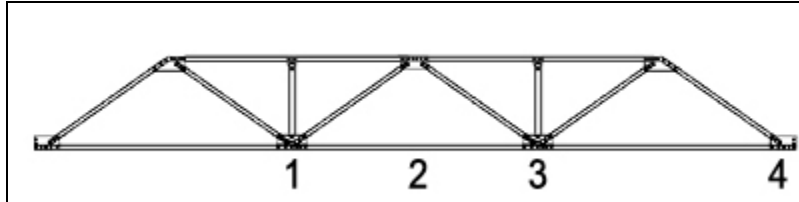


UMass Amherst
 Adaptive Use Bridge Project
 Southern Vermont (1906) Bridge Load Test 2 Results

A 19340 lb bucket loader was used to load the Southern Vermont (1906) Bridge.



Bridge diagram and node labeling shown above. Dial gages located at points 1, 2 and 3.

Test #1. Loader facing forwards with center of gravity at location 2.

| Gage # | Zero (in) | Disp (in) | Net (in) |
|--------|-----------|-----------|----------|
| 1 | -0.0045 | 0.1485 | 0.1530 |
| 2 | -0.0030 | 0.1730 | 0.1760 |
| 3 | -0.0020 | 0.1510 | 0.1530 |

Test #2. Loader facing backwards with center of gravity at location 2.

| Gage # | Zero (in) | Disp (in) | Net (in) |
|--------|-----------|-----------|----------|
| 1 | -0.0030 | 0.1430 | 0.1460 |
| 2 | 0.0010 | 0.1745 | 0.1735 |
| 3 | 0.0000 | 0.1535 | 0.1535 |

Test #3. Loader facing backwards with center of gravity at location 3.

| Gage # | Zero (in) | Disp (in) | Net (in) |
|--------|-----------|-----------|----------|
| 1 | -0.0030 | 0.1090 | 0.1120 |
| 2 | 0.0010 | 0.1655 | 0.1645 |
| 3 | 0.0000 | 0.1555 | 0.1555 |

Test #4. Loader facing backwards with center of gravity at location 2.

| Gage # | Zero (in) | Disp (in) | Net (in) |
|--------|-----------|-----------|----------|
| 1 | -0.0030 | 0.1420 | 0.1450 |
| 2 | 0.0010 | 0.1820 | 0.1810 |
| 3 | 0.0000 | 0.1615 | 0.1615 |

Test #5. Loader facing backwards with center of gravity at location 1.

| Gage # | Zero (in) | Disp (in) | Net (in) | Rebound (in) | Net Rebound (in) |
|--------|-----------|-----------|----------|--------------|------------------|
| 1 | -0.0030 | 0.1515 | 0.1545 | 0.001 | 0.0040 |
| 2 | 0.0010 | 0.1670 | 0.1660 | 0.0095 | 0.0085 |
| 3 | 0.0000 | 0.1225 | 0.1225 | 0.0055 | 0.0055 |

Summary of results. All displacements are inches.

| Test | C.G. at location 1 | | | C.G. at location 2 | | | C.G. at location 3 | | |
|------|--------------------|--------|--------|--------------------|--------|--------|--------------------|--------|--------|
| | gage 1 | gage 2 | gage 3 | gage 1 | gage 2 | gage 3 | gage 1 | gage 2 | gage 3 |
| 1 | | | | 0.153 | 0.176 | 0.153 | | | |
| 2 | | | | 0.146 | 0.174 | 0.154 | | | |
| 3 | 0.155 | 0.166 | 0.123 | | | | | | |
| 4 | | | | 0.145 | 0.181 | 0.162 | | | |
| 5 | | | | | | | 0.112 | 0.165 | 0.156 |
| Mean | | | | 0.148 | 0.177 | 0.156 | | | |
| std | | | | 0.004 | 0.004 | 0.005 | | | |
| Max | | | | 0.153 | 0.181 | 0.162 | | | |
| Min | | | | 0.145 | 0.174 | 0.153 | | | |