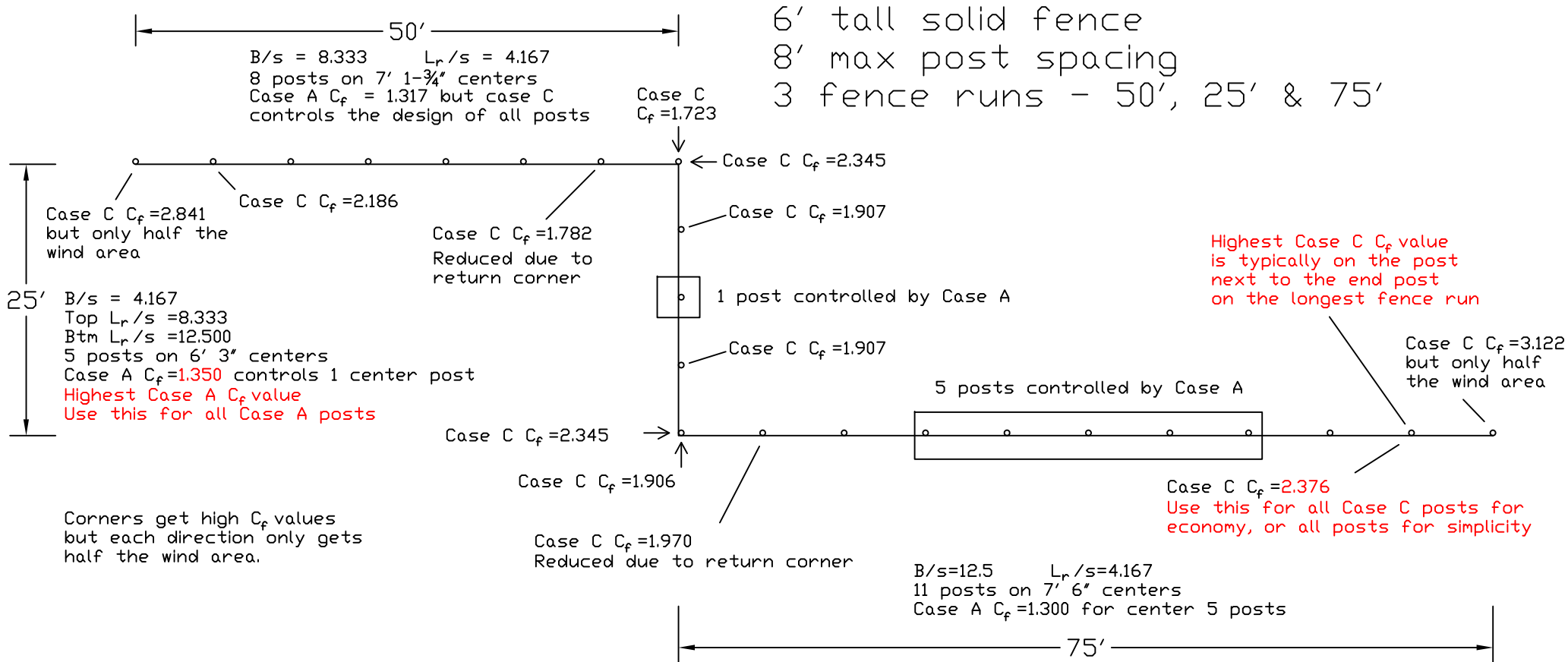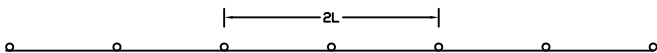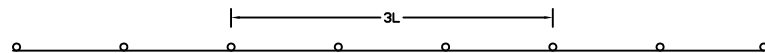Check shortest runs for largest Case A C_f value
Check longest runs for largest Case C C_f value
Extra information shown to demonstrate how the values change with position

50'

B/s = 8.333 L_r/s = 4.167
8 posts on 7' 1-¾" centers
Case A C_f = 1.317 but case C
controls the design of all posts

Case C
C_f =1.723

6' tall solid fence
8' max post spacing
3 fence runs – 50', 25' & 75'

Case C C_f =2.345

Case C C_f =2.186

Case C C_f =2.841
but only half the
wind area

Case C C_f =1.782
Reduced due to
return corner

Case C C_f =1.907

1 post controlled by Case A

Highest Case C C_f value
is typically on the post
next to the end post
on the longest fence run

25'   B/s = 4.167
Top L_r/s =8.333
Btm L_r/s =12.500
5 posts on 6' 3" centers
Case A C_f =1.350 controls 1 center post
Highest Case A C_f value
Use this for all Case A posts

Case C C_f =1.907

5 posts controlled by Case A

Case C C_f =3.122
but only half
the wind area

Case C C_f =2.345

Case C C_f =1.906

Corners get high C_f values
but each direction only gets
half the wind area.

Case C C_f =1.970
Reduced due to return corner

Case C C_f =2.376
Use this for all Case C posts for
economy, or all posts for simplicity

B/s=12.5 L_r/s=4.167
11 posts on 7' 6" centers
Case A C_f =1.300 for center 5 posts

75'

Odd number of posts
2 x times the post spacing, L or greater must be
Case A, or Case C controls the entire fence run

2L

Even number of posts
3 x times the post spacing, L or greater must be
Case A, or Case C controls the entire fence run

3L

Page 1 of 4 – calculations shown on following pages

50' fence run

C_f values for solid & mostly solid fencing (ε or $\varepsilon' > 0.7$)							
B =	50.000	ft	Length of Straight Fence Run Being Analyzed	Maximum Post Spacing		8.000	ft
L =	7.143	ft	Even Post Spacing - 8 Posts, 7' 1-3/4'' on Center	Even Post	◉ Use →	7.143	ft
h =	6.000	ft	Fence Height (3' minimum - 20' maximum)	Spacings	○ Use →	6.250	ft
g =	0.000	ft	Gap between the ground and bottom of fencing	for Length,	○ Use →	5.556	ft
s =	6.000	ft	Height of Fencing Materials, s = h - g	B	○ Use →	5.000	ft
s / h =	1.000	-	Clearance Ratio				
B / s =	8.333	-	Aspect Ratio				
R_2 =	0.800	-	Case C Reduction Factor	$R_2 = (1.8 - s/h) \leq 1.0$			
L_{rL} =	0.000	ft	Length of Left Return Corner (0 ft if no return)	Left and right ends of fence run when looking at the			
L_{rR} =	25.000	ft	Length of Right Return Corner (0 ft if no return)	front face of the fencing			
L_{rL} / s =	0.000	-	Left Return Corner Length to Fencing Height Ratio				
L_{rR} / s =	4.167	-	Right Return Corner Length to Fencing Height Ratio				
R_{3L} =	1.000	-	Left Return Corner Reduction Factor	Per ASCE 7 §29 solid wall return corner table			
R_{3R} =	0.600	-	Right Return Corner Reduction Factor				
C_{fA} =	1.317	-	Force Coefficient - Case A / Use C_{fA} for line posts away from ends and corners	Per ASCE 7 §29 solid wall Case A table			
C_{fA-max} =	1.350	-	Highest C_{fA} value that controls elsewhere in fence	Put in the highest C_{fA} controling a fence run			

Raw Case C C_f Values

C_{f0} =	3.583	-	Force Coefficient - Case C - 0 to s	
C_{f1} =	2.317		Force Coefficient - Case C - s to 2s	
C_{f2} =	1.717	-	Force Coefficient - Case C - 2s to 3s	
C_{f3} =	1.033	-	Force Coefficient - Case C - > 3s	Per ASCE 7 §29 solid wall Case C table
C_{f4} =	0.000	-	N/A for B/s < 13	Values in red are lower than the Case A C_f value
C_{f5} =	0.000	-	N/A for B/s < 13	
C_{f6} =	0.000	-	N/A for B/s < 13	

Reduced Case C C_f values per Case C Reduction Factor, R_2 and Return Corner Reduction Factors, R_{3L} & R_{3R}

C_{fr0L} =	2.867	-	Reduced Force Coefficient - Left Case C - 0 to s	$C_{fr0L} = R_2 R_{3L} C_{f0}$ Left end - 0 to s region
C_{fr0R} =	1.720	-	Reduced Force Coefficient - Right Case C - 0 to s	$C_{fr0R} = R_2 R_{3R} C_{f0}$ Right end - 0 to s region
C_{fr1} =	1.853	-	Reduced Force Coefficient - Case C - s to 2s	$C_{fr1} = R_2 C_{f1}$
C_{fr2} =	1.373	-	Reduced Force Coefficient - Case C - 2s to 3s	$C_{fr2} = R_2 C_{f2}$
C_{fr3} =	0.827	-	Reduced Force Coefficient - Case C - > 3s	$C_{fr3} = R_2 C_{f3}$
C_{fr4} =	0.000	-	N/A for B/s < 13	$C_{fr4} = R_2 C_{f4}$
C_{fr5} =	0.000	-	N/A for B/s < 13	$C_{fr5} = R_2 C_{f5}$
C_{fr6} =	0.000	-	N/A for B/s < 13	$C_{fr6} = R_2 C_{f6}$

Equivalent Post C_f values per Post Spacing, L

C_{FE1} =	2.841	-	Left End		C_{FE1} =	1.723	- Right Corner
C_{FE2} =	2.186	-	2nd Post		C_{FE2} =	1.782	- 2nd Post
C_{FE3} =	1.421	-	3rd Post	Case C controls the entire fence run	C_{FE3} =	1.421	- 3rd Post

25' fence run

Cf values for solid & mostly solid fencing (ε or ε' > 0.7)						
B =	25.000	ft	Length of Straight Fence Run Being Analyzed	Maximum Post Spacing	8.000	ft
L =	6.250	ft	Even Post Spacing - 5 Posts, 6' 3 " on Center	Even Post	⦿ Use → 6.250	ft
h =	6.000	ft	Fence Height (3' minimum - 20' maximum)	Spacings	○ Use → 5.000	ft
g =	0.000	ft	Gap between the ground and bottom of fencing	for Length,	○ Use → 4.167	ft
s =	6.000	ft	Height of Fencing Materials, s = h - g	B	○ Use → 3.571	ft
s / h =	1.000	-	Clearance Ratio			
B / s =	4.167	-	Aspect Ratio			
R_2 =	0.800	-	Case C Reduction Factor	$R_2 = (1.8 - s/h) \leq 1.0$		
L_{rL} =	50.000	ft	Length of Left Return Corner (0 ft if no return)	Left and right ends of fence run when looking at the		
L_{rR} =	75.000	ft	Length of Right Return Corner (0 ft if no return)	front face of the fencing		
L_{rL} / s =	8.333	-	Left Return Corner Length to Fencing Height Ratio			
L_{rR} / s =	12.500	-	Right Return Corner Length to Fencing Height Ratio			
R_{3L} =	1.000	-	Left Return Corner Reduction Factor	Per ASCE 7 §29 solid wall return corner table		
R_{3R} =	1.000	-	Right Return Corner Reduction Factor			
C_{fA} =	1.350	-	Force Coefficient - Case A	Per ASCE 7 §29 solid wall Case A table		
			Use C_{fA} for line posts away from ends and corners			
C_{fA-max} =	1.350	-	Highest C_{fA} value that controls elsewhere in fence	Put in the highest C_{fA} controling a fence run		
Raw Case C Cf Values						
C_{f0} =	2.933	-	Force Coefficient - Case C - 0 to s			
C_{f1} =	1.917		Force Coefficient - Case C - s to 2s			
C_{f2} =	1.325	-	Force Coefficient - Case C - 2s to 3s			
C_{f3} =	1.092	-	Force Coefficient - Case C - > 3s	Per ASCE 7 §29 solid wall Case C table		
C_{f4} =	0.000	-	N/A for B/s < 13	Values in red are lower than the Case A C_f value		
C_{f5} =	0.000	-	N/A for B/s < 13			
C_{f6} =	0.000	-	N/A for B/s < 13			
Reduced Case C Cf values per Case C Reduction Factor, R_2 and Return Corner Reduction Factors, R_{3L} & R_{3R}						
C_{fr0L} =	2.347	-	Reduced Force Coefficient - Left Case C - 0 to s	$C_{fr0L} = R_2 R_{3L} C_{f0}$ Left end - 0 to s region		
C_{fr0R} =	2.347	-	Reduced Force Coefficient - Right Case C - 0 to s	$C_{fr0R} = R_2 R_{3R} C_{f0}$ Right end - 0 to s region		
C_{fr1} =	1.533	-	Reduced Force Coefficient - Case C - s to 2s	$C_{fr1} = R_2 C_{f1}$		
C_{fr2} =	1.060	-	Reduced Force Coefficient - Case C - 2s to 3s	$C_{fr2} = R_2 C_{f2}$		
C_{fr3} =	0.873	-	Reduced Force Coefficient - Case C - > 3s	$C_{fr3} = R_2 C_{f3}$		
C_{fr4} =	0.000	-	N/A for B/s < 13	$C_{fr4} = R_2 C_{f4}$		
C_{fr5} =	0.000	-	N/A for B/s < 13	$C_{fr5} = R_2 C_{f5}$		
C_{fr6} =	0.000	-	N/A for B/s < 13	$C_{fr6} = R_2 C_{f6}$		
Equivalent Post Cf values per Post Spacing, L						

C_{FE1} =	2.345	-	Left Corner		C_{FE1} =	2.345	- Right Corner
C_{FE2} =	1.907	-	2nd Post		C_{FE2} =	1.907	- 2nd Post
C_{FE3} =	1.350	-	3rd Post	Case A controls the center 1 post(s)	C_{FE3} =	1.350	- 3rd Post

75' fence run

			C_f values for solid & mostly solid fencing (ε or ε' > 0.7)				
B =	75.000	ft	Length of Straight Fence Run Being Analyzed	Maximum Post Spacing		8.000	ft
L =	7.500	ft	Even Post Spacing - 11 Posts, 7' 6 '' on Center	Even Post	◉ Use →	7.500	ft
h =	6.000	ft	Fence Height (3' minimum - 20' maximum)	Spacings	○ Use →	6.818	ft
g =	0.000	ft	Gap between the ground and bottom of fencing	for Length,	○ Use →	6.250	ft
s =	6.000	ft	Height of Fencing Materials, s = h - g	B	○ Use →	5.769	ft
s / h =	1.000	-	Clearance Ratio				
B / s =	12.500	-	Aspect Ratio				
R_2 =	0.800	-	Case C Reduction Factor	R_2 = (1.8 - s/h) ≤ 1.0			
L_{rL} =	25.000	ft	Length of Left Return Corner (0 ft if no return)	Left and right ends of fence run when looking at the			
L_{rR} =	0.000	ft	Length of Right Return Corner (0 ft if no return)	front face of the fencing			
L_{rL} / s =	4.167	-	Left Return Corner Length to Fencing Height Ratio				
L_{rR} / s =	0.000	-	Right Return Corner Length to Fencing Height Ratio				
R_{3L} =	0.600	-	Left Return Corner Reduction Factor	Per ASCE 7 §29 solid wall return corner table			
R_{3R} =	1.000	-	Right Return Corner Reduction Factor				
C_{fA}	1.300	-	Force Coefficient - Case A	Per ASCE 7 §29 solid wall Case A table			
			Use C_{fA} for line posts away from ends and corners				
C_{fA-max}	1.350	-	Highest C_{fA} value that controls elsewhere in fence	Put in the highest C_{fA} controling a fence run			

Raw Case C C_f Values

C_{f0} =	3.958	-	Force Coefficient - Case C - 0 to s		
C_{f1} =	2.575		Force Coefficient - Case C - s to 2s		
C_{f2} =	1.975	-	Force Coefficient - Case C - 2s to 3s		
C_{f3} =	1.408	-	Force Coefficient - Case C - > 3s	Per ASCE 7 §29 solid wall Case C table	
C_{f4} =	0.000	-	N/A for B/s < 13	Values in red are lower than the Case A C_f value	
C_{f5} =	0.000	-	N/A for B/s < 13		
C_{f6} =	0.000	-	N/A for B/s < 13		

Reduced Case C C_f values per Case C Reduction Factor, R_2 and Return Corner Reduction Factors, R_{3L} & R_{3R}

C_{fr0L} =	1.900	-	Reduced Force Coefficient - Left Case C - 0 to s	$C_{fr0L} = R_2 R_{3L} C_{f0}$ Left end - 0 to s region
C_{fr0R} =	3.167	-	Reduced Force Coefficient - Right Case C - 0 to s	$C_{fr0R} = R_2 R_{3R} C_{f0}$ Right end - 0 to s region
C_{fr1} =	2.060	-	Reduced Force Coefficient - Case C - s to 2s	$C_{fr1} = R_2 C_{f1}$
C_{fr2} =	1.580	-	Reduced Force Coefficient - Case C - 2s to 3s	$C_{fr2} = R_2 C_{f2}$
C_{fr3} =	1.127	-	Reduced Force Coefficient - Case C - > 3s	$C_{fr3} = R_2 C_{f3}$
C_{fr4} =	0.000	-	N/A for B/s < 13	$C_{fr4} = R_2 C_{f4}$
C_{fr5} =	0.000	-	N/A for B/s < 13	$C_{fr5} = R_2 C_{f5}$
C_{fr6} =	0.000	-	N/A for B/s < 13	$C_{fr6} = R_2 C_{f6}$

		Equivalent Post C_f values per Post Spacing, L		

C_{FE1} =	1.906	-	Left Corner	C_{FE1} =	3.122	- Right End
C_{FE2} =	1.970	-	2nd Post	C_{FE2} =	2.376	- 2nd Post
C_{FE3} =	1.585	-	3rd Post	C_{FE3} =	1.585	- 3rd Post
C_{FE4} =	1.350	-	4th Post Case A controls the center 5 post(s)	C_{FE4} =	1.350	- 4th Post