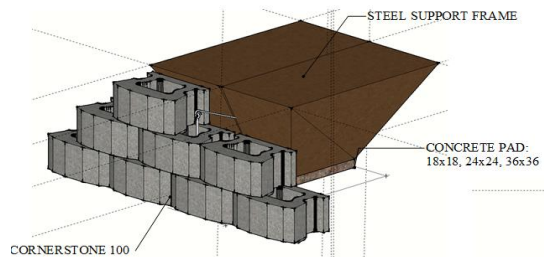
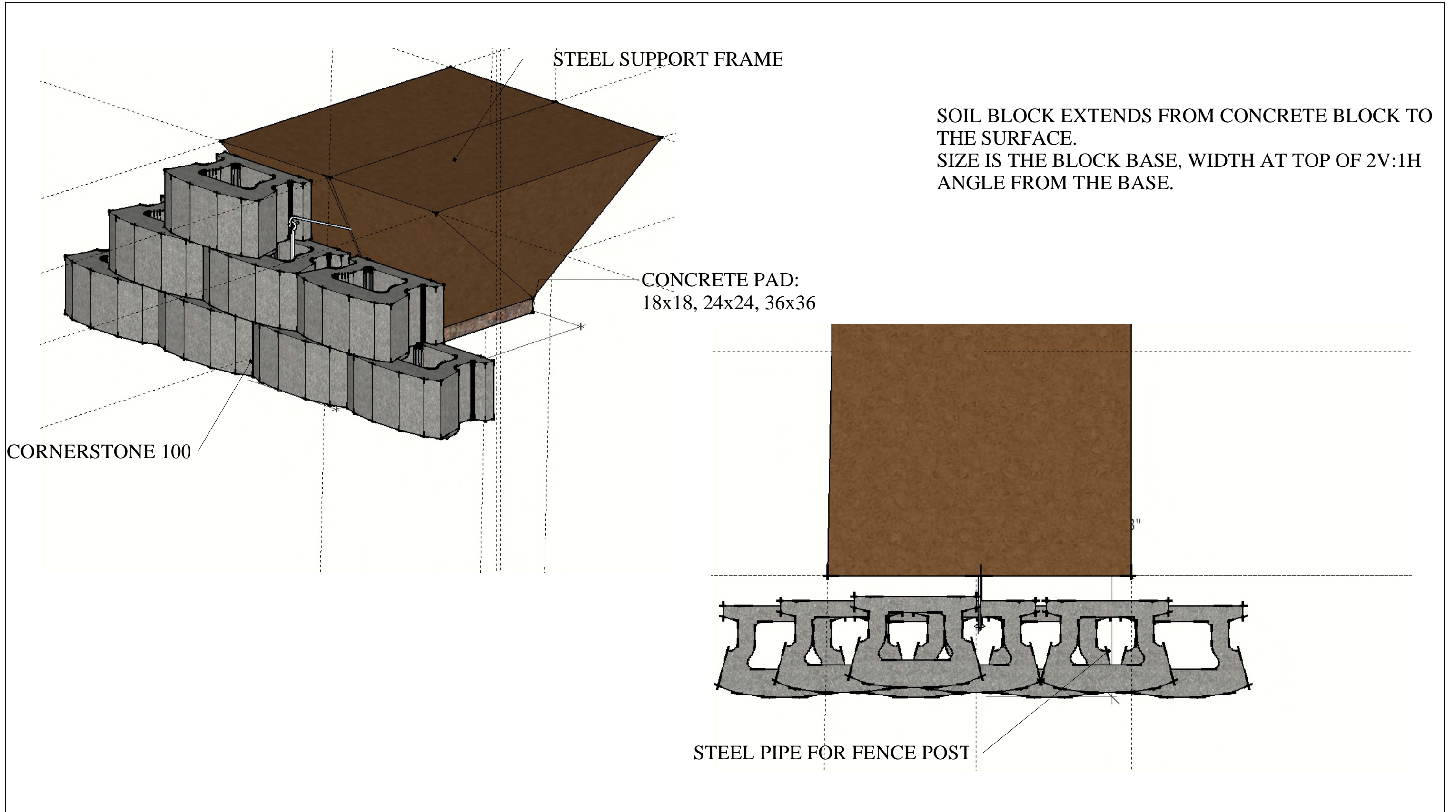


# Race Engineering Assoc.

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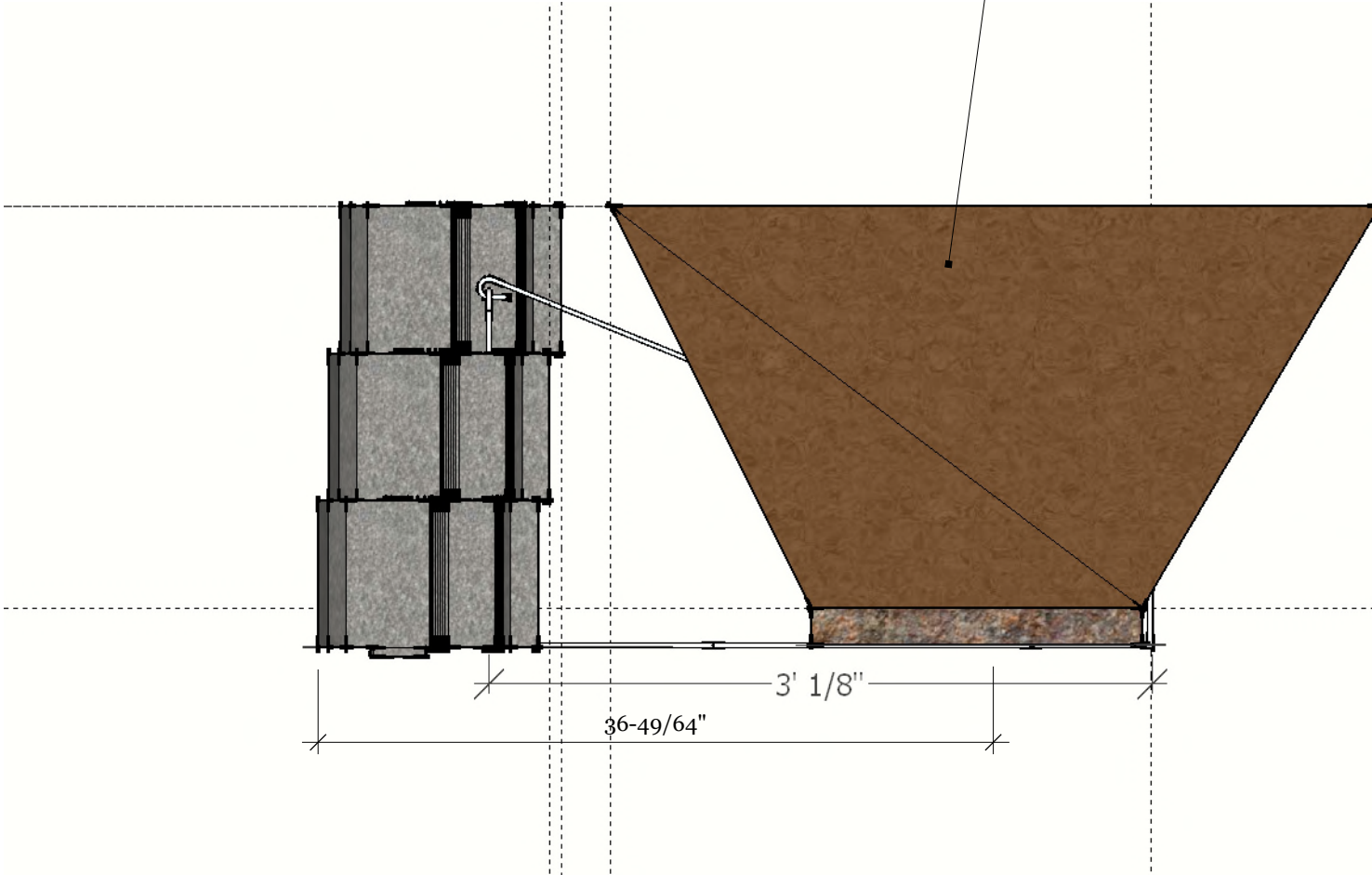
<b>File</b>	<b>Customer / Project</b>	<b>Date</b>								
<b>REA-</b>	CornerStone Post-In Assembly	03/14/17								
<b>By</b>	<b>Reviewed</b>	<b>Subject</b>								
rjr		Overturning resistance of Post-In Assembly								
		1								
<input type="checkbox"/> Units Listed <input type="checkbox"/> Numbers Checked <input type="checkbox"/> Sources Referenced <input type="checkbox"/> Inputs Listed										
Item	<p>Calculate resistance from soil over the concrete pad. Assume soil base is the pad with, extending up at 2V:1H shape.</p> <p><b>Variables:</b></p> <p><math>\gamma_{\mu} = 120</math> pcf     <math>\gamma_c = 140</math> pcf  <math>ht = 26</math> in (assume 2 ft, 4 in to surface, 2 inch concrete pad)</p> <p><b>Pad Dimension:</b>     <b>Moment Arms:</b>     <math>L = 3.75</math> ft     <math>L = 3' 9"</math> face of block to tail, measure from front of unit</p> <p><math>P1 = 18</math> in     <math>M1 = 3.00</math> ft  <math>P2 = 24</math> in     <math>M2 = 2.75</math> ft  <math>P3 = 30</math> in     <math>M3 = 2.50</math> ft</p> <p><b>Weight of soil mass</b>     <b>Resisting Moment</b></p> <p><math>P1 = 2093</math> lbf     <b>Mr1= 6278 ft-lbf</b>  <math>P2 = 2870</math> lbf     <b>Mr2= 7893 ft-lbf</b>  <math>P3 = 3789</math> lbf     <b>Mr3= 9474 ft-lbf</b></p> <p><b>Driving moment from Fence</b></p> <p><math>Ht_f = 8</math> ft (height of fence)  <math>Wd_f = 6</math> ft (width of fence panel)</p> <p><b>Wind Speed:</b> 70 mph</p> <p>Force on Fence: <math>F=A \times P = A \times Ce \times Cq \times Qs \times lw</math></p> <p><math>A =</math> area of fence     <math>A = 48</math> sf  <math>P =</math> pressure  <math>Ce =</math> combined height, exposure and gust factor     <math>Ce = 0.84</math>  <math>Cq =</math> pressure coefficient     <math>Cq = 2</math> for long flat plate  <math>Qs =</math> wind stagnet factor     <math>Qs = 0.00256 * V^2 = 12.5</math> psf  <math>lw =</math> importance factor     <math>lw = 1.0</math></p> <p><math>F = 1012</math> lbf</p> <p><math>Mo =</math> driving moment on fence</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"><b>Mo = 4046 ft_lbf</b></td> <td style="width: 20%; text-align: center;">18x18</td> <td style="width: 20%; text-align: center;">24x24</td> <td style="width: 30%; text-align: center;">30x30</td> </tr> <tr style="background-color: yellow;"> <td><b>Fsot =</b></td> <td style="text-align: center;">1.55</td> <td style="text-align: center;">1.95</td> <td style="text-align: center;">2.34</td> </tr> </table>	<b>Mo = 4046 ft_lbf</b>	18x18	24x24	30x30	<b>Fsot =</b>	1.55	1.95	2.34	Chk
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<b>Fsot =</b>	1.55	1.95	2.34							





POST-IN-DETAIL	POST-IN	REVISIONS		A 0 1
		MM/DD/YY	REMARKS	
1	--/--/--	...		
2	--/--/--	...		
3	--/--/--	...		
4	--/--/--	...		
5	--/--/--	...		

SOIL MASS IS A 2V:1H MASS ABOVE THE  
BASE CONCRETE STONE.



POST-IN

REVISIONS	
MM/DD/YY	REMARKS
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