



Robotic Arm Platform

Team Victory Lap

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Impact of Societal/Environmental Factors

Materials subject to regulations - steel/aluminum

Most regulations deal with chemical holding tanks, not water tanks

Design considerations/impacts for societal/environmental/sustainability

Not permanent structure, no residual pieces

Construction Plan

Scaling - 1/2 scale

Bill of Materials

Item	Length	Width	Height	Notes	
Quantity	Item	Length	Width	Height	Notes
7	Height Dowel	N/A	1'	8'	Truss corners, 6' height
1	Link Plywood	4'	8'	1/2"	Triangular cut out for truss, piece for simulating fitting through hole
5	Notes Solid Wood	1"	2"	96'	3
1	Aluminum Piping	Cable 4'-4.5' height	N/A	1/8"	30'
2	Truss corner	Pulley			3
24'	Plywood	Eye hooks			
8'		Cable clamps			
2	1/2"	Rollers			
12	http://www.homedepot.com/p/Underlayment-Common-7-32-in-x-4-ft-x-8-ft-Actual-0-196-in-x-48-in-x-96-in-431178/203183010				
	Triangular cut out for truss, piece for simulating fitting through hole				3
	Solid Wood				

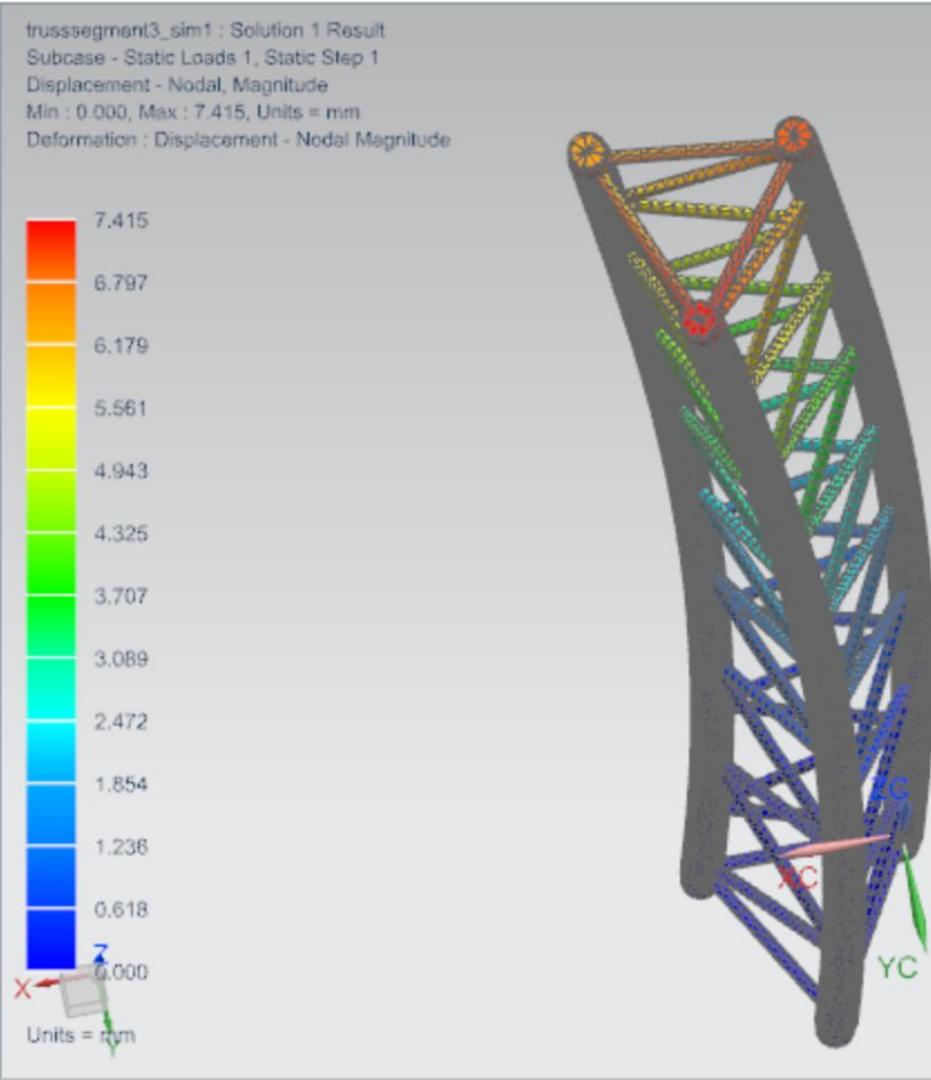
Picture



Original Design FEA

Displacement FEA

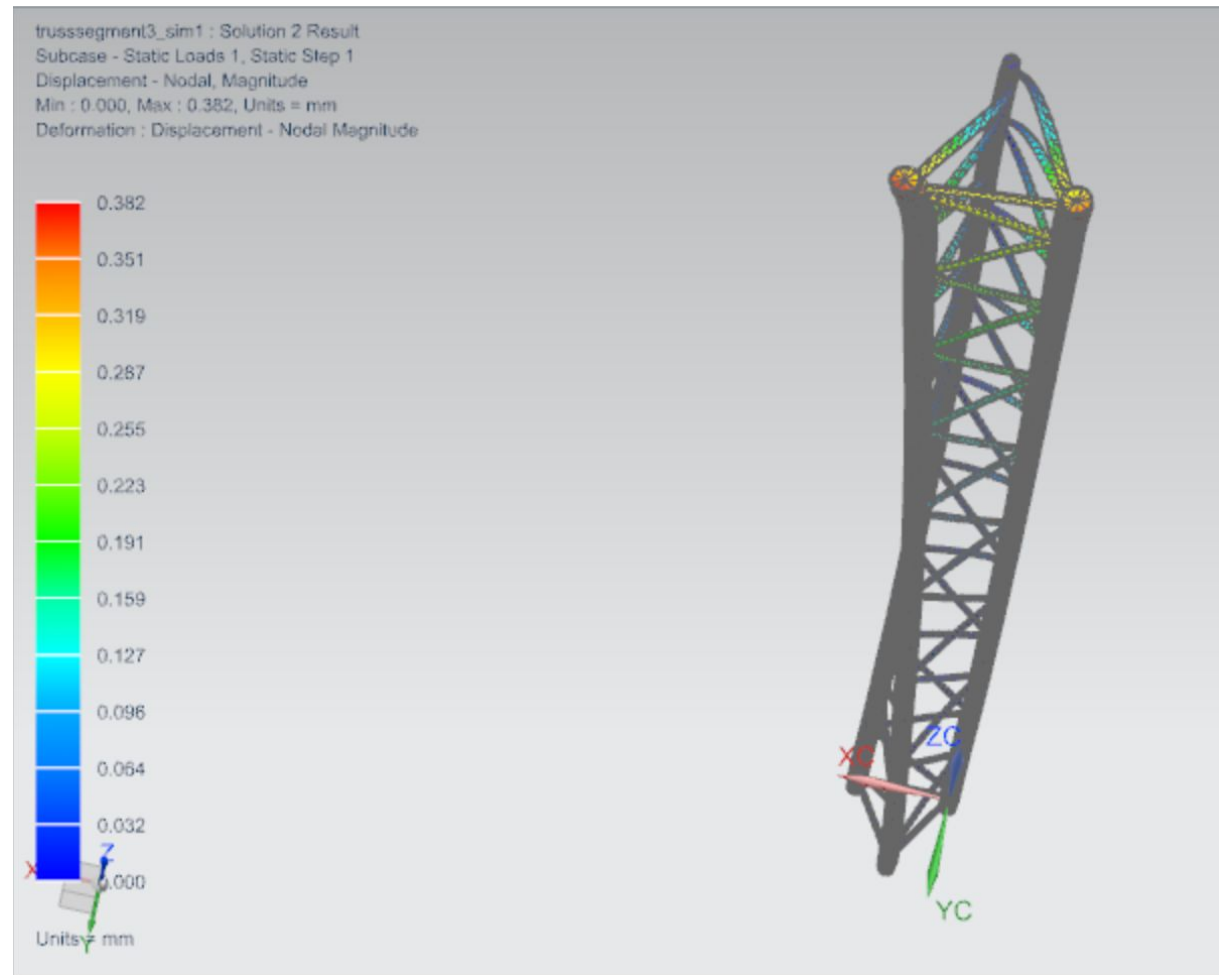
Not fixed to the wall



Adjustment FEA

Displacement FEA

1 bar fixed to the wall



Von Mises Stress

Displacement FEA

Not fixed to the wall

