in)	PASS (67.4%)	0.109 (=L/550)	0.333 (=L/180)	2.5	S	0
Bearing Stress (psi)	PASS (39.1%)	456.7	750.0	0	D+S	1.15

REACTIONS

Y axis	Units for V: lbf		Units for M: lbf-ft	
	DEAD	LIVE ROOF	SNOW	TOTAL
A	757	2	6435	7194
B	757	2	6435	7194

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	5	RoofLive	Y
Self Weight (lbf/ft)	-	11.1	11.1	0	5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #17	B	291.731	291.731	0	5	Dead	Y
Uniform (lbf/ft)	Trusses #17	B	2574.094	2574.094	0	5	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Headers - 2nd Level	LOADING:	ASD
MEMBER NAME:	Header #15	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(2) 1.75 X 11.25	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 10 Member Slope: 0/12 Actual Length (ft): 10

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
39.38	415.28	10.05	11.48	2	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 1.01 C_r = 1 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	10	0	10	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (23.8%)	249.6	327.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (11.7%)	2662.9	3016.4	5	D+S	1.15
Deflection Y (in)	PASS (52.6%)	0.316 (=L/380)	0.667 (=L/180)	5	S	0
Bearing Stress (psi)	PASS (16.8%)	624.1	750.0	0	D+S	1.15

REACTIONS

Y axis	Units for V: lbf		Units for M: lbf-ft	
	DEAD	LIVE ROOF	SNOW	TOTAL
A	719	5	5835	6559
B	719	5	5835	6559

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	10	RoofLive	Y
Self Weight (lbf/ft)	-	11.48	11.48	0	10	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #18	B	132.25	132.25	0	10	Dead	Y
Uniform (lbf/ft)	Trusses #18	B	1166.912	1166.912	0	10	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Floor - 2nd Level	LOADING:	ASD
MEMBER NAME:	Joist #1	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS
MATERIAL:	I-Joists		

Weyerhaeuser	TJI 560	(1) 14	0(in) O.C.	DRY
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BEAM PROPERTIES

Start (ft): 0 End (ft): 34 Member Slope: 0/12 Actual Length (ft): 34 O.C. Spacing(in): 12

El x10 ⁶ (lbf-in ²)	BSW (lbf/ft)	Lams	K x10 ⁶ (lbf)	Mcap (lbf-ft)	Vcap (lbf)	End Rcap 1.75 NS (lbf)	End Rcap 3.5 NS (lbf)	End Rcap 1.75 WS (lbf)	End Rcap 3.5 WS (lbf)	Int Rcap 3.5 NS (lbf)	Int Rcap 5.25 NS (lbf)	Int Rcap 3.5 WS (lbf)	Int Rcap 5.25 WS (lbf)
926	4.2	1	5.3	11275	2390	1265	1725	1740	2200	3000	3455	3475	3930

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		Top	Bottom	Elev. Diff (ft)
1	3	0	3	0
2	28	0	28	0
3	3	0	3	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Force (lbf)	PASS (34.5%)	1409.1	2151.0	31.28	D	0.9
Bending Moment (lbf-ft)	PASS (59.1%)	4146.5	10147.5	30.94	D	0.9
Deflection Y (in)	PASS (5.0%)	0.190 (=L/2147)	0.200 (=L/2040)	0	L	0
Bearing Load (lbf)	PASS (18.3%)	2450.6	3000.0	31	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	SNOW	TOTAL
A	0	0	0	0
B	295	680	1345	2320
C	1771	680	-130	2321
D	0	0	0	0

Reaction Location WS-Web Stiffener Required NSR-No Stiffener Required

A	B	C	D
NSR	NSR	NSR	NSR

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	40	40	0	34	Live	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	34	Dead	Y
Point (lbf)	Point	150	-	0	-	Dead	Y
Point (lbf)	Point	1215	-	0	-	Snow	Y
Point (lbf)	Point	150	-	34	-	Dead	Y
Point (lbf)	Point	1215	-	34	-	Dead	Y
Self Weight (lbf/ft)	-	4.2	4.2	0	34	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Floor - 2nd Level	LOADING:	ASD
MEMBER NAME:	Joist #2	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS
MATERIAL:	I-Joists		
Weyerhaeuser	TJI 110	(1) 14	0(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 35 Member Slope: 0/12 Actual Length (ft): 35 O.C. Spacing(in): 24

El x10 ⁶	BSW	Lams	K x10 ⁶	Mcap	Vcap	End Rcap	End Rcap	End Rcap	End Rcap	Int Rcap	Int Rcap	Int Rcap	Int Rcap
(lbf-in ²)	(lbf/ft)		(lbf)	(lbf-ft)	(lbf)	1.75 NS	3.5 NS	1.75 WS	3.5 WS	3.5 NS	5.25 NS	3.5 WS	5.25 WS
392	2.8	1	4.5	3740	1860	910	1375	1225	1735	1935	2350	2295	2705

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		Top	Bottom	Elev. Diff (ft)
1	1	0	1	0
2	8	0	8	0
3	12.5	0	12.5	0
4	13.5	0	13.5	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Force (lbf)	PASS (54.3%)	850.0	1860.0	21.7	D+L	1
Bending Moment (lbf-ft)	PASS (48.7%)	1919.6	3740.0	21.35	D+L	1
Deflection Y (in)	PASS (82.8%)	0.078 (=L/5385)	0.450 (=L/933)	29.05	L	0
Bearing Load (lbf)	PASS (30.9%)	1623.3	2350.0	21.5	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	0	0	0
B	105	314	419
C	282	843	1125
D	407	1216	1623
E	143	427	570

Reaction Location WS-Web Stiffener Required NSR-No Stiffener Required

A	B	C	D	E
NSR	NSR	NSR	NSR	NSR

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	40	40	0	35	Live	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	35	Dead	Y
Self Weight (lbf/ft)	-	2.8	2.8	0	35	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:	--	REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff

LEVEL:	Floor - 2nd Level	LOADING:	ASD
MEMBER NAME:	Joist #3	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS
MATERIAL:	I-Joists		

Weyerhaeuser	TJI 360	(1) 14	0(in) O.C.	DRY
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BEAM PROPERTIES

Start (ft): 0 End (ft): 17 Member Slope: 0/12 Actual Length (ft): 17 O.C. Spacing(in): 16

El x10 ⁶	BSW	Lams	K x10 ⁶	Mcap	Vcap	End Rcap	End Rcap	End Rcap	End Rcap	Int Rcap	Int Rcap	Int Rcap	Int Rcap
(lbf-in ²)	(lbf/ft)		(lbf)	(lbf-ft)	(lbf)	1.75 NS	3.5 NS	1.75 WS	3.5 WS	3.5 NS	5.25 NS	3.5 WS	5.25 WS
612	3.3	1	4.5	7335	1955	1080	1505	1440	1865	2460	3000	2815	3360

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		Top	Bottom	Elev. Diff (ft)
1	17	0	17	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR	CD
Shear Force (lbf)	PASS (68.4%)	617.4	1955.0	0	D+L	1	
Bending Moment (lbf-ft)	PASS (64.2%)	2623.9	7335.0	8.5	D+L	1	
Deflection Y (in)	PASS (71.1%)	0.164 (=L/1244)	0.567 (=L/360)	8.5	L	0	
Bearing Load (lbf)	PASS (59.0%)	617.4	1505.0	0	D+L	1	

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	164	453	617
B	164	453	617

Reaction Location WS-Web Stiffener Required NSR-No Stiffener Required

A B

NSR NSR

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	40	40	0	17	Live	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	17	Dead	Y
Self Weight (lbf/ft)	-	3.3	3.3	0	17	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Floor - 2nd Level	LOADING:	ASD
MEMBER NAME:	Joist #4	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS
MATERIAL:	I-Joists		

Weyerhaeuser	TJI 360	(1) 14	0(in) O.C.	DRY
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BEAM PROPERTIES

Start (ft): 0 End (ft): 13.5 Member Slope: 0/12 Actual Length (ft): 13.5 O.C. Spacing(in): 16

El x10 ⁶ (lbf-in ²)	BSW (lbf/ft)	Lams	K x10 ⁶ (lbf)	Mcap (lbf-ft)	Vcap (lbf)	End Rcap 1.75 NS (lbf)	End Rcap 3.5 NS (lbf)	End Rcap 1.75 WS (lbf)	End Rcap 3.5 WS (lbf)	Int Rcap 3.5 NS (lbf)	Int Rcap 5.25 NS (lbf)	Int Rcap 3.5 WS (lbf)	Int Rcap 5.25 WS (lbf)
612	3.3	1	4.5	7335	1955	1080	1505	1440	1865	2460	3000	2815	3360

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		Top	Bottom	Elev. Diff (ft)
1	9	0	9	0
2	4.5	0	4.5	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Force (lbf)	PASS (80.5%)	381.6	1955.0	8.91	D+L	1
Bending Moment (lbf-ft)	PASS (92.7%)	538.6	7335.0	9.045	D+L	1
Deflection Y (in)	PASS (97.6%)	0.007 (=L/23143)	0.300 (=L/540)	4.05	L	0
Bearing Load (lbf)	PASS (77.5%)	674.1	3000.0	9	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	71	195	266
B	179	495	674
C	11	30	41

Reaction Location WS-Web Stiffener Required NSR-No Stiffener Required

A	B	C
NSR	NSR	NSR

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	40	40	0	13.5	Live	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	13.5	Dead	Y
Self Weight (lbf/ft)	-	3.3	3.3	0	13.5	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Floor - 2nd Level	LOADING:	ASD
MEMBER NAME:	Joist #5	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS
MATERIAL:	I-Joists		

Weyerhaeuser	TJI 360	(1) 14	0(in) O.C.	DRY
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BEAM PROPERTIES

Start (ft): 0 End (ft): 15.5 Member Slope: 0/12 Actual Length (ft): 15.5 O.C. Spacing(in): 16

El x10 ⁶ (lbf-in ²)	BSW (lbf/ft)	Lams	K x10 ⁶ (lbf)	Mcap (lbf-ft)	Vcap (lbf)	End Rcap 1.75 NS (lbf)	End Rcap 3.5 NS (lbf)	End Rcap 1.75 WS (lbf)	End Rcap 3.5 WS (lbf)	Int Rcap 3.5 NS (lbf)	Int Rcap 5.25 NS (lbf)	Int Rcap 3.5 WS (lbf)	Int Rcap 5.25 WS (lbf)
612	3.3	1	4.5	7335	1955	1080	1505	1440	1865	2460	3000	2815	3360

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		Top	Bottom	Elev. Diff (ft)
1	15.5	0	15.5	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR	CD
Shear Force (lbf)	PASS (71.2%)	562.9	1955.0	15.5	D+L	1	
Bending Moment (lbf-ft)	PASS (70.3%)	2181.3	7335.0	7.75	D+L	1	
Deflection Y (in)	PASS (78.1%)	0.113 (=L/1646)	0.517 (=L/360)	7.75	L	0	
Bearing Load (lbf)	PASS (62.6%)	562.9	1505.0	15.5	D+L	1	

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	150	413	563
B	150	413	563

Reaction Location WS-Web Stiffener Required NSR-No Stiffener Required

A	B
NSR	NSR

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	40	40	0	15.5	Live	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	15.5	Dead	Y
Self Weight (lbf/ft)	-	3.3	3.3	0	15.5	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design	
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis	
CUSTOMER:		REVIEWED BY:	Stephen Curtis	
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff	
	--			
LEVEL:	Floor - 2nd Level	LOADING:	ASD	
MEMBER NAME:	Joist #6	CODE:	2018 International Building Code	
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS	
MATERIAL:	I-Joists			
Weyerhaeuser	TJI 360	(1) 14	0(in) O.C.	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 2 Member Slope: 0/12 Actual Length (ft): 2 O.C. Spacing(in): 16

El x10 ⁶	BSW	Lams	K x10 ⁶	Mcap	Vcap	End Rcap	End Rcap	End Rcap	End Rcap	Int Rcap	Int Rcap	Int Rcap	Int Rcap
(lbf-in ²)	(lbf/ft)		(lbf)	(lbf-ft)	(lbf)	1.75 NS	3.5 NS	1.75 WS	3.5 WS	3.5 NS	5.25 NS	3.5 WS	5.25 WS
612	3.3	1	4.5	7335	1955	1080	1505	1440	1865	2460	3000	2815	3360

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		Top	Bottom	Elev. Diff (ft)
1	2	0	2	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR	CD
Shear Force (lbf)	PASS (96.3%)	72.6	1955.0	0	D+L	1	
Bending Moment (lbf-ft)	PASS (99.5%)	36.3	7335.0	1	D+L	1	
Deflection Y (in)	PASS (100.0%)	0.000 (=L/∞)	0.067 (=L/358)	1	L	0	
Bearing Load (lbf)	PASS (95.2%)	72.6	1505.0	0	D+L	1	

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	19	53	72
B	19	53	72

Reaction Location WS-Web Stiffener Required NSR-No Stiffener Required

A B
NSR NSR

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	40	40	0	2	Live	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	2	Dead	Y
Self Weight (lbf/ft)	-	3.3	3.3	0	2	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Floor - 2nd Level	LOADING:	ASD
MEMBER NAME:	Joist #7	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS
MATERIAL:	I-Joists		

Weyerhaeuser	TJI 360	(1) 14	0(in) O.C.	DRY
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BEAM PROPERTIES

Start (ft): 0 End (ft): 15 Member Slope: 0/12 Actual Length (ft): 15 O.C. Spacing(in): 16

El x10 ⁶	BSW	Lams	K x10 ⁶	Mcap	Vcap	End Rcap	End Rcap	End Rcap	End Rcap	Int Rcap	Int Rcap	Int Rcap	Int Rcap
(lbf-in ²)	(lbf/ft)		(lbf)	(lbf-ft)	(lbf)	1.75 NS	3.5 NS	1.75 WS	3.5 WS	3.5 NS	5.25 NS	3.5 WS	5.25 WS
612	3.3	1	4.5	7335	1955	1080	1505	1440	1865	2460	3000	2815	3360

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		Top	Bottom	Elev. Diff (ft)
1	15	0	15	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR	CD
Shear Force (lbf)	PASS (72.1%)	544.8	1955.0	15	D+L	1	
Bending Moment (lbf-ft)	PASS (72.1%)	2042.8	7335.0	7.5	D+L	1	
Deflection Y (in)	PASS (80.1%)	0.099 (=L/1818)	0.500 (=L/360)	7.5	L	0	
Bearing Load (lbf)	PASS (63.8%)	544.8	1505.0	0	D+L	1	

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	145	400	545
B	145	400	545

Reaction Location WS-Web Stiffener Required NSR-No Stiffener Required

A	B
NSR	NSR

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	40	40	0	15	Live	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	15	Dead	Y
Self Weight (lbf/ft)	-	3.3	3.3	0	15	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design	
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis	
CUSTOMER:		REVIEWED BY:	Stephen Curtis	
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff	
	--			
LEVEL:	Floor - 2nd Level	LOADING:	ASD	
MEMBER NAME:	Joist #8	CODE:	2018 International Building Code	
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS	
MATERIAL:	I-Joists			
Weyerhaeuser	TJI 360	(1) 14	0(in) O.C.	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 5 Member Slope: 0/12 Actual Length (ft): 5 O.C. Spacing(in): 16

El x10 ⁶	BSW	Lams	K x10 ⁶	Mcap	Vcap	End Rcap	End Rcap	End Rcap	End Rcap	Int Rcap	Int Rcap	Int Rcap	Int Rcap
(lbf-in ²)	(lbf/ft)		(lbf)	(lbf-ft)	(lbf)	1.75 NS	3.5 NS	1.75 WS	3.5 WS	3.5 NS	5.25 NS	3.5 WS	5.25 WS
612	3.3	1	4.5	7335	1955	1080	1505	1440	1865	2460	3000	2815	3360

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		Top	Bottom	Elev. Diff (ft)
1	5	0	5	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Force (lbf)	PASS (90.7%)	181.6	1955.0	0	D+L	1
Bending Moment (lbf-ft)	PASS (96.9%)	227.0	7335.0	2.5	D+L	1
Deflection Y (in)	PASS (99.3%)	0.001 (=L/60000)	0.167 (=L/359)	2.5	L	0
Bearing Load (lbf)	PASS (87.9%)	181.6	1505.0	0	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	48	133	181
B	48	133	181

Reaction Location WS-Web Stiffener Required NSR-No Stiffener Required

A B
NSR NSR

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	40	40	0	5	Live	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	5	Dead	Y
Self Weight (lbf/ft)	-	3.3	3.3	0	5	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Floor - 2nd Level	LOADING:	ASD
MEMBER NAME:	Joist #9	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS
MATERIAL:	I-Joists		

Weyerhaeuser	TJI 360	(1) 14	0(in) O.C.	DRY
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BEAM PROPERTIES

Start (ft): 0 End (ft): 12.5 Member Slope: 0/12 Actual Length (ft): 12.5 O.C. Spacing(in): 16

El x10 ⁶ (lbf-in ²)	BSW (lbf/ft)	Lams	K x10 ⁶ (lbf)	Mcap (lbf-ft)	Vcap (lbf)	End Rcap 1.75 NS (lbf)	End Rcap 3.5 NS (lbf)	End Rcap 1.75 WS (lbf)	End Rcap 3.5 WS (lbf)	Int Rcap 3.5 NS (lbf)	Int Rcap 5.25 NS (lbf)	Int Rcap 3.5 WS (lbf)	Int Rcap 5.25 WS (lbf)
612	3.3	1	4.5	7335	1955	1080	1505	1440	1865	2460	3000	2815	3360

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		Top	Bottom	Elev. Diff (ft)
1	12.5	0	12.5	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR	CD
Shear Force (lbf)	PASS (76.8%)	454.0	1955.0	12.5	D+L	1	
Bending Moment (lbf-ft)	PASS (80.7%)	1418.6	7335.0	6.25	D+L	1	
Deflection Y (in)	PASS (88.5%)	0.048 (=L/3125)	0.417 (=L/360)	6.25	L	0	
Bearing Load (lbf)	PASS (69.8%)	454.0	1505.0	0	D+L	1	

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	121	333	454
B	121	333	454

Reaction Location WS-Web Stiffener Required NSR-No Stiffener Required

A	B
NSR	NSR

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	40	40	0	12.5	Live	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	12.5	Dead	Y
Self Weight (lbf/ft)	-	3.3	3.3	0	12.5	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:	--	REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
LEVEL:	Floor - 2nd Level	LOADING:	ASD
MEMBER NAME:	Joist #10	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS
MATERIAL:	I-Joists		
Weyerhaeuser	TJI 360	(1) 14	0(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 17.5 Member Slope: 0/12 Actual Length (ft): 17.5 O.C. Spacing(in): 16

El x10 ⁶	BSW	Lams	K x10 ⁶	Mcap	Vcap	End Rcap	End Rcap	End Rcap	End Rcap	Int Rcap	Int Rcap	Int Rcap	Int Rcap
(lbf-in ²)	(lbf/ft)		(lbf)	(lbf-ft)	(lbf)	1.75 NS	3.5 NS	1.75 WS	3.5 WS	3.5 NS	5.25 NS	3.5 WS	5.25 WS
612	3.3	1	4.5	7335	1955	1080	1505	1440	1865	2460	3000	2815	3360

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		Top	Bottom	Elev. Diff (ft)
1	17.5	0	17.5	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR	CD
Shear Force (lbf)	PASS (67.5%)	635.5	1955.0	17.5	D+L	1	
Bending Moment (lbf-ft)	PASS (62.1%)	2780.5	7335.0	8.75	D+L	1	
Deflection Y (in)	PASS (68.5%)	0.184 (=L/1141)	0.583 (=L/360)	8.75	L	0	
Bearing Load (lbf)	PASS (57.8%)	635.5	1505.0	0	D+L	1	

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	169	467	636
B	169	467	636

Reaction Location WS-Web Stiffener Required NSR-No Stiffener Required

A B
NSR NSR

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	40	40	0	17.5	Live	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	17.5	Dead	Y
Self Weight (lbf/ft)	-	3.3	3.3	0	17.5	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Floor - 2nd Level	LOADING:	ASD
MEMBER NAME:	Girder #4	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(2) 1.75 X 18	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 26 Member Slope: 0/12 Actual Length (ft): 26

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
63	1701	16.08	18.38	2	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 0.95C_r = 1 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	26	0	26	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (68.9%)	102.0	327.8	26	D+0.75L+0.75S	1.15
Bending Stress Y (psi)	PASS (48.2%)	1464.9	2829.5	13.78	D+0.75L+0.75S	1.15
Deflection Y (in)	PASS (67.1%)	0.571 (=L/546)	1.733 (=L/180)	13.52	D+L	1
Bearing Stress (psi)	PASS (53.4%)	349.5	750.0	26	D+0.75L+0.75S	1.15

REACTIONS

Y axis	DEAD	LIVE	SNOW	TOTAL
A	578	987	1950	3515
B	1067	2337	1950	5354

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	150	150	0	26	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	26	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Joist #4	A	52.927	52.927	7.75	22	Dead	Y
Uniform (lbf/ft)	Joist #4	A	146.258	146.258	7.75	22	Live	Y
Uniform (lbf/ft)	Joist #5	A	112.181	112.181	22	26	Dead	Y

LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Joist #5	A	310	310	22	26	Live	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Floor - 2nd Level	LOADING:	ASD
MEMBER NAME:	Beam #5	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	AISC:	AISC 360-16
MATERIAL:	Steel		

W Shapes	W10x45	A992-50		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 22 Member Slope: 0/12 Actual Length (ft): 22

Es x10 ³	Fy x10 ³	Fu x10 ³	Area	depth	tw	tf	bf	Ix	Iy	Zx	Zy	J	Cw
(psi)	(psi)	(psi)	(in ²)	(in)	(in)	(in)	(in)	(in ⁴)	(in ⁴)	(in ³)	(in ³)	(in ⁴)	(in ⁶)
29000	50	65	13.3	10.1	0.35	0.62	8.02	248	53.4	54.9	20.3	1.51	1200

DESIGN PROPERTIES

Lp	Lr	Flange	Web	Flange	Web		
(in)	(in)	Flexure	Flexure	Compression	Compression	Cv	Cv_WA
85	323	Compact	Compact	Non-Slender	Non-Slender	1	1

BEAM DATA

Span	Length	Unbraced Length		Beam End									
		Top	Bottom	Elev. Diff	Pnt/и	Pnc/и	Mn/и	Mn-OOP/и	Vn/и	Vn-OOP/и	Cb	Cb-OOP	
1	22	0	22	0	0	0	0	0	0	0	0	0	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	AISC CODE	LOAD COMBO
Shear Force Y (lbf)	PASS (49.3%)	35832.5	70700.0	0	G2-1	D+S
Moment Y (lbf-ft)	PASS (52.0%)	65768.9	136976.0	5.5	F2-1	D+S
Deflection Y (in)	PASS (66.7%)	0.488 (=L/541)	1.467 (=L/180)	9.68		S

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	SNOW	TOTAL
A	5537	3638	30294	39469
B	2243	3812	3205	9260

Reaction Location

A	B
---	---

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	45	45	0	22	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #10	B	191.781	191.781	0	5.5	Dead	Y
Uniform (lbf/ft)	Trusses #10	B	1692.188	1692.188	0	5.5	Snow	Y
Point (lbf)	Beam #1	B	2210.811	-	0.25	-	Dead	Y
Point (lbf)	Beam #1	B	9.75	-	0.25	-	Live	Y
Point (lbf)	Beam #1	B	16917.22	-	0.25	-	Snow	Y
Uniform (lbf/ft)	Joist #5	A	112.181	112.181	0	22	Dead	Y
Uniform (lbf/ft)	Joist #5	A	310	310	0	22	Live	Y
Uniform (lbf/ft)	Joist #6	B	14.475	14.475	6.5	22	Dead	Y
Uniform (lbf/ft)	Joist #6	B	40	40	6.5	22	Live	Y

LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Girder #5	A	748	-	5.5	-	Dead	Y
Point (lbf)	Girder #5	A	6600	-	5.5	-	Snow	Y
Point (lbf)	Beam #7	B	83.64584	-	6.5	-	Dead	Y
Point (lbf)	Beam #7	B	675	-	6.5	-	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Floor - 2nd Level	LOADING:	ASD
MEMBER NAME:	Beam #6	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	AISC:	AISC 360-16
MATERIAL:	Steel		

W Shapes	W10x112	A992-50			
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BEAM PROPERTIES

Start (ft): 0 End (ft): 22 Member Slope: 0/12 Actual Length (ft): 22

Es x10 ³	Fy x10 ³	Fu x10 ³	Area	depth	tw	tf	bf	Ix	Iy	Zx	Zy	J	Cw
(psi)	(psi)	(psi)	(in ²)	(in)	(in)	(in)	(in)	(in ⁴)	(in ⁴)	(in ³)	(in ³)	(in ⁴)	(in ⁶)
29000	50	65	32.9	11.4	0.755	1.25	10.4	716	236	147	69.2	15.1	6020

DESIGN PROPERTIES

Lp	Lr	Flange	Web	Flange	Web	Cv	Cv_WA
(in)	(in)	Flexure	Flexure	Compression	Compression		
114	769	Compact	Compact	Non-Slender	Non-Slender	1	1

BEAM DATA

Span	Length	Unbraced Length		Beam End									
		Top	Bottom	Elev. Diff	Pnt/и	Pnc/и	Mn/и	Mn-OOP/и	Vn/и	Vn-OOP/и	Cb	Cb-OOP	
1	22	0	22	0	0	0	0	0	0	0	0	0	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	AISC CODE	LOAD COMBO
Shear Force Y (lbf)	PASS (73.1%)	-46379.3	172140.0	22	G2-1	D+S
Moment Y (lbf-ft)	PASS (26.9%)	268200.6	366766.5	11	F2-1	D+S
Deflection Y (in)	PASS (38.5%)	0.902 (=L/293)	1.467 (=L/180)	11.44		S

REACTIONS

Y axis	DEAD	LIVE	SNOW	TOTAL
A	3921	218	23011	27150
B	5955	402	40424	46781

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	112	112	0	22	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Outlookers	B	75.569	75.569	6.5	22	Dead	Y
Uniform (lbf/ft)	Outlookers	B	800.451	800.451	6.5	22	Snow	Y
Uniform (lbf/ft)	Trusses #15	C	14.875	14.875	0	22	Dead	Y
Uniform (lbf/ft)	Trusses #15	C	131.25	131.25	0	22	Snow	Y
Uniform (lbf/ft)	Joist #6	A	14.475	14.475	6.5	22	Dead	Y
Uniform (lbf/ft)	Joist #6	A	40	40	6.5	22	Live	Y
Point (lbf)	Beam #7	A	83.64584	-	6.5	-	Dead	Y
Point (lbf)	Beam #7	A	675	-	6.5	-	Snow	Y
Point (lbf)	Header #10	A	2802.838	-	11	-	Dead	Y

LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Header #10	B	2802.836	-	17.5	-	Dead	Y
Point (lbf)	Header #10	A	23732.52	-	11	-	Snow	Y
Point (lbf)	Header #10	B	23732.52	-	17.5	-	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Floor - 2nd Level	LOADING:	ASD
MEMBER NAME:	Beam #7	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		

Weyerhaeuser	2.0E Microlam LVL	(1) 1.75 X 14	DRY		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 2 Member Slope: 0/12 Actual Length (ft): 2

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
24.5	400.17	6.25	7.15	1	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 0.98C_r = 1 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	2	0	2	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (85.8%)	46.4	327.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (97.3%)	79.6	2927.9	1	D+S	1.15
Deflection Y (in)	PASS (99.8%)	0.000 (=L/∞)	0.133 (=L/180)	1	S	0
Bearing Stress (psi)	PASS (89.5%)	78.8	750.0	0	D+S	1.15

REACTIONS

Y axis	Units for V: lbf		Units for M: lbf-ft	
	DEAD	LIVE	SNOW	TOTAL
A	84	1	675	760
B	84	1	675	760

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	2	Live	Y
Self Weight (lbf/ft)	-	7.15	7.15	0	2	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #13	A	76.5	76.5	0	2	Dead	Y
Uniform (lbf/ft)	Trusses #13	A	675	675	0	2	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Floor - 2nd Level	LOADING:	ASD
MEMBER NAME:	Beam #8	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(2) 1.75 X 14	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 15 Member Slope: 0/12 Actual Length (ft): 15

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
49	800.33	12.51	14.29	2	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 0.98 C_r = 1 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	15	0	15	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (30.6%)	227.5	327.8	15	D+S	1.15
Bending Stress Y (psi)	PASS (12.4%)	2566.3	2927.9	11.7	D+S	1.15
Deflection Y (in)	PASS (59.9%)	0.401 (=L/449)	1.000 (=L/180)	8.4	S	0
Bearing Stress (psi)	PASS (48.5%)	386.1	750.0	15	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	324	1850	2174
B	874	6559	7433

Reaction Location

A	B
---	---

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	14.29	14.29	0	15	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #4	B	983.641	-	11.7	-	Dead	Y
Point (lbf)	Beam #4	B	8408.484	-	11.7	-	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Floor - 2nd Level	LOADING:	ASD
MEMBER NAME:	Beam #9	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		

Weyerhaeuser	2.0E Microlam LVL	(3) 1.75 X 14	DRY		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 12.5 Member Slope: 0/12 Actual Length (ft): 12.5

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
73.5	1200.5	18.76	21.44	3	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 0.98C_r = 1 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	4.5	0	4.5	0				
2	8	0	8	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (50.1%)	163.6	327.8	4.5	D+S	1.15
Bending Stress Y (psi)	PASS (16.9%)	2432.5	2927.9	4.5	D+S	1.15
Deflection Y (in)	PASS (33.6%)	0.398 (=L/377)	0.600 (=L/250)	0	S	0
Bearing Stress (psi)	PASS (43.4%)	453.2	801.1	4.5	D+0.75L+0.75S	1.15

REACTIONS

Y axis	Units for V: lbf		Units for M: lbf-ft	
	DEAD	LIVE	SNOW	TOTAL
A	0	0	0	0
B	2708	3591	10248	16547
C	-64	919 / -101	-3689	-2935

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	80	80	0	4.5	Live	Y
Self Weight (lbf/ft)	-	21.44	21.44	0	12.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Joist #7	B	108.563	108.563	0	4.5	Dead	Y
Uniform (lbf/ft)	Joist #7	B	300	300	0	4.5	Live	Y
Uniform (lbf/ft)	Joist #8	B	36.188	36.188	4.5	12.5	Dead	Y
Uniform (lbf/ft)	Joist #8	B	100	100	4.5	12.5	Live	Y
Uniform (lbf/ft)	Joist #9	A	90.469	90.469	4.5	12.5	Dead	Y
Uniform (lbf/ft)	Joist #9	A	250	250	4.5	12.5	Live	Y
Point (lbf)	Beam #8	B	874.428	-	0	-	Dead	Y
Point (lbf)	Beam #8	B	6558.613	-	0	-	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Floor - 2nd Level	LOADING:	ASD
MEMBER NAME:	Beam #10	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	AISC:	AISC 360-16
MATERIAL:	Steel		

MC Shapes	MC10x22	A992-50		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 15 Member Slope: 0/12 Actual Length (ft): 15

Es x10 ³	Fy x10 ³	Fu x10 ³	Area	depth	tw	tf	bf	Ix	Iy	Zx	Zy	J	Cw
(psi)	(psi)	(psi)	(in ²)	(in)	(in)	(in)	(in)	(in ⁴)	(in ⁴)	(in ³)	(in ³)	(in ⁴)	(in ⁶)
29000	50	65	6.45	10	0.29	0.575	3.32	102	6.4	23.9	5.29	0.51	110

DESIGN PROPERTIES

Lp	Lr	Flange	Web	Flange	Web	Cv	Cv_WA
(in)	(in)	Flexure	Flexure	Compression	Compression		
42	158	Compact	Compact	Non-Slender	Non-Slender	1	1

BEAM DATA

Span	Length	Unbraced Length		Beam End		Pnt/и	Pnc/и	Mn/и	Mn-OOP/и	Vn/и	Vn-OOP/и	Cb	Cb-OOP
		Top	Bottom	Elev. Diff									
1	13	0	13	0	0	0	0	0	0	0	0	0	0
1	2	0	2	0	0	0	0	0	0	0	0	0	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	AISC CODE	LOAD COMBO
Shear Force Y (lbf)	PASS (86.9%)	6802.8	52095.8	13.05	G2-1	D+L
Moment Y (lbf-ft)	PASS (77.7%)	13306.8	59630.7	12.9	F2-1	D+L
Deflection Y (in)	PASS (83.4%)	0.044 (=L/4091)	0.267 (=L/674)	15		D+L

REACTIONS

Y axis	DEAD	LIVE	SNOW	TOTAL
A	2825	4945	4414	12184
B	3701	5674	640	10015
C	0	0	0	0

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	22	22	0	15	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Joist #7	A	108.563	108.563	0	9	Dead	Y
Uniform (lbf/ft)	Joist #7	A	300	300	0	9	Live	Y
Point (lbf)	Beam #5	B	2242.899	-	0	-	Dead	Y
Point (lbf)	Beam #5	B	3811.558	-	0	-	Live	Y
Point (lbf)	Beam #5	B	3204.743	-	0	-	Snow	Y
Point (lbf)	Beam #8	A	323.588	-	4.5	-	Dead	Y
Point (lbf)	Beam #8	A	1849.865	-	4.5	-	Snow	Y

LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #11	B	2652.401	-	15	-	Dead	Y
Point (lbf)	Beam #11	B	4107.5	-	15	-	Live	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Floor - 2nd Level	LOADING:	ASD
MEMBER NAME:	Beam #11	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	AISC:	AISC 360-16
MATERIAL:	Steel		

W Shapes	W10x88	A992-50			
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BEAM PROPERTIES

Start (ft): 0 End (ft): 26.5 Member Slope: 0/12 Actual Length (ft): 26.5

Es x10 ³	Fy x10 ³	Fu x10 ³	Area	depth	tw	tf	bf	Ix	Iy	Zx	Zy	J	Cw
(psi)	(psi)	(psi)	(in ²)	(in)	(in)	(in)	(in)	(in ⁴)	(in ⁴)	(in ³)	(in ³)	(in ⁴)	(in ⁶)
29000	50	65	26	10.8	0.605	0.99	10.3	534	179	113	53.1	7.53	4330

DESIGN PROPERTIES

Lp	Lr	Flange	Web	Flange	Web		
(in)	(in)	Flexure	Flexure	Compression	Compression	Cv	Cv_WA
111	615	Compact	Compact	Non-Slender	Non-Slender	1	1

BEAM DATA

Span	Length	Unbraced Length		Beam End									
		Top	Bottom	Elev. Diff	Pnt/ι	Pnc/ι	Mn/ι	Mn-OOP/ι	Vn/ι	Vn-OOP/ι	Cb	Cb-OOP	
1	26.5	0	26.5	0	0	0	0	0	0	0	0	0	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	AISC CODE	LOAD COMBO
Shear Force Y (lbf)	PASS (94.8%)	6759.9	130680.0	0	G2-1	D+L
Moment Y (lbf-ft)	PASS (84.1%)	44784.4	281936.1	13.25	F2-1	D+L
Deflection Y (in)	PASS (79.3%)	0.366 (=L/869)	1.767 (=L/180)	13.25		D+L

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	2652	4108	6760
B	2652	4108	6760

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	88	88	0	26.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Joist #5	B	112.181	112.181	0	26.5	Dead	Y
Uniform (lbf/ft)	Joist #5	B	310	310	0	26.5	Live	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Floor - 2nd Level	LOADING:	ASD
MEMBER NAME:	Beam #18	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(3) 1.75 X 14	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 11 Member Slope: 0/12 Actual Length (ft): 11

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
73.5	1200.5	18.76	21.44	3	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 0.98C_r = 1 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	11	0	11	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (19.8%)	262.9	327.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (15.3%)	2479.1	2927.9	5.5	D+S	1.15
Deflection Y (in)	PASS (62.5%)	0.275 (=L/480)	0.733 (=L/180)	5.5	S	0
Bearing Stress (psi)	PASS (40.5%)	446.2	750.0	0	D+S	1.15

REACTIONS

Y axis	DEAD	LIVE	SNOW	TOTAL
A	1864	1380	11020	14264
B	1864	1380	11020	14264

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	11	Live	Y
Self Weight (lbf/ft)	-	21.44	21.44	0	11	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Joist #9	B	90.469	90.469	0	11	Dead	Y
Uniform (lbf/ft)	Joist #9	B	250	250	0	11	Live	Y
Uniform (lbf/ft)	Trusses #22	A	113.536	113.536	0	11	Dead	Y

LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #22	A	113.536	113.536	0	11	Dead	Y
Uniform (lbf/ft)	Trusses #22	A	1001.786	1001.786	0	11	Snow	Y
Uniform (lbf/ft)	Trusses #22	A	1001.786	1001.786	0	11	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #1	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch	No. 2	(1) 5.5 X 9.5	DRY		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 3 Member Slope: 0/12 Actual Length (ft): 3

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
52.25	392.96	131.71	11.92	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	875	425	170	600	625	1300	470
Adjusted Values	875	425	170	600	625	1300	470
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	3	0	3	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (31.7%)	133.6	195.5	3	D+S	1.15
Bending Stress Y (psi)	PASS (49.7%)	506.1	1006.3	1.5	D+S	1.15
Deflection Y (in)	PASS (95.1%)	0.010 (=L/3600)	0.200 (=L/180)	1.5	S	0
Bearing Stress (psi)	PASS (9.8%)	563.9	625.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	TOTAL
A	490	195	2	4162	4849
B	490	195	2	4162	4849

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	3	RoofLive	Y
Self Weight (lbf/ft)	-	11.92	11.92	0	3	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #2	C	314.5	314.5	0	3	Dead	Y
Uniform (lbf/ft)	Trusses #2	C	130	130	0	3	Live	Y
Uniform (lbf/ft)	Trusses #2	C	2775	2775	0	3	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #3	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(3) 1.75 X 11.875	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 3 Member Slope: 0/12 Actual Length (ft): 3

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
62.34	732.62	15.91	18.18	3	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 1 C_r = 1 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	3	0	3	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (4.7%)	312.5	327.8	3	D+S	1.15
Bending Stress Y (psi)	PASS (53.2%)	1402.5	2994.3	1.5	D+S	1.15
Deflection Y (in)	PASS (93.9%)	0.012 (=L/3000)	0.200 (=L/180)	1.5	S	0
Bearing Stress (psi)	PASS (26.7%)	549.7	750.0	0	D+S	1.15

REACTIONS

Y axis	DEAD	LIVE	SNOW	TOTAL
A	1567	1020	11421	14008
B	1567	1020	11421	14008

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	18.18	18.18	0	3	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #3	B	289	289	0	3	Dead	Y
Uniform (lbf/ft)	Trusses #3	B	2550.003	2550.003	0	3	Snow	Y
Point (lbf)	Header #2	B	1326.277	-	1.5	-	Dead	Y
Point (lbf)	Header #2	B	11155.71	-	1.5	-	Snow	Y

LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Joist #1	B	295.221	295.221	0	3	Dead	Y
Uniform (lbf/ft)	Joist #1	B	679.999	679.999	0	3	Live	Y
Uniform (lbf/ft)	Joist #1	B	1345.178	1345.178	0	3	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #4	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch	No. 2	(1) 5.5 X 9.5	DRY		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 2 Member Slope: 0/12 Actual Length (ft): 2

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
52.25	392.96	131.71	11.92	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	875	425	170	600	625	1300	470
Adjusted Values	875	425	170	600	625	1300	470
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	2	0	2	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (34.0%)	128.9	195.5	0	D+S	1.15
Bending Stress Y (psi)	PASS (67.6%)	325.7	1006.3	1	D+S	1.15
Deflection Y (in)	PASS (97.9%)	0.003 (=L/8000)	0.133 (=L/180)	1	S	0
Bearing Stress (psi)	PASS (56.4%)	272.2	625.0	0	D+S	1.15

REACTIONS

Y axis	Units for V: lbf		Units for M: lbf-ft	
	DEAD	LIVE	SNOW	TOTAL
A	596	680	3895	5171
B	596	680	3895	5171

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	11.92	11.92	0	2	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #3	B	289	289	0	2	Dead	Y
Uniform (lbf/ft)	Trusses #3	B	2550.003	2550.003	0	2	Snow	Y
Uniform (lbf/ft)	Joist #1	B	295.221	295.221	0	2	Dead	Y
Uniform (lbf/ft)	Joist #1	B	679.999	679.999	0	2	Live	Y
Uniform (lbf/ft)	Joist #1	B	1345.178	1345.178	0	2	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #5	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		

Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 8.75 X 15	DRY		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 10 Member Slope: 0/12 Actual Length (ft): 10

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
131.25	2460.94	837.4	29.93	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	10	0	10	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR	CD
Shear Stress Y (psi)	PASS (15.4%)	257.7	304.8	0	D+S	1.15	
Bending Stress Y (psi)	PASS (25.2%)	2061.4	2755.6	5	D+S	1.15	
Deflection Y (in)	PASS (78.9%)	0.141 (=L/851)	0.667 (=L/180)	5	D+L	1	
Bearing Stress (psi)	PASS (23.3%)	429.5	560.0	0	D+S	1.15	

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	TOTAL
A	10448	3400	5	12099	25952
B	10448	3400	5	12099	25952

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	10	RoofLive	Y
Self Weight (lbf/ft)	-	29.93	29.93	0	10	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #3	C	288.998	288.998	0	10	Dead	Y
Uniform (lbf/ft)	Trusses #3	C	2549.977	2549.977	0	10	Snow	Y
Uniform (lbf/ft)	Joist #1	C	1770.578	1770.578	0	10	Dead	Y
Uniform (lbf/ft)	Joist #1	C	679.998	679.998	0	10	Live	Y
Uniform (lbf/ft)	Joist #1	C	-130.177	-130.177	0	10	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #6	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		

Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 8.75 X 24	DRY		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 16 Member Slope: 0/12 Actual Length (ft): 16

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
210	10080	1339.84	47.9	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	16	0	16	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (15.1%)	258.7	304.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (17.5%)	2069.6	2508.3	8	D+S	1.15
Deflection Y (in)	PASS (78.8%)	0.227 (=L/846)	1.067 (=L/180)	8	D+L	1
Bearing Stress (psi)	PASS (17.9%)	459.9	560.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	SNOW	TOTAL
A	16860	5440	19358	41658
B	16860	5440	19358	41658

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	47.9	47.9	0	16	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #3	C	288.998	288.998	0	16	Dead	Y
Uniform (lbf/ft)	Trusses #3	C	2549.977	2549.977	0	16	Snow	Y
Uniform (lbf/ft)	Joist #1	C	1770.578	1770.578	0	16	Dead	Y

LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Joist #1	C	679.998	679.998	0	16	Live	Y
Uniform (lb/ft)	Joist #1	C	-130.177	-130.177	0	16	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #7	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(3) 1.75 X 14	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 3 Member Slope: 0/12 Actual Length (ft): 3

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
73.5	1200.5	18.76	21.44	3	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 0.98C_r = 1 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	3	0	3	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (15.7%)	276.1	327.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (63.6%)	1065.9	2927.9	1.5	D+S	1.15
Deflection Y (in)	PASS (96.3%)	0.007 (=L/5143)	0.200 (=L/180)	1.5	S	0
Bearing Stress (psi)	PASS (23.6%)	572.7	750.0	0	D+S	1.15

REACTIONS

Y axis	DEAD	LIVE	SNOW	TOTAL
A	3115	814	10416	14345
B	1806	401	10682	12889

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	21.44	21.44	0	3	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #3	C	288.998	288.998	0	1.5	Dead	Y
Uniform (lbf/ft)	Trusses #3	C	2549.977	2549.977	0	1.5	Snow	Y
Uniform (lbf/ft)	Trusses #4	C	314.5	314.5	1.5	3	Dead	Y
Uniform (lbf/ft)	Trusses #4	C	130	130	1.5	3	Live	Y

LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #4	C	2775	2775	1.5	3	Snow	Y
Uniform (lbf/ft)	Joist #1	C	1770.578	1770.578	0	1.5	Dead	Y
Uniform (lbf/ft)	Joist #1	C	679.998	679.998	0	1.5	Live	Y
Uniform (lbf/ft)	Joist #1	C	-130.177	-130.177	0	1.5	Snow	Y
Point (lbf)	Girder #2	B	1295.964	-	1.5	-	Dead	Y
Point (lbf)	Girder #2	B	13306.32	-	1.5	-	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #8	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch	No. 2	(1) 5.5 X 9.5	DRY		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 3 Member Slope: 0/12 Actual Length (ft): 3

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
52.25	392.96	131.71	11.92	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	875	425	170	600	625	1300	470
Adjusted Values	875	425	170	600	625	1300	470
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	3	0	3	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (12.3%)	171.4	195.5	0	D+S	1.15
Bending Stress Y (psi)	PASS (48.3%)	520.5	1006.3	1.35	D+S	1.15
Deflection Y (in)	PASS (94.9%)	0.010 (=L/3600)	0.200 (=L/180)	1.47	S	0
Bearing Stress (psi)	PASS (42.1%)	361.9	625.0	0	D+S	1.15

REACTIONS

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	TOTAL
A	731	320	2	5240	6293
B	556	320	2	3776	4654

Reaction Location

A	B
---	---

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	3	RoofLive	Y
Self Weight (lbf/ft)	-	11.92	11.92	0	3	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #7	A	53.55	53.55	0	3	Dead	Y
Uniform (lbf/ft)	Trusses #7	A	472.5	472.5	0	3	Snow	Y
Uniform (lbf/ft)	Trusses #8	B	204.122	204.122	0	3	Dead	Y
Uniform (lbf/ft)	Trusses #8	B	1801.078	1801.078	0	3	Snow	Y
Uniform (lbf/ft)	Joist #2	E	71.57191	71.57191	0	3	Dead	Y
Uniform (lbf/ft)	Joist #2	E	213.6475	213.6475	0	3	Live	Y
Point (lbf)	Header #9	A	263.3188	-	0.5	-	Dead	Y
Point (lbf)	Header #9	A	2195.247	-	0.5	-	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #11	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		

Weyerhaeuser	2.0E Microlam LVL	(3) 1.75 X 18	DRY		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 4 Member Slope: 0/12 Actual Length (ft): 4

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
94.5	2551.5	24.12	27.56	3	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 0.95C_r = 1 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	4	0	4	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (8.6%)	299.7	327.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (78.9%)	597.8	2829.5	0.76	D+S	1.15
Deflection Y (in)	PASS (97.8%)	0.006 (=L/8000)	0.267 (=L/180)	1.8	S	0
Bearing Stress (psi)	PASS (20.1%)	599.3	750.0	0	D+S	1.15

REACTIONS

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	TOTAL
A	2036	200	2	16842	19080
B	824	200	2	6141	7167

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	4	RoofLive	Y
Self Weight (lbf/ft)	-	27.56	27.56	0	4	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #12	B	157.25	157.25	0.75	4	Dead	Y
Uniform (lbf/ft)	Trusses #12	B	1387.5	1387.5	0.75	4	Snow	Y
Uniform (lbf/ft)	Joist #8	A	36.188	36.188	0	4	Dead	Y

LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Joist #8	A	100	100	0	4	Live	Y
Point (lbf)	Girder #11	B	2093.672	-	0.75	-	Dead	Y
Point (lbf)	Girder #11	B	18473.88	-	0.75	-	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #12	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch	No. 2	(1) 5.5 X 9.5	DRY		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 5 Member Slope: 0/12 Actual Length (ft): 5

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
52.25	392.96	131.71	11.92	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	875	425	170	600	625	1300	470
Adjusted Values	875	425	170	600	625	1300	470
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	5	0	5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (61.6%)	75.1	195.5	3.55	D+S	1.15
Bending Stress Y (psi)	PASS (43.4%)	567.1	1002.5	3.5	D+S	1.15
Deflection Y (in)	PASS (92.2%)	0.026 (=L/2308)	0.333 (=L/180)	2.75	S	0
Bearing Stress (psi)	PASS (78.7%)	132.9	625.0	0	D+S	1.15

REACTIONS

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	TOTAL
A	11	276 / -30	2	-1107	-848
B	-15	643 / -71	2	-2582	-2023

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	5	RoofLive	Y
Self Weight (lbf/ft)	-	11.92	11.92	0	5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #9	C	-64.022	-	3.5	-	Dead	Y
Point (lbf)	Beam #9	C	-3689.221	-	3.5	-	Snow	Y
Point (lbf)	Beam #9	C	-101.25	-	3.5	-	Live	Y
Point (lbf)	Beam #9	C	919.062	-	3.5	-	Live	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #13	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(2) 1.75 X 9.5	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 10 Member Slope: 0/12 Actual Length (ft): 10

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
33.25	250.07	8.49	9.7	2	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 1.03 C_r = 1 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	10	0	10	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (28.9%)	232.9	327.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (4.7%)	2942.0	3086.6	5	D+S	1.15
Deflection Y (in)	PASS (38.0%)	0.413 (=L/291)	0.667 (=L/180)	5	S	0
Bearing Stress (psi)	PASS (34.4%)	491.7	750.0	0	D+S	1.15

REACTIONS

Y axis	DEAD	LIVE ROOF	SNOW	TOTAL
A	569	5	4594	5168
B	569	5	4594	5168

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	10	RoofLive	Y
Self Weight (lbf/ft)	-	9.7	9.7	0	10	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #15	B	104.125	104.125	0	10	Dead	Y
Uniform (lbf/ft)	Trusses #15	B	918.75	918.75	0	10	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #16	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch	No. 2	(1) 3.5 X 7.25	DRY		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 3 Member Slope: 0/12 Actual Length (ft): 3

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
25.38	111.15	25.9	5.79	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1170	690	180	1418	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.3	1.2	1	1.05	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	3	0	3	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (73.0%)	56.0	207.0	0	D+S	1.15
Bending Stress Y (psi)	PASS (58.9%)	553.5	1345.5	1.5	D+S	1.15
Deflection Y (in)	PASS (95.6%)	0.009 (=L/4000)	0.200 (=L/180)	1.5	S	0
Bearing Stress (psi)	PASS (71.1%)	180.4	625.0	0	D+S	1.15

REACTIONS

Y axis	Units for V: lbf		Units for M: lbf-ft	
	DEAD	LIVE ROOF	SNOW	TOTAL
A	146	2	801	949
B	146	2	801	949

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	3	RoofLive	Y
Self Weight (lbf/ft)	-	5.79	5.79	0	3	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #13	C	275.355	-	1.5	-	Dead	Y
Point (lbf)	Beam #13	C	1601.69	-	1.5	-	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #17	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch	No. 2	(1) 5.5 X 9.5	DRY		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 4.5 Member Slope: 0/12 Actual Length (ft): 4.5

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
52.25	392.96	131.71	11.92	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	875	425	170	600	625	1300	470
Adjusted Values	875	425	170	600	625	1300	470
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	4.5	0	4.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (42.7%)	112.1	195.5	4.5	D+S	1.15
Bending Stress Y (psi)	PASS (36.7%)	637.2	1006.3	2.25	D+S	1.15
Deflection Y (in)	PASS (90.7%)	0.028 (=L/1929)	0.300 (=L/180)	2.25	S	0
Bearing Stress (psi)	PASS (24.3%)	473.3	625.0	0	D+S	1.15

REACTIONS

Y axis	Units for V: lbf		Units for M: lbf-ft	
	DEAD	LIVE ROOF	SNOW	TOTAL
A	422	2	3483	3907
B	422	2	3483	3907

Reaction Location

A	B
---	---

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	4.5	RoofLive	Y
Self Weight (lbf/ft)	-	11.92	11.92	0	4.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #22	B	175.464	175.464	0	4.5	Dead	Y
Uniform (lbf/ft)	Trusses #22	B	1548.213	1548.213	0	4.5	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #18	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(3) 1.75 X 9.25	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 6.5 Member Slope: 0/12 Actual Length (ft): 6.5

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
48.56	346.26	12.39	14.16	3	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
Bending Adjustment Factors	C _V = 1.04 C _r = 1 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values						

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	6.5	0	6.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (34.7%)	214.0	327.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (41.7%)	1804.9	3097.8	3.25	D+S	1.15
Deflection Y (in)	PASS (75.9%)	0.105 (=L/743)	0.433 (=L/180)	3.25	S	0
Bearing Stress (psi)	PASS (41.3%)	440.0	750.0	0	D+S	1.15

REACTIONS

Y axis	DEAD	LIVE	SNOW	TOTAL
A	1072	1138	5857	8067
B	1072	1138	5857	8067

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	14.16	14.16	0	6.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Outlookers	B	75.569	75.569	0	6.5	Dead	Y
Uniform (lbf/ft)	Outlookers	B	800.451	800.451	0	6.5	Snow	Y
Uniform (lbf/ft)	Joist #10	B	126.656	126.656	0	6.5	Dead	Y
Uniform (lbf/ft)	Joist #10	B	350	350	0	6.5	Live	Y

LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #22	A	113.536	113.536	0	6.5	Dead	Y
Uniform (lbf/ft)	Trusses #22	A	1001.786	1001.786	0	6.5	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #19	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		

Weyerhaeuser	2.0E Microlam LVL	(3) 1.75 X 14	DRY		
--------------	-------------------	---------------	-----	--	--

BEAM PROPERTIES

Start (ft): 0 End (ft): 9.25 Member Slope: 0/12 Actual Length (ft): 9.25

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
73.5	1200.5	18.76	21.44	3	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 0.98C_r = 1 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	6	0	6	0				
2	3.25	0	3.25	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (16.0%)	275.2	327.8	5.92	D+S	1.15
Bending Stress Y (psi)	PASS (69.0%)	907.0	2927.9	6.013	D+S	1.15
Deflection Y (in)	PASS (94.2%)	0.023 (=L/4826)	0.400 (=L/278)	2.682	S	0
Bearing Stress (psi)	PASS (18.3%)	612.4	750.0	6	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	1007	8424	9431
B	2575	21538	24113
C	242	2021	2263

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	21.44	21.44	0	9.25	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #17	B	291.731	291.731	0	9.25	Dead	Y
Uniform (lbf/ft)	Trusses #17	B	2574.094	2574.094	0	9.25	Snow	Y
Uniform (lbf/ft)	Trusses #23	A	100.13	100.13	0	9.25	Dead	Y
Uniform (lbf/ft)	Trusses #23	A	883.5	883.5	0	9.25	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #20	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(4) 1.75 X 14	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 3.5 Member Slope: 0/12 Actual Length (ft): 3.5

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
98	1600.67	25.01	28.58	4	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 0.98C_r = 1 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	3.5	0	3.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (17.1%)	271.8	327.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (76.7%)	681.7	2927.9	0.77	D+S	1.15
Deflection Y (in)	PASS (97.4%)	0.006 (=L/7000)	0.233 (=L/180)	1.54	S	0
Bearing Stress (psi)	PASS (24.8%)	563.6	750.0	0	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	2210	15544	17754
B	735	5258	5993

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	28.58	28.58	0	3.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Outlookers	B	75.569	75.569	0	3.5	Dead	Y
Uniform (lbf/ft)	Outlookers	B	800.451	800.451	0	3.5	Snow	Y
Point (lbf)	Beam #20	A	2581.078	-	0.75	-	Dead	Y
Point (lbf)	Beam #20	A	18000.66	-	0.75	-	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #21	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch	No. 2	(1) 5.5 X 9.5	DRY		
-------------------	-------	---------------	-----	--	--

BEAM PROPERTIES

Start (ft): 0 End (ft): 6.5 Member Slope: 0/12 Actual Length (ft): 6.5

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
52.25	392.96	131.71	11.92	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	875	425	170	600	625	1300	470
Adjusted Values	875	425	170	600	625	1300	470
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	6.5	0	6.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (57.6%)	82.8	195.5	0	D+S	1.15
Bending Stress Y (psi)	PASS (32.4%)	680.2	1006.3	3.25	D+S	1.15
Deflection Y (in)	PASS (85.5%)	0.063 (=L/1238)	0.433 (=L/180)	3.25	S	0
Bearing Stress (psi)	PASS (44.0%)	349.8	625.0	0	D+S	1.15

REACTIONS

Y axis	Units for V: lbf		Units for M: lbf-ft	
	DEAD	LIVE ROOF	SNOW	TOTAL
A	284	3	2601	2888
B	284	3	2601	2888

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	6.5	RoofLive	Y
Self Weight (lbf/ft)	-	11.92	11.92	0	6.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Outlookers	B	75.569	75.569	0	6.5	Dead	Y
Uniform (lbf/ft)	Outlookers	B	800.451	800.451	0	6.5	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:	--	REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #22	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(3) 1.75 X 11.875	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 3 Member Slope: 0/12 Actual Length (ft): 3

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
62.34	732.62	15.91	18.18	3	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 1 C_r = 1 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	3	0	3	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (36.7%)	207.4	327.8	3	D+S	1.15
Bending Stress Y (psi)	PASS (74.4%)	765.3	2994.3	1.5	D+S	1.15
Deflection Y (in)	PASS (96.5%)	0.007 (=L/5143)	0.200 (=L/180)	1.5	S	0
Bearing Stress (psi)	PASS (27.0%)	547.2	750.0	0	D+S	1.15

REACTIONS

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	TOTAL
A	1103	1020	2	7516	9641
B	1103	1020	2	7516	9641

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	3	RoofLive	Y
Self Weight (lbf/ft)	-	18.18	18.18	0	3	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #3	B	289	289	0	3	Dead	Y
Uniform (lbf/ft)	Trusses #3	B	2550.003	2550.003	0	3	Snow	Y
Point (lbf)	Header #2	A	397.936	-	1.5	-	Dead	Y

LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Header #2	A	3347.158	-	1.5	-	Snow	Y
Uniform (lbf/ft)	Joist #1	B	295.221	295.221	0	3	Dead	Y
Uniform (lbf/ft)	Joist #1	B	679.999	679.999	0	3	Live	Y
Uniform (lbf/ft)	Joist #1	B	1345.178	1345.178	0	3	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #23	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(3) 1.75 X 14	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 3.5 Member Slope: 0/12 Actual Length (ft): 3.5

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
73.5	1200.5	18.76	21.44	3	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 0.98C_r = 1 Volume factor is applied on a load combination basis And is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	3.5	0	3.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (36.6%)	207.9	327.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (57.5%)	1245.2	2927.9	1.75	D+S	1.15
Deflection Y (in)	PASS (95.1%)	0.011 (=L/3818)	0.233 (=L/180)	1.75	S	0
Bearing Stress (psi)	PASS (42.5%)	431.2	750.0	0	D+S	1.15

REACTIONS

Y axis	DEAD	LIVE ROOF	SNOW	TOTAL
A	1312	2	8876	10190
B	1312	2	8876	10190

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	3.5	RoofLive	Y
Self Weight (lbf/ft)	-	21.44	21.44	0	3.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #22	A	2549.104	-	1.75	-	Dead	Y
Point (lbf)	Beam #22	A	17751.51	-	1.75	-	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Column #12-2	CODE:	2018 International Building Code
MEMBER TYPE:	COLUMN	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Parallam PSL	(1) 7 X 9.25	DRY

Column #12-2 DIAGRAM



COLUMN PROPERTIES

Start(ft) 0 End(ft): 26

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
64.75	461.68	264.4	20.23	1	9	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2900	2300	290	2900	625	2000	1016.535
Adjusted Values	2900	2300	290	2900	625	2000	1017
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 1.03 C_r = 1 Volume factor Is applied on a load combination basis And Is Not reflected in the adjusted values

COLUMN DATA

Span	Length (ft)	Unbraced Length (ft)		Column End						
		X	Y	Offset	CP	Ke(X Axis)	Ke(Y Axis)	KeL/d (X Axis)	KeL/d (Y Axis)	
1	26	26	2	0	33.73	3.43				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Compressive Stress (psi)	PASS (16.3%)	598.5	715.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Z axis	DEAD	SNOW	TOTAL
A	4417	34333	38750
B	0	0	0

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lb/ft)	-	20.23	20.23	0	26	Dead	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Axial (lb)	Girder #12	B	-3891.062	-3891.062	26	26	Dead	Z
Axial (lb)	Girder #12	B	-34332.89	-34332.89	26	26	Snow	Z



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:	--	REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff

LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Joists #11	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS
MATERIAL:	I-Joists		

Weyerhaeuser	TJI 110	(1) 9.5	0(in) O.C.	DRY
--------------	---------	---------	------------	-----

BEAM PROPERTIES

Start (ft): 0 End (ft): 16 Member Slope: 0/12 Actual Length (ft): 16 O.C. Spacing(in): 24

El x10 ⁶ (lbf-in ²)	BSW (lbf/ft)	Lams	K x10 ⁶ (lbf)	Mcap (lbf-ft)	Vcap (lbf)	End Rcap 1.75 NS (lbf)	End Rcap 3.5 NS (lbf)	End Rcap 1.75 WS (lbf)	End Rcap 3.5 WS (lbf)	Int Rcap 3.5 NS (lbf)	Int Rcap 5.25 NS (lbf)	Int Rcap 3.5 WS (lbf)	Int Rcap 5.25 WS (lbf)
157	2.3	1	4.5	2500	1220	910	1220	910	1220	1935	2350	1935	2350

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		Top	Bottom	Elev. Diff (ft)
1	8	0	8	0
2	8	0	8	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Force (lbf)	PASS (56.4%)	531.5	1220.0	8	D+L	1
Bending Moment (lbf-ft)	PASS (66.0%)	850.2	2500.0	8	D+L	1
Deflection Y (in)	PASS (92.7%)	0.020 (=L/9600)	0.267 (=L/719)	3.36	L	0
Bearing Load (lbf)	PASS (45.1%)	1062.9	1935.0	8	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	79	240	319
B	263	800	1063
C	79	240	319

Reaction Location WS-Web Stiffener Required NSR-No Stiffener Required

A	B	C
NSR	NSR	NSR

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	40	40	0	16	Live	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	16	Dead	Y
Self Weight (lbf/ft)	-	2.3	2.3	0	16	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design	
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis	
CUSTOMER:		REVIEWED BY:	Stephen Curtis	
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff	
	--			
LEVEL:	Floor - 1st Level	LOADING:	ASD	
MEMBER NAME:	Joists #12	CODE:	2018 International Building Code	
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS	
MATERIAL:	I-Joists			
Weyerhaeuser	TJI 110	(1) 9.5	0(in) O.C.	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 27 Member Slope: 0/12 Actual Length (ft): 27 O.C. Spacing(in): 24

El x10 ⁶	BSW	Lams	K x10 ⁶	Mcap	Vcap	End Rcap	End Rcap	End Rcap	End Rcap	Int Rcap	Int Rcap	Int Rcap	Int Rcap
(lbf-in ²)	(lbf/ft)		(lbf)	(lbf-ft)	(lbf)	1.75 NS	3.5 NS	1.75 WS	3.5 WS	3.5 NS	5.25 NS	3.5 WS	5.25 WS
157	2.3	1	4.5	2500	1220	910	1220	910	1220	1935	2350	1935	2350

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		Top	Bottom	Elev. Diff (ft)
1	11	0	11	0
2	8	0	8	0
3	8	0	8	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Force (lbf)	PASS (45.1%)	669.9	1220.0	10.8	D+L	1
Bending Moment (lbf-ft)	PASS (54.5%)	1136.4	2500.0	11.07	D+L	1
Deflection Y (in)	PASS (73.9%)	0.096 (=L/3375)	0.367 (=L/883)	4.86	L	0
Bearing Load (lbf)	PASS (38.3%)	1193.0	1935.0	11	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	118	360	478
B	295	898	1193
C	209	635	844
D	88	268	356

Reaction Location WS-Web Stiffener Required NSR-No Stiffener Required

A	B	C	D
NSR	NSR	NSR	NSR

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	40	40	0	27	Live	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	27	Dead	Y
Self Weight (lbf/ft)	-	2.3	2.3	0	27	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:	--	REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Joists #13	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS
MATERIAL:	I-Joists		
Weyerhaeuser	TJI 110	(1) 9.5	0(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 41.5 Member Slope: 0/12 Actual Length (ft): 41.5 O.C. Spacing(in): 24

El x10 ⁶	BSW	Lams	K x10 ⁶	Mcap	Vcap	End Rcap	End Rcap	End Rcap	End Rcap	Int Rcap	Int Rcap	Int Rcap	Int Rcap
(lbf-in ²)	(lbf/ft)		(lbf)	(lbf-ft)	(lbf)	1.75 NS	3.5 NS	1.75 WS	3.5 WS	3.5 NS	5.25 NS	3.5 WS	5.25 WS
157	2.3	1	4.5	2500	1220	910	1220	910	1220	1935	2350	1935	2350

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		Top	Bottom	Elev. Diff (ft)
1	7.5	0	7.5	0
2	8	0	8	0
3	12.5	0	12.5	0
4	7	0	7	0
5	6.5	0	6.5	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Force (lbf)	PASS (47.3%)	642.6	1220.0	27.805	D+L	1
Bending Moment (lbf-ft)	PASS (56.8%)	1080.0	2500.0	15.355	D+L	1
Deflection Y (in)	PASS (77.3%)	0.094 (=L/5298)	0.417 (=L/1194)	21.58	L	0
Bearing Load (lbf)	PASS (39.4%)	1171.8	1935.0	15.5	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	82	250	332
B	200	609	809
C	290	882	1172
D	285	868	1153
E	160	487	647
F	74	224	298

Reaction Location WS-Web Stiffener Required NSR-No Stiffener Required

A	B	C	D	E	F
NSR	NSR	NSR	NSR	NSR	NSR

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	40	40	0	41.5	Live	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	41.5	Dead	Y
Self Weight (lbf/ft)	-	2.3	2.3	0	41.5	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Joists #14	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS
MATERIAL:	I-Joists		

Weyerhaeuser	TJI 110	(1) 9.5	0(in) O.C.	DRY
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BEAM PROPERTIES

Start (ft): 0 End (ft): 38.5 Member Slope: 0/12 Actual Length (ft): 38.5 O.C. Spacing(in): 24

El x10 ⁶ (lbf-in ²)	BSW (lbf/ft)	Lams	K x10 ⁶ (lbf)	Mcap (lbf-ft)	Vcap (lbf)	End Rcap 1.75 NS (lbf)	End Rcap 3.5 NS (lbf)	End Rcap 1.75 WS (lbf)	End Rcap 3.5 WS (lbf)	Int Rcap 3.5 NS (lbf)	Int Rcap 5.25 NS (lbf)	Int Rcap 3.5 WS (lbf)	Int Rcap 5.25 WS (lbf)
157	2.3	1	4.5	2500	1220	910	1220	910	1220	1935	2350	1935	2350

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		Top	Bottom	Elev. Diff (ft)
1	12.5	0	12.5	0
2	12.5	0	12.5	0
3	7	0	7	0
4	6.5	0	6.5	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Force (lbf)	PASS (35.0%)	793.2	1220.0	12.32	D+L	1
Bending Moment (lbf-ft)	PASS (31.8%)	1705.1	2500.0	12.32	D+L	1
Deflection Y (in)	PASS (68.0%)	0.134 (=L/3448)	0.417 (=L/1108)	5.39	L	0
Bearing Load (lbf)	PASS (19.8%)	1552.3	1935.0	12.5	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	128	389	517
B	384	1168	1552
C	257	780	1037
D	173	526	699
E	71	217	288

Reaction Location WS-Web Stiffener Required NSR-No Stiffener Required

A	B	C	D	E
NSR	NSR	NSR	NSR	NSR

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	40	40	0	38.5	Live	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	38.5	Dead	Y
Self Weight (lbf/ft)	-	2.3	2.3	0	38.5	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design	
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis	
CUSTOMER:	--	REVIEWED BY:	Stephen Curtis	
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff	
LEVEL:	Floor - 1st Level	LOADING:	ASD	
MEMBER NAME:	Joists #15	CODE:	2018 International Building Code	
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS	
MATERIAL:	I-Joists			
Weyerhaeuser	TJI 110	(1) 9.5	0(in) O.C.	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 17 Member Slope: 0/12 Actual Length (ft): 17 O.C. Spacing(in): 24

El x10 ⁶ (lbf-in ²)	BSW (lbf/ft)	Lams	K x10 ⁶ (lbf)	Mcap (lbf-ft)	Vcap (lbf)	End Rcap 1.75 NS (lbf)	End Rcap 3.5 NS (lbf)	End Rcap 1.75 WS (lbf)	End Rcap 3.5 WS (lbf)	Int Rcap 3.5 NS (lbf)	Int Rcap 5.25 NS (lbf)	Int Rcap 3.5 WS (lbf)	Int Rcap 5.25 WS (lbf)
157	2.3	1	4.5	2500	1220	910	1220	910	1220	1935	2350	1935	2350

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		Top	Bottom	Elev. Diff (ft)
1	12.5	0	12.5	0
2	4.5	0	4.5	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Force (lbf)	PASS (35.9%)	782.6	1220.0	12.41	D+L	1
Bending Moment (lbf-ft)	PASS (38.0%)	1550.2	2500.0	12.58	D+L	1
Deflection Y (in)	PASS (63.3%)	0.153 (=L/1333)	0.417 (=L/489)	5.61	L	0
Bearing Load (lbf)	PASS (28.4%)	1386.3	1935.0	12.5	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	133	404	537
B	343	1043	1386
C	-29	-87	-116

Reaction Location WS-Web Stiffener Required NSR-No Stiffener Required

A		B	C
NSR		NSR	NSR

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	40	40	0	17	Live	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	17	Dead	Y
Self Weight (lbf/ft)	-	2.3	2.3	0	17	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design	
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis	
CUSTOMER:		REVIEWED BY:	Stephen Curtis	
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff	
	--			
LEVEL:	Floor - 1st Level	LOADING:	ASD	
MEMBER NAME:	Joists #16	CODE:	2018 International Building Code	
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS	
MATERIAL:	I-Joists			
Weyerhaeuser	TJI 110	(1) 9.5	0(in) O.C.	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 17 Member Slope: 0/12 Actual Length (ft): 17 O.C. Spacing(in): 24

						End Rcap	End Rcap	End Rcap	End Rcap	Int Rcap	Int Rcap	Int Rcap	Int Rcap
El x10 ⁶	BSW	Lams	K x10 ⁶	Mcap	Vcap	1.75 NS	3.5 NS	1.75 WS	3.5 WS	3.5 NS	5.25 NS	3.5 WS	5.25 WS
(lbf-in ²)	(lbf/ft)		(lbf)	(lbf-ft)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)
157	2.3	1	4.5	2500	1220	910	1220	910	1220	1935	2350	1935	2350

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		Top	Bottom	Elev. Diff (ft)
1	3.5	0	3.5	0
2	7	0	7	0
3	6.5	0	6.5	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Force (lbf)	PASS (65.4%)	422.3	1220.0	10.54	D+L	1
Bending Moment (lbf-ft)	PASS (79.6%)	509.8	2500.0	10.54	D+L	1
Deflection Y (in)	PASS (95.7%)	0.009 (=L/22667)	0.217 (=L/940)	14.28	L	0
Bearing Load (lbf)	PASS (57.2%)	829.1	1935.0	10.5	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	24	73	97
B	153	464	617
C	205	624	829
D	65	199	264

Reaction Location WS-Web Stiffener Required NSR-No Stiffener Required

A	B	C	D
NSR	NSR	NSR	NSR

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	40	40	0	17	Live	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	17	Dead	Y
Self Weight (lbf/ft)	-	2.3	2.3	0	17	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design	
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis	
CUSTOMER:		REVIEWED BY:	Stephen Curtis	
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff	
	--			
LEVEL:	Floor - 1st Level	LOADING:	ASD	
MEMBER NAME:	Joists #17	CODE:	2018 International Building Code	
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS	
MATERIAL:	I-Joists			
Weyerhaeuser	TJI 110	(1) 9.5	0(in) O.C.	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 38.5 Member Slope: 0/12 Actual Length (ft): 38.5 O.C. Spacing(in): 24

El x10 ⁶ (lbf-in ²)	BSW (lbf/ft)	Lams	K x10 ⁶ (lbf)	Mcap (lbf-ft)	Vcap (lbf)	End Rcap 1.75 NS (lbf)	End Rcap 3.5 NS (lbf)	End Rcap 1.75 WS (lbf)	End Rcap 3.5 WS (lbf)	Int Rcap 3.5 NS (lbf)	Int Rcap 5.25 NS (lbf)	Int Rcap 3.5 WS (lbf)	Int Rcap 5.25 WS (lbf)
157	2.3	1	4.5	2500	1220	910	1220	910	1220	1935	2350	1935	2350

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		Top	Bottom	Elev. Diff (ft)
1	12.5	0	12.5	0
2	7.5	0	7.5	0
3	10	0	10	0
4	8.5	0	8.5	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Force (lbf)	PASS (37.3%)	764.5	1220.0	12.32	D+L	1
Bending Moment (lbf-ft)	PASS (44.1%)	1397.1	2500.0	5.005	D+L	1
Deflection Y (in)	PASS (61.3%)	0.161 (=L/2870)	0.417 (=L/1108)	5.775	L	0
Bearing Load (lbf)	PASS (31.8%)	1318.9	1935.0	12.5	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	135	410	545
B	326	993	1319
C	182	554	736
D	287	874	1161
E	82	249	331

Reaction Location WS-Web Stiffener Required NSR-No Stiffener Required

A	B	C	D	E
NSR	NSR	NSR	NSR	NSR

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	40	40	0	38.5	Live	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	38.5	Dead	Y
Self Weight (lbf/ft)	-	2.3	2.3	0	38.5	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design	
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis	
CUSTOMER:		REVIEWED BY:	Stephen Curtis	
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff	
	--			
LEVEL:	Floor - 1st Level	LOADING:	ASD	
MEMBER NAME:	Joists #18	CODE:	2018 International Building Code	
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS	
MATERIAL:	I-Joists			
Weyerhaeuser	TJI 110	(1) 9.5	0(in) O.C.	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 40.5 Member Slope: 0/12 Actual Length (ft): 40.5 O.C. Spacing(in): 24

El x10 ⁶ (lbf-in ²)	BSW (lbf/ft)	Lams	K x10 ⁶ (lbf)	Mcap (lbf-ft)	Vcap (lbf)	End Rcap 1.75 NS (lbf)	End Rcap 3.5 NS (lbf)	End Rcap 1.75 WS (lbf)	End Rcap 3.5 WS (lbf)	Int Rcap 3.5 NS (lbf)	Int Rcap 5.25 NS (lbf)	Int Rcap 3.5 WS (lbf)	Int Rcap 5.25 WS (lbf)
157	2.3	1	4.5	2500	1220	910	1220	910	1220	1935	2350	1935	2350

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		Top	Bottom	Elev. Diff (ft)
1	10.5	0	10.5	0
2	11.5	0	11.5	0
3	10	0	10	0
4	8.5	0	8.5	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Force (lbf)	PASS (46.9%)	647.7	1220.0	10.125	D+L	1
Bending Moment (lbf-ft)	PASS (46.4%)	1340.4	2500.0	10.53	D+L	1
Deflection Y (in)	PASS (81.8%)	0.064 (=L/7594)	0.350 (=L/1389)	4.455	L	0
Bearing Load (lbf)	PASS (31.2%)	1331.2	1935.0	10.5	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	106	323	429
B	329	1002	1331
C	277	843	1120
D	267	812	1079
E	86	261	347

Reaction Location WS-Web Stiffener Required NSR-No Stiffener Required

A	B	C	D	E
NSR	NSR	NSR	NSR	NSR

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	40	40	0	40.5	Live	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	40.5	Dead	Y
Self Weight (lbf/ft)	-	2.3	2.3	0	40.5	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design	
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis	
CUSTOMER:		REVIEWED BY:	Stephen Curtis	
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff	
	--			
LEVEL:	Floor - 1st Level	LOADING:	ASD	
MEMBER NAME:	Joists #19	CODE:	2018 International Building Code	
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS	
MATERIAL:	I-Joists			
Weyerhaeuser	TJI 110	(1) 9.5	0(in) O.C.	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 34.5 Member Slope: 0/12 Actual Length (ft): 34.5 O.C. Spacing(in): 24

El x10 ⁶ (lbf-in ²)	BSW (lbf/ft)	Lams	K x10 ⁶ (lbf)	Mcap (lbf-ft)	Vcap (lbf)	End Rcap 1.75 NS (lbf)	End Rcap 3.5 NS (lbf)	End Rcap 1.75 WS (lbf)	End Rcap 3.5 WS (lbf)	Int Rcap 3.5 NS (lbf)	Int Rcap 5.25 NS (lbf)	Int Rcap 3.5 WS (lbf)	Int Rcap 5.25 WS (lbf)
157	2.3	1	4.5	2500	1220	910	1220	910	1220	1935	2350	1935	2350

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		Top	Bottom	Elev. Diff (ft)
1	4.5	0	4.5	0
2	11.5	0	11.5	0
3	10	0	10	0
4	8.5	0	8.5	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Force (lbf)	PASS (49.9%)	611.8	1220.0	15.87	D+L	1
Bending Moment (lbf-ft)	PASS (59.0%)	1025.7	2500.0	15.87	D+L	1
Deflection Y (in)	PASS (84.3%)	0.060 (=L/6900)	0.383 (=L/1081)	10.005	L	0
Bearing Load (lbf)	PASS (38.9%)	1181.7	1935.0	16	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	7	23	30
B	259	787	1046
C	292	889	1181
D	262	798	1060
E	87	264	351

Reaction Location WS-Web Stiffener Required NSR-No Stiffener Required

A	B	C	D	E
NSR	NSR	NSR	NSR	NSR

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	40	40	0	34.5	Live	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	34.5	Dead	Y
Self Weight (lbf/ft)	-	2.3	2.3	0	34.5	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Joists #20	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS
MATERIAL:	I-Joists		

Weyerhaeuser	TJI 110	(1) 9.5	0(in) O.C.	DRY
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BEAM PROPERTIES

Start (ft): 0 End (ft): 36 Member Slope: 0/12 Actual Length (ft): 36 O.C. Spacing(in): 24

El x10 ⁶ (lbf-in ²)	BSW (lbf/ft)	Lams	K x10 ⁶ (lbf)	Mcap (lbf-ft)	Vcap (lbf)	End Rcap 1.75 NS (lbf)	End Rcap 3.5 NS (lbf)	End Rcap 1.75 WS (lbf)	End Rcap 3.5 WS (lbf)	Int Rcap 3.5 NS (lbf)	Int Rcap 5.25 NS (lbf)	Int Rcap 3.5 WS (lbf)	Int Rcap 5.25 WS (lbf)
157	2.3	1	4.5	2500	1220	910	1220	910	1220	1935	2350	1935	2350

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		Top	Bottom	Elev. Diff (ft)
1	8.5	0	8.5	0
2	6.5	0	6.5	0
3	10.5	0	10.5	0
4	10.5	0	10.5	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Force (lbf)	PASS (44.5%)	677.2	1220.0	25.56	D+L	1
Bending Moment (lbf-ft)	PASS (48.9%)	1277.3	2500.0	25.56	D+L	1
Deflection Y (in)	PASS (81.2%)	0.066 (=L/6545)	0.350 (=L/1234)	31.32	L	0
Bearing Load (lbf)	PASS (27.9%)	432.5	600.0	36	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	93	282	375
B	219	667	886
C	203	619	822
D	324	987	1311
E	107	326	433

Reaction Location WS-Web Stiffener Required NSR-No Stiffener Required

A	B	C	D	E
NSR	NSR	NSR	NSR	NSR

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	40	40	0	36	Live	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	36	Dead	Y
Self Weight (lbf/ft)	-	2.3	2.3	0	36	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Joists #21	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS
MATERIAL:	I-Joists		
Weyerhaeuser	TJI 110	(1) 9.5	0(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 20.5 Member Slope: 0/12 Actual Length (ft): 20.5 O.C. Spacing(in): 24

El x10 ⁶	BSW	Lams	K x10 ⁶	Mcap	Vcap	End Rcap	End Rcap	End Rcap	End Rcap	Int Rcap	Int Rcap	Int Rcap	Int Rcap
(lbf-in ²)	(lbf/ft)		(lbf)	(lbf-ft)	(lbf)	1.75 NS	3.5 NS	1.75 WS	3.5 WS	3.5 NS	5.25 NS	3.5 WS	5.25 WS
157	2.3	1	4.5	2500	1220	910	1220	910	1220	1935	2350	1935	2350

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		Top	Bottom	Elev. Diff (ft)
1	10	0	10	0
2	10.5	0	10.5	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Force (lbf)	PASS (43.7%)	686.5	1220.0	10.045	D+L	1
Bending Moment (lbf-ft)	PASS (45.3%)	1367.2	2500.0	10.045	D+L	1
Deflection Y (in)	PASS (82.4%)	0.062 (=L/3968)	0.350 (=L/703)	15.99	L	0
Bearing Load (lbf)	PASS (29.6%)	1362.5	1935.0	10	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	97	295	392
B	337	1025	1362
C	105	320	425

Reaction Location WS-Web Stiffener Required NSR-No Stiffener Required

A	B	C
NSR	NSR	NSR

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	40	40	0	20.5	Live	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	20.5	Dead	Y
Self Weight (lbf/ft)	-	2.3	2.3	0	20.5	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:	--	REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff

LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Joists #22	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS
MATERIAL:	I-Joists		

Weyerhaeuser	TJI 110	(1) 9.5	0(in) O.C.	DRY
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BEAM PROPERTIES

Start (ft): 0 End (ft): 10.5 Member Slope: 0/12 Actual Length (ft): 10.5 O.C. Spacing(in): 24

El x10 ⁶ (lbf-in ²)	BSW (lbf/ft)	Lams	K x10 ⁶ (lbf)	Mcap (lbf-ft)	Vcap (lbf)	End Rcap 1.75 NS (lbf)	End Rcap 3.5 NS (lbf)	End Rcap 1.75 WS (lbf)	End Rcap 3.5 WS (lbf)	Int Rcap 3.5 NS (lbf)	Int Rcap 5.25 NS (lbf)	Int Rcap 3.5 WS (lbf)	Int Rcap 5.25 WS (lbf)
157	2.3	1	4.5	2500	1220	910	1220	910	1220	1935	2350	1935	2350

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		Top	Bottom	Elev. Diff (ft)
1	10.5	0	10.5	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR	CD
Shear Force (lbf)	PASS (54.3%)	558.1	1220.0	10.5	D+L	1	
Bending Moment (lbf-ft)	PASS (41.4%)	1464.9	2500.0	5.25	D+L	1	
Deflection Y (in)	PASS (60.2%)	0.139 (=L/906)	0.350 (=L/360)	5.25	L	0	
Bearing Load (lbf)	PASS (54.3%)	558.1	1220.0	0	D+L	1	

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	138	420	558
B	138	420	558

Reaction Location WS-Web Stiffener Required NSR-No Stiffener Required

A	B
NSR	NSR

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	40	40	0	10.5	Live	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	10.5	Dead	Y
Self Weight (lbf/ft)	-	2.3	2.3	0	10.5	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design	
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis	
CUSTOMER:		REVIEWED BY:	Stephen Curtis	
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff	
	--			
LEVEL:	Floor - 1st Level	LOADING:	ASD	
MEMBER NAME:	Joists #23	CODE:	2018 International Building Code	
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS	
MATERIAL:	I-Joists			
Weyerhaeuser	TJI 110	(1) 9.5	0(in) O.C.	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 31 Member Slope: 0/12 Actual Length (ft): 31 O.C. Spacing(in): 24

El x10 ⁶ (lbf-in ²)	BSW (lbf/ft)	Lams	K x10 ⁶ (lbf)	Mcap (lbf-ft)	Vcap (lbf)	End Rcap 1.75 NS (lbf)	End Rcap 3.5 NS (lbf)	End Rcap 1.75 WS (lbf)	End Rcap 3.5 WS (lbf)	Int Rcap 3.5 NS (lbf)	Int Rcap 5.25 NS (lbf)	Int Rcap 3.5 WS (lbf)	Int Rcap 5.25 WS (lbf)
157	2.3	1	4.5	2500	1220	910	1220	910	1220	1935	2350	1935	2350

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		Top	Bottom	Elev. Diff (ft)
1	10	0	10	0
2	10.5	0	10.5	0
3	10.5	0	10.5	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Force (lbf)	PASS (47.3%)	642.8	1220.0	20.77	D+L	1
Bending Moment (lbf-ft)	PASS (53.2%)	1168.9	2500.0	20.46	D+L	1
Deflection Y (in)	PASS (79.3%)	0.073 (=L/5096)	0.350 (=L/1063)	26.35	L	0
Bearing Load (lbf)	PASS (36.0%)	1239.0	1935.0	20.5	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	104	318	422
B	294	895	1189
C	307	932	1239
D	110	335	445

Reaction Location WS-Web Stiffener Required NSR-No Stiffener Required

A	B	C	D
NSR	NSR	NSR	NSR

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	40	40	0	31	Live	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	31	Dead	Y
Self Weight (lbf/ft)	-	2.3	2.3	0	31	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Deck Joists #1	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch(North)	No. 2	(1) 1.5 X 9.25	0(in) O.C.	DRY
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BEAM PROPERTIES

Start (ft): 0 End (ft): 11 Member Slope: 0/12 Actual Length (ft): 11 O.C. Spacing(in): 16

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
13.88	98.93	2.6	3.1	1	0.49	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	850	500	180	1400	625	1600	580
Adjusted Values	1075	550	180	1400	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.1	1.1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1.15

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	11	0	11	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (65.8%)	70.8	207.0	0	D+S	1.15
Bending Stress Y (psi)	PASS (18.3%)	1010.6	1236.5	5.5	D+S	1.15
Deflection Y (in)	PASS (62.2%)	0.208 (=L/635)	0.550 (=L/240)	5.5	S	0
Bearing Stress (psi)	PASS (80.0%)	124.8	625.0	0	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	105	550	655
B	105	550	655

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	75	75	0	11	Snow	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	11	Dead	Y
Self Weight (lbf/ft)	-	3.1	3.1	0	11	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Deck Joists #2	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch(North)	No. 2	(1) 1.5 X 9.25	0(in) O.C.	DRY
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BEAM PROPERTIES

Start (ft): 0 End (ft): 11 Member Slope: 0/12 Actual Length (ft): 11 O.C. Spacing(in): 16

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
13.88	98.93	2.6	3.1	1	0.49	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	850	500	180	1400	625	1600	580
Adjusted Values	1075	550	180	1400	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.1	1.1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1.15

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	11	0	11	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (65.8%)	70.8	207.0	0	D+S	1.15
Bending Stress Y (psi)	PASS (18.3%)	1010.6	1236.5	5.5	D+S	1.15
Deflection Y (in)	PASS (62.2%)	0.208 (=L/635)	0.550 (=L/240)	5.5	S	0
Bearing Stress (psi)	PASS (80.0%)	124.8	625.0	0	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	105	550	655
B	105	550	655

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	75	75	0	11	Snow	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	11	Dead	Y
Self Weight (lbf/ft)	-	3.1	3.1	0	11	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Deck Joists #3	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch(North)	No. 2	(1) 1.5 X 7.25	0(in) O.C.	DRY
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BEAM PROPERTIES

Start (ft): 0 End (ft): 7.5 Member Slope: 0/12 Actual Length (ft): 7.5 O.C. Spacing(in): 16

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
10.88	47.63	2.04	2.43	1	0.49	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	850	500	180	1400	625	1600	580
Adjusted Values	1173	600	180	1470	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.2	1.2	1	1.05	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1.15

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	7.5	0	7.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (70.4%)	61.3	207.0	7.5	D+S	1.15
Bending Stress Y (psi)	PASS (43.6%)	760.4	1349.0	3.75	D+S	1.15
Deflection Y (in)	PASS (75.1%)	0.093 (=L/968)	0.375 (=L/240)	3.75	S	0
Bearing Stress (psi)	PASS (86.5%)	84.6	625.0	0	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	69	375	444
B	69	375	444

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	75	75	0	7.5	Snow	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	7.5	Dead	Y
Self Weight (lbf/ft)	-	2.43	2.43	0	7.5	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Deck Joists #4	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch(North)	No. 2	(1) 1.5 X 9.25	0(in) O.C.	DRY
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BEAM PROPERTIES

Start (ft): 0 End (ft): 9.5 Member Slope: 0/12 Actual Length (ft): 9.5 O.C. Spacing(in): 16

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
13.88	98.93	2.6	3.1	1	0.49	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	850	500	180	1400	625	1600	580
Adjusted Values	1075	550	180	1400	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.1	1.1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1.15

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	9.5	0	9.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (70.5%)	61.2	207.0	0	D+S	1.15
Bending Stress Y (psi)	PASS (39.0%)	753.8	1236.5	4.75	D+S	1.15
Deflection Y (in)	PASS (75.6%)	0.116 (=L/983)	0.475 (=L/240)	4.75	S	0
Bearing Stress (psi)	PASS (82.8%)	107.8	625.0	0	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	91	475	566
B	91	475	566

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	75	75	0	9.5	Snow	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	9.5	Dead	Y
Self Weight (lbf/ft)	-	3.1	3.1	0	9.5	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Deck Joists #5	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch(North)	No. 2	(1) 1.5 X 7.25	0(in) O.C.	DRY
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BEAM PROPERTIES

Start (ft): 0 End (ft): 5.5 Member Slope: 0/12 Actual Length (ft): 5.5 O.C. Spacing(in): 16

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
10.88	47.63	2.04	2.43	1	0.49	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	850	500	180	1400	625	1600	580
Adjusted Values	1173	600	180	1470	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.2	1.2	1	1.05	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1.15

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	5.5	0	5.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (78.3%)	44.9	207.0	0	D+S	1.15
Bending Stress Y (psi)	PASS (69.7%)	409.0	1349.0	2.75	D+S	1.15
Deflection Y (in)	PASS (90.2%)	0.027 (=L/2444)	0.275 (=L/240)	2.75	S	0
Bearing Stress (psi)	PASS (90.1%)	62.0	625.0	0	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	51	275	326
B	51	275	326

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	75	75	0	5.5	Snow	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	5.5	Dead	Y
Self Weight (lbf/ft)	-	2.43	2.43	0	5.5	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Deck Joists #6	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch(North)	No. 2	(1) 1.5 X 7.25	0(in) O.C.	DRY
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BEAM PROPERTIES

Start (ft): 0 End (ft): 7 Member Slope: 0/12 Actual Length (ft): 7 O.C. Spacing(in): 16

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
10.88	47.63	2.04	2.43	1	0.49	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	850	500	180	1400	625	1600	580
Adjusted Values	1173	600	180	1470	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.2	1.2	1	1.05	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1.15

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	7	0	7	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (72.4%)	57.2	207.0	0	D+S	1.15
Bending Stress Y (psi)	PASS (50.9%)	662.4	1349.0	3.5	D+S	1.15
Deflection Y (in)	PASS (79.7%)	0.071 (=L/1183)	0.350 (=L/240)	3.5	S	0
Bearing Stress (psi)	PASS (87.4%)	79.0	625.0	0	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	65	350	415
B	65	350	415

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	75	75	0	7	Snow	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	7	Dead	Y
Self Weight (lbf/ft)	-	2.43	2.43	0	7	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Deck Joists #7	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch(North)	No. 2	(1) 1.5 X 7.25	0(in) O.C.	DRY
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BEAM PROPERTIES

Start (ft): 0 End (ft): 6.5 Member Slope: 0/12 Actual Length (ft): 6.5 O.C. Spacing(in): 16

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
10.88	47.63	2.04	2.43	1	0.49	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	850	500	180	1400	625	1600	580
Adjusted Values	1173	600	180	1470	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.2	1.2	1	1.05	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1.15

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	6.5	0	6.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (74.4%)	53.1	207.0	0	D+S	1.15
Bending Stress Y (psi)	PASS (57.7%)	571.2	1349.0	3.25	D+S	1.15
Deflection Y (in)	PASS (83.8%)	0.053 (=L/1472)	0.325 (=L/240)	3.25	S	0
Bearing Stress (psi)	PASS (88.3%)	73.3	625.0	0	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	60	325	385
B	60	325	385

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	75	75	0	6.5	Snow	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	6.5	Dead	Y
Self Weight (lbf/ft)	-	2.43	2.43	0	6.5	Dead	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Beam #25	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch	No. 2	(1) 3.5 X 9.25	DRY		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 4 Member Slope: 0/12 Actual Length (ft): 4

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
32.38	230.84	33.05	7.38	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1080	632	180	1350	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.2	1.1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	4	0	4	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (55.7%)	91.7	207.0	0	D+S	1.15
Bending Stress Y (psi)	PASS (61.7%)	476.0	1242.0	2	D+S	1.15
Deflection Y (in)	PASS (95.2%)	0.013 (=L/3692)	0.267 (=L/180)	2	S	0
Bearing Stress (psi)	PASS (83.5%)	102.9	625.0	0	D+S	1.15

REACTIONS

Y axis	DEAD	LIVE	SNOW	TOTAL
A	330	2	1650	1982
B	330	2	1650	1982

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	4	Live	Y
Self Weight (lbf/ft)	-	7.38	7.38	0	4	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Deck Joists #1	B	78.803	78.803	0	4	Dead	Y
Uniform (lbf/ft)	Deck Joists #1	B	412.5	412.5	0	4	Snow	Y
Uniform (lbf/ft)	Deck Joists #2	A	78.803	78.803	0	4	Dead	Y
Uniform (lbf/ft)	Deck Joists #2	A	412.5	412.5	0	4	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Beam #26	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch	No. 2	(1) 5.5 X 11.5	DRY		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 11.5 Member Slope: 0/12 Actual Length (ft): 11.5

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
63.25	697.07	159.44	14.43	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	875	425	170	600	625	1300	470
Adjusted Values	875	425	170	600	625	1300	470
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	11.5	0	11.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (64.7%)	69.0	195.5	0	D+S	1.15
Bending Stress Y (psi)	PASS (17.8%)	827.6	1006.3	5.75	D+S	1.15
Deflection Y (in)	PASS (76.6%)	0.179 (=L/771)	0.767 (=L/180)	5.75	S	0
Bearing Stress (psi)	PASS (84.6%)	96.1	625.0	0	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	536	2372	2908
B	536	2372	2908

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	14.43	14.43	0	11.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Deck Joists #2	B	78.803	78.803	0	11.5	Dead	Y
Uniform (lbf/ft)	Deck Joists #2	B	412.5	412.5	0	11.5	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Beam #27	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch	No. 2	(1) 5.5 X 11.5	DRY		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 11.5 Member Slope: 0/12 Actual Length (ft): 11.5

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
63.25	697.07	159.44	14.43	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	875	425	170	600	625	1300	470
Adjusted Values	875	425	170	600	625	1300	470
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	11.5	0	11.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (64.7%)	69.0	195.5	0	D+S	1.15
Bending Stress Y (psi)	PASS (17.8%)	827.6	1006.3	5.75	D+S	1.15
Deflection Y (in)	PASS (76.6%)	0.179 (=L/771)	0.767 (=L/180)	5.75	S	0
Bearing Stress (psi)	PASS (84.6%)	96.1	625.0	0	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	536	2372	2908
B	536	2372	2908

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	14.43	14.43	0	11.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Deck Joists #2	B	78.803	78.803	0	11.5	Dead	Y
Uniform (lbf/ft)	Deck Joists #2	B	412.5	412.5	0	11.5	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Beam #28	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch	No. 2	(1) 3.5 X 9.25	DRY		
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BEAM PROPERTIES

Start (ft): 0 End (ft): 18.5 Member Slope: 0/12 Actual Length (ft): 18.5

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
32.38	230.84	33.05	7.38	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1080	632	180	1350	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.2	1.1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	9.25	0	9.25	0				
2	9.25	0	9.25	0				

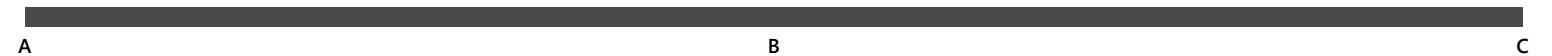
PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (44.1%)	115.6	207.0	9.25	D+S	1.15
Bending Stress Y (psi)	PASS (9.2%)	1109.8	1222.7	9.25	D+S	1.15
Deflection Y (in)	PASS (89.3%)	0.066 (=L/3364)	0.617 (=L/360)	3.885	S	0
Bearing Stress (psi)	PASS (41.1%)	407.4	692.0	9.25	D+S	1.15

REACTIONS

Y axis	Units for V: lbf		Units for M: lbf-ft
	DEAD	SNOW	TOTAL
A	262	1236	1498
B	872	4119	4991
C	262	1236	1498

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	7.38	7.38	0	18.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Deck Joists #4	B	68.057	68.057	0	18.5	Dead	Y
Uniform (lbf/ft)	Deck Joists #4	B	356.25	356.25	0	18.5	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Beam #29	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	Select Structural	(1) 3.5 X 9.25	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 18 Member Slope: 0/12 Actual Length (ft): 18

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
32.38	230.84	33.05	7.38	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	1500	1000	180	1700	625	1900	690
Adjusted Values	1800	1100	180	1700	625	1900	690
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.2	1.1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 0.86C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	9	0	9	0				
2	9	0	9	0				

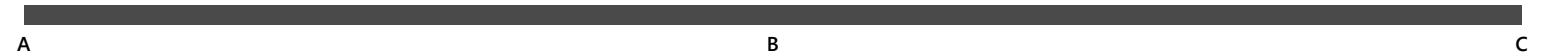
PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (3.7%)	199.3	207.0	9	D+S	1.15
Bending Stress Y (psi)	PASS (7.9%)	1861.3	2021.4	9	D+S	1.15
Deflection Y (in)	PASS (85.1%)	0.089 (=L/2427)	0.600 (=L/360)	3.78	S	0
Bearing Stress (psi)	PASS (33.1%)	446.9	667.6	9	D+S	1.15

REACTIONS

Y axis	Units for V: lbf		Units for M: lbf-ft
	DEAD	SNOW	TOTAL
A	430	2152	2582
B	1432	7172	8604
C	430	2152	2582

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	7.38	7.38	0	18	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Deck Joists #3	B	51.842	51.842	0	18	Dead	Y
Uniform (lbf/ft)	Deck Joists #3	B	281.25	281.25	0	18	Snow	Y
Uniform (lbf/ft)	Deck Joists #4	A	68.057	68.057	0	18	Dead	Y
Uniform (lbf/ft)	Deck Joists #4	A	356.25	356.25	0	18	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Beam #30	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	Select Structural	(1) 3.5 X 9.25	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 18 Member Slope: 0/12 Actual Length (ft): 18

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
32.38	230.84	33.05	7.38	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	1500	1000	180	1700	625	1900	690
Adjusted Values	1800	1100	180	1700	625	1900	690
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.2	1.1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 0.86C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	9	0	9	0				
2	9	0	9	0				

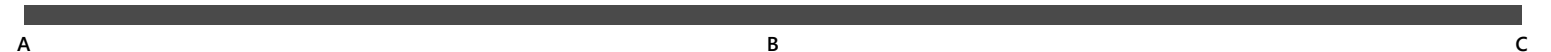
PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (45.7%)	112.5	207.0	9	D+S	1.15
Bending Stress Y (psi)	PASS (48.0%)	1050.6	2021.4	9	D+S	1.15
Deflection Y (in)	PASS (91.7%)	0.050 (=L/4320)	0.600 (=L/360)	3.78	S	0
Bearing Stress (psi)	PASS (62.2%)	252.3	667.6	9	D+S	1.15

REACTIONS

Y axis	Units for V: lbf		Units for M: lbf-ft
	DEAD	SNOW	TOTAL
A	255	1202	1457
B	849	4008	4857
C	255	1202	1457

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	7.38	7.38	0	18	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Deck Joists #4	B	68.057	68.057	0	18	Dead	Y
Uniform (lbf/ft)	Deck Joists #4	B	356.25	356.25	0	18	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Beam #31	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	Select Structural	(1) 3.5 X 9.25	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 18 Member Slope: 0/12 Actual Length (ft): 18

Area	I _x	I _y	BSW	Lams	G	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
32.38	230.84	33.05	7.38	1	0.5	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (psi) x10 ³
Base Values	1500	1000	180	1700	625	1900	690
Adjusted Values	1800	1100	180	1700	625	1900	690
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.2	1.1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 0.86C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	9	0	9	0				
2	9	0	9	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (3.7%)	199.3	207.0	9	D+S	1.15
Bending Stress Y (psi)	PASS (7.9%)	1861.3	2021.4	9	D+S	1.15
Deflection Y (in)	PASS (85.1%)	0.089 (=L/2427)	0.600 (=L/360)	3.78	S	0
Bearing Stress (psi)	PASS (33.1%)	446.9	667.6	9	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	430	2152	2582
B	1432	7172	8604
C	430	2152	2582

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	7.38	7.38	0	18	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Deck Joists #3	B	51.842	51.842	0	18	Dead	Y
Uniform (lbf/ft)	Deck Joists #3	B	281.25	281.25	0	18	Snow	Y
Uniform (lbf/ft)	Deck Joists #4	A	68.057	68.057	0	18	Dead	Y
Uniform (lbf/ft)	Deck Joists #4	A	356.25	356.25	0	18	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Beam #32	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	Select Structural	(1) 3.5 X 9.25	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 11 Member Slope: 0/12 Actual Length (ft): 11

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
32.38	230.84	33.05	7.38	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	1500	1000	180	1700	625	1900	690
Adjusted Values	1800	1100	180	1700	625	1900	690
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.2	1.1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 0.86C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	11	0	11	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (60.8%)	81.1	207.0	0	D+S	1.15
Bending Stress Y (psi)	PASS (44.1%)	1157.4	2070.0	5.5	D+S	1.15
Deflection Y (in)	PASS (73.1%)	0.197 (=L/670)	0.733 (=L/180)	5.5	S	0
Bearing Stress (psi)	PASS (85.5%)	90.9	625.0	0	D+S	1.15

REACTIONS

Y axis	Units for V: lbf		Units for M: lbf-ft	
	DEAD	LIVE	SNOW	TOTAL
A	307	6	1444	1757
B	307	6	1444	1757

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	11	Live	Y
Self Weight (lbf/ft)	-	7.38	7.38	0	11	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Deck Joists #6	B	48.386	48.386	0	11	Dead	Y
Uniform (lbf/ft)	Deck Joists #6	B	262.5	262.5	0	11	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Beam #33	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch	Select Structural	(1) 5.5 X 9.5	DRY		
-------------------	-------------------	---------------	-----	--	--

BEAM PROPERTIES

Start (ft): 0 End (ft): 11 Member Slope: 0/12 Actual Length (ft): 11

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
52.25	392.96	131.71	11.92	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	1600	950	170	1100	625	1600	580
Adjusted Values	1600	950	170	1100	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 0.86C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	11	0	11	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (54.2%)	89.5	195.5	11	D+S	1.15
Bending Stress Y (psi)	PASS (32.4%)	1244.1	1840.0	5.5	D+S	1.15
Deflection Y (in)	PASS (66.5%)	0.246 (=L/537)	0.733 (=L/180)	5.5	S	0
Bearing Stress (psi)	PASS (83.5%)	103.1	625.0	0	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	541	2578	3119
B	541	2578	3119

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	11.92	11.92	0	11	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Deck Joists #5	B	38.018	38.018	0	11	Dead	Y
Uniform (lbf/ft)	Deck Joists #5	B	206.25	206.25	0	11	Snow	Y
Uniform (lbf/ft)	Deck Joists #6	A	48.386	48.386	0	11	Dead	Y
Uniform (lbf/ft)	Deck Joists #6	A	262.5	262.5	0	11	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Beam #34	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	Select Structural	(1) 3.5 X 9.25	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 11.5 Member Slope: 0/12 Actual Length (ft): 11.5

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
32.38	230.84	33.05	7.38	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	1500	1000	180	1700	625	1900	690
Adjusted Values	1800	1100	180	1700	625	1900	690
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.2	1.1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 0.86C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	11.5	0	11.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (59.0%)	84.8	207.0	0	D+S	1.15
Bending Stress Y (psi)	PASS (38.9%)	1265.0	2070.0	5.75	D+S	1.15
Deflection Y (in)	PASS (69.3%)	0.236 (=L/585)	0.767 (=L/180)	5.75	S	0
Bearing Stress (psi)	PASS (82.0%)	112.2	625.0	11.5	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	321	1509	1830
B	444	1717	2161

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	7.38	7.38	0	11.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Deck Joists #6	B	48.386	48.386	0	11.5	Dead	Y
Uniform (lbf/ft)	Deck Joists #6	B	262.5	262.5	0	11.5	Snow	Y
Point (lbf)	Beam #37	B	123.3645	-	11.5	-	Dead	Y
Point (lbf)	Beam #37	B	207.1872	-	11.5	-	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Beam #35	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	Select Structural	(1) 5.5 X 9.5	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 11.5 Member Slope: 0/12 Actual Length (ft): 11.5

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
52.25	392.96	131.71	11.92	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	1600	950	170	1100	625	1600	580
Adjusted Values	1600	950	170	1100	625	1600	580
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 0.86C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	11.5	0	11.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (52.1%)	93.6	195.5	0	D+S	1.15
Bending Stress Y (psi)	PASS (26.1%)	1359.8	1840.0	5.75	D+S	1.15
Deflection Y (in)	PASS (61.7%)	0.293 (=L/471)	0.767 (=L/180)	5.75	S	0
Bearing Stress (psi)	PASS (77.0%)	143.7	625.0	11.5	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	565	2695	3260
B	822	3524	4346

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	11.92	11.92	0	11.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Deck Joists #5	B	38.018	38.018	0	11.5	Dead	Y
Uniform (lbf/ft)	Deck Joists #5	B	206.25	206.25	0	11.5	Snow	Y
Uniform (lbf/ft)	Deck Joists #6	A	48.386	48.386	0	11.5	Dead	Y
Uniform (lbf/ft)	Deck Joists #6	A	262.5	262.5	0	11.5	Snow	Y
Point (lbf)	Beam #37	A	256.764	-	11.5	-	Dead	Y
Point (lbf)	Beam #37	A	828.749	-	11.5	-	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Beam #36	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch	Select Structural	(1) 3.5 X 9.25	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 8.5 Member Slope: 0/12 Actual Length (ft): 8.5

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
32.38	230.84	33.05	7.38	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc _⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	1500	1000	180	1700	625	1900	690
Adjusted Values	1800	1100	180	1700	625	1900	690
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1.2	1.1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 0.86C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	8.5	0	8.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (71.8%)	58.3	207.0	0	D+S	1.15
Bending Stress Y (psi)	PASS (68.9%)	642.9	2070.0	4.25	D+S	1.15
Deflection Y (in)	PASS (88.5%)	0.065 (=L/1569)	0.567 (=L/180)	4.25	S	0
Bearing Stress (psi)	PASS (89.5%)	65.4	625.0	0	D+S	1.15

REACTIONS

Y axis	DEAD	SNOW	TOTAL
A	222	1036	1258
B	222	1036	1258

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	7.38	7.38	0	8.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Deck Joists #7	B	44.93	44.93	0	8.5	Dead	Y
Uniform (lb/ft)	Deck Joists #7	B	243.75	243.75	0	8.5	Snow	Y



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Beam #37	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		
Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 5.125 X 18	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 7.5 Member Slope: 0/12 Actual Length (ft): 7.5

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
92.25	2490.75	201.92	21.04	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C _M	1	1	1	1	1	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	7.5	0	7.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (94.2%)	17.7	304.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (97.5%)	69.6	2760.0	1.5	D+S	1.15
Deflection Y (in)	PASS (99.6%)	0.002 (=L/45000)	0.500 (=L/180)	3.225	S	0
Bearing Stress (psi)	PASS (93.1%)	38.5	560.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	SNOW	TOTAL
A	257	829	1086
B	123	207	330

Reaction Location



LOAD LIST

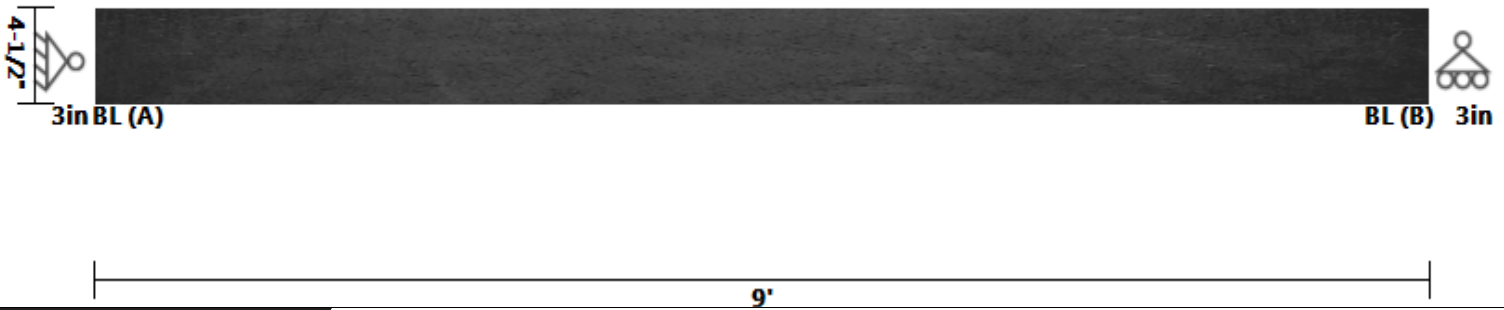
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	21.04	21.04	0	7.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #36	A	222.333	-	1.5	-	Dead	Y
Point (lbf)	Beam #36	A	1035.938	-	1.5	-	Snow	Y

**PASS**

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Column - Bm #11-1	CODE:	2018 International Building Code
MEMBER TYPE:	COLUMN	AISC:	AISC 360-16
MATERIAL:	Steel		
HSS Square	HSS4-1/2x4-1/2x.188	A500 Gr.B-46	

Column - Bm #11-1 DIAGRAM**COLUMN PROPERTIES**

Start(ft) 0 End(ft): 9

Es x10 ³	Fy x10 ³	Fu x10 ³	Area	Ix	Iy	Zx	Zy	J	Cw
(psi)	(psi)	(psi)	(in ²)	(in ⁴)	(in ⁴)	(in ³)	(in ³)	(in ⁴)	(in ⁶)
29000	46	58	2.93	9.02	9.02	4.71	4.71	14.4	0

DESIGN PROPERTIES

Lp	Lr	Flange	Web	Flange	Web	Cv	Cv_WA
(in)	(in)	Flexure	Flexure	Compression	Compression		
198	5106	Compact	Compact	Non-Slender	Non-Slender	1	1

COLUMN DATA

Span	Length	Unbraced Length		Column End								
		Top	Bottom	Elev. Diff	Pnt/ι	Pnc/ι	Mn/ι	Mn-OOP/ι	Vn/ι	Vn-OOP/ι	Cb	Cb-OOP
1	9	0	0	0	0	0	0	0	0	0	0	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	AISC CODE	LOAD COMBO
Compressive Force (lbf)	PASS (89.0%)	6856.2	62465.9	0	E3-1	D+L

REACTIONS

Units for V: lbf Units for M: lbf-ft

Z axis	DEAD	LIVE	TOTAL
A	2749	4108	6857
B	0	0	0

Reaction Location

A

B

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	10.7	10.7	0	9	Dead	Z

LINKED LOAD LIST

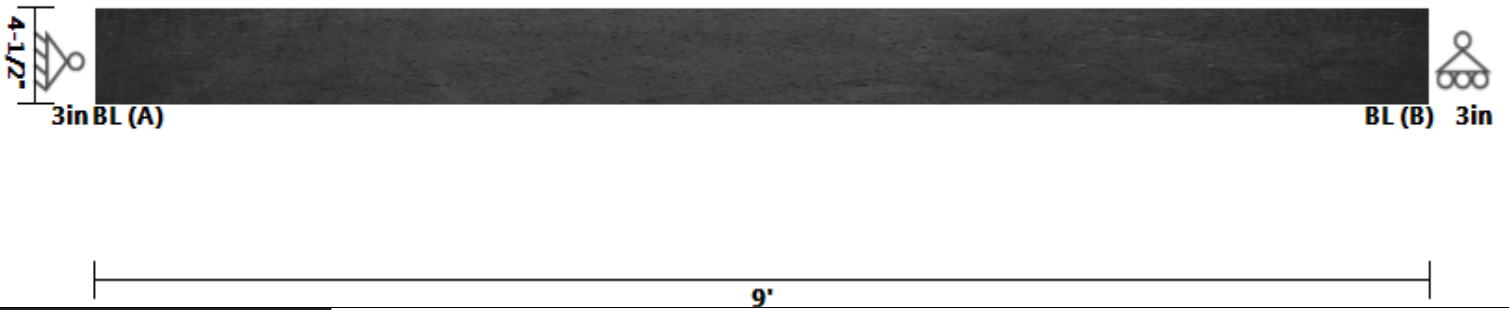
Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Axial (lbf)	Beam #11	A	-2652.401	-2652.401	9	9	Dead	Z
Axial (lbf)	Beam #11	A	-4107.5	-4107.5	9	9	Live	Z



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Column Bm #5-1	CODE:	2018 International Building Code
MEMBER TYPE:	COLUMN	AISC:	AISC 360-16
MATERIAL:	Steel		
HSS Square	HSS4-1/2x4-1/2x.188	A500 Gr.B-46	

Column Bm #5-1 DIAGRAM



COLUMN PROPERTIES

Start(ft) 0 End(ft): 9

Es x10 ³	Fy x10 ³	Fu x10 ³	Area	Ix	Iy	Zx	Zy	J	Cw
(psi)	(psi)	(psi)	(in ²)	(in ⁴)	(in ⁴)	(in ³)	(in ³)	(in ⁴)	(in ⁶)
29000	46	58	2.93	9.02	9.02	4.71	4.71	14.4	0

DESIGN PROPERTIES

Lp	Lr	Flange	Web	Flange	Web	Cv	Cv_WA
(in)	(in)	Flexure	Flexure	Compression	Compression		
198	5106	Compact	Compact	Non-Slender	Non-Slender	1	1

COLUMN DATA

Span	Length	Unbraced Length		Column End								
		Top	Bottom	Elev. Diff	Pnt/ι	Pnc/ι	Mn/ι	Mn-OOP/ι	Vn/ι	Vn-OOP/ι	Cb	Cb-OOP
1	9	0	0	0	0	0	0	0	0	0	0	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	AISC CODE	LOAD COMBO
Compressive Force (lbf)	PASS (42.5%)	35927.0	62465.9	0	E3-1	D+S

REACTIONS

Units for V: lbf Units for M: lbf-ft

Z axis	DEAD	LIVE	SNOW	TOTAL
A	5633	3638	30294	39565
B	0	0	0	0

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	10.7	10.7	0	9	Dead	Z

LINKED LOAD LIST

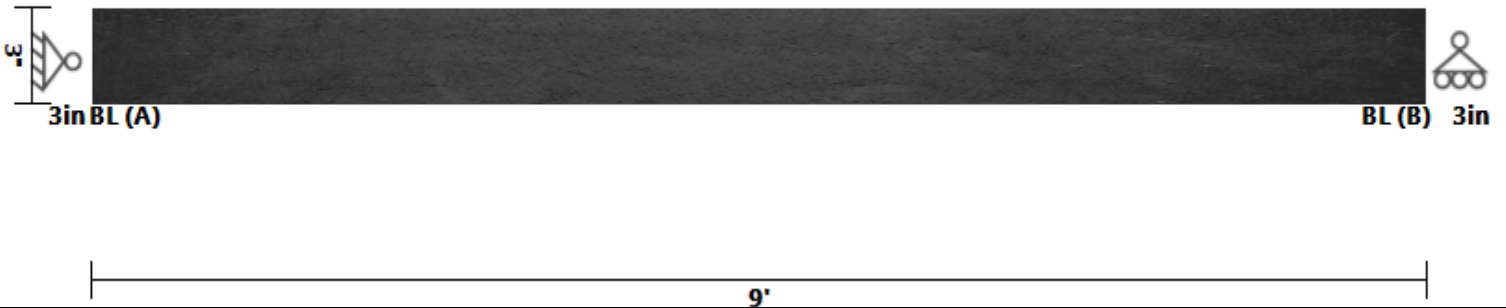
Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Axial (lbf)	Beam #5	A	-5536.62	-5536.62	9	9	Dead	Z
Axial (lbf)	Beam #5	A	-3637.75	-3637.75	9	9	Live	Z
Axial (lbf)	Beam #5	A	-30294.02	-30294.02	9	9	Snow	Z



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Column Bm #10-1	CODE:	2018 International Building Code
MEMBER TYPE:	COLUMN	AISC:	AISC 360-16
MATERIAL:	Steel		
HSS Square	HSS3x3x.188	A500 Gr.B-46	

Column Bm #10-1 DIAGRAM



COLUMN PROPERTIES

Start(ft) 0 End(ft): 9									
Es x10 ³	Fy x10 ³	Fu x10 ³	Area	Ix	Iy	Zx	Zy	J	Cw
(psi)	(psi)	(psi)	(in ²)	(in ⁴)	(in ⁴)	(in ³)	(in ³)	(in ⁴)	(in ⁶)
29000	46	58	1.89	2.46	2.46	1.97	1.97	4.03	0

DESIGN PROPERTIES

Lp	Lr	Flange	Web	Flange	Web	Cv	Cv_WA
(in)	(in)	Flexure	Flexure	Compression	Compression		
131	3456	Compact	Compact	Non-Slender	Non-Slender	1	1

COLUMN DATA

Span	Length	Unbraced Length		Column End								
		Top	Bottom	Elev. Diff	Pnt/ι	Pnc/ι	Mn/ι	Mn-OOP/ι	Vn/ι	Vn-OOP/ι	Cb	Cb-OOP
1	9	0	0	0	0	0	0	0	0	0	0	0

PASS-FAIL

PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	AISC CODE	LOAD COMBO
Compressive Force (lbf) PASS (65.2%)	9906.2	28464.6	0	E3-1	D+0.75L+0.75S

REACTIONS

Z axis	DEAD	LIVE	SNOW	TOTAL
A	2887	4945	4414	12246
B	0	0	0	0

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	6.87	6.87	0	9	Dead	Z

LINKED LOAD LIST

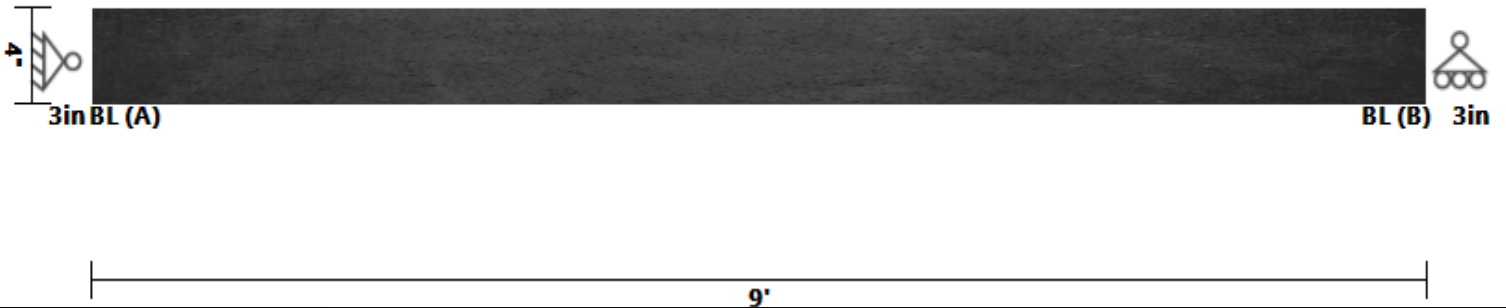
Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Axial (lbf)	Beam #10	A	-2824.878	-2824.878	9	9	Dead	Z
Axial (lbf)	Beam #10	A	-4945.021	-4945.021	9	9	Live	Z
Axial (lbf)	Beam #10	A	-4414.27	-4414.27	9	9	Snow	Z



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Column Bm #10-2	CODE:	2018 International Building Code
MEMBER TYPE:	COLUMN	AISC:	AISC 360-16
MATERIAL:	Steel		
HSS Square	HSS4x4x.188	A500 Gr.B-46	

Column Bm #10-2 DIAGRAM



COLUMN PROPERTIES

Start(ft) 0 End(ft): 9

Es x10 ³	Fy x10 ³	Fu x10 ³	Area	Ix	Iy	Zx	Zy	J	Cw
(psi)	(psi)	(psi)	(in ²)	(in ⁴)	(in ⁴)	(in ³)	(in ³)	(in ⁴)	(in ⁶)
29000	46	58	2.58	6.21	6.21	3.67	3.67	10	0

DESIGN PROPERTIES

Lp	Lr	Flange	Web	Flange	Web	Cv	Cv_WA
(in)	(in)	Flexure	Flexure	Compression	Compression		
176	4575	Compact	Compact	Non-Slender	Non-Slender	1	1

COLUMN DATA

Span	Length	Unbraced Length		Column End								
		Top	Bottom	Elev. Diff	Pnt/ι	Pnc/ι	Mn/ι	Mn-OOP/ι	Vn/ι	Vn-OOP/ι	Cb	Cb-OOP
1	9	0	0	0	0	0	0	0	0	0	0	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	AISC CODE	LOAD COMBO
Compressive Force (lbf)	PASS (81.5%)	9459.9	51265.9	0	E3-1	D+L

REACTIONS

Z axis	DEAD	LIVE	SNOW	TOTAL
A	3786	5674	640	10100
B	0	0	0	0

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	9.42	9.42	0	9	Dead	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Axial (lbf)	Beam #10	B	-3701.071	-3701.071	9	9	Dead	Z
Axial (lbf)	Beam #10	B	-5674.039	-5674.039	9	9	Live	Z
Axial (lbf)	Beam #10	B	-640.338	-640.338	9	9	Snow	Z



PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #1	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
3 (ft) Wide X 10 (in) Deep		Soil Depth TOF: 0 (ft)	Long. (4) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
3	10	362.5	193.3333

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
8	24	Concrete	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (19.0%)	1215.1	1500.0	D+S	ASD
One-Way Shear (lb/ft)	PASS (93.8%)	1460.5	23661.6	1.2D+1.6S+L	LRFD
Moment (lb-ft)	PASS (90.0%)	1122.6	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	3.0	3.0	D	LRFD

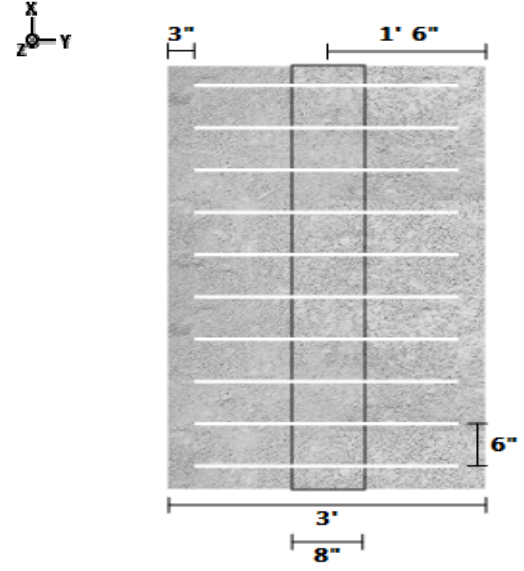
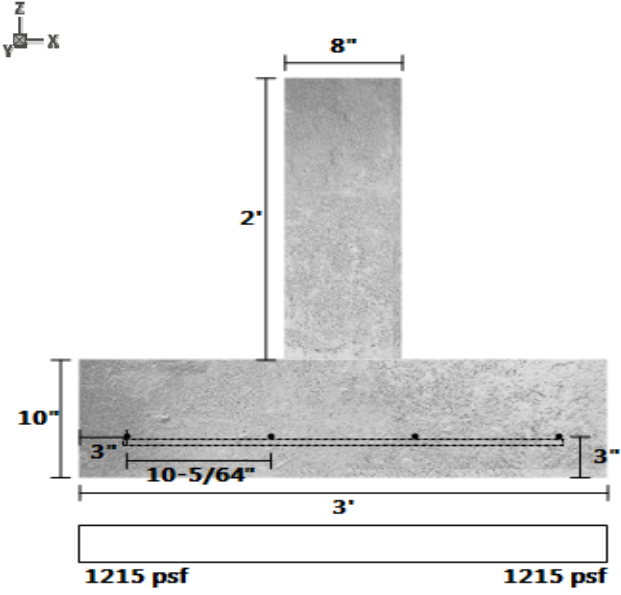
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Trusses #2	B	314.5007	314.5007	0	1	Dead	Z
Uniform (lb/ft)	Trusses #2	B	130.0004	130.0004	0	1	Live	Z
Uniform (lb/ft)	Trusses #2	B	2774.994	2774.994	0	1	Snow	Z

Footing #1 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #2	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
4 (ft) Wide X 10 (in) Deep		Soil Depth TOF: 0 (ft)	Long. (5) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
4	10	483.3333	193.3333

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
8	24	Concrete	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (14.1%)	1289.0	1500.0	D+S	ASD
One-Way Shear (lb/ft)	PASS (91.6%)	2637.3	31548.8	1.2D+1.6S+L	LRFD
Moment (lb-ft)	PASS (76.5%)	2643.9	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	4.0	4.0	D	LRFD

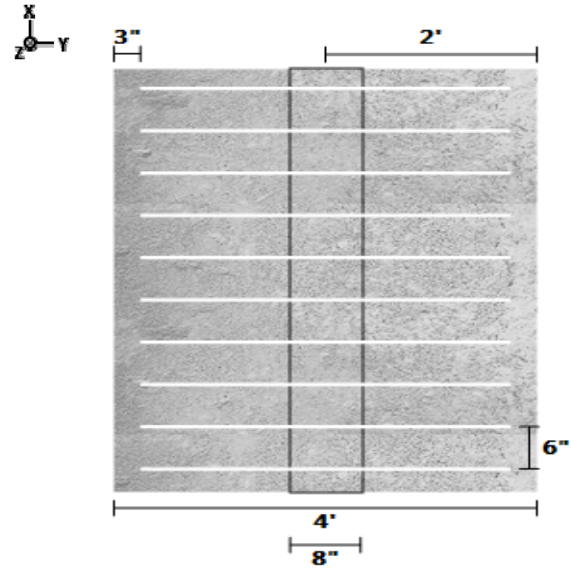
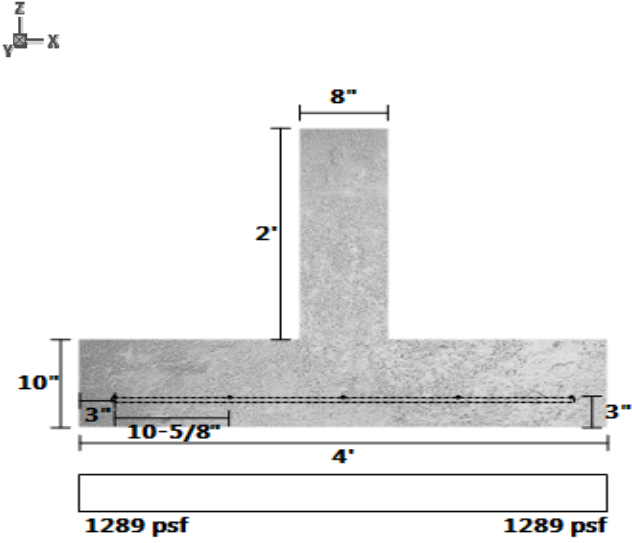
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Trusses #3	B	289.0001	289.0001	0	1	Dead	Z
Uniform (lb/ft)	Trusses #3	B	2550.003	2550.003	0	1	Snow	Z
Uniform (lb/ft)	Joist #1	B	295.2209	295.2209	0	1	Dead	Z
Uniform (lb/ft)	Joist #1	B	679.9991	679.9991	0	1	Live	Z
Uniform (lb/ft)	Joist #1	B	1345.178	1345.178	0	1	Snow	Z

Footing #2 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #3	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
3 (ft) Wide X 10 (in) Deep		Soil Depth TOF: 0 (ft)	Long. (4) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
3	10	362.5	193.3333

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
8	24	Concrete	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (19.0%)	1215.1	1500.0	D+S	ASD
One-Way Shear (lb/ft)	PASS (93.8%)	1460.5	23661.6	1.2D+1.6S+L	LRFD
Moment (lb-ft)	PASS (90.0%)	1122.6	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	3.0	3.0	D	LRFD

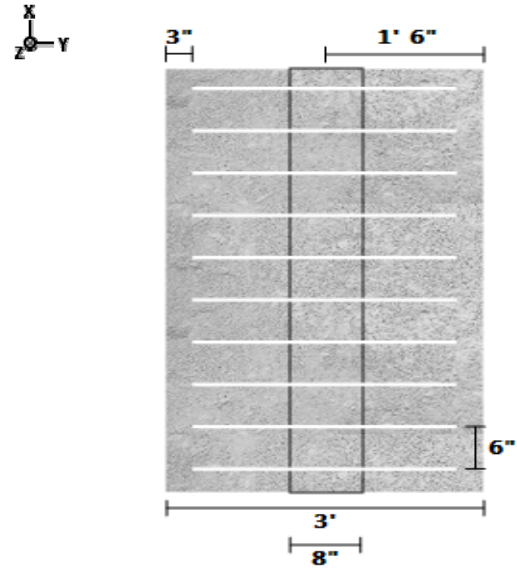
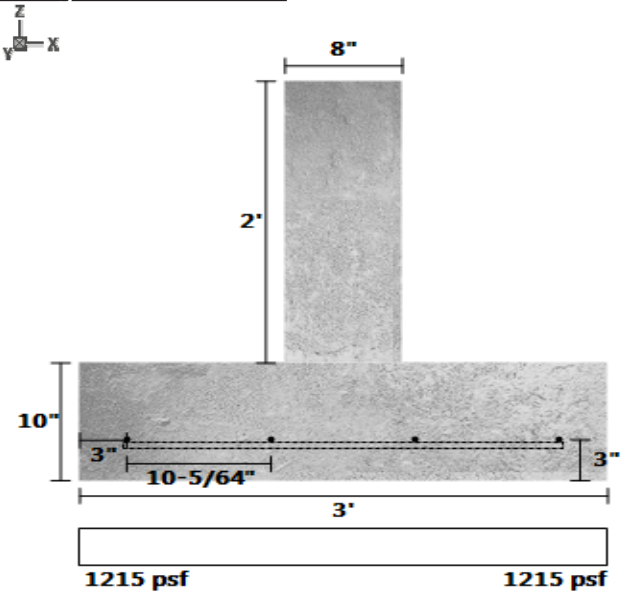
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Trusses #4	B	314.5007	314.5007	0	1	Dead	Z
Uniform (lb/ft)	Trusses #4	B	130.0004	130.0004	0	1	Live	Z
Uniform (lb/ft)	Trusses #4	B	2774.994	2774.994	0	1	Snow	Z

Footing #3 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #4	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
3 (ft) Wide X 10 (in) Deep		Soil Depth TOF: 0 (ft)	Long. (4) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING					
Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)		
3	10	362.5	193.3333		
CONCRETE					
fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)		
3000	3122019	145	0.75		
STEM WALL					
Width (in)	Height (in)	Material	Stemwall Offset (in)		
8	24	Concrete	0		
SOIL					
Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3
REBAR					
Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)		
4	6	60000	2.9E+07		
COVER					
Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)			
3	3	3			

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (19.0%)	1215.1	1500.0	D+S	ASD
One-Way Shear (lb/ft)	PASS (93.8%)	1460.5	23661.6	1.2D+1.6S+L	LRFD
Moment (lb-ft)	PASS (90.0%)	1122.6	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	3.0	3.0	D	LRFD

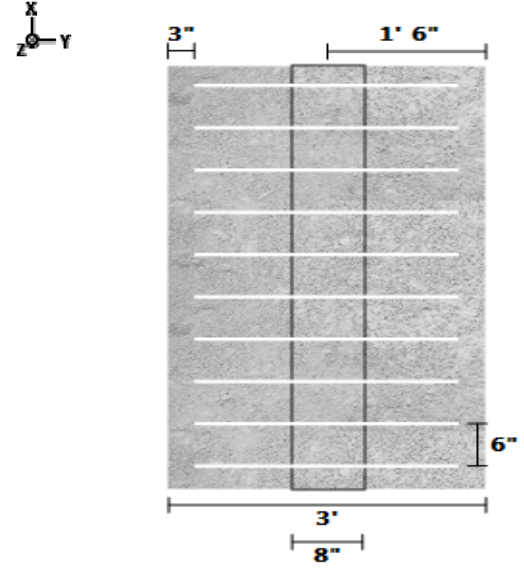
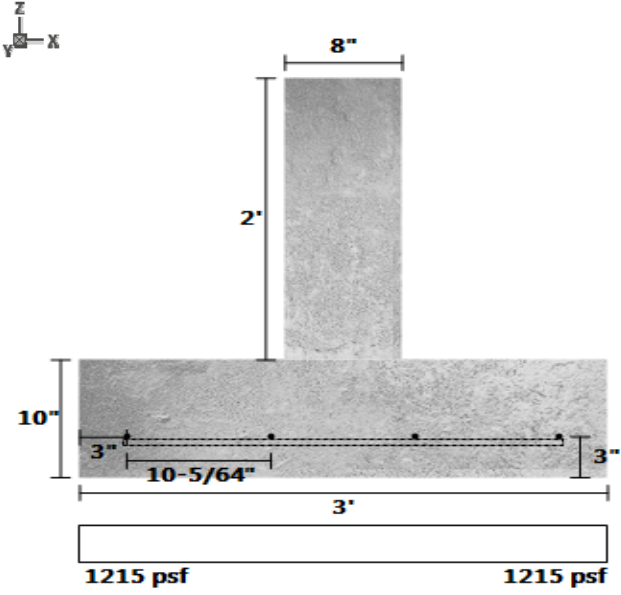
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Trusses #4	C	314.4998	314.4998	0	1	Dead	Z
Uniform (lb/ft)	Trusses #4	C	129.9995	129.9995	0	1	Live	Z
Uniform (lb/ft)	Trusses #4	C	2775	2775	0	1	Snow	Z

Footing #4 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #5	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
2 (ft) Wide X 10 (in) Deep		Soil Depth TOF: 0 (ft)	Long. (3) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING					
Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)		
2	10	241.6667	193.3333		
CONCRETE					
fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)		
3000	3122019	145	0.75		
STEM WALL					
Width (in)	Height (in)	Material	Stemwall Offset (in)		
8	24	Concrete	0		
SOIL					
Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3
REBAR					
Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)		
4	6	60000	2.9E+07		
COVER					
Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)			
3	3	3			

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (23.0%)	1155.7	1500.0	D+S	ASD
One-Way Shear (lb/ft)	PASS (96.3%)	584.4	15774.4	1.2D+1.6S+L	LRFD
Moment (lb-ft)	PASS (97.0%)	337.0	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	2.0	2.0	D	LRFD

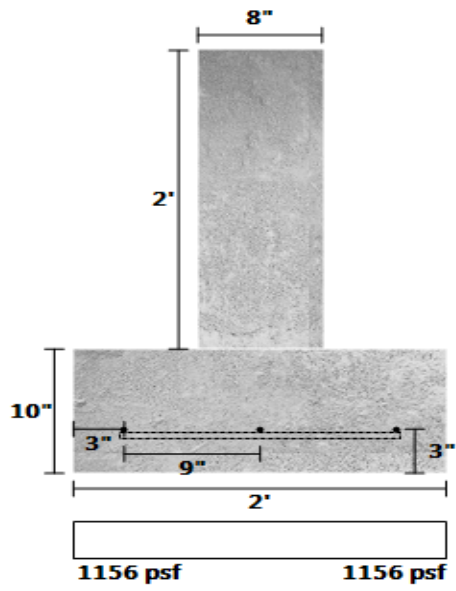
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Trusses #5	B	186.9999	186.9999	0	1	Dead	Z
Uniform (lb/ft)	Trusses #5	B	1649.999	1649.999	0	1	Snow	Z
Uniform (lb/ft)	Joists #11	A	39.45329	39.45329	0	1	Dead	Z
Uniform (lb/ft)	Joists #11	A	120.01	120.01	0	1	Live	Z

Footing #5 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #6	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
1.333 (ft) Wide X 10 (in) Deep		Soil Depth TOF: 0 (ft)	Long. (2) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING					
Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)		
1.333	10	161.0708	193.3333		
CONCRETE					
fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)		
3000	3122019	145	0.75		
STEM WALL					
Width (in)	Height (in)	Material	Stemwall Offset (in)		
8	24	Concrete	0		
SOIL					
Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3
REBAR					
Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)		
4	6	60000	2.9E+07		
COVER					
Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)			
3	3	3			

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (31.2%)	1032.7	1500.0	D+S	ASD
One-Way Shear (lb/ft)	PASS (99.4%)	62.3	10513.6	1.2D+1.6S+L	LRFD
Moment (lb-ft)	PASS (99.4%)	66.6	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	1.3	1.3	D	LRFD

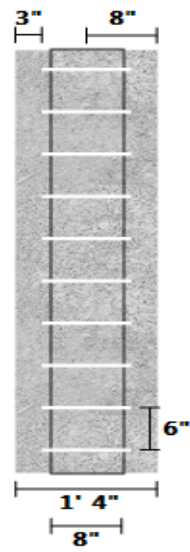
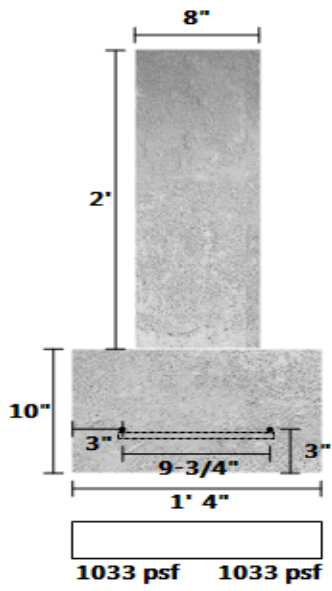
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Outlookers	B	75.56889	75.56889	0	1	Dead	Z
Uniform (lb/ft)	Outlookers	B	800.4514	800.4514	0	1	Snow	Z
Uniform (lb/ft)	Trusses #6	C	14.875	14.875	0	1	Dead	Z
Uniform (lb/ft)	Trusses #6	C	131.25	131.25	0	1	Snow	Z

Footing #6 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #7	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
3 (ft) Wide X 10 (in) Deep		Soil Depth TOF: 0 (ft)	Long. (4) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING					
Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)		
3	10	362.5	193.3333		
CONCRETE					
fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)		
3000	3122019	145	0.75		
STEM WALL					
Width (in)	Height (in)	Material	Stemwall Offset (in)		
8	24	Concrete	0		
SOIL					
Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3
REBAR					
Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)		
4	6	60000	2.9E+07		
COVER					
Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)			
3	3	3			

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (17.0%)	1244.7	1500.0	D+S	ASD
One-Way Shear (lb/ft)	PASS (93.4%)	1572.8	23661.6	1.2D+1.6S+L	LRFD
Moment (lb-ft)	PASS (89.3%)	1208.9	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	3.0	3.0	D	LRFD

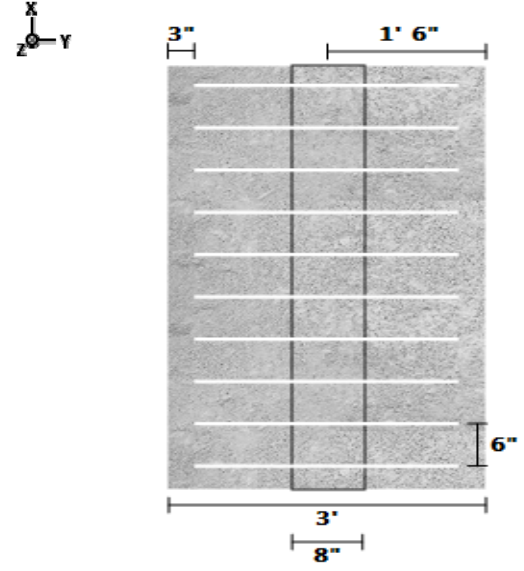
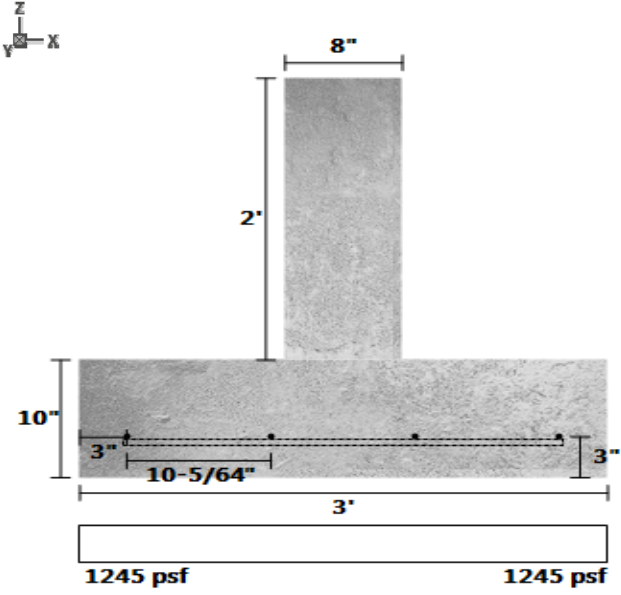
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Trusses #7	A	53.55	53.55	0	1	Dead	Z
Uniform (lb/ft)	Trusses #7	A	472.5	472.5	0	1	Snow	Z
Uniform (lb/ft)	Trusses #8	B	204.1218	204.1218	0	1	Dead	Z
Uniform (lb/ft)	Trusses #8	B	1801.078	1801.078	0	1	Snow	Z
Uniform (lb/ft)	Joist #3	B	123.0375	123.0375	0	1	Dead	Z
Uniform (lb/ft)	Joist #3	B	340	340	0	1	Live	Z
Uniform (lb/ft)	Joists #16	D	32.71292	32.71292	0	1	Dead	Z
Uniform (lb/ft)	Joists #16	D	99.50698	99.50698	0	1	Live	Z
Uniform (lb/ft)	Deck Joists #2	A	78.80341	78.80341	0	1	Dead	Z
Uniform (lb/ft)	Deck Joists #2	A	412.5	412.5	0	1	Snow	Z

Footing #7 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing - WD-#8	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
2 (ft) Wide X 10 (in) Deep		Soil Depth TOF: 0 (ft)	Long. (3) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING					
Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)		
2	10	241.6667	84.58334		
CONCRETE					
fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)		
3000	3122019	145	0.75		
STEM WALL					
Width (in)	Height (in)	Material	Stemwall Offset (in)		
3.5	24	Wood	0		
SOIL					
Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3
REBAR					
Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)		
4	6	60000	2.9E+07		
COVER					
Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)			
3	3	3			

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (18.5%)	1221.8	1500.0	D+S	ASD
One-Way Shear (lb/ft)	PASS (93.3%)	1062.6	15774.4	1.2D+1.6S+L	LRFD
Moment (lb-ft)	PASS (92.9%)	797.0	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	2.0	2.0	D	LRFD

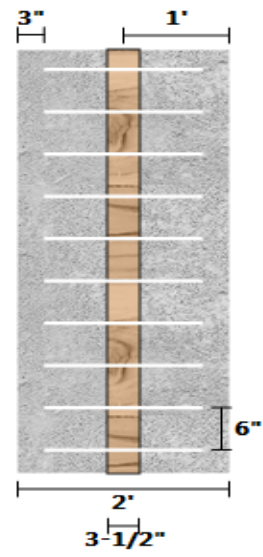
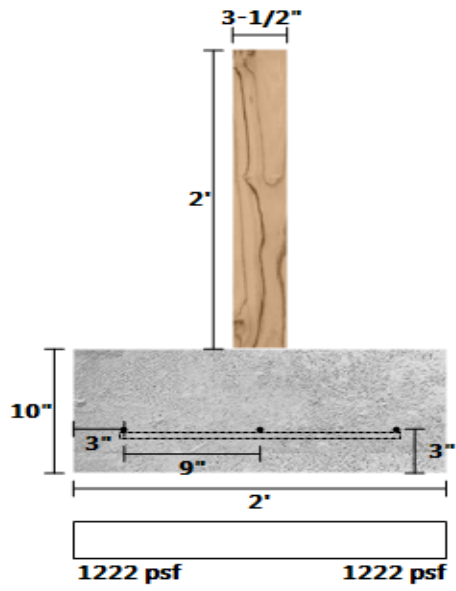
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Trusses #9	B	200	200	0	1	Dead	Z
Uniform (lb/ft)	Trusses #9	B	1764.706	1764.706	0	1	Snow	Z
Uniform (lb/ft)	Joist #2	B	52.53483	52.53483	0	1	Dead	Z
Uniform (lb/ft)	Joist #2	B	156.8206	156.8206	0	1	Live	Z
Uniform (lb/ft)	Joists #13	B	100.1765	100.1765	0	1	Dead	Z
Uniform (lb/ft)	Joists #13	B	304.7193	304.7193	0	1	Live	Z

Footing - WD-#8 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:	--	REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing - WD-#9	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
2 (ft) Wide X 10 (in) Deep		Soil Depth TOF: 0 (ft)	Long. (3) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING					
Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)		
2	10	241.6667	84.58334		
CONCRETE					
fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)		
3000	3122019	145	0.75		
STEM WALL					
Width (in)	Height (in)	Material	Stemwall Offset (in)		
3.5	24	Wood	0		
SOIL					
Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3
REBAR					
Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)		
4	6	60000	2.9E+07		
COVER					
Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)			
3	3	3			

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (26.3%)	1105.1	1500.0	D+S	ASD
One-Way Shear (lb/ft)	PASS (94.7%)	841.8	15774.4	1.2D+1.6S+L	LRFD
Moment (lb-ft)	PASS (94.4%)	631.4	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	2.0	2.0	D	LRFD

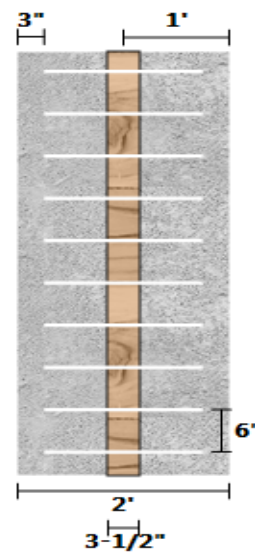
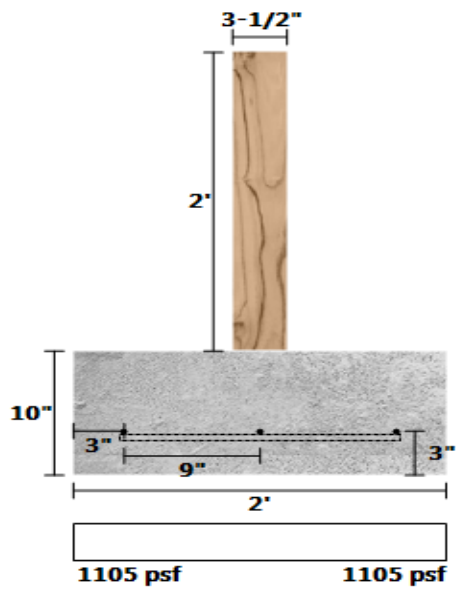
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Trusses #10	B	191.7812	191.7812	0	1	Dead	Z
Uniform (lb/ft)	Trusses #10	B	1692.188	1692.188	0	1	Snow	Z

Footing - WD-#9 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing - WD-#10	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
2 (ft) Wide X 10 (in) Deep		Soil Depth TOF: 0 (ft)	Long. (3) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING					
Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)		
2	10	241.6667	84.58334		
CONCRETE					
fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)		
3000	3122019	145	0.75		
STEM WALL					
Width (in)	Height (in)	Material	Stemwall Offset (in)		
3.5	24	Wood	0		
SOIL					
Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3
REBAR					
Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)		
4	6	60000	2.9E+07		
COVER					
Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)			
3	3	3			

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (33.4%)	998.8	1500.0	D+S	ASD
One-Way Shear (lb/ft)	PASS (94.7%)	834.1	15774.4	1.2D+1.6S+L	LRFD
Moment (lb-ft)	PASS (94.4%)	625.6	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	2.0	2.0	D	LRFD

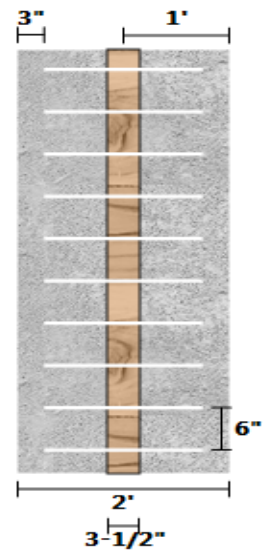
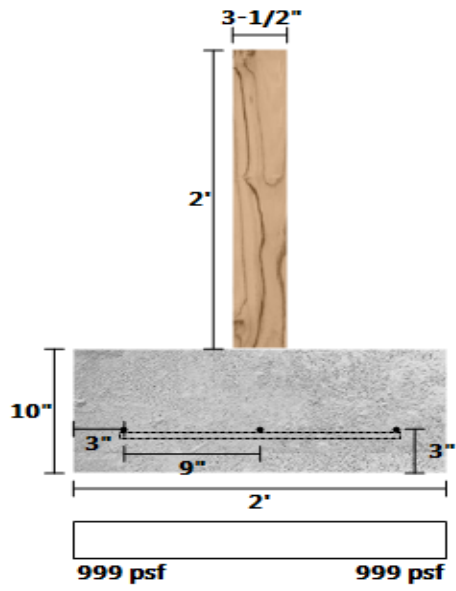
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Trusses #12	B	157.25	157.25	0	1	Dead	Z
Uniform (lb/ft)	Trusses #12	B	1387.5	1387.5	0	1	Snow	Z
Uniform (lb/ft)	Joist #10	A	126.6563	126.6563	0	1	Dead	Z
Uniform (lb/ft)	Joist #10	A	350	350	0	1	Live	Z

Footing - WD-#10 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #11	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
1.333 (ft) Wide X 10 (in) Deep		Soil Depth TOF: 0 (ft)	Long. (2) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
1.333	10	161.0708	193.3333

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
8	24	Concrete	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (28.5%)	1073.0	1500.0	D+S	ASD
One-Way Shear (lb/ft)	PASS (99.3%)	70.9	10513.6	1.2D+1.6S+L	LRFD
Moment (lb-ft)	PASS (99.3%)	75.8	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	1.3	1.3	D	LRFD

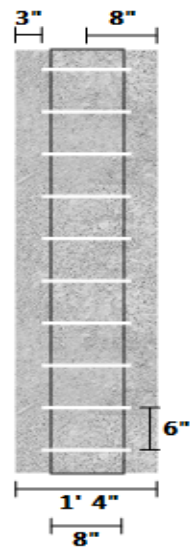
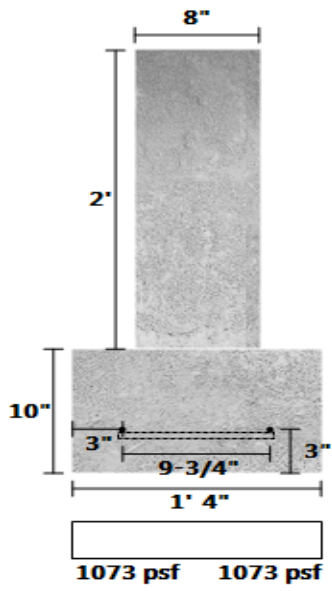
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Trusses #15	B	104.125	104.125	0	1	Dead	Z
Uniform (lb/ft)	Trusses #15	B	918.75	918.75	0	1	Snow	Z
Uniform (lb/ft)	Joists #18	A	53.01897	53.01897	0	1	Dead	Z
Uniform (lb/ft)	Joists #18	A	161.2744	161.2744	0	1	Live	Z

Footing #11 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #12	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
4 (ft) Wide X 10 (in) Deep		Soil Depth TOF: 0 (ft)	Long. (5) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
4	10	483.3333	193.3333

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
8	24	Concrete	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (19.6%)	1206.0	1500.0	D+S	ASD
One-Way Shear (lb/ft)	PASS (92.7%)	2288.0	31548.8	1.2D+1.6S+L	LRFD
Moment (lb/ft)	PASS (79.6%)	2293.7	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	4.0	4.0	D	LRFD

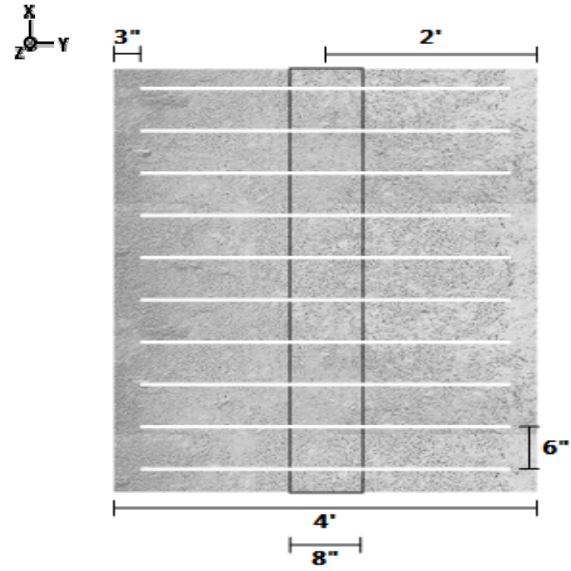
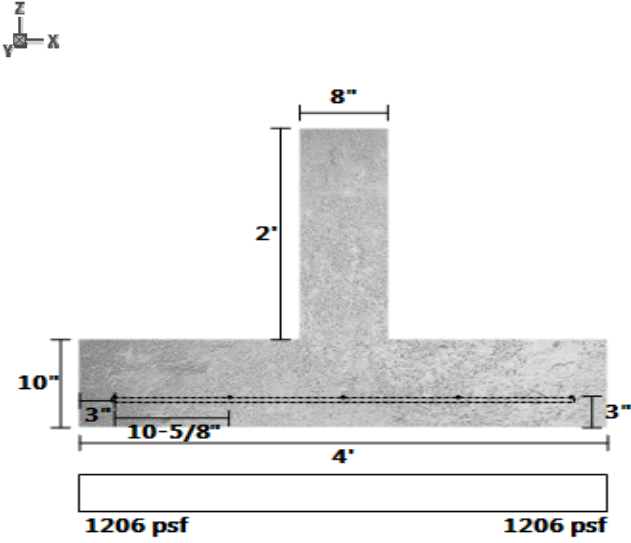
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Trusses #17	B	291.7314	291.7314	0	1	Dead	Z
Uniform (lb/ft)	Trusses #17	B	2574.094	2574.094	0	1	Snow	Z
Uniform (lb/ft)	Trusses #23	A	100.13	100.13	0	1	Dead	Z
Uniform (lb/ft)	Trusses #23	A	883.4998	883.4998	0	1	Snow	Z
Uniform (lb/ft)	Joists #20	E	53.5081	53.5081	0	1	Dead	Z
Uniform (lb/ft)	Joists #20	E	162.7623	162.7623	0	1	Live	Z
Uniform (lb/ft)	Deck Joists #5	A	38.01756	38.01756	0	1	Dead	Z
Uniform (lb/ft)	Deck Joists #5	A	206.25	206.25	0	1	Snow	Z

Footing #12 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing - WD-#13	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
2.5 (ft) Wide X 10 (in) Deep		Soil Depth TOF: 0 (ft)	Long. (4) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
2.5	10	302.0833	84.58334

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
3.5	24	Wood	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (8.6%)	1371.5	1500.0	D+S	ASD
One-Way Shear (lb/ft)	PASS (91.6%)	1658.6	19718.0	1.2D+1.6S+L	LRFD
Moment (lb-ft)	PASS (87.6%)	1396.2	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	2.5	2.5	D	LRFD

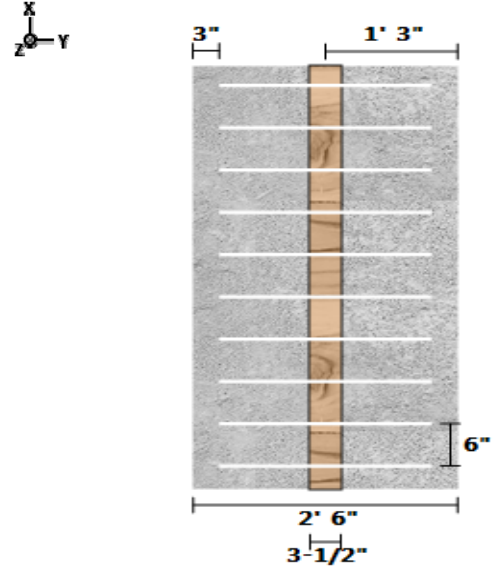
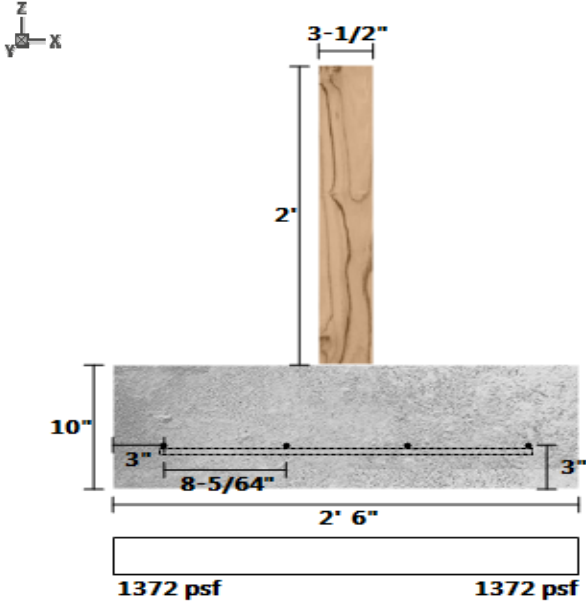
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Trusses #17	A	235.2678	235.2678	0	1	Dead	Z
Uniform (lb/ft)	Trusses #17	A	2075.893	2075.893	0	1	Snow	Z
Uniform (lb/ft)	Trusses #18	C	63.25	63.25	0	1	Dead	Z
Uniform (lb/ft)	Trusses #18	C	558.0882	558.0882	0	1	Snow	Z
Uniform (lb/ft)	Joists #20	B	109.6375	109.6375	0	1	Dead	Z
Uniform (lb/ft)	Joists #20	B	333.4982	333.4982	0	1	Live	Z

Footing - WD-#13 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #14	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
1.333 (ft) Wide X 10 (in) Deep		Soil Depth TOF: 0 (ft)	Long. (2) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
1.333	10	161.0708	193.3333

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
8	24	Concrete	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (15.0%)	1275.2	1500.0	D+S	ASD
One-Way Shear (lb/ft)	PASS (99.2%)	86.6	10513.6	1.2D+1.6S+L	LRFD
Moment (lb-ft)	PASS (99.2%)	92.6	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	1.3	1.3	D	LRFD

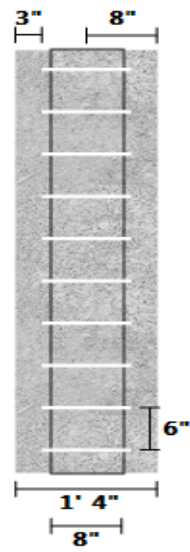
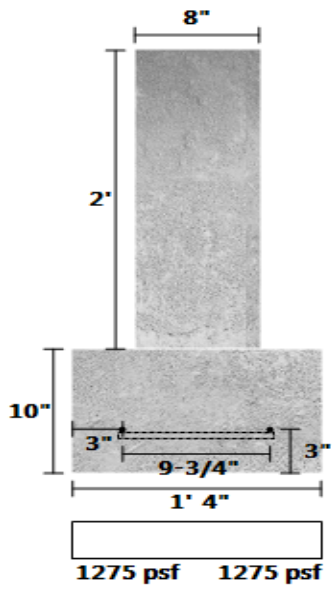
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Trusses #18	B	132.25	132.25	0	1	Dead	Z
Uniform (lb/ft)	Trusses #18	B	1166.912	1166.912	0	1	Snow	Z
Uniform (lb/ft)	Joists #20	A	46.27993	46.27993	0	1	Dead	Z
Uniform (lb/ft)	Joists #20	A	140.7755	140.7755	0	1	Live	Z

Footing #14 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:	--	REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #15	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
2 (ft) Wide X 10 (in) Deep		Soil Depth TOF: 0 (ft)	Long. (3) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING					
Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)		
2	10	241.6667	193.3333		
CONCRETE					
fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)		
3000	3122019	145	0.75		
STEM WALL					
Width (in)	Height (in)	Material	Stemwall Offset (in)		
8	24	Concrete	0		
SOIL					
Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3
REBAR					
Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)		
4	6	60000	2.9E+07		
COVER					
Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)			
3	3	3			

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (22.7%)	1159.5	1500.0	D+S	ASD
One-Way Shear (lb/ft)	PASS (96.4%)	566.3	15774.4	1.2D+1.6S+L	LRFD
Moment (lb-ft)	PASS (97.1%)	326.5	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	2.0	2.0	D	LRFD

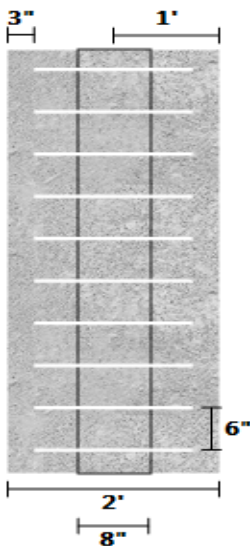
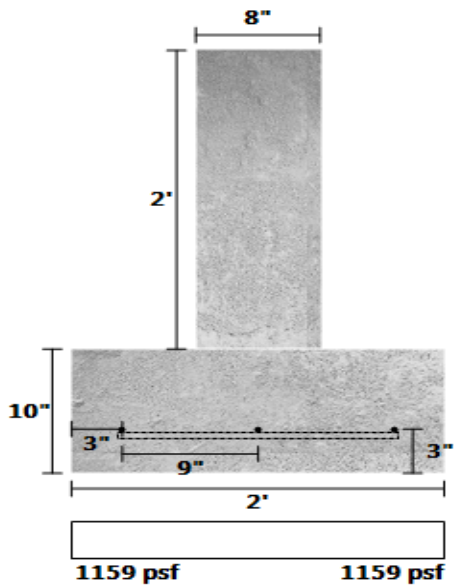
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Trusses #21	B	191.781	191.781	0	1	Dead	Z
Uniform (lb/ft)	Trusses #21	B	1692.186	1692.186	0	1	Snow	Z

Footing #15 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing - WD-#16	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
1.333 (ft) Wide X 10 (in) Deep		Soil Depth TOF: 0 (ft)	Long. (2) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
1.333	10	161.0708	84.58334

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
3.5	24	Wood	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (20.7%)	1189.5	1500.0	D+L	ASD
One-Way Shear (lb/ft)	PASS (96.6%)	361.1	10513.6	1.2D+1.6L+0.5Lr	LRFD
Moment (lb-ft)	PASS (97.6%)	265.7	11245.8	1.2D+1.6L+0.5Lr	LRFD
Compression (ft ²)	PASS (100.0%)	1.3	1.3	D	LRFD

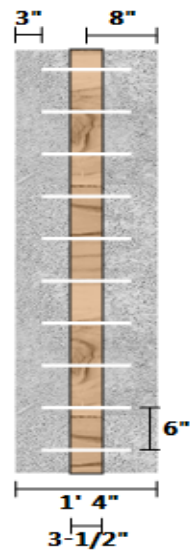
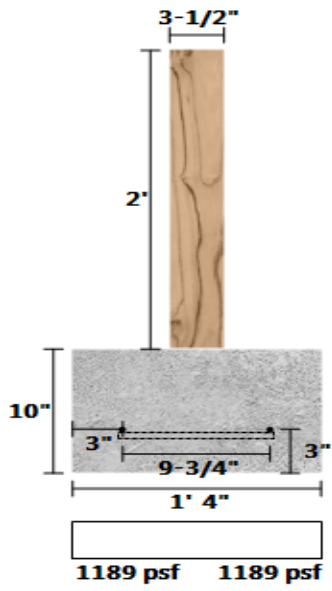
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Joist #2	C	141.2205	141.2205	0	1	Dead	Z
Uniform (lb/ft)	Joist #2	C	421.5537	421.5537	0	1	Live	Z
Uniform (lb/ft)	Joists #14	B	192.0291	192.0291	0	1	Dead	Z
Uniform (lb/ft)	Joists #14	B	584.119	584.119	0	1	Live	Z

Footing - WD-#16 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing - WD-#17	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
1.333 (ft) Wide X 10 (in) Deep		Soil Depth TOF: 0 (ft)	Long. (2) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
1.333	10	161.0708	84.58334

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
3.5	24	Wood	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (21.1%)	1182.8	1500.0	D+L	ASD
One-Way Shear (lb/ft)	PASS (96.6%)	358.7	10513.6	1.2D+1.6L+0.5Lr	LRFD
Moment (lb-ft)	PASS (97.7%)	263.9	11245.8	1.2D+1.6L+0.5Lr	LRFD
Compression (ft ²)	PASS (100.0%)	1.3	1.3	D	LRFD

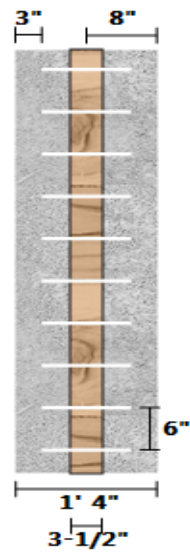
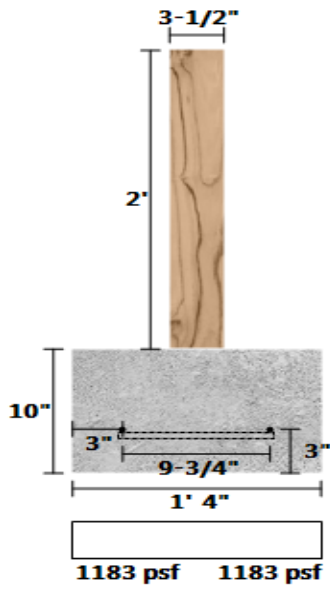
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Joist #2	D	203.6727	203.6727	0	1	Dead	Z
Uniform (lb/ft)	Joist #2	D	607.9783	607.9783	0	1	Live	Z
Uniform (lb/ft)	Joists #14	C	128.2567	128.2567	0	1	Dead	Z
Uniform (lb/ft)	Joists #14	C	390.1345	390.1345	0	1	Live	Z

Footing - WD-#17 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing - WD-#18	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
2 (ft) Wide X 10 (in) Deep		Soil Depth TOF: 0 (ft)	Long. (3) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING					
Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)		
2	10	241.6667	84.58334		
CONCRETE					
fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)		
3000	3122019	145	0.75		
STEM WALL					
Width (in)	Height (in)	Material	Stemwall Offset (in)		
3.5	24	Wood	0		
SOIL					
Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3
REBAR					
Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)		
4	6	60000	2.9E+07		
COVER					
Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)			
3	3	3			

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (18.5%)	1222.1	1500.0	D+S	ASD
One-Way Shear (lb/ft)	PASS (93.4%)	1035.1	15774.4	1.2D+1.6S+L	LRFD
Moment (lb-ft)	PASS (93.1%)	776.4	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	2.0	2.0	D	LRFD

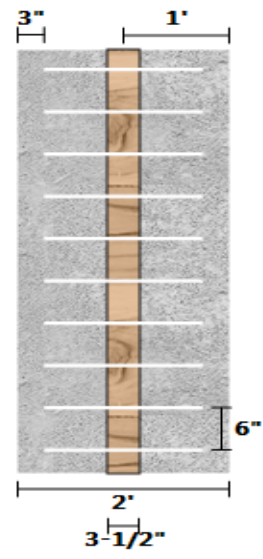
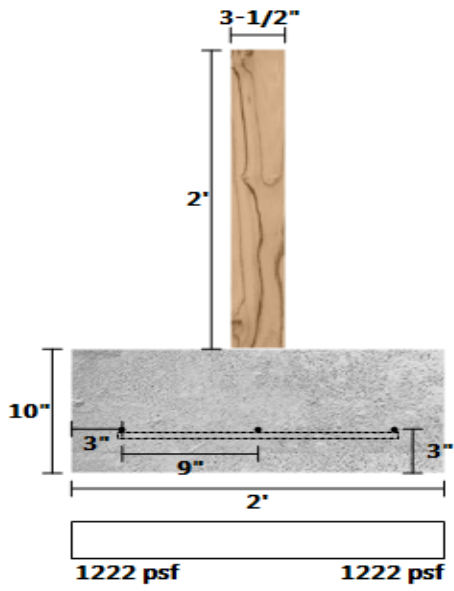
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Outlookers	B	75.56889	75.56889	0	1	Dead	Z
Uniform (lb/ft)	Outlookers	B	800.4514	800.4514	0	1	Snow	Z
Uniform (lb/ft)	Joist #10	B	126.6563	126.6563	0	1	Dead	Z
Uniform (lb/ft)	Joist #10	B	350	350	0	1	Live	Z
Uniform (lb/ft)	Trusses #22	A	113.5357	113.5357	0	1	Dead	Z
Uniform (lb/ft)	Trusses #22	A	1001.786	1001.786	0	1	Snow	Z

Footing - WD-#18 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #19	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
1.333 (ft) Wide X 10 (in) Deep		Soil Depth TOF: 0 (ft)	Long. (2) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
1.333	10	161.0708	193.3333

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
8	24	Concrete	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (19.7%)	1205.1	1500.0	D+S	ASD
One-Way Shear (lb/ft)	PASS (99.2%)	80.5	10513.6	1.2D+1.6S+L	LRFD
Moment (lb-ft)	PASS (99.2%)	86.0	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	1.3	1.3	D	LRFD

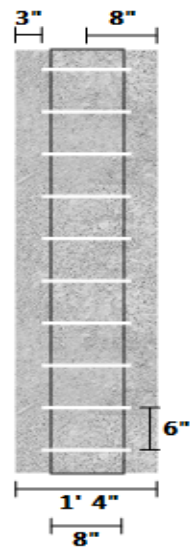
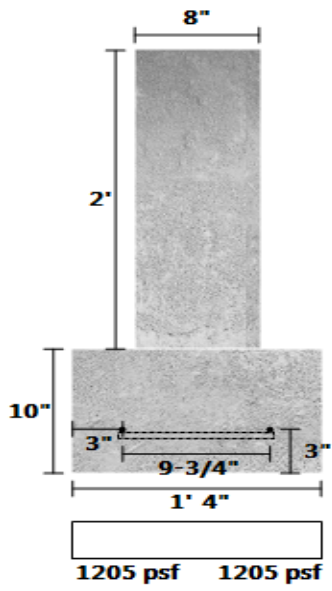
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Outlookers	B	75.56889	75.56889	0	1	Dead	Z
Uniform (lb/ft)	Outlookers	B	800.4514	800.4514	0	1	Snow	Z
Uniform (lb/ft)	Joists #18	E	42.89775	42.89775	0	1	Dead	Z
Uniform (lb/ft)	Joists #18	E	130.4875	130.4875	0	1	Live	Z
Uniform (lb/ft)	Deck Joists #3	A	51.84212	51.84212	0	1	Dead	Z
Uniform (lb/ft)	Deck Joists #3	A	281.25	281.25	0	1	Snow	Z

Footing #19 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #1-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

4 (ft) X 4 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (5) #4 Long, (5) #4 Short
---------------------------	------------------------	--------------------------------

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
4	4	10	13.33	1933.33

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)	0
---------	---

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
7.5	5.5	Wood	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (11.1%)	1333.8	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (66.4%)	10605.6	31548.8	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (66.4%)	10605.6	31548.8	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (60.0%)	27881.4	69670.3	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (53.4%)	13404.7	28754.4	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (55.4%)	12818.8	28754.4	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (77.9%)	30167.0	136743.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	16.0	16.0	D	LRFD

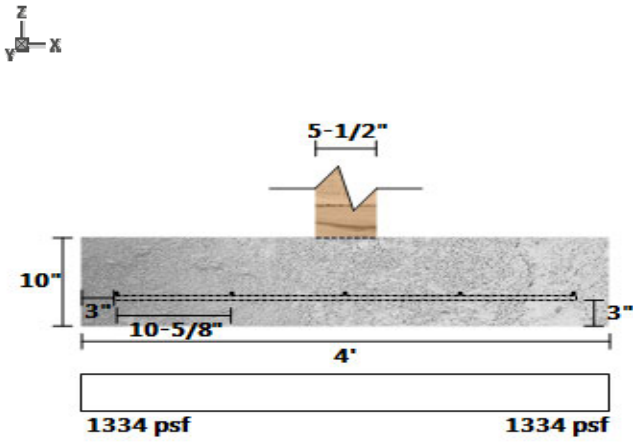
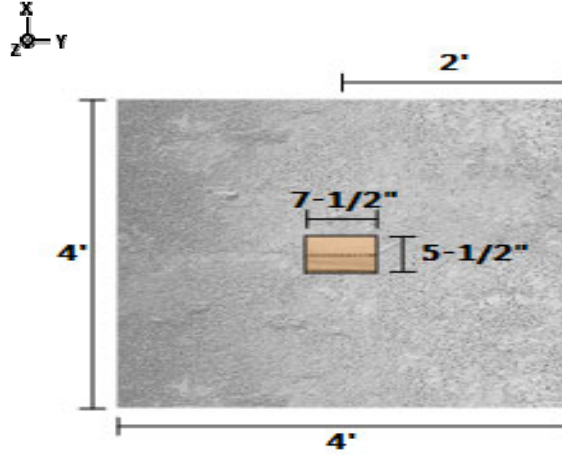
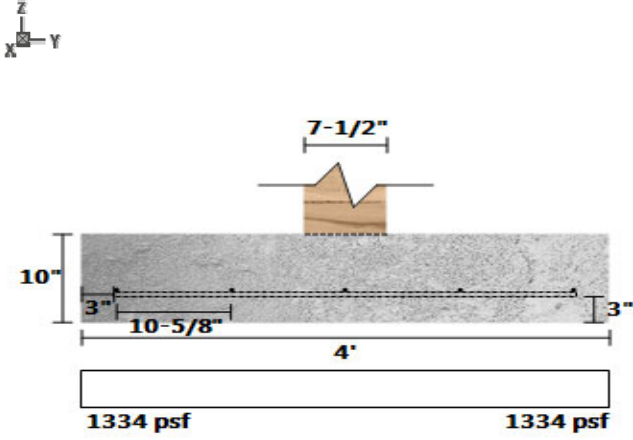
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Beam #1	A	2239.257	-	0	-	Dead	Z
Point (lb/ft)	Beam #1	A	9.749994	-	0	-	Live	Z
Point (lb/ft)	Beam #1	A	17168.22	-	0	-	Snow	Z

SpotFtg Bm #1-1 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Gdr #1-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

4 (ft) X 4 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (5) #4 Long, (5) #4 Short
---------------------------	------------------------	--------------------------------

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
4	4	10	13.33	1933.33

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (31.1%)	1033.5	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (74.9%)	7912.9	31548.8	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (74.9%)	7912.9	31548.8	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (73.3%)	20688.9	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (72.4%)	7932.7	28754.4	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (72.4%)	7932.7	28754.4	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (89.2%)	22846.3	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	16.0	16.0	D	LRFD

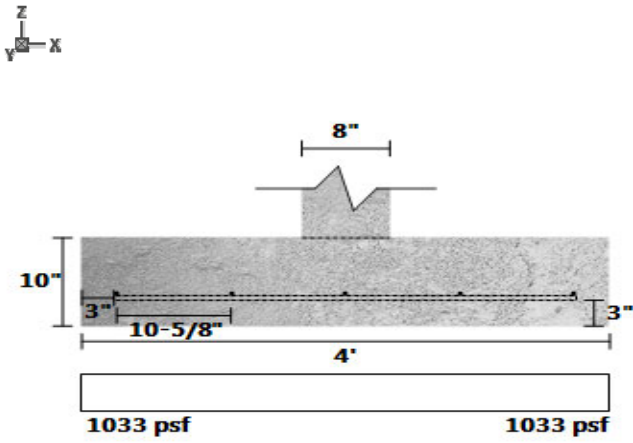
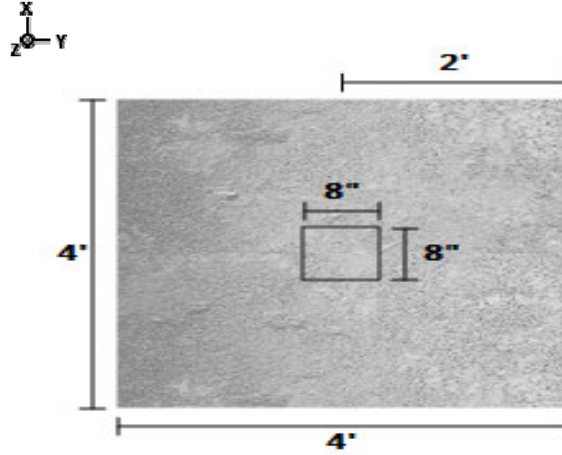
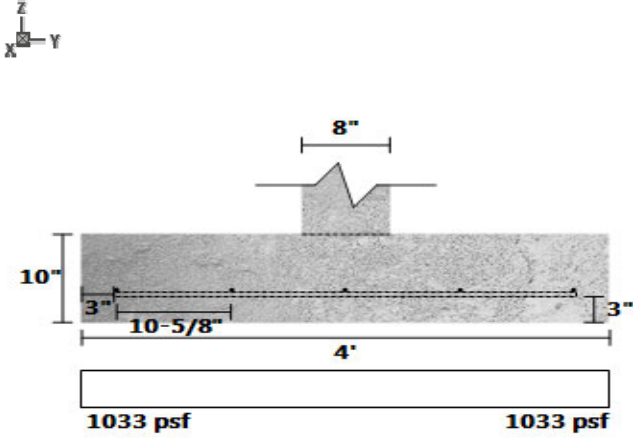
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Girder #1	A	1295.964	-	0	-	Dead	Z
Point (lb/ft)	Girder #1	A	13306.32	-	0	-	Snow	Z

SpotFtg Gdr #1-1 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Gdr #1-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

3.5 (ft) X 3.5 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short
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MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
3.5	3.5	10	10.21	1480.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (12.5%)	1312.9	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (73.2%)	7411.4	27605.2	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (73.2%)	7411.4	27605.2	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (74.2%)	20028.5	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (71.6%)	6550.2	23076.6	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (71.6%)	6550.2	23076.6	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (89.2%)	22846.3	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	12.3	12.3	D	LRFD

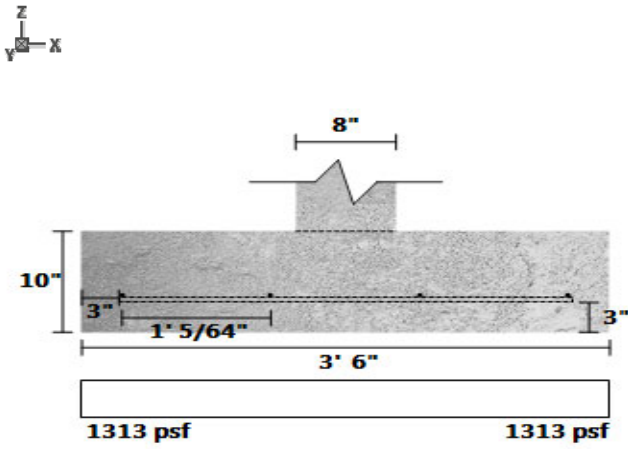
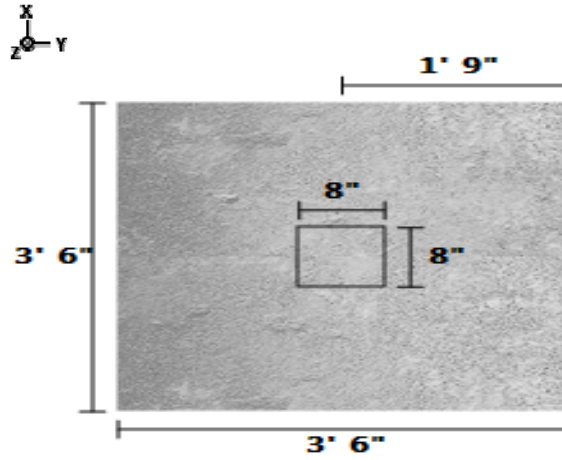
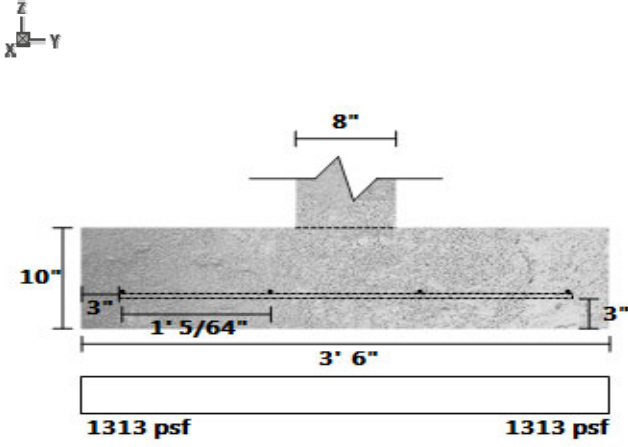
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Girder #1	B	1295.964	-	0	-	Dead	Z
Point (lb/ft)	Girder #1	B	13306.32	-	0	-	Snow	Z

SpotFtg Gdr #1-2 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Hdr #2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

4 (ft) X 4 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (5) #4 Long, (5) #4 Short
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MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
4	4	10	13.33	1933.33

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)	0
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COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (39.9%)	901.0	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (78.7%)	6733.7	31548.8	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (78.7%)	6733.7	31548.8	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (77.3%)	17605.8	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (76.5%)	6750.6	28754.4	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (76.5%)	6750.6	28754.4	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (90.8%)	19441.7	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	16.0	16.0	D	LRFD

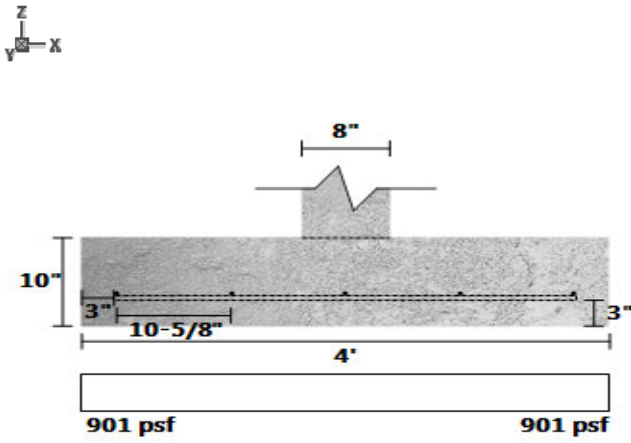
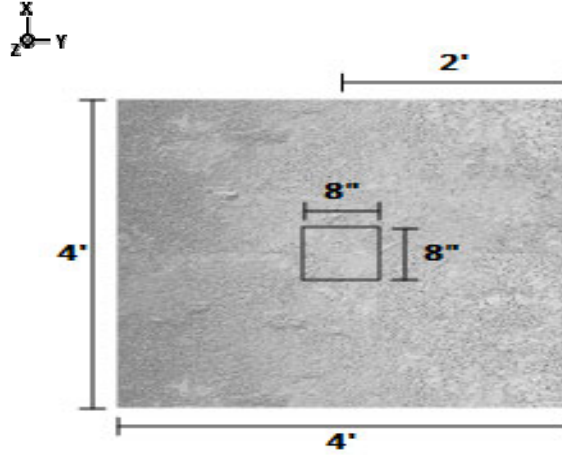
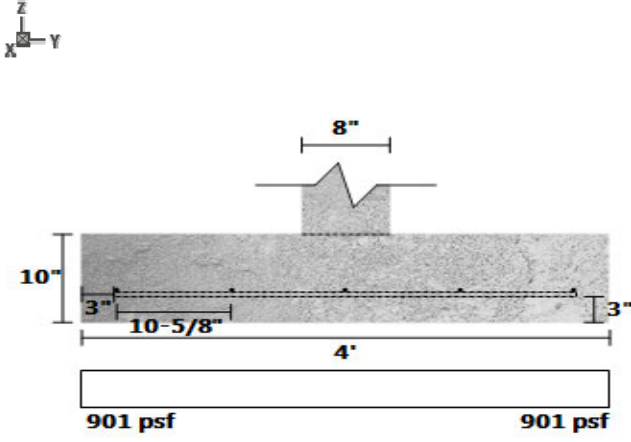
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Header #2	B	1326.277	-	0	-	Dead	Z
Point (lb/ft)	Header #2	B	11155.71	-	0	-	Snow	Z

SpotFtg Hdr #2 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Hdr #5-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

4.5 (ft) X 4.5 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (5) #4 Long, (5) #4 Short
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MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
4.5	4.5	10	16.88	2446.88

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)	0
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COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (17.7%)	1234.2	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (63.9%)	12827.7	35492.4	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (63.9%)	12827.7	35492.4	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (57.9%)	32663.0	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (50.1%)	14407.3	28872.8	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (50.1%)	14407.3	28872.8	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (83.4%)	35296.5	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	20.3	20.3	D	LRFD

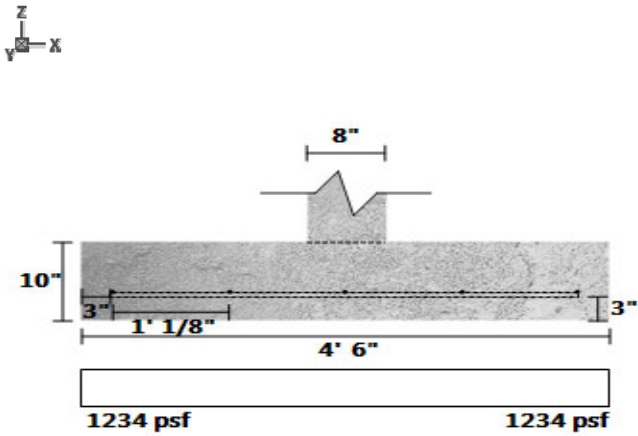
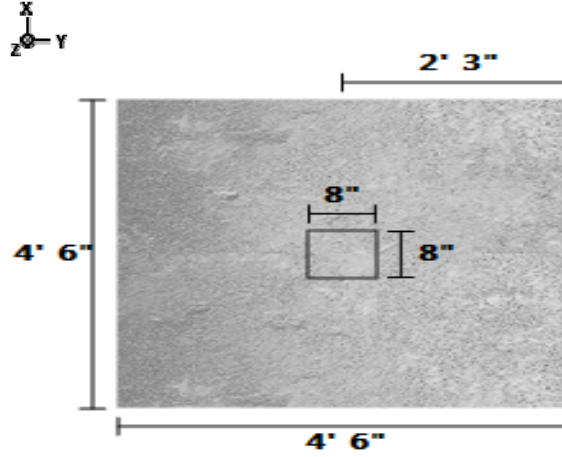
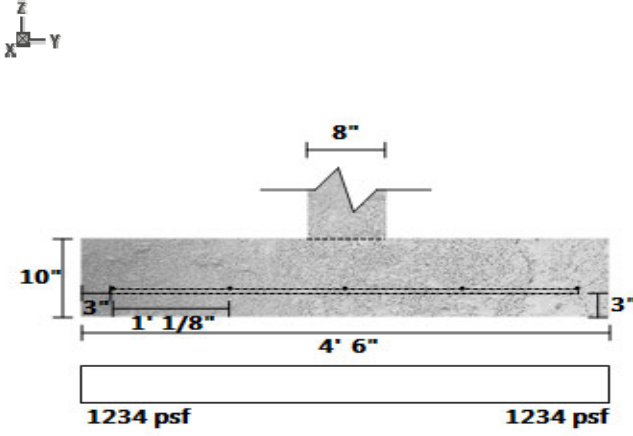
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Header #5	A	10447.55	-	0	-	Dead	Z
Point (lb/ft)	Header #5	A	3399.99	-	0	-	Live	Z
Point (lb/ft)	Header #5	A	12099	-	0	-	Snow	Z

SpotFtg Hdr #5-1 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Hdr #5-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

6 (ft) X 7.5 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (10) #4 Long, (9) #4 Short
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MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
6	7.5	10	37.5	5437.5

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)	0
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COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	24	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (4.9%)	1426.7	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (38.2%)	36553.2	59154.0	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (22.8%)	36553.2	47323.2	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (14.2%)	85506.2	99685.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (9.8%)	46353.9	51374.0	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (5.0%)	54483.9	57366.5	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (85.6%)	91941.6	636480.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	45.0	45.0	D	LRFD

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

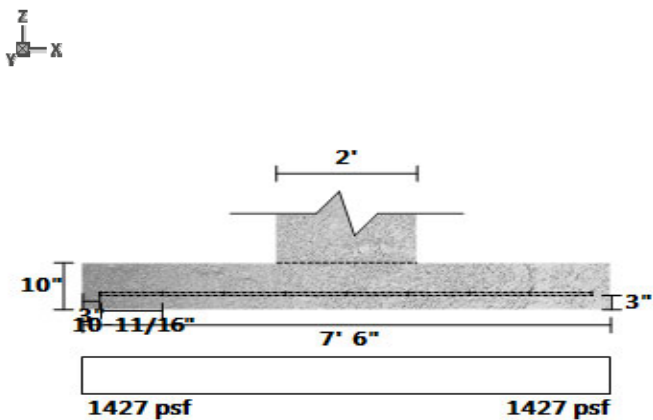
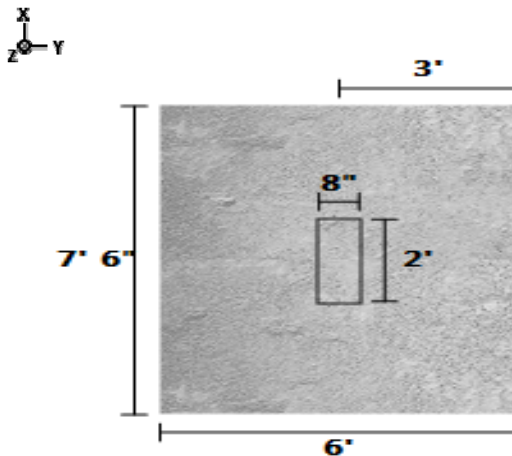
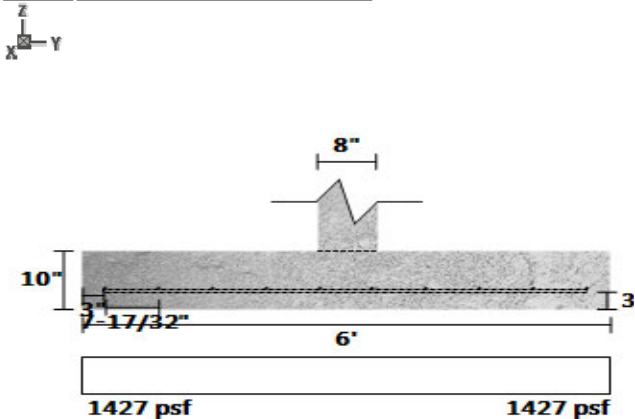
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Header #5	B	10447.55	-	0	-	Dead	Z
Point (lb/ft)	Header #5	B	3399.99	-	0	-	Live	Z
Point (lb/ft)	Header #5	B	12099	-	0	-	Snow	Z
Point (lb/ft)	Header #6	A	16859.77	-	0	-	Dead	Z

LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Header #6	A	5439.984	-	0	-	Live	Z
Point (lbf)	Header #6	A	19358.4	-	0	-	Snow	Z

SpotFtg Hdr #5-2 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Hdr #6-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

5.5 (ft) X 5.5 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (7) #4 Long, (7) #4 Short
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MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
5.5	5.5	10	25.21	3655.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)	0
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COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (12.1%)	1318.1	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (49.3%)	21993.3	43379.6	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (49.3%)	21993.3	43379.6	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (30.6%)	53816.9	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (25.2%)	30075.4	40229.0	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (25.2%)	30075.4	40229.0	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (73.3%)	56646.2	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	30.3	30.3	D	LRFD

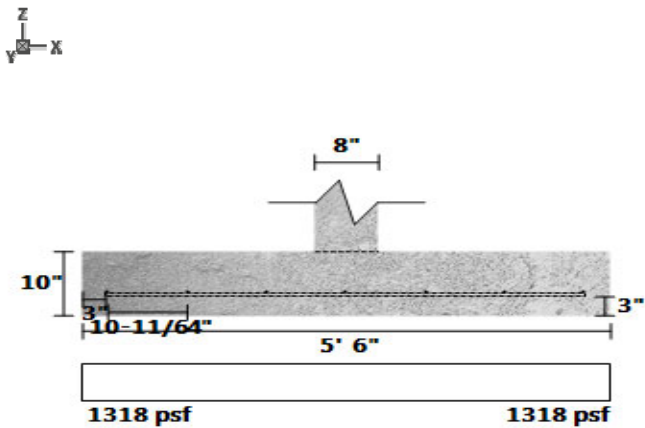
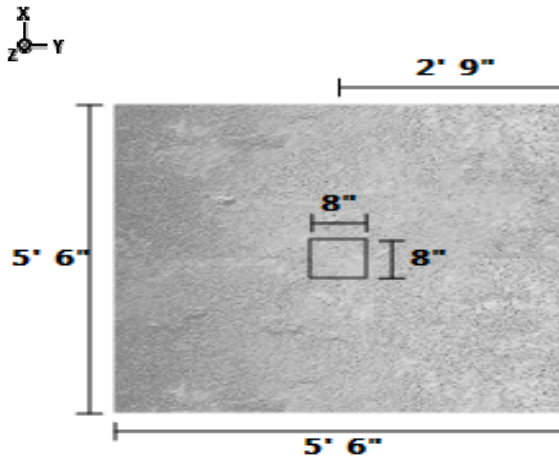
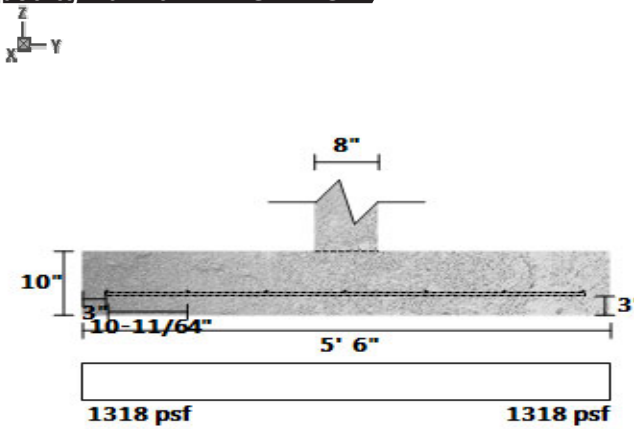
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Header #6	B	16859.77	-	0	-	Dead	Z
Point (lb/ft)	Header #6	B	5439.984	-	0	-	Live	Z
Point (lb/ft)	Header #6	B	19358.4	-	0	-	Snow	Z

SpotFtg Hdr #6-2 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Hdr #7-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
3.5 (ft) X 3.5 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
3.5	3.5	10	10.21	1480.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (18.3%)	1225.4	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (75.1%)	6883.4	27605.2	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (75.1%)	6883.4	27605.2	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (76.0%)	18601.6	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (73.6%)	6083.5	23076.6	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (73.6%)	6083.5	23076.6	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (90.0%)	21218.6	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	12.3	12.3	D	LRFD

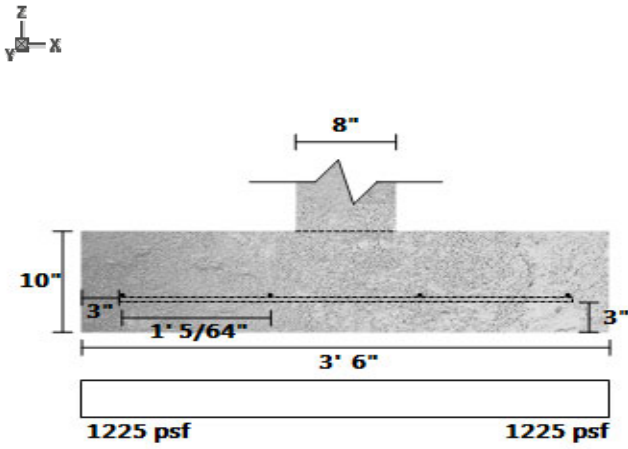
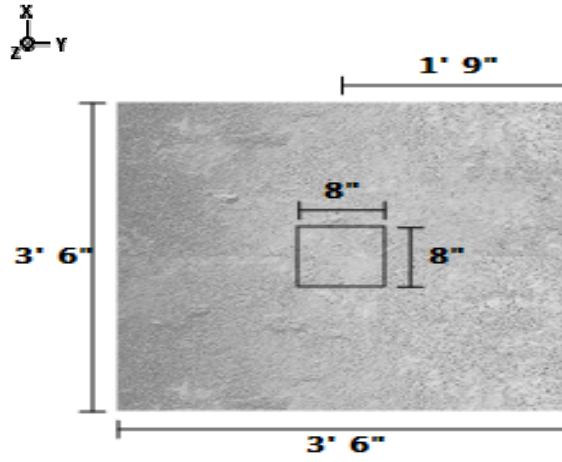
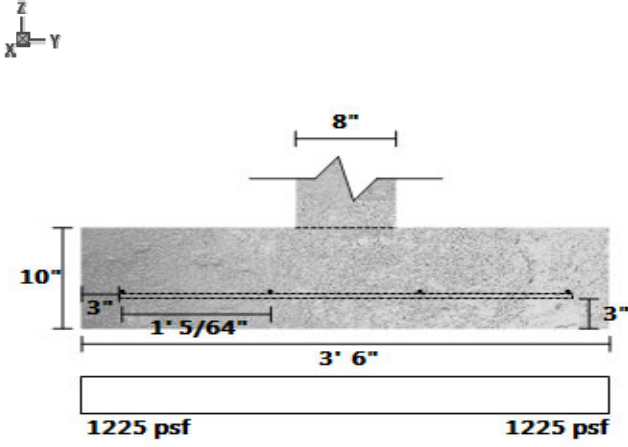
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Header #7	A	3115.099	-	0	-	Dead	Z
Point (lb/ft)	Header #7	A	813.7476	-	0	-	Live	Z
Point (lb/ft)	Header #7	A	10416.06	-	0	-	Snow	Z

SpotFtg Hdr #7-1 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Hdr #7-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

3.5 (ft) X 3.5 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short
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MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
3.5	3.5	10	10.21	1480.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)	0
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COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (24.0%)	1140.3	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (76.9%)	6378.4	27605.2	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (76.9%)	6378.4	27605.2	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (77.8%)	17236.8	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (75.6%)	5637.1	23076.6	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (75.6%)	5637.1	23076.6	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (90.7%)	19661.7	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	12.3	12.3	D	LRFD

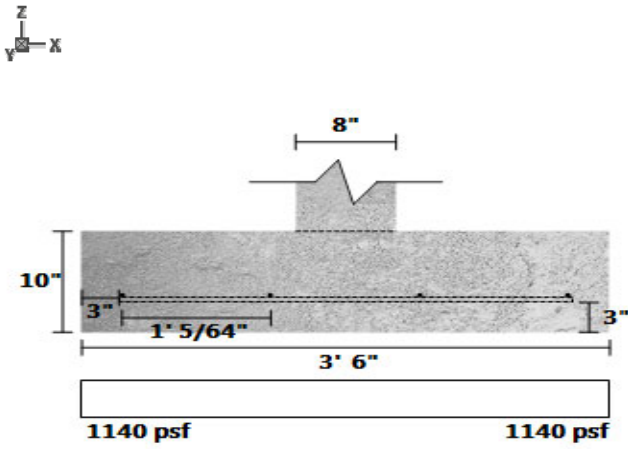
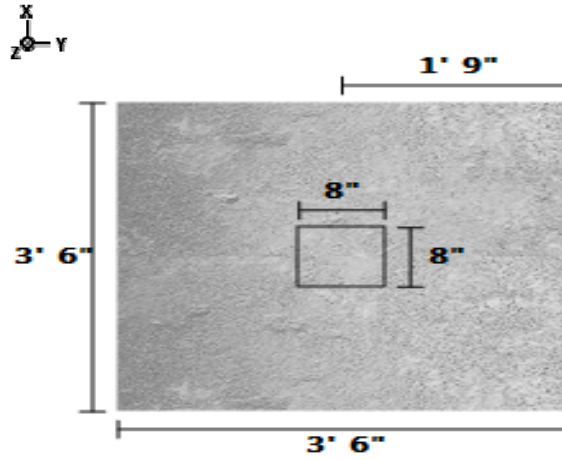
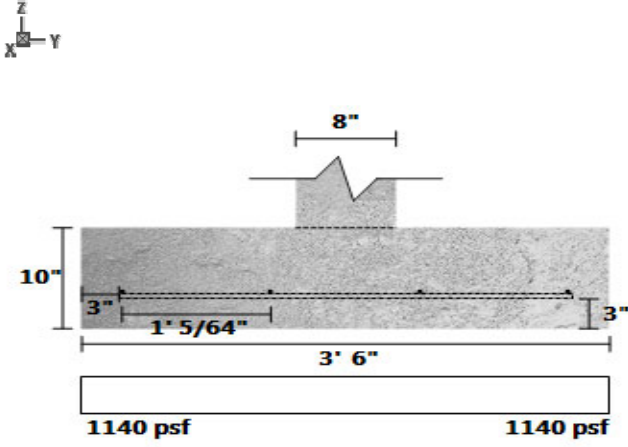
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Header #7	B	1806.292	-	0	-	Dead	Z
Point (lb/ft)	Header #7	B	401.2487	-	0	-	Live	Z
Point (lb/ft)	Header #7	B	10682.46	-	0	-	Snow	Z

SpotFtg Hdr #7-2 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Gdr #2-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

3.5 (ft) X 3.5 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short
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MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
3.5	3.5	10	10.21	1480.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (12.5%)	1312.9	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (73.2%)	7411.4	27605.2	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (73.2%)	7411.4	27605.2	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (74.2%)	20028.5	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (71.6%)	6550.2	23076.6	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (71.6%)	6550.2	23076.6	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (89.2%)	22846.3	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	12.3	12.3	D	LRFD

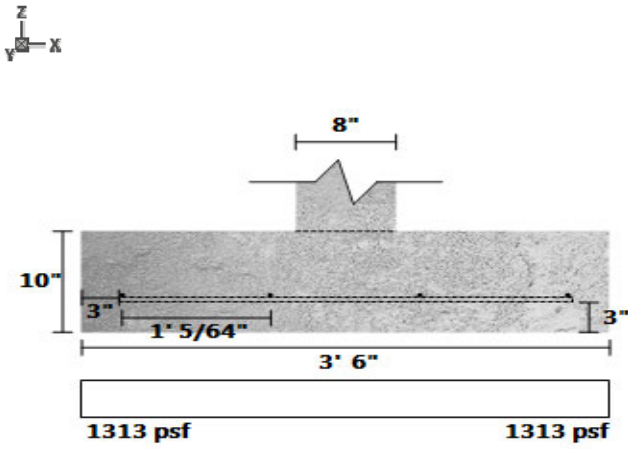
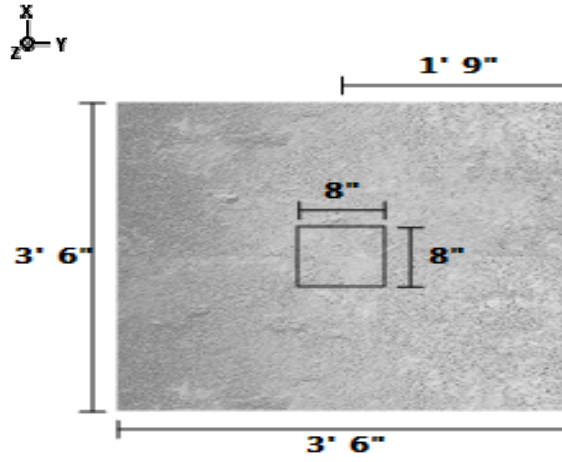
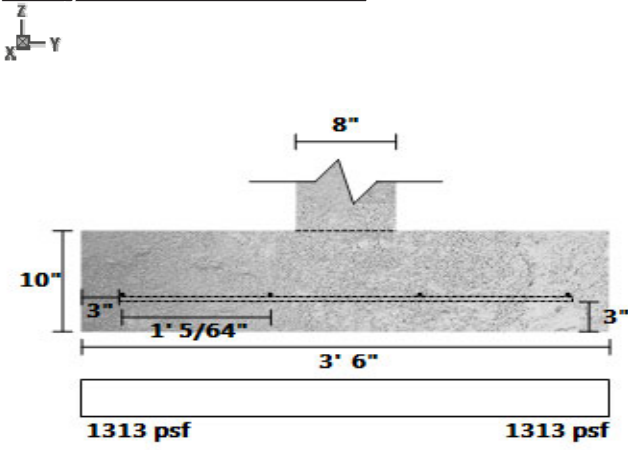
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Girder #2	A	1295.964	-	0	-	Dead	Z
Point (lb/ft)	Girder #2	A	13306.32	-	0	-	Snow	Z

SpotFtg Gdr #2-1 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #2-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
2 (ft) X 2 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	Bot. (3) #4 Long, (3) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
2	2	10	3.33	483.33

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)	0
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COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (20.5%)	1192.0	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (91.9%)	1283.2	15774.4	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (91.9%)	1283.2	15774.4	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (94.7%)	4143.7	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (95.7%)	739.9	17124.7	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (95.7%)	739.9	17124.7	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (96.9%)	6658.8	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	4.0	4.0	D	LRFD

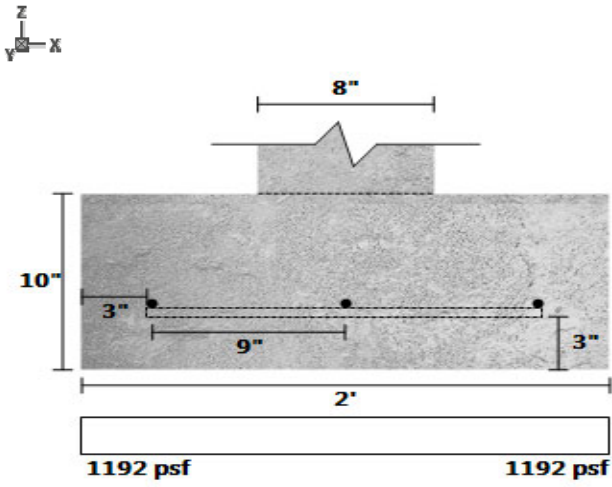
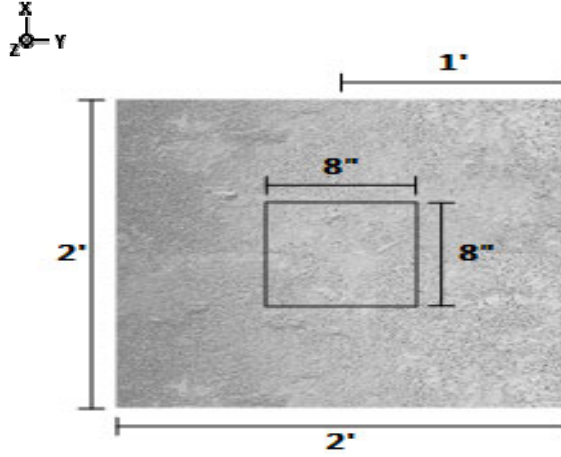
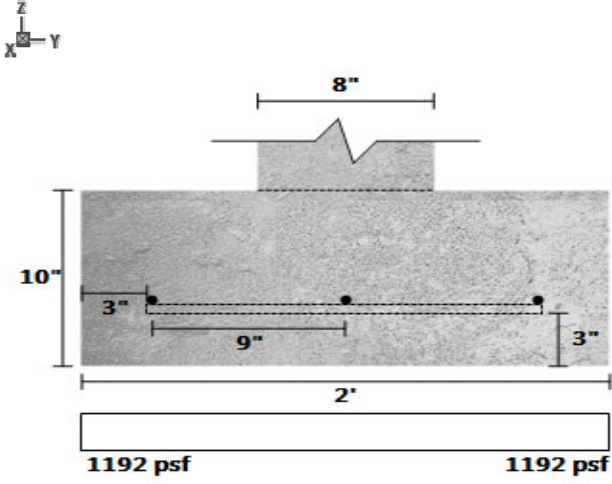
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Beam #2	A	494.6477	-	0	-	Dead	Z
Point (lb/ft)	Beam #2	A	3790.159	-	0	-	Snow	Z

SpotFtg Bm #2-1 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #2-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
3.5 (ft) X 3.5 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
3.5	3.5	10	10.21	1480.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)	0
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COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (3.5%)	1448.2	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (70.4%)	8183.7	27605.2	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (70.4%)	8183.7	27605.2	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (71.5%)	22115.5	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (68.7%)	7232.7	23076.6	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (68.7%)	7232.7	23076.6	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (88.1%)	25226.8	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	12.3	12.3	D	LRFD

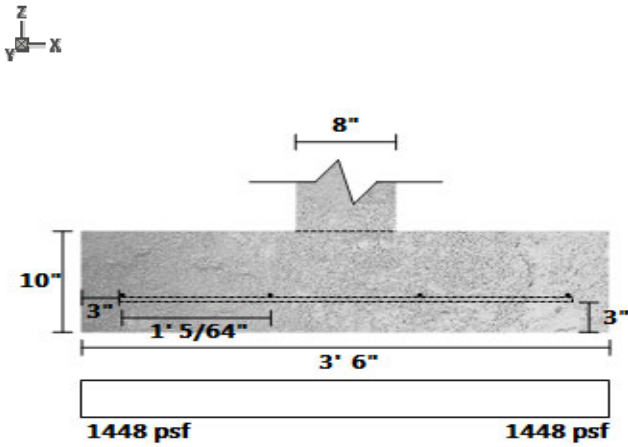
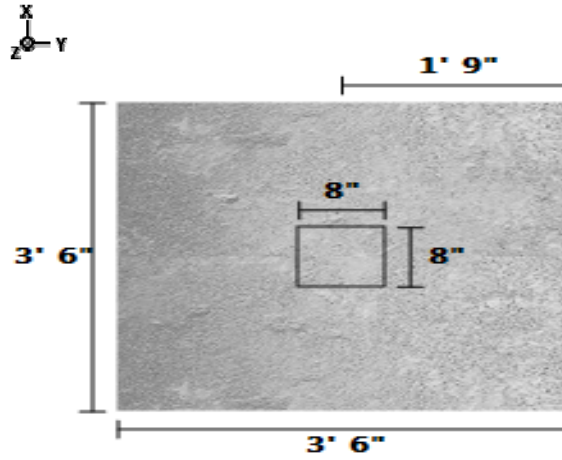
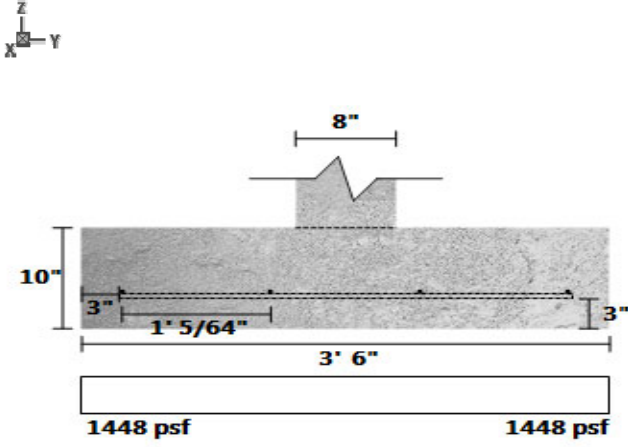
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Beam #2	B	1648.606	-	0	-	Dead	Z
Point (lb/ft)	Beam #2	B	12632.18	-	0	-	Snow	Z
Point (lb/ft)	Beam #25	A	329.9812	-	0	-	Dead	Z
Point (lb/ft)	Beam #25	A	1650	-	0	-	Snow	Z

SpotFtg Bm #2-2 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #2-3	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
3.5 (ft) X 3.5 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft³)	Footing Weight (lb/ft)
3.5	3.5	10	10.21	1480.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)	0
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COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft²)	Density (lb/ft³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft²)	PASS (52.8%)	708.0	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (87.0%)	3600.0	27605.2	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (87.0%)	3600.0	27605.2	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (87.5%)	9728.5	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (86.2%)	3181.6	23076.6	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (86.2%)	3181.6	23076.6	1.2D+1.6S+L	LRFD
Crushing (lb/ft²)	PASS (94.8%)	11097.1	212160.0	1.2D+1.6S+L	LRFD
Compression (ft²)	PASS (100.0%)	12.3	12.3	D	LRFD

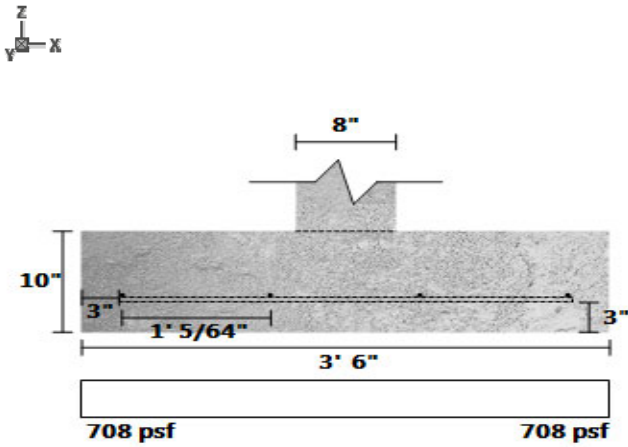
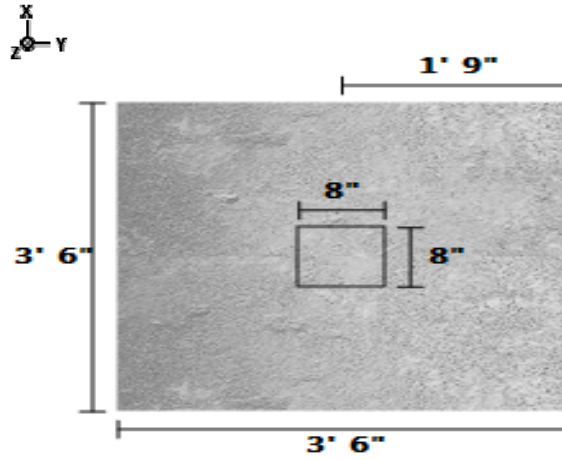
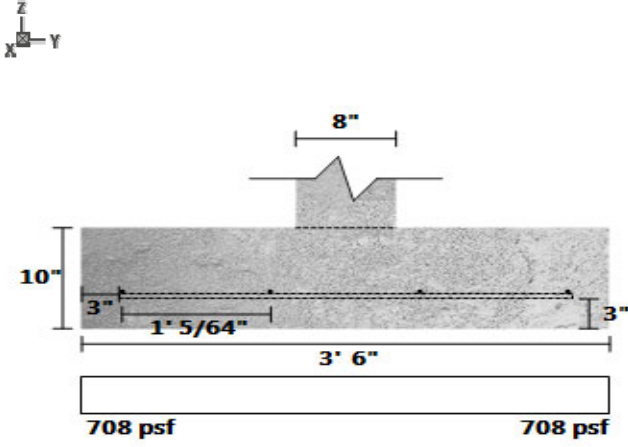
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Beam #2	C	494.6477	-	0	-	Dead	Z
Point (lb/ft)	Beam #2	C	3790.159	-	0	-	Snow	Z
Point (lb/ft)	Beam #26	A	536.0658	-	0	-	Dead	Z
Point (lb/ft)	Beam #26	A	2371.875	-	0	-	Snow	Z

SpotFtg Bm #2-3 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #3-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

4.5 (ft) X 4.5 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (5) #4 Long, (5) #4 Short
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MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
4.5	4.5	10	16.88	2446.88

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)	0
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COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (14.0%)	1290.5	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (62.5%)	13323.7	35492.4	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (62.5%)	13323.7	35492.4	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (56.3%)	33926.0	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (48.2%)	14964.4	28872.8	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (48.2%)	14964.4	28872.8	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (82.7%)	36661.3	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	20.3	20.3	D	LRFD

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

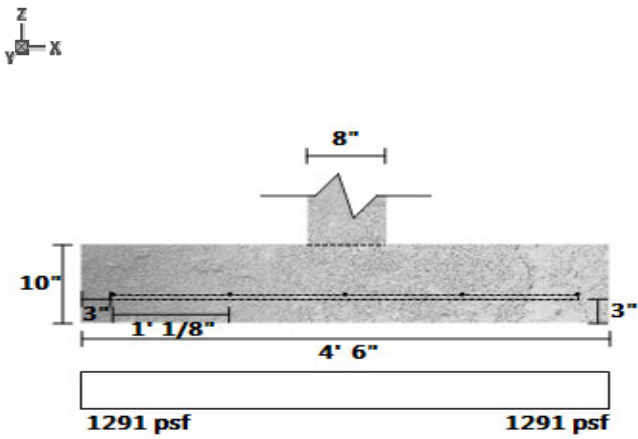
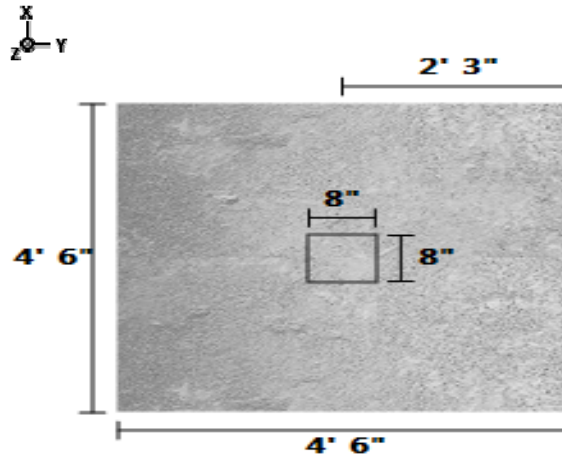
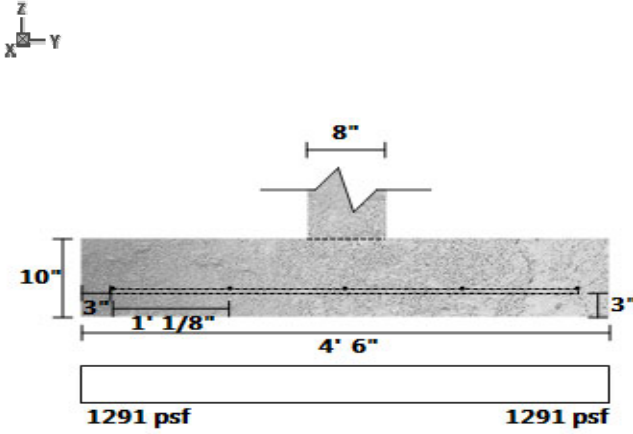
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Beam #3	B	2022.887	-	0	-	Dead	Z
Point (lb/ft)	Beam #3	B	15847.64	-	0	-	Snow	Z
Point (lb/ft)	Beam #26	B	536.0659	-	0	-	Dead	Z
Point (lb/ft)	Beam #26	B	2371.875	-	0	-	Snow	Z

LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #27	A	536.0658	-	0	-	Dead	Z
Point (lbf)	Beam #27	A	2371.875	-	0	-	Snow	Z

SpotFtg Bm #3-2 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #3-3	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

3 (ft) X 3 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short
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MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
3	3	10	7.5	1087.5

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)	0
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COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (11.6%)	1326.5	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (79.1%)	4938.8	23661.6	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (79.1%)	4938.8	23661.6	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (82.0%)	13924.7	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (83.5%)	3796.1	22946.6	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (83.5%)	3796.1	22946.6	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (92.1%)	16733.8	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	9.0	9.0	D	LRFD

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

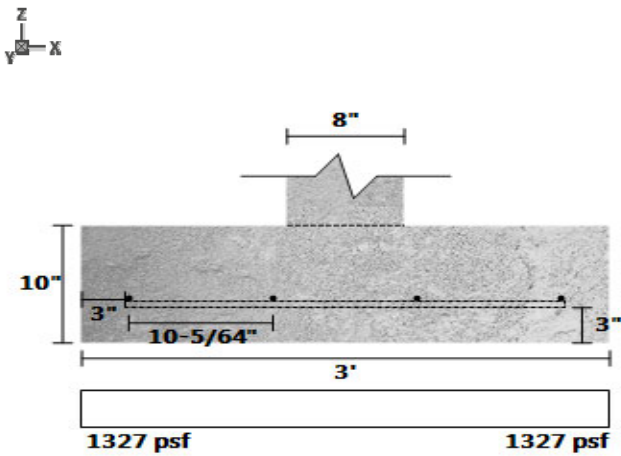
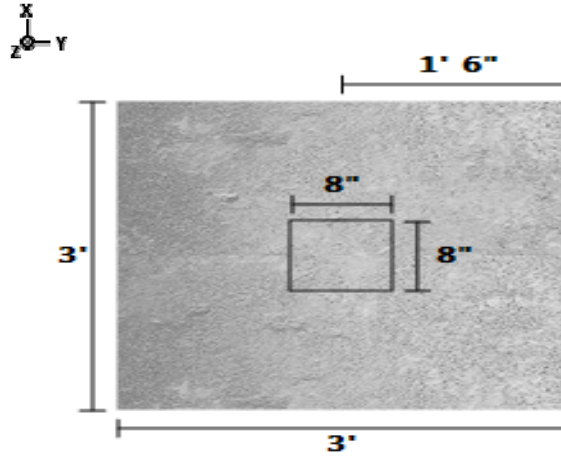
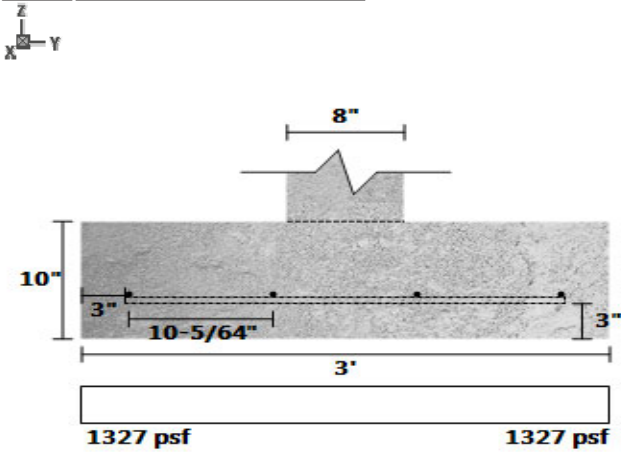
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Beam #3	C	606.947	-	0	-	Dead	Z
Point (lb/ft)	Beam #3	C	4754.928	-	0	-	Snow	Z
Point (lb/ft)	Beam #27	B	536.0659	-	0	-	Dead	Z
Point (lb/ft)	Beam #27	B	2371.875	-	0	-	Snow	Z

LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #29	A	429.6172	-	0	-	Dead	Z
Point (lbf)	Beam #29	A	2151.741	-	0	-	Snow	Z

SpotFtg Bm #3-3 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Hdr #8	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
3 (ft) X 3 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft³)	Footing Weight (lb/ft)
3	3	10	7.5	1087.5

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)	0
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COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft²)	Density (lb/ft³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft²)	PASS (13.3%)	1301.2	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (78.8%)	5024.8	23661.6	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (78.8%)	5024.8	23661.6	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (81.7%)	14167.0	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (83.2%)	3862.2	22946.6	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (83.2%)	3862.2	22946.6	1.2D+1.6S+L	LRFD
Crushing (lb/ft²)	PASS (92.0%)	17025.0	212160.0	1.2D+1.6S+L	LRFD
Compression (ft²)	PASS (100.0%)	9.0	9.0	D	LRFD

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

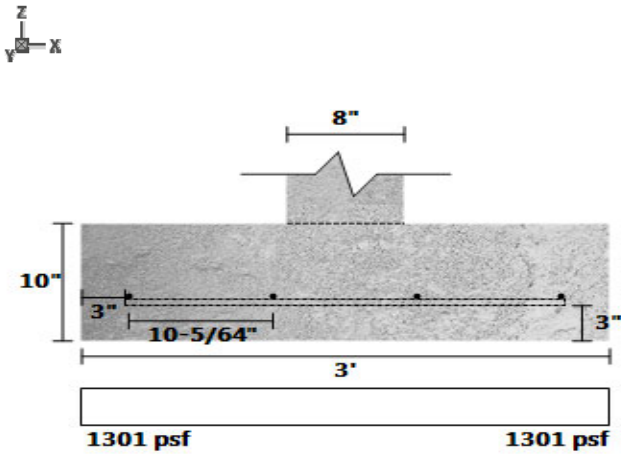
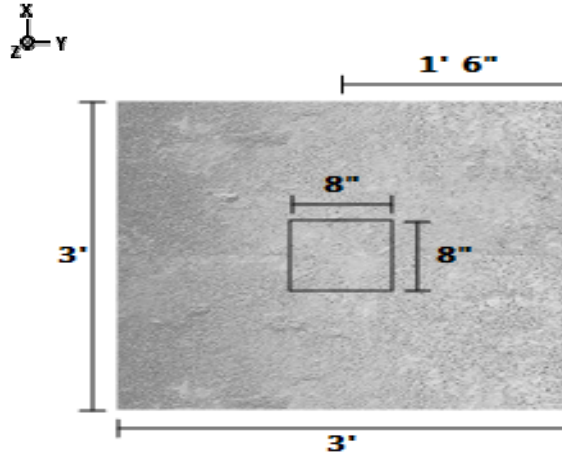
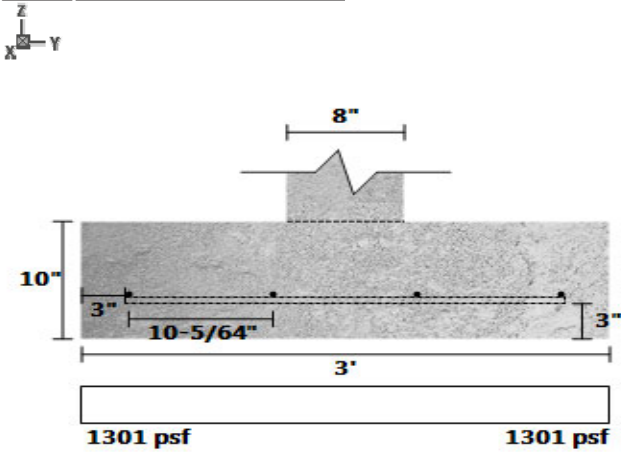
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Header #1	A	489.6246	-	0	-	Dead	Z
Point (lb/ft)	Header #1	A	194.9993	-	0	-	Live	Z
Point (lb/ft)	Header #1	A	4162.5	-	0	-	Snow	Z
Point (lb/ft)	Header #8	A	731.1739	-	0	-	Dead	Z

LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Header #8	A	320.4725	-	0	-	Live	Z
Point (lbf)	Header #8	A	5239.754	-	0	-	Snow	Z

SpotFtg Hdr #8 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Gdr #3-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

4.5 (ft) X 4.5 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (5) #4 Long, (5) #4 Short
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MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
4.5	4.5	10	16.88	2446.88

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (1.8%)	1473.2	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (56.3%)	15519.3	35492.4	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (56.3%)	15519.3	35492.4	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (49.0%)	39516.8	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (39.6%)	17430.4	28872.8	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (39.6%)	17430.4	28872.8	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (79.9%)	42702.8	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	20.3	20.3	D	LRFD

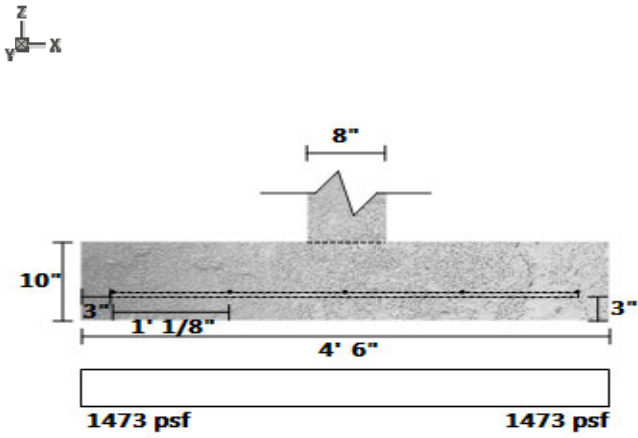
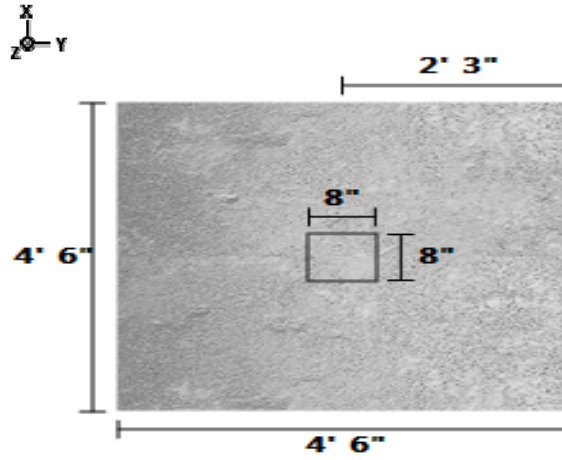
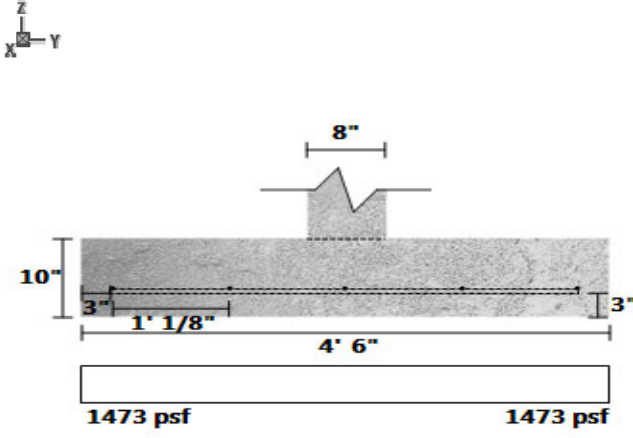
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Girder #3	A	2787.752	-	0	-	Dead	Z
Point (lb/ft)	Girder #3	A	24597.82	-	0	-	Snow	Z

SpotFtg Gdr #3-1 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Gdr #3-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

6.5 (ft) X 6.5 (ft) X 12 (in)	Soil Depth TOF: 0 (ft)	Bot. (9) #4 Long, (9) #4 Short
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MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
6.5	6.5	12	42.25	6126.25

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)	0
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COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	36	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (20.5%)	1192.6	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (53.9%)	28335.1	61520.2	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (53.9%)	28335.1	61520.2	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (54.8%)	63276.6	140129.3	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (74.8%)	17001.1	67455.5	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (30.0%)	47225.2	67455.5	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (92.4%)	72167.8	954720.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	42.3	42.3	D	LRFD

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

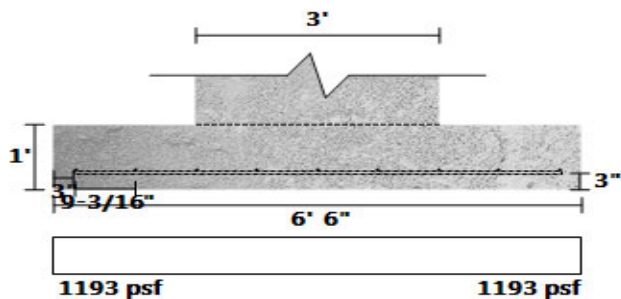
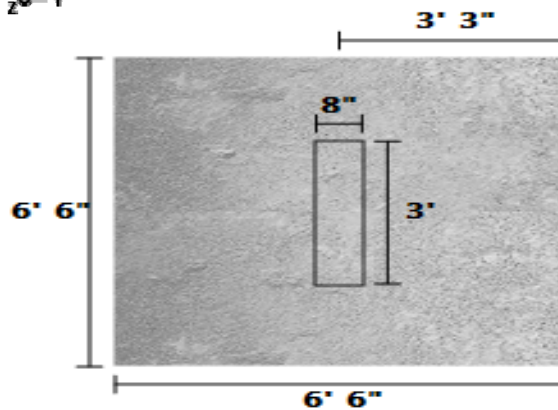
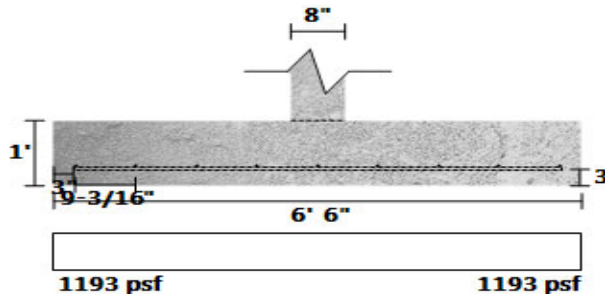
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Girder #3	B	2787.752	-	0	-	Dead	Z
Point (lb/ft)	Girder #3	B	24597.82	-	0	-	Snow	Z
Point (lb/ft)	Girder #6	A	1447.653	-	0	-	Dead	Z
Point (lb/ft)	Girder #6	A	12773.41	-	0	-	Snow	Z

LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #11	A	2652.401	-	0	-	Dead	Z
Point (lbf)	Beam #11	A	4107.5	-	0	-	Live	Z

SpotFtg Gdr #3-2 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #5-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

7 (ft) X 8 (ft) X 14 (in)	Soil Depth TOF: 0 (ft)	Bot. (13) #4 Long, (11) #4 Short
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MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
7	8	14	65.33	9473.33

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)	0
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COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
5.5	36	Wood	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (10.4%)	1343.8	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (51.0%)	43243.4	88336.7	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (44.1%)	43243.4	77294.6	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (35.8%)	97128.8	151368.6	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (30.3%)	70789.1	101533.6	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (26.8%)	87784.0	119875.4	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (83.7%)	107230.8	656370.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	56.0	56.0	D	LRFD

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

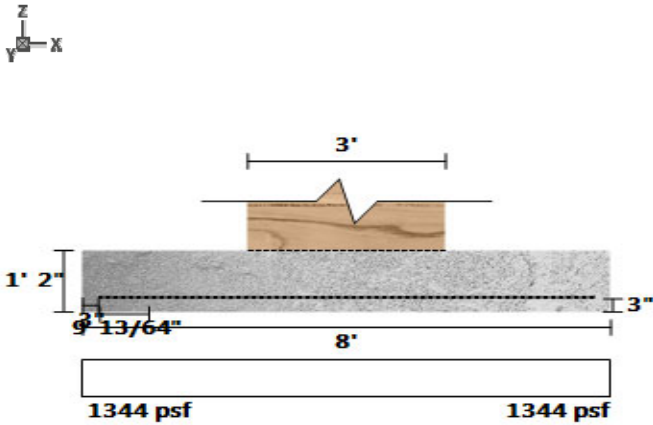
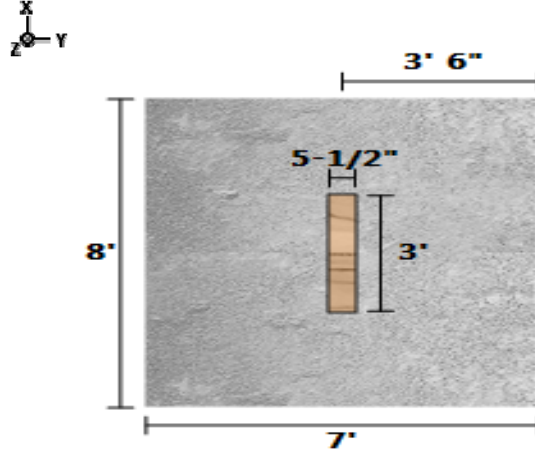
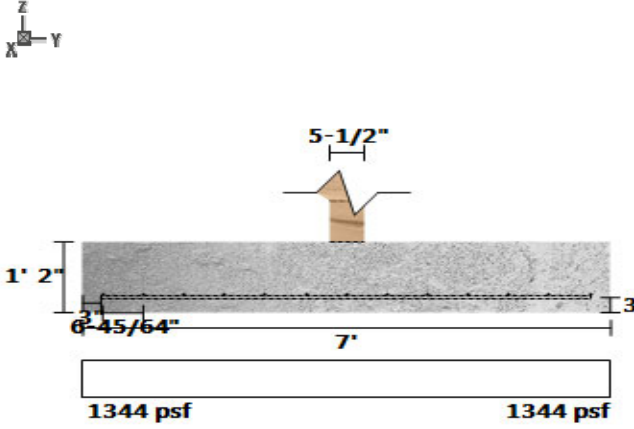
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Girder #4	B	1066.704	-	0	-	Dead	Z
Point (lb/ft)	Girder #4	B	2337.012	-	0	-	Live	Z
Point (lb/ft)	Girder #4	B	1949.992	-	0	-	Snow	Z
Point (lb/ft)	Beam #5	A	5536.62	-	0	-	Dead	Z

LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #5	A	3637.75	-	0	-	Live	Z
Point (lbf)	Beam #5	A	30294.02	-	0	-	Snow	Z
Point (lbf)	Beam #6	A	3920.953	-	0	-	Dead	Z
Point (lbf)	Beam #6	A	218.4094	-	0	-	Live	Z
Point (lbf)	Beam #6	A	23010.64	-	0	-	Snow	Z

SpotFtg Bm #5-1 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #10-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

7 (ft) X 8.5 (ft) X 14 (in)	Soil Depth TOF: 0 (ft)	Bot. (14) #4 Long, (11) #4 Short
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MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
7	8.5	14	69.42	10065.42

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)	0
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COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
5.5	36	Wood	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (4.7%)	1428.9	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (48.1%)	48732.0	93857.7	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (37.0%)	48732.0	77294.6	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (27.2%)	110126.6	151368.6	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (14.2%)	87076.6	101533.6	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (23.3%)	98926.1	129043.9	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (81.6%)	120841.0	656370.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	59.5	59.5	D	LRFD

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

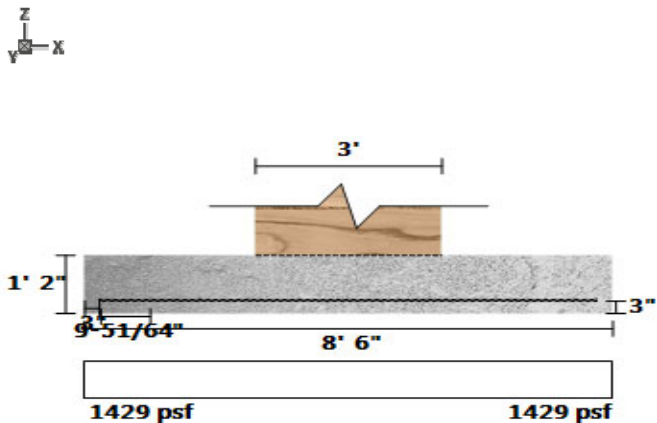
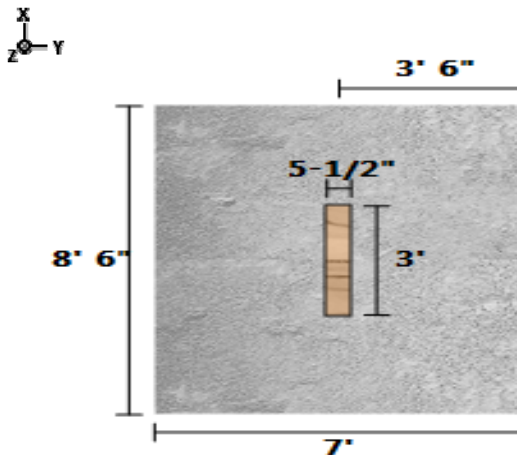
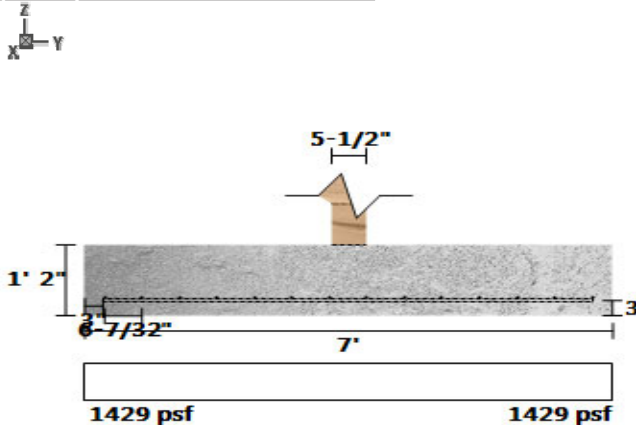
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Girder #10	A	1521.899	-	0	-	Dead	Z
Point (lb/ft)	Girder #10	A	13428.52	-	0	-	Snow	Z
Point (lb/ft)	Beam #6	B	5955.31	-	0	-	Dead	Z
Point (lb/ft)	Beam #6	B	401.5913	-	0	-	Live	Z

LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #6	B	40423.92	-	0	-	Snow	Z
Point (lbf)	Beam #10	A	2824.878	-	0	-	Dead	Z
Point (lbf)	Beam #10	A	4945.021	-	0	-	Live	Z
Point (lbf)	Beam #10	A	4414.27	-	0	-	Snow	Z
Point (lbf)	Beam #12	C	778.8353	-	0	-	Dead	Z
Point (lbf)	Beam #12	C	5606	-	0	-	Snow	Z

SpotFtg Bm #10-1 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Gdr #12-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

6.5 (ft) X 6.5 (ft) X 12 (in)	Soil Depth TOF: 0 (ft)	Bot. (9) #4 Long, (9) #4 Short
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MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
6.5	6.5	12	42.25	6126.25

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (9.4%)	1358.7	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (49.1%)	31333.0	61520.2	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (49.1%)	31333.0	61520.2	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (28.0%)	76123.1	105688.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (22.6%)	52221.6	67455.5	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (22.6%)	52221.6	67455.5	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (62.4%)	79803.2	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	42.3	42.3	D	LRFD

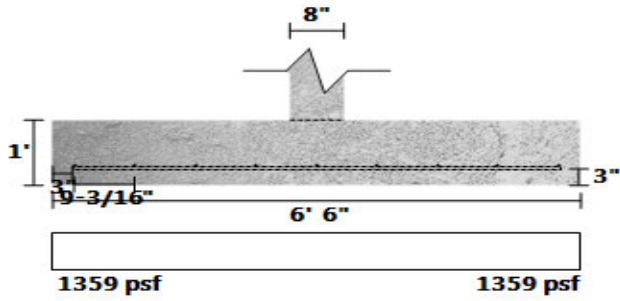
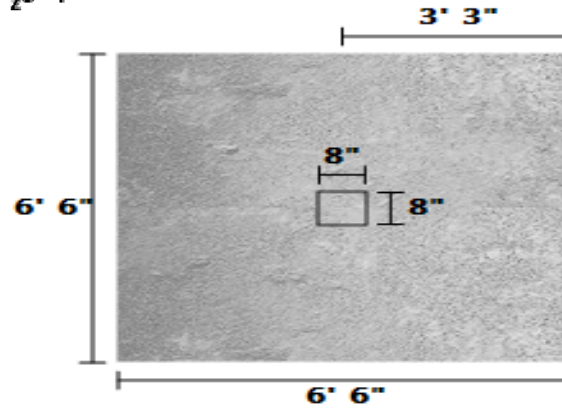
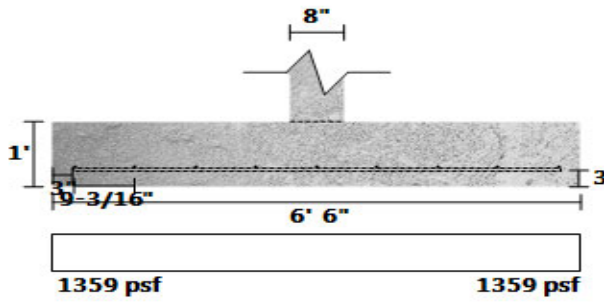
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Girder #12	B	3891.062	-	0	-	Dead	Z
Point (lb/ft)	Girder #12	B	34332.89	-	0	-	Snow	Z
Point (lb/ft)	Beam #19	A	1725.176	-	0	-	Dead	Z
Point (lb/ft)	Beam #19	A	11331.29	-	0	-	Snow	Z

SpotFtg Gdr #12-2 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Hdr #11-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

4 (ft) X 4 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (5) #4 Long, (5) #4 Short
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MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
4	4	10	13.33	1933.33

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
5.5	5.5	Wood	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (13.3%)	1300.7	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (65.1%)	11019.8	31548.8	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (65.1%)	11019.8	31548.8	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (57.1%)	27664.3	64412.2	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (54.3%)	13149.0	28754.4	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (54.3%)	13149.0	28754.4	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (70.5%)	29591.6	100278.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	16.0	16.0	D	LRFD

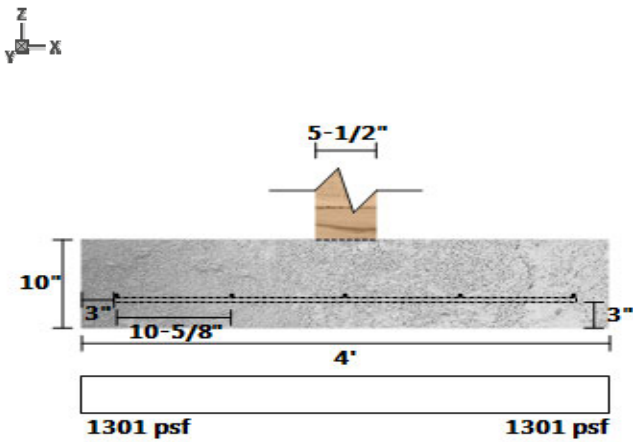
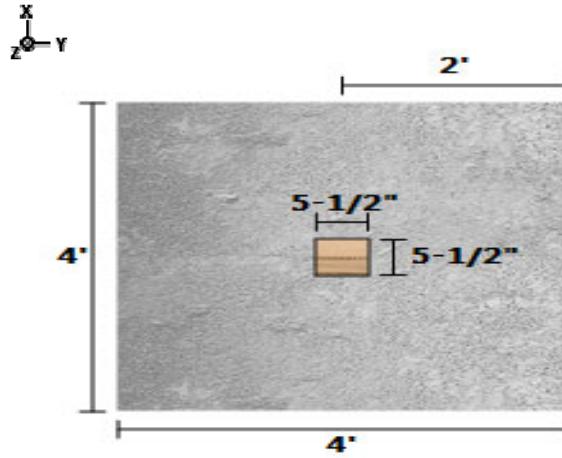
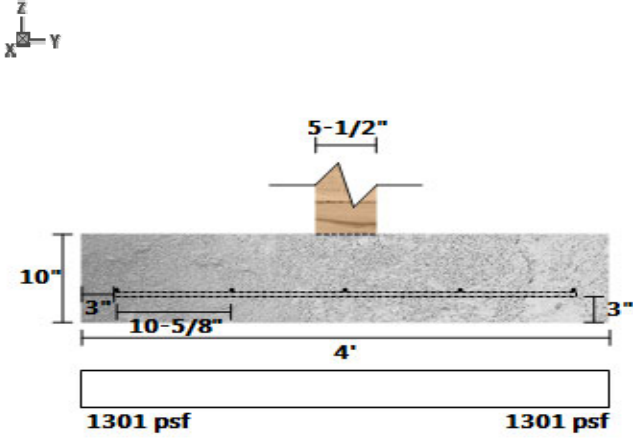
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Header #11	A	2036.229	-	0	-	Dead	Z
Point (lb/ft)	Header #11	A	199.9995	-	0	-	Live	Z
Point (lb/ft)	Header #11	A	16841.95	-	0	-	Snow	Z

SpotFtg Hdr #11-1 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Hdr #11-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

4 (ft) X 4 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (5) #4 Long, (5) #4 Short
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MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
4	4	10	13.33	1933.33

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
5.5	5.5	Wood	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (67.5%)	487.6	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (88.8%)	3538.7	31548.8	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (88.8%)	3538.7	31548.8	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (86.2%)	8883.6	64412.2	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (85.3%)	4222.4	28754.4	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (85.3%)	4222.4	28754.4	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (90.5%)	9502.5	100278.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	16.0	16.0	D	LRFD

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

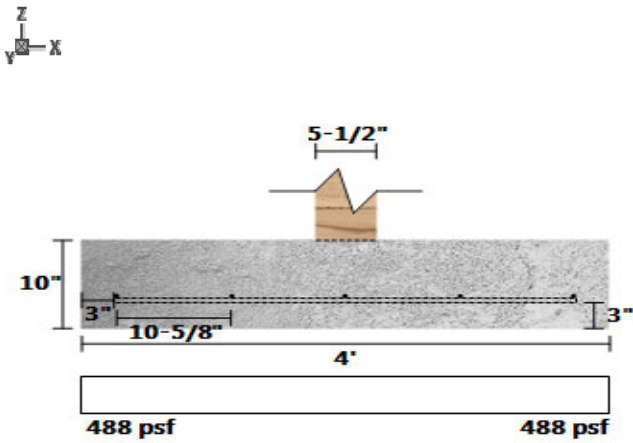
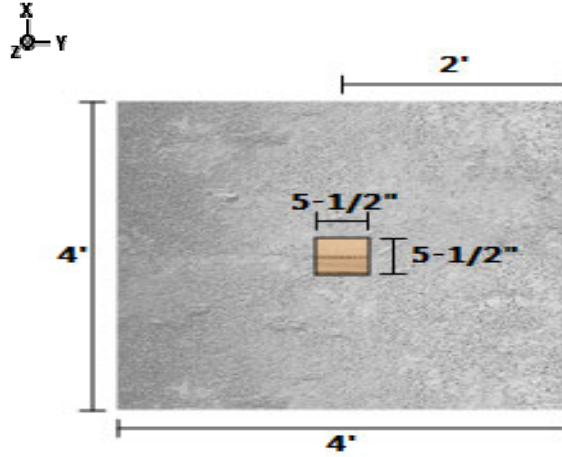
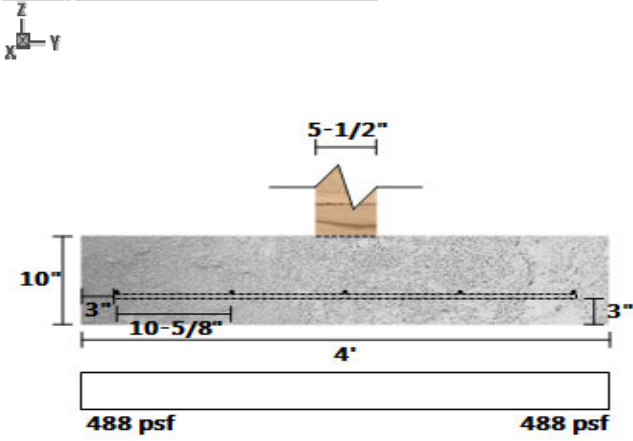
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Header #11	B	823.5071	-	0	-	Dead	Z
Point (lb/ft)	Header #11	B	200.0001	-	0	-	Live	Z
Point (lb/ft)	Header #11	B	6141.294	-	0	-	Snow	Z
Point (lb/ft)	Header #12	A	10.58496	-	0	-	Dead	Z

LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Header #12	A	-1106.767	-	0	-	Snow	Z
Point (lbf)	Header #12	A	-30.37502	-	0	-	Live	Z
Point (lbf)	Header #12	A	275.7189	-	0	-	Live	Z

SpotFtg Hdr #11-2 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #10-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

3 (ft) X 3 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short
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MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
3	3	10	7.5	1087.5

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
5.5	5.5	Wood	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (22.5%)	1162.6	1500.0	D+L	ASD
One-Way Shear X (lb/ft)	PASS (80.7%)	4565.8	23661.6	1.2D+1.6L+0.5S	LRFD
One-Way Shear Y (lb/ft)	PASS (80.7%)	4565.8	23661.6	1.2D+1.6L+0.5S	LRFD
Two-Way Shear (lb/ft)	PASS (81.0%)	12238.8	64412.2	1.2D+1.6L+0.5S	LRFD
Moment X (lb-ft)	PASS (80.7%)	4427.9	22946.6	1.2D+1.6L+0.5S	LRFD
Moment Y (lb-ft)	PASS (80.7%)	4427.9	22946.6	1.2D+1.6L+0.5S	LRFD
Crushing (lb/ft)	PASS (86.2%)	13841.5	100278.8	1.2D+1.6L+0.5S	LRFD
Compression (ft ²)	PASS (100.0%)	9.0	9.0	D	LRFD

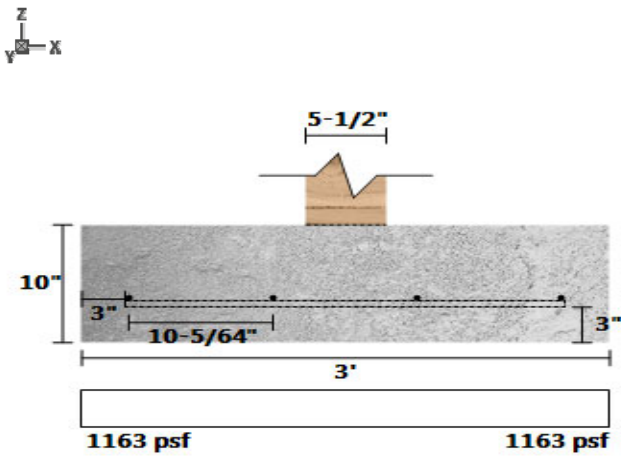
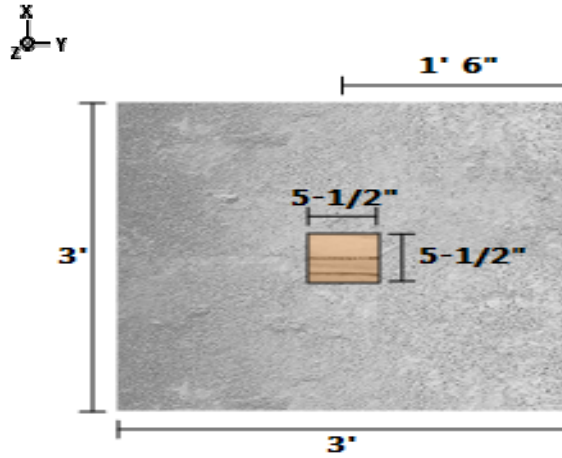
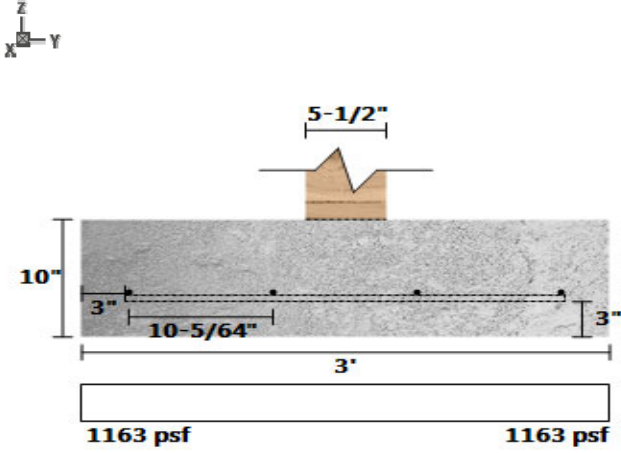
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Beam #10	B	3701.071	-	0	-	Dead	Z
Point (lb/ft)	Beam #10	B	5674.039	-	0	-	Live	Z
Point (lb/ft)	Beam #10	B	640.3379	-	0	-	Snow	Z

SpotFtg Bm #10-2 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #9-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

3.5 (ft) X 3.5 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short
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MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
3.5	3.5	10	10.21	1480.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
5.5	5.5	Wood	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (20.7%)	1189.2	1500.0	D+0.75L+0.75S	ASD
One-Way Shear X (lb/ft)	PASS (70.2%)	8230.2	27605.2	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (70.2%)	8230.2	27605.2	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (67.0%)	21261.4	64412.2	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (61.5%)	8879.0	23076.6	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (61.5%)	8879.0	23076.6	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (76.8%)	23238.3	100278.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	12.3	12.3	D	LRFD

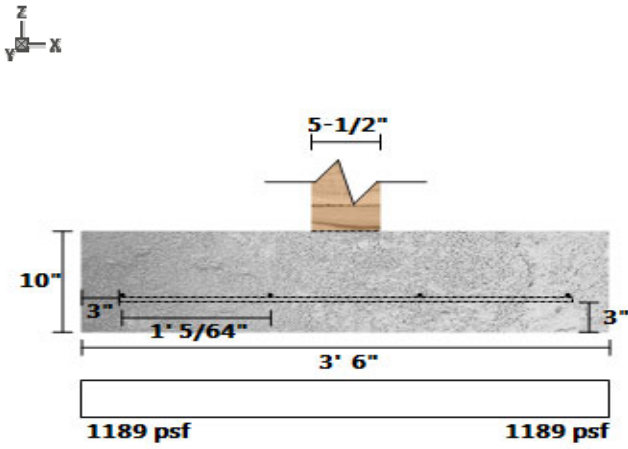
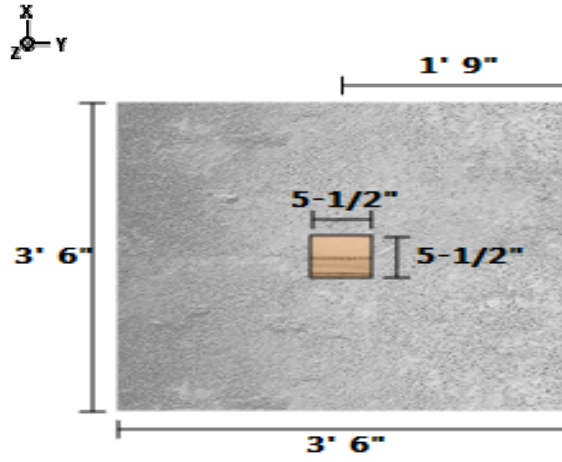
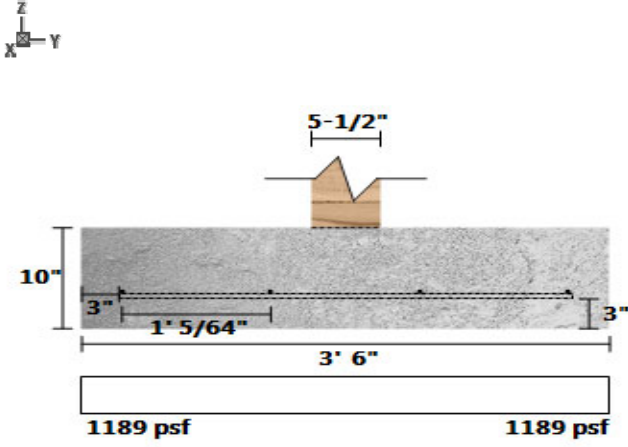
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Beam #9	B	2708.201	-	0	-	Dead	Z
Point (lb/ft)	Beam #9	B	3590.938	-	0	-	Live	Z
Point (lb/ft)	Beam #9	B	10247.83	-	0	-	Snow	Z

SpotFtg Bm #9-1 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #4-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
2.5 (ft) X 1.3334 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	Bot. (2) #4 Long, (3) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
2.5	1.3334	10	2.78	402.8

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)	0
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COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (4.4%)	1433.3	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (83.5%)	1731.4	10516.8	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (91.2%)	1731.4	19718.0	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (95.2%)	3724.5	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (98.4%)	283.9	17278.2	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (90.0%)	1144.8	11416.5	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (96.8%)	6811.9	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	3.3	3.3	D	LRFD

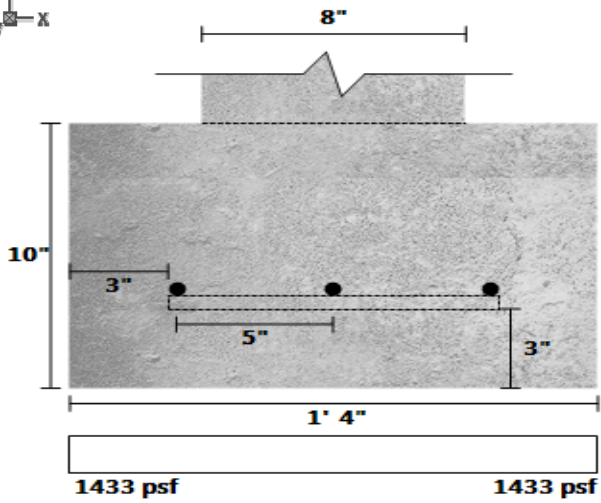
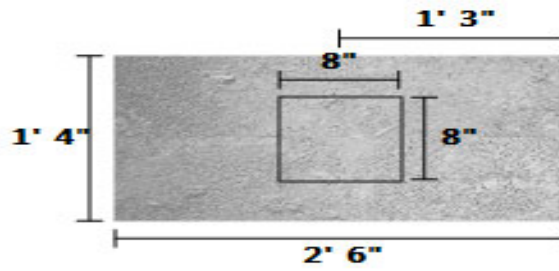
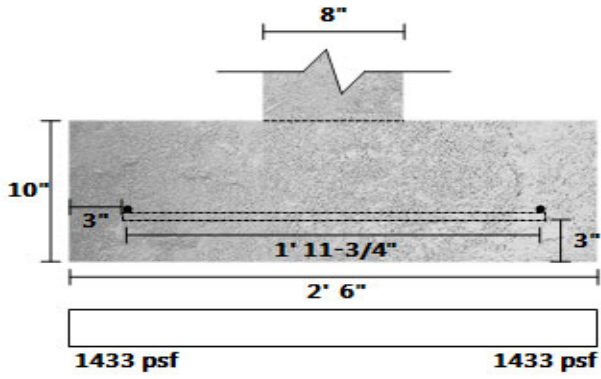
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Beam #4	A	472.922	-	0	-	Dead	Z
Point (lb/ft)	Beam #4	A	3902.115	-	0	-	Snow	Z

SpotFtg Bm #4-1 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Gdr #7-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

3.5 (ft) X 3.5 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short
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MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
3.5	3.5	10	10.21	1480.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
5.5	5.5	Wood	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (20.5%)	1192.0	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (73.7%)	7246.5	27605.2	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (73.7%)	7246.5	27605.2	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (70.9%)	18720.1	64412.2	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (66.1%)	7817.7	23076.6	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (66.1%)	7817.7	23076.6	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (79.6%)	20460.7	100278.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	12.3	12.3	D	LRFD

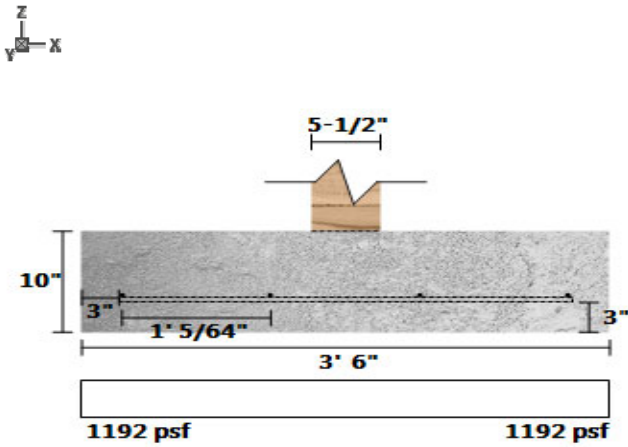
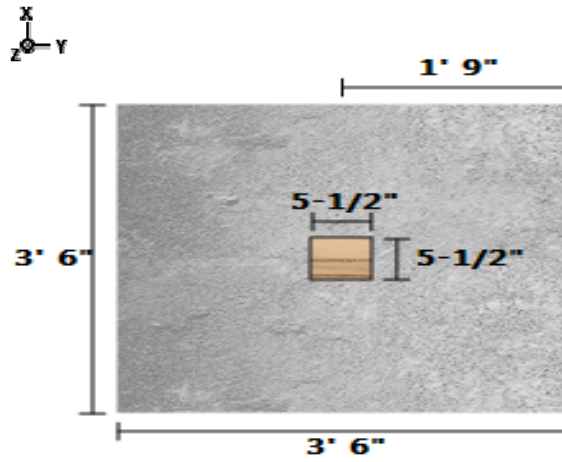
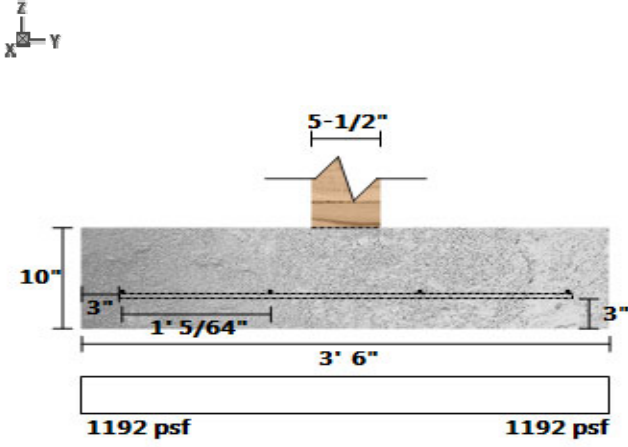
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Girder #7	B	1335.694	-	0	-	Dead	Z
Point (lb/ft)	Girder #7	B	11785.54	-	0	-	Snow	Z

SpotFtg Gdr #7-2 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #18-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

3.5 (ft) X 3.5 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short
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MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
3.5	3.5	10	10.21	1480.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)	0
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COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (21.8%)	1172.6	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (75.0%)	6893.7	27605.2	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (75.0%)	6893.7	27605.2	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (76.0%)	18629.3	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (73.6%)	6092.6	23076.6	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (73.6%)	6092.6	23076.6	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (90.0%)	21250.2	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	12.3	12.3	D	LRFD

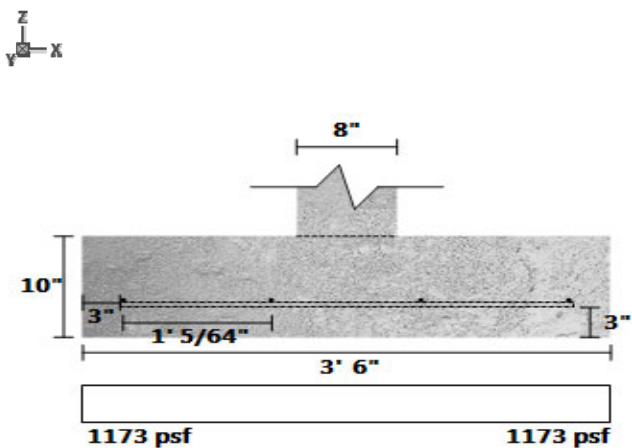
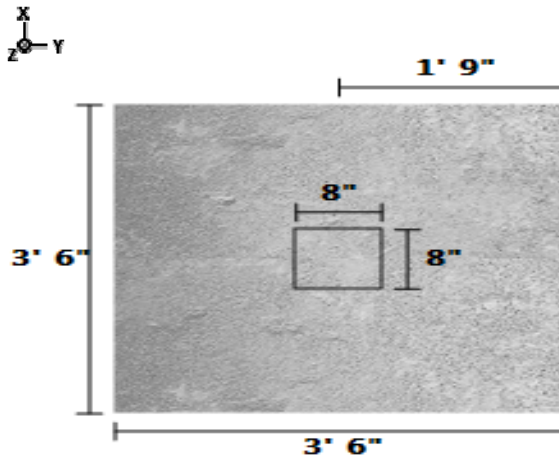
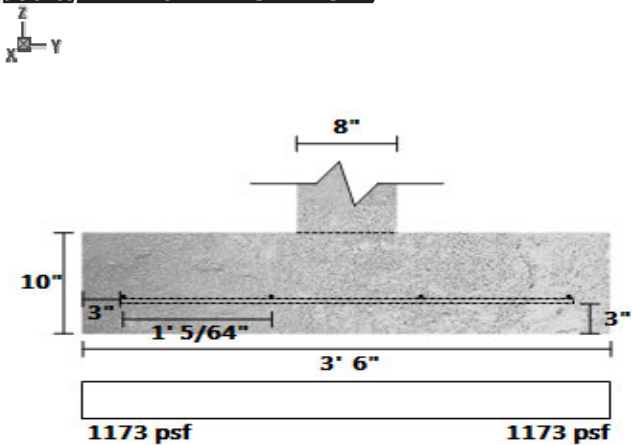
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Beam #18	A	1864.377	-	0	-	Dead	Z
Point (lb/ft)	Beam #18	A	1380.5	-	0	-	Live	Z
Point (lb/ft)	Beam #18	A	11019.64	-	0	-	Snow	Z

SpotFtg Bm #18-1 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #18-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

3.5 (ft) X 3.5 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short
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MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
3.5	3.5	10	10.21	1480.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)	0
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COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
5.5	5.5	Wood	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (21.8%)	1172.6	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (72.7%)	7526.1	27605.2	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (72.7%)	7526.1	27605.2	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (69.8%)	19442.4	64412.2	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (64.8%)	8119.4	23076.6	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (64.8%)	8119.4	23076.6	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (78.8%)	21250.2	100278.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	12.3	12.3	D	LRFD

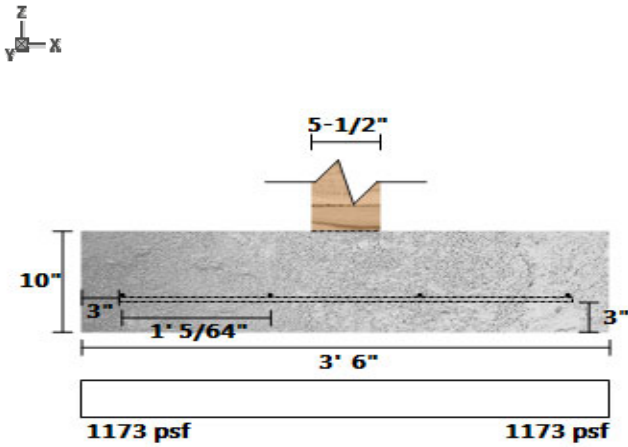
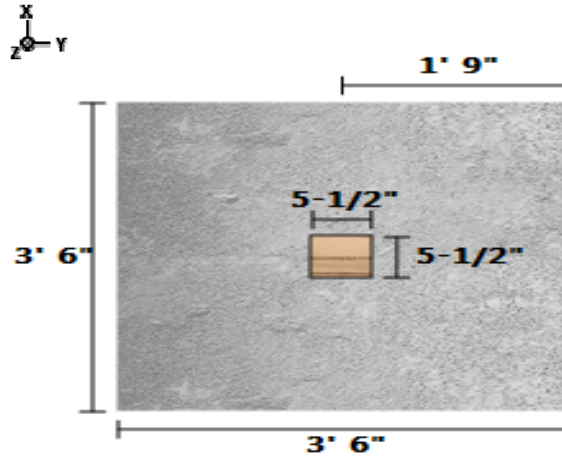
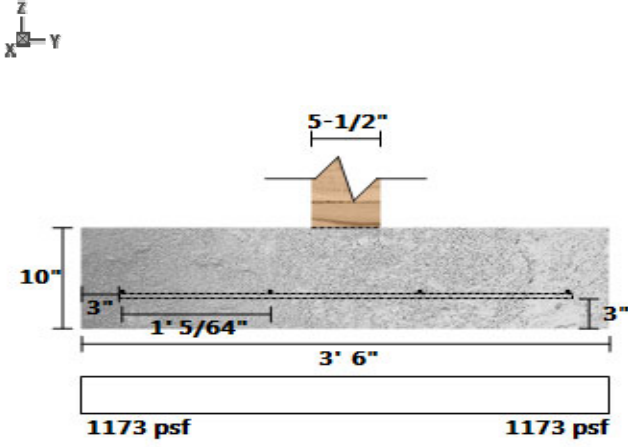
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Beam #18	B	1864.377	-	0	-	Dead	Z
Point (lb/ft)	Beam #18	B	1380.5	-	0	-	Live	Z
Point (lb/ft)	Beam #18	B	11019.64	-	0	-	Snow	Z

SpotFtg Bm #18-2 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #16-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2 (ft) X 4 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (5) #4 Long, (3) #4 Short
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MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
2	4	10	6.67	966.67

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)	0
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COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
5.5	5.5	Wood	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (68.2%)	476.9	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (96.5%)	1091.2	31548.8	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (93.1%)	1091.2	15774.4	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (94.0%)	3877.1	64412.2	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (88.4%)	1980.8	17124.7	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (97.0%)	873.7	28754.4	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (95.6%)	4457.7	100278.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	8.0	8.0	D	LRFD

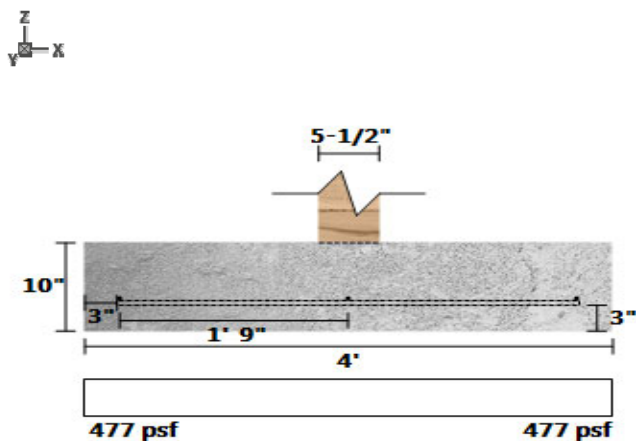
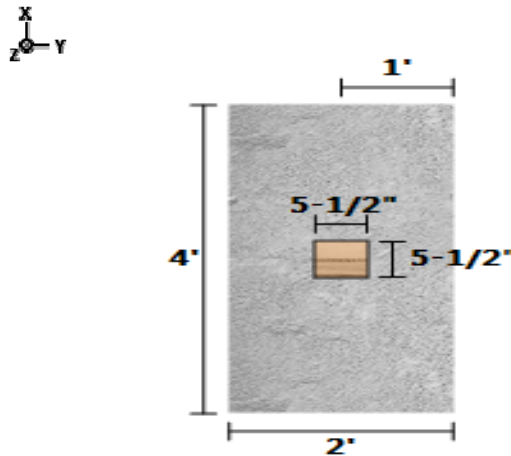
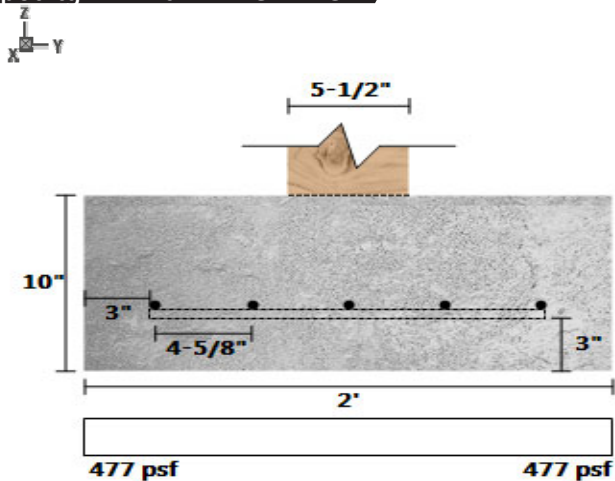
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Beam #16	A	250.6059	-	0	-	Dead	Z
Point (lb/ft)	Beam #16	A	2597.495	-	0	-	Snow	Z

SpotFtg Bm #16-1 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #16-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
3.5 (ft) X 3.5 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
3.5	3.5	10	10.21	1480.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)	0
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COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (16.9%)	1245.8	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (74.8%)	6945.8	27605.2	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (74.8%)	6945.8	27605.2	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (75.8%)	18770.1	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (73.4%)	6138.6	23076.6	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (73.4%)	6138.6	23076.6	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (89.9%)	21410.8	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	12.3	12.3	D	LRFD

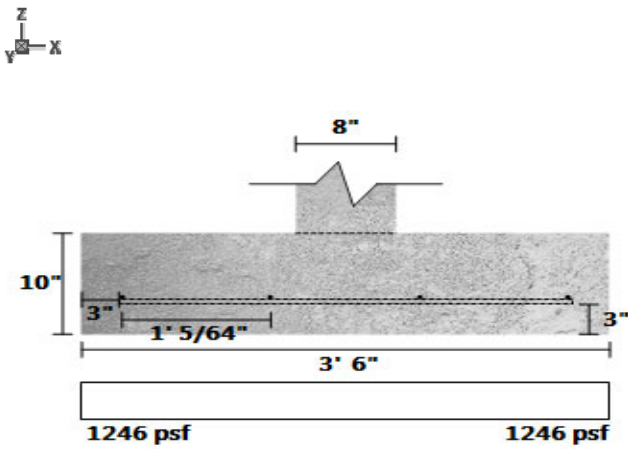
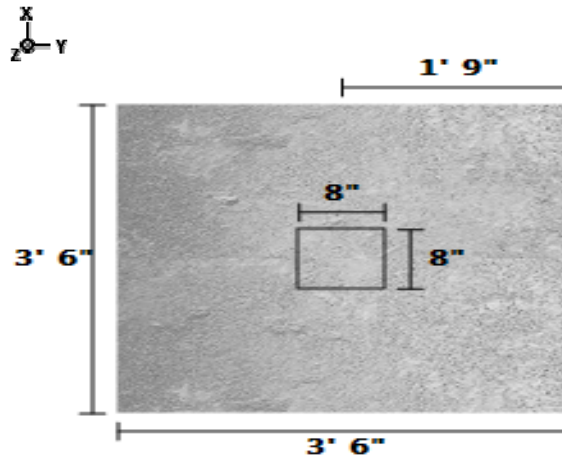
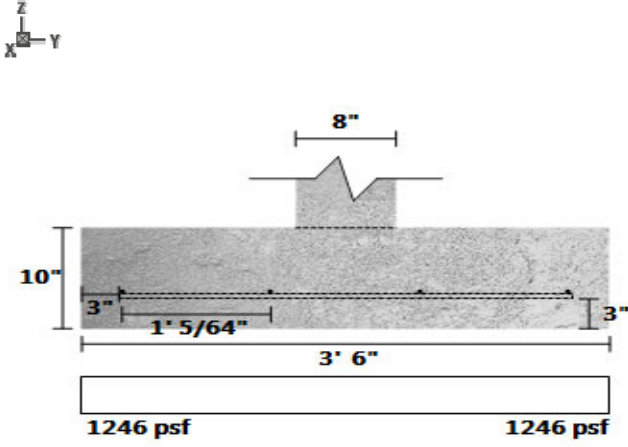
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Beam #16	B	1378.5	-	0	-	Dead	Z
Point (lb/ft)	Beam #16	B	11144.55	-	0	-	Snow	Z
Point (lb/ft)	Beam #36	B	222.3328	-	0	-	Dead	Z
Point (lb/ft)	Beam #36	B	1035.938	-	0	-	Snow	Z

SpotFtg Bm #16-2 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #17-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

3.5 (ft) X 3.5 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short
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MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
3.5	3.5	10	10.21	1480.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)	0
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COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (42.7%)	860.1	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (83.5%)	4558.2	27605.2	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (83.5%)	4558.2	27605.2	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (84.1%)	12318.0	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (82.5%)	4028.5	23076.6	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (82.5%)	4028.5	23076.6	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (93.4%)	14051.0	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	12.3	12.3	D	LRFD

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

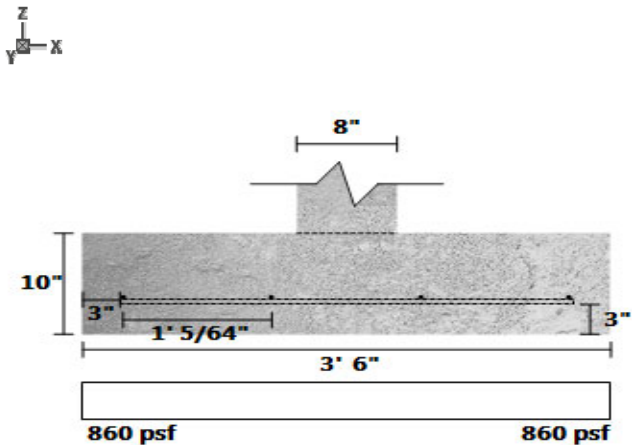
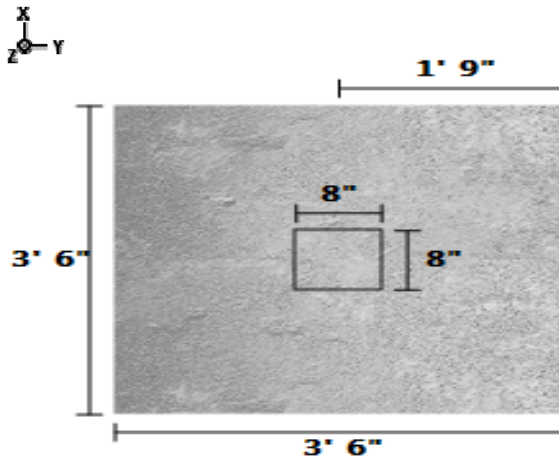
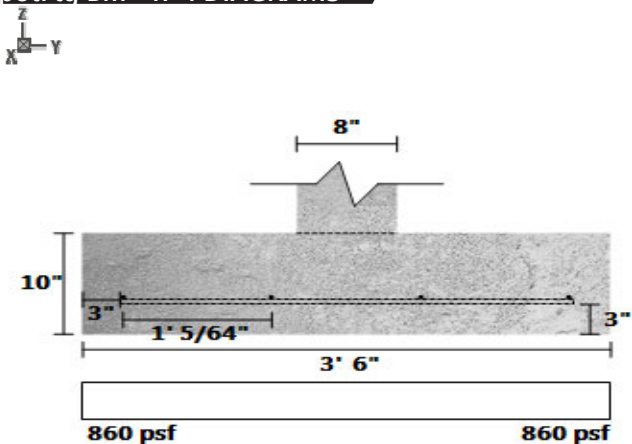
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Beam #17	A	805.9662	-	0	-	Dead	Z
Point (lb/ft)	Beam #17	A	6499.543	-	0	-	Snow	Z
Point (lb/ft)	Beam #32	A	306.7336	-	0	-	Dead	Z
Point (lb/ft)	Beam #32	A	5.5	-	0	-	Live	Z

LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #32	A	1443.75	-	0	-	Snow	Z

SpotFtg Bm #17-1 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #17-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
4.5 (ft) X 4.5 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	Bot. (5) #4 Long, (5) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
4.5	4.5	10	16.88	2446.88

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)	0
---------	---

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (9.8%)	1352.3	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (60.4%)	14066.8	35492.4	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (60.4%)	14066.8	35492.4	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (53.8%)	35818.3	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (45.3%)	15799.0	28872.8	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (45.3%)	15799.0	28872.8	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (81.8%)	38706.1	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	20.3	20.3	D	LRFD

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

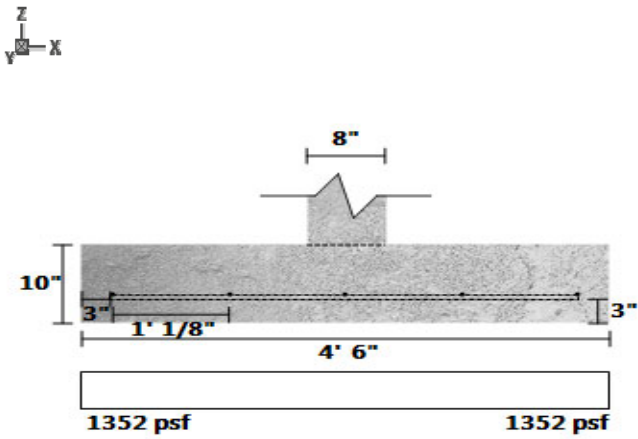
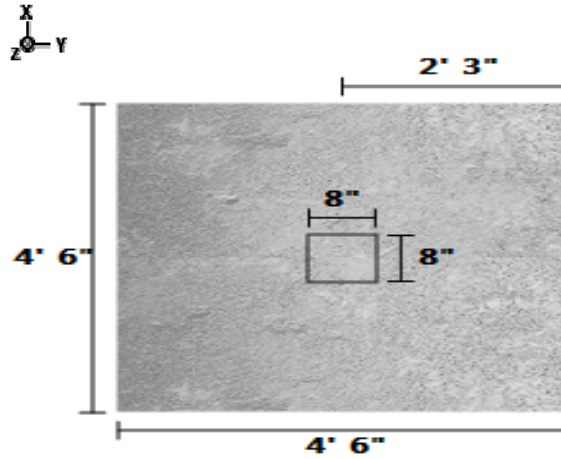
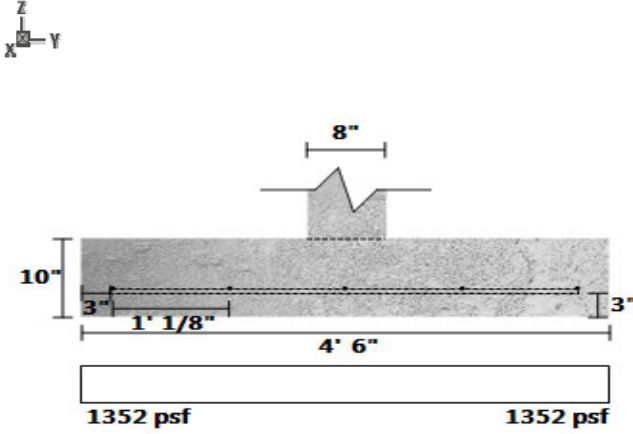
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Beam #17	B	2371.855	-	0	-	Dead	Z
Point (lb/ft)	Beam #17	B	18984.7	-	0	-	Snow	Z
Point (lb/ft)	Beam #32	B	306.7336	-	0	-	Dead	Z
Point (lb/ft)	Beam #32	B	5.5	-	0	-	Live	Z

LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #32	B	1443.75	-	0	-	Snow	Z
Point (lbf)	Beam #34	A	320.6761	-	0	-	Dead	Z
Point (lbf)	Beam #34	A	1509.375	-	0	-	Snow	Z

SpotFtg Bm #17-2 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #17-3	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
3.5 (ft) X 3.5 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
3.5	3.5	10	10.21	1480.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)	0
---------	---

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (21.1%)	1184.0	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (76.4%)	6522.7	27605.2	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (76.4%)	6522.7	27605.2	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (77.3%)	17626.9	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (75.0%)	5764.7	23076.6	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (75.0%)	5764.7	23076.6	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (90.5%)	20106.7	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	12.3	12.3	D	LRFD

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

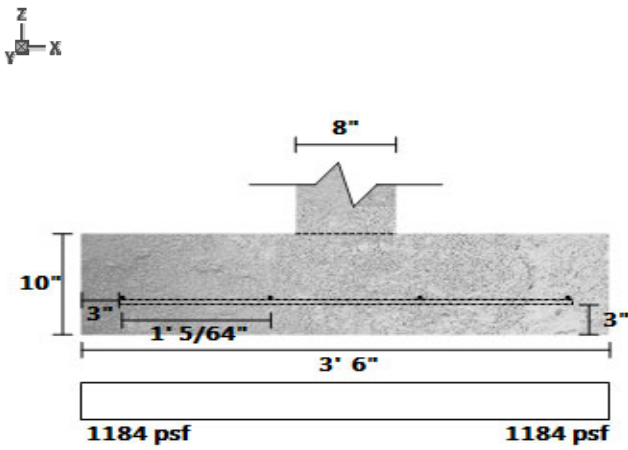
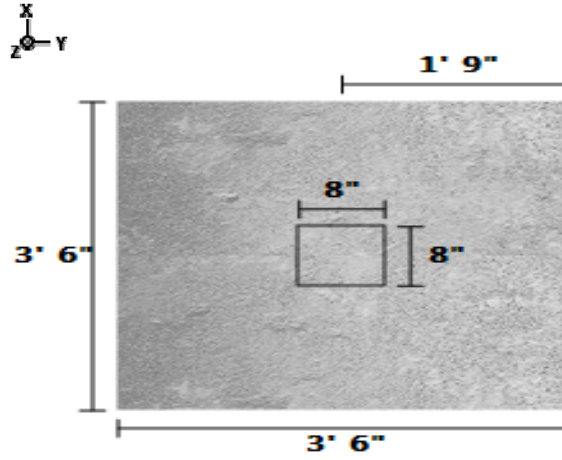
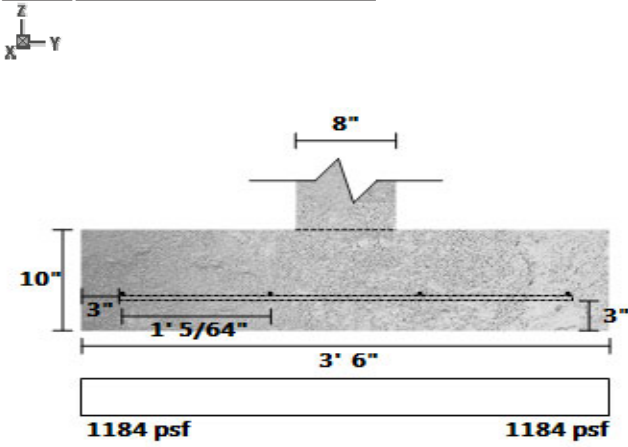
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Beam #17	C	1265.539	-	0	-	Dead	Z
Point (lb/ft)	Beam #17	C	9267.609	-	0	-	Snow	Z
Point (lb/ft)	Beam #34	B	444.0401	-	0	-	Dead	Z
Point (lb/ft)	Beam #34	B	1716.562	-	0	-	Snow	Z

LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #37	B	123.3645	-	0	-	Dead	Z
Point (lbf)	Beam #37	B	207.1872	-	0	-	Snow	Z

SpotFtg Bm #17-3 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #12-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
2 (ft) X 2.5 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	Bot. (3) #4 Long, (3) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
2	2.5	10	4.17	604.17

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (6.8%)	1397.8	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (90.3%)	1908.8	19718.0	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (87.9%)	1908.8	15774.4	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (91.1%)	6912.2	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (90.3%)	1664.6	17124.7	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (93.6%)	1100.6	17278.2	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (95.3%)	9905.2	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	5.0	5.0	D	LRFD

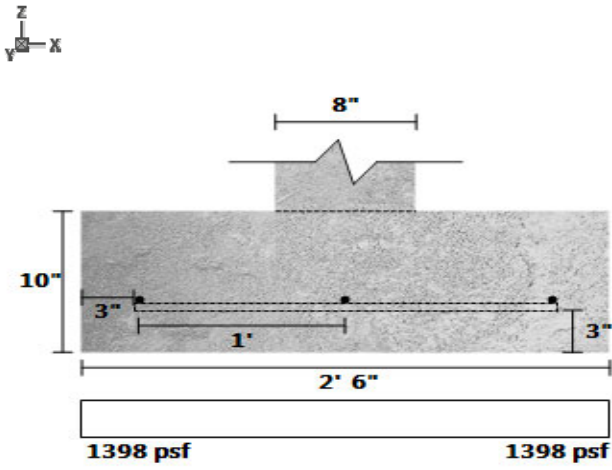
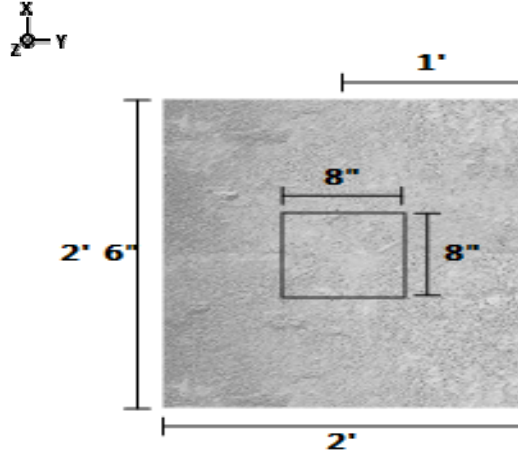
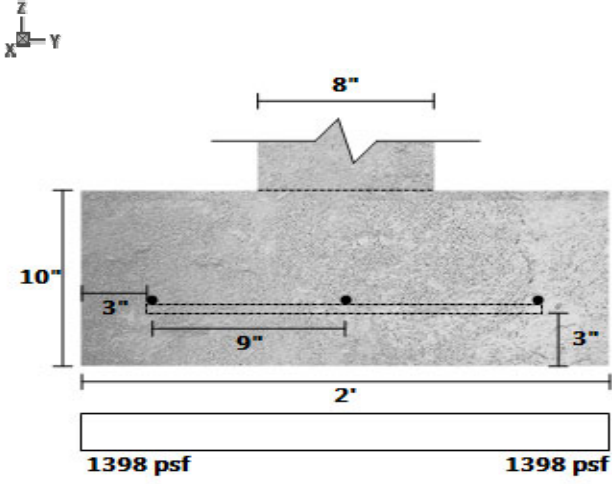
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Beam #12	C	778.8353	-	0	-	Dead	Z
Point (lb/ft)	Beam #12	C	5606	-	0	-	Snow	Z

SpotFtg Bm #12-2 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #14-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2 (ft) X 2.5 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (3) #4 Long, (3) #4 Short
-----------------------------	------------------------	--------------------------------

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
2	2.5	10	4.17	604.17

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (6.8%)	1397.8	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (90.3%)	1908.8	19718.0	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (87.9%)	1908.8	15774.4	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (91.1%)	6912.2	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (90.3%)	1664.6	17124.7	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (93.6%)	1100.6	17278.2	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (95.3%)	9905.2	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	5.0	5.0	D	LRFD

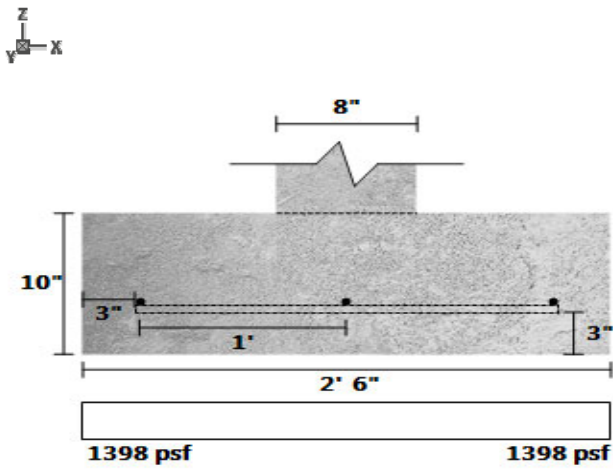
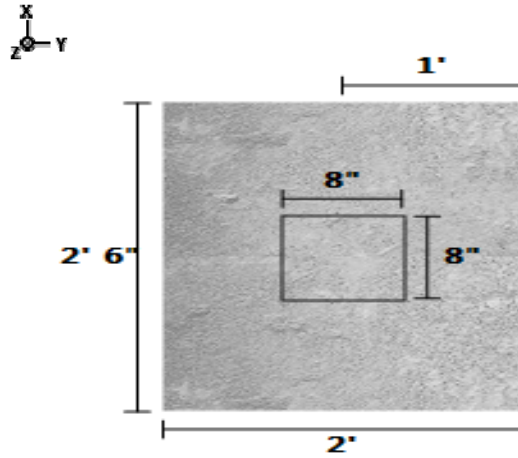
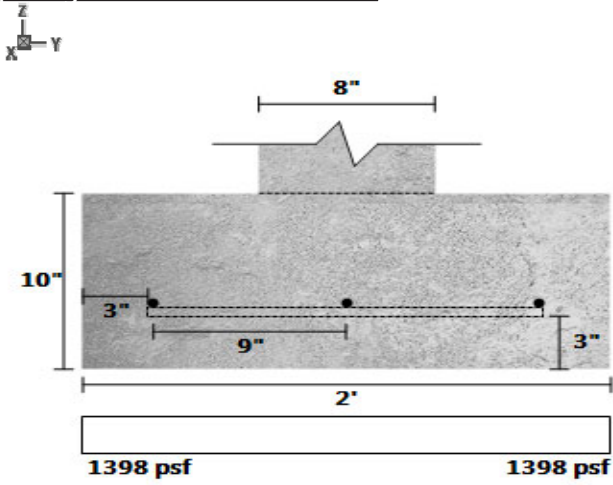
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Beam #14	C	778.8353	-	0	-	Dead	Z
Point (lb/ft)	Beam #14	C	5606	-	0	-	Snow	Z

SpotFtg Bm #14-2 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #15-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
3.5 (ft) X 3.5 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
3.5	3.5	10	10.21	1480.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)	0
---------	---

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (25.0%)	1124.3	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (77.6%)	6172.9	27605.2	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (77.6%)	6172.9	27605.2	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (78.5%)	16681.4	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (76.4%)	5455.5	23076.6	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (76.4%)	5455.5	23076.6	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (91.0%)	19028.3	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	12.3	12.3	D	LRFD

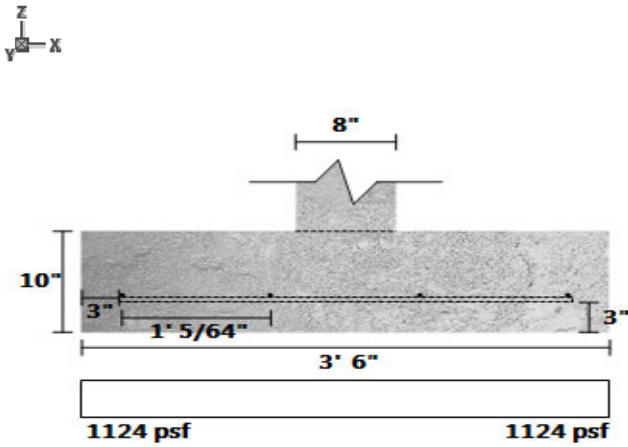
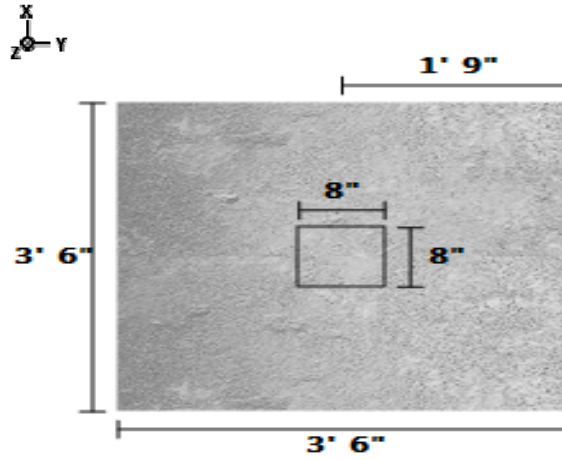
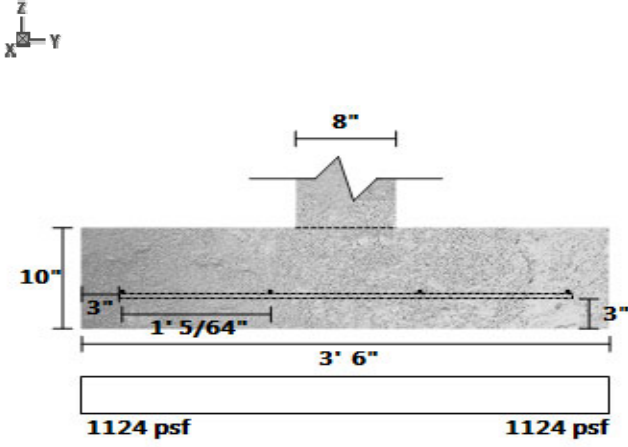
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Beam #15	A	1614.16	-	0	-	Dead	Z
Point (lb/ft)	Beam #15	A	5.498535	-	0	-	Live	Z
Point (lb/ft)	Beam #15	A	10678	-	0	-	Snow	Z

SpotFtg Bm #15-1 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #15-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
2 (ft) X 2 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	Bot. (3) #4 Long, (3) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
2	2	10	3.33	483.33

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

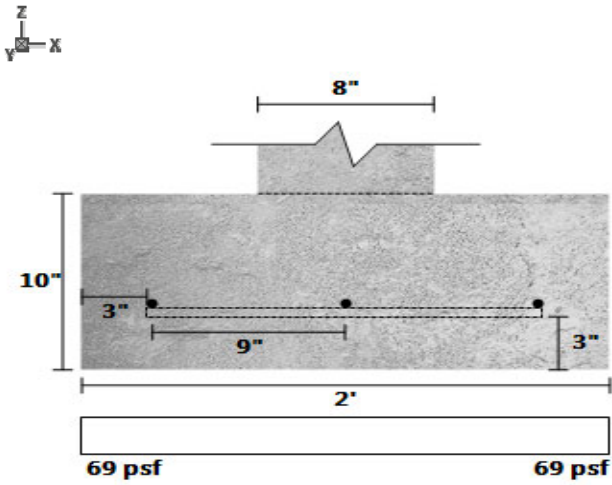
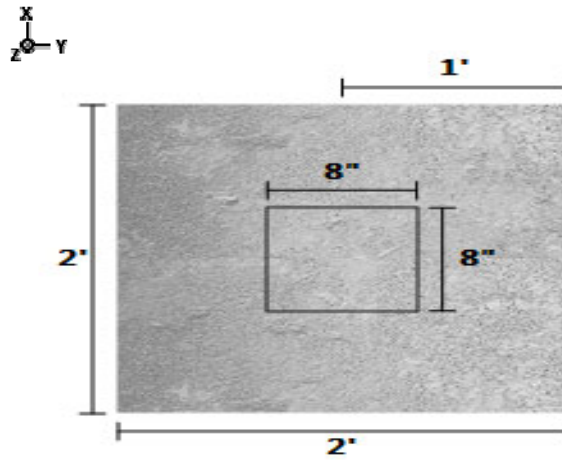
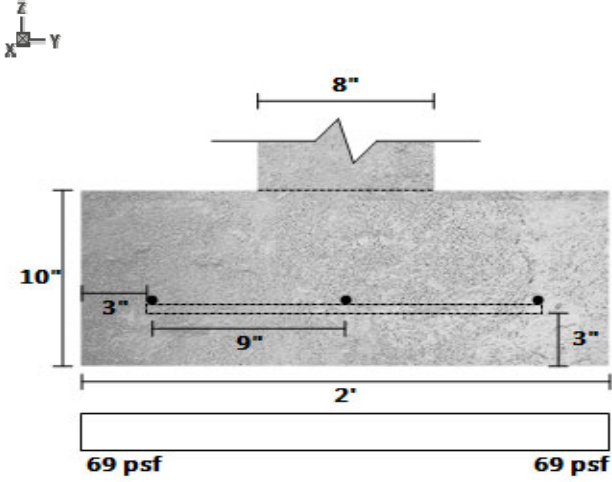
PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (95.4%)	69.1	1500.0	D+L	ASD
One-Way Shear X (lb/ft)	PASS (100.0%)	0.3	15774.4	1.2D+1.6L+0.5Lr	LRFD
One-Way Shear Y (lb/ft)	PASS (100.0%)	0.3	15774.4	1.2D+1.6L+0.5Lr	LRFD
Two-Way Shear (lb/ft)	PASS (100.0%)	1.0	77557.5	1.2D+1.6L+0.5Lr	LRFD
Moment X (lb-ft)	PASS (100.0%)	0.2	17124.7	1.2D+1.6L+0.5Lr	LRFD
Moment Y (lb-ft)	PASS (100.0%)	0.2	17124.7	1.2D+1.6L+0.5Lr	LRFD
Crushing (lb/ft)	PASS (100.0%)	1.6	212160.0	1.2D+1.6L+0.5Lr	LRFD
Compression (ft ²)	PASS (100.0%)	4.0	4.0	D	LRFD

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

SpotFtg Bm #15-2 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #21-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

3.5 (ft) X 3.5 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short
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MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
3.5	3.5	10	10.21	1480.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (18.2%)	1226.8	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (75.3%)	6807.4	27605.2	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (75.3%)	6807.4	27605.2	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (76.3%)	18396.1	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (73.9%)	6016.3	23076.6	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (73.9%)	6016.3	23076.6	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (90.1%)	20984.1	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	12.3	12.3	D	LRFD

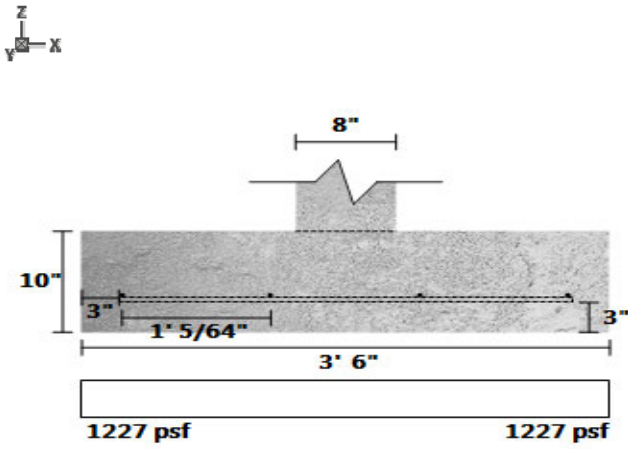
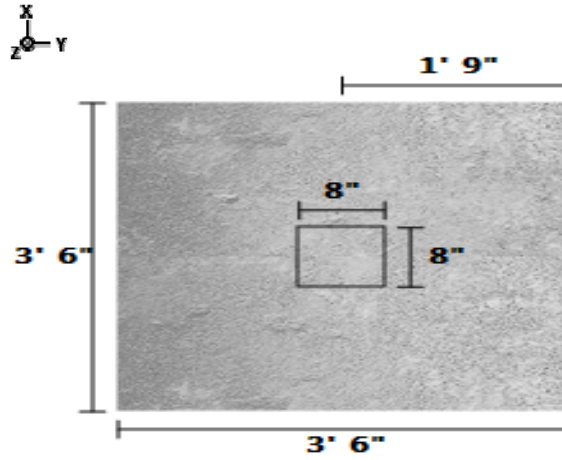
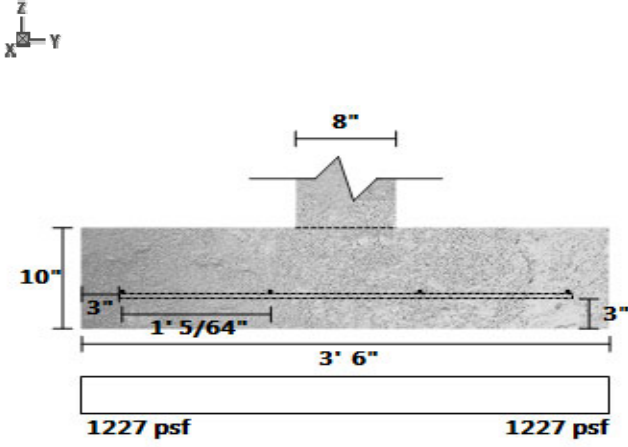
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Beam #21	A	1736.483	-	0	-	Dead	Z
Point (lb/ft)	Beam #21	A	11812.1	-	0	-	Snow	Z

SpotFtg Bm #21-1 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #24-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
4.5 (ft) X 4.5 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	Bot. (5) #4 Long, (5) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
4.5	4.5	10	16.88	2446.88

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)	0
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COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (11.3%)	1330.2	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (61.3%)	13736.8	35492.4	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (61.3%)	13736.8	35492.4	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (54.9%)	34978.0	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (46.6%)	15428.4	28872.8	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (46.6%)	15428.4	28872.8	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (82.2%)	37798.1	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	20.3	20.3	D	LRFD

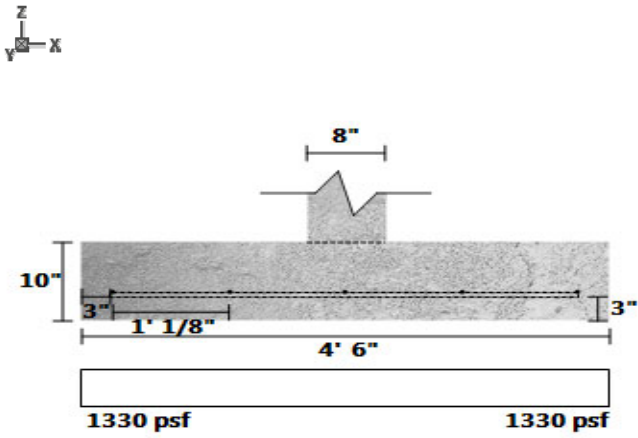
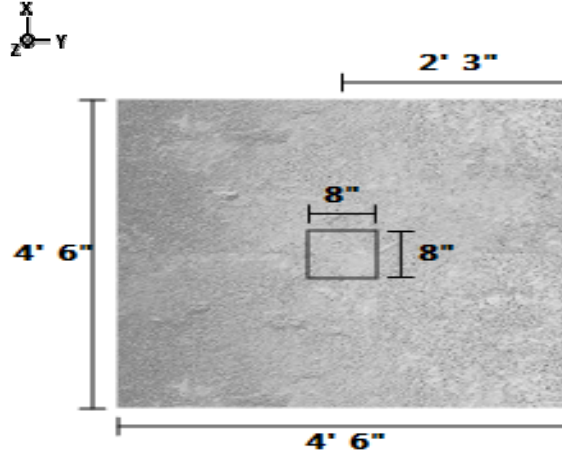
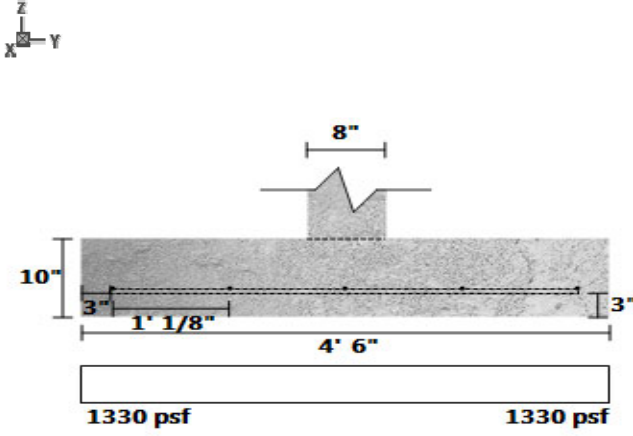
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Beam #24	A	3205.526	-	0	-	Dead	Z
Point (lb/ft)	Beam #24	A	19786.94	-	0	-	Snow	Z
Point (lb/ft)	Beam #28	A	261.7087	-	0	-	Dead	Z
Point (lb/ft)	Beam #28	A	1235.845	-	0	-	Snow	Z

SpotFtg Bm #24-1 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Hdr #20	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

4 (ft) X 4 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (5) #4 Long, (5) #4 Short
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MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
4	4	10	13.33	1933.33

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (18.0%)	1230.5	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (69.8%)	9533.0	31548.8	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (69.8%)	9533.0	31548.8	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (67.9%)	24924.9	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (66.8%)	9556.9	28754.4	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (66.8%)	9556.9	28754.4	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (87.0%)	27524.0	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	16.0	16.0	D	LRFD

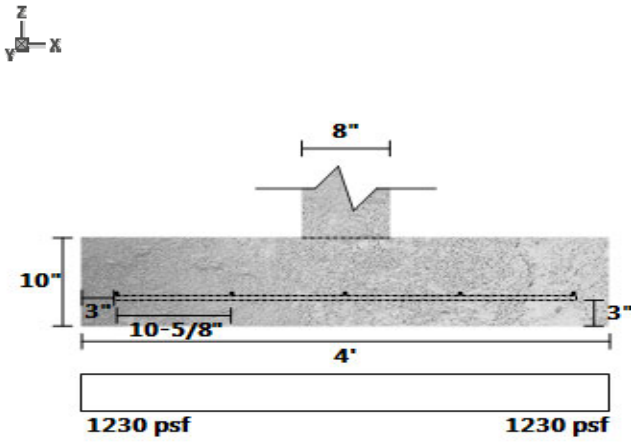
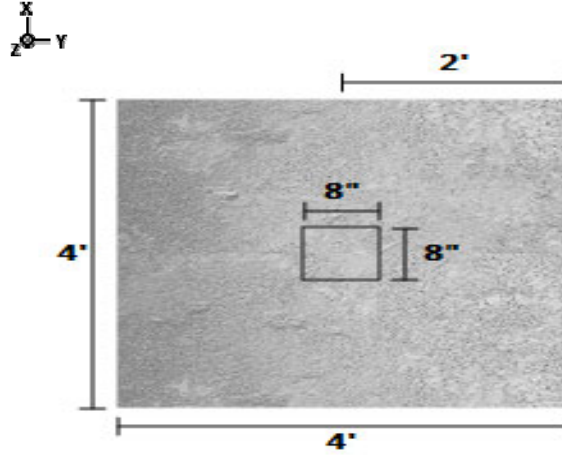
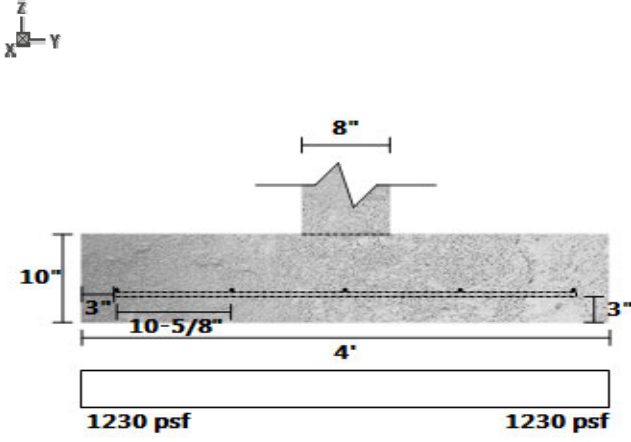
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Header #20	A	2210.256	-	0	-	Dead	Z
Point (lb/ft)	Header #20	A	15544.15	-	0	-	Snow	Z

SpotFtg Hdr #20 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Hdr #23	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

4 (ft) X 4 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (5) #4 Long, (5) #4 Short
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MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
4	4	10	13.33	1933.33

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (49.5%)	757.6	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (82.7%)	5464.3	31548.8	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (82.7%)	5464.3	31548.8	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (81.6%)	14286.9	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (80.9%)	5478.0	28754.4	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (80.9%)	5478.0	28754.4	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (92.6%)	15776.7	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	16.0	16.0	D	LRFD

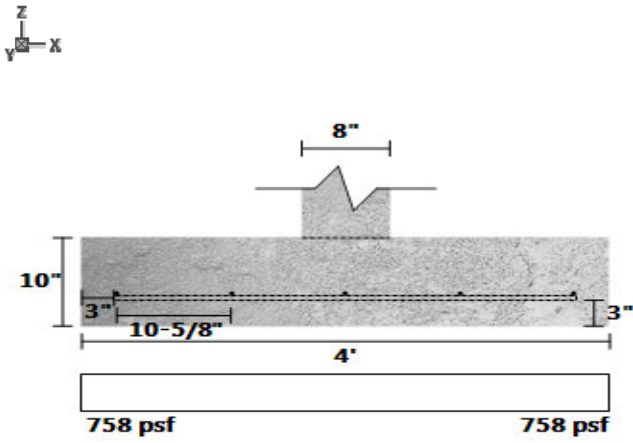
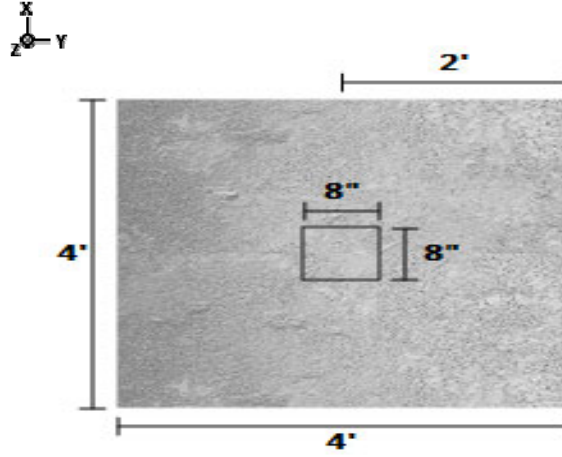
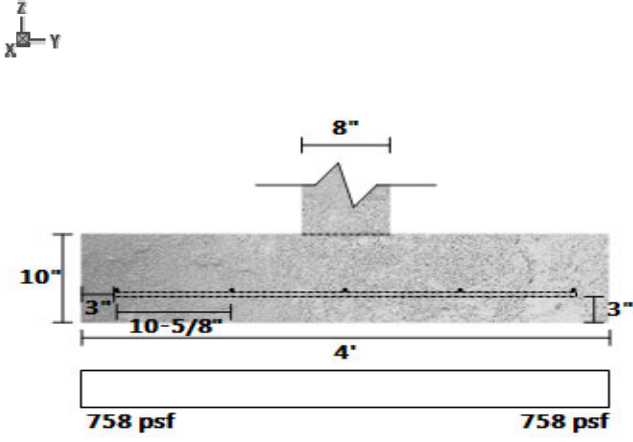
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Header #23	A	1312.068	-	0	-	Dead	Z
Point (lb/ft)	Header #23	A	8875.757	-	0	-	Snow	Z

SpotFtg Hdr #23 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #24-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

6.5 (ft) X 6.5 (ft) X 12 (in)	Soil Depth TOF: 0 (ft)	Bot. (9) #4 Long, (9) #4 Short
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MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
6.5	6.5	12	42.25	6126.25

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)	0
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COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (10.0%)	1349.3	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (50.0%)	30780.0	61520.2	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (50.0%)	30780.0	61520.2	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (29.2%)	74779.7	105688.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (23.9%)	51300.1	67455.5	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (23.9%)	51300.1	67455.5	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (63.0%)	78394.9	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	42.3	42.3	D	LRFD

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

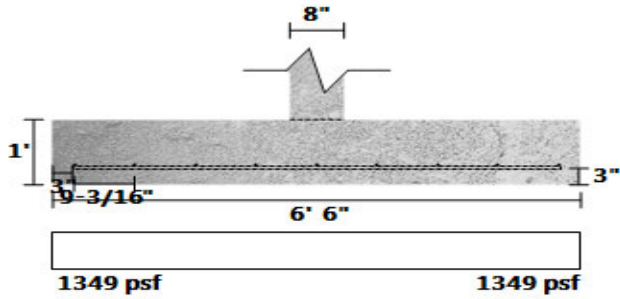
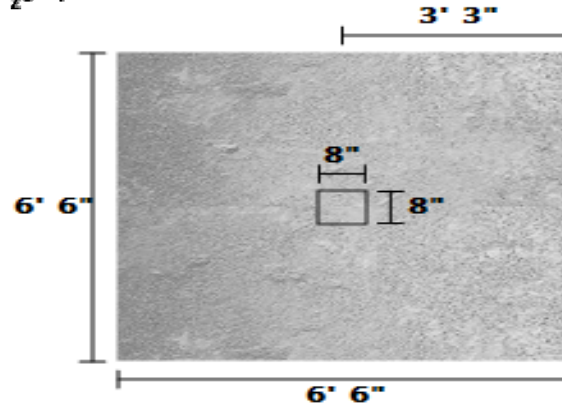
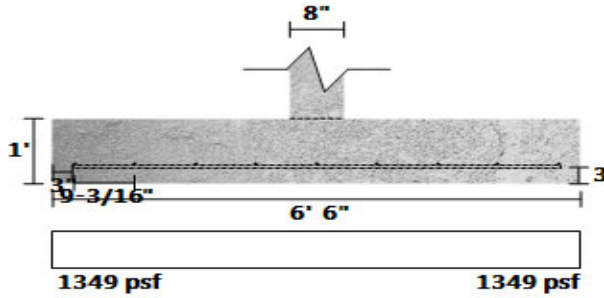
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Beam #24	B	7025.446	-	0	-	Dead	Z
Point (lb/ft)	Beam #24	B	40901.54	-	0	-	Snow	Z
Point (lb/ft)	Beam #28	C	261.7087	-	0	-	Dead	Z
Point (lb/ft)	Beam #28	C	1235.845	-	0	-	Snow	Z

LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #30	A	254.6355	-	0	-	Dead	Z
Point (lbf)	Beam #30	A	1202.444	-	0	-	Snow	Z

SpotFtg Bm #24-2 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #23-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
3.5 (ft) X 3.5 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
3.5	3.5	10	10.21	1480.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (18.5%)	1223.2	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (75.4%)	6790.1	27605.2	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (75.4%)	6790.1	27605.2	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (76.3%)	18349.3	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (74.0%)	6001.0	23076.6	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (74.0%)	6001.0	23076.6	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (90.1%)	20930.8	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	12.3	12.3	D	LRFD

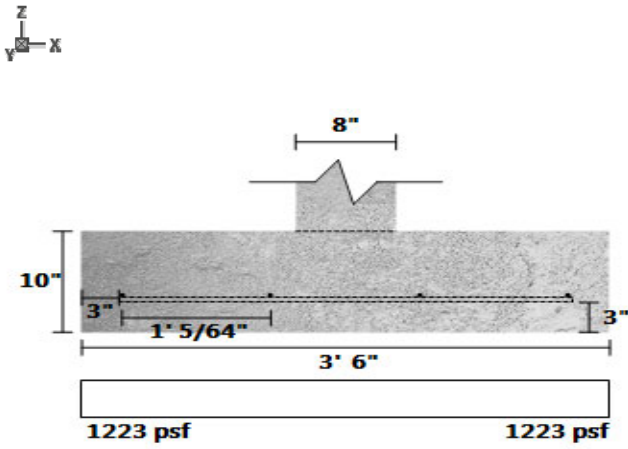
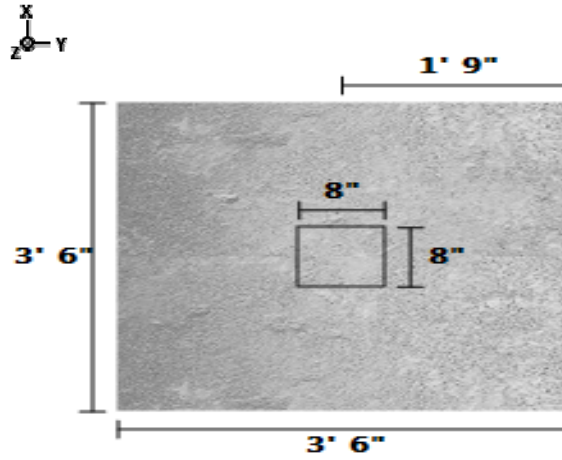
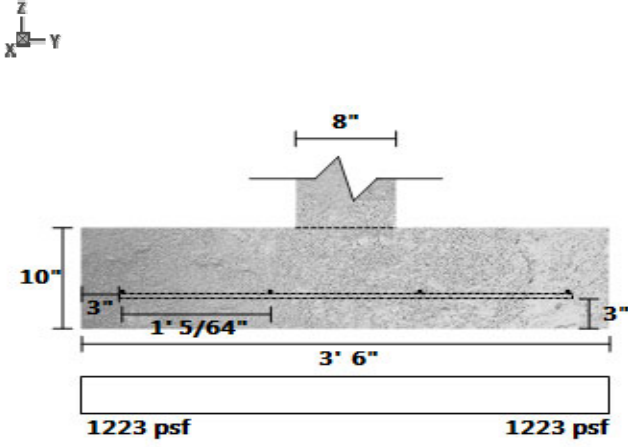
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Beam #23	A	1692.032	-	0	-	Dead	Z
Point (lb/ft)	Beam #23	A	11812.09	-	0	-	Snow	Z

SpotFtg Bm #23-1 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #25-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
1.3334 (ft) X 1.3334 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	Bot. (2) #4 Long, (2) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
1.3334	1.3334	10	1.48	214.84

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)	0
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COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (17.7%)	1234.5	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (98.9%)	118.7	10516.8	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (98.9%)	118.7	10516.8	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (99.4%)	456.3	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (98.9%)	126.6	11416.5	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (98.9%)	126.6	11416.5	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (98.6%)	3037.0	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	1.8	1.8	D	LRFD

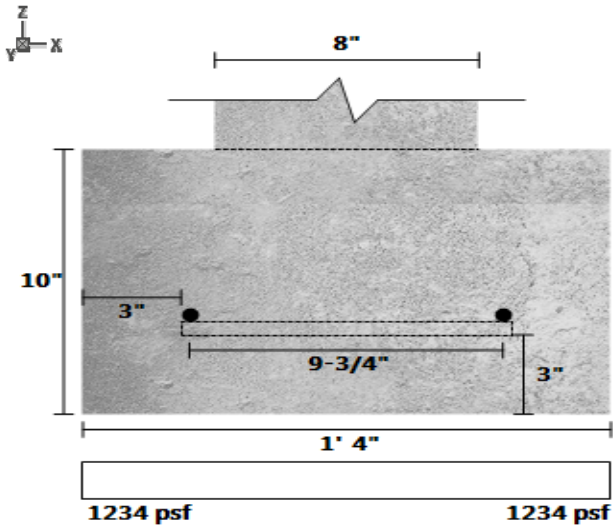
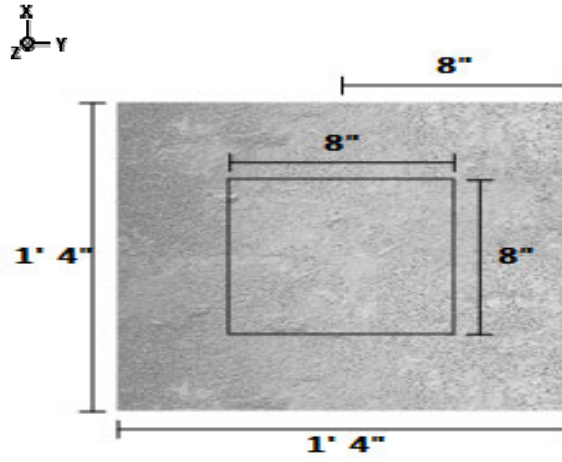
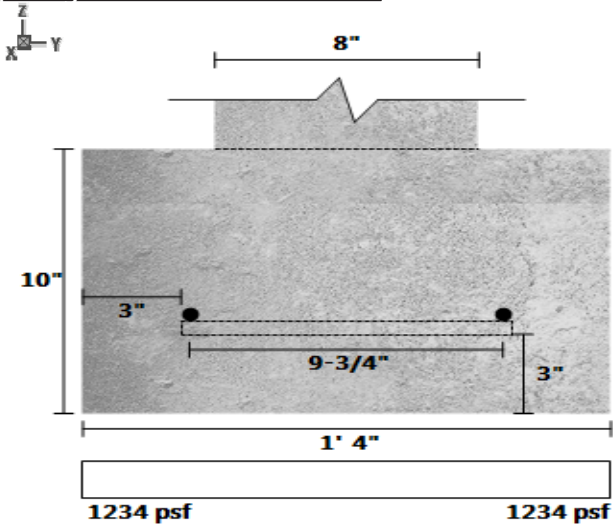
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Beam #25	B	329.9811	-	0	-	Dead	Z
Point (lb/ft)	Beam #25	B	1650	-	0	-	Snow	Z

SpotFtg Bm #25-2 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Hdr #18-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

3 (ft) X 3 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short
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MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
3	3	10	7.5	1087.5

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
5.5	5.5	Wood	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (40.6%)	890.8	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (83.6%)	3891.3	23661.6	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (83.6%)	3891.3	23661.6	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (83.8%)	10430.9	64412.2	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (83.6%)	3773.8	22946.6	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (83.6%)	3773.8	22946.6	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (88.2%)	11796.8	100278.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	9.0	9.0	D	LRFD

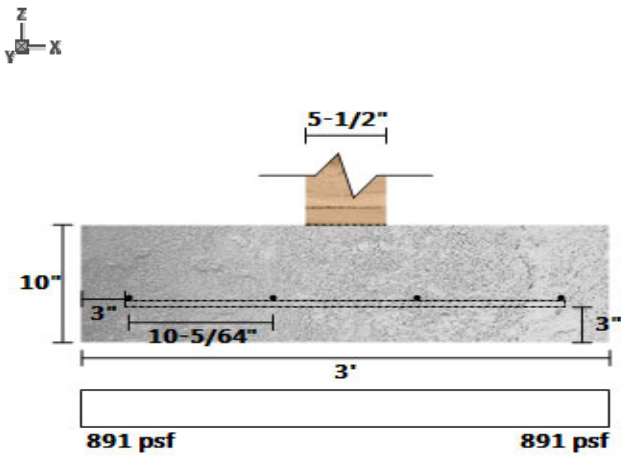
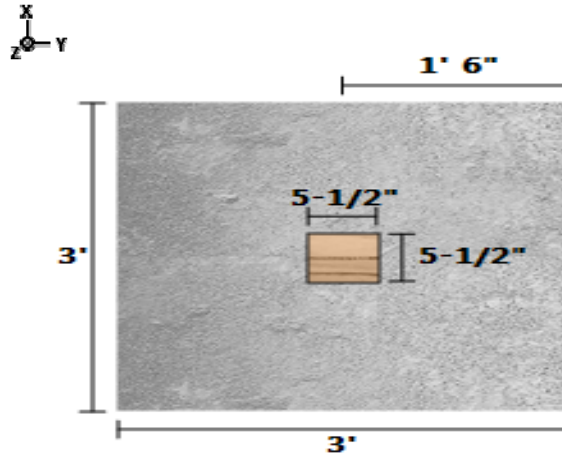
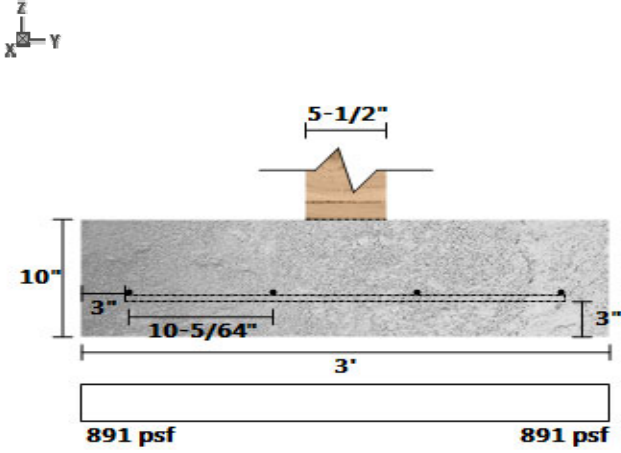
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Header #18	A	1072.256	-	0	-	Dead	Z
Point (lb/ft)	Header #18	A	1137.5	-	0	-	Live	Z
Point (lb/ft)	Header #18	A	5857.271	-	0	-	Snow	Z

SpotFtg Hdr #18-1 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Hdr #18-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

3 (ft) X 3 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short
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MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
3	3	10	7.5	1087.5

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)	0
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COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
5.5	5.5	Wood	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (40.6%)	890.8	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (83.6%)	3891.3	23661.6	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (83.6%)	3891.3	23661.6	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (83.8%)	10430.9	64412.2	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (83.6%)	3773.8	22946.6	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (83.6%)	3773.8	22946.6	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (88.2%)	11796.8	100278.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	9.0	9.0	D	LRFD

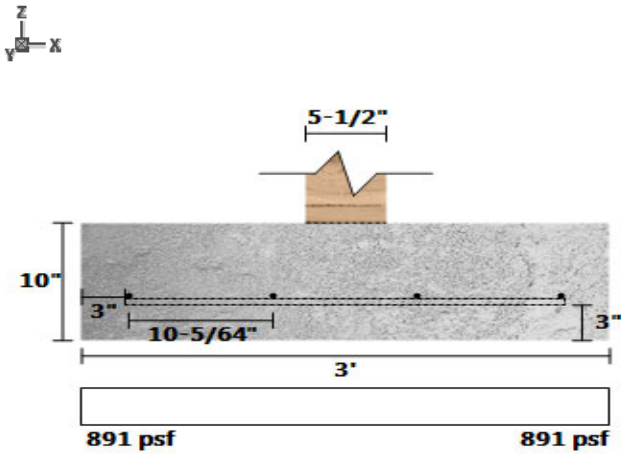
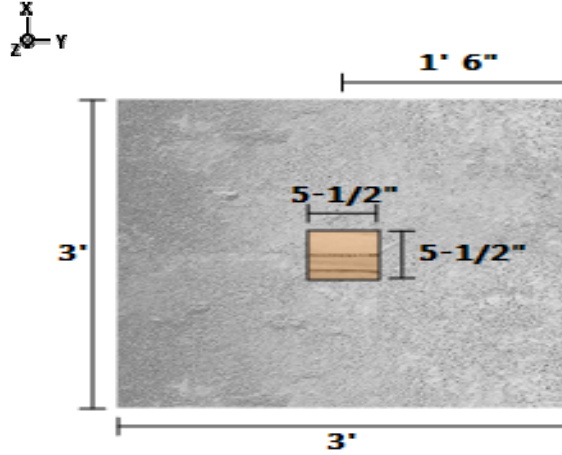
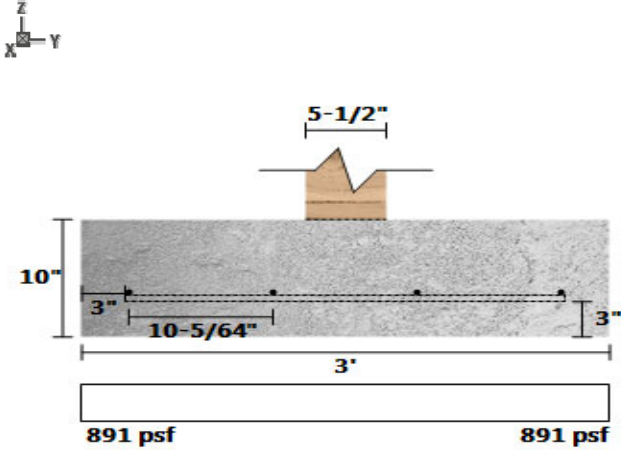
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Header #18	B	1072.256	-	0	-	Dead	Z
Point (lb/ft)	Header #18	B	1137.5	-	0	-	Live	Z
Point (lb/ft)	Header #18	B	5857.271	-	0	-	Snow	Z

SpotFtg Hdr #18-2 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #28-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2.5 (ft) X 2.5 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (3) #4 Long, (3) #4 Short
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MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
2.5	2.5	10	5.21	755.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)	0
---------	---

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (38.7%)	919.4	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (90.2%)	1941.3	19718.0	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (90.2%)	1941.3	19718.0	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (92.5%)	5791.6	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (92.6%)	1283.6	17278.2	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (92.6%)	1283.6	17278.2	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (96.4%)	7638.0	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	6.3	6.3	D	LRFD

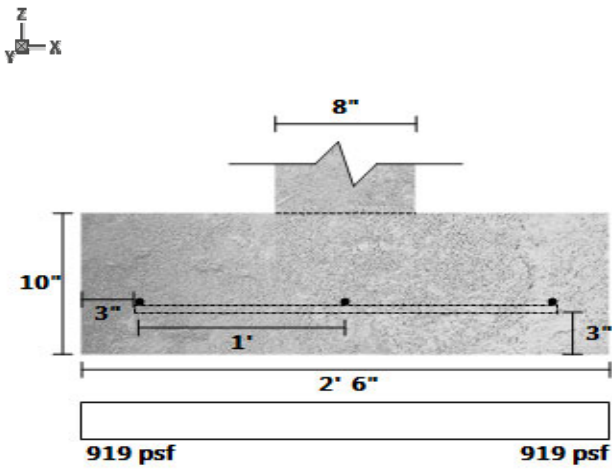
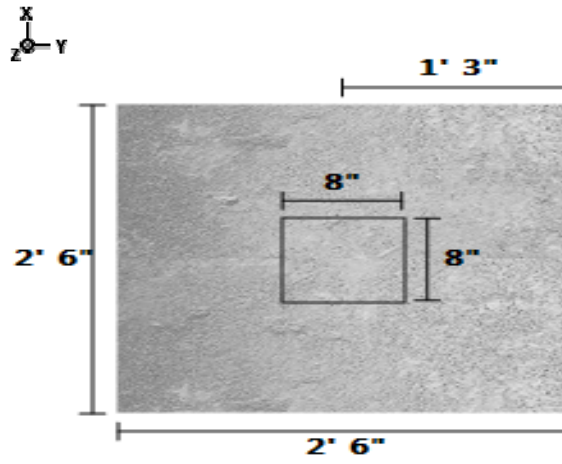
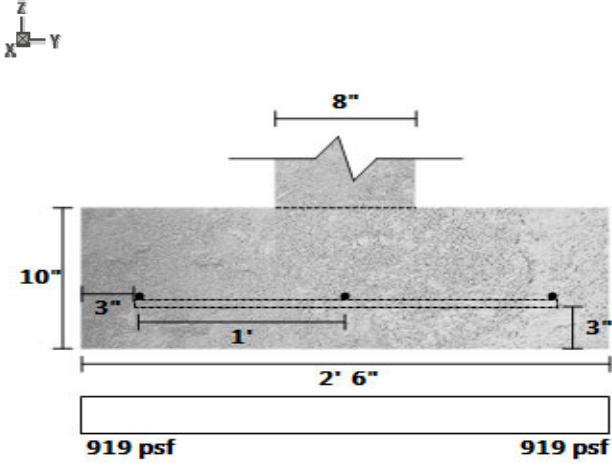
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Beam #28	B	872.2461	-	0	-	Dead	Z
Point (lb/ft)	Beam #28	B	4118.935	-	0	-	Snow	Z

SpotFtg Bm #28-2 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #29-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

3 (ft) X 3 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short
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MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
3	3	10	7.5	1087.5

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (28.2%)	1076.8	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (83.5%)	3894.0	23661.6	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (83.5%)	3894.0	23661.6	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (85.8%)	10978.8	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (87.0%)	2993.0	22946.6	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (87.0%)	2993.0	22946.6	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (93.8%)	13193.7	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	9.0	9.0	D	LRFD

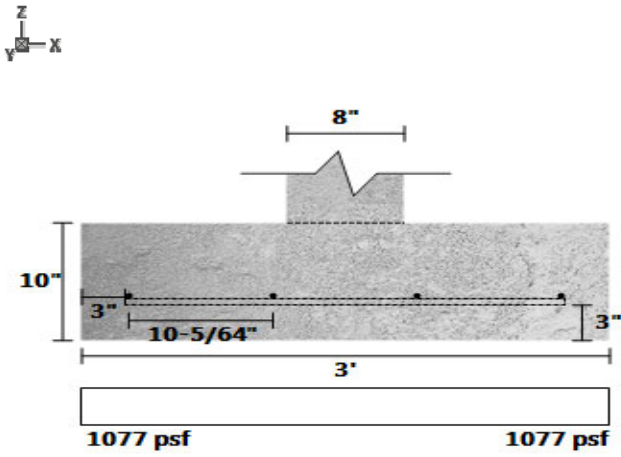
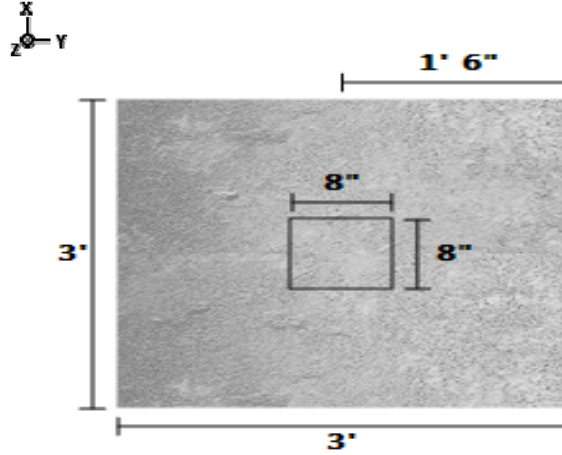
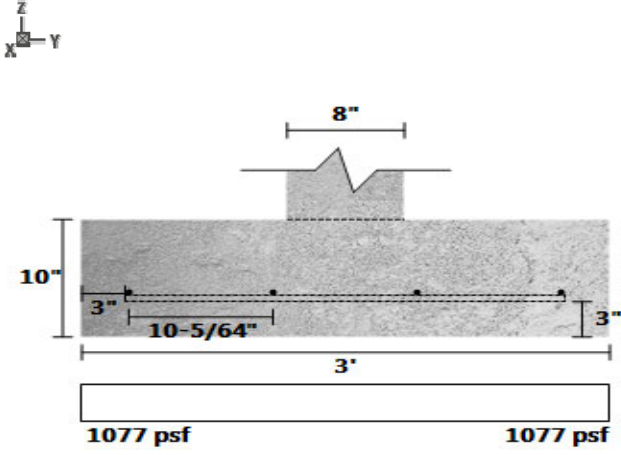
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Beam #29	B	1431.866	-	0	-	Dead	Z
Point (lb/ft)	Beam #29	B	7171.515	-	0	-	Snow	Z

SpotFtg Bm #29-2 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #29-3	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2.5 (ft) X 2.5 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (3) #4 Long, (3) #4 Short
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MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
2.5	2.5	10	5.21	755.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)	0
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COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (36.9%)	946.9	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (89.8%)	2012.4	19718.0	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (89.8%)	2012.4	19718.0	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (92.3%)	6003.7	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (92.3%)	1330.6	17278.2	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (92.3%)	1330.6	17278.2	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (96.3%)	7917.7	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	6.3	6.3	D	LRFD

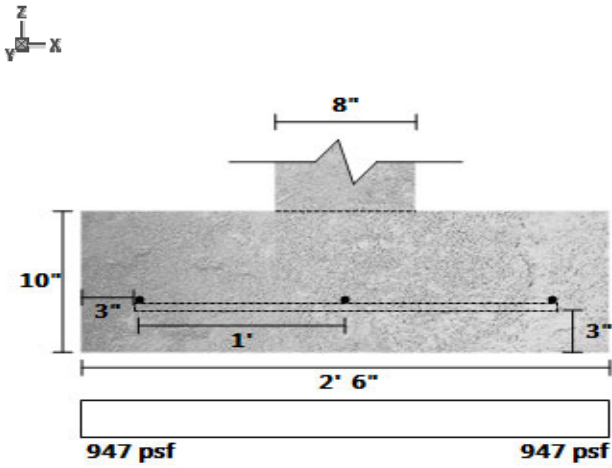
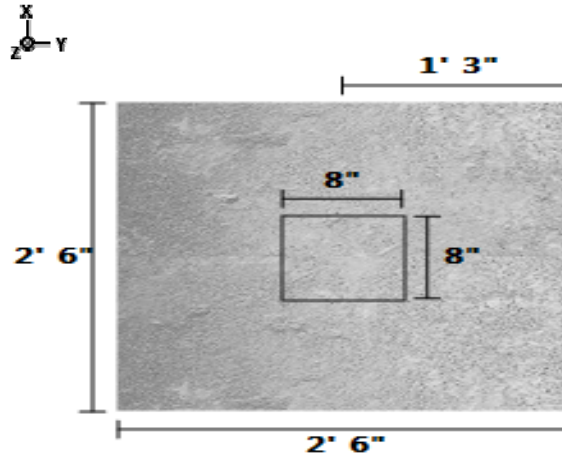
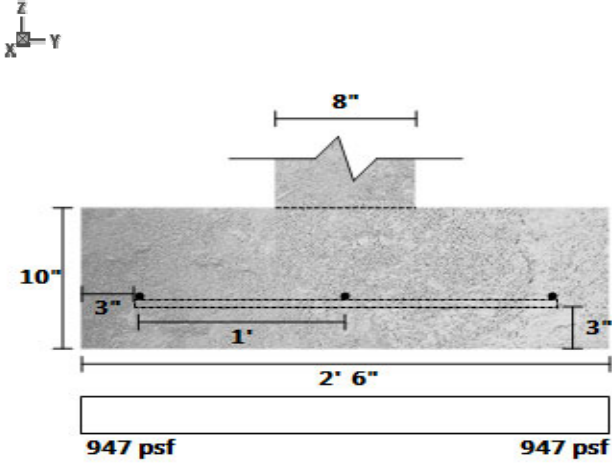
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Beam #29	C	429.6172	-	0	-	Dead	Z
Point (lb/ft)	Beam #29	C	2151.741	-	0	-	Snow	Z
Point (lb/ft)	Beam #31	A	429.6172	-	0	-	Dead	Z
Point (lb/ft)	Beam #31	A	2151.741	-	0	-	Snow	Z

SpotFtg Bm #29-3 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #30-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
2 (ft) X 2 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	Bot. (3) #4 Long, (3) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
2	2	10	3.33	483.33

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)	0
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COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (11.0%)	1334.9	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (90.9%)	1432.1	15774.4	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (90.9%)	1432.1	15774.4	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (94.0%)	4624.6	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (95.2%)	825.7	17124.7	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (95.2%)	825.7	17124.7	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (96.5%)	7431.6	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	4.0	4.0	D	LRFD

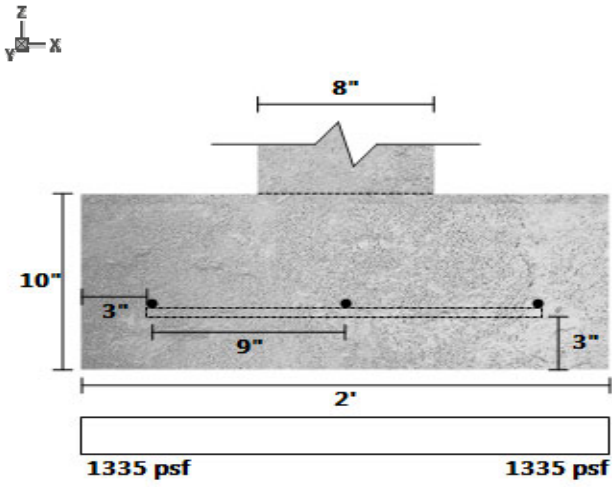
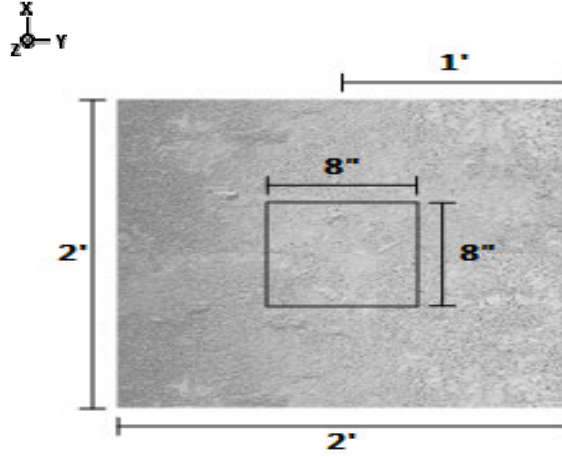
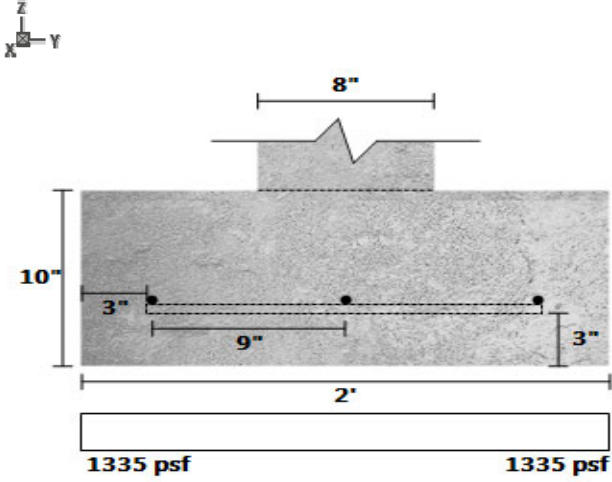
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Beam #30	B	848.6719	-	0	-	Dead	Z
Point (lb/ft)	Beam #30	B	4007.612	-	0	-	Snow	Z

SpotFtg Bm #30-2 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #31-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

3 (ft) X 3 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short
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MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
3	3	10	7.5	1087.5

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (28.2%)	1076.8	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (83.5%)	3894.0	23661.6	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (83.5%)	3894.0	23661.6	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (85.8%)	10978.8	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (87.0%)	2993.0	22946.6	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (87.0%)	2993.0	22946.6	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (93.8%)	13193.7	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	9.0	9.0	D	LRFD

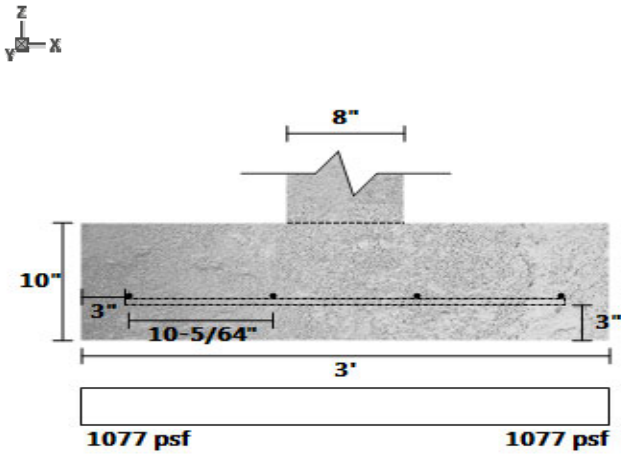
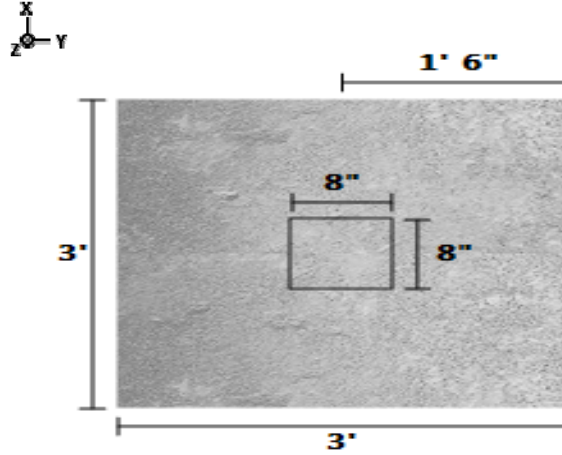
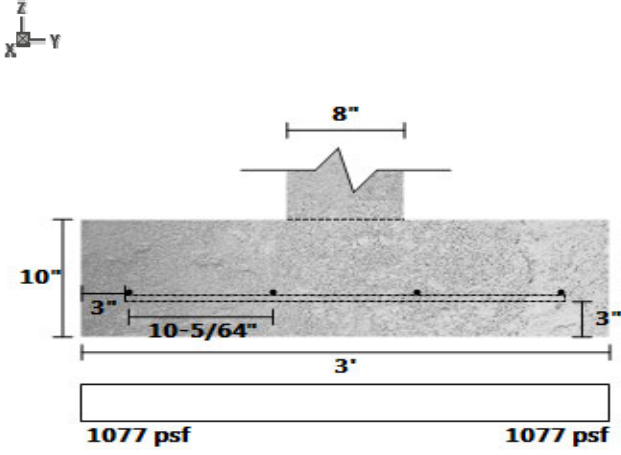
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Beam #31	B	1431.866	-	0	-	Dead	Z
Point (lb/ft)	Beam #31	B	7171.515	-	0	-	Snow	Z

SpotFtg Bm #31-2 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #31-3	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
2.5 (ft) X 2.5 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	Bot. (3) #4 Long, (3) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
2.5	2.5	10	5.21	755.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)	0
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COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (31.1%)	1032.9	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (88.7%)	2219.7	19718.0	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (88.7%)	2219.7	19718.0	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (91.5%)	6622.1	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (91.5%)	1467.7	17278.2	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (91.5%)	1467.7	17278.2	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (95.9%)	8733.2	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	6.3	6.3	D	LRFD

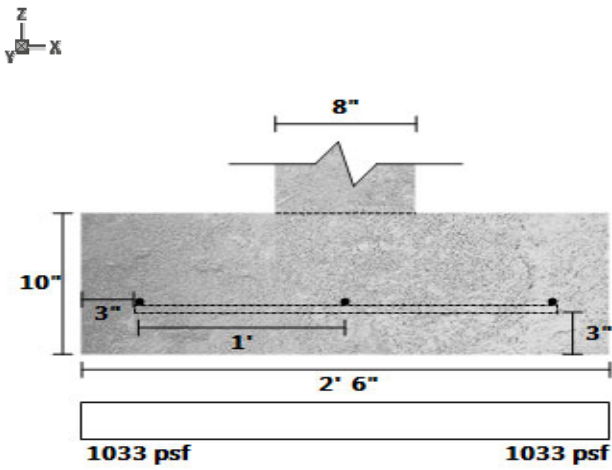
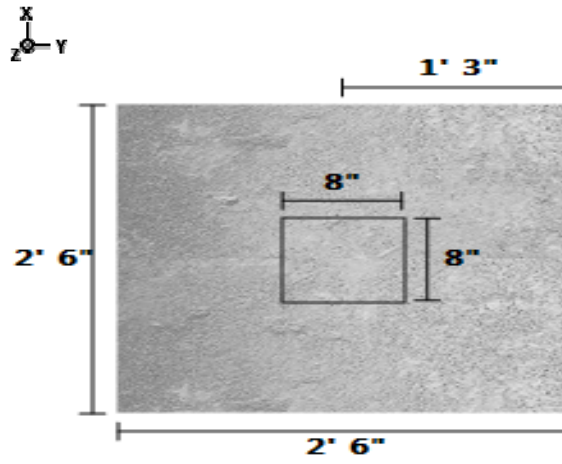
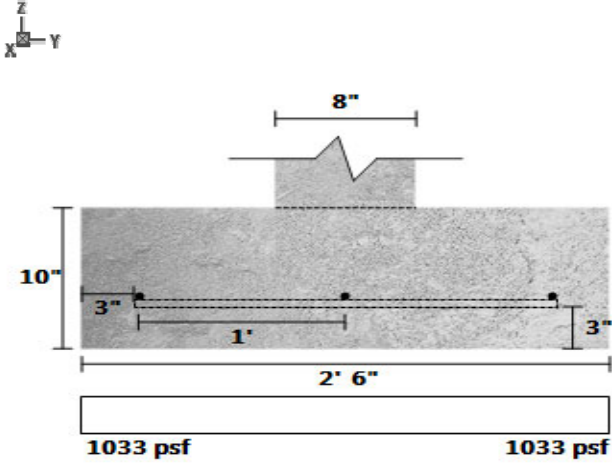
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Beam #31	C	429.6172	-	0	-	Dead	Z
Point (lb/ft)	Beam #31	C	2151.741	-	0	-	Snow	Z
Point (lb/ft)	Beam #33	A	540.7611	-	0	-	Dead	Z
Point (lb/ft)	Beam #33	A	2578.125	-	0	-	Snow	Z

SpotFtg Bm #31-3 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		

LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #33-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

3 (ft) X 3 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short
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MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
3	3	10	7.5	1087.5

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)	0
---------	---

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (4.5%)	1433.2	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (77.5%)	5319.9	23661.6	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (77.5%)	5319.9	23661.6	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (80.7%)	14999.1	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (82.2%)	4089.0	22946.6	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (82.2%)	4089.0	22946.6	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (91.5%)	18025.0	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	9.0	9.0	D	LRFD

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

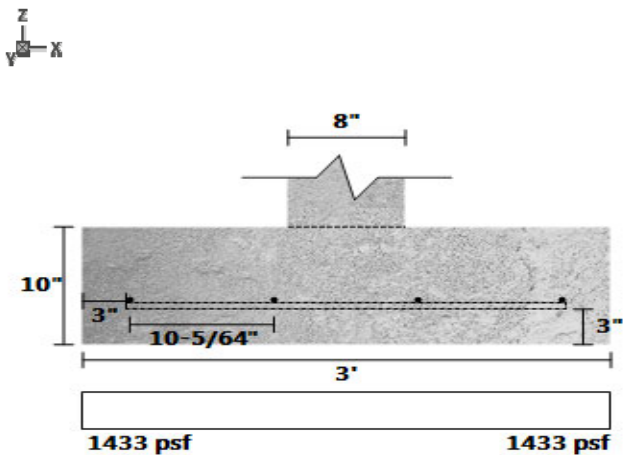
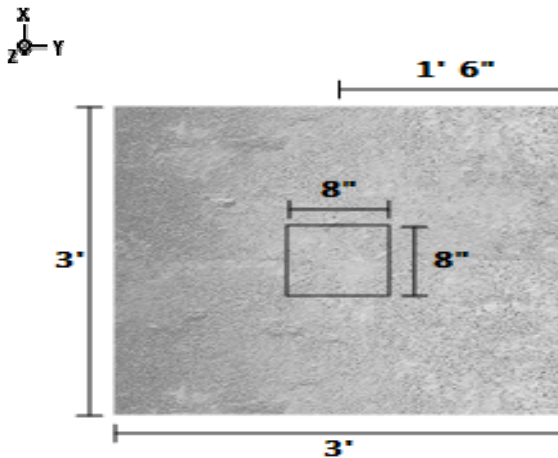
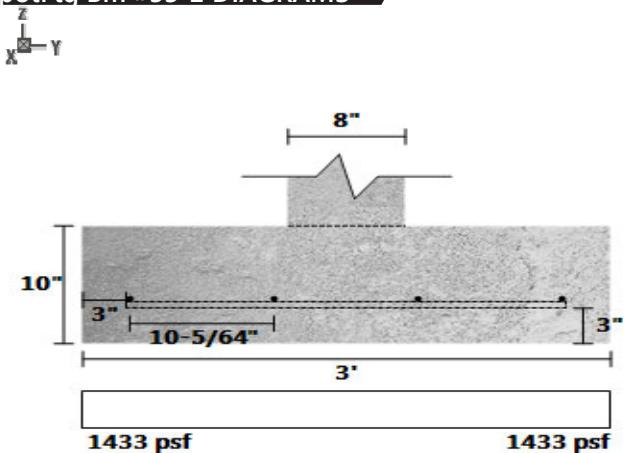
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Beam #33	B	540.7611	-	0	-	Dead	Z
Point (lb/ft)	Beam #33	B	2578.125	-	0	-	Snow	Z
Point (lb/ft)	Beam #35	A	565.3411	-	0	-	Dead	Z
Point (lb/ft)	Beam #35	B	822.1052	-	0	-	Dead	Z

LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #35	A	2695.313	-	0	-	Snow	Z
Point (lbf)	Beam #35	B	3524.062	-	0	-	Snow	Z
Point (lbf)	Beam #37	A	256.764	-	0	-	Dead	Z
Point (lbf)	Beam #37	A	828.749	-	0	-	Snow	Z

SpotFtg Bm #33-2 DIAGRAMS





PASS

DATE:	5/17/2022	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	21-046 Goff
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #35-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
2.5 (ft) X 2.5 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	Bot. (3) #4 Long, (3) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
2.5	2.5	10	5.21	755.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)	0
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COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft ²)	Density (lb/ft ³)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.)	Bottom Cover (in.)	Side Cover (in.)
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (34.0%)	989.9	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (89.4%)	2099.5	19718.0	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (89.4%)	2099.5	19718.0	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (91.9%)	6263.4	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb-ft)	PASS (92.0%)	1388.2	17278.2	1.2D+1.6S+L	LRFD
Moment Y (lb-ft)	PASS (92.0%)	1388.2	17278.2	1.2D+1.6S+L	LRFD
Crushing (lb/ft)	PASS (96.1%)	8260.1	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	6.3	6.3	D	LRFD

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Beam #35	B	822.1052	-	0	-	Dead	Z
Point (lb/ft)	Beam #35	B	3524.062	-	0	-	Snow	Z
Point (lb/ft)	Beam #37	A	256.764	-	0	-	Dead	Z
Point (lb/ft)	Beam #37	A	828.749	-	0	-	Snow	Z

SpotFtg Bm #35-2 DIAGRAMS

