

Description: A sample calculation

Input Model Parameters

Roof Bay Parameters

Num. of Primary Members: 2

Num. of Secondary Members: 5

Roof Slope: 0.25:12

Mirrored Left: False

Mirrored Right: False

Loading Parameters

Surface Dead Load: 20.0 psf

Surface Rain Load: 22.4 psf

Initial Impounded Rain Depth: 3.85 in

Results

The model ran 4 iterations in 0.28 s.

Final Impounded Water Weight: 4.55 kips

Detailed Member Results

Primary Members

Primary Member 1: W16X26

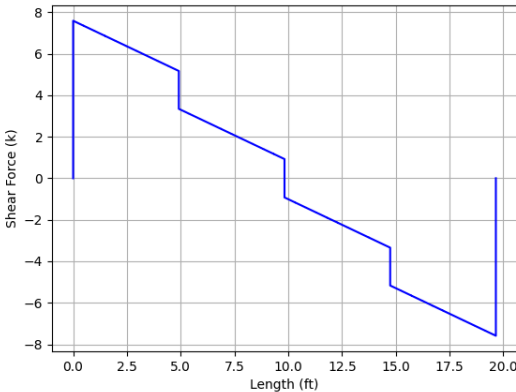
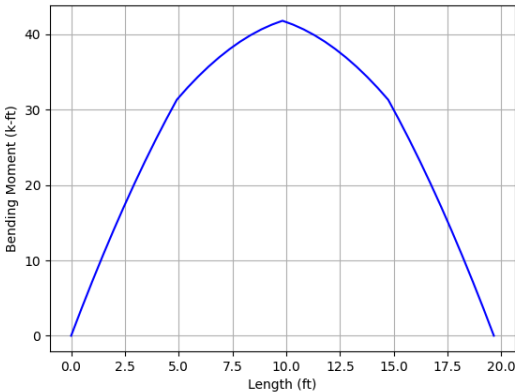
Max Deflection: -0.33 in @ 9.82 ft

Max Moment: 41.81 k-ft @ 9.82 ft

Max Shear: 7.59 k @ 0.0 ft

Bending Moment Diagram

Shear Force Diagram

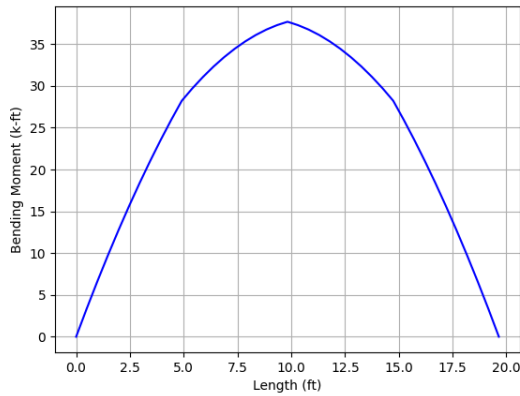
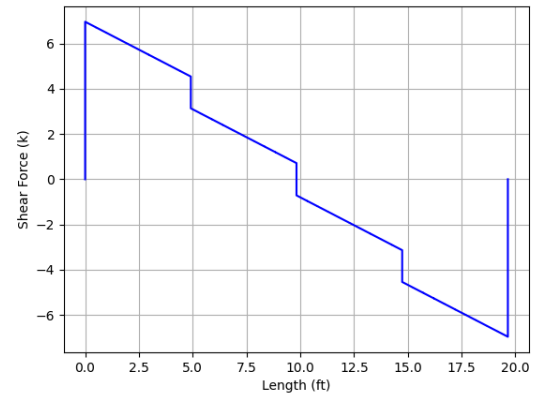


Primary Member 2: W16X26

Max Deflection: -0.29 in @ 9.82 ft

Max Moment: 37.67 k-ft @ 9.82 ft

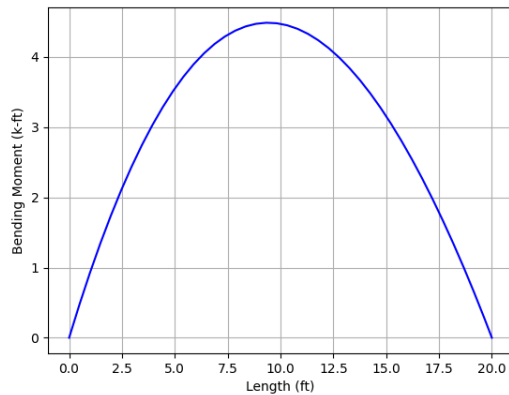
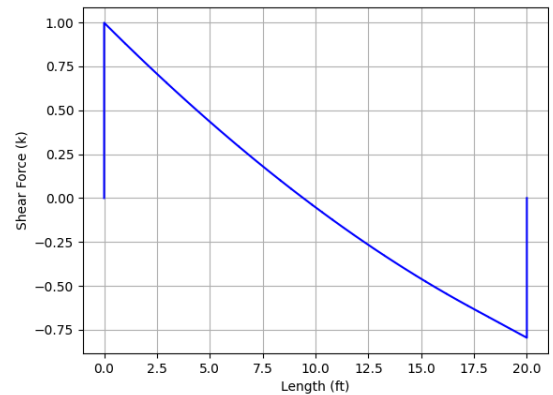
Max Shear: 6.96 k @ 0.0 ft

Bending Moment Diagram**Shear Force Diagram****Secondary Members****Secondary Member 1: W12X16**

Max Deflection: -0.11 in @ 9.82 ft

Max Moment: 4.49 k-ft @ 9.33 ft

Max Shear: 1.0 k @ 0.0 ft

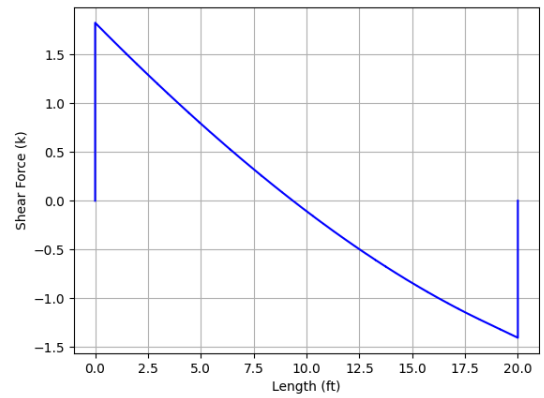
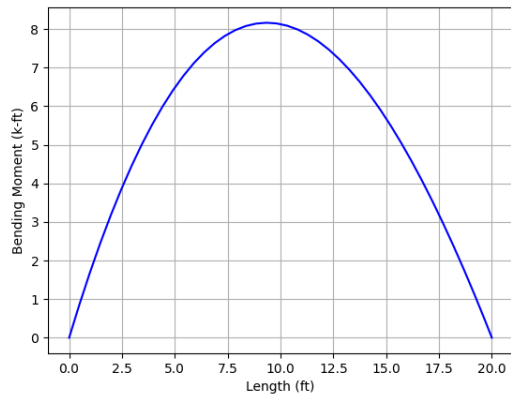
Bending Moment Diagram**Shear Force Diagram****Secondary Member 2: 14K1**

Max Deflection: -0.35 in @ 9.82 ft

Max Moment: 8.16 k-ft @ 9.33 ft

Max Shear: 1.82 k @ 0.0 ft

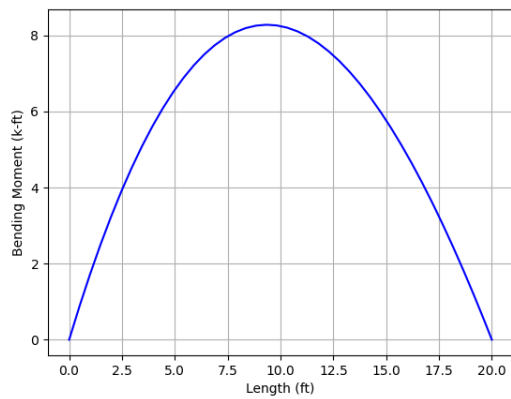
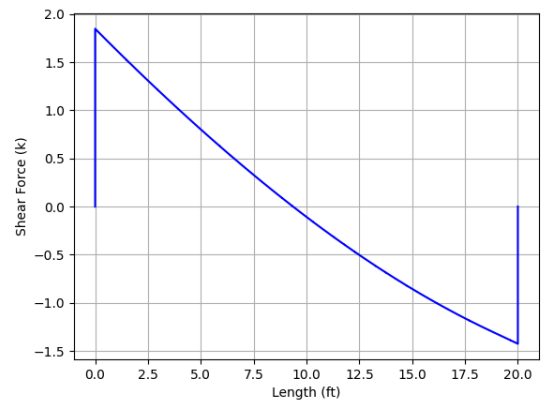
Bending Moment Diagram**Shear Force Diagram**

**Secondary Member 3: 14K1**

Max Deflection: -0.35 in @ 9.82 ft

Max Moment: 8.28 k-ft @ 9.33 ft

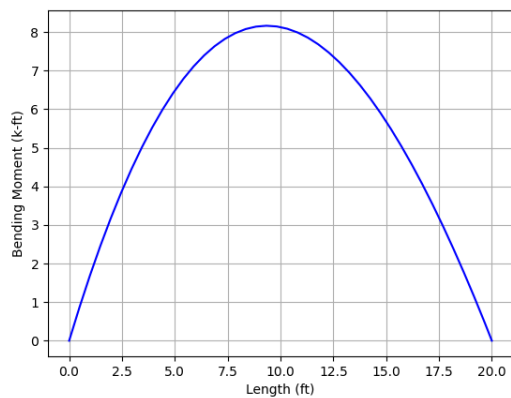
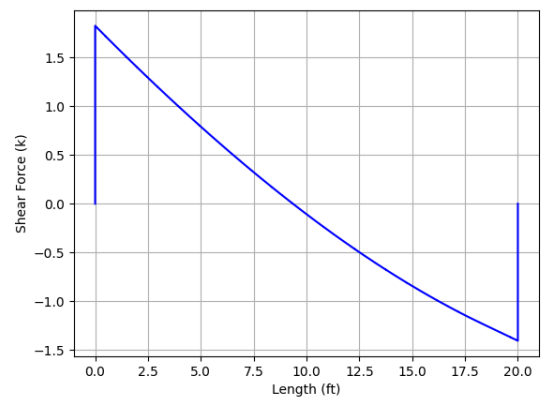
Max Shear: 1.85 k @ 0.0 ft

Bending Moment Diagram**Shear Force Diagram****Secondary Member 4: 14K1**

Max Deflection: -0.35 in @ 9.82 ft

Max Moment: 8.16 k-ft @ 9.33 ft

Max Shear: 1.82 k @ 0.0 ft

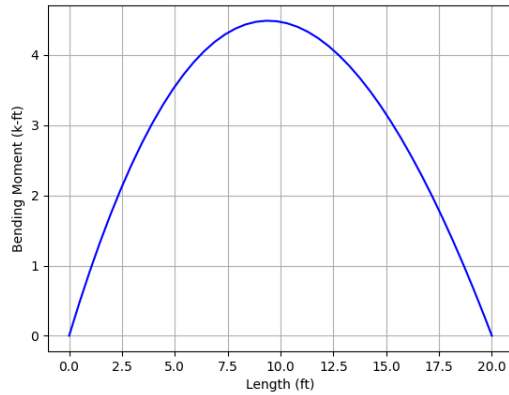
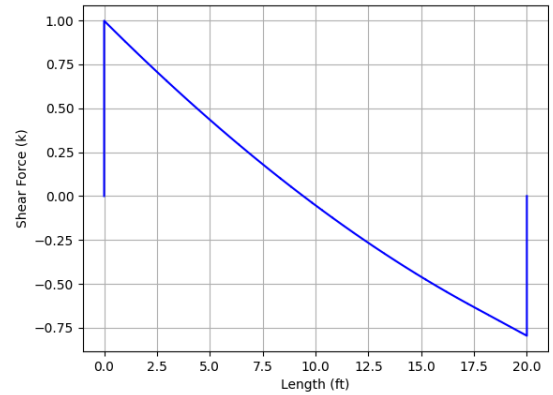
Bending Moment Diagram**Shear Force Diagram**

Secondary Member 5: W12X16

Max Deflection: -0.11 in @ 9.82 ft

Max Moment: 4.49 k-ft @ 9.33 ft

Max Shear: 1.0 k @ 0.0 ft

Bending Moment Diagram**Shear Force Diagram****Disclaimer**

The creator of this Python package (pondpy) does not guarantee the accuracy, completeness, or reliability of the results presented in this report. The results are intended for informational purposes only. They should not be relied upon as a substitute for engineering judgment. It is essential that all designs and calculations be verified and approved by a qualified design professional to ensure their suitability and compliance with applicable standards and regulations.