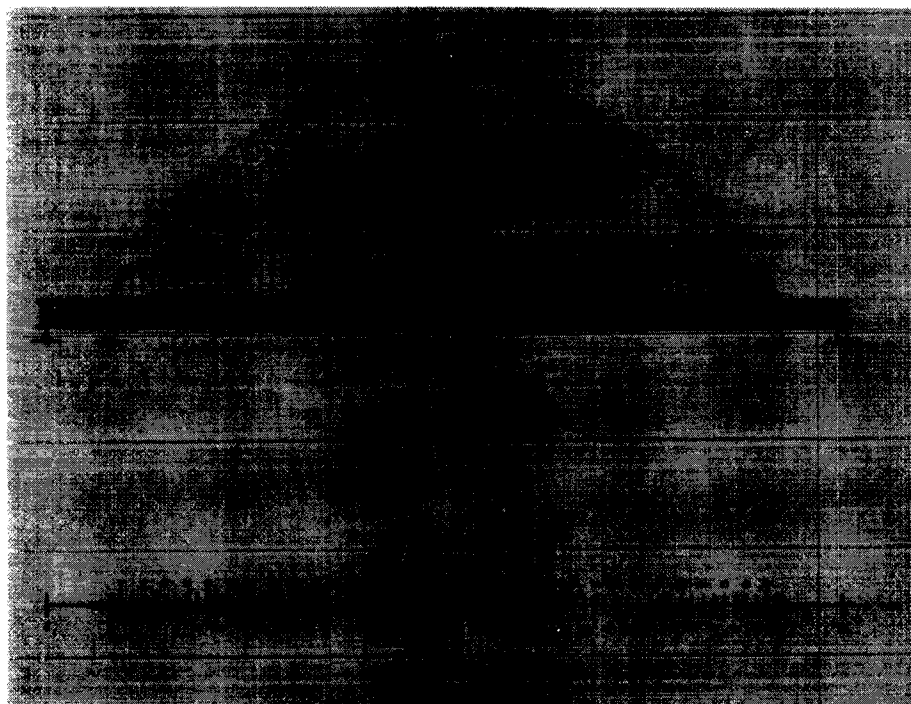




SKYCIV BEAM ANALYSIS REPORT

Load Combination: DL



Software: SkyCiv Beam v3.2.4
Tue Jul 09 2024 14:25:07 GMT-0400 (Eastern Daylight Time)

Project Info

File Name: 74 IN Point Load Beam

Engineer: Leo Leo Roche (lroche@newfabinc.com)

Included in this Report:

- Input Summary
- Beam Section
- Free Body Diagram (FBD)
- Analysis Summary
- Analysis Results
- Bending Moment Diagram (BMD)
- Shear Force Diagram (SFD)
- Deflection Results
- Stress Results

INPUT SUMMARY

General Info

Beam Length:	74 in
Section Name:	2 x 2
Self Weight:	False

Supports

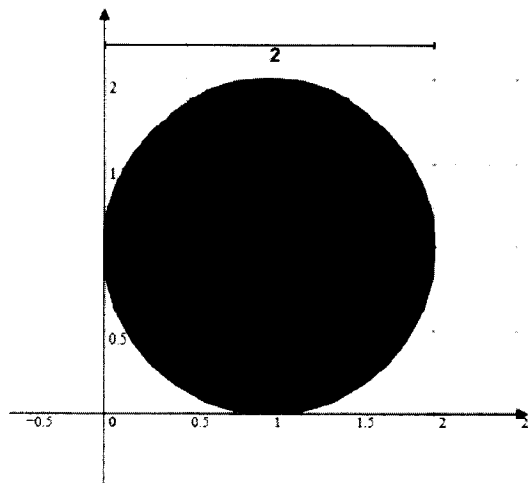
Support Type	Location
Pinned	0 in
Roller	74 in
Roller	6 in
Roller	68 in

Loads

Load Type	Location	Magnitude	Load Case
Distributed Load	6 in to 7 in	0 lb to -4.194 lb	DL
Distributed Load	7 in to 8 in	-4.194 lb to -8.378 lb	DL
Distributed Load	8 in to 9 in	-8.378 lb to -12.54 lb	DL
Distributed Load	9 in to 10 in	-12.54 lb to -16.671 lb	DL
Distributed Load	10 in to 11 in	-16.671 lb to -20.758 lb	DL
Distributed Load	11 in to 12 in	-20.758 lb to -24.792 lb	DL
Distributed Load	12 in to 13 in	-24.792 lb to -28.762 lb	DL
Distributed Load	13 in to 14 in	-28.762 lb to -32.659 lb	DL
Distributed Load	14 in to 15 in	-32.659 lb to -36.471 lb	DL
Distributed Load	15 in to 16 in	-36.471 lb to -40.19 lb	DL
Distributed Load	16 in to 17 in	-40.19 lb to -43.806 lb	DL
Distributed Load	17 in to 18 in	-43.806 lb to -47.31 lb	DL
Distributed Load	18 in to 19 in	-47.31 lb to -50.692 lb	DL
Distributed Load	19 in to 20 in	-50.692 lb to -53.944 lb	DL
Distributed Load	20 in to 21 in	-53.944 lb to -57.057 lb	DL
Distributed Load	21 in to 22 in	-57.057 lb to -60.024 lb	DL
Distributed Load	22 in to 23 in	-60.024 lb to -62.837 lb	DL
Distributed Load	23 in to 24 in	-62.837 lb to -65.488 lb	DL
Distributed Load	24 in to 25 in	-65.488 lb to -67.972 lb	DL
Distributed Load	25 in to 26 in	-67.972 lb to -70.281 lb	DL
Distributed Load	26 in to 27 in	-70.281 lb to -72.409 lb	DL
Distributed Load	27 in to 28 in	-72.409 lb to -74.352 lb	DL
Distributed Load	28 in to 29 in	-74.352 lb to -76.104 lb	DL
Distributed Load	29 in to 30 in	-76.104 lb to -77.66 lb	DL
Distributed Load	30 in to 31 in	-77.66 lb to -79.017 lb	DL
Distributed Load	31 in to 32 in	-79.017 lb to -80.171 lb	DL
Distributed Load	32 in to 33 in	-80.171 lb to -81.12 lb	DL
Distributed Load	33 in to 34 in	-81.12 lb to -81.86 lb	DL
Distributed Load	34 in to 35 in	-81.86 lb to -82.39 lb	DL
Distributed Load	35 in to 36 in	-82.39 lb to -82.709 lb	DL
Distributed Load	36 in to 37 in	-82.709 lb to -82.815 lb	DL
Distributed Load	37 in to 38 in	-82.815 lb to -82.709 lb	DL
Distributed Load	38 in to 39 in	-82.709 lb to -82.39 lb	DL
Distributed Load	39 in to 40 in	-82.39 lb to -81.86 lb	DL
Distributed Load	40 in to 41 in	-81.86 lb to -81.12 lb	DL
Distributed Load	41 in to 42 in	-81.12 lb to -80.171 lb	DL
Distributed Load	42 in to 43 in	-80.171 lb to -79.017 lb	DL
Distributed Load	43 in to 44 in	-79.017 lb to -77.66 lb	DL
Distributed Load	44 in to 45 in	-77.66 lb to -76.104 lb	DL
Distributed Load	45 in to 46 in	-76.104 lb to -74.352 lb	DL
Distributed Load	46 in to 47 in	-74.352 lb to -72.409 lb	DL
Distributed Load	47 in to 48 in	-72.409 lb to -70.281 lb	DL
Distributed Load	48 in to 49 in	-70.281 lb to -67.972 lb	DL
Distributed Load	49 in to 50 in	-67.972 lb to -65.488 lb	DL

Load Type	Location	Magnitude	Load Case
Distributed Load	50 in to 51 in	-65.488 lb to -62.837 lb	DL
Distributed Load	51 in to 52 in	-62.837 lb to -60.024 lb	DL
Distributed Load	52 in to 53 in	-60.024 lb to -57.057 lb	DL
Distributed Load	53 in to 54 in	-57.057 lb to -53.944 lb	DL
Distributed Load	54 in to 55 in	-53.944 lb to -50.692 lb	DL
Distributed Load	55 in to 56 in	-50.692 lb to -47.31 lb	DL
Distributed Load	56 in to 57 in	-47.31 lb to -43.806 lb	DL
Distributed Load	57 in to 58 in	-43.806 lb to -40.19 lb	DL
Distributed Load	58 in to 59 in	-40.19 lb to -36.471 lb	DL
Distributed Load	59 in to 60 in	-36.471 lb to -32.659 lb	DL
Distributed Load	60 in to 61 in	-32.659 lb to -28.762 lb	DL
Distributed Load	61 in to 62 in	-28.762 lb to -24.792 lb	DL
Distributed Load	62 in to 63 in	-24.792 lb to -20.758 lb	DL
Distributed Load	63 in to 64 in	-20.758 lb to -16.671 lb	DL
Distributed Load	64 in to 65 in	-16.671 lb to -12.54 lb	DL
Distributed Load	65 in to 66 in	-12.54 lb to -8.378 lb	DL
Distributed Load	66 in to 67 in	-8.378 lb to -4.194 lb	DL
Distributed Load	67 in to 68 in	-4.194 lb to 0 lb	DL

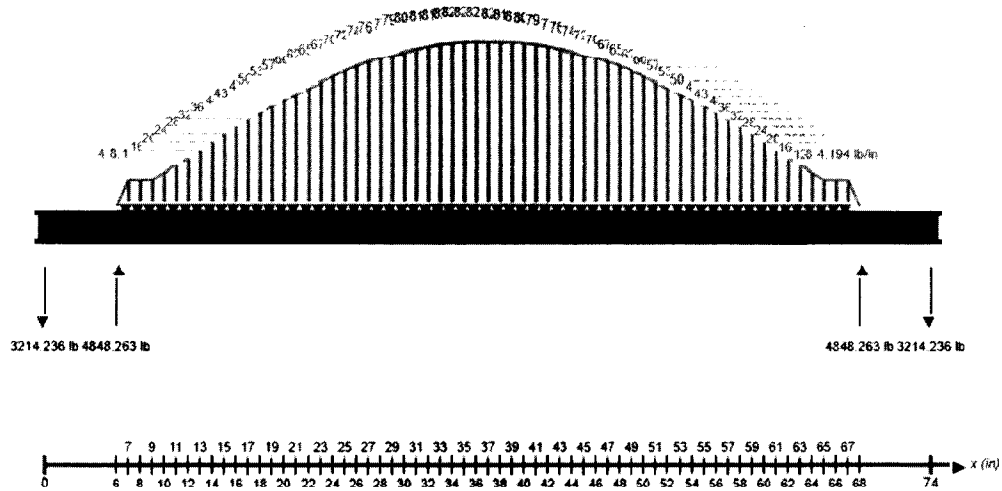
Beam Section



Geometric Properties		
A	3.142	in ²
C _z	1	in
C _y	1	in
Bending Properties		
I _z	0.785	in ⁴
I _y	0.785	in ⁴
Shear Properties		
A _z	2.827	in ²
A _y	2.827	in ²
Torsion Properties		
J	1.571	in ⁴
r	1	in

Shape	Material	E (ksi)	ν	ρ (lb/ft ³)
Circular	Structural Steel	29000	0.27	490

FREE BODY DIAGRAM



RESULT SUMMARY

Check	Status	Limit	Ratio	Max
Deflection	PASS	L/250	0.584	L/428
Custom Stress Limit	FAIL	39 psi	629.614	24554.952 psi
Material Yield	PASS	36000 psi	0.682	24554.952 psi
Material Strength	PASS	58000 psi	0.423	24554.952 psi

ANALYSIS RESULTS

Reactions

Support at	X	Y	Mx
0	0 lb	-3214.236 lb	0 lb-in
74	0 lb	-3214.236 lb	0 lb-in
6	0 lb	4848.263 lb	0 lb-in
68	0 lb	4848.263 lb	0 lb-in

Force Extremes

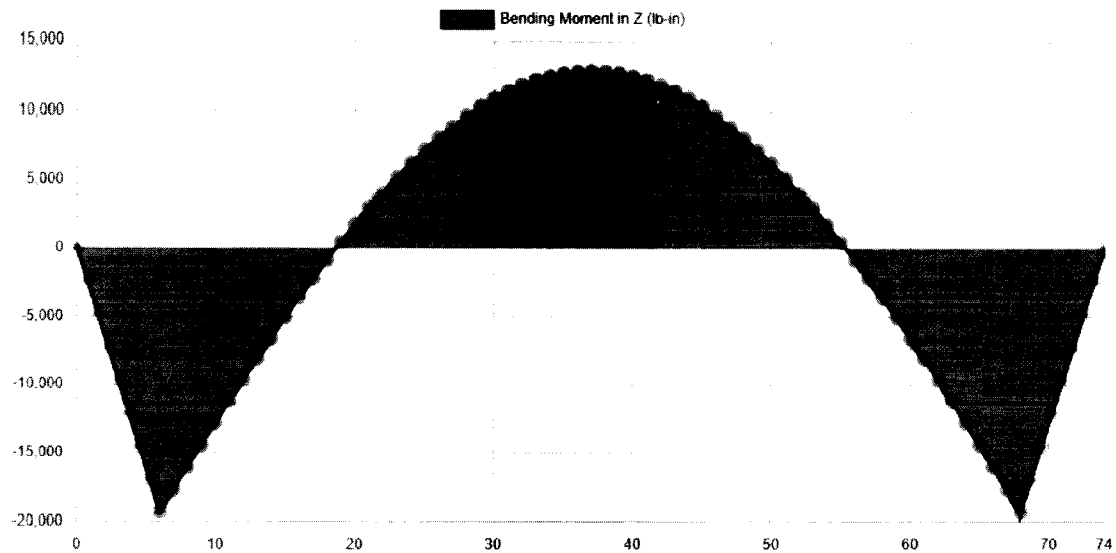
Result	Max	Min
Bending Moment	12962.452 lb-in	-19285.415 lb-in
Shear	3214.236 lb	-3214.236 lb
Displacement	0.002 in	-0.145 in

Stress Extremes

Result	Max	Min
Bending Stress	24554.952 psi	-24554.952 psi
Shear Stress Total	1545.32 psi	0 psi
Max Combined Normal Stress	24554.952 psi	0 psi
Min Combined Normal Stress	0 psi	-24554.952 psi

DIAGRAMS

Bending Moment Diagram



Bending Moment Equations

- Eq. 1** $M_1(x) = -3214.2x$ for $0 \leq x \leq 6$
- Eq. 2** $M_2(x) = -0.699x^3 + 12.582x^2 + 1558.567x - 28938.57$ for $6 \leq x \leq 7$
- Eq. 3** $M_3(x) = -0.697x^3 + 12.547x^2 + 1558.812x - 28939.142$ for $7 \leq x \leq 8$
- Eq. 4** $M_4(x) = -0.694x^3 + 12.459x^2 + 1559.516x - 28941.019$ for $8 \leq x \leq 9$
- Eq. 5** $M_5(x) = -0.689x^3 + 12.32x^2 + 1560.772x - 28944.786$ for $9 \leq x \leq 10$
- Eq. 6** $M_6(x) = -0.681x^3 + 12.099x^2 + 1562.972x - 28952.119$ for $10 \leq x \leq 11$
- Eq. 7** $M_7(x) = -0.672x^3 + 11.808x^2 + 1566.178x - 28963.876$ for $11 \leq x \leq 12$
- Eq. 8** $M_8(x) = -0.662x^3 + 11.424x^2 + 1570.786x - 28982.308$ for $12 \leq x \leq 13$
- Eq. 9** $M_9(x) = -0.649x^3 + 10.949x^2 + 1576.955x - 29009.038$ for $13 \leq x \leq 14$
- Eq. 10** $M_{10}(x) = -0.635x^3 + 10.354x^2 + 1585.285x - 29047.912$ for $14 \leq x \leq 15$
- Eq. 11** $M_{11}(x) = -0.62x^3 + 9.657x^2 + 1595.747x - 29100.224$ for $15 \leq x \leq 16$
- Eq. 12** $M_{12}(x) = -0.603x^3 + 8.833x^2 + 1608.931x - 29170.539$ for $16 \leq x \leq 17$
- Eq. 13** $M_{13}(x) = -0.584x^3 + 7.881x^2 + 1625.115x - 29262.248$ for $17 \leq x \leq 18$
- Eq. 14** $M_{14}(x) = -0.564x^3 + 6.783x^2 + 1644.879x - 29380.832$ for $18 \leq x \leq 19$
- Eq. 15** $M_{15}(x) = -0.542x^3 + 5.548x^2 + 1668.344x - 29529.444$ for $19 \leq x \leq 20$
- Eq. 16** $M_{16}(x) = -0.519x^3 + 4.158x^2 + 1696.144x - 29714.777$ for $20 \leq x \leq 21$
- Eq. 17** $M_{17}(x) = -0.494x^3 + 2.625x^2 + 1728.337x - 29940.128$ for $21 \leq x \leq 22$
- Eq. 18** $M_{18}(x) = -0.469x^3 + 0.931x^2 + 1765.605x - 30213.427$ for $22 \leq x \leq 23$
- Eq. 19** $M_{19}(x) = -0.442x^3 - 0.932x^2 + 1808.454x - 30541.936$ for $23 \leq x \leq 24$
- Eq. 20** $M_{20}(x) = -0.414x^3 - 2.936x^2 + 1856.55x - 30926.704$ for $24 \leq x \leq 25$
- Eq. 21** $M_{21}(x) = -0.385x^3 - 5.123x^2 + 1911.237x - 31382.433$ for $25 \leq x \leq 26$
- Eq. 22** $M_{22}(x) = -0.355x^3 - 7.477x^2 + 1972.416x - 31912.642$ for $26 \leq x \leq 27$
- Eq. 23** $M_{23}(x) = -0.324x^3 - 9.974x^2 + 2039.848x - 32519.535$ for $27 \leq x \leq 28$
- Eq. 24** $M_{24}(x) = -0.292x^3 - 12.648x^2 + 2114.72x - 33218.34$ for $28 \leq x \leq 29$
- Eq. 25** $M_{25}(x) = -0.259x^3 - 15.49x^2 + 2197.138x - 34015.047$ for $29 \leq x \leq 30$
- Eq. 26** $M_{26}(x) = -0.226x^3 - 18.475x^2 + 2286.688x - 34910.547$ for $30 \leq x \leq 31$
- Eq. 27** $M_{27}(x) = -0.192x^3 - 21.621x^2 + 2384.229x - 35918.476$ for $31 \leq x \leq 32$
- Eq. 28** $M_{28}(x) = -0.158x^3 - 24.902x^2 + 2489.19x - 37038.05$ for $32 \leq x \leq 33$
- Eq. 29** $M_{29}(x) = -0.123x^3 - 28.35x^2 + 2602.99x - 38289.855$ for $33 \leq x \leq 34$
- Eq. 30** $M_{30}(x) = -0.088x^3 - 31.92x^2 + 2724.37x - 39665.495$ for $34 \leq x \leq 35$
- Eq. 31** $M_{31}(x) = -0.053x^3 - 35.612x^2 + 2853.607x - 41173.266$ for $35 \leq x \leq 36$
- Eq. 32** $M_{32}(x) = -0.018x^3 - 39.447x^2 + 2991.632x - 42829.554$ for $36 \leq x \leq 37$

Eq. 33 $M_{33}(x) = 0.018x^3 - 43.368x^2 + 3136.745x - 44619.293$ for $37 \leq x \leq 38$

Eq. 34 $M_{34}(x) = 0.053x^3 - 47.416x^2 + 3290.532x - 46567.249$ for $38 \leq x \leq 39$

Eq. 35 $M_{35}(x) = 0.088x^3 - 51.53x^2 + 3450.997x - 48653.301$ for $39 \leq x \leq 40$

Eq. 36 $M_{36}(x) = 0.123x^3 - 55.73x^2 + 3618.997x - 50893.301$ for $40 \leq x \leq 41$

Eq. 37 $M_{37}(x) = 0.158x^3 - 60.014x^2 + 3794.661x - 53294.049$ for $41 \leq x \leq 42$

Eq. 38 $M_{38}(x) = 0.192x^3 - 64.32x^2 + 3975.472x - 55875.389$ for $42 \leq x \leq 43$

Eq. 39 $M_{39}(x) = 0.226x^3 - 68.684x^2 + 4163.145x - 58515.376$ for $43 \leq x \leq 44$

Eq. 40 $M_{40}(x) = 0.259x^3 - 73.062x^2 + 4355.777x - 61340.645$ for $44 \leq x \leq 45$

Eq. 41 $M_{41}(x) = 0.292x^3 - 77.472x^2 + 4554.227x - 64317.395$ for $45 \leq x \leq 46$

Eq. 42 $M_{42}(x) = 0.324x^3 - 81.865x^2 + 4756.305x - 67415.924$ for $46 \leq x \leq 47$

Eq. 43 $M_{43}(x) = 0.355x^3 - 86.213x^2 + 4960.637x - 70617.134$ for $47 \leq x \leq 48$

Eq. 44 $M_{44}(x) = 0.385x^3 - 90.557x^2 + 5169.15x - 73953.326$ for $48 \leq x \leq 49$

Eq. 45 $M_{45}(x) = 0.414x^3 - 94.844x^2 + 5379.237x - 77384.755$ for $49 \leq x \leq 50$

Eq. 46 $M_{46}(x) = 0.442x^3 - 99.019x^2 + 5587.987x - 80863.921$ for $50 \leq x \leq 51$

Eq. 47 $M_{47}(x) = 0.469x^3 - 103.15x^2 + 5798.668x - 84445.498$ for $51 \leq x \leq 52$

Eq. 48 $M_{48}(x) = 0.494x^3 - 107.154x^2 + 6006.876x - 88054.437$ for $52 \leq x \leq 53$

Eq. 49 $M_{49}(x) = 0.519x^3 - 111.023x^2 + 6211.933x - 91677.111$ for $53 \leq x \leq 54$

Eq. 50 $M_{50}(x) = 0.542x^3 - 114.776x^2 + 6414.595x - 95325.027$ for $54 \leq x \leq 55$

Eq. 51 $M_{51}(x) = 0.564x^3 - 118.351x^2 + 6611.22x - 98929.818$ for $55 \leq x \leq 56$

Eq. 52 $M_{52}(x) = 0.584x^3 - 121.767x^2 + 6802.516x - 102500.677$ for $56 \leq x \leq 57$

Eq. 53 $M_{53}(x) = 0.603x^3 - 124.959x^2 + 6984.46x - 105957.613$ for $57 \leq x \leq 58$

Eq. 54 $M_{54}(x) = 0.62x^3 - 127.946x^2 + 7157.706x - 109307.036$ for $58 \leq x \leq 59$

Eq. 55 $M_{55}(x) = 0.635x^3 - 130.689x^2 + 7319.572x - 112490.41$ for $59 \leq x \leq 60$

Eq. 56 $M_{56}(x) = 0.649x^3 - 133.239x^2 + 7472.572x - 115550.41$ for $60 \leq x \leq 61$

Eq. 57 $M_{57}(x) = 0.662x^3 - 135.466x^2 + 7608.389x - 118312.012$ for $61 \leq x \leq 62$

Eq. 58 $M_{58}(x) = 0.672x^3 - 137.45x^2 + 7731.397x - 120854.178$ for $62 \leq x \leq 63$

Eq. 59 $M_{59}(x) = 0.681x^3 - 139.119x^2 + 7836.575x - 123062.926$ for $63 \leq x \leq 64$

Eq. 60 $M_{60}(x) = 0.689x^3 - 140.528x^2 + 7926.687x - 124985.315$ for $64 \leq x \leq 65$

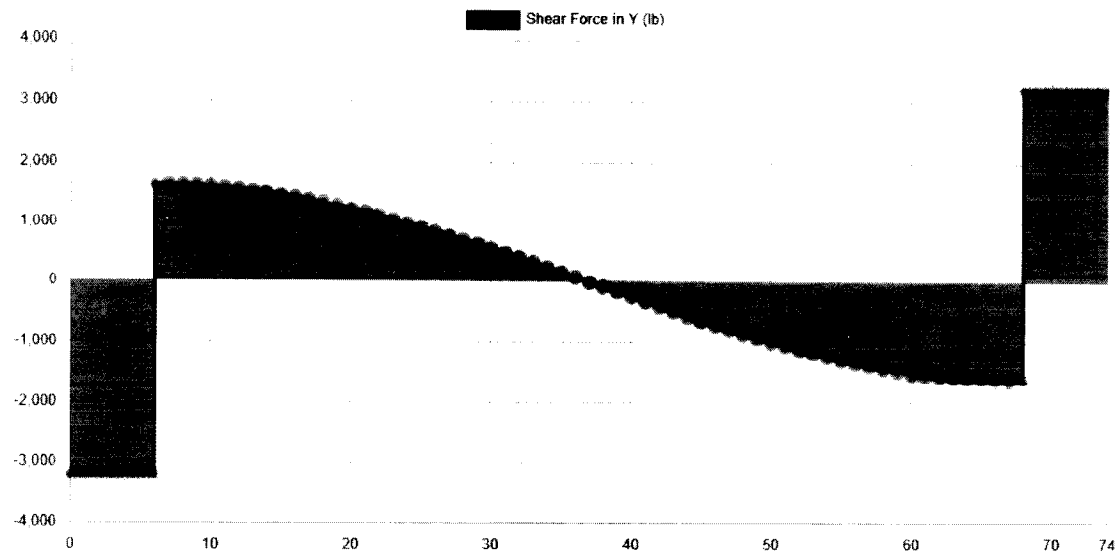
Eq. 61 $M_{61}(x) = 0.694x^3 - 141.535x^2 + 7992.175x - 126404.211$ for $65 \leq x \leq 66$

Eq. 62 $M_{62}(x) = 0.697x^3 - 142.261x^2 + 8040.091x - 127458.363$ for $66 \leq x \leq 67$

Eq. 63 $M_{63}(x) = 0.699x^3 - 142.596x^2 + 8062.536x - 127959.635$ for $67 \leq x \leq 68$

Eq. 64 $M_{64}(x) = 3214.267x - 237853.279$ for $68 \leq x \leq 74$

Shear Force Diagram

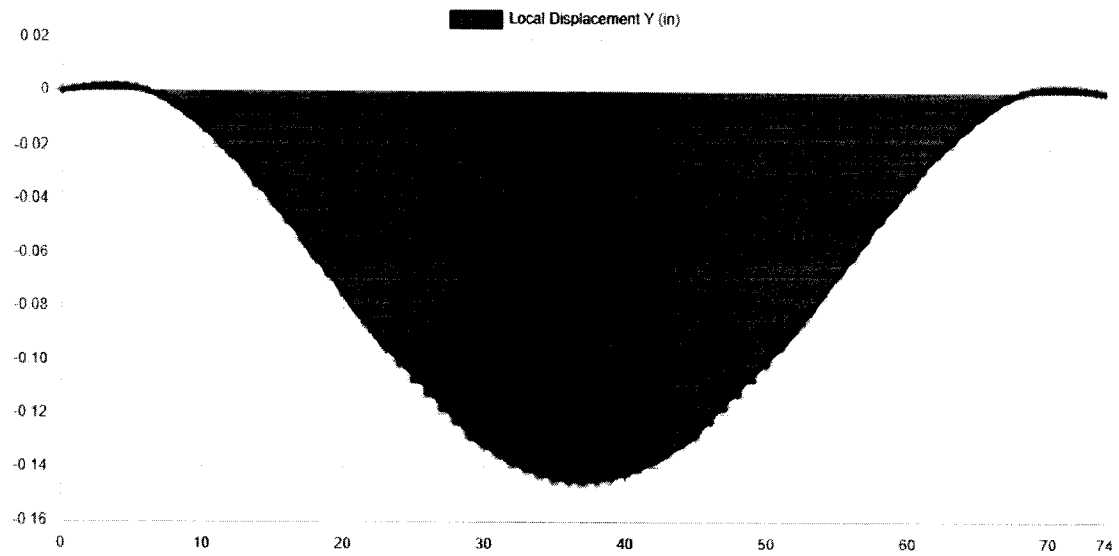


Shear Force Equations

- Eq. 1** $V_1(x) = -3214.2$ for $0 \leq x \leq 6$
- Eq. 2** $V_2(x) = -2.097x^2 + 25.164x + 1558.567$ for $6 \leq x \leq 7$
- Eq. 3** $V_3(x) = -2.092x^2 + 25.094x + 1558.812$ for $7 \leq x \leq 8$
- Eq. 4** $V_4(x) = -2.081x^2 + 24.918x + 1559.516$ for $8 \leq x \leq 9$
- Eq. 5** $V_5(x) = -2.066x^2 + 24.639x + 1560.772$ for $9 \leq x \leq 10$
- Eq. 6** $V_6(x) = -2.043x^2 + 24.199x + 1562.972$ for $10 \leq x \leq 11$
- Eq. 7** $V_7(x) = -2.017x^2 + 23.616x + 1566.178$ for $11 \leq x \leq 12$
- Eq. 8** $V_8(x) = -1.985x^2 + 22.848x + 1570.786$ for $12 \leq x \leq 13$
- Eq. 9** $V_9(x) = -1.948x^2 + 21.899x + 1576.955$ for $13 \leq x \leq 14$
- Eq. 10** $V_{10}(x) = -1.906x^2 + 20.709x + 1585.285$ for $14 \leq x \leq 15$
- Eq. 11** $V_{11}(x) = -1.86x^2 + 19.314x + 1595.747$ for $15 \leq x \leq 16$
- Eq. 12** $V_{12}(x) = -1.808x^2 + 17.666x + 1608.931$ for $16 \leq x \leq 17$
- Eq. 13** $V_{13}(x) = -1.752x^2 + 15.762x + 1625.115$ for $17 \leq x \leq 18$
- Eq. 14** $V_{14}(x) = -1.691x^2 + 13.566x + 1644.879$ for $18 \leq x \leq 19$
- Eq. 15** $V_{15}(x) = -1.626x^2 + 11.096x + 1668.344$ for $19 \leq x \leq 20$
- Eq. 16** $V_{16}(x) = -1.556x^2 + 8.316x + 1696.144$ for $20 \leq x \leq 21$
- Eq. 17** $V_{17}(x) = -1.483x^2 + 5.25x + 1728.337$ for $21 \leq x \leq 22$
- Eq. 18** $V_{18}(x) = -1.407x^2 + 1.862x + 1765.605$ for $22 \leq x \leq 23$
- Eq. 19** $V_{19}(x) = -1.325x^2 - 1.864x + 1808.454$ for $23 \leq x \leq 24$
- Eq. 20** $V_{20}(x) = -1.242x^2 - 5.872x + 1856.55$ for $24 \leq x \leq 25$
- Eq. 21** $V_{21}(x) = -1.155x^2 - 10.247x + 1911.237$ for $25 \leq x \leq 26$
- Eq. 22** $V_{22}(x) = -1.064x^2 - 14.953x + 1972.416$ for $26 \leq x \leq 27$
- Eq. 23** $V_{23}(x) = -0.971x^2 - 19.948x + 2039.848$ for $27 \leq x \leq 28$
- Eq. 24** $V_{24}(x) = -0.876x^2 - 25.296x + 2114.72$ for $28 \leq x \leq 29$
- Eq. 25** $V_{25}(x) = -0.778x^2 - 30.98x + 2197.138$ for $29 \leq x \leq 30$
- Eq. 26** $V_{26}(x) = -0.678x^2 - 36.95x + 2286.688$ for $30 \leq x \leq 31$
- Eq. 27** $V_{27}(x) = -0.577x^2 - 43.243x + 2384.229$ for $31 \leq x \leq 32$
- Eq. 28** $V_{28}(x) = -0.474x^2 - 49.803x + 2489.19$ for $32 \leq x \leq 33$
- Eq. 29** $V_{29}(x) = -0.37x^2 - 56.7x + 2602.99$ for $33 \leq x \leq 34$
- Eq. 30** $V_{30}(x) = -0.265x^2 - 63.84x + 2724.37$ for $34 \leq x \leq 35$
- Eq. 31** $V_{31}(x) = -0.16x^2 - 71.225x + 2853.607$ for $35 \leq x \leq 36$
- Eq. 32** $V_{32}(x) = -0.053x^2 - 78.893x + 2991.632$ for $36 \leq x \leq 37$
- Eq. 33** $V_{33}(x) = 0.053x^2 - 86.737x + 3136.745$ for $37 \leq x \leq 38$
- Eq. 34** $V_{34}(x) = 0.16x^2 - 94.831x + 3290.532$ for $38 \leq x \leq 39$
- Eq. 35** $V_{35}(x) = 0.265x^2 - 103.06x + 3450.997$ for $39 \leq x \leq 40$

Eq. 36 $V_{36}(x) = 0.37x^2 - 111.46x + 3618.997$ for $40 \leq x \leq 41$
Eq. 37 $V_{37}(x) = 0.474x^2 - 120.029x + 3794.661$ for $41 \leq x \leq 42$
Eq. 38 $V_{38}(x) = 0.577x^2 - 128.639x + 3975.472$ for $42 \leq x \leq 43$
Eq. 39 $V_{39}(x) = 0.678x^2 - 137.368x + 4163.145$ for $43 \leq x \leq 44$
Eq. 40 $V_{40}(x) = 0.778x^2 - 146.124x + 4355.777$ for $44 \leq x \leq 45$
Eq. 41 $V_{41}(x) = 0.876x^2 - 154.944x + 4554.227$ for $45 \leq x \leq 46$
Eq. 42 $V_{42}(x) = 0.971x^2 - 163.73x + 4756.305$ for $46 \leq x \leq 47$
Eq. 43 $V_{43}(x) = 1.064x^2 - 172.425x + 4960.637$ for $47 \leq x \leq 48$
Eq. 44 $V_{44}(x) = 1.155x^2 - 181.113x + 5169.15$ for $48 \leq x \leq 49$
Eq. 45 $V_{45}(x) = 1.242x^2 - 189.688x + 5379.237$ for $49 \leq x \leq 50$
Eq. 46 $V_{46}(x) = 1.325x^2 - 198.038x + 5587.987$ for $50 \leq x \leq 51$
Eq. 47 $V_{47}(x) = 1.407x^2 - 206.3x + 5798.668$ for $51 \leq x \leq 52$
Eq. 48 $V_{48}(x) = 1.483x^2 - 214.308x + 6006.876$ for $52 \leq x \leq 53$
Eq. 49 $V_{49}(x) = 1.556x^2 - 222.046x + 6211.933$ for $53 \leq x \leq 54$
Eq. 50 $V_{50}(x) = 1.626x^2 - 229.552x + 6414.595$ for $54 \leq x \leq 55$
Eq. 51 $V_{51}(x) = 1.691x^2 - 236.702x + 6611.22$ for $55 \leq x \leq 56$
Eq. 52 $V_{52}(x) = 1.752x^2 - 243.534x + 6802.516$ for $56 \leq x \leq 57$
Eq. 53 $V_{53}(x) = 1.808x^2 - 249.918x + 6984.46$ for $57 \leq x \leq 58$
Eq. 54 $V_{54}(x) = 1.86x^2 - 255.892x + 7157.706$ for $58 \leq x \leq 59$
Eq. 55 $V_{55}(x) = 1.906x^2 - 261.379x + 7319.572$ for $59 \leq x \leq 60$
Eq. 56 $V_{56}(x) = 1.948x^2 - 266.479x + 7472.572$ for $60 \leq x \leq 61$
Eq. 57 $V_{57}(x) = 1.985x^2 - 270.932x + 7608.389$ for $61 \leq x \leq 62$
Eq. 58 $V_{58}(x) = 2.017x^2 - 274.9x + 7731.397$ for $62 \leq x \leq 63$
Eq. 59 $V_{59}(x) = 2.043x^2 - 279.239x + 7836.575$ for $63 \leq x \leq 64$
Eq. 60 $V_{60}(x) = 2.066x^2 - 281.055x + 7926.687$ for $64 \leq x \leq 65$
Eq. 61 $V_{61}(x) = 2.081x^2 - 283.07x + 7992.175$ for $65 \leq x \leq 66$
Eq. 62 $V_{62}(x) = 2.092x^2 - 284.522x + 8040.091$ for $66 \leq x \leq 67$
Eq. 63 $V_{63}(x) = 2.097x^2 - 285.192x + 8062.536$ for $67 \leq x \leq 68$
Eq. 64 $V_{64}(x) = 3214.267$ for $68 \leq x \leq 74$

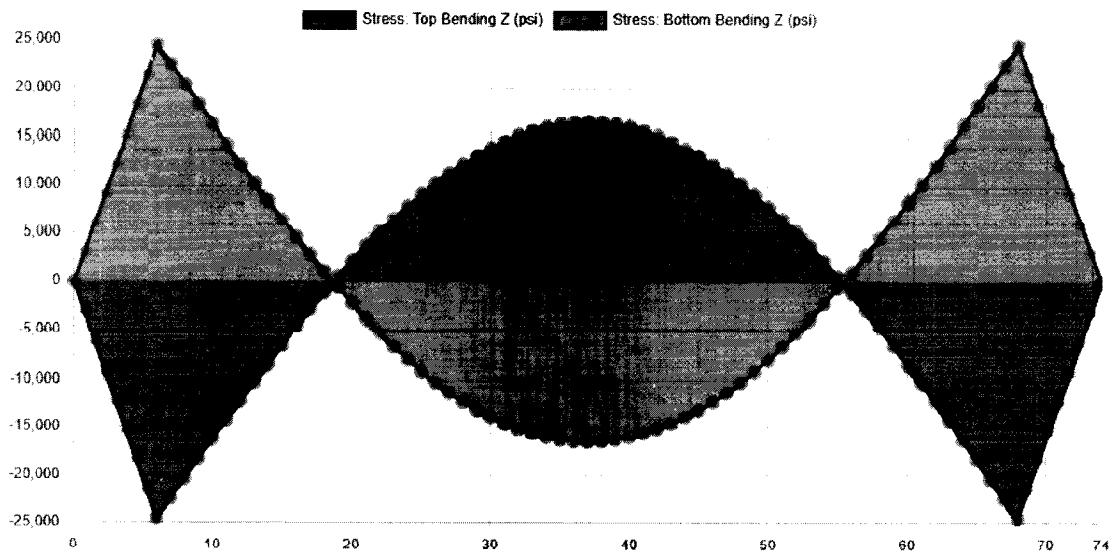
Displacement



Location (in)	Total Deflection (in)	Span ^❶
0	0 in	-
3.75	0.002 in	L/3100
6	0 in	-
37	0.145 in	L/428
68	0 in	-
70.25	0.002 in	L/3100
74	0 in	-

❶ The Deflection/Span results are calculated using the analysis results and the Deflection Limit of L/250 set in the model settings.

Bending Stress



Shear Stress

