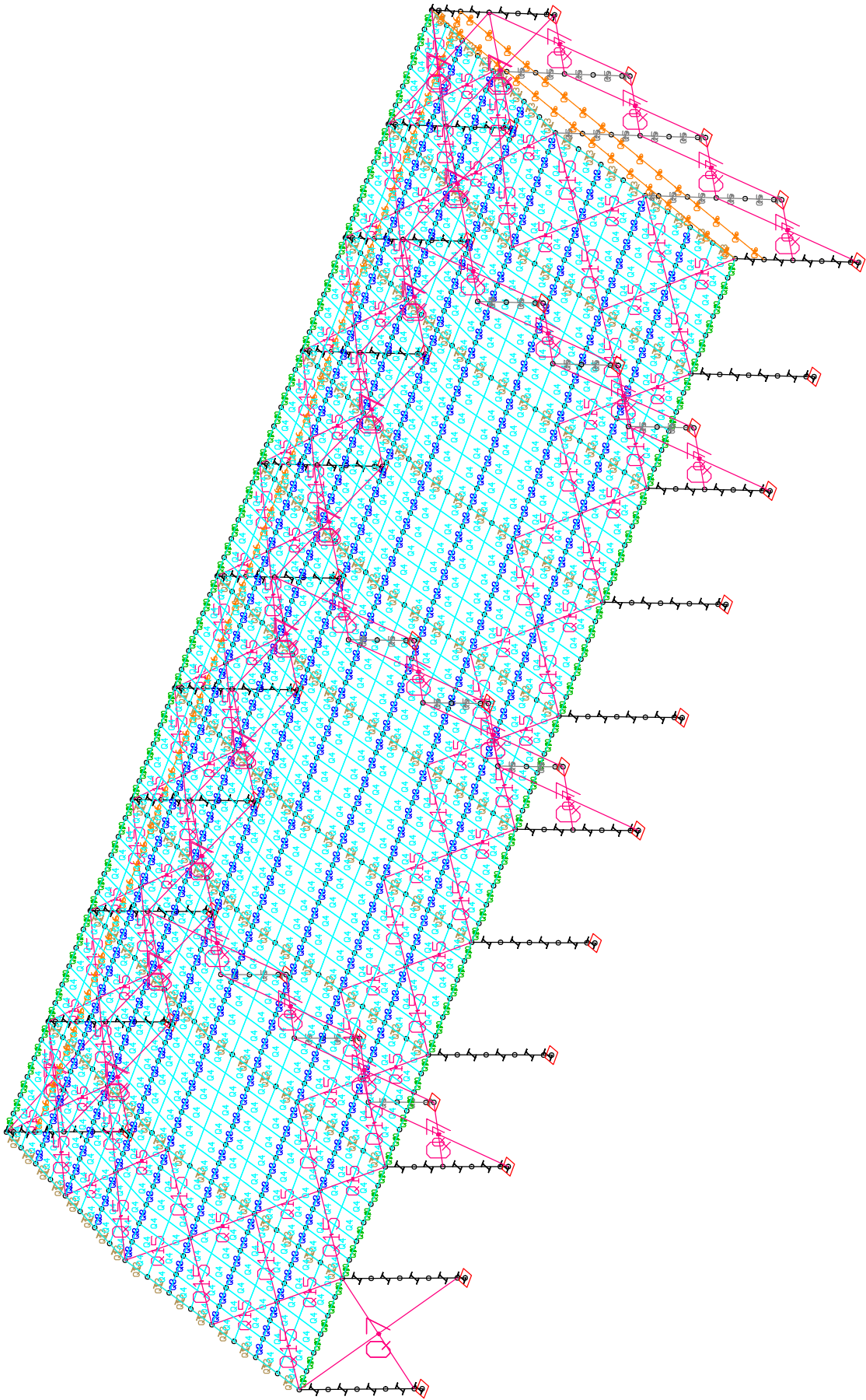
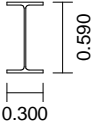
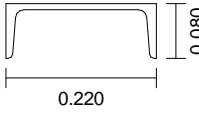
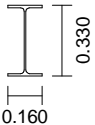

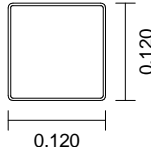
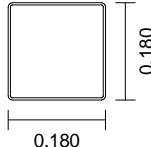
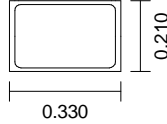


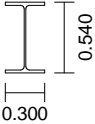
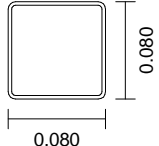
X
Y
Z



Section properties

| | | | | |
|----|---|--|--|---|
| 1 | HEA 600  | Centroid [m] Area [m²] Moments of inertia [m⁴] Main axis angle [Grad] | ys = 0.000 A = 2.2600e-02 Ix = 3.9900e-06 Iy = 1.4120e-03 Iz = 1.1270e-04 Phi = 0.000 | zs = 0.000 I1 = 1.4120e-03 I2 = 1.1270e-04 |
| 3 | Polygon  | Centroid [m] Area [m²] Moments of inertia [m⁴] Main axis angle [Grad] | ys = -0.000 A = 3.7482e-03 Ix = 1.0000e-06 Iy = 1.9415e-06 Iz = 2.6930e-05 Phi = -0.000 | zs = -0.000 I1 = 1.9415e-06 I2 = 2.6930e-05 |
| 4 | Area | Element thickness [m] Orthotropy ratio dy/dx E-Modulus slab/plain | d = 0.0025 = 1 = 1 | torsion-free |
| 5 | IPE 330  | Centroid [m] Area [m²] Moments of inertia [m⁴] Main axis angle [Grad] | ys = 0.000 A = 6.2600e-03 Ix = 2.8300e-07 Iy = 1.1770e-04 Iz = 7.8800e-06 Phi = 0.000 | zs = 0.000 I1 = 1.1770e-04 I2 = 7.8800e-06 |
| 6 | Polygon  | Centroid [m] Area [m²] Moments of inertia [m⁴] Main axis angle [Grad] | ys = 0.000 A = 2.1310e-03 Ix = 1.0000e-06 Iy = 3.7301e-06 Iz = 9.2307e-06 Phi = -0.000 | zs = -0.000 I1 = 3.7301e-06 I2 = 9.2307e-06 |
| 7 | Bibliothek  | QRO 120 x 120 x 3 (EN 10219-2) Centroid [m] Area [m²] Moments of inertia [m⁴] Main axis angle [Grad] | ys = 0.000 A = 1.3800e-03 Ix = 4.8770e-06 Iy = 3.1200e-06 Iz = 3.1200e-06 Phi = 0.000 | zs = 0.000 I1 = 3.1200e-06 I2 = 3.1200e-06 |
| 10 | Bibliothek  | QRO 180 x 180 x 4 (EN 10219-2) Centroid [m] Area [m²] Moments of inertia [m⁴] Main axis angle [Grad] | ys = 0.000 A = 2.7700e-03 Ix = 2.2100e-05 Iy = 1.4220e-05 Iz = 1.4220e-05 Phi = 0.000 | zs = 0.000 I1 = 1.4220e-05 I2 = 1.4220e-05 |
| 12 | Polygon  | Centroid [m] Area [m²] Moments of inertia [m⁴] Main axis angle [Grad] | ys = 0.023 A = 1.3580e-02 Ix = 1.0000e-06 Iy = 9.2122e-05 Iz = 2.2068e-04 Phi = -0.000 | zs = 0.076 I1 = 9.2122e-05 I2 = 2.2068e-04 |

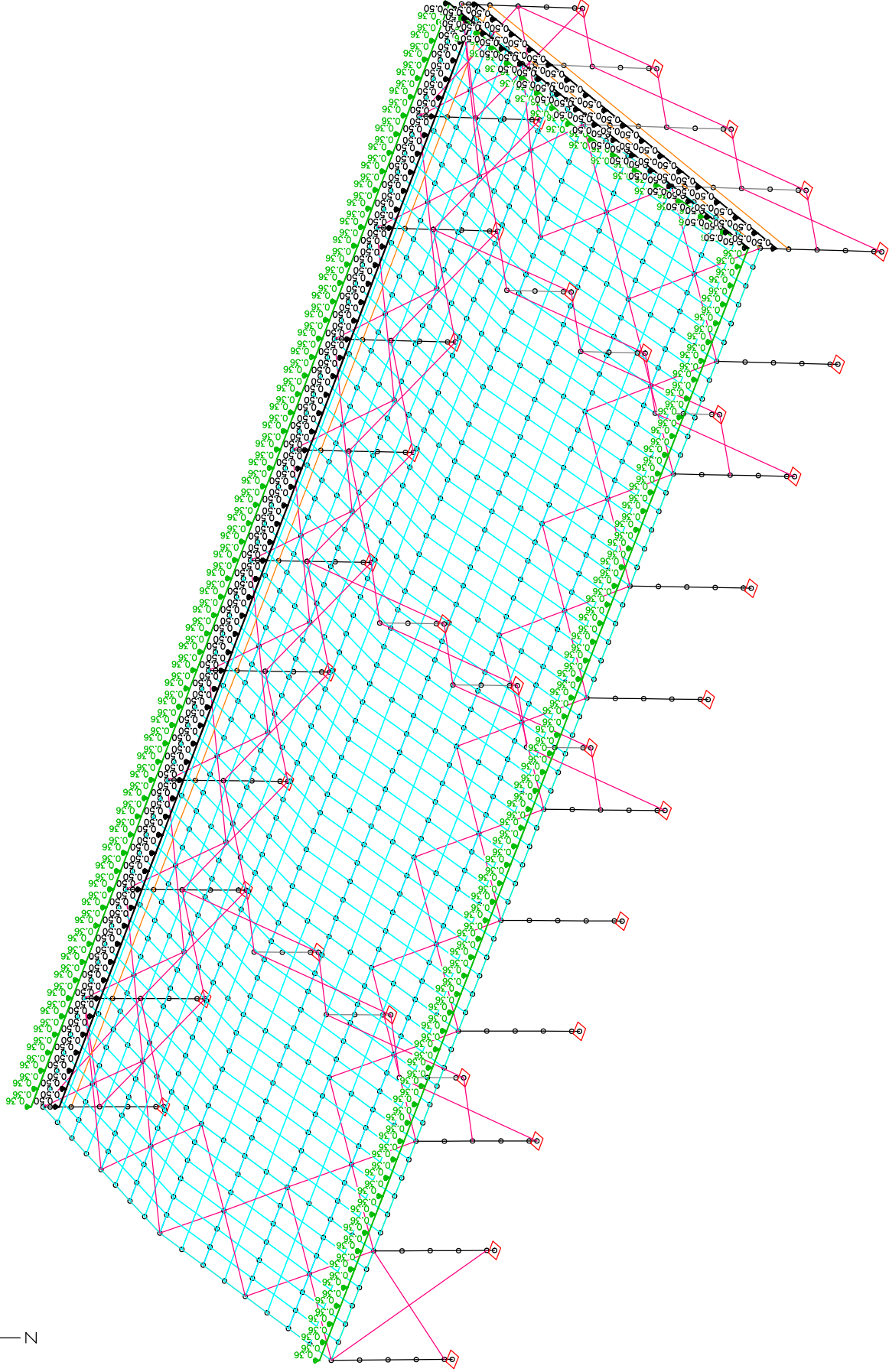
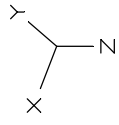
Section properties

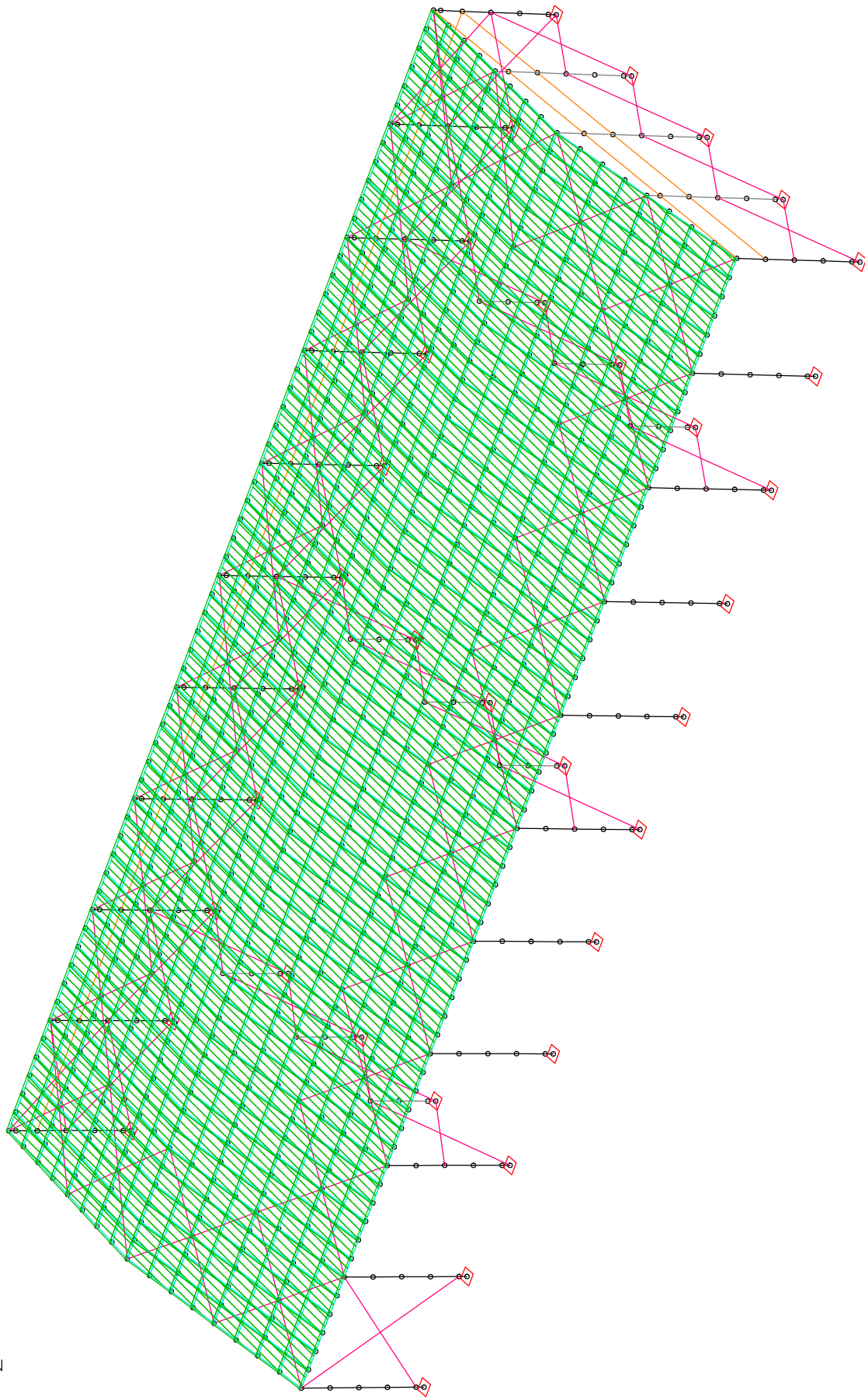
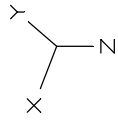
| | | | | |
|----|---|--|---|---|
| 13 | HEA 550  | Centroid [m] Area [m²] Moments of inertia [m⁴] Main axis angle [Grad] | $y_s = 0.000$ $A = 2.1200e-02$ $I_x = 3.5300e-06$ $I_y = 1.1190e-03$ $I_z = 1.0820e-04$ $\Phi = 0.000$ | $z_s = 0.000$ $I_1 = 1.1190e-03$ $I_2 = 1.0820e-04$ |
| 14 | Area | Element thickness [m] Orthotropy ratio ν_y/ν_x E-Modulus slab/plain | $d = 0.2000$ $= 1$ $= 1$ | torsion-free |
| 15 | Bibliothek  | QRO 80 x 80 x 3 (EN 10219-2) Centroid [m] Area [m²] Moments of inertia [m⁴] Main axis angle [Grad] | $y_s = 0.000$ $A = 9.0100e-04$ $I_x = 1.3990e-06$ $I_y = 8.7800e-07$ $I_z = 8.7800e-07$ $\Phi = 0.000$ | $z_s = 0.000$ $I_1 = 8.7800e-07$ $I_2 = 8.7800e-07$ |

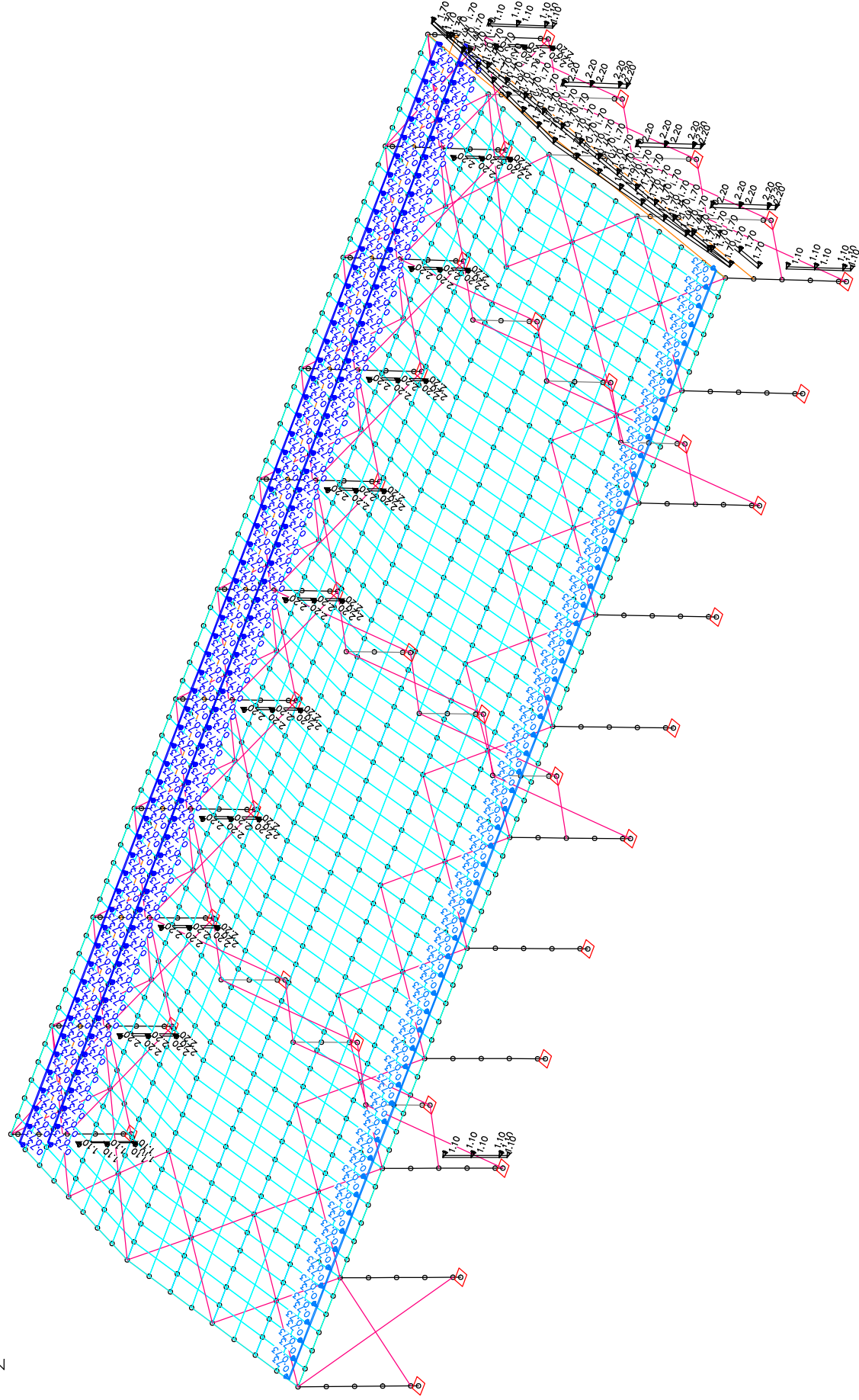
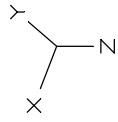
Material properties

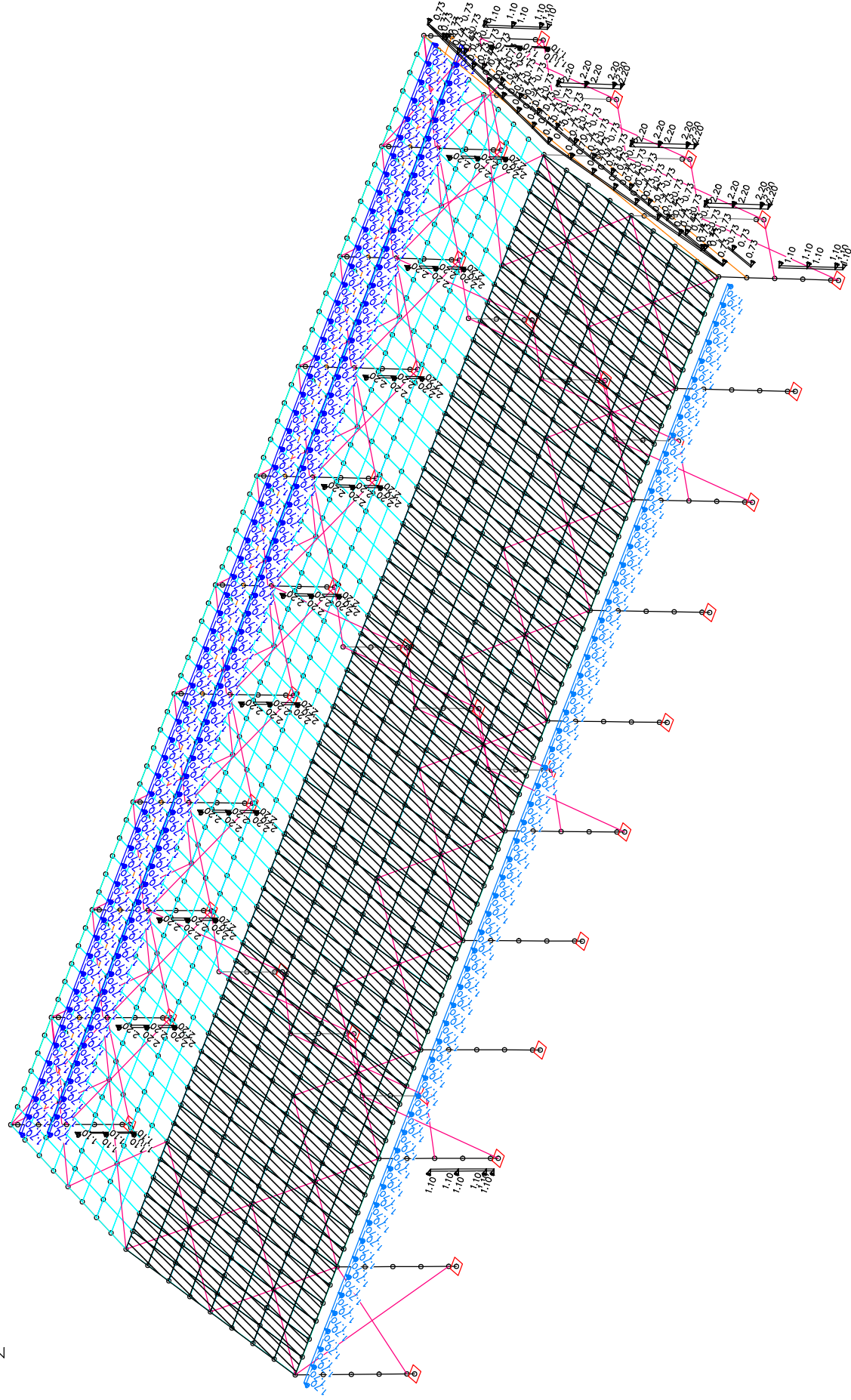
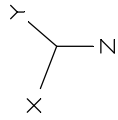
| | No. | Type | E-Modu. [MN/m²] | G-Modu. [MN/m²] | Poiss. ratio | alpha.t [1/K] | gamma [kN/m³] |
|----|-----|--------|--------------------|--------------------|-----------------|------------------|------------------|
| 1 | 1 | S235 | 210000 | 81000 | 0.30 | 1.200e-05 | 78.500 |
| 2 | 3 | S235 | 210000 | 81000 | 0.30 | 1.200e-05 | 78.500 |
| 3 | 4 | S235 | 210000 | 81000 | 0.30 | 1.200e-05 | 78.500 |
| 4 | 5 | S235 | 210000 | 81000 | 0.30 | 1.200e-05 | 78.500 |
| 5 | 6 | S235 | 210000 | 81000 | 0.30 | 1.200e-05 | 78.500 |
| 6 | 7 | S235 | 210000 | 81000 | 0.30 | 1.200e-05 | 78.500 |
| 7 | 10 | S235 | 210000 | 81000 | 0.30 | 1.200e-05 | 78.500 |
| 8 | 12 | S235 | 210000 | 81000 | 0.30 | 1.200e-05 | 78.500 |
| 9 | 13 | S235 | 210000 | 81000 | 0.30 | 1.200e-05 | 78.500 |
| 10 | 14 | C16/20 | 27400 | 11400 | 0.20 | 1.000e-05 | 25.000 |
| 11 | 15 | S235 | 210000 | 81000 | 0.30 | 1.200e-05 | 78.500 |

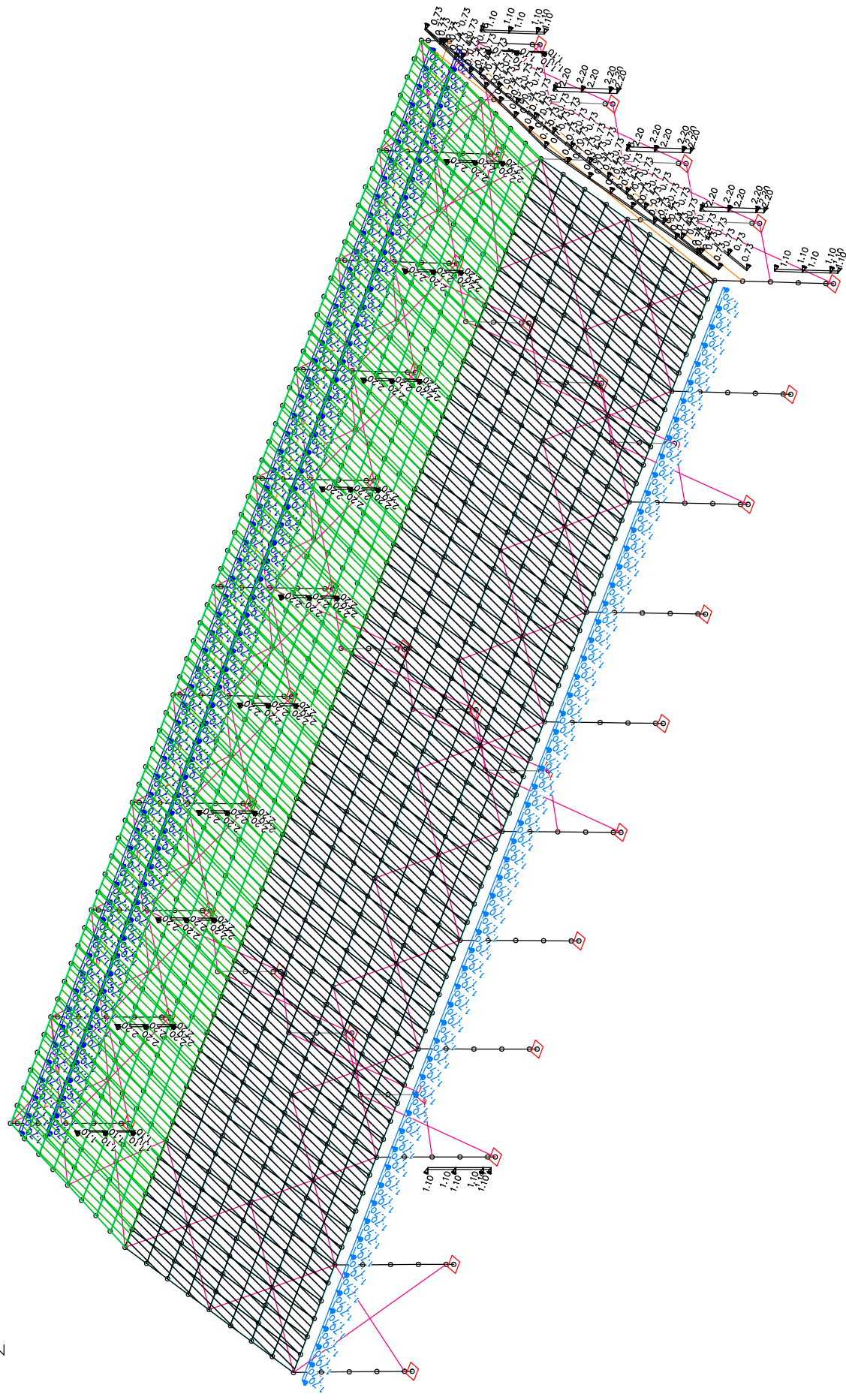
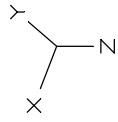
DEAD LOAD

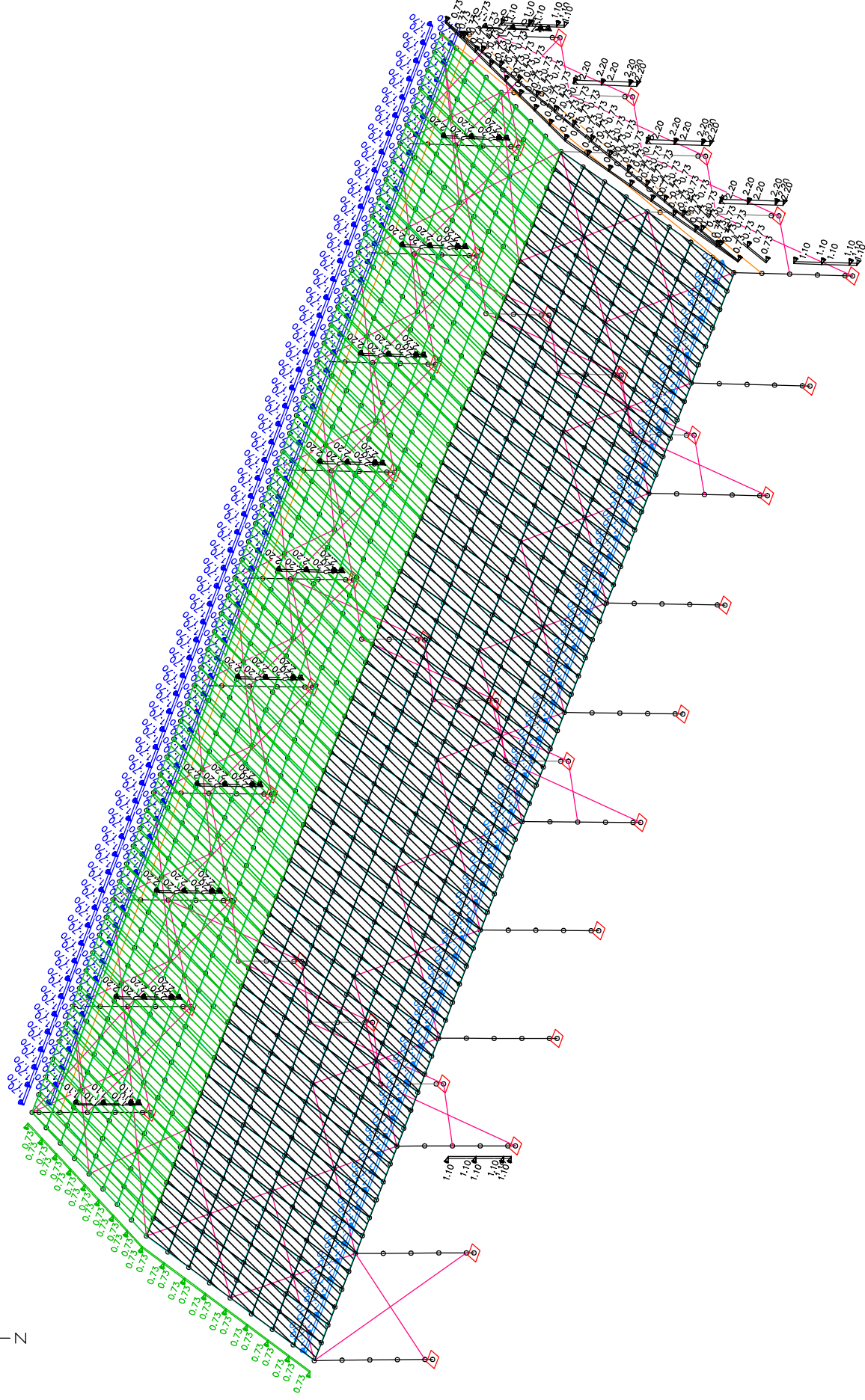
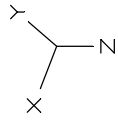


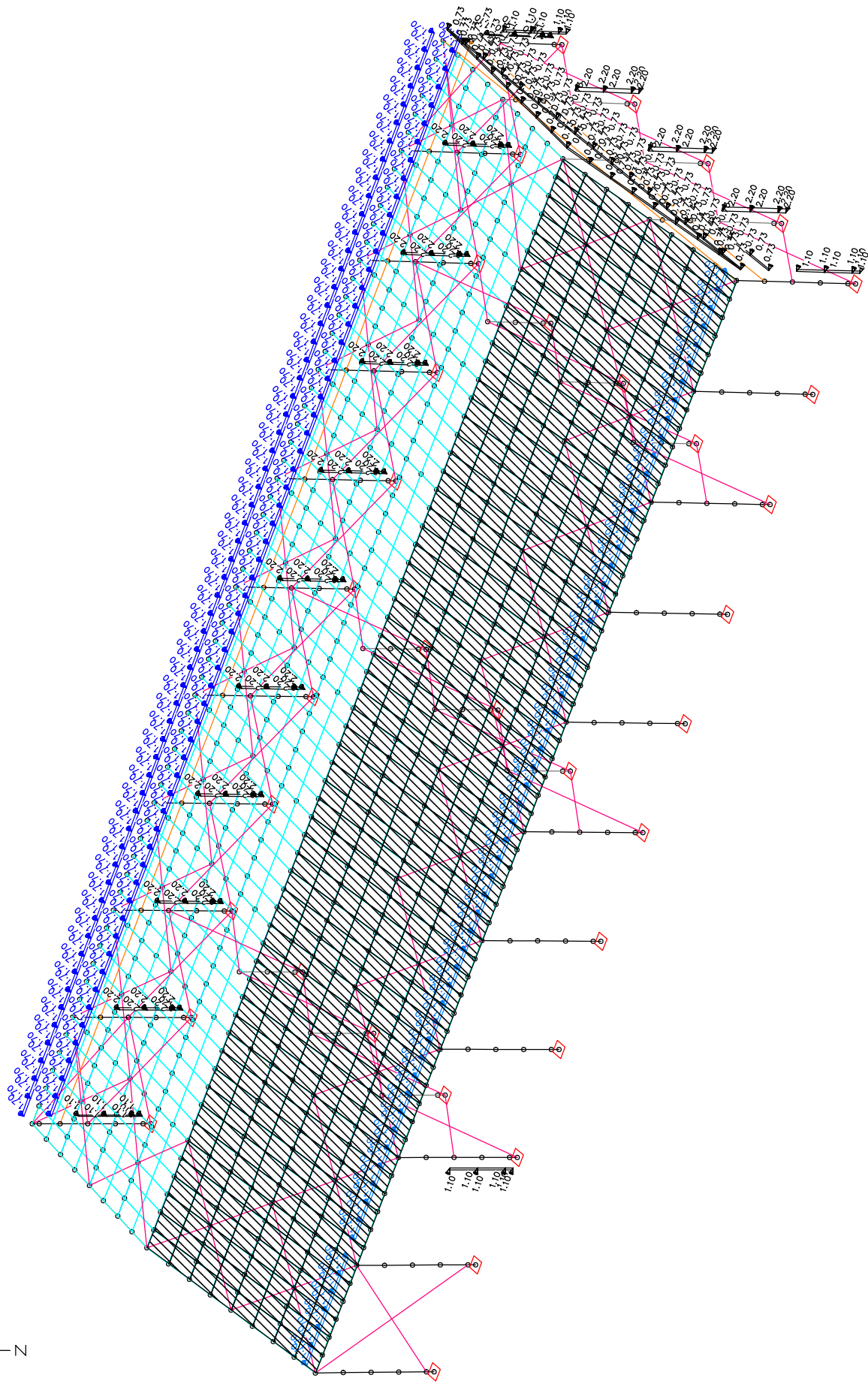
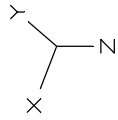


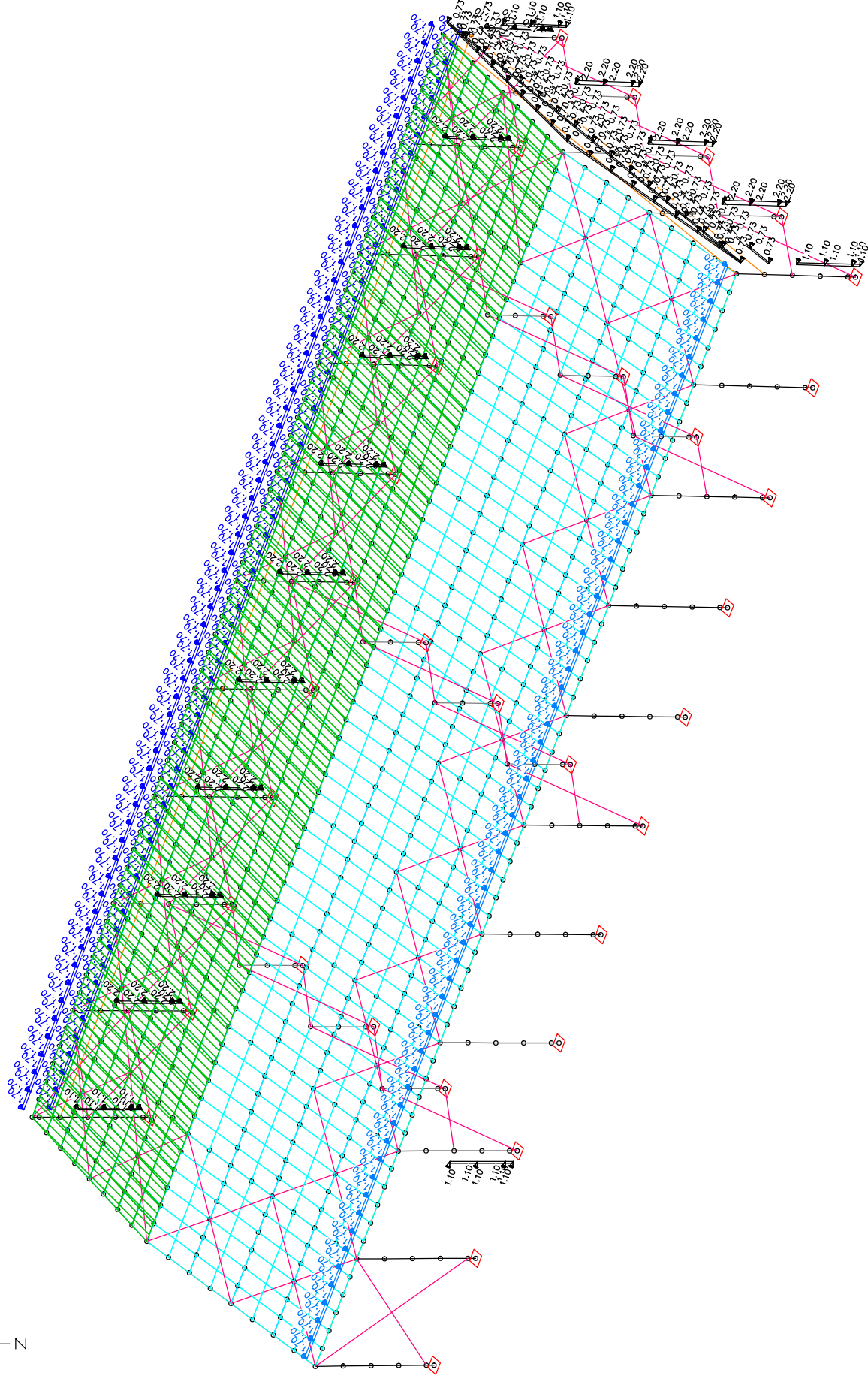
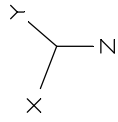


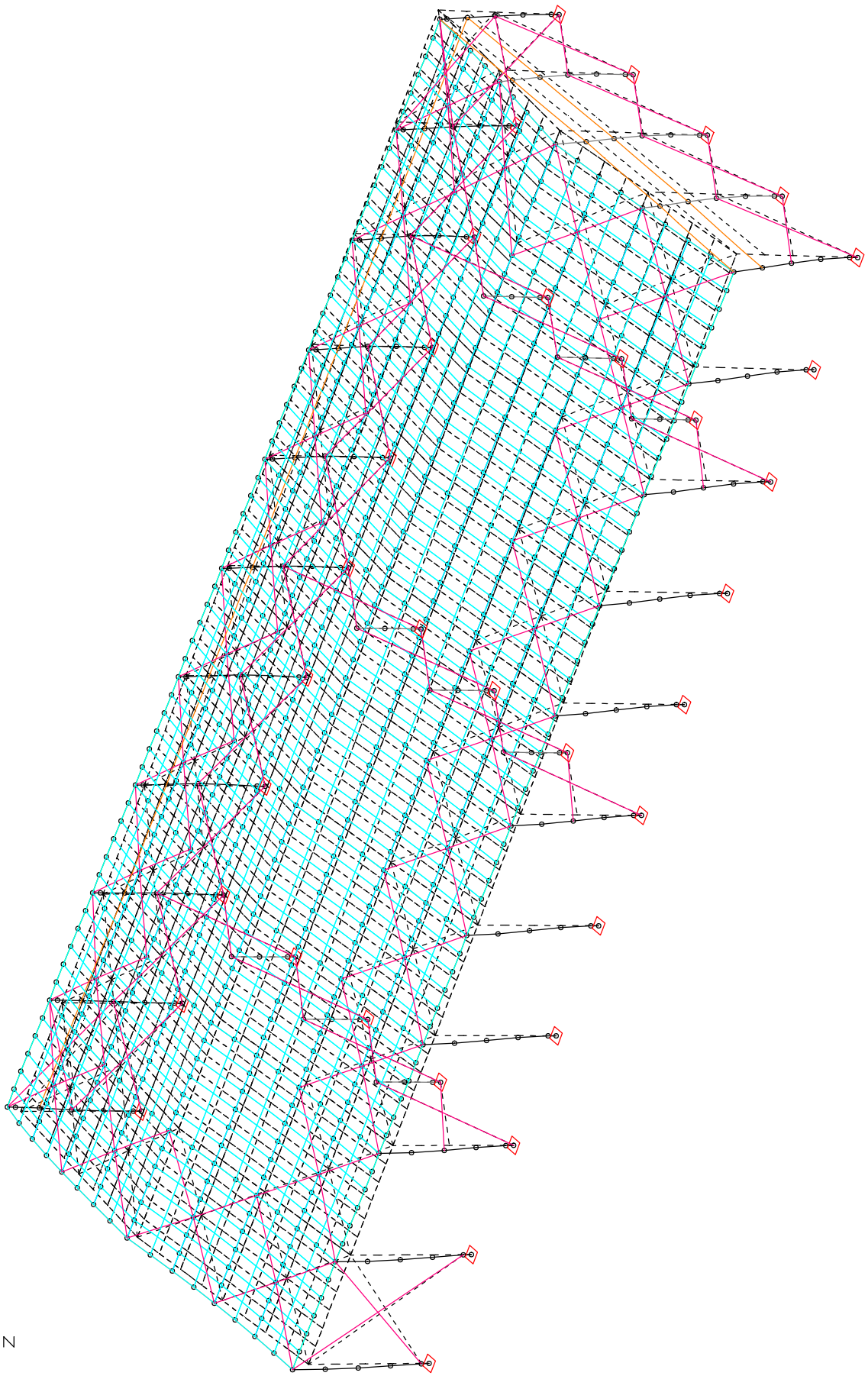
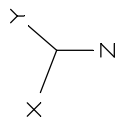




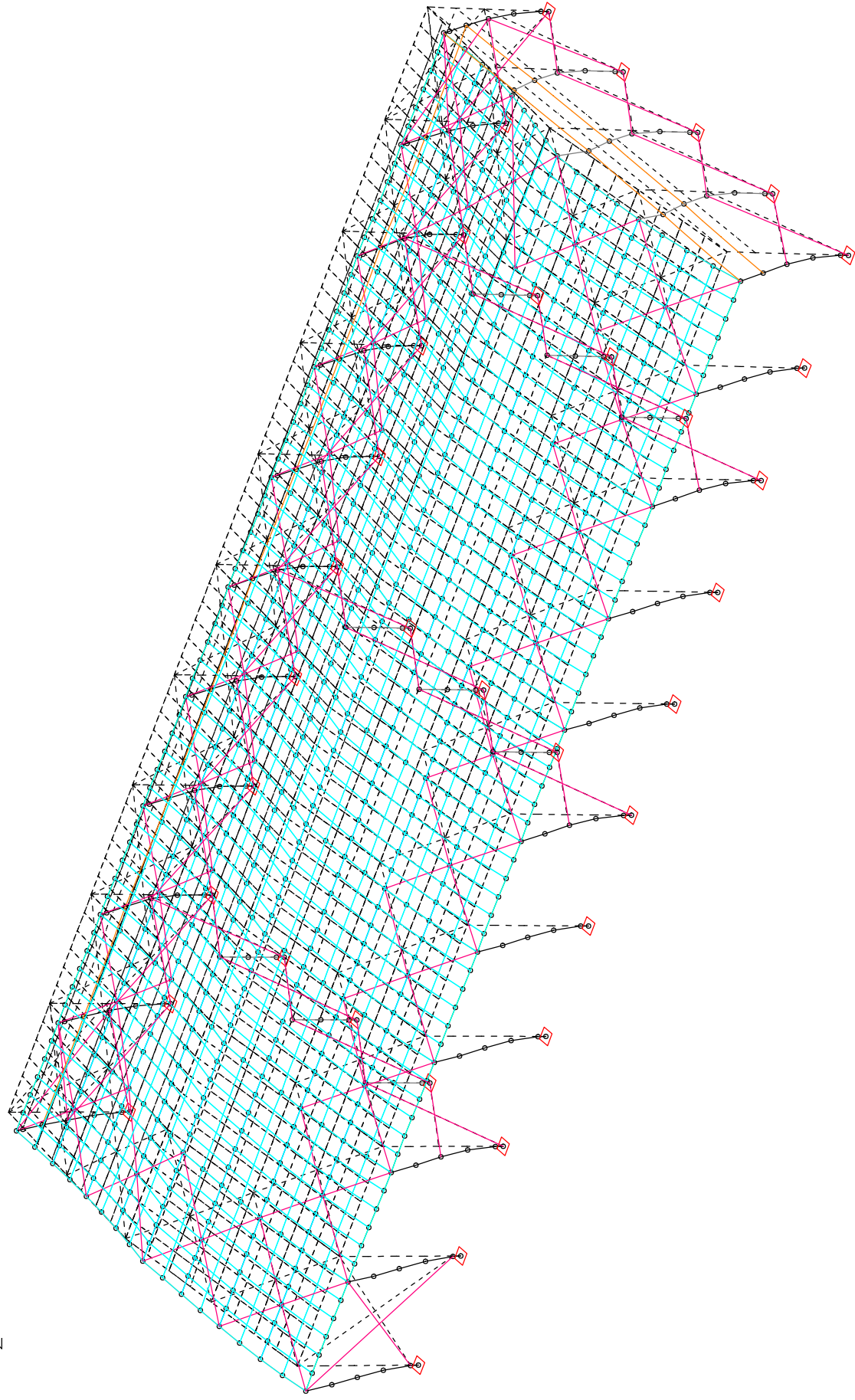
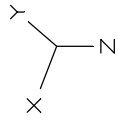




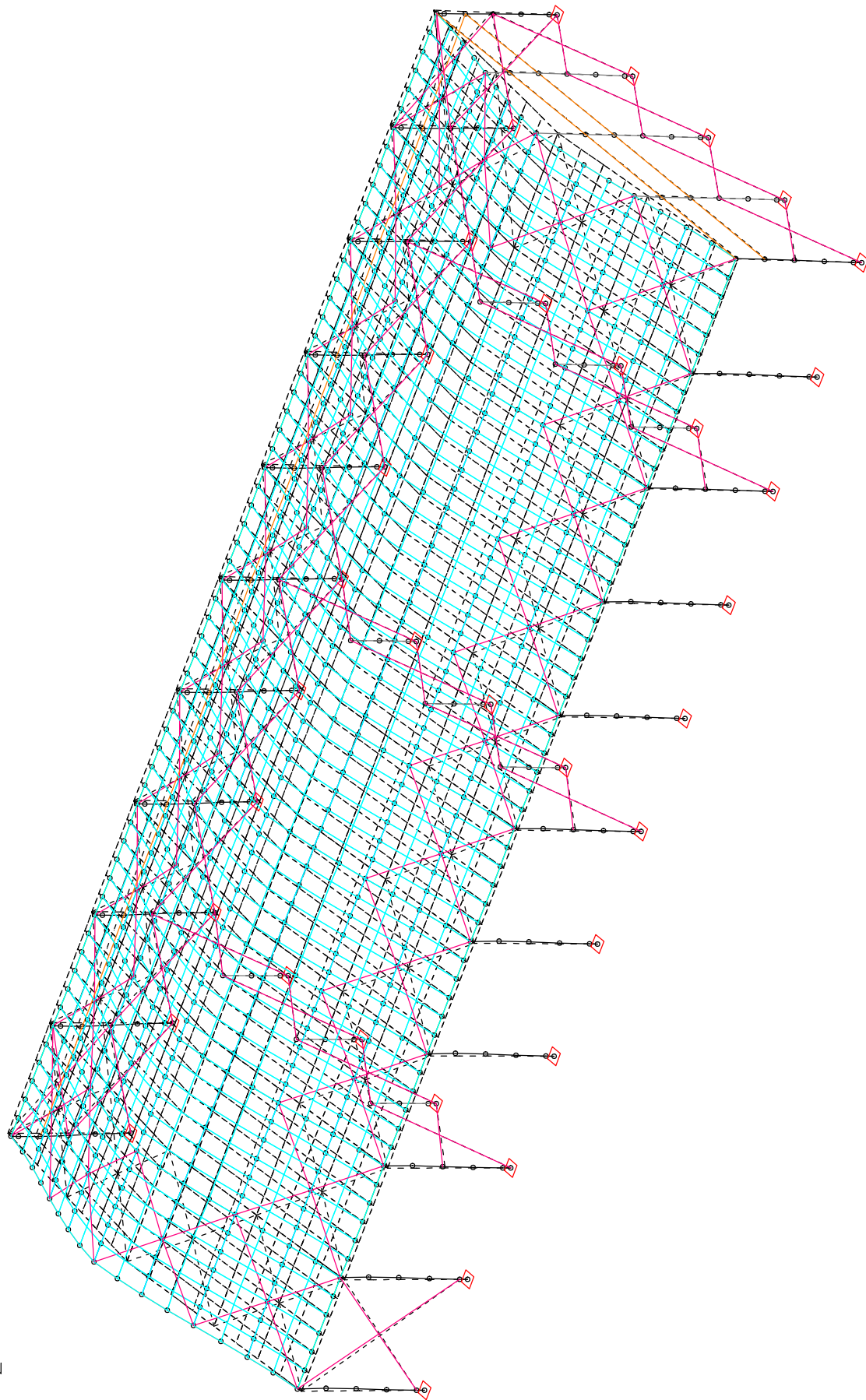
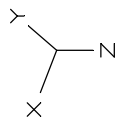




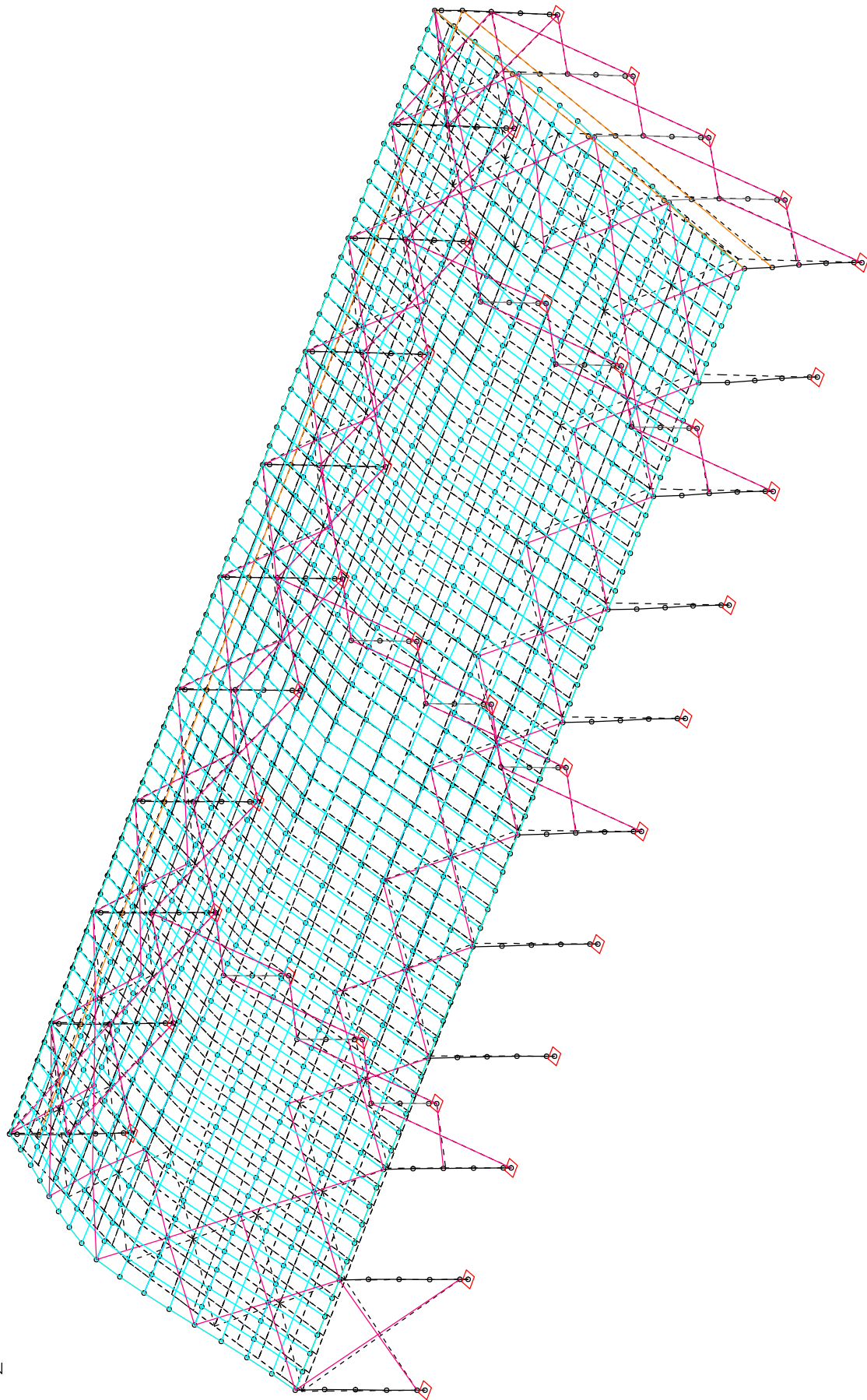
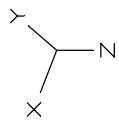
Eigenmode 1: Deformations u [mm], Faktor = 14.3, Resonant frequency = 2.57 Hz
 Value range (overall system, min/max): 0.00/89.53 [mm]



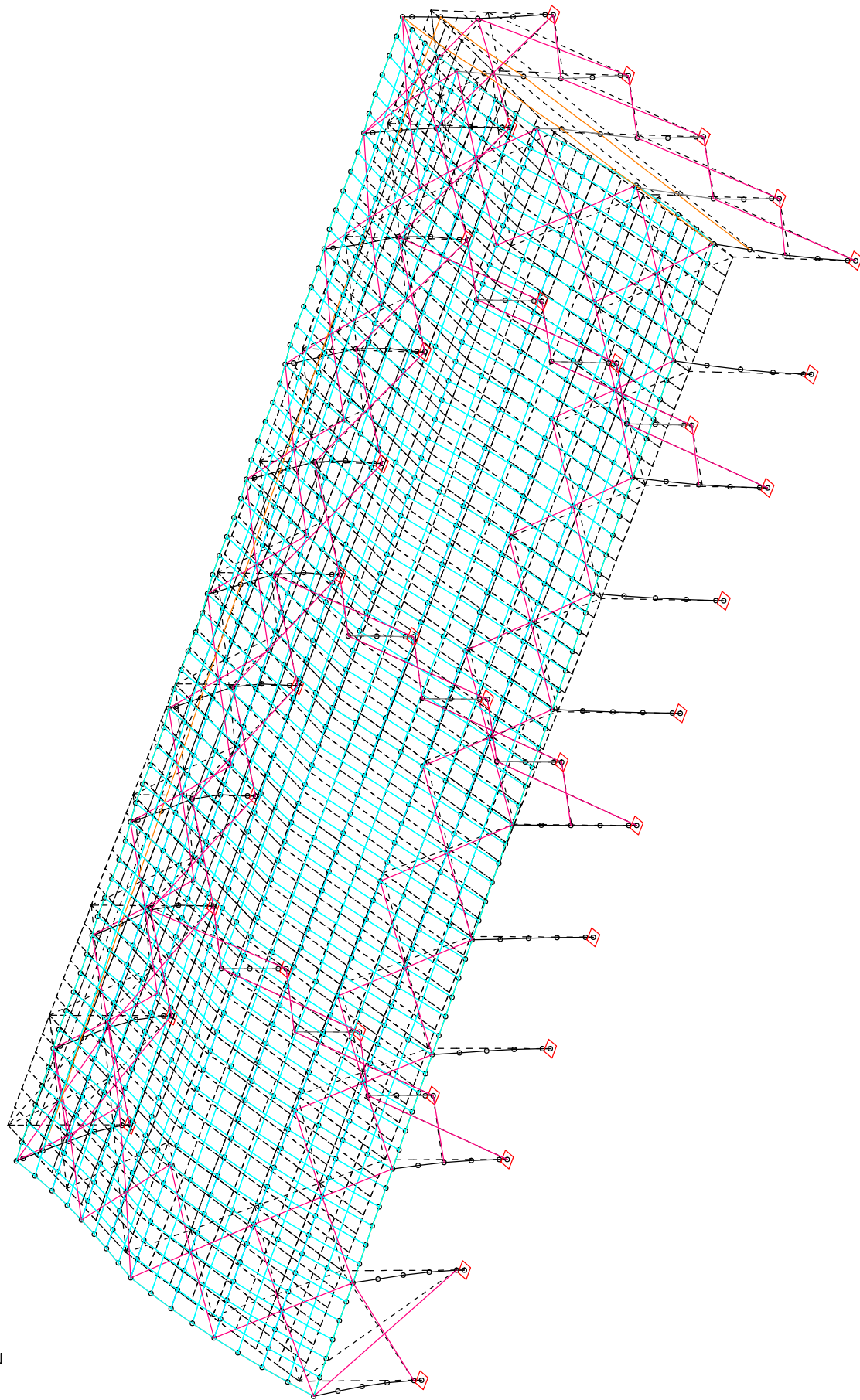
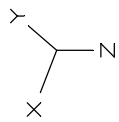
Eigenmode 2: Deformations u [mm], Faktor = 28.2, Resonant frequency = 2.75 Hz
Value range (overall system, min/max): 0.00/71.70 [mm]



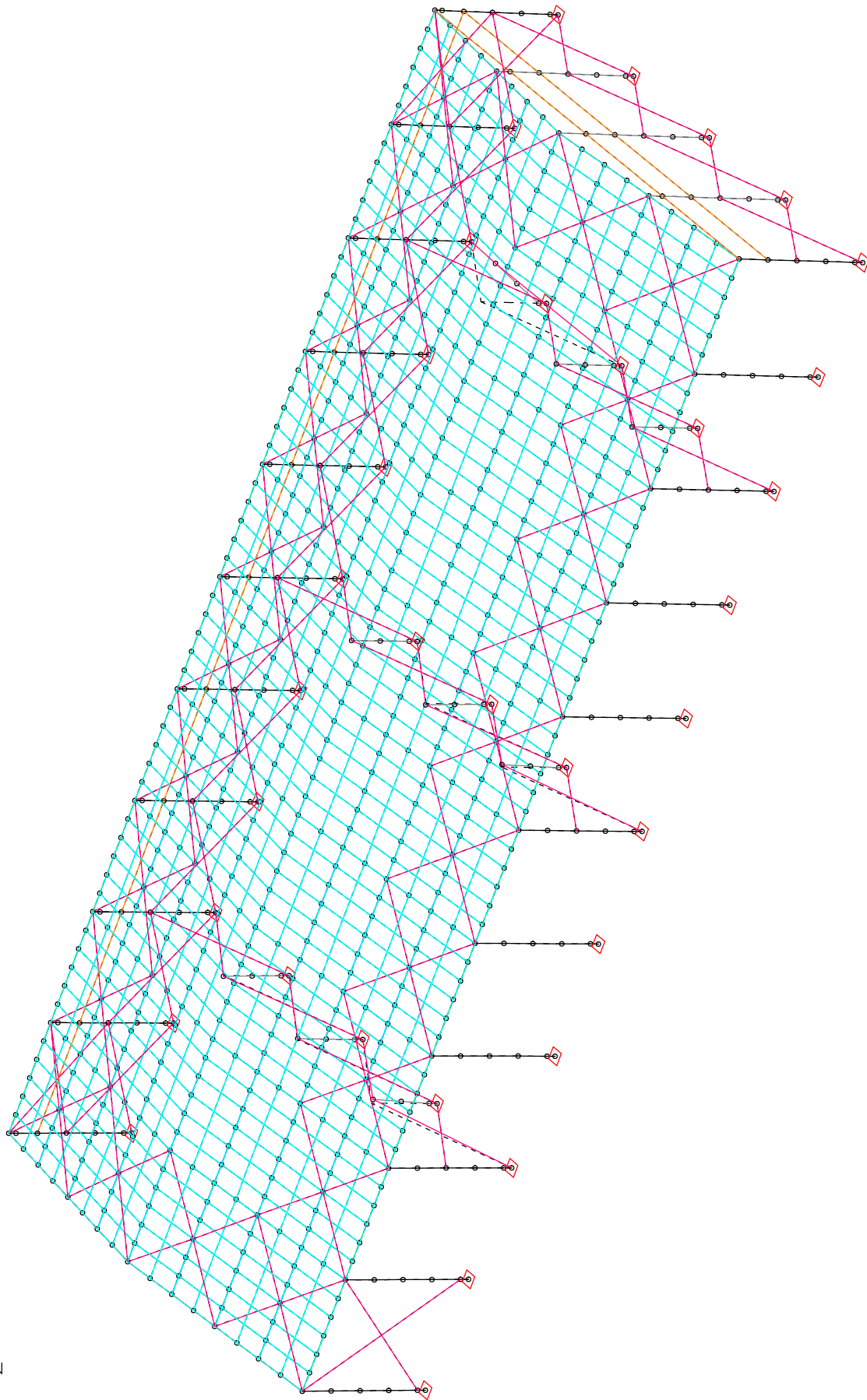
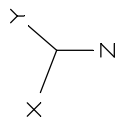
Eigenmode 3: Deformations u [mm], Faktor = 21.6, Resonant frequency = 2.83 Hz
Value range (overall system, min/max): 0.00/93.60 [mm]



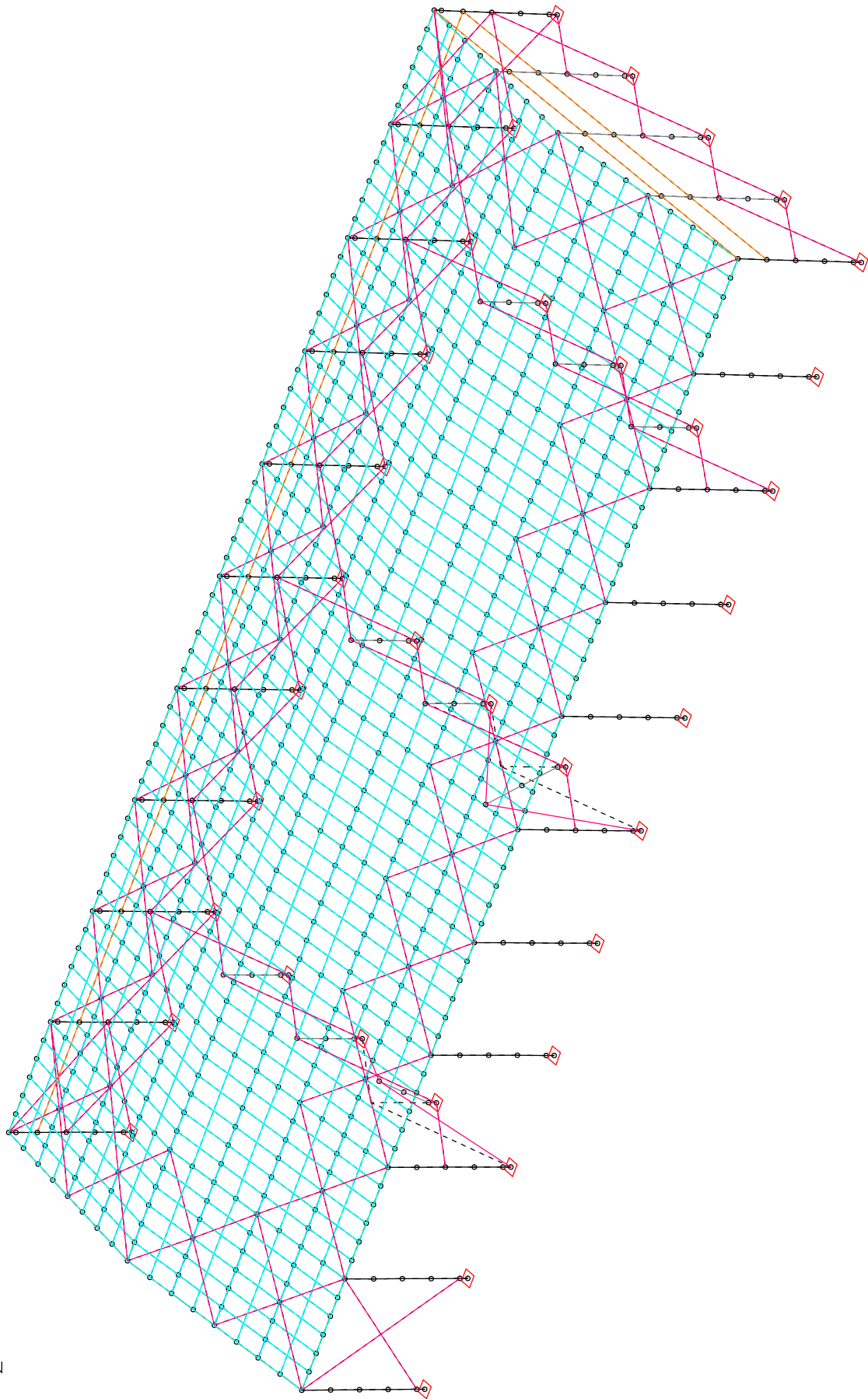
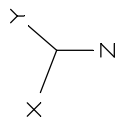
Eigenmode 4: Deformations u [mm], Faktor = 14.0, Resonant frequency = 3.04 Hz
Value range (overall system, min/max): 0.00/145.05 [mm]



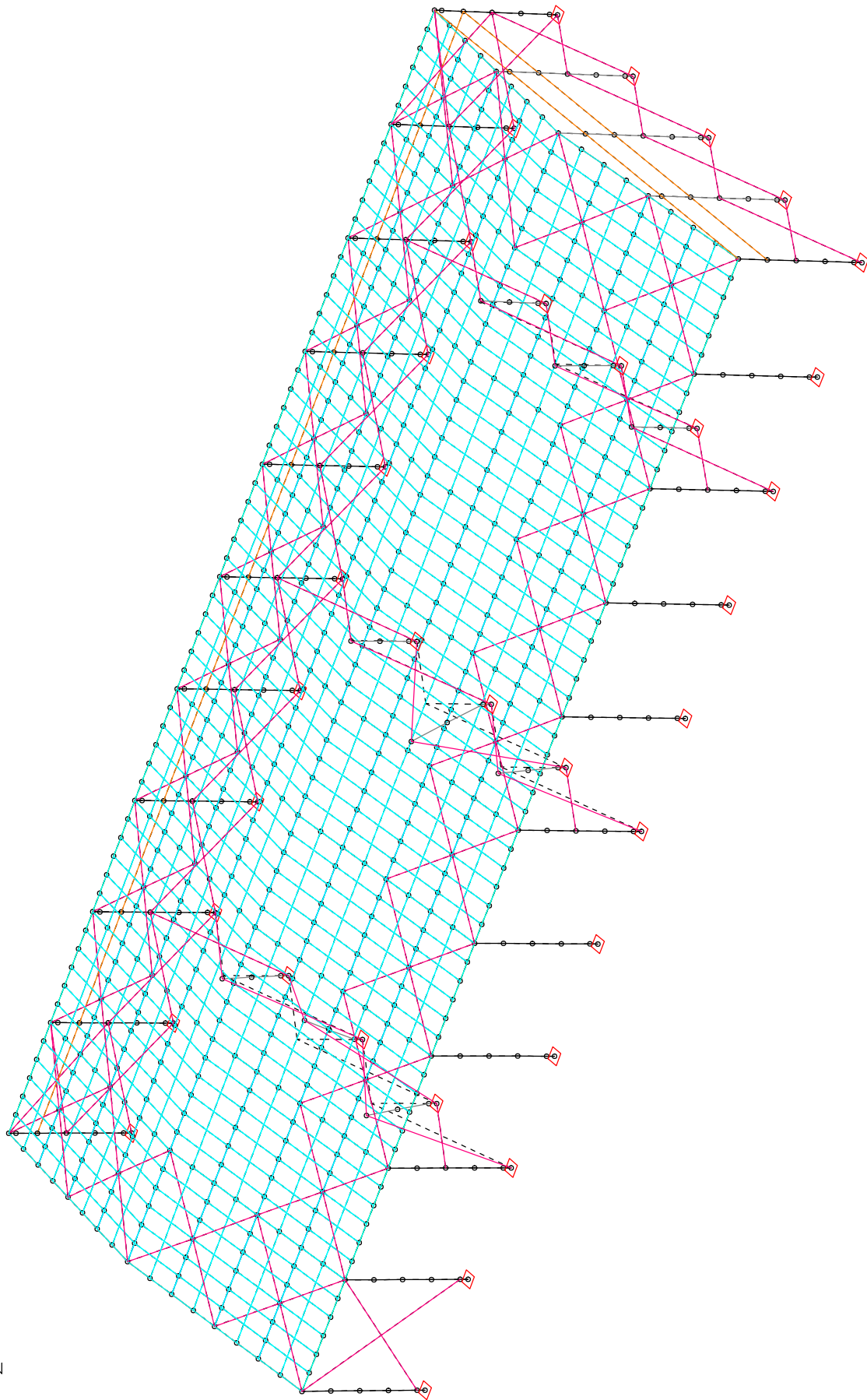
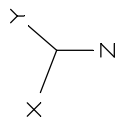
Eigenmode 5: Deformations u [mm], Faktor = 21.4, Resonant frequency = 3.52 Hz
 Value range (overall system, min/max): 0.00/94.79 [mm]



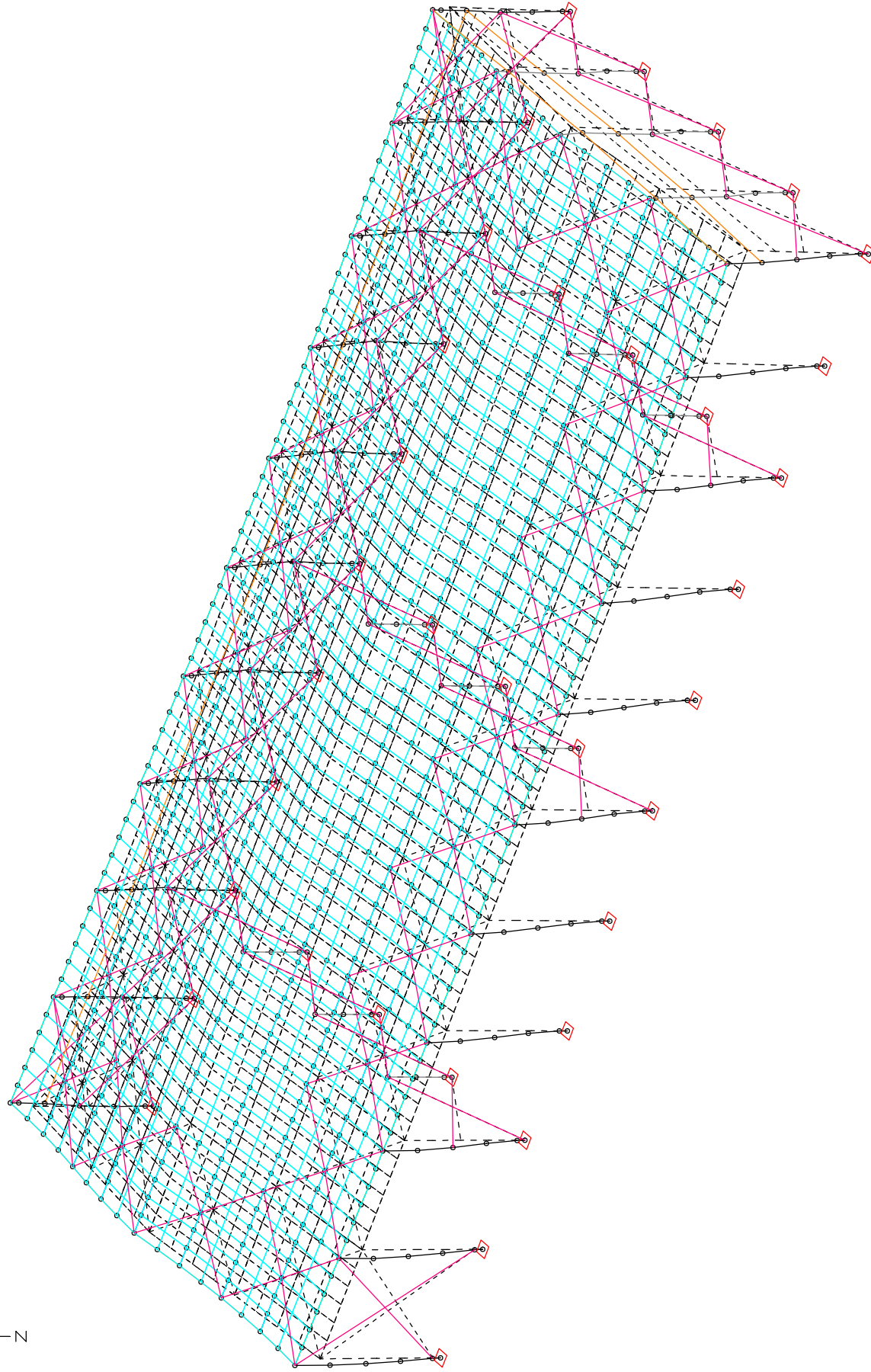
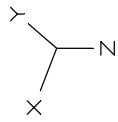
Eigenmode 6: Deformations u [mm], Faktor = 39392.7, Resonant frequency = 4.24 Hz
 Value range (overall system, min/max): 0.00/0.05 [mm]



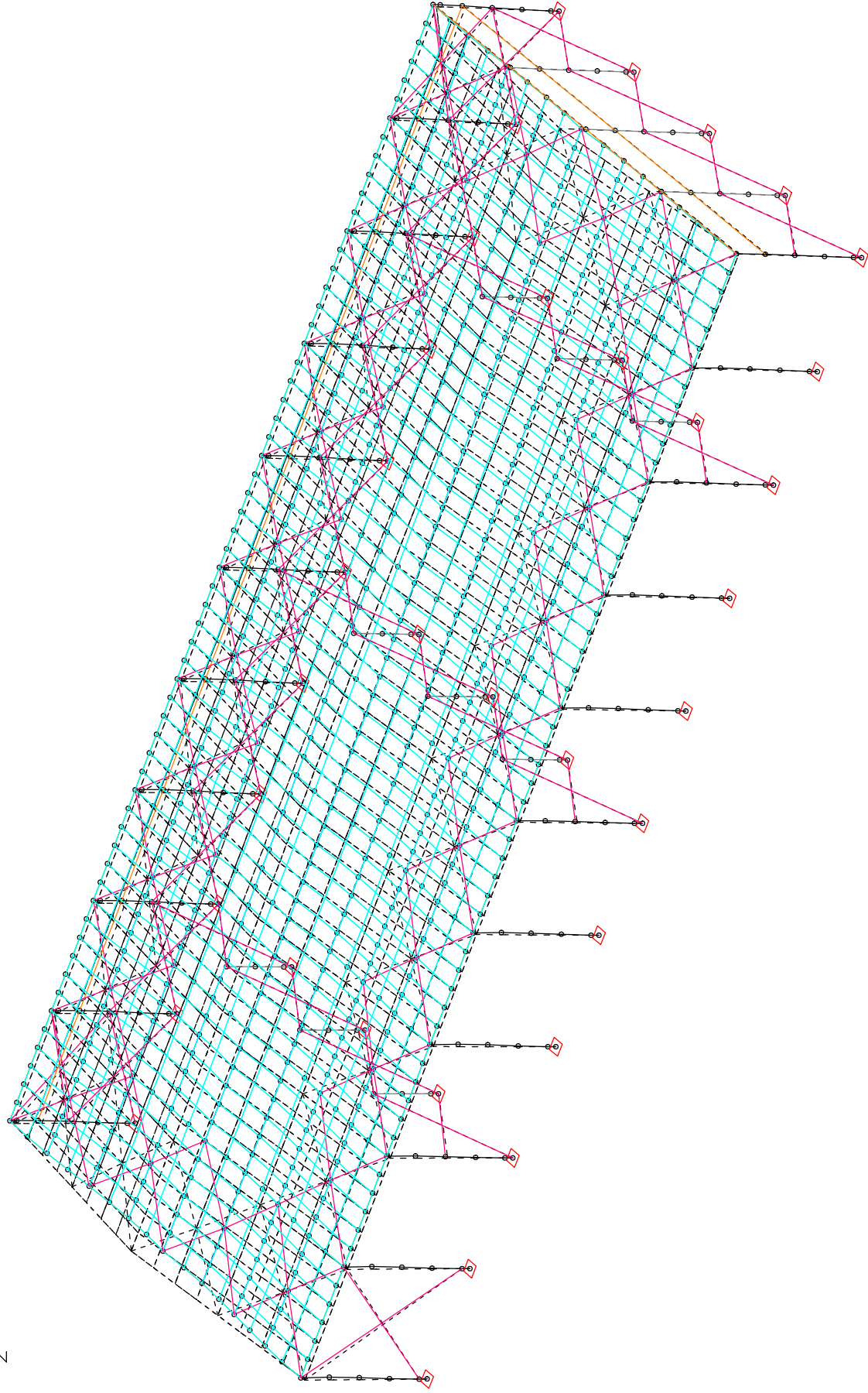
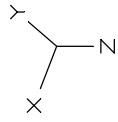
Eigenmode 7: Deformations u [mm], Faktor = 53883.9, Resonant frequency = 4.24 Hz
 Value range (overall system, min/max): 0.00/0.04 [mm]



Eigenmode 8: Deformations u [mm], Faktor = 47091.8, Resonant frequency = 4.24 Hz
 Value range (overall system, min/max): 0.00/0.04 [mm]



LF 1000: Response spectrum overlaid
Deformations u [mm], Faktor = 297.7
Value range (overall system, min/max): 0.00/6.80 [mm]



LF 1020: Response spectrum 20. eigenmode
Deformations u [mm], Faktor = 307.4
Value range (overall system, min/max): 0.00/6.58 [mm]

Load case combination 1, W

| 1. Variable exclusive action | | Faktor |
|------------------------------|------|--------|
| 3 | Wx | 1.000 |
| 4 | Wy1 | 1.000 |
| 5 | Wy2 | 1.000 |
| 6 | -Wy3 | 1.000 |
| 7 | -Wy4 | 1.000 |
| 8 -Wy5 | | 1.000 |

Load case combination 2, 1.5S+0.9W

| Variable inclusive action | | Faktor |
|---------------------------|---|--------|
| 2 | S | 1.500 |
| K1 | W | 0.900 |

Load case combination 3, 1.5W+0.75S

| Variable inclusive action | | Faktor |
|---------------------------|---|--------|
| 2 | S | 0.750 |
| K1 | W | 1.500 |

Load case combination 4, -Zx

| 1. Variable exclusive action | | Faktor |
|------------------------------|-------------------------------|--------|
| 1001 | Response spectrum 1. eigenmod | -1.000 |
| 1002 | Response spectrum 2. eigenmod | -1.000 |
| 1003 | Response spectrum 3. eigenmod | -1.000 |
| 1004 | Response spectrum 4. eigenmod | -1.000 |
| 1005 | Response spectrum 5. eigenmod | -1.000 |
| 1006 | Response spectrum 6. eigenmod | -1.000 |
| 1007 | Response spectrum 7. eigenmod | -1.000 |
| 1008 | Response spectrum 8. eigenmod | -1.000 |

Load case combination 5, -Zy

| 1. Variable exclusive action | | Faktor |
|------------------------------|-------------------------------|--------|
| 1011 | Response spectrum 11. eigenmo | -1.000 |
| 1012 | Response spectrum 12. eigenmo | -1.000 |
| 1013 | Response spectrum 13. eigenmo | -1.000 |
| 1014 | Response spectrum 14. eigenmo | -1.000 |
| 1015 | Response spectrum 15. eigenmo | -1.000 |
| 1016 | Response spectrum 16. eigenmo | -1.000 |
| 1017 | Response spectrum 17. eigenmo | -1.000 |
| 1018 | Response spectrum 18. eigenmo | -1.000 |

Load case combination 6, -Zz

| 1. Variable exclusive action | | Faktor |
|------------------------------|-------------------------------|--------|
| 1021 | Response spectrum 21. eigenmo | -1.000 |
| 1022 | Response spectrum 22. eigenmo | -1.000 |
| 1023 | Response spectrum 23. eigenmo | -1.000 |
| 1024 | Response spectrum 24. eigenmo | -1.000 |
| 1025 | Response spectrum 25. eigenmo | -1.000 |
| 1026 | Response spectrum 26. eigenmo | -1.000 |
| 1027 | Response spectrum 27. eigenmo | -1.000 |
| 1028 | Response spectrum 28. eigenmo | -1.000 |

Load case combination 7, Zx+0.3Zy+0.3Zz

| 1. Variable exclusive action | | Faktor |
|------------------------------|-------------------------------|--------|
| 1000 | Response spectrum overlaid | 1.000 |
| 1001 | Response spectrum 1. eigenmod | 1.000 |
| 1002 | Response spectrum 2. eigenmod | 1.000 |
| 1003 | Response spectrum 3. eigenmod | 1.000 |
| 1004 | Response spectrum 4. eigenmod | 1.000 |
| 1005 | Response spectrum 5. eigenmod | 1.000 |
| 1006 | Response spectrum 6. eigenmod | 1.000 |
| 1007 | Response spectrum 7. eigenmod | 1.000 |
| 1008 | Response spectrum 8. eigenmod | 1.000 |
| K4 | -Zx | 1.000 |
| 2. Variable exclusive action | | Faktor |
| 1010 | Response spectrum 10. eigenmo | 0.300 |
| 1011 | Response spectrum 11. eigenmo | 0.300 |
| 1012 | Response spectrum 12. eigenmo | 0.300 |
| 1013 | Response spectrum 13. eigenmo | 0.300 |
| 1014 | Response spectrum 14. eigenmo | 0.300 |
| 1015 | Response spectrum 15. eigenmo | 0.300 |
| 1016 | Response spectrum 16. eigenmo | 0.300 |
| 1017 | Response spectrum 17. eigenmo | 0.300 |
| 1018 | Response spectrum 18. eigenmo | 0.300 |
| K5 | -Zy | 0.300 |
| 3. Variable exclusive action | | Faktor |
| 1020 | Response spectrum 20. eigenmo | 0.300 |
| 1021 | Response spectrum 21. eigenmo | 0.300 |
| 1022 | Response spectrum 22. eigenmo | 0.300 |
| 1023 | Response spectrum 23. eigenmo | 0.300 |
| 1024 | Response spectrum 24. eigenmo | 0.300 |
| 1025 | Response spectrum 25. eigenmo | 0.300 |
| 1026 | Response spectrum 26. eigenmo | 0.300 |
| 1027 | Response spectrum 27. eigenmo | 0.300 |
| 1028 | Response spectrum 28. eigenmo | 0.300 |
| K6 | -Zz | 0.300 |

Load case combination 8, $0.3Z_x+Z_y+0.3Z_z$

| 1. Variable exclusive action | | Faktor |
|------------------------------|-------------------------------|--------|
| 1000 | Response spectrum overlaid | 0.300 |
| 1001 | Response spectrum 1. eigenmod | 0.300 |
| 1002 | Response spectrum 2. eigenmod | 0.300 |
| 1003 | Response spectrum 3. eigenmod | 0.300 |
| 1004 | Response spectrum 4. eigenmod | 0.300 |
| 1005 | Response spectrum 5. eigenmod | 0.300 |
| 1006 | Response spectrum 6. eigenmod | 0.300 |
| 1007 | Response spectrum 7. eigenmod | 0.300 |
| 1008 | Response spectrum 8. eigenmod | 0.300 |
| K4 | -Z _x | 0.300 |
| 2. Variable exclusive action | | Faktor |
| 1010 | Response spectrum 10. eigenmo | 1.000 |
| 1011 | Response spectrum 11. eigenmo | 1.000 |
| 1012 | Response spectrum 12. eigenmo | 1.000 |
| 1013 | Response spectrum 13. eigenmo | 1.000 |
| 1014 | Response spectrum 14. eigenmo | 1.000 |
| 1015 | Response spectrum 15. eigenmo | 1.000 |
| 1016 | Response spectrum 16. eigenmo | 1.000 |
| 1017 | Response spectrum 17. eigenmo | 1.000 |
| 1018 | Response spectrum 18. eigenmo | 1.000 |
| K5 | -Z _y | 1.000 |
| 3. Variable exclusive action | | Faktor |
| 1020 | Response spectrum 20. eigenmo | 0.300 |
| 1021 | Response spectrum 21. eigenmo | 0.300 |
| 1022 | Response spectrum 22. eigenmo | 0.300 |
| 1023 | Response spectrum 23. eigenmo | 0.300 |
| 1024 | Response spectrum 24. eigenmo | 0.300 |
| 1025 | Response spectrum 25. eigenmo | 0.300 |
| 1026 | Response spectrum 26. eigenmo | 0.300 |
| 1027 | Response spectrum 27. eigenmo | 0.300 |
| 1028 | Response spectrum 28. eigenmo | 0.300 |
| K6 | -Z _z | 0.300 |

Load case combination 9, $0.3Z_x+0.3Z_y+Z_z$

| 1. Variable exclusive action | | Faktor |
|------------------------------|-------------------------------|--------|
| 1000 | Response spectrum overlaid | 0.300 |
| 1001 | Response spectrum 1. eigenmod | 0.300 |
| 1002 | Response spectrum 2. eigenmod | 0.300 |
| 1003 | Response spectrum 3. eigenmod | 0.300 |
| 1004 | Response spectrum 4. eigenmod | 0.300 |
| 1005 | Response spectrum 5. eigenmod | 0.300 |
| 1006 | Response spectrum 6. eigenmod | 0.300 |
| 1007 | Response spectrum 7. eigenmod | 0.300 |
| 1008 | Response spectrum 8. eigenmod | 0.300 |
| K4 | -Z _x | 0.300 |

Load case combination 9, $0.3Z_x+0.3Z_y+Z_z$

| 2. Variable exclusive action | | Faktor |
|------------------------------|-------------------------------|--------|
| 1010 | Response spectrum 10. eigenmo | 0.300 |
| 1011 | Response spectrum 11. eigenmo | 0.300 |
| 1012 | Response spectrum 12. eigenmo | 0.300 |
| 1013 | Response spectrum 13. eigenmo | 0.300 |
| 1014 | Response spectrum 14. eigenmo | 0.300 |
| 1015 | Response spectrum 15. eigenmo | 0.300 |
| 1016 | Response spectrum 16. eigenmo | 0.300 |
| 1017 | Response spectrum 17. eigenmo | 0.300 |
| 1018 | Response spectrum 18. eigenmo | 0.300 |
| K5 | -Z _y | 0.300 |

| 3. Variable exclusive action | | Faktor |
|------------------------------|-------------------------------|--------|
| 1020 | Response spectrum 20. eigenmo | 1.000 |
| 1021 | Response spectrum 21. eigenmo | 1.000 |
| 1022 | Response spectrum 22. eigenmo | 1.000 |
| 1023 | Response spectrum 23. eigenmo | 1.000 |
| 1024 | Response spectrum 24. eigenmo | 1.000 |
| 1025 | Response spectrum 25. eigenmo | 1.000 |
| 1026 | Response spectrum 26. eigenmo | 1.000 |
| 1027 | Response spectrum 27. eigenmo | 1.000 |
| 1028 | Response spectrum 28. eigenmo | 1.000 |
| K6 | -Z _z | 1.000 |

Load case combination 10, $1.5S+Z_i$

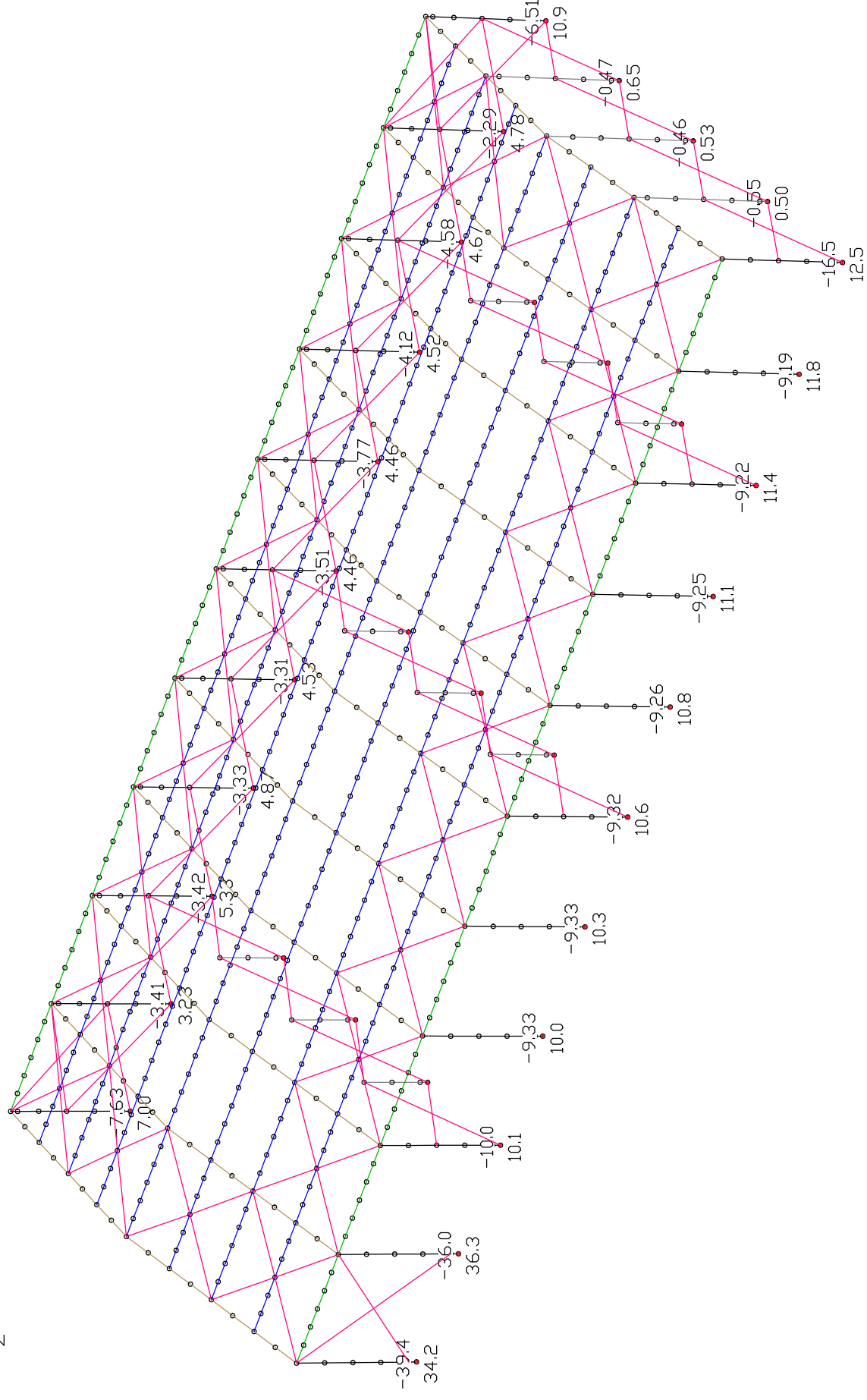
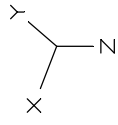
| Variable inclusive action | | Faktor |
|---------------------------|---|--------|
| 2 | S | 1.500 |

| 1. Variable exclusive action | | Faktor |
|------------------------------|---------------------|--------|
| K7 | $Z_x+0.3Z_y+0.3Z_z$ | 1.000 |
| K8 | $0.3Z_x+Z_y+0.3Z_z$ | 1.000 |
| K9 | $0.3Z_x+0.3Z_y+Z_z$ | 1.000 |

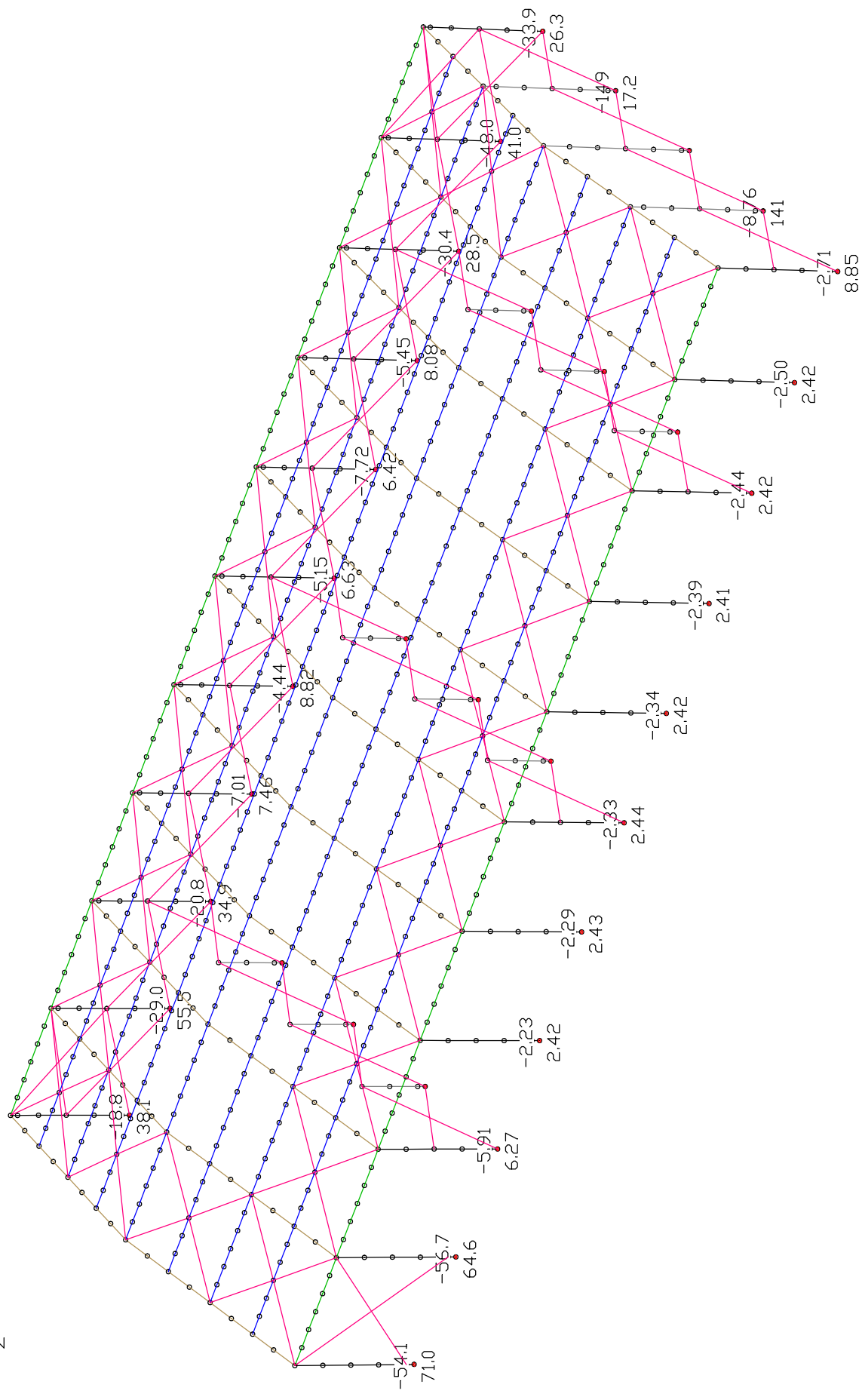
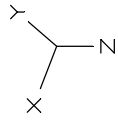
Load case combination 11

| Permanent action | | Faktor |
|------------------|---|--------|
| 1 | G | 1.350 |

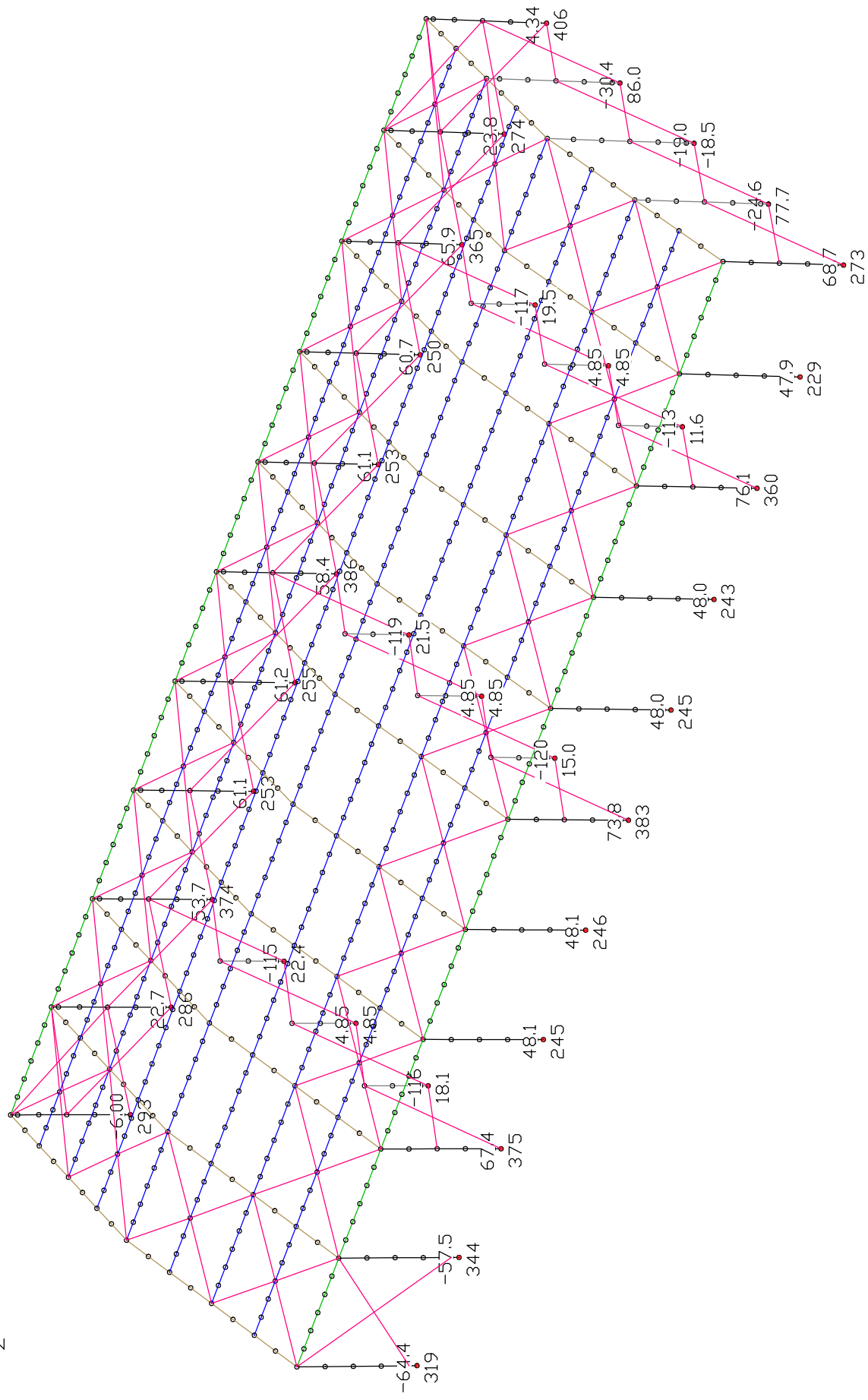
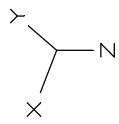
| 1. Variable exclusive action | | Faktor |
|------------------------------|---------------------|--------|
| K1 | W | 1.500 |
| K2 | $1.5S+0.9W$ | 1.000 |
| K3 | $1.5W+0.75S$ | 1.000 |
| K7 | $Z_x+0.3Z_y+0.3Z_z$ | 1.000 |
| K8 | $0.3Z_x+Z_y+0.3Z_z$ | 1.000 |
| K9 | $0.3Z_x+0.3Z_y+Z_z$ | 1.000 |
| K10 | $1.5S+Z_i$ | 1.000 |



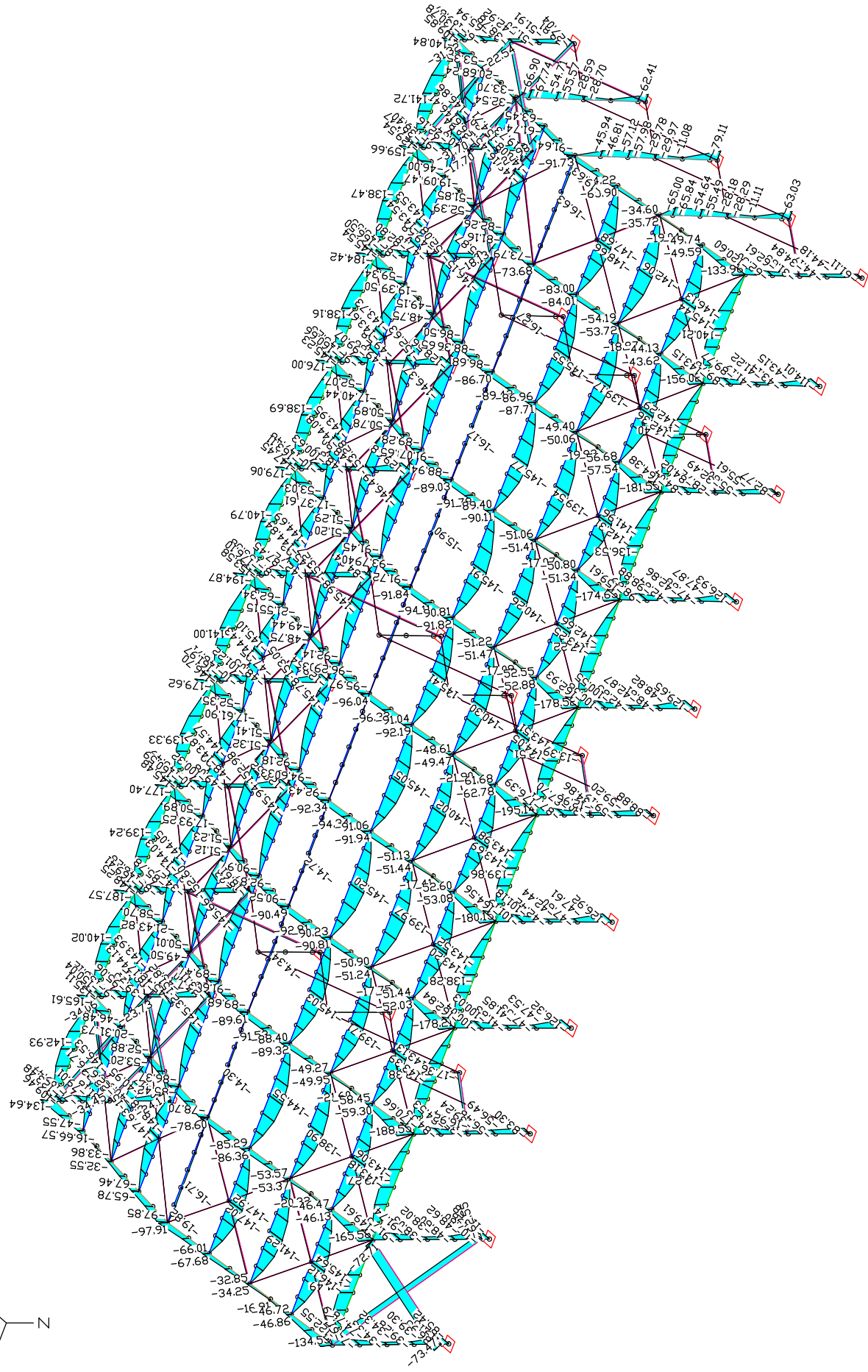
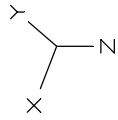
LFK 11: Support reactions in the local system $\min, \max M_y(l) \geq 0.50$ [kNm]



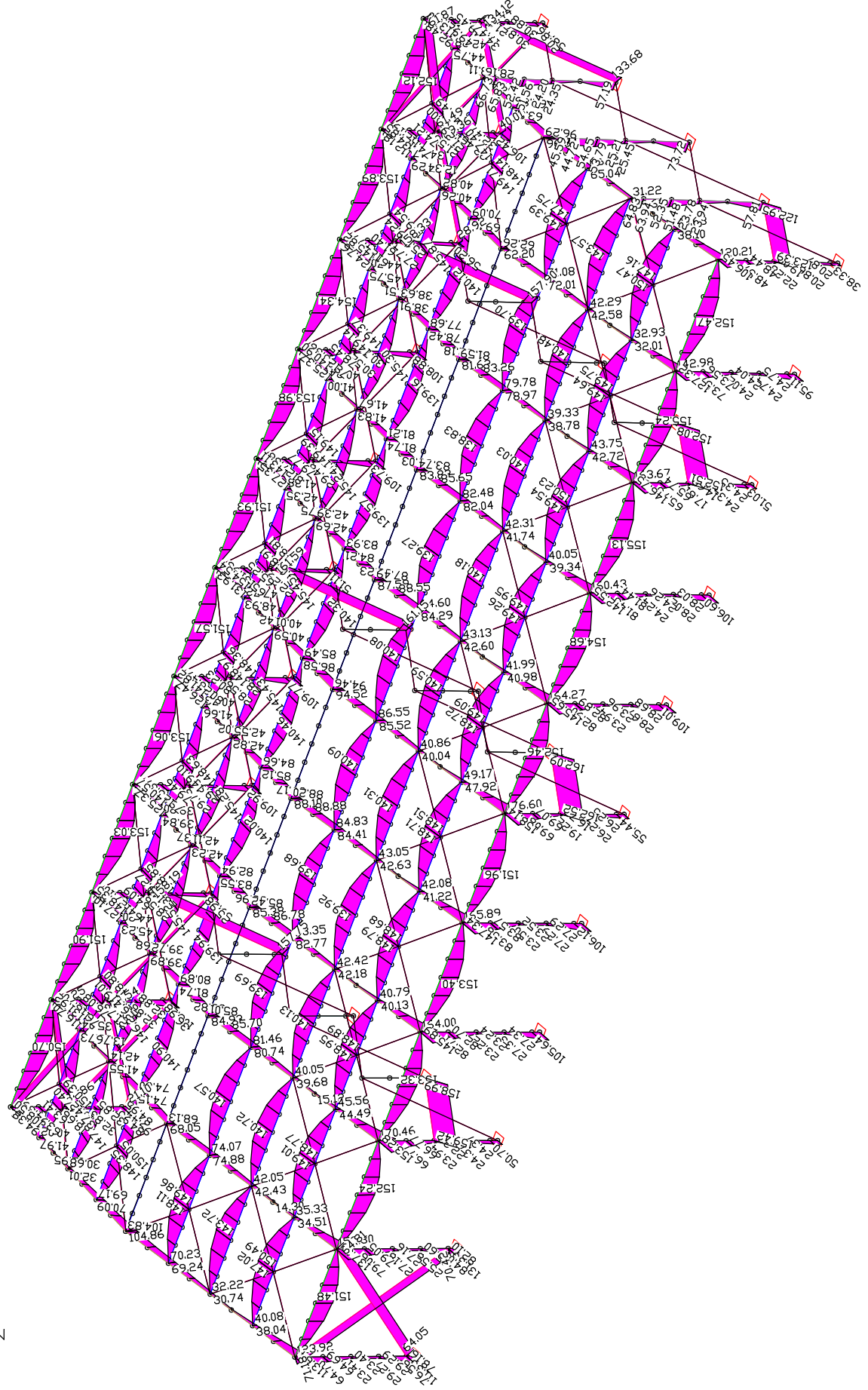
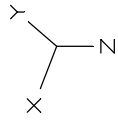
LFK 11: Support reactions in the local system min,max Rx(l) >= 0.50 [kN]



LFK 11: Support reactions in the local system min,max Rz(l) >= 0.50 [kN]



LFK 11: Stresses min Sigma.x [MN/m²]
Value range (overall system, min/max): -195.14/0.96 [MN/m²]



LFK 11: Stresses max Sigma.x [MN/m²]
Value range (overall system, min/max): -1.17/176.60 [MN/m²]