STRUCTURAL CALCULATIONS

for:

ARIZONA

12/30/2013

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DESIGN CRITERIA CODE **:** **IBC 2006** Sht. DS1

ROOF LOAD DURATION = 1.25 LDF
SNOW LOADING ? NO

PITCHED ROOF R1
ROOF DL = 22.5 PSF R1 ROOF PITCH = 5.0:12
ROOF LL = 20 PSF PITCH REDUCTION = 0.95

FLAT ROOF R2 FLAT ROOF R3
ROOF DL = R2 ROOF PITCH = 0.3:12 ROOF DL = 12 PSF
ROOF LL = PITCH REDUCTION = 1.00 ROOF LL = 12 PSF

F1
FLOOR DL =
FLOOR LL =

OPEN LATTICE DL =		
JOIST/RAFTER WIDTH =		
JOIST/RAFTER DEPTH =		
SPACING =		

F2 F3
DECK DL = STAIR DL =
DECK LL = STAIR LL =

LATERAL:
WIND GOVERNS? YES
WIND VELOCITY = 90 MPH 3-SEC GUST
WIND EXPOSURE **:** C

SAWN LUMBER: SPECIES AND GRADES LISTED ARE MINIMUM. BETTER MAY BE SUBSTITUTED.

2 x 6 :	HEM-FIR	# 2	(LEDGERS, BEAMS, AND HEADERS)
2 x - 4 x THICK (2 X 8 etc):	DF-L	# 2	(LEDGERS, 4 x POSTS, BEAMS, AND HEADERS)
6 x AND THICKER :	DF-L	# 1	(POSTS, BEAMS, AND HEADERS)
2 x 4 STUDS :	HEM-FIR	Stud	WALL HEIGHTS UP TO 8'-1"
2 x 4 STUDS :	HEM-FIR	# 2	WALL HEIGHTS MORE THAN 8'-1"
2 x 6 STUDS :	HEM-FIR	Stud	WALL HEIGHTS UP TO 10'-1"
2 x 6 STUDS :	HEM-FIR	# 2	WALL HEIGHTS MORE THAN 10'-1"
SPECIAL (SEE CALCS)			2 x TO 4 x
SPECIAL (SEE CALCS)			6 x AND THICKER
2 x AND 3 x MUD SILL :	DF-L	# 2	W/ INCISED FACTOR
GLULAM BEAMS : DF/DF	GLB	24F-V4	FOR SIMPLE SPANS (STD CAMBER U.N.O.)
GLULAM BEAMS : DF/DF	C&C GLB	24F-V8	FOR CONTINUOUS AND CANTILEVERS
GLULAM COLUMNS : DF/DF	GLC	Comb 2 DF	
RESID. PARALLAM BEAMS :	PSL	2.0E	9.25" TO 18" DEEP
COMM. PARALLAM BEAMS :	Com PSL	2.2E	20" AND GREATER DEPTH
PARALLAM COLUMNS :	PSL Col	1.8E	3.5" TO 7" DIMENSIONS

NOTE:
POST AND TRIMMER SPECIES/GRADE BASED ON WALL HEIGHT, NOT ACTUAL POST/TRIM HT.

PRE-FAB TRUSSES: TO BE ENGINEERED BY TRUSS MANUFACTURER WITH SHOP DRAWINGS AND CALCULATIONS SEALED BY ARIZONA REGISTERED ENGINEER.

CONVENTIONAL FOUNDATIONS:
SOIL BEARING PRESSURE = 1500 PSF BASEMENT SOIL BRG PRESSURE = 2000 PSF
CONCRETE 28-DAY F'c = 2500 PSI

POST-TENSIONED FOUNDATIONS:
SOIL BEARING PRESSURE = 1250 PSF
POST-TENSION CONCRETE 28-DAY F'c = 2500 PSI

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LOAD CRITERIA AND EXAMPLE OF HEADER/BEAM DESIGN OUTPUT Sht. DS2

(See Design Specs sheet preceeding this sheet)

	LOAD CODE	DEAD	R2 x LIVE	TL
ROOF	R1	22	19	41 psf
ROOF	R3	12	12	24 psf

Note: "R" or "F" Load Codes are used to determine load combination allowable stresses.

LOAD CODE	TRIB 1 OR ENTIRE SPAN	TRIB 2	TRIB 3	TRIB 4 (CANTILEVER)
F1	5 (FT)			
R1	7 (FT)			
R2		8 (FT)	12 (FT)	

Additional Dead or Total Load

Example: TL = (55 x 5) + (38 x 7) = 541 PLF

	D/TL					
	L					
D/TL	28 PLF		42 PLF		28 PLF	
L						
Coded TL	541 PLF		280 PLF		420 PLF	
Length	4 FT		3 FT		6 FT	
	OVERALL L = **13 FT**					

LEFT OR "SOUTH" END OF MEMBER

NO. TRIMMER STUDS REQ'D MOMENT = 9185 FT-LBS

TL DEFL= 0.33" LOCATION OF MAX. M = 6.6' 1404 LBS=GOVERN'G SHEAR @ LDF = 1.25

BRG L = 1.13" LL DEFL= 0.14" BRG L =1.03" **STRESS RATIOS**

1917	DURATION	SPECIES	GRADE	DROP/RAISED	NO. OF PLIES	1404	**SHEAR=0.79**
988/677	1.25 LDF				3 pcs	1380/123	**MOMENT=0.90**
R=3184 LBS	Camber OK?	Try 2 x 12		BEAM	REP	**R=2907 LBS**	**TL DEFL.= L/477**
	NO. PCS	SIZE	SPECIES	GRADE	REP ?		REC'M'D = L/320
BEAM LABEL	**3**	**2 x 12**	**DF-L**	**#2**	**Yes**		

ROOF LIVE = 1380 LBS

FLOOR LIVE = 123 LBS

BACK-OFF "d" FOR SHEAR AT :

ALL BEAMS/HEADERS ? **NO**

ALL BEAMS/HEADERS DEEPER THAN 15" ? **YES**

ADD DEAD LOAD TO ALL HEADERS = 20 PLF

ADD SELF-LOAD TO HEADERS / BEAMS : YES

REDUCE ROOF LIVE ? YES

REDUCE FLOOR LIVE ? YES

CHECK CURRENT DESIGN : "TAG" SIMILAR BEAMS ? **NO**

If same size or more:

PREVIOUS MARK SPAN >=, LOAD >= ? **YES**

If same size or less:

PREVIOUS MARK SPAN <=, LOAD <= ? **YES**

LOAD ECCENTRICITY = d / 6 FOR POSTS/TRIMMERS ? YES

LOAD CASE (D + 0.75 x Lr (or S) + 0.75 x L) ? YES

		HDR TRIM HEIGHT
FIRST FLR CLG HEIGHT =	**10. FT**	**7.5 FT**
SECOND FLR CLG HEIGHT =		
THIRD FLR CLG HEIGHT =		
FOURTH FLR CLG HEIGHT =		
FLOOR HEIGHT =		

FLAT ROOF HEADER TRIM HT (R3 ONLY) =

FLAT ROOF TOP OF PARAPET (R3 ONLY) =

ADD DEAD LOAD TO FLAT ROOF HDRS (R3 ONLY) = 0 PLF

"FLAT ROOF" SLOPE = > 1/4 IN./FT. ? YES

NOTES:

1) When both floor and roof live loads are applied, allowable bending and shear stresses are multiplied by LDF = 1.25. The load case with floor live load only is also checked, using LDF = 1.00
2) Dead load only case is automatically checked with LDF = 0.90
3) Dropped beams or headers are automatically checked for Stability Factor, and allowable bending stress is reduced accordingly.
4) Glulam beams are automatically checked for Volume Factor, and allowable bending stress is reduced accordingly. If Stability Factor (dropped beams and headers only) is less than Volume Factor, it governs bending stress reduction. Camber is checked for spans in excess of 8'
5) Floor live loads reduced per IBC Sect. 1607.9.2; Roof live loads reduced per IBC Sect. 1607.11.2
6) Post design is based on ceiling (wall top plate) height, with depth of supported beam deducted.
7) For cantilever, check beam design with live load on cantilever only.

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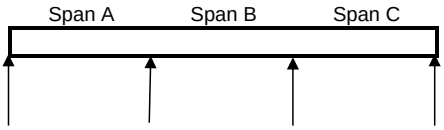
CONTINUOUS ELEMENTS AND ADDITIONAL NOTES Sht. DS3

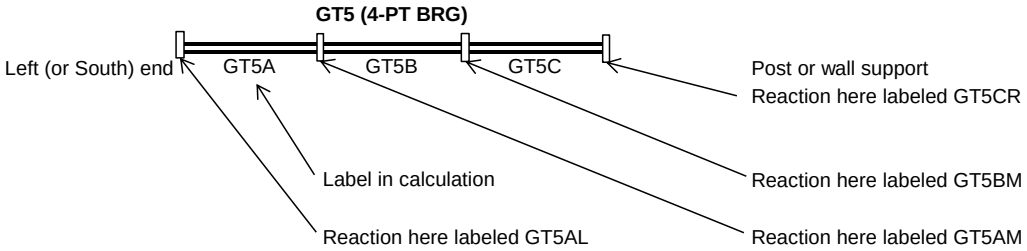
When continuous trusses, girder trusses, and beams are analyzed in this calculation set, each span designated with the trailing alphabetic identifier A, B, C, etc., starting at the left (south) end.

Example of 3-span continuous member :



On the framing plan(s), this would be called out as a single member, for example GT5 (4-pt brg), because no additional info is necessary for construction and to reduce complexity of the drawings.

Example :



ALSO:

When girder trusses, headers and beams above the second floor are analyzed in this calculation set, they are prefixed with the letter R. Example: RGT3, RB5. The "R" prefix is not used on the drawings.

When girder trusses, headers and beams above the first floor are analyzed in this calculation set, they are prefixed with the number 2. Example: 2GT9, 2B16. The "2" prefix is not used on the drawings. There also will be some RB- headers that

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GIRDER TRUSS REACTIONS

	Hip	Jack	Setback	Skip LL?
3	0	0		

	TRIB 1	TRIB 2	TRIB 3	TRIB 4
R1	21.6	0	0	

Mid Reaction 10656 Red. Rf Live 34%

15692 5036/0

D/TL							
L							
Coded TL	780						
Length	21.2			0			
GT1A	**21.2**						**0**
	3 studs					5 studs	
10.00 ft.	2 x 6 wall					2 x 6 wall	10.00 ft.
	3.21					**6.09**	LDF=1.25
5145		Type:	Roof	4 ply		5145	
3119/0						3119/0	
8265	NO. PLIES					**8265**	

GT1A	**4 plies**	**Roof Girder Truss**

Brg area inadequate

	Hip	Jack	Setback	Skip LL?
	0	0		

	TRIB 1	TRIB 2	TRIB 3	TRIB 4
R1	21	0	0	

Red. Rf Live 7%

D/TL							
L							
Coded TL	844						
Length	11.5			0			
GT1B	**11.5**						**0**
	5 studs					2 studs	
10.00 ft.	2 x 6 wall					2 x 6 wall	10.00 ft.
	1.88					1.88	LDF=1.25
2713		Type:	Roof	4 ply		2713	
2142/0						2142/0	
4855	NO. PLIES					**4855**	

GT1B	**4 plies**	**Roof Girder Truss**

	Hip	Jack	Setback	Skip LL?
	0	0		

	TRIB 1	TRIB 2	TRIB 3	TRIB 4
R1	2	0	0	

D/TL							
L							
Coded TL	83						
Length	43			0			
RT1	**43**						**0**
						1 stud	
	Hanger	HUS26	MUS28			2 x 6 wall	10.00 ft.
						2.77	LDF=1.25
966		Type:	Roof	1 ply		966	
817/0		No. of support plies:	2 ply			817/0	
1783	NO. PLIES					**1783**	

RT1	**1 plies**	**Roof Girder Truss**

	Hip	Jack	Setback	Skip LL?
	0	0		

	TRIB 1	TRIB 2	TRIB 3	TRIB 4
R1		0	0	

D/TL							
L							
Coded TL	0						
Length	15.2			0			
GT3	**15.2**						**0**
10.00 ft.	2 x 6 wall					2 x 6 wall	10.00 ft.
							LDF=0.90
0		Type:	Roof	1 ply		0	
0/0						0/0	
0	NO. PLIES					**0**	

GT3	**1 plies**	**Roof Girder Truss**

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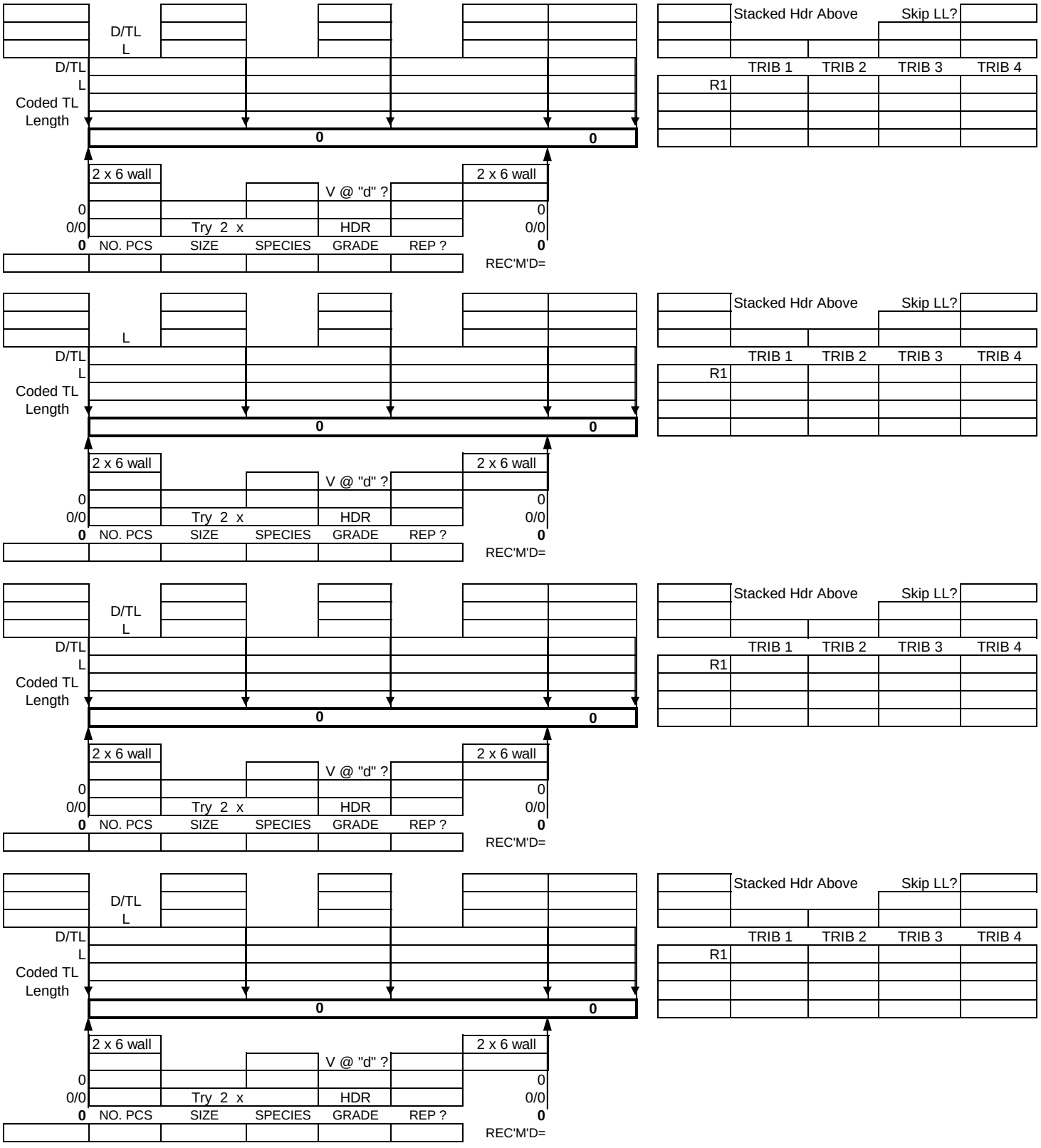
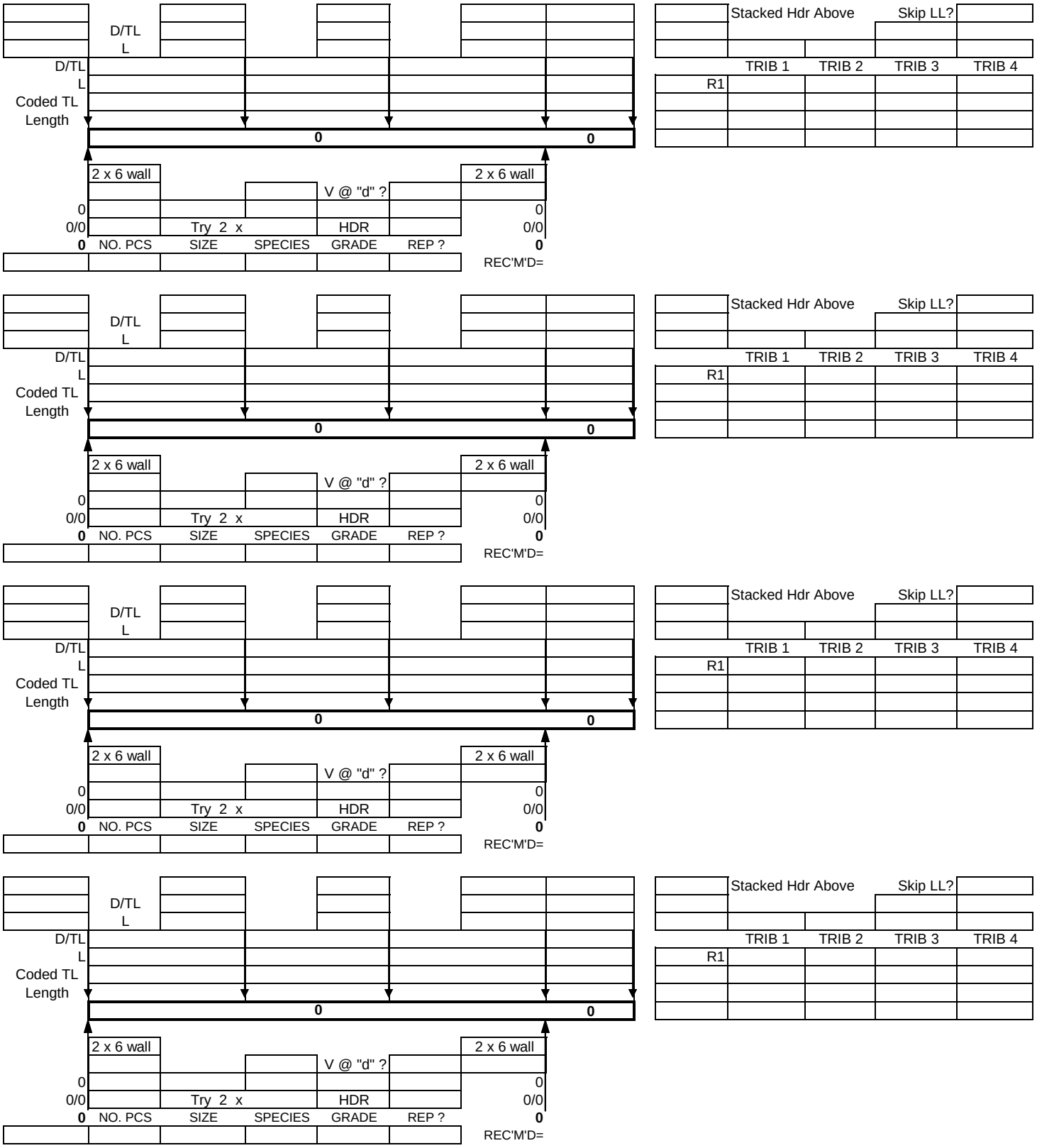
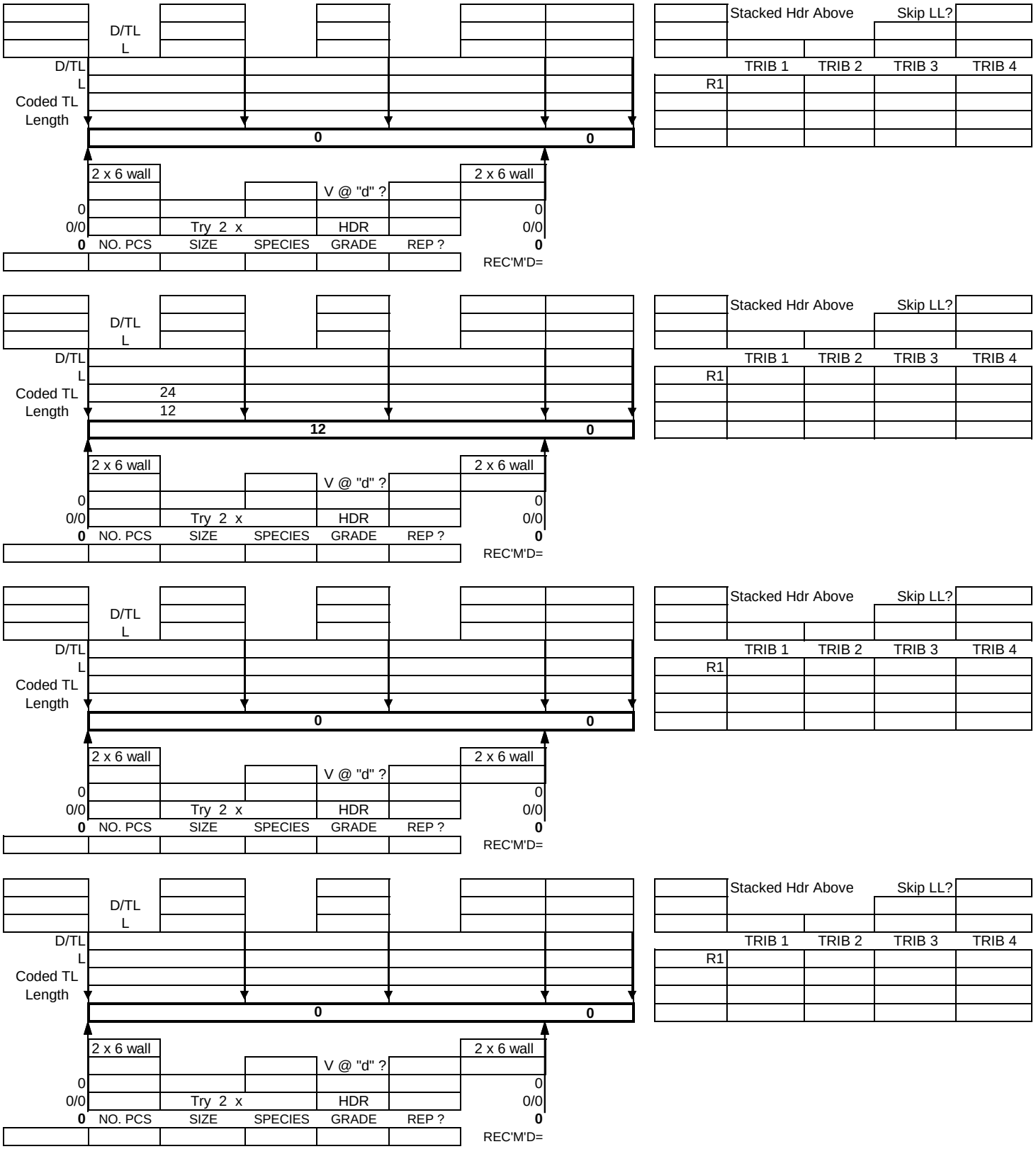
0 DESIGN OF RAFTERS, JOISTS, HEADERS, AND BEAMS Sht. H1




D/TL
L
D/TL
L
Coded TL
Length
0
0
2 x 6 wall
2 x 6 wall
V @ "d" ?
0
0
0/0
Try 2 x
HDR
0/0
0
NO. PCS
SIZE
SPECIES
GRADE
REP ?
0
REC'M'D=
Stacked Hdr Above
Skip LL?
TRIB 1
TRIB 2
TRIB 3
TRIB 4
R1


D/TL
L
D/TL
L
Coded TL
Length
0
0
2 x 6 wall
2 x 6 wall
V @ "d" ?
0
0
0/0
Try 2 x
HDR
0/0
0
NO. PCS
SIZE
SPECIES
GRADE
REP ?
0
REC'M'D=
Stacked Hdr Above
Skip LL?
TRIB 1
TRIB 2
TRIB 3
TRIB 4
R1
D/TL
L
D/TL
L
Coded TL
Length
24
12
12
0
2 x 6 wall
2 x 6 wall
V @ "d" ?
0
0
0/0
Try 2 x
HDR
0/0
0
NO. PCS
SIZE
SPECIES
GRADE
REP ?
0
REC'M'D=
Stacked Hdr Above
Skip LL?
TRIB 1
TRIB 2
TRIB 3
TRIB 4
R1
D/TL
L
D/TL
L
Coded TL
Length
0
0
2 x 6 wall
2 x 6 wall
V @ "d" ?
0
0
0/0
Try 2 x
HDR
0/0
0
NO. PCS
SIZE
SPECIES
GRADE
REP ?
0
REC'M'D=
Stacked Hdr Above
Skip LL?
TRIB 1
TRIB 2
TRIB 3
TRIB 4
R1
D/TL
L
D/TL
L
Coded TL
Length
0
0
2 x 6 wall
2 x 6 wall
V @ "d" ?
0
0
0/0
Try 2 x
HDR
0/0
0
NO. PCS
SIZE
SPECIES
GRADE
REP ?
0
REC'M'D=
Stacked Hdr Above
Skip LL?
TRIB 1
TRIB 2
TRIB 3
TRIB 4
R1

DESIGN OF STUDS, POSTS, TRIMMERS, KING STUDS Sht. S1

PGT1AM

Species : | No.Pieces= 4 | Stud/King/Post/Trim? P
Special, GLC/PSL ? | Grade : | Rough Sawn? N | Fire-Rated Wall? N
Axial Load Type (DL,FLR,RF,SNOW, AUTO) : AUTO | Axial C_D = 1.25 | Per IBC Sect. 2306.2.1? N
Lateral Load Type (AutoW, W, EQ, N/A) : N/A | Lateral C_D = N/A | Free-standing Post?
TRY > **2** x **6** | Fb = 675 psi | Brg on Sole Plate? Y
Exact Size = 6.00 in. w. x 5.50 in.dp. | Fc = 800 psi | Basic C_P = N/A
A / S / I = 33.0 in.^2 30.3 in.^3 83 in.^4 | E = 1200 ksi | Flexure C_F = N/A
| C_R = N/A | Comp. C_F = 1.00

AXIAL LOAD | Roof+Floor P_D = 10656 lbs | L/D ratio = 22 **< 50 OK**
Red. Rf Live 36.8% | Roof P_L = 5036 lbs | F_{CE} = 756 psi
| Floor P_L = 0 lbs | F_C* = 1000 psi
| Total = 15692 lbs | F_C' = 588 psi
0.0 | R_T = 0. lbs | C_D = 1.25 (Governs)
0.0 | (Axial Load Only) | fc = 476 psi
Clear Ht.= 10. ft. | HEM-FIR Sole Plate Bearing Ratio = **1.17** **N.G. !!**
0.0 | (Axial Load Only) | Compression R = 0.93 **OK**
C_P = N/A | R_B = 0. lbs
M_{POS} = 0
Lateral Load Defl. = N/A | f_B = N/A | Fb ' = N/A | Flexure R = N/A

		No. of Pcs.	Width		Depth	Species	Grade
PGT1AM	**USE > POST**	**4**	**2**	**x**	**6**	**HEM-FIR**	**Stud**

Species : | No.Pieces= 1 | Stud/King/Post/Trim? P
Special, GLC/PSL ? | Grade : | Rough Sawn? N | Fire-Rated Wall? N
Axial Load Type (DL,FLR,RF,SNOW, AUTO) : AUTO | Axial C_D = 1.00 | Per IBC Sect. 2306.2.1? N
Lateral Load Type (AutoW, W, EQ, N/A) : N/A | Lateral C_D = N/A | Free-standing Post?
TRY > **2** x | Fb = 675 psi | Brg on Sole Plate? Y
Exact Size = x | Fc = 800 psi | Basic C_P = N/A
A / S / I = | E = 1200 ksi | Flexure C_F = N/A
| C_R = N/A | Comp. C_F = 1.00

AXIAL LOAD | Roof+Floor P_D = 0 lbs | L/D ratio = **< 50 OK**
| Roof P_L = 0 lbs | F_{CE} = psi
| Floor P_L = 0 lbs | F_C* = psi
| Total = 0 lbs | F_C' = psi
0.0 | R_T = 0. lbs | C_D = 1.00 (Governs)
0.0 | (Axial Load Only) | fc = psi
Clear Ht.= 10. ft. |
0.0 | (Axial Load Only) | Compression R =
C_P = N/A | R_B = 0. lbs
M_{POS} = 0
Lateral Load Defl. = N/A | f_B = | Fb ' = | Flexure R =

		Width		Depth	Species	Grade
POST		**N/A**	**x**	**N/A**		

Species : | No.Pieces= | Stud/King/Post/Trim? K
Special, GLC/PSL ? | Grade : | Rough Sawn? N | Fire-Rated Wall? N
Axial Load Type (DL,FLR,RF,SNOW, AUTO) : AUTO | Axial C_D = 1.00 | Per IBC Sect. 2306.2.1? N
Lateral Load Type (AutoW, W, EQ, N/A) : AutoW | Lateral C_D = 1.60 | Trib. Width (ft.) =
TRY > **2** x | Fb = 675 psi | Defl. Ratio (L / Input) = 120
Exact Size = x | Fc = 800 psi | Basic C_P = 1.2
A / S / I = | E = 1200 ksi | Flexure C_F = 1.00
Speed = 90. mph | C_R = 1.00 | Comp. C_F = 1.00
Exp. = C | Roof+Floor P_D = 0 lbs | L/D ratio = **< 50 OK**
Sole at = 0. ft. | Roof P_L = 0 lbs | F_{CE} = psi
| Floor P_L = 0 lbs | F_C* = psi
Wind (psf) Dist.(ft.) | Total = 0 lbs | F_C' = psi
0.0 0.0 | R_T = 80. lbs | C_D = 1.60 (Governs)
0.0 0.0 | (Axial Load Only) | fc = psi
Clear Ht.= 10. ft.
16.0 10.0
C_P = 1.20 | R_B = 80. lbs
M_{POS} = 201
Lateral Load Defl. = N/A | f_B = | Fb ' = | Flexure R =
Lateral Load Allow = 1.00 in.

		Width		Depth	Species	Grade
KING		**N/A**	**x**	**N/A**		

Species : No.Pieces= 1 Stud/King/Post/Trim? P
Special, GLC/PSL ? Grade : Rough Sawn? N Fire-Rated Wall? N
Axial Load Type (DL,FLR,RF,SNOW, AUTO) : AUTO Axial C_D = 1.00 Per IBC Sect. 2306.2.1? N
Lateral Load Type (AutoW, W, EQ, N/A) : N/A Lateral C_D = N/A Free-standing Post?
TRY > **2** x Fb = 675 psi Brg on Sole Plate? Y
Exact Size = x Fc = 800 psi Basic C_P = N/A
A / S / I = E = 1200 ksi Flexure C_F = N/A
C_R = N/A Comp. C_F = 1.00

AXIAL LOAD
Roof+Floor P_D = 0 lbs L/D ratio = **< 50 OK**
Roof P_L = 0 lbs F_{CE} = psi
Floor P_L = 0 lbs F_C* = psi
Total = 0 lbs F_C' = psi
0.0 R_T = 0. lbs C_D = 1.00 (Governs)
0.0 (Axial Load Only) fc = psi
Clear Ht.= 10. ft.
0.0 (Axial Load Only) Compression R =
C_P = N/A R_B = 0. lbs
M_{POS} = 0
Lateral Load Defl. = N/A f_B = Fb ' = Flexure R =

	Width		Depth	Species	Grade
POST	**N/A**	**x**	**N/A**		

Species : No.Pieces= 1 Stud/King/Post/Trim? K
Special, GLC/PSL ? Grade : Rough Sawn? N Fire-Rated Wall? N
Axial Load Type (DL,FLR,RF,SNOW, AUTO) : AUTO Axial C_D = 1.00 Per IBC Sect. 2306.2.1? N
Lateral Load Type (AutoW, W, EQ, N/A) : AutoW Lateral C_D = 1.60 Trib. Width (ft.) =
TRY > **2** x Fb = 675 psi Defl. Ratio (L / Input) = 120
Exact Size = x Fc = 800 psi Basic C_P = 1.2
A / S / I = E = 1200 ksi Flexure C_F = 1.00
Speed = 90. mph C_R = 1.00 Comp. C_F = 1.00
Exp. = C Roof+Floor P_D = 0 lbs L/D ratio = **< 50 OK**
Sole at = 0. ft. Roof P_L = 0 lbs F_{CE} = psi
Floor P_L = 0 lbs F_C* = psi
Wind (psf) Dist.(ft.) Total = 0 lbs F_C' = psi
0.0 0.0 R_T = 80. lbs C_D = 1.60 (Governs)
0.0 0.0 (Axial Load Only) fc = psi
Clear Ht.= 10. ft.
16.0 10.0
C_P = 1.20 R_B = 80. lbs
M_{POS} = 201
Lateral Load Defl. = N/A f_B = Fb ' = Flexure R =
Lateral Load Allow = 1.00 in.

	Width		Depth	Species	Grade
KING	**N/A**	**x**	**N/A**		

Species : No.Pieces= 1 Stud/King/Post/Trim? K
Special, GLC/PSL ? Grade : Rough Sawn? N Fire-Rated Wall? N
Axial Load Type (DL,FLR,RF,SNOW, AUTO) : AUTO Axial C_D = 1.00 Per IBC Sect. 2306.2.1? N
Lateral Load Type (AutoW, W, EQ, N/A) : AutoW Lateral C_D = 1.60 Trib. Width (ft.) =
TRY > **2** x Fb = 675 psi Defl. Ratio (L / Input) = 120
Exact Size = x Fc = 800 psi Basic C_P = 1.2
A / S / I = E = 1200 ksi Flexure C_F = 1.00
Speed = 90. mph C_R = 1.00 Comp. C_F = 1.00
Exp. = C Roof+Floor P_D = 0 lbs L/D ratio = **< 50 OK**
Sole at = 0. ft. Roof P_L = 0 lbs F_{CE} = psi
Floor P_L = 0 lbs F_C* = psi
Wind (psf) Dist.(ft.) Total = 0 lbs F_C' = psi
0.0 0.0 R_T = 80. lbs C_D = 1.60 (Governs)
0.0 0.0 (Axial Load Only) fc = psi
Clear Ht.= 10. ft.
16.0 10.0
C_P = 1.20 R_B = 80. lbs
M_{POS} = 201
Lateral Load Defl. = N/A f_B = Fb ' = Flexure R =
Lateral Load Allow = 1.00 in.

	Width		Depth	Species	Grade
KING	**N/A**	**x**	**N/A**		

FOUNDATION DESIGN

ALLOW SOIL BRG PRESSURE = 1500. psf ALLOW BASEMENT SOIL BRG PRESSURE = 2000. psf

CONTINUOUS FOOTING DESIGNS: ALL 10" THICK UNLESS NOTED OTHERWISE.

	WT1	WT2	WT3	WT4	WT5	WT6	WT7	WT8
RF LOAD =								
FLR LOAD =								
STUD WALL =								
BSMT/MISC.=								
TOTAL =								
W REQ'D =								
USE FTG :								
REINF Ar =								

SPOT FOOTING DESIGNS: ALL 12" THICK UNLESS NOTED OTHERWISE.

For unequal beam reactions, suffix "L", "M", or "R". No suffix is "L" reaction by default.

SF2 Post Design?

ACTUAL LOAD = lbs MAX LOAD FROM

LOAD CAPACITY = 6000 lbs ALSO FROM

REQ'D AREA = 0.00 ft.^2

NOT USED SIZE OF SQUARE FTG = 0.0 in.

SF2.5 Post Design?

ACTUAL LOAD = 8265 lbs MAX LOAD FROM **GT1AL**

LOAD CAPACITY = 9375 lbs ALSO FROM

REQ'D AREA = 5.51 ft.^2

SIZE OF SQUARE FTG = 28.2 in.

PROVIDE 30 INCH SQUARE FOOTING 12 INCH THICK W/ 3-# 4 BOTT E.W.

SF3 Post Design?

ACTUAL LOAD = lbs MAX LOAD FROM

LOAD CAPACITY = 13500 lbs ALSO FROM

REQ'D AREA = 0.00 ft.^2

NOT USED SIZE OF SQUARE FTG = 0.0 in.

SF3.5 Post Design?

ACTUAL LOAD = 15692 lbs MAX LOAD FROM **GT1AM**

LOAD CAPACITY = 18375 lbs ALSO FROM

REQ'D AREA = 10.46 ft.^2

SIZE OF SQUARE FTG = 38.8 in.

PROVIDE 42 INCH SQUARE FOOTING 12 INCH THICK W/ 5-# 4 BOTT E.W.

SF4 Post Design?

ACTUAL LOAD = lbs MAX LOAD FROM

LOAD CAPACITY = 24000 lbs ALSO FROM

REQ'D AREA = 0.00 ft.^2

NOT USED SIZE OF SQUARE FTG = 0.0 in.

SF4.5 Post Design?

ACTUAL LOAD = lbs MAX LOAD FROM

LOAD CAPACITY = 30375 lbs ALSO FROM

REQ'D AREA = 0.00 ft.^2

NOT USED SIZE OF SQUARE FTG = 0.0 in.

0

0 Sheet: L 1

WALL	SHEAR WALL MATERIAL SCHEDULE	ALLOWABLE SHEAR
SW1	7/8" 3-Coat Stucco w/ #16 Ga. Staples w/ 7/8" legs @ 6" o.c.	180 plf
SW2	1/2" Gypboard wall (unblocked) w/ 5d cooler nails 7" o.c. at edges and field.	100 plf
SW3	1/2" Gypboard wall (unblocked) w/ 5d cooler nails 4" o.c. at edges and field.	125 plf
SW4	1/2" Gypboard wall (blocked) w/ 5d cooler nails 4" o.c. at edges and field.	150 plf
SW5	5/8" Gypboard wall (unblocked) w/ 6d cooler nails 7" o.c. at edges and field.	115 plf
SW6	5/8" Gypboard wall (unblocked) w/ 6d cooler nails 4" o.c. at edges and field.	145 plf
SW7	5/8" Gypboard wall (blocked) w/ 6d cooler nails 4" o.c. at edges and field.	175 plf
SW8	Two layers of 5/8" Gypboard (blocked) w/ 6d cooler nails 9" o.c. at base ply and 8d cooler nails 7" o.c. at face ply	250 plf
SW9	3/8" blocked CDX sheathing w/ 8d common nails 6" o.c. at edges and 12" o.c. field.	220 plf
SW10	3/8" blocked CDX sheathing w/ 8d common nails 4" o.c. at edges and 12" o.c. field.	320 plf
SW11	3/8" blocked CDX sheathing w/ 8d common nails 3" o.c. at edges and 12" o.c. field.	410 plf
SW12	3/8" blocked CDX sheathing w/ 8d common nails 2" o.c. at edges and 12" o.c. field.	530 plf
SW13	15/32" blocked CDX sheathing w/ 10d common nails 6" o.c. at edges and 12" o.c. field.	260 plf
SW14	15/32" blocked CDX sheathing w/ 10d common nails 4" o.c. at edges and 12" o.c. field.	390 plf
SW15	15/32" blocked CDX sheathing w/ 10d common nails 3" o.c. at edges and 12" o.c. field.	510 plf

SHEARWALL CRITERIA

STRAP	TYPE	ALLOW. (lbs)
CMST14	A	5517
2CS16	B	2899
2CS18	C	2329
2CS20	D	1751
CS16	E	1449
CS18	F	1165
CS20	G	876

HOLDOWN	TYPE	ALLOW. (lbs)	
HD10A	H	8045	(Triple 2x)
HDU8	I	5665	
PHD6/STHD1	J	8505	
PHD5/STHD1	K	5665	
PHD2/STHD1	L	1690	
PHD2/STHD	M	3115	

6 x 4 Post
8 x 4 Post

ASED ON C

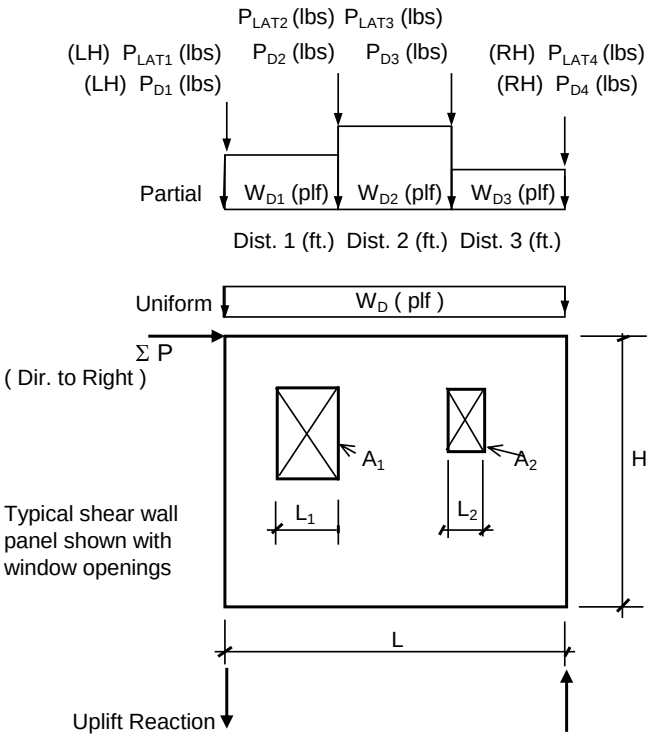
Note:
2CS20 denotes double CS20 strap.
2SW2 denotes SW2 applied both sides of the wall.

Note:
LSTHD8C, STHD10E, STHD14E denote reduced design capacity at corner or end condition where hold down is 1.5" from corner or end; actual holdowns are LSTHD8, STHD10, STHD14 etc.

LSTHD8R is reduced capacity LSTHD8 with 10-16d sinker nails. It can used as a direct replacement for the discontinued PAHD42.

SHEARWALL ANALYSIS

The following criteria apply to the Multi-Panel and Shearwall Analysis Programs **:**



NOTES **:**

P_{LAT} (where occurs) are overturn loads induced by shearwall above.

PD and WD are reduced by 0.60 for earthquake and for wind, for effective dead load resisting moment.

American Plywood Association (APA) Technical Report #157 - Perforated Shear Wall Design **:**

Area* = $\Sigma A_1 + A_2 + \ldots$

Length* = $\Sigma L_1 + L_2 + \ldots$

$\alpha = \frac{\text{Area*}}{L \times H}$ $\beta = \frac{L - \text{Length*}}{L}$

$r = \frac{1}{1 + (\alpha / \beta)}$ $F = \frac{r}{3 - (2 \times r)}$

$L' = F \times L$ $q' = \frac{P}{L'}$

Per the APA TR#157, minimum of 24" required under openings. Minimum of 12" WSP or 24" gypbd required above openings. Height to width ratio of all wall piers shall be 3.5:1. Entire panel is sheathed with shear mat'l, including above and below window openings. Shear panel type is determined by the "amplified" shear value q'. With this method, it is not necessary to design for force transfer around openings, and straps are typically not required at the opening corners.

With multi-panel shearwalls, value of $q' = \frac{\text{Total P}}{(L_A \times F_A) + (L_B \times F_B) + \ldots}$

0.00

0 Sheet: L 3

WIND PRESSURE WORKSHEET

WIND p = q x G x Cp x Iw x It Wind Speed V = 90 mph Exposure : C Roof p_h = 0.0 psf

MAIN WIND-FORCE RESISTING SYSTEM Eff. A_V = s. f. I_W x I_T = 1.00 h = 16.6'

Walls	Kz	Windward p_z (psf)	Leeward p_h (psf)
p1 (0' - 15')	0.85	**11.6**	**7.2**
p2 (15' - 20')	0.90	**12.3**	**7.7**
p3 (20' - 25')	0.94	**12.8**	**8.0**

G = 0.85 WR1 Pitch= 5.0:12

Kh = 0.90 LR1 Pitch= 5.0:12

Use : **p2_R**
Use : **p2_LW**

Cp = 1.3 Windward and Leeward Walls (p_W)

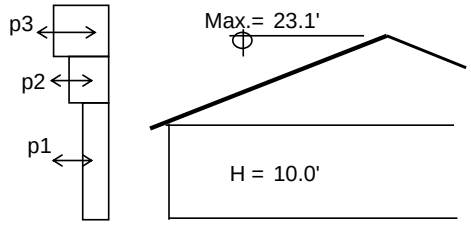
Cp = 0.8 Windward Wall (p_WW)

Cp = 0.5 Leeward Wall (p_LW)

Cp = 0.23 Windward Roof (p_WR)

Cp = 0.60 Leeward Roof (p_LR)

Cp = 0.83 Windward and Leeward Roofs (p_R)



Number of Stories = 1

Shear Panel Label = SW

WR Pitch Length = 31.5'

LR Pitch Length = 31.5'

WIND FRONT/BACK Total Wind (lbs) = **0** **< < GOVERNS FRONT / BACK**

ROOF Wall Subtotal = 0 Roof Subtotal = 0

Wall :	Length	Height	Pressure	Wind Load	Roof :	Length	Ht / Width	Pressure	Wind Load

WIND LEFT/RIGHT Total Wind (lbs) = **0** **< < GOVERNS LEFT / RIGHT**

ROOF Wall Subtotal = 0 Roof Subtotal = 0

Wall :	Length	Height	Pressure	Wind Load	Roof :	Length	Ht / Width	Pressure	Wind Load

0

0 Sheet: L 3A

LATERAL LOAD ANALYSIS & DESIGN

BACK/FRONT GOVERNS?

WIND FRONT/BACK

	0	

RIGHT/LEFT GOVERNS?

WIND LEFT/RIGHT

	0	

0.00

0

SHEARWALL ANALYSIS

Sheet: L

Panel Mark :								
Σ Lateral P =								
Load Type (W, EQ) :								
At Elevated Floor ?								
L (ft.) =								
H (ft.) =								
APA TR157 Perforated Shearwall — Area* =								
APA TR157 Perforated Shearwall — Length* =								
APA TR157 Perforated Shearwall — F =								
q (plf) =								
L'_{TOTAL} =								
q' (plf) =								
H/L =								
Allowed Types :								
Select Shearwall :								
Panel Mark (above) :								
q (above) =	0	0	0	0	0	0	0	0
H (above - ft.) =	0	0	0	0	0	0	0	0
Panel Above L (ft.) =	0	0	0	0	0	0	0	0
Offset - from LH end =								
→ Dir R M_{OT} (ft-lbs) =								
← Dir L M_{OT} (ft-lbs) =								
Unif. W_D (plf) =								
Panel Above Unif. W_D (plf) =								
Dist. 1 (ft.) =								
Dist. 2 (ft.) =								
Dist. 3 (ft.) =								
Part. W_{D1} (plf) =								
Part. W_{D2} (plf) =								
Part. W_{D3} (plf) =								
(LH) P_{D1} (lbs) =								
P_{D2} (lbs) =								
P_{D3} (lbs) =								
(RH) P_{D4} (lbs) =								
Dir. R M_R (ft-lbs) =								
Dir. L M_R (ft-lbs) =								
Dir. R M_{NET} (ft-lbs) =								
Dir. L M_{NET} (ft-lbs) =								
LH end Uplift (lbs) =								
RH end Uplift (lbs) =								
LH end Holdown :								
RH end Holdown :								
LH end Studs/Post :								
RH end Studs/Post :								
16d or 1/2 in. dia. a.b. o/c =								
8d or 0.138 in. dia. shotpin =								
(At L_{EFF}) 16d toenails =								
Directly over shear wall								
2 x 6 blocking o/c =								
Simpson LTP4 o/c =								
Simpson A35, A35F o/c =								
At L_{EFF} (ft.) =								
2 x 6 blocking o/c =								
Simpson LTP4 o/c =								
Simpson A35, A35F o/c =								

0.00

0

SHEARWALL ANALYSIS

Sheet: L

Panel Mark :								
Σ Lateral P =								
Load Type (W, EQ) :								
At Elevated Floor ?								
L (ft.) =								
H (ft.) =								
APA TR157 Perforated Shearwall — Area* =								
APA TR157 Perforated Shearwall — Length* =								
APA TR157 Perforated Shearwall — F =								
q (plf) =								
L'_{TOTAL} =								
q' (plf) =								
H/L =								
Allowed Types :								
Select Shearwall :								
Panel Mark (above) :								
q (above) =	0	0	0	0	0	0	0	0
H (above - ft.) =	0	0	0	0	0	0	0	0
Panel Above L (ft.) =	0	0	0	0	0	0	0	0
Offset - from LH end =								
Dir R M_{OT} (ft-lbs) =								
Dir L M_{OT} (ft-lbs) =								
Unif. W_D (plf) =								
Panel Above Unif. W_D (plf) =								
Dist. 1 (ft.) =								
Dist. 2 (ft.) =								
Dist. 3 (ft.) =								
Part. W_{D1} (plf) =								
Part. W_{D2} (plf) =								
Part. W_{D3} (plf) =								
(LH) P_{D1} (lbs) =								
P_{D2} (lbs) =								
P_{D3} (lbs) =								
(RH) P_{D4} (lbs) =								
Dir. R M_R (ft-lbs) =								
Dir. L M_R (ft-lbs) =								
Dir. R M_{NET} (ft-lbs) =								
Dir. L M_{NET} (ft-lbs) =								
LH end Uplift (lbs) =								
RH end Uplift (lbs) =								
LH end Holdown :								
RH end Holdown :								
LH end Studs/Post :								
RH end Studs/Post :								
16d or 1/2 in. dia. a.b. o/c =								
8d or 0.138 in. dia. shotpin =								
(At L_{EFF}) 16d toenails =								
Directly over shear wall								
2 x 6 blocking o/c =								
Simpson LTP4 o/c =								
Simpson A35, A35F o/c =								
At L_{EFF} (ft.) =								
2 x 6 blocking o/c =								
Simpson LTP4 o/c =								
Simpson A35, A35F o/c =								

0.00

0

MULTIPANEL SHEARWALL ANALYSIS

Sheet: L

Elev. Floor? | L_{TOT} = **0.0 ft.** | q = **0. plf**

Load Type (W, EQ): | (L, R, Both)? Both | L'_{TOT} = **0.0 ft.** | q' = **0. plf**

Ht. (ft.) =									
L (ft.) =									
H (ft.) =									
APA TR157 Perforated Shearwall — Area* =									
Length* =									
F =									
H/L =									
Allowed Types :									
Select Shearwall :									
Panel Mark (above) :									
q (above) =	0	0	0	0	0	0	0	0	
H (above - ft.) =	0	0	0	0	0	0	0	0	
Panel Above L (ft.) =	0	0	0	0	0	0	0	0	
Offset - from LH end =									

Q (lbs) =

Dir R M_{OT} (ft-lbs) =

Dir L M_{OT} (ft-lbs) =

Unif. W_D (plf) =									
Panel Above Unif. W_D (plf) =									
Dist. 1 (ft.) =									
Dist. 2 (ft.) =									
Dist. 3 (ft.) =									
Part. W_{D1} (plf) =									
Part. W_{D2} (plf) =									
Part. W_{D3} (plf) =									
(LH) P_{D1} (lbs) =									
P_{D2} (lbs) =									
P_{D3} (lbs) =									
(RH) P_{D4} (lbs) =									

Dir. R M_R (ft-lbs) =

Dir. L M_R (ft-lbs) =

Dir. R M_{NET} (ft-lbs) = 0

Dir. L M_{NET} (ft-lbs) = 0

LH end Uplift (lbs) = 0

RH end Uplift (lbs) = 0

LH end Holdown :								
RH end Holdown :								

LH end Studs/Post :

RH end Studs/Post :

Shear Transfer

1/2 in. dia. a.b. o/c =

0.138 in. dia. shotpin =

(At L_{EFF}) 16d toenails =

Directly over shear wall

2 x 6 blocking o/c =

Simpson LTP4 o/c =

Simpson A35, A35F o/c =

At L_{EFF} =

0.00

0

MULTIPANEL SHEARWALL ANALYSIS

Sheet: L

Elev. Floor? | L_{TOT} = **0.0 ft.** | q = **0. plf**

Load Type (W, EQ): | (L, R, Both)? Both | L'_{TOT} = **0.0 ft.** | q' = **0. plf**

Ht. (ft.) =									
L (ft.) =									
H (ft.) =									
APA TR157 Perforated Shearwall — Area* =									
Length* =									
F =									
H/L =									
Allowed Types :									
Select Shearwall :									
Panel Mark (above) :									
q (above) =	0	0	0	0	0	0	0	0	
H (above - ft.) =	0	0	0	0	0	0	0	0	
Panel Above L (ft.) =	0	0	0	0	0	0	0	0	
Offset - from LH end =									

Q (lbs) =

Dir R M_{OT} (ft-lbs) =

Dir L M_{OT} (ft-lbs) =

Unif. W_D (plf) =									
Panel Above Unif. W_D (plf) =									
Dist. 1 (ft.) =									
Dist. 2 (ft.) =									
Dist. 3 (ft.) =									
Part. W_{D1} (plf) =									
Part. W_{D2} (plf) =									
Part. W_{D3} (plf) =									
(LH) P_{D1} (lbs) =									
P_{D2} (lbs) =									
P_{D3} (lbs) =									
(RH) P_{D4} (lbs) =									

Dir. R M_R (ft-lbs) =

Dir. L M_R (ft-lbs) =

Dir. R M_{NET} (ft-lbs) = 0

Dir. L M_{NET} (ft-lbs) = 0

LH end Uplift (lbs) = 0

RH end Uplift (lbs) = 0

LH end Holdown :								
RH end Holdown :								

LH end Studs/Post :

RH end Studs/Post :

Shear Transfer

1/2 in. dia. a.b. o/c =

0.138 in. dia. shotpin =

(At L_{EFF}) 16d toenails =

Directly over shear wall

2 x 6 blocking o/c =

Simpson LTP4 o/c =

Simpson A35, A35F o/c =

At L_{EFF} =

0.00

0

MULTIPANEL SHEARWALL ANALYSIS

Sheet: L

Elev. Floor? | L_{TOT} = **0.0 ft.** | q = **0. plf**

Load Type (W, EQ): | (L, R, Both)? Both | L'_{TOT} = **0.0 ft.** | q' = **0. plf**

Ht. (ft.) =									
L (ft.) =									
H (ft.) =									
APA TR157 Perforated Shearwall — Area* =									
Length* =									
F =									
H/L =									
Allowed Types :									
Select Shearwall :									
Panel Mark (above) :									
q (above) =	0	0	0	0	0	0	0	0	
H (above - ft.) =	0	0	0	0	0	0	0	0	
Panel Above L (ft.) =	0	0	0	0	0	0	0	0	
Offset - from LH end =									

Q (lbs) =

Dir R M_{OT} (ft-lbs) =

Dir L M_{OT} (ft-lbs) =

Unif. W_D (plf) =									
Panel Above Unif. W_D (plf) =									
Dist. 1 (ft.) =									
Dist. 2 (ft.) =									
Dist. 3 (ft.) =									
Part. W_{D1} (plf) =									
Part. W_{D2} (plf) =									
Part. W_{D3} (plf) =									
(LH) P_{D1} (lbs) =									
P_{D2} (lbs) =									
P_{D3} (lbs) =									
(RH) P_{D4} (lbs) =									

Dir. R M_R (ft-lbs) =

Dir. L M_R (ft-lbs) =

Dir. R M_{NET} (ft-lbs) = 0

Dir. L M_{NET} (ft-lbs) = 0

LH end Uplift (lbs) = 0

RH end Uplift (lbs) = 0

LH end Holdown :								
RH end Holdown :								

LH end Studs/Post :

RH end Studs/Post :

Shear Transfer

1/2 in. dia. a.b. o/c =

0.138 in. dia. shotpin =

(At L_{EFF}) 16d toenails =

Directly over shear wall

2 x 6 blocking o/c =

Simpson LTP4 o/c =

Simpson A35, A35F o/c =

At L_{EFF} =

0.00

0

MULTIPANEL SHEARWALL ANALYSIS

Sheet: L

Elev. Floor? | L_{TOT} = **0.0 ft.** | q = **0. plf**

Load Type (W, EQ): | (L, R, Both)? Both | L'_{TOT} = **0.0 ft.** | q' = **0. plf**

Ht. (ft.) =									
L (ft.) =									
H (ft.) =									
APA TR157 Perforated Shearwall — Area* =									
Length* =									
F =									
H/L =									
Allowed Types :									
Select Shearwall :									
Panel Mark (above) :									
q (above) =	0	0	0	0	0	0	0	0	
H (above - ft.) =	0	0	0	0	0	0	0	0	
Panel Above L (ft.) =	0	0	0	0	0	0	0	0	
Offset - from LH end =									

Q (lbs) =

Dir R M_{OT} (ft-lbs) =

Dir L M_{OT} (ft-lbs) =

Unif. W_D (plf) =									
Panel Above Unif. W_D (plf) =									
Dist. 1 (ft.) =									
Dist. 2 (ft.) =									
Dist. 3 (ft.) =									
Part. W_{D1} (plf) =									
Part. W_{D2} (plf) =									
Part. W_{D3} (plf) =									
(LH) P_{D1} (lbs) =									
P_{D2} (lbs) =									
P_{D3} (lbs) =									
(RH) P_{D4} (lbs) =									

Dir. R M_R (ft-lbs) =

Dir. L M_R (ft-lbs) =

Dir. R M_{NET} (ft-lbs) = 0

Dir. L M_{NET} (ft-lbs) = 0

LH end Uplift (lbs) = 0

RH end Uplift (lbs) = 0

LH end Holdown :								
RH end Holdown :								

LH end Studs/Post :

RH end Studs/Post :

Shear Transfer

1/2 in. dia. a.b. o/c =

0.138 in. dia. shotpin =

(At L_{EFF}) 16d toenails =

Directly over shear wall

2 x 6 blocking o/c =

Simpson LTP4 o/c =

Simpson A35, A35F o/c =

At L_{EFF} =

0.00

0

MULTIPANEL SHEARWALL ANALYSIS

Sheet: L

Elev. Floor? | L_{TOT} = **0.0 ft.** | q = **0. plf**

Load Type (W, EQ): | (L, R, Both)? Both | L'_{TOT} = **0.0 ft.** | q' = **0. plf**

Ht. (ft.) =									
L (ft.) =									
H (ft.) =									
APA TR157 Perforated Shearwall — Area* =									
Length* =									
F =									
H/L =									
Allowed Types :									
Select Shearwall :									
Panel Mark (above) :									
q (above) =	0	0	0	0	0	0	0	0	
H (above - ft.) =	0	0	0	0	0	0	0	0	
Panel Above L (ft.) =	0	0	0	0	0	0	0	0	
Offset - from LH end =									

Q (lbs) =

Dir R M_{OT} (ft-lbs) =

Dir L M_{OT} (ft-lbs) =

Unif. W_D (plf) =									
Panel Above Unif. W_D (plf) =									
Dist. 1 (ft.) =									
Dist. 2 (ft.) =									
Dist. 3 (ft.) =									
Part. W_{D1} (plf) =									
Part. W_{D2} (plf) =									
Part. W_{D3} (plf) =									
(LH) P_{D1} (lbs) =									
P_{D2} (lbs) =									
P_{D3} (lbs) =									
(RH) P_{D4} (lbs) =									

Dir. R M_R (ft-lbs) =

Dir. L M_R (ft-lbs) =

Dir. R M_{NET} (ft-lbs) = 0

Dir. L M_{NET} (ft-lbs) = 0

LH end Uplift (lbs) = 0

RH end Uplift (lbs) = 0

LH end Holdown :								
RH end Holdown :								

LH end Studs/Post :

RH end Studs/Post :

Shear Transfer

1/2 in. dia. a.b. o/c =

0.138 in. dia. shotpin =

(At L_{EFF}) 16d toenails =

Directly over shear wall

2 x 6 blocking o/c =

Simpson LTP4 o/c =

Simpson A35, A35F o/c =

At L_{EFF} =

0.00

0

MULTIPANEL SHEARWALL ANALYSIS

Sheet: L

Elev. Floor? | L_{TOT} = **0.0 ft.** | q = **0. plf**

Load Type (W, EQ): | (L, R, Both)? Both | L'_{TOT} = **0.0 ft.** | q' = **0. plf**

Ht. (ft.) =									
L (ft.) =									
H (ft.) =									
APA TR157 Perforated Shearwall — Area* =									
Length* =									
F =									
H/L =									
Allowed Types :									
Select Shearwall :									
Panel Mark (above) :									
q (above) =	0	0	0	0	0	0	0	0	
H (above - ft.) =	0	0	0	0	0	0	0	0	
Panel Above L (ft.) =	0	0	0	0	0	0	0	0	
Offset - from LH end =									

Q (lbs) =

Dir R M_{OT} (ft-lbs) =

Dir L M_{OT} (ft-lbs) =

Unif. W_D (plf) =									
Panel Above Unif. W_D (plf) =									
Dist. 1 (ft.) =									
Dist. 2 (ft.) =									
Dist. 3 (ft.) =									
Part. W_{D1} (plf) =									
Part. W_{D2} (plf) =									
Part. W_{D3} (plf) =									
(LH) P_{D1} (lbs) =									
P_{D2} (lbs) =									
P_{D3} (lbs) =									
(RH) P_{D4} (lbs) =									

Dir. R M_R (ft-lbs) =

Dir. L M_R (ft-lbs) =

Dir. R M_{NET} (ft-lbs) = 0

Dir. L M_{NET} (ft-lbs) = 0

LH end Uplift (lbs) = 0

RH end Uplift (lbs) = 0

LH end Holdown :								
RH end Holdown :								

LH end Studs/Post :

RH end Studs/Post :

Shear Transfer

1/2 in. dia. a.b. o/c =

0.138 in. dia. shotpin =

(At L_{EFF}) 16d toenails =

Directly over shear wall

2 x 6 blocking o/c =

Simpson LTP4 o/c =

Simpson A35, A35F o/c =

At L_{EFF} =

0.00

0

MULTIPANEL SHEARWALL ANALYSIS

Sheet: L

Elev. Floor? | L_{TOT} = **0.0 ft.** | q = **0. plf**

Load Type (W, EQ): | (L, R, Both)? Both | L'_{TOT} = **0.0 ft.** | q' = **0. plf**

Ht. (ft.) =									
L (ft.) =									
H (ft.) =									
APA TR157 Perforated Shearwall — Area* =									
Length* =									
F =									
H/L =									
Allowed Types :									
Select Shearwall :									
Panel Mark (above) :									
q (above) =	0	0	0	0	0	0	0	0	
H (above - ft.) =	0	0	0	0	0	0	0	0	
Panel Above L (ft.) =	0	0	0	0	0	0	0	0	
Offset - from LH end =									

Q (lbs) =

Dir R M_{OT} (ft-lbs) =

Dir L M_{OT} (ft-lbs) =

Unif. W_D (plf) =									
Panel Above Unif. W_D (plf) =									
Dist. 1 (ft.) =									
Dist. 2 (ft.) =									
Dist. 3 (ft.) =									
Part. W_{D1} (plf) =									
Part. W_{D2} (plf) =									
Part. W_{D3} (plf) =									
(LH) P_{D1} (lbs) =									
P_{D2} (lbs) =									
P_{D3} (lbs) =									
(RH) P_{D4} (lbs) =									

Dir. R M_R (ft-lbs) =

Dir. L M_R (ft-lbs) =

Dir. R M_{NET} (ft-lbs) = 0

Dir. L M_{NET} (ft-lbs) = 0

LH end Uplift (lbs) = 0

RH end Uplift (lbs) = 0

LH end Holdown :								
RH end Holdown :								

LH end Studs/Post :

RH end Studs/Post :

Shear Transfer

1/2 in. dia. a.b. o/c =

0.138 in. dia. shotpin =

(At L_{EFF}) 16d toenails =

Directly over shear wall

2 x 6 blocking o/c =

Simpson LTP4 o/c =

Simpson A35, A35F o/c =

At L_{EFF} =

0.00

0

MULTIPANEL SHEARWALL ANALYSIS

Sheet: L

Elev. Floor? | L_{TOT} = **0.0 ft.** | q = **0. plf**

Load Type (W, EQ): | (L, R, Both)? Both | L'_{TOT} = **0.0 ft.** | q' = **0. plf**

Ht. (ft.) =									
L (ft.) =									
H (ft.) =									
APA TR157 Perforated Shearwall — Area* =									
Length* =									
F =									
H/L =									
Allowed Types :									
Select Shearwall :									
Panel Mark (above) :									
q (above) =	0	0	0	0	0	0	0	0	
H (above - ft.) =	0	0	0	0	0	0	0	0	
Panel Above L (ft.) =	0	0	0	0	0	0	0	0	
Offset - from LH end =									

Q (lbs) =

Dir R M_{OT} (ft-lbs) =

Dir L M_{OT} (ft-lbs) =

Unif. W_D (plf) =									
Panel Above Unif. W_D (plf) =									
Dist. 1 (ft.) =									
Dist. 2 (ft.) =									
Dist. 3 (ft.) =									
Part. W_{D1} (plf) =									
Part. W_{D2} (plf) =									
Part. W_{D3} (plf) =									
(LH) P_{D1} (lbs) =									
P_{D2} (lbs) =									
P_{D3} (lbs) =									
(RH) P_{D4} (lbs) =									

Dir. R M_R (ft-lbs) =

Dir. L M_R (ft-lbs) =

Dir. R M_{NET} (ft-lbs) = 0

Dir. L M_{NET} (ft-lbs) = 0

LH end Uplift (lbs) = 0

RH end Uplift (lbs) = 0

LH end Holdown :								
RH end Holdown :								

LH end Studs/Post :

RH end Studs/Post :

Shear Transfer

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