

**Location Properties**

|                          |                        |  |
|--------------------------|------------------------|--|
| <b>Technician:</b> SPIRH | <b>Map Number:</b>     |  |
| <b>Address:</b>          | <b>Pole Tags:</b>      | 09506309   |
| <b>City:</b>             | <b>State:</b>          |  |
| <b>County:</b>           | <b>Zip Code:</b>       |  |
| <b>Cross Street 1:</b>   | <b>Cross Street 2:</b> |  |
| <b>Remedy:</b>           | <b>Summary Notes:</b>  | 1. GOOG Attach 1/4" EHS at 23' 3".<br>2. NES install span guy at 34' 0".<br>3. NES attach span guy at 34' 7".<br>Install an Ofgi-54" for Guy Span to Pole 09506111 Below Lowest Power Conductors<br>Ensure streetlight is properly grounded before making attachments<br>Install an Ofgi-54" for Guy Span to Pole 09506113 Below Lowest Power Conductors |
| <b>Comments:</b>         |                        |  |

**Location Analysis Summary**

| Layer    | Pole Length/Class | Maximum Load %             |                   |         |                   |                     |                | Pole Strength Remaining | Loading Adjusted by Strength? | Clearance Violations Present? |
|----------|-------------------|----------------------------|-------------------|---------|-------------------|---------------------|----------------|-------------------------|-------------------------------|-------------------------------|
|          |                   | Pole                       | Guy               | Anchor  | Cross Arm         | Insulator           | Sidewalk Brace |                         |                               |                               |
| Existing | 45/4              | 55.62 from stress at 0' 0" | No Data           | No Data | 8.24 (CrossArm#1) | 30.35 (Insulator#3) | No Data        | 100%                    | N                             | N                             |
| Proposed | 45/4              | 57.99 from stress at 0' 0" | No Data           | No Data | 8.24 (CrossArm#1) | 30.35 (Insulator#3) | No Data        | 100%                    | N                             | Y                             |
| Remedy   | 45/4              | 59.15 from stress at 0' 0" | 79.94 (SpanGuy#1) | No Data | 8.24 (CrossArm#1) | 30.35 (Insulator#3) | No Data        | 100%                    | N                             | N                             |



SE



N



N/A



SE



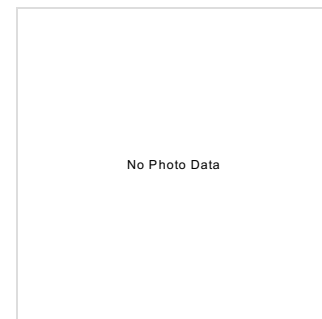
N/A



N/A



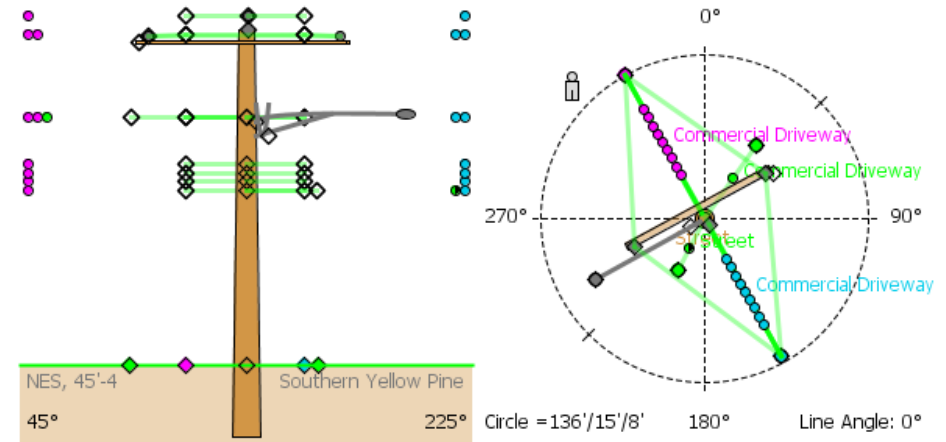
No Photo Data



No Photo Data

Design Properties

Owner: NES  
 Species: Southern Yellow Pine  
 Length: 45'  
 Class: 4  
 AGL: 37' 0"  
 GLC: 34 1/4"  
 Foundation: None  
 Ground Water Level: None  
 Lean Angle: 0 °  
 Lean Direction: 0 °  
 Allowable Stress Adjustment: 100%  
 Effective Allowable Stress: 8000 lb/in²  
 GPS Point: 36.16202, -86.800302



Load Case Properties

|                                 | Medium Load (Grade C @ Xings) (Governing Case) | Deflection Check         |
|---------------------------------|--|--------------------------|
| LoadCase Type                   | NESC 2012 Medium                               | Custom                   |
| Construction Grade              | C With Crossings                               | N/A                      |
| Construction Type               | New  | N/A                      |
| Temperature                     | 15 °F  | 60 °F                    |
| Wind Pressure                   | 4 lb/ft²                                       | 0 lb/ft²                 |
| Ice Thickness                   | 0.25"  | 0"                       |
| Wind                            | Sweep  | Sweep                    |
| Wind Direction                  | 0 °  | 0 °                      |
| Wind Increment                  | 1 °  | 1 °                      |
| Usage Level                     | None   | None                     |
| Analysis Method                 | Basic (Direct Stiffness)                       | Basic (Direct Stiffness) |
| Load Percentage Allowed         | 100%   | 100%                     |
| Average Length on Main Span     | No   | No                       |
| Displacement Based Load Changes | None   | None                     |
| Analyze Ground Line Only        | No   | No                       |
| Analyze with Buckling Case      | Yes  | No                       |
| Analyze with Deflection Case    | No   | No                       |
| Analyze with Strength Results   | No   | No                       |
| Custom                          | No   | No                       |

Analysis Results

Loading

| Component     | Medium Load (Grade C @ Xings) (Governing Case) |                            |                | Deflection Check          |                            |                | Client File Maximum Rating |
|---------------|--|----------------------------|----------------|---------------------------|----------------------------|----------------|----------------------------|
|               | Max %  | Load (Applied / Allowable) | Wind Direction | Max %                     | Load (Applied / Allowable) | Wind Direction |                            |
| Pole          | 55.62 from stress at 0' 0"                     | 3782 / 6800 lb/in²         | 245 °          | 1.93 from stress at 0' 0" | 155 / 8000 lb/in²          | 0 °            | 8000 lb/in²                |
| Pole-Buckling | 13.62  | 3394 / 24911 lbf           | 242 °          | N/A                       | N/A                        | N/A            | N/A                        |
| Cross Arm#1   | 8.24   | 560 / 6800 lb/in²          | 60 °           | 2                         | 160 / 8000 lb/in²          | 0 °            | 8000 lb/in²                |
| Insulator#1   | 30.21  | 124 / 412 lbf              | 241 °          | 6.86                      | 28 / 412 lbf               | 0 °            | 412 lbf                    |
| Insulator#2   | 30.21  | 124 / 412 lbf              | 241 °          | 6.86                      | 28 / 412 lbf               | 0 °            | 412 lbf                    |
| Insulator#3   | 30.35  | 125 / 412 lbf              | 61 °           | 6.86                      | 28 / 412 lbf               | 0 °            | 412 lbf                    |

Pole Strength

| Section Modulus        |           | Cross-Sectional Area   |           | Moment of Inertia      |           |
|------------------------|-----------|------------------------|-----------|------------------------|-----------|
| Lowest Remaining Value | At Height | Lowest Remaining Value | At Height | Lowest Remaining Value | At Height |
| 100%                   | 0' 0"     | 100%                   | 0' 0"     | 100%                   | 0' 0"     |

### Pole Static Analysis

#### Medium Load (Grade C @ Xings)

| Heights | Stress % | Stresses (lb/in <sup>2</sup> ) | Applied Moments(ft-lbf) |   |       | Internal Moments(ft-lbf) |       |       | Applied Forces(lbf) |    |     |       | Internal Forces(lbf) |       |             |       | Displacements(in) |      |   |       |
|---------|----------|--------------------------------|-------------------------|---|-------|--------------------------|-------|-------|---------------------|----|-----|-------|----------------------|-------|-------------|-------|-------------------|------|---|-------|
|         |          |                                | X                       | Y | Total | X                        | Y     | Total | X                   | Y  | Z   | Total | X                    | Y     | Total Shear | Axial | X                 | Y    | Z | Total |
| 0' 0"   | 55.62    | 3782                           | 0                       | 0 | 0     | 36628                    | 15367 | 39721 | 0                   | 0  | 0   | 0     | 742                  | -1577 | 1743        | 3394  | 0                 | 0    | 0 | 0     |
| 0' 1"   | 55.58    | 3779                           | 0                       | 0 | 0     | 36524                    | 15318 | 39606 | 0                   | 1  | -4  | 4     | 741                  | -1576 | 1742        | 3389  | 0                 | 0    | 0 | 0     |
| 0' 2"   | 55.48    | 3772                           | 0                       | 0 | 0     | 36317                    | 15221 | 39378 | 0                   | 1  | -6  | 6     | 741                  | -1575 | 1741        | 3383  | 0                 | 0    | 0 | 0     |
| 0' 4"   | 55.31    | 3761                           | 0                       | 0 | 0     | 36111                    | 15124 | 39150 | -1                  | 3  | -17 | 18    | 740                  | -1573 | 1738        | 3366  | 0                 | 0    | 0 | 0     |
| 1' 0"   | 54.95    | 3736                           | 0                       | 0 | 0     | 35079                    | 14639 | 38011 | -2                  | 5  | -28 | 29    | 737                  | -1568 | 1733        | 3338  | 0                 | 0    | 0 | 0     |
| 1' 8"   | 54.22    | 3687                           | 0                       | 0 | 0     | 34050                    | 14155 | 36875 | -4                  | 8  | -49 | 49    | 734                  | -1560 | 1724        | 3289  | 0                 | 0.1  | 0 | 0.1   |
| 3' 3"   | 52.95    | 3601                           | 0                       | 0 | 0     | 31491                    | 12951 | 34051 | -5                  | 11 | -68 | 69    | 728                  | -1548 | 1711        | 3221  | -0.1              | 0.3  | 0 | 0.4   |
| 4' 11"  | 51.31    | 3489                           | 0                       | 0 | 0     | 28952                    | 11757 | 31248 | -5                  | 11 | -65 | 67    | 723                  | -1537 | 1698        | 3156  | -0.3              | 0.7  | 0 | 0.8   |
| 6' 7"   | 49.41    | 3360                           | 0                       | 0 | 0     | 26431                    | 10571 | 28466 | -5                  | 11 | -63 | 64    | 718                  | -1526 | 1686        | 3093  | -0.5              | 1.3  | 0 | 1.4   |
| 8' 2"   | 47.18    | 3208                           | 0                       | 0 | 0     | 23927                    | 9394  | 25705 | -5                  | 11 | -61 | 62    | 713                  | -1515 | 1674        | 3032  | -0.8              | 2    | 0 | 2.2   |
| 9' 10"  | 44.66    | 3037                           | 0                       | 0 | 0     | 21442                    | 8224  | 22965 | -5                  | 11 | -59 | 60    | 708                  | -1504 | 1662        | 2973  | -1.2              | 2.9  | 0 | 3.1   |
| 11' 6"  | 41.77    | 2840                           | 0                       | 0 | 0     | 18975                    | 7063  | 20247 | -5                  | 10 | -56 | 58    | 703                  | -1494 | 1651        | 2917  | -1.6              | 3.9  | 0 | 4.2   |
| 13' 1"  | 38.43    | 2613                           | 0                       | 0 | 0     | 16524                    | 5910  | 17549 | -5                  | 10 | -54 | 55    | 698                  | -1484 | 1640        | 2863  | -2.1              | 5.1  | 0 | 5.5   |
| 14' 9"  | 34.67    | 2357                           | 0                       | 0 | 0     | 14090                    | 4765  | 14874 | -5                  | 10 | -52 | 53    | 693                  | -1474 | 1629        | 2811  | -2.6              | 6.4  | 0 | 6.9   |
| 16' 5"  | 30.4     | 2067                           | 0                       | 0 | 0     | 11673                    | 3628  | 12224 | -5                  | 10 | -50 | 51    | 689                  | -1464 | 1618        | 2761  | -3.1              | 7.8  | 0 | 8.4   |
| 18' 1"  | 25.94    | 1764                           | 0                       | 0 | 0     | 9272                     | 2498  | 9603  | -4                  | 8  | -41 | 42    | 685                  | -1455 | 1609        | 2720  | -3.7              | 9.4  | 0 | 10.1  |
| 19' 3"  | 22.67    | 1542                           | 0                       | 0 | 0     | 7571                     | 1702  | 7760  | -2                  | 4  | -17 | 18    | 574                  | -1234 | 1361        | 2175  | -4.2              | 10.5 | 0 | 11.3  |
| 19' 3"  | 21.29    | 1448                           | 0                       | 0 | 0     | 7514                     | 1662  | 7696  | -1                  | 1  | -7  | 7     | 301                  | -1068 | 1109        | 2112  | -4.2              | 10.5 | 0 | 11.3  |
| 19' 8"  | 20.39    | 1387                           | 0                       | 0 | 0     | 7050                     | 1531  | 7214  | -1                  | 3  | -15 | 15    | 300                  | -1065 | 1106        | 2097  | -4.3              | 11   | 0 | 11.8  |
| 20' 4"  | 19.04    | 1295                           | 0                       | 0 | 0     | 6387                     | 1347  | 6528  | -2                  | 4  | -20 | 20    | 204                  | -834  | 859         | 1717  | -4.6              | 11.6 | 0 | 12.5  |
| 21' 2"  | 17.81    | 1211                           | 0                       | 0 | 0     | 5701                     | 1183  | 5823  | -1                  | 3  | -14 | 14    | 109                  | -605  | 615         | 1344  | -4.9              | 12.5 | 0 | 13.4  |
| 21' 4"  | 17.01    | 1157                           | 0                       | 0 | 0     | 5581                     | 1161  | 5701  | -1                  | 3  | -15 | 15    | 108                  | -602  | 611         | 1329  | -5                | 12.7 | 0 | 13.6  |
| 22' 3"  | 16.28    | 1107                           | 0                       | 0 | 0     | 5033                     | 1066  | 5145  | -2                  | 5  | -21 | 22    | 12                   | -371  | 371         | 948   | -5.3              | 13.7 | 0 | 14.7  |
| 23' 0"  | 15.57    | 1059                           | 0                       | 0 | 0     | 4762                     | 1057  | 4878  | -3                  | 6  | -30 | 31    | 9                    | -364  | 364         | 918   | -5.6              | 14.5 | 0 | 15.5  |
| 24' 7"  | 14.93    | 1015                           | 0                       | 0 | 0     | 4164                     | 1042  | 4293  | -3                  | 6  | -28 | 29    | 6                    | -358  | 358         | 890   | -6.3              | 16.3 | 0 | 17.5  |
| 25' 3"  | 14.35    | 976                            | 0                       | 0 | 0     | 3934                     | 1038  | 4069  | -2                  | 4  | -20 | 20    | 4                    | -354  | 354         | 870   | -6.5              | 17   | 0 | 18.3  |
| 26' 3"  | 13.85    | 942                            | 0                       | 0 | 0     | 3581                     | 1034  | 3728  | -2                  | 4  | -19 | 20    | 2                    | -349  | 349         | 851   | -7                | 18.2 | 0 | 19.5  |
| 26' 11" | 12.06    | 820                            | 0                       | 0 | 0     | 2718                     | 684   | 2803  | -1                  | 3  | -12 | 13    | -3                   | -340  | 340         | 724   | -7.2              | 19   | 0 | 20.3  |
| 27' 4"  | 10.34    | 703                            | 0                       | 0 | 0     | 2578                     | 691   | 2669  | -1                  | 3  | -11 | 11    | 89                   | -282  | 295         | 548   | -7.4              | 19.5 | 0 | 20.9  |
| 27' 11" | 9.75     | 663                            | 0                       | 0 | 0     | 2422                     | 642   | 2506  | -3                  | 6  | -24 | 25    | 86                   | -276  | 289         | 524   | -7.7              | 20.2 | 0 | 21.6  |
| 29' 6"  | 8.68     | 591                            | 0                       | 0 | 0     | 1969                     | 500   | 2032  | -4                  | 8  | -35 | 36    | 83                   | -268  | 280         | 490   | -8.4              | 22.2 | 0 | 23.7  |
| 31' 2"  | 7.27     | 494                            | 0                       | 0 | 0     | 1530                     | 364   | 1574  | -4                  | 8  | -33 | 34    | 79                   | -260  | 271         | 457   | -9.1              | 24.2 | 0 | 25.9  |
| 32' 10" | 5.67     | 385                            | 0                       | 0 | 0     | 1104                     | 235   | 1130  | -4                  | 8  | -31 | 33    | 75                   | -252  | 263         | 425   | -9.8              | 26.3 | 0 | 28    |
| 34' 5"  | 4        | 272                            | 0                       | 0 | 0     | 691                      | 112   | 702   | -3                  | 6  | -25 | 26    | 72                   | -245  | 256         | 400   | -10.5             | 28.4 | 0 | 30.3  |
| 35' 7"  | 2.24     | 152                            | 0                       | 0 | 0     | 220                      | 98    | 242   | -2                  | 4  | -14 | 15    | 25                   | -84   | 88          | 116   | -11               | 29.8 | 0 | 31.8  |
| 36' 1"  | 1.13     | 77                             | 0                       | 0 | 0     | 177                      | 86    | 199   | -1                  | 3  | -12 | 13    | 24                   | -81   | 84          | 104   | -11.3             | 30.5 | 0 | 32.5  |
| 37' 0"  | 0.98     | 67                             | 0                       | 0 | 0     | 0                        | 0     | 0     | -1                  | 2  | -8  | 8     | 0                    | 0     | 0           | 0     | -11.7             | 31.7 | 0 | 33.8  |

**Deflection Check**

| Heights | Stress % | Stresses (lb/in <sup>2</sup> ) | Applied Moments (ft-lbf) |   |       | Internal Moments (ft-lbf) |      |       | Applied Forces (lbf) |   |     |       | Internal Forces (lbf) |     |             |       | Displacements (") |     |   |       |
|---------|----------|--------------------------------|--------------------------|---|-------|---------------------------|------|-------|----------------------|---|-----|-------|-----------------------|-----|-------------|-------|-------------------|-----|---|-------|
|         |          |                                | X                        | Y | Total | X                         | Y    | Total | X                    | Y | Z   | Total | X                     | Y   | Total Shear | Axial | X                 | Y   | Z | Total |
| 0' 0"   | 1.93     | 155                            | 0                        | 0 | 0     | 1232                      | 844  | 1494  | 0                    | 0 | 0   | 0     | 57                    | -43 | 71          | 1273  | 0                 | 0   | 0 | 0     |
| 0' 1"   | 1.93     | 154                            | 0                        | 0 | 0     | 1230                      | 841  | 1489  | 0                    | 0 | -2  | 2     | 57                    | -43 | 71          | 1270  | 0                 | 0   | 0 | 0     |
| 0' 2"   | 1.93     | 154                            | 0                        | 0 | 0     | 1224                      | 833  | 1481  | 0                    | 0 | -3  | 3     | 57                    | -43 | 71          | 1267  | 0                 | 0   | 0 | 0     |
| 0' 4"   | 1.92     | 154                            | 0                        | 0 | 0     | 1218                      | 826  | 1472  | 0                    | 0 | -9  | 9     | 57                    | -43 | 71          | 1258  | 0                 | 0   | 0 | 0     |
| 1' 0"   | 1.91     | 153                            | 0                        | 0 | 0     | 1190                      | 789  | 1428  | 0                    | 0 | -15 | 15    | 57                    | -43 | 71          | 1243  | 0                 | 0   | 0 | 0     |
| 1' 8"   | 1.88     | 151                            | 0                        | 0 | 0     | 1162                      | 752  | 1384  | 0                    | 0 | -26 | 26    | 57                    | -43 | 71          | 1218  | 0                 | 0   | 0 | 0     |
| 3' 3"   | 1.84     | 147                            | 0                        | 0 | 0     | 1092                      | 659  | 1275  | 0                    | 0 | -36 | 36    | 57                    | -43 | 71          | 1182  | 0                 | 0   | 0 | 0     |
| 4' 11"  | 1.79     | 143                            | 0                        | 0 | 0     | 1021                      | 566  | 1168  | 0                    | 0 | -34 | 34    | 57                    | -43 | 71          | 1147  | 0                 | 0   | 0 | 0     |
| 6' 7"   | 1.72     | 138                            | 0                        | 0 | 0     | 951                       | 474  | 1062  | 0                    | 0 | -33 | 33    | 57                    | -43 | 71          | 1114  | 0                 | 0   | 0 | 0.1   |
| 8' 2"   | 1.65     | 132                            | 0                        | 0 | 0     | 880                       | 381  | 959   | 0                    | 0 | -32 | 32    | 57                    | -43 | 71          | 1082  | 0                 | 0.1 | 0 | 0.1   |
| 9' 10"  | 1.58     | 126                            | 0                        | 0 | 0     | 810                       | 288  | 860   | 0                    | 0 | -31 | 31    | 57                    | -43 | 71          | 1051  | -0.1              | 0.1 | 0 | 0.1   |
| 11' 6"  | 1.5      | 120                            | 0                        | 0 | 0     | 740                       | 195  | 765   | 0                    | 0 | -30 | 30    | 57                    | -43 | 71          | 1022  | -0.1              | 0.1 | 0 | 0.2   |
| 13' 1"  | 1.42     | 114                            | 0                        | 0 | 0     | 669                       | 103  | 677   | 0                    | 0 | -29 | 29    | 57                    | -43 | 71          | 993   | -0.1              | 0.2 | 0 | 0.2   |
| 14' 9"  | 1.35     | 108                            | 0                        | 0 | 0     | 599                       | 10   | 599   | 0                    | 0 | -27 | 27    | 57                    | -43 | 71          | 966   | -0.1              | 0.2 | 0 | 0.3   |
| 16' 5"  | 1.3      | 104                            | 0                        | 0 | 0     | 529                       | -83  | 535   | 0                    | 0 | -26 | 26    | 57                    | -43 | 71          | 940   | -0.1              | 0.3 | 0 | 0.3   |
| 18' 1"  | 1.28     | 102                            | 0                        | 0 | 0     | 458                       | -176 | 491   | 0                    | 0 | -22 | 22    | 57                    | -43 | 71          | 918   | -0.2              | 0.3 | 0 | 0.4   |
| 19' 3"  | 1.26     | 101                            | 0                        | 0 | 0     | 407                       | -240 | 473   | 0                    | 0 | -9  | 9     | 57                    | -43 | 71          | 725   | -0.2              | 0.4 | 0 | 0.4   |
| 19' 3"  | 1.25     | 100                            | 0                        | 0 | 0     | 403                       | -247 | 473   | 0                    | 0 | -4  | 4     | -33                   | 2   | 33          | 706   | -0.2              | 0.4 | 0 | 0.4   |
| 19' 8"  | 1.25     | 100                            | 0                        | 0 | 0     | 404                       | -233 | 467   | 0                    | 0 | -8  | 8     | -33                   | 2   | 33          | 699   | -0.2              | 0.4 | 0 | 0.4   |
| 20' 4"  | 1.25     | 100                            | 0                        | 0 | 0     | 405                       | -212 | 458   | 0                    | 0 | -10 | 10    | -33                   | 2   | 33          | 592   | -0.2              | 0.4 | 0 | 0.5   |
| 21' 2"  | 1.23     | 99                             | 0                        | 0 | 0     | 407                       | -185 | 447   | 0                    | 0 | -7  | 7     | -33                   | 2   | 33          | 489   | -0.2              | 0.5 | 0 | 0.5   |
| 21' 4"  | 1.23     | 98                             | 0                        | 0 | 0     | 408                       | -178 | 445   | 0                    | 0 | -8  | 8     | -33                   | 2   | 33          | 482   | -0.2              | 0.5 | 0 | 0.5   |
| 22' 3"  | 1.23     | 99                             | 0                        | 0 | 0     | 410                       | -148 | 436   | 0                    | 0 | -11 | 11    | -33                   | 2   | 33          | 374   | -0.2              | 0.5 | 0 | 0.5   |
| 23' 0"  | 1.25     | 100                            | 0                        | 0 | 0     | 411                       | -124 | 430   | 0                    | 0 | -16 | 16    | -33                   | 2   | 33          | 359   | -0.2              | 0.5 | 0 | 0.6   |
| 24' 7"  | 1.29     | 103                            | 0                        | 0 | 0     | 415                       | -71  | 421   | 0                    | 0 | -15 | 15    | -33                   | 2   | 33          | 344   | -0.2              | 0.6 | 0 | 0.7   |
| 25' 3"  | 1.33     | 106                            | 0                        | 0 | 0     | 417                       | -50  | 420   | 0                    | 0 | -10 | 10    | -33                   | 2   | 33          | 333   | -0.2              | 0.6 | 0 | 0.7   |
| 26' 3"  | 1.38     | 110                            | 0                        | 0 | 0     | 420                       | -17  | 420   | 0                    | 0 | -10 | 10    | -33                   | 2   | 33          | 323   | -0.2              | 0.7 | 0 | 0.7   |
| 26' 11" | 1.05     | 84                             | 0                        | 0 | 0     | 89                        | -180 | 201   | 0                    | 0 | -7  | 7     | -33                   | 2   | 33          | 257   | -0.2              | 0.7 | 0 | 0.8   |
| 27' 4"  | 0.68     | 54                             | 0                        | 0 | 0     | 91                        | -165 | 188   | 0                    | 0 | -6  | 6     | -14                   | -8  | 16          | 221   | -0.2              | 0.8 | 0 | 0.8   |
| 27' 11" | 0.65     | 52                             | 0                        | 0 | 0     | 86                        | -157 | 180   | 0                    | 0 | -13 | 13    | -14                   | -8  | 16          | 208   | -0.2              | 0.8 | 0 | 0.8   |
| 29' 6"  | 0.6      | 48                             | 0                        | 0 | 0     | 74                        | -135 | 154   | 0                    | 0 | -18 | 18    | -14                   | -8  | 16          | 190   | -0.3              | 0.9 | 0 | 0.9   |
| 31' 2"  | 0.54     | 44                             | 0                        | 0 | 0     | 61                        | -112 | 128   | 0                    | 0 | -17 | 17    | -14                   | -8  | 16          | 173   | -0.3              | 1   | 0 | 1     |
| 32' 10" | 0.47     | 38                             | 0                        | 0 | 0     | 49                        | -90  | 102   | 0                    | 0 | -17 | 17    | -14                   | -8  | 16          | 156   | -0.3              | 1.1 | 0 | 1.1   |
| 34' 5"  | 0.4      | 32                             | 0                        | 0 | 0     | 36                        | -67  | 76    | 0                    | 0 | -13 | 13    | -14                   | -8  | 16          | 143   | -0.3              | 1.2 | 0 | 1.2   |
| 35' 7"  | 0.2      | 16                             | 0                        | 0 | 0     | 2                         | -5   | 6     | 0                    | 0 | -8  | 8     | -5                    | -3  | 5           | 39    | -0.3              | 1.2 | 0 | 1.3   |
| 36' 1"  | 0.02     | 2                              | 0                        | 0 | 0     | 1                         | -3   | 3     | 0                    | 0 | -6  | 6     | -5                    | -3  | 5           | 32    | -0.3              | 1.3 | 0 | 1.3   |
| 37' 0"  | 0.02     | 1                              | 0                        | 0 | 0     | 0                         | 0    | 0     | 0                    | 0 | -4  | 4     | 0                     | 0   | 0           | 0     | -0.3              | 1.3 | 0 | 1.3   |

**Buckling**

| Load Case                     | Allowable Buckling Force | Applied Buckling Force | Percent of Critical | Column Section Height | Column Diameter | Buckling Constant |
|-------------------------------|--------------------------|------------------------|---------------------|-----------------------|-----------------|-------------------|
| Medium Load (Grade C @ Xings) | 24911 lbf                | 3394 lbf               | 13.62               | 21' 2"                | 10"             | 2                 |

## Wire End Points and Wires

| WEP#2     |                     |          |               |                   |             |                  |                    |                 |                |                               |     |                  |     |
|-----------|---------------------|----------|---------------|-------------------|-------------|------------------|--------------------|-----------------|----------------|-------------------------------|-----|------------------|-----|
| Type      | Environment         | Distance | Direction     | GPS Point         | Inclination | Measured Between | Measured to Ground |                 |                |                               |     |                  |     |
| Next Pole | Commercial Driveway | 136'     | 331 °         | Undefined.        | 0 °         | 4' 11"           | 18' 5"             |                 |                |                               |     |                  |     |
| ID        | Size                | Owner    | Group         | Tension Group     | Height      | Midspan          | TAF                | Initial Tension | Tension Method | Medium Load (Grade C @ Xings) |     | Deflection Check |     |
|           |                     |          |               |                   |             |                  |                    |                 |                | Tension                       | Sag | Tension          | Sag |
| Wire#18   | 2 CU                | NES      | Primary       | Full              | 38' 7"      | 0' 0"            | 1                  | 678 lbf*        | Dynamic        | 1229.75 lbf**                 | N/A | 410.59 lbf**     | N/A |
| Wire#16   | 2 CU                | NES      | Primary       | Full              | 36' 6"      | 0' 0"            | 1                  | 678 lbf*        | Dynamic        | 1229.75 lbf**                 | N/A | 410.59 lbf**     | N/A |
| Wire#17   | 2 CU                | NES      | Primary       | Full              | 36' 6"      | 0' 0"            | 1                  | 678 lbf*        | Dynamic        | 1229.75 lbf**                 | N/A | 410.59 lbf**     | N/A |
| Wire#10   | 4 CU                | NES      | Neutral       | Full              | 27' 4"      | 0' 0"            | 1                  | 491 lbf*        | Dynamic        | 934.96 lbf**                  | N/A | 301.76 lbf**     | N/A |
| Wire#11   | 6 AD - Shepherd     | NES      | Secondary     | Secondary/Service | 27' 4"      | 26' 7"           | 1                  | 30 lbf*         | Dynamic        | 315.93 lbf**                  | N/A | 30 lbf**         | N/A |
| Wire#12   | Fiber 2"            | O        | Communication | Full              | 22' 3"      | 21' 8"           | 1                  | 1075 lbf*       | Dynamic        | 2578.65 lbf**                 | N/A | 1075 lbf**       | N/A |
| Wire#13   | Fiber 2"            | O        | Communication | Full              | 21' 2"      | 20' 10"          | 1                  | 1075 lbf*       | Dynamic        | 2578.65 lbf**                 | N/A | 1075 lbf**       | N/A |
| Wire#14   | Fiber 2"            | O        | Communication | Full              | 20' 4"      | 20' 1"           | 1                  | 1075 lbf*       | Dynamic        | 2578.65 lbf**                 | N/A | 1075 lbf**       | N/A |
| Wire#15   | Coax 2"             | COMC     | Communication | Full              | 19' 3"      | 18' 5"           | 1                  | 1075 lbf*       | Dynamic        | 2311 lbf**                    | N/A | 1075 lbf**       | N/A |

| WEP#1         |                     |          |               |                   |             |                  |                    |                 |                |                               |     |                  |     |
|---------------|---------------------|----------|---------------|-------------------|-------------|------------------|--------------------|-----------------|----------------|-------------------------------|-----|------------------|-----|
| Type          | Environment         | Distance | Direction     | GPS Point         | Inclination | Measured Between | Measured to Ground |                 |                |                               |     |                  |     |
| Previous Pole | Commercial Driveway | 130'     | 151 °         | Undefined.        | 0 °         | 3' 4"            | 17' 8"             |                 |                |                               |     |                  |     |
| ID            | Size                | Owner    | Group         | Tension Group     | Height      | Midspan          | TAF                | Initial Tension | Tension Method | Medium Load (Grade C @ Xings) |     | Deflection Check |     |
|               |                     |          |               |                   |             |                  |                    |                 |                | Tension                       | Sag | Tension          | Sag |
| Wire#9        | 2 CU                | NES      | Primary       | Full              | 38' 7"      | 0' 0"            | 1                  | 678 lbf*        | Dynamic        | 1211.56 lbf**                 | N/A | 405.33 lbf**     | N/A |
| Wire#7        | 2 CU                | NES      | Primary       | Full              | 36' 6"      | 0' 0"            | 1                  | 678 lbf*        | Dynamic        | 1211.56 lbf**                 | N/A | 405.33 lbf**     | N/A |
| Wire#8        | 2 CU                | NES      | Primary       | Full              | 36' 6"      | 0' 0"            | 1                  | 678 lbf*        | Dynamic        | 1211.56 lbf**                 | N/A | 405.33 lbf**     | N/A |
| Wire#1        | 4 CU                | NES      | Neutral       | Full              | 27' 4"      | 0' 0"            | 1                  | 491 lbf*        | Dynamic        | 919.61 lbf**                  | N/A | 299 lbf**        | N/A |
| Wire#2        | 6 AD - Shepherd     | NES      | Secondary     | Secondary/Service | 27' 4"      | 26' 4"           | 1                  | 30 lbf*         | Dynamic        | 315.14 lbf**                  | N/A | 30 lbf**         | N/A |
| Wire#3        | Fiber 2"            | O        | Communication | Full              | 22' 3"      | 23' 0"           | 1                  | 1075 lbf*       | Dynamic        | 2550.77 lbf**                 | N/A | 1075 lbf**       | N/A |
| Wire#4        | Fiber 2"            | O        | Communication | Full              | 21' 2"      | 22' 3"           | 1                  | 1075 lbf*       | Dynamic        | 2550.77 lbf**                 | N/A | 1075 lbf**       | N/A |
| Wire#5        | Fiber 2"            | O        | Communication | Full              | 20' 4"      | 21' 7"           | 1                  | 1075 lbf*       | Dynamic        | 2550.77 lbf**                 | N/A | 1075 lbf**       | N/A |
| Wire#6        | Coax 2"             | COMC     | Communication | Full              | 19' 3"      | 17' 8"           | 1                  | 1075 lbf*       | Dynamic        | 2301.5 lbf**                  | N/A | 1075 lbf**       | N/A |

| WEP#3      |                     |          |           |                   |             |                  |                    |                 |                |                               |     |                  |     |
|------------|---------------------|----------|-----------|-------------------|-------------|------------------|--------------------|-----------------|----------------|-------------------------------|-----|------------------|-----|
| Type       | Environment         | Distance | Direction | GPS Point         | Inclination | Measured Between | Measured to Ground |                 |                |                               |     |                  |     |
| Other Pole | Commercial Driveway | 70'      | 35 °      | Undefined.        | 0 °         | N/A              | 28' 2"             |                 |                |                               |     |                  |     |
| ID         | Size                | Owner    | Group     | Tension Group     | Height      | Midspan          | TAF                | Initial Tension | Tension Method | Medium Load (Grade C @ Xings) |     | Deflection Check |     |
|            |                     |          |           |                   |             |                  |                    |                 |                | Tension                       | Sag | Tension          | Sag |
| Wire#19    | 6 AD - Shepherd     | NES      | Secondary | Secondary/Service | 27' 4"      | 28' 2"           | 1                  | 20 lbf*         | Dynamic        | 184.2 lbf**                   | N/A | 20 lbf**         | N/A |

| WEP#4      |             |          |               |               |             |                  |                    |                 |                |                              |     |                  |     |
|------------|-------------|----------|---------------|---------------|-------------|------------------|--------------------|-----------------|----------------|------------------------------|-----|------------------|-----|
| Type       | Environment | Distance | Direction     | GPS Point     | Inclination | Measured Between | Measured to Ground |                 |                |                              |     |                  |     |
| Other Pole | Street      | 42'      | 207 °         | Undefined.    | 0 °         | N/A              | 18' 5"             |                 |                |                              |     |                  |     |
| ID         | Size        | Owner    | Group         | Tension Group | Height      | Midspan          | TAF                | Initial Tension | Tension Method | Medium Load (Grade C @ Xlgs) |     | Deflection Check |     |
|            |             |          |               |               |             |                  |                    |                 |                | Tension                      | Sag | Tension          | Sag |
| Wire#20    | Fiber 2"    | COMC     | Communication | Slack         | 19' 3"      | 18' 5"           | 1                  | 100 lbf*        | Dynamic        | 317.24 lbf**                 | N/A | 100 lbf**        | N/A |

\*Tension value used in an analysis may vary dependent on 'Average Length on Main Span' setting in the Load Case.

\*\* Tension value is inclusive of environmental and load factors associated with the Load Case.

#### Equipment

| ID      | Size           | Owner | Type         | Height  | Bottom Height | Direction |
|---------|----------------|-------|--------------|---------|---------------|-----------|
| Equip#1 | Roadway - 6 ft | NES   | Street Light | 26' 11" | 25' 4"        | 241 °     |
| Equip#2 | Street Light   | NES   | Drip Loop    | 25' 3"  | 25' 3"        | 241 °     |

#### Cross Arms

| ID         | Size                  | Height | Association | Direction | Offset | Insulators               |
|------------|-----------------------|--------|-------------|-----------|--------|--------------------------|
| CrossArm#1 | 8 Foot Wood Cross Arm | 35' 7" | Bisector    | 61 °      | 4' 0"  | Insulator#1, Insulator#2 |

#### Insulators

| ID          | Size                 | Direction | Offset | Wires           |
|-------------|----------------------|-----------|--------|-----------------|
| Insulator#1 | 27kV Pin (Cross Arm) | 151 °     | 0' 4"  | Wire#7, Wire#16 |
| Insulator#2 | 27kV Pin (Cross Arm) | 151 °     | 7' 8"  | Wire#8, Wire#17 |
| Insulator#3 | 27kV Pin (Pole Top)  | 147 °     | 37' 0" | Wire#9, Wire#18 |