

Lab 8

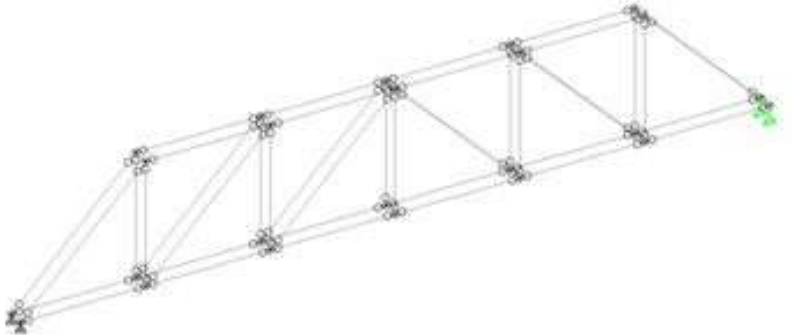
Presentation

CIVE 3200
Amanda Siciliano, Brett
Lebel, Matt Chakalis

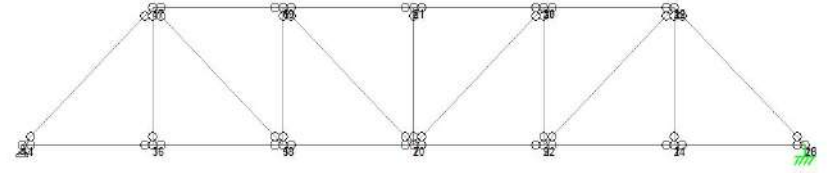
Introduction

- ❖ Compare & contrast bridges designed
- ❖ Build bridge using PASCO sets
- ❖ Test using 2 independent load cases

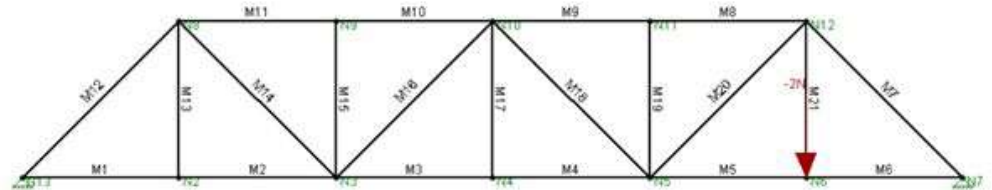
Option 2



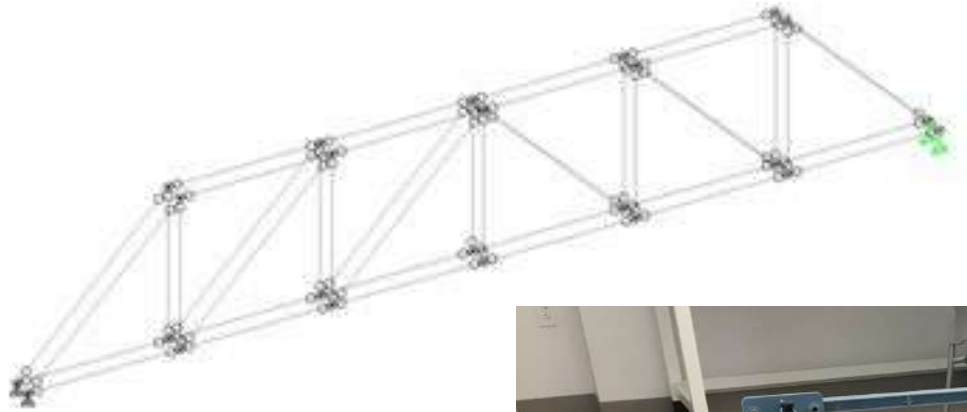
Option 1



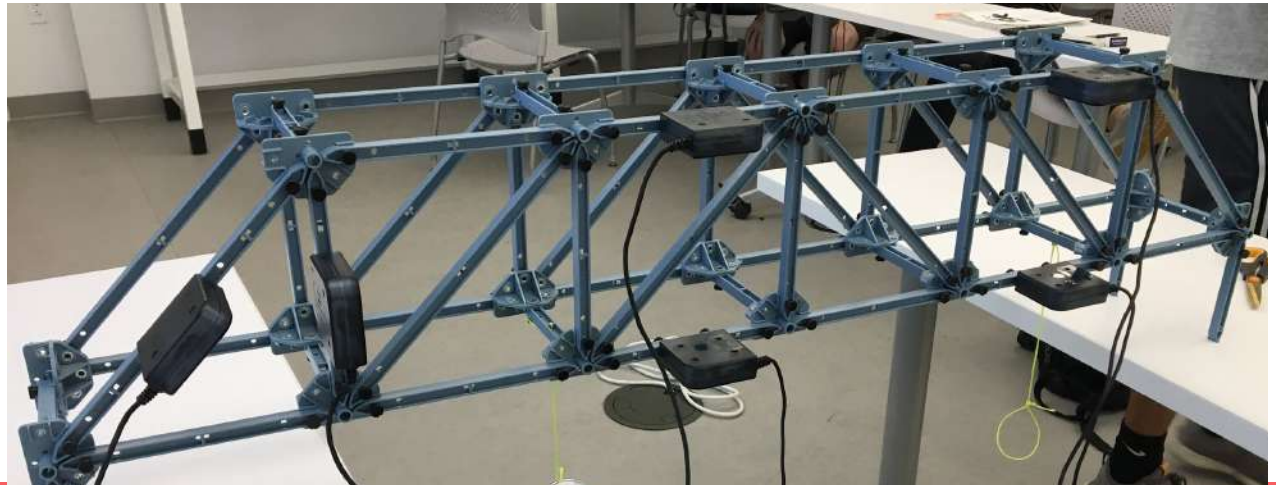
Option 3



Bridge Selected



Howe Truss



Methodology

- ❑ PASCO bridge building set
- ❑ Software
 - ❑ STAAD Pro
 - ❑ RISA 2-D

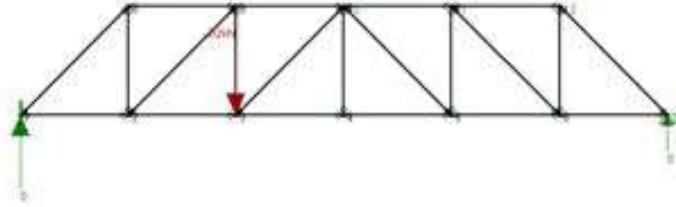
PASCO

STAAD.Pro



RISA-2D

Load Case "C"



Results

Load Case "D"



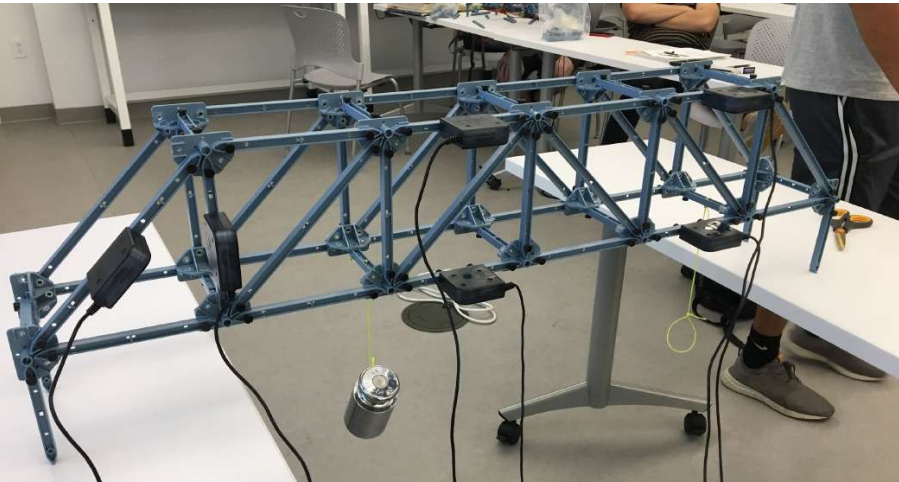
Table	Values	Normalized Values
1	8.86	.903
2	-5.7	-.581
3	11.54	1.176
4	-8.87	-.907
5	2.68	.278
6	-5.5	-.560

Table	Values	Normalized Values
1	2.27	.231
2	-1.53	-.156
3	2.57	0.261
4	-4.82	-.490
5	7.08	.721
6	-5.41	-.551

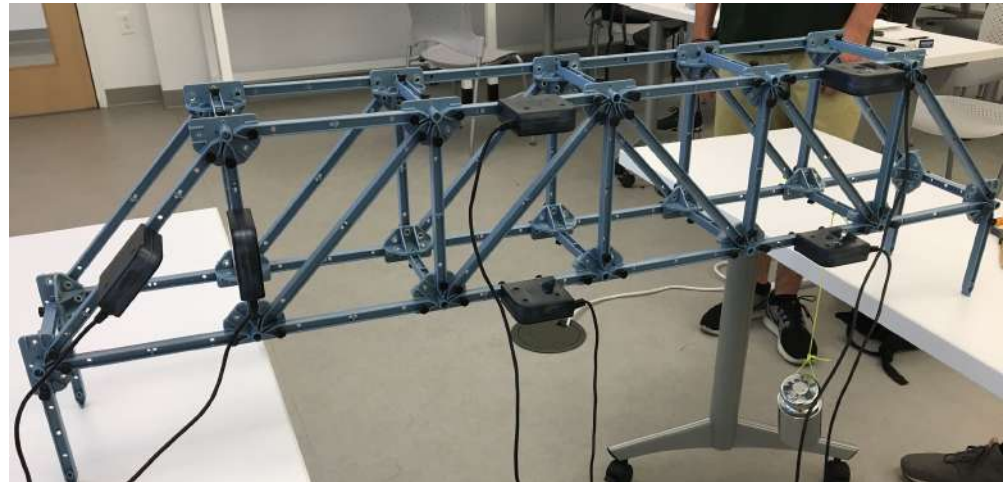
Joint Label	X [kN]	Y [kN]	MZ [k-ft]
1	0	.013	0
2	0	.007	0
Totals	0	.02	0

Joint Label	X [kN]	Y [kN]	MZ [k-ft]
1	0	.003	0
2	0	.016	0
Totals	0	.02	0

Load Case C

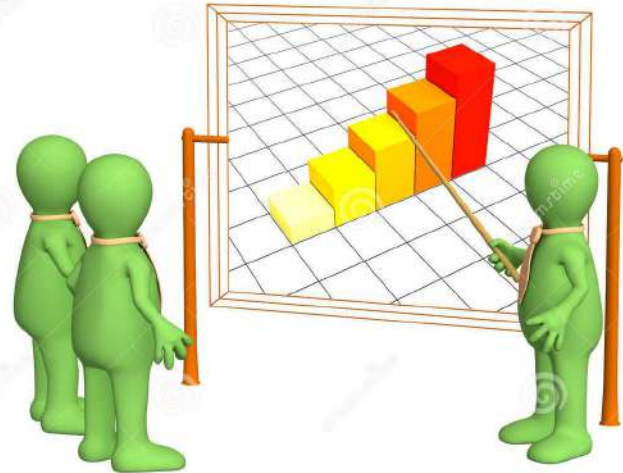


Load Case D



Discussion

- Differences in values = placement of load cells & applied load
- Self weight accounted in PASCO & STAAD
- Loading C
 - Largest = 1.176
 - Smallest = -0.907
- Loading D
 - Largest = 0.721
 - Smallest = -0.551



Conclusion

- Value of using software
- Physical & virtual models
- Check for structural integrity

