



CONSULTING GROUP, INC.

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**Tower Structural Analysis Report for
SBA Network Services, Inc.**



Existing 130' Self-Support Tower
SBA Site Name: Glastonbury-main St.
SBA Site ID: CT46126-A -01

Carrier Name: AT&T
Carrier Site Name: 10071041
Site Location:
2577 Main Street
Glastonbury, CT 06033
Hartford County

Latitude: 41.714389°
Longitude: -72.613028°

ACGI Job # 16-4584

| ANALYSIS RESULTS | | |
|-----------------------------------|--------------|--|
| Tower Components | 89.6% | Pass |
| Tower Foundation | 62.0% | Pass |
| Net Change in Tower Stress | -9.1% | Change from previous structural analysis by Allpro Consulting Group, Inc., ACGI Job # 16-2859, dated 08/16/2016 |

Prepared By:
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Staff Engineer



12/09/2016
Approved By
Joji M. George, PE.
CT PE# 24444

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1. ANALYSIS SUMMARY

The existing 130' Self-support Tower located in Glastonbury, Connecticut was analyzed by Allpro Consulting Group, Inc. (ACGI) for the existing and the proposed AT&T antennas, radios and coaxes as authorized by SBA Communication Corp. Based on the results of the analysis, the existing tower with below mentioned proposed and existing loading is found to be **in code compliance** with TIA-222-G, Structural Standards for Steel Antenna Towers and Antenna Supporting Structures and 2012 International Building Code (IBC 2012).

2. SCOPE & SOURCE OF INFORMATION

The purpose of this structural analysis is to determine whether the existing structure is capable of supporting additional proposed loads.

| SOURCE OF INFORMATION | | |
|-------------------------------|--|--|
| Tower Data: | FRED A. NUDD Corporation | Original Tower Design by FRED A. NUDD Corporation PJ No. 6893, Sept, 1999 |
| | FDH Engineering Inc. | Modification Drawings by FDH, Project No. 1338401400, dated 06/17/2013 |
| | FDH Engineering Inc. | Modification Inspection Report by FDH, Project No. 1304001700, dated 11/01/2013 |
| | FDH Engineering Inc. | Modification Inspection Report by FDH, Project No. 1305911700, dated 02/25/2014 |
| | B+T Group | Existing Tower data as per previous structural analysis by B+T Group, Job # 101341.001.01a, dated 09/29/2015 |
| Allpro Consulting Group, Inc. | Previous Structural Analysis by Allpro Consulting Group, Inc. (ACGI Job #16-2859, dated 8/16/2016) | |
| Foundation Data: | FRED A. NUDD Corporation | Original Tower Design by FRED A. NUDD Corporation PJ No. 6893, Sept, 1999 |
| Geotechnical Report: | Tectonic Engineering | Geotechnical Report by Tectonic Engineering Project # 1170.C057, dated 08/26/1999 |

| | | |
|-----------------------|-------------------------------|---|
| Loading Data: | B+T Group | Existing loading as per previous structural analysis by B+T Group, Job # 101341.001.01a, dated 09/29/2015 |
| | SBA Communication Corp. | Site Summary dated 08/02/2016 Proposed final loading for AT&T as per Application ID # 39946, v1 downloaded from SBA portal |
| | Allpro Consulting Group, Inc. | Previous Structural Analysis by Allpro Consulting Group, Inc. (ACGI Job #16-2859, dated 8/16/2016) |
| Authorization: | SBA Communication Corp. | |

3. ANALYSIS METHODS & DATA

The analysis was performed in accordance with Telecommunication Industry Association specification TIA-222-G. The tower was modeled using TNX Tower, a 3-D finite element program. TNX Tower is a general-purpose modeling, analysis, and design program created specifically for communication towers using the EIA-222-C, EIA-222-D, TIA/EIA-222-F or TIA/EIA-222-G standards. The 3-D model included the tower, with existing appurtenances and all proposed loads.

| SITE DATA | |
|------------------------------------|--|
| SBA Site Name: | Glastonbury main st. |
| SBA Site Number: | CT146126-A-01 |
| Carrier Site Name: | AT&T/10071041 |
| City, State: | Glastonbury, CT |
| County: | Hartford |
| Code Wind Load Requirement: | TIA-222-G & IBC 2012 (Ultimate wind speed of 124 mph 3 sec gust equivalent to Nominal design wind speed of 96 mph basic wind speed) |
| Wind Load Used: | TIA-222-G Code: <ul style="list-style-type: none"> • Nominal design wind speed of 96 mph (3 sec gust wind speed) • Structure class: II • Topographic Category: 1 • Exposure Category: B • A wind speed of 50 mph is used in combination with ice. • Nominal ice thickness of 1.0 in. |
| Seismic Requirement: | Spectral response acceleration at short periods, $S_s = 0.180$ (USGS Design Maps Summary) Since, $S_s = 0.180 < 1$ (Earthquake effects can be ignored in accordance with 2.7.3 of the TIA-222-G code) |

| TOWER DATA | |
|----------------------------|--|
| Tower Type: | 3 Sided Self-support Tower |
| Height: | 130' |
| Cross Section: | Triangular |
| Steel Strength: | Legs – 50 ksi, Braces – 36 ksi |
| Type of Foundation: | Individual concrete pad with square pedestal |

| TOWER HISTORY | |
|------------------------------------|--|
| Tower Manufacturer / Model: | ROHN/ SSV TOWER |
| Date of Original Design: | September 1999 |
| Previous Modifications: | Modification Drawings by FDH, Project No. 1338401400, dated 06/17/2013 |
| Original Design Code Reqs: | TIA/EIA 222-F 1996, 85mph + 1/2" ice |

4. CONCLUSIONS

| RESULT SUMMARY | | |
|-----------------------------|------------|-----------|
| MEMBER | % Capacity | Pass/Fail |
| Leg | 83.4 % | Pass |
| Diagonal | 89.6 % | Pass |
| Horizontal | 4.0 % | Pass |
| Sec. Horizontal | 84.6 % | Pass |
| Top Girt | 0.9 % | Pass |
| Bottom Girt | 12.3 % | Pass |
| Bolt Checks | 89.6 % | Pass |
| Overall Tower rating | | |
| 89.6 % | | |

| FOUNDATION CAPACITY | | |
|---------------------------|------------|-----------|
| Direction | % Capacity | Pass/Fail |
| Overturning | 62.0 % | Pass |
| Net Soil Bearing Pressure | 20.9 % | Pass |
| Horizontal shear capacity | 16.1% | Pass |
| Overall | | |
| 62.0 % | | |

As per the results of the analysis, the existing tower is **in code compliance** for the new and existing antenna loads.

Maximum tower member stress is **less than allowable**, making it **in code compliance** under the TIA-222-G code and 2012 International Building Code requirements.

5.

DISCLAIMER

Installation procedures and related loading are not within the scope of this analysis. A contractor experienced in similar work should perform all installation work. The engineering services provided by Allpro Consulting Group, Inc. (ACGI) are limited to the computer analysis and calculations of the structure with the proposed and existing loads. This analysis is considered void if the loading mentioned in this report is changed or is different as installed. It is assumed that the existing structure is properly maintained and is in good condition free of any defects. Scope of this analysis does not include existing connections, except as noted in this report.

ACGI does not make any warranties, expressed or implied in connection with this engineering analysis report and disclaims any liability arising from deficiencies or any existing conditions of the original structure. ACGI will not be responsible for consequential or incidental damages sustained by any parties as a result of any data or conclusions included in this Report. The maximum liability of ACGI pursuant to this report shall be limited to the consulting fee received for the preparation of the report.

6.

ASSUMPTIONS

This analysis was completed based on the following assumptions:

- Tower has been properly maintained.
- Tower erection was in accordance to manufacturer drawings.
- Leg flanges have been properly designed by manufacturer to not be a limiting reaction.
- Welds have been properly designed and installed by manufacturer to not be a limiting reaction.
- Foundation was constructed in accordance to manufacturer drawings.
- Foundation does not have structural damage.
- Bolts have been properly tightened according to manufacturer specifications.
- Appurtenance, mount and transmission line sizes and weights are best estimates using the tnxTower database and manufacturer information.
- It is assumed that all the radios are/will be mounted behind the antennas.

7. APPURTENANCE LISTING

| EXISTING LOAD DESCRIPTION | | | | | |
|---------------------------|------------------------|------------------------------|---|-----------------------|---------------|
| <u>ELEV (ft.)</u> | <u>Qty.</u> | <u>Antenna Description</u> | <u>Mount Type & Qty.</u> | <u>TX. LINE (in)</u> | <u>TENANT</u> |
| 130± | 1 | Andrew VHLP2.5 | (3) T-Frames @128' | (6) 5/16 (4) 1/2 | Sprint |
| 128± | 3 | Unknown 24"x14"x9" | | | |
| | 2 | Argus Tech. LLPX310R | | | |
| | 1 | Kathrein 840 10054 | | | |
| | 1 | Motorola TIMING 2000 | | | |
| 126± | 1 | Andrew VHLP2.5 | | | |
| 124± | 3 | Unknown MODEM | | | |
| | 1 | Andrew VHLP2.5 | | | |
| 120± | 3 | Alcatel Lucent TD-RRH8x20-25 | (3) T-Arms @118.5' | (4) 1-1/4" | Sprint |
| | 3 | Rfs Celwave APXVTM14-C-120 | | | |
| 118.5± | 3 | Ericsson 1900 MHz | | | |
| | 4 | RFS ACU-A20-N RETs | | | |
| | 3 | Ericsson 800 MHz | | | |
| | 1 | Powerwave P40-16-XLPP-RR-A | | | |
| | 2 | RFS APXVSP18-C-A20 | | | |
| 3 | Samsung 800 MHz Filter | | | | |
| 110± | 6 | Allgon 7700.00 | (3) T-Frames @110' | (12) 1-1/4 (1) 3/8 | AT&T |
| | 1 | Andrew SBNH-1D6565C | | | |
| | 6 | Ericsson RRUS-11 1900MHz | | | |
| | 2 | KMW AM-X-CD-16-65-00T-RET | | | |
| | 6 | Powerwave LGP13519 | | | |
| | 6 | Powerwave LGP21401 | | | |
| | 1 | Raycap DC6-48-60-18-8F | | | |
| 93± | 3 | Ericsson AIR 21 B2A/B4P | (3) T-Frames (1) MT-195-12 (1) VSR-TS-B @93' | (13) 1-5/8 | T-MOBILE |
| | 3 | Ericsson AIR 21 B4A/B2P | | | |
| | 3 | Ericsson KRY 112 144/1 TMA | | | |
| | 3 | Commscope LNX-6515DS-A1M | | | |
| | 3 | Ericsson S11B12 | | | |
| 80± | 3 | Alcatel Lucent RRH2X60-PCS | (3) T-Frames @80' | (2) 1-5/8 | VERIZON |
| | 3 | Alcatel Lucent RRH2x60-700 | | | |
| | 3 | Alcatel Lucent RRH2x60-AWS | | | |
| | 6 | Andrew HBXX-6517DS-A2M | | | |
| | 6 | Andrew LNX-6514DS-A1M | | | |
| | 2 | RFS DB-T1-6Z-8AB-0Z | | | |
| 55.5± | 1 | GPS Antenna | (2) Side-Arm @55.5' | (1) 1/2 | |
| 50.5± | 2 | GPS Antennas | (2) Side-Arm @50.5' | (2) 1/2 | |

| AT&T FINAL LOAD DESCRIPTION | | | | | |
|-----------------------------|-------------|--------------------------------|------------------------------|---|---------------|
| <u>ELEV</u> <u>(ft.)</u> | <u>Qty.</u> | <u>Antenna Description</u> | <u>Mount Type & Qty.</u> | <u>TX. LINE (in)</u> | <u>TENANT</u> |
| 110± | 2 | CCI HPA-65R-BUU-H6 Antennas | (3) T-Frames @110' | (36) 1/2 fiber (18) 1-1/4 coax (18) 3/8" | AT&T |
| | 1 | CCI HPA-65R-BUU-H8 Antennas | | | |
| | 6 | Kathrein 800 10121 Antennas | | | |
| | 3 | Ericsson RRUS 11 | | | |
| | 3 | Ericsson RRUS 12 | | | |
| | 3 | Ericsson RRUS A2 | | | |
| | 6 | Powerwave LGP 21401 DB-850 TMA | | | |
| | 12 | Kathrein 860-10025 RET | | | |
| | 6 | Powerwave LGP21901 diplexers | | | |
| | 3 | Andrew ATSBT-TOP-MF-4G | | | |
| | 1 | Raycap | | | |

Notes:

1. ACGI should be notified of any discrepancies found in the data listed in this report.
2. Notify Allpro Consulting Group, Inc. of any potential physical & other interference with existing antennas for a redesign.

8. SUMMARY OF WORKING PERCENTAGE OF STRUCTURAL COMPONENTS

Section Capacity Table

| Section No. | Elevation ft | Component Type | Size | Critical Element | P K | SF*P _{allow} K | % Capacity | Pass Fail |
|-------------|-------------------|----------------|--|------------------|----------|-------------------------|------------------------------|-----------|
| T1 | 130 - 120 | Leg | 1 1/2 | 2 | -8.407 | 47.300 | 17.8 | Pass |
| T2 | 120 - 117.143 | Leg | 2 | 44 | -13.486 | 95.057 | 14.2 | Pass |
| T3 | 117.143 - 114.286 | Leg | 2 | 56 | -19.814 | 95.057 | 20.8 | Pass |
| T4 | 114.286 - 111.43 | Leg | 2 | 65 | -26.328 | 93.381 | 28.2 | Pass |
| T5 | 111.43 - 108.573 | Leg | 2 | 74 | -34.461 | 93.381 | 36.9 | Pass |
| T6 | 108.573 - 105.716 | Leg | 2 | 83 | -44.444 | 93.381 | 47.6 | Pass |
| T7 | 105.716 - 102.859 | Leg | 2 | 92 | -55.815 | 93.381 | 59.8 | Pass |
| T8 | 102.859 - 100 | Leg | 2 | 101 | -72.359 | 127.201 | 56.9 | Pass |
| T9 | 100 - 96 | Leg | P4.5 x 0.237 | 116 | -75.468 | 142.411 | 53.0 | Pass |
| T10 | 96 - 92 | Leg | P4.5 x 0.237 | 125 | -88.280 | 142.411 | 62.0 | Pass |
| T11 | 92 - 88 | Leg | P4.5 x 0.237 | 134 | -96.636 | 151.005 | 64.0 | Pass |
| T12 | 88 - 84 | Leg | BT101341- P4.5 x 0.237 w/ HP5.625x0.375 | 146 | -109.738 | 221.384 | 49.6 | Pass |
| T13 | 84 - 80 | Leg | BT101341- P4.5 x 0.237 w/ HP5.625x0.375 | 158 | -121.987 | 221.402 | 55.1 | Pass |
| T14 | 80 - 75 | Leg | P6.625x0.280 | 170 | -139.008 | 256.371 | 54.2 | Pass |
| T15 | 75 - 70 | Leg | P6.625x0.280 | 179 | -157.171 | 256.371 | 61.3 | Pass |
| T16 | 70 - 65 | Leg | P6.625x0.280 | 188 | -174.160 | 256.371 | 67.9 | Pass |
| T17 | 65 - 60 | Leg | P6.625x0.280 | 197 | -189.884 | 256.371 | 74.1 | Pass |
| T18 | 60 - 55 | Leg | P6.625x0.280 | 206 | -201.815 | 267.248 | 75.5 | Pass |
| T19 | 55 - 50 | Leg | BT101341- P6.625x0.280 w/ HP7.625x0.301(45'-55') | 218 | -219.760 | 344.376 | 63.8 | Pass |
| T20 | 50 - 45 | Leg | BT101341- P6.625x0.280 w/ HP7.625x0.301(45'-55') | 227 | -232.743 | 344.376 | 67.6 | Pass |
| T21 | 45 - 40 | Leg | BT101341- P6.625x0.280 w/ HP7.625x0.301 | 236 | -244.131 | 353.331 | 69.1 | Pass |
| T22 | 40 - 33.3333 | Leg | P6.625x.432 | 248 | -259.968 | 367.767 | 70.7 | Pass |
| T23 | 33.3333 - 26.6667 | Leg | P6.625x.432 | 257 | -277.072 | 367.767 | 75.3 | Pass |
| T24 | 26.6667 - 20 | Leg | P6.625x.432 | 266 | -292.298 | 367.767 | 79.5 | Pass |
| T25 | 20 - 13.3333 | Leg | P6.625x.432 | 275 | -306.755 | 367.767 | 83.4 | Pass |
| T26 | 13.3333 - 6.66667 | Leg | P6.625x.432 | 284 | -319.690 | 397.395 | 80.4 | Pass |
| T27 | 6.66667 - 0 | Leg | BT101341- P6.625 x .432 w/ HP7.625x0.301 | 296 | -332.934 | 445.367 | 74.8 | Pass |
| T1 | 130 - 120 | Diagonal | 1/2 | 13 | -1.554 | 2.125 | 73.1 | Pass |
| T2 | 120 - 117.143 | Diagonal | 3/4 | 52 | -2.310 | 8.003 | 28.9 | Pass |
| T3 | 117.143 - 114.286 | Diagonal | 3/4 | 61 | -3.004 | 8.003 | 37.5 | Pass |
| T4 | 114.286 - 111.43 | Diagonal | 3/4 | 70 | -2.836 | 7.941 | 35.7 | Pass |
| T5 | 111.43 - 108.573 | Diagonal | 3/4 | 79 | -3.747 | 7.941 | 47.2 | Pass |
| T6 | 108.573 - 105.716 | Diagonal | 3/4 | 88 | -4.720 | 7.941 | 59.4 | Pass |
| T7 | 105.716 - 102.859 | Diagonal | 3/4 | 97 | -4.677 | 7.941 | 58.9 | Pass |
| T8 | 102.859 - 100 | Diagonal | 3/4 | 109 | -4.936 | 8.001 | 61.7 | Pass |
| T9 | 100 - 96 | Diagonal | L1 1/2x1 1/2x3/16 | 121 | -4.011 | 10.892 | 36.8 | Pass |
| T10 | 96 - 92 | Diagonal | L2x2x1/4 | 130 | -4.670 | 22.096 | 81.9 (b) 21.1 | Pass |
| T11 | 92 - 88 | Diagonal | 2L1 1/2x1 1/2x3/16x3/8 | 139 | 6.873 | 26.763 | 48.1 (b) 25.7 | Pass |
| T12 | 88 - 84 | Diagonal | 2L1 1/2x1 1/2x3/16x3/8 | 151 | 6.529 | 26.763 | 73.3 (b) 24.4 | Pass |
| T13 | 84 - 80 | Diagonal | 2L1 1/2x1 1/2x3/16x3/8 | 163 | -6.001 | 27.654 | 69.6 (b) 21.7 | Pass |
| T14 | 80 - 75 | Diagonal | L2x2x1/4 | 175 | -6.076 | 19.872 | 61.3 (b) 30.6 62.5 (b) | Pass |



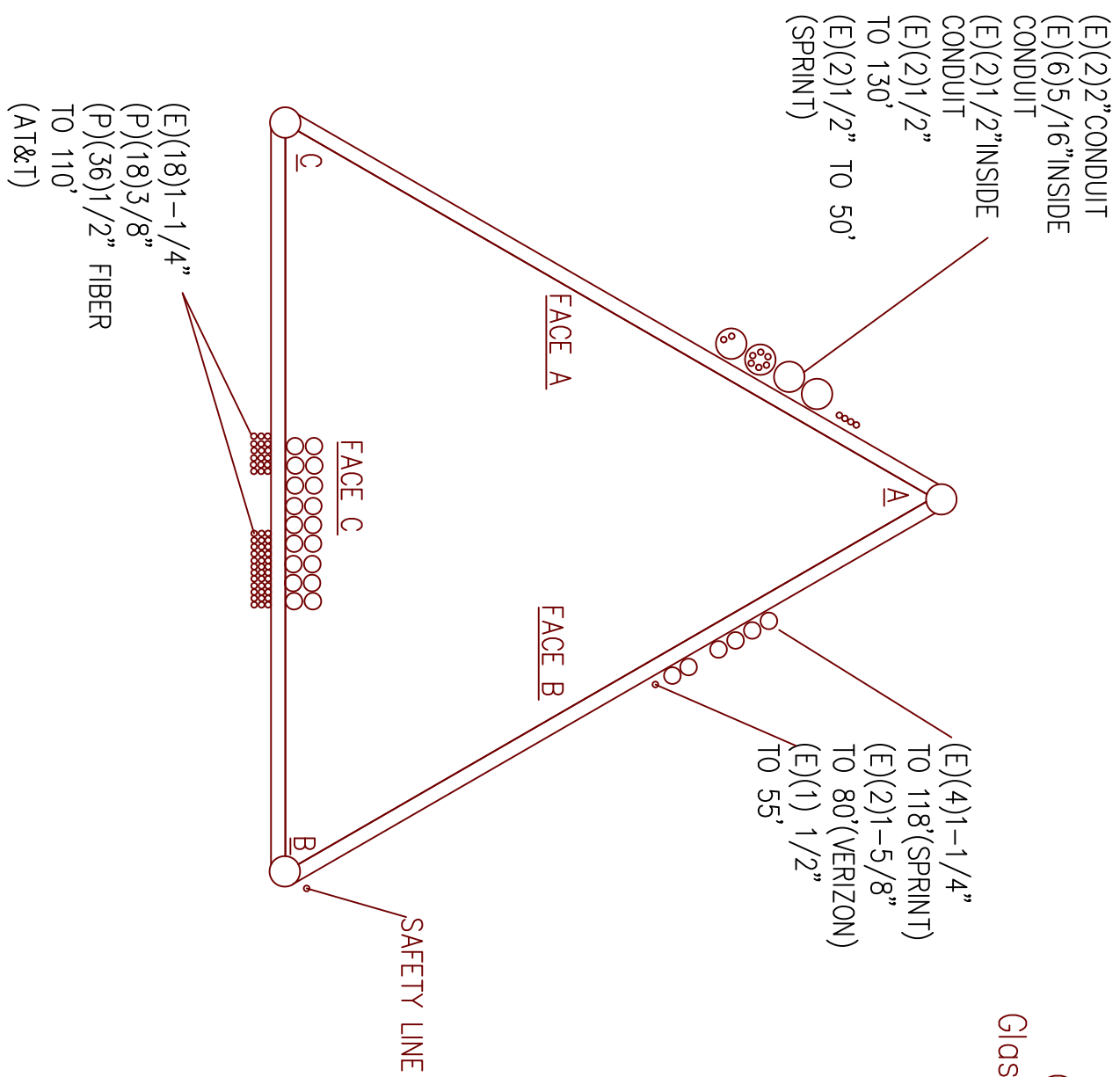
CT46126-A-01 Glastonbury-main St. – 130' SST

| Section No. | Elevation ft | Component Type | Size | Critical Element | P K | SF*P _{allow} K | % Capacity | Pass Fail | |
|-------------|-------------------|----------------------|------------------------|------------------|--------|-------------------------|----------------------------|-------------|-------------|
| T15 | 75 - 70 | Diagonal | 2L1 1/2x1 1/2x3/16x3/8 | 184 | -6.785 | 26.164 | 25.9 | Pass | |
| T16 | 70 - 65 | Diagonal | 2L1 1/2x1 1/2x3/16x3/8 | 193 | -6.053 | 25.691 | 67.2 (b) 23.6 | Pass | |
| T17 | 65 - 60 | Diagonal | 2L1 1/2x1 1/2x3/16x3/8 | 202 | -6.266 | 25.205 | 58.6 (b) 24.9 | Pass | |
| T18 | 60 - 55 | Diagonal | 2L1 1/2x1 1/2x3/16x3/8 | 208 | -7.833 | 24.144 | 61.7 (b) 32.4 | Pass | |
| T19 | 55 - 50 | Diagonal | 2L1 1/2x1 1/2x3/16x3/8 | 220 | -5.083 | 24.196 | 77.3 (b) 21.0 | Pass | |
| T20 | 50 - 45 | Diagonal | 2L1 1/2x1 1/2x3/16x3/8 | 229 | -6.072 | 23.674 | 49.9 (b) 25.6 | Pass | |
| T21 | 45 - 40 | Diagonal | L2x2x1/4 | 238 | -6.737 | 17.253 | 60.0 (b) 39.0 | Pass | |
| T22 | 40 - 33.3333 | Diagonal | 2L1 3/4x1 3/4x3/16x3/8 | 251 | -6.042 | 26.573 | 69.3 (b) 22.7 | Pass | |
| T23 | 33.3333 - 26.6667 | Diagonal | 2L1 3/4x1 3/4x3/16x3/8 | 259 | -6.361 | 25.910 | 48.3 (b) 24.6 | Pass | |
| T24 | 26.6667 - 20 | Diagonal | 2L1 3/4x1 3/4x3/16x3/8 | 268 | -5.971 | 25.232 | 49.1 (b) 23.7 | Pass | |
| T25 | 20 - 13.3333 | Diagonal | L2x2x3/16 | 277 | -6.096 | 9.232 | 45.6 (b) 66.0 | Pass | |
| T26 | 13.3333 - 6.66667 | Diagonal | L2x2x3/16 | 286 | -5.949 | 8.336 | 89.6 (b) 71.4 | Pass | |
| T27 | 6.66667 - 0 | Diagonal | 2L2x2x3/16x3/8 | 298 | -7.676 | 30.610 | 88.9 (b) 25.1 | Pass | |
| T1 | 130 - 120 | Horizontal | L1 1/4x1 1/4x3/16 | 36 | -0.270 | 6.709 | 55.5 (b) 4.0 | Pass | |
| T8 | 102.859 - 100 | Secondary Horizontal | L2x2x1/8 | 112 | -1.143 | 10.739 | 10.6 | Pass | |
| T11 | 92 - 88 | Secondary Horizontal | 4x3/8 | 142 | -2.783 | 16.048 | 17.3 | Pass | |
| T12 | 88 - 84 | Secondary Horizontal | 4x3/8 | 154 | -3.383 | 13.861 | 37.6 (b) 24.4 | Pass | |
| T13 | 84 - 80 | Secondary Horizontal | 4x3/8 | 166 | -2.924 | 12.081 | 46.4 (b) 24.2 | Pass | |
| T18 | 60 - 55 | Secondary Horizontal | L2x2x1/8 | 214 | 3.498 | 13.254 | 39.4 (b) 26.4 | Pass | |
| T21 | 45 - 40 | Secondary Horizontal | L3x3x5/16 | 244 | 4.230 | 51.700 | 84.6 (b) 8.2 | Pass | |
| T26 | 13.3333 - 6.66667 | Secondary Horizontal | L2x2x1/4 | 292 | 5.539 | 24.485 | 53.2 (b) 22.6 | Pass | |
| T1 | 130 - 120 | Top Girt | L1 1/4x1 1/4x3/16 | 6 | -0.064 | 6.709 | 52.8 (b) 0.9 | Pass | |
| T2 | 120 - 117.143 | Top Girt | L1 1/4x1 1/4x3/16 | 47 | 0.077 | 14.048 | 0.6 | Pass | |
| T1 | 130 - 120 | Bottom Girt | L1 1/4x1 1/4x3/16 | 9 | -0.212 | 6.709 | 3.2 | Pass | |
| T8 | 102.859 - 100 | Bottom Girt | L1 1/4x1 1/4x3/16 | 105 | -0.835 | 6.795 | 12.3 | Pass | |
| | | | | | | | Summary | | |
| | | | | | | | Leg (T25) | 83.4 | Pass |
| | | | | | | | Diagonal (T25) | 89.6 | Pass |
| | | | | | | | Horizontal (T1) | 4.0 | Pass |
| | | | | | | | Secondary Horizontal (T18) | 84.6 | Pass |
| | | | | | | | Top Girt (T1) | 0.9 | Pass |
| | | | | | | | Bottom Girt (T8) | 12.3 | Pass |
| | | | | | | | Bolt Checks | 89.6 | Pass |
| | | | | | | | RATING = | 89.6 | Pass |

APPENDIX

COAX LAYOUT

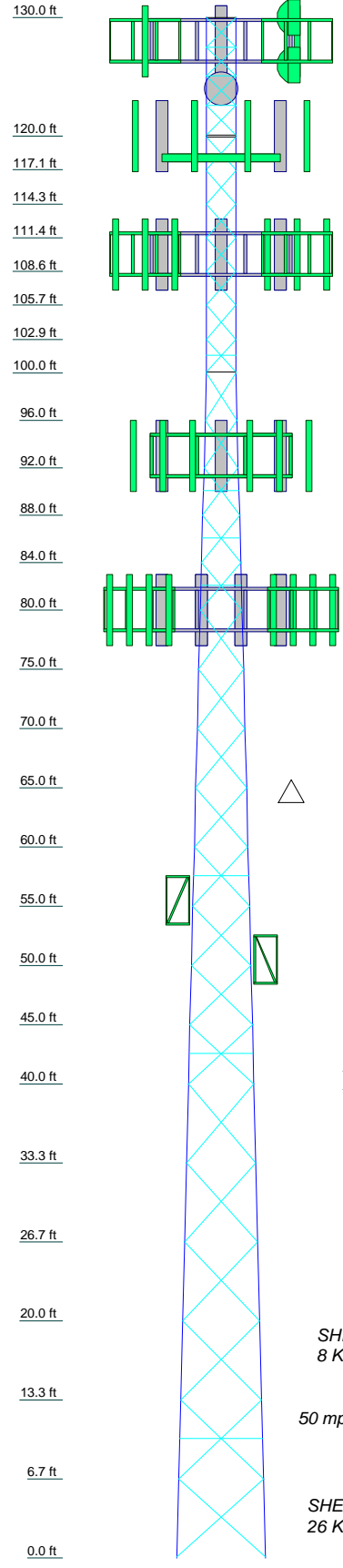
CT46126-A -01/
 Glastonbury-main St.
 130' SST



COAX LAYOUT

TOWER ELEVATION DRAWING

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|-------------------|----|----|----|--------|----|----|----|----|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------------|-----|-----|-----|
| Section | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 | T11 | T12 | T13 | T14 | T15 | T16 | T17 | T18 | T19 | T20 | T21 | T22 | T23 | T24 | T25 | T26 | T27 |
| Legs | SR 1 1/2 | | | | SR 2 | | | | | P4.5 x 0.237 | A | | | | | | | | | | C | | | P6.625x.432 | | | |
| Leg Grade | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Diagonals | | | | | SR 3/4 | | | | | | G | | | | | | | | | | | | | | | | |
| Diagonal Grade | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Top Girts | L1 1/4x1 1/4x3/16 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bottom Girts | L1 1/4x1 1/4x3/16 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Horizontal | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sec. Horizontals | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Face Width (ft) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| # Panels @ (ft) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Weight (K) | | | | | | | | | | | | | | | | | | | | | | | | | | | |



SYMBOL LIST

| MARK | SIZE | MARK | SIZE |
|------|--|------|------------------------|
| A | BT101341- P4.5 x 0.237 w/ HP5.625x0.375 | G | 2L1 1/2x1 1/2x3/16x3/8 |
| B | BT101341- P6.625x0.280 w/ HP7.625x0.301(45'-55') | H | 2L2x2x3/16x3/8 |
| C | BT101341- P6.625x0.280 w/ HP7.625x0.301 | I | L1 1/4x1 1/4x3/16 |
| D | BT101341- P6.625 x .432 w/ HP7.625x0.301 | J | L2x2x1/8 |
| E | L1 1/2x1 1/2x3/16 | K | L3x3x5/16 |
| F | L2x2x1/4 | L | 1 @ 2.77604 |

MATERIAL STRENGTH

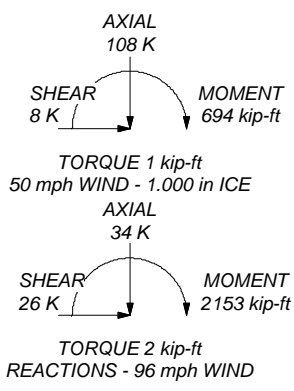
| GRADE | Fy | Fu | GRADE | Fy | Fu |
|---------|--------|--------|----------|--------|--------|
| A570-45 | 45 ksi | 60 ksi | A500M-54 | 54 ksi | 70 ksi |
| A36 | 36 ksi | 58 ksi | | | |

- ### TOWER DESIGN NOTES
1. Tower is located in Hartford County, Connecticut.
 2. Tower designed for Exposure B to the TIA-222-G Standard.
 3. Tower designed for a 96 mph basic wind in accordance with the TIA-222-G Standard.
 4. Tower is also designed for a 50 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
 5. Deflections are based upon a 60 mph wind.
 6. Tower Structure Class II.
 7. Topographic Category 1 with Crest Height of 0'
 8. TOWER RATING: 89.6%

ALL REACTIONS ARE FACTORED

MAX. CORNER REACTIONS AT BASE:
 DOWN: 343 K
 SHEAR: 19 K

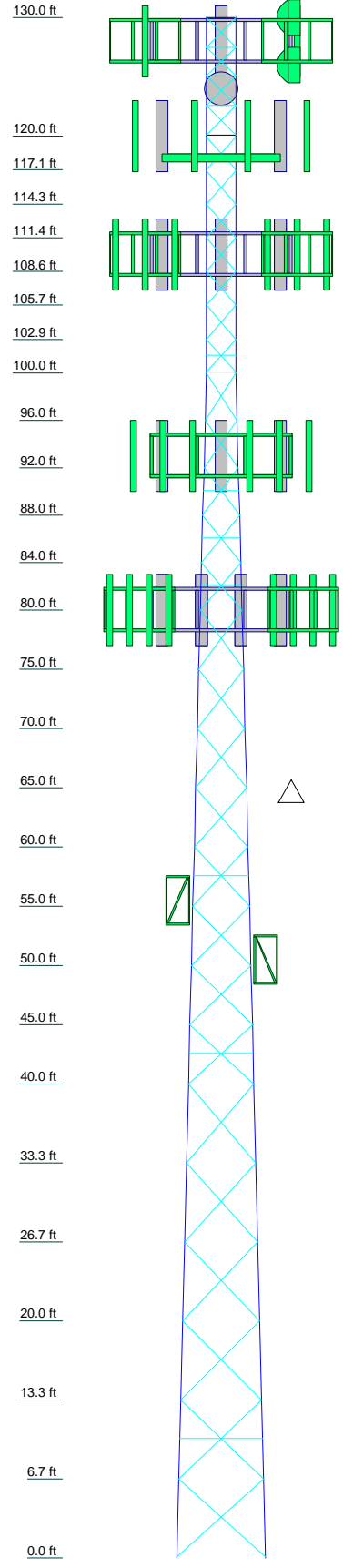
UPLIFT: -319 K
 SHEAR: 18 K



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| | | |
|---|--|--------------------|
| Job: 16-4584 | Project: Glastonbury-main st, CT (CT46126-A-01) | |
| Client: SBA Communications Corporation | Drawn by: bpaudel | App'd: |
| Code: TIA-222-G | Date: 12/08/16 | Scale: NTS |
| Path: | | Dwg No. E-1 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|-------------------|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Section | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 | T11 | T12 | T13 | T14 | T15 | T16 | T17 | T18 | T19 | T20 | T21 | T22 | T23 | T24 | T25 | T26 | T27 |
| Legs | SR 1 1/2 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leg Grade | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Diagonals | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Diagonal Grade | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Top Girts | L1 1/4x1 1/4x3/16 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bottom Girts | L1 1/4x1 1/4x3/16 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Horizontal | L1 1/4x1 1/4x3/16 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sec. Horizontals | N.A. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Face Width (ft) | 2.5 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| # Panels @ (ft) | 4 @ 2.47917 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Weight (K) | 0.3 | | | | | | | | | | | | | | | | | | | | | | | | | | |



DESIGNED APPURTENANCE LOADING

| TYPE | ELEVATION | TYPE | ELEVATION |
|------------------------------------|-----------|--|-----------|
| LLPX310R w/ Mount Pipe (E) | 128 | (4) (P) Kathrein 860-10025 RET | 110 |
| LLPX310R w/ Mount Pipe (E) | 128 | (4) (P) Kathrein 860-10025 RET | 110 |
| 840 10054 w/ Mount Pipe (E) | 128 | (4) (P) Kathrein 860-10025 RET | 110 |
| 24"x14"x9" (E) | 128 | (2) (P) Powerwave LGP21901 | 110 |
| 24"x14"x9" (E) | 128 | (2) (P) Powerwave LGP21901 | 110 |
| 24"x14"x9" (E) | 128 | (2) (P) Powerwave LGP21901 | 110 |
| TIMING 2000 (E) | 128 | (2) LGP13519 (E) | 110 |
| MODEM (E) | 128 | (2) LGP13519 (E) | 110 |
| MODEM (E) | 128 | (2) LGP13519 (E) | 110 |
| MODEM (E) | 128 | AIR 21 B2A/B4P (E) | 93 |
| Sector Mount [SM 803-3] (E) | 128 | AIR 21 B2A/B4P (E) | 93 |
| VHLP2.5 (E) | 128 | AIR 21 B2A/B4P (E) | 93 |
| VHLP2.5 (E) | 128 | AIR 21 B4A/B2P (E) | 93 |
| VHLP2.5 (E) | 128 | AIR 21 B4A/B2P (E) | 93 |
| APXVSP18-C-A20 w/ Mount Pipe (E) | 118.5 | AIR 21 B4A/B2P (E) | 93 |
| APXVSP18-C-A20 w/ Mount Pipe (E) | 118.5 | KRY 112 144/1 TMA (E) | 93 |
| P40-16-XLPP-RR-A w/ Mount Pipe (E) | 118.5 | KRY 112 144/1 TMA (E) | 93 |
| TD-RRH8x20-25 (E) | 118.5 | KRY 112 144/1 TMA (E) | 93 |
| TD-RRH8x20-25 (E) | 118.5 | LNx-6515DS-A1M w/ Mount Pipe (P) | 93 |
| TD-RRH8x20-25 (E) | 118.5 | LNx-6515DS-A1M w/ Mount Pipe (P) | 93 |
| 1900 MHz (E) | 118.5 | LNx-6515DS-A1M w/ Mount Pipe (P) | 93 |
| 1900 MHz (E) | 118.5 | S11B12 (P) | 93 |
| 1900 MHz (E) | 118.5 | S11B12 (P) | 93 |
| 800 MHz (E) | 118.5 | S11B12 (P) | 93 |
| 800 MHz (E) | 118.5 | Sector Mount [SM 402-3] (E-2 Pipes Included) | 93 |
| 800 MHz (E) | 118.5 | Miscellaneous [NA 507-1] (P-MT-195-12) | 93 |
| (2) ACU-A20-N RETs (E) | 118.5 | VSR-TS-B Stabilizer Kit (P) | 93 |
| ACU-A20-N RETs (E) | 118.5 | (2) HBXX-6517DS-A2M w/ Mount Pipe (E) | 80 |
| 800 MHz Filter (E) | 118.5 | (2) HBXX-6517DS-A2M w/ Mount Pipe (E) | 80 |
| 800 MHz Filter (E) | 118.5 | (2) HBXX-6517DS-A2M w/ Mount Pipe (E) | 80 |
| 800 MHz Filter (E) | 118.5 | (2) HBXX-6517DS-A2M w/ Mount Pipe (E) | 80 |
| 6' x 2" Mount Pipe (E) | 118.5 | RRH2x60-700 (E) | 80 |
| 6' x 2" Mount Pipe (E) | 118.5 | RRH2x60-700 (E) | 80 |
| T-Arm Mount [TA 601-3] (E) | 118.5 | RRH2x60-AWS (E) | 80 |
| APXVTM14-C-120 w/ Mount Pipe (E) | 118.5 | RRH2x60-AWS (E) | 80 |
| APXVTM14-C-120 w/ Mount Pipe (E) | 118.5 | RRH2x60-AWS (E) | 80 |
| APXVTM14-C-120 w/ Mount Pipe (E) | 118.5 | RRH2x60-AWS (E) | 80 |
| (2) LGP21401 (E) | 110 | RRH2X60-PCS (E) | 80 |
| (2) LGP21401 (E) | 110 | RRH2X60-PCS (E) | 80 |
| (2) RRUS-11 1900MHz (E) | 110 | RRH2X60-PCS (E) | 80 |
| (2) RRUS-11 1900MHz (E) | 110 | (2) DB-T1-6Z-8AB-0Z (E) | 80 |
| (2) RRUS-11 1900MHz (E) | 110 | Sector Mount [SM 104-3] (E) | 80 |
| DC6-48-60-18-8F (E) | 110 | (2) LNx-6514DS-A1M w/ Mount Pipe (E) | 80 |
| Sector Mount [SM 409-3] (E) | 110 | (2) LNx-6514DS-A1M w/ Mount Pipe (E) | 80 |
| (P) HPA-65R-BUU-H6 | 110 | (2) LNx-6514DS-A1M w/ Mount Pipe (E) | 80 |
| (P) HPA-65R-BUU-H6 | 110 | (2) LNx-6514DS-A1M w/ Mount Pipe (E) | 80 |
| (2) (P) KATH 800-10121 | 110 | GPS-QBW-20N (Reference) | 55.5 |
| (2) (P) KATH 800-10121 | 110 | GPS (E) | 55.5 |
| (2) (P) KATH 800-10121 | 110 | GPS (E) | 55.5 |
| (P) HPA-65R-BUU-H8 | 110 | Side Arm Mount [SO 701-1] (E) | 50.5 |
| (P) RRUS 12 | 110 | Side Arm Mount [SO 701-1] (E) | 50.5 |
| (P) RRUS 12 | 110 | GPS (E) | 50.5 |
| (P) RRUS 12 | 110 | Side Arm Mount [SO 701-1] (E) | 50.5 |
| (P) RRUS A2 | 110 | GPS (E) | 50.5 |
| (P) RRUS A2 | 110 | Side Arm Mount [SO 701-1] (E) | 50.5 |
| (P) RRUS A2 | 110 | | |

SYMBOL LIST

| MARK | SIZE | MARK | SIZE |
|------|--|------|------------------------|
| A | BT101341- P4.5 x 0.237 w/ HP5.625x0.375 | G | 2L1 1/2x1 1/2x3/16x3/8 |
| B | BT101341- P6.625x0.280 w/ HP7.625x0.301(45'-55') | H | 2L2x2x3/16x3/8 |
| | | I | L1 1/4x1 1/4x3/16 |
| C | BT101341- P6.625x0.280 w/ HP7.625x0.301 | J | L2x2x1/8 |
| D | BT101341- P6.625 x .432 w/ HP7.625x0.301 | K | L3x3x5/16 |
| E | L1 1/2x1 1/2x3/16 | L | 1 @ 2.77604 |
| F | L2x2x1/4 | | |

MATERIAL STRENGTH

| GRADE | Fy | Fu | GRADE | Fy | Fu |
|---------|--------|--------|----------|--------|--------|
| A570-45 | 45 ksi | 60 ksi | A500M-54 | 54 ksi | 70 ksi |
| A36 | 36 ksi | 58 ksi | | | |

TOWER DESIGN NOTES

1. Tower is located in Hartford County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-G Standard.
3. Tower designed for a 96 mph basic wind in accordance with the TIA-222-G Standard.

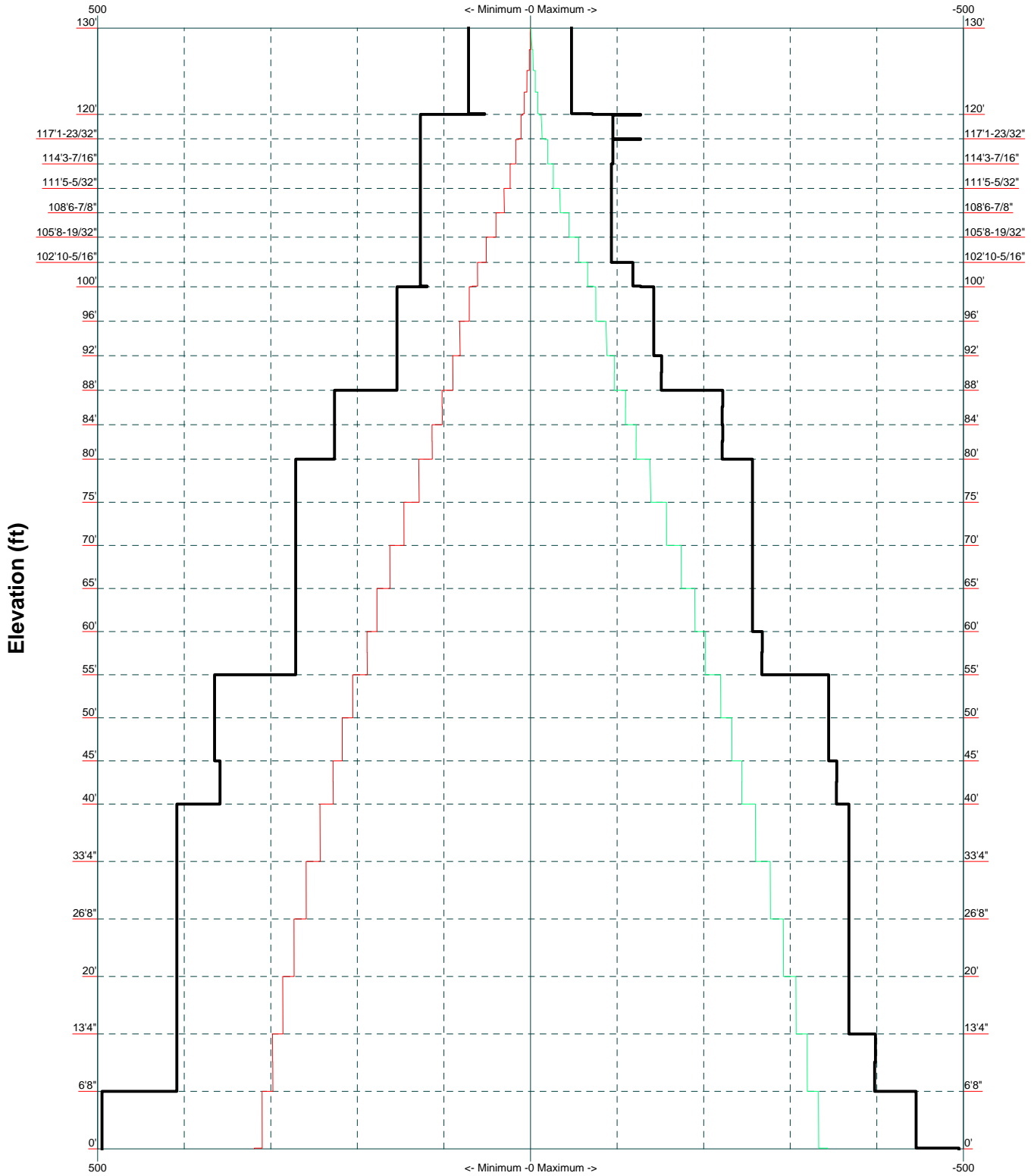
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|---|--|--|--|---|--|
| <p>Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375</p> | | <p>Job: 16-4584 Project: Glastonbury-main st, CT (CT46126-A-01) Client: SBA Communications Corporation Code: TIA-222-G Path:</p> | | <p>Drawn by: bpaudel Date: 12/08/16 Scale: NTS Dwg No. E-1</p> | |
|---|--|--|--|---|--|

MISCELLANEOUS PLOTS

TIA-222-G - 96 mph/50 mph 1.000 in Ice Exposure B

Leg Capacity ———

Leg Compression (K)



| | | | |
|--|--|--|-------------------|
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| Dallas, TX 75243 | | Client: SBA Communications Corporation | Drawn by: bpaudel |
| Phone: 972-231-8893 | | Code: TIA-222-G | Date: 12/08/16 |
| FAX: 866-364-8375 | | Path: | Scale: NTS |
| | | | Dwg No. E-3 |

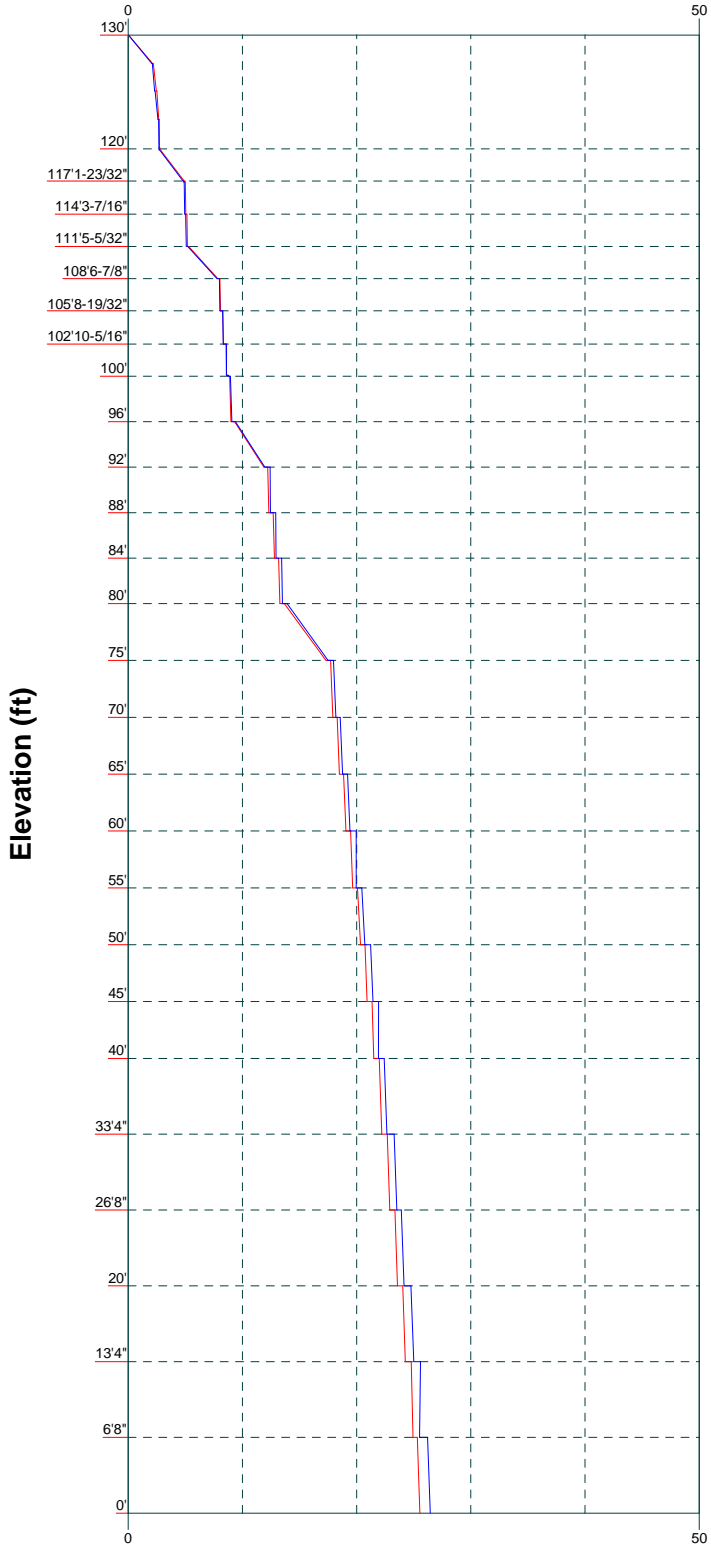
Vx

Vz

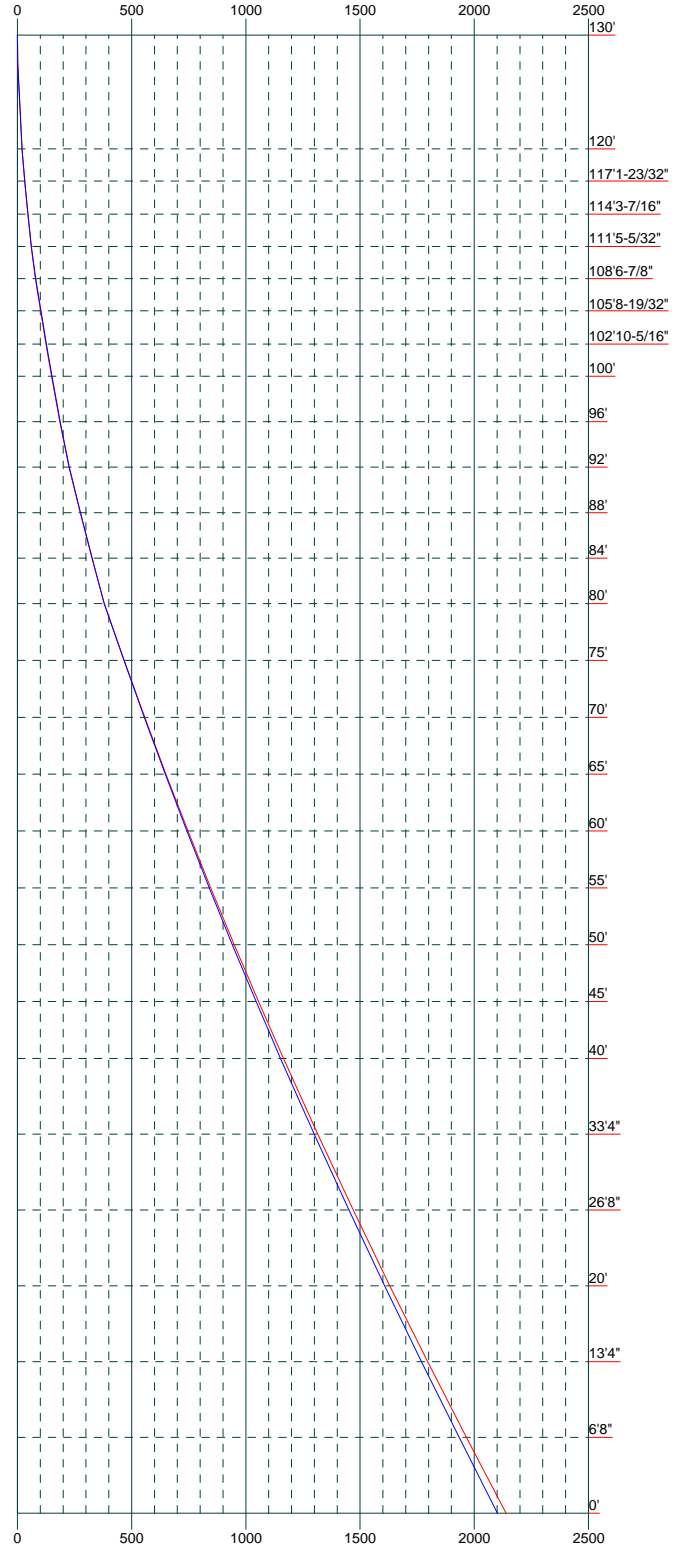
Mx

Mz

Global Mast Shear (K)



Global Mast Moment (kip-ft)



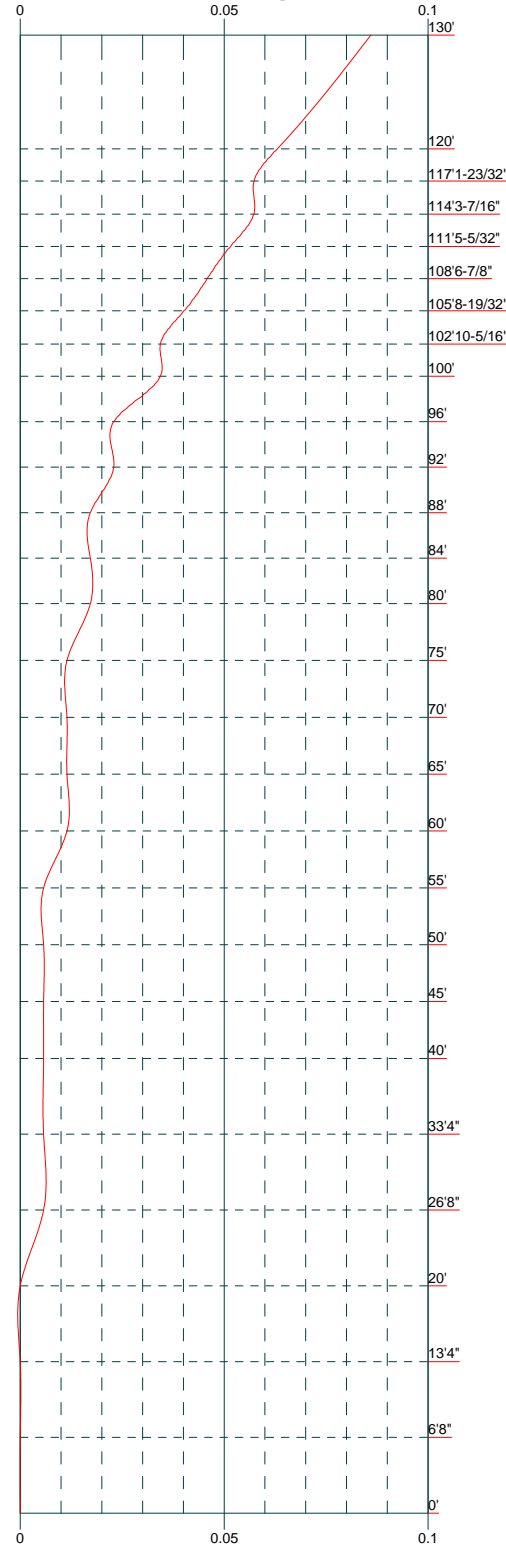
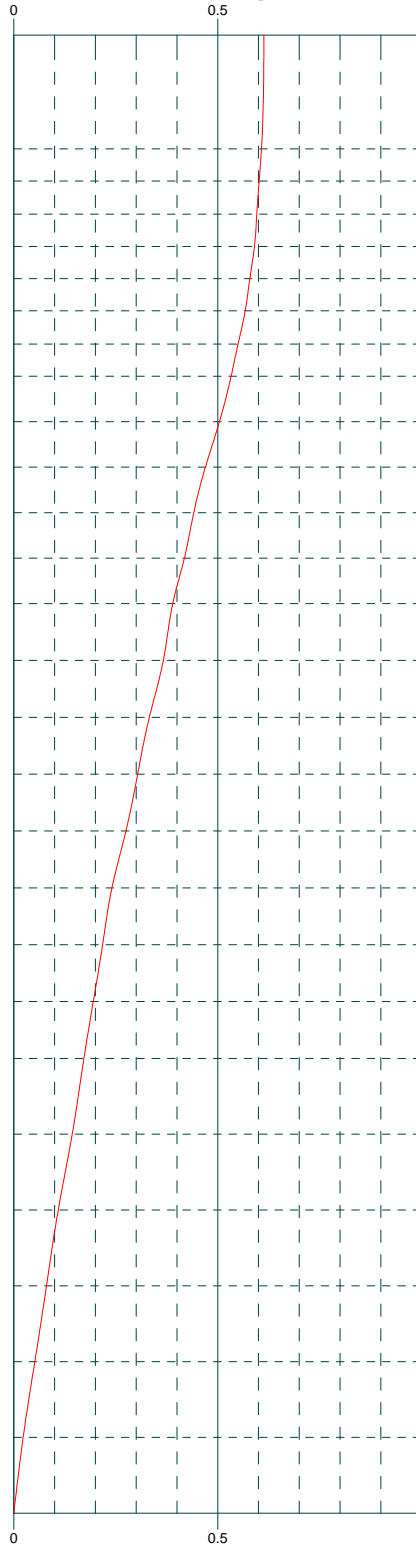
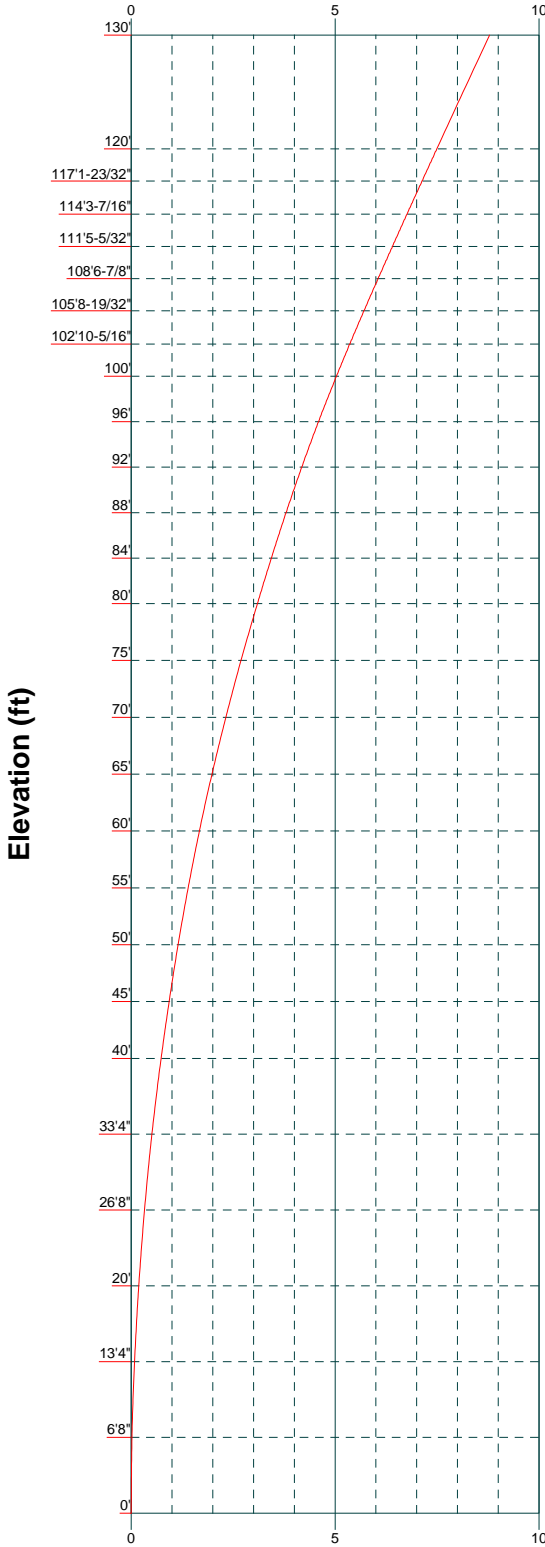
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| | | |
|---|--|-------------------|
| Job: 16-4584 | Project: Glastonbury-main st, CT (CT46126-A-01) | |
| Client: SBA Communications Corporation | Drawn by: bpaudef | App'd: |
| Code: TIA-222-G | Date: 12/08/16 | Scale: NTS |
| Path: | Dwg No. E-4 | |

Deflection (in)

Tilt (deg)

Twist (deg)



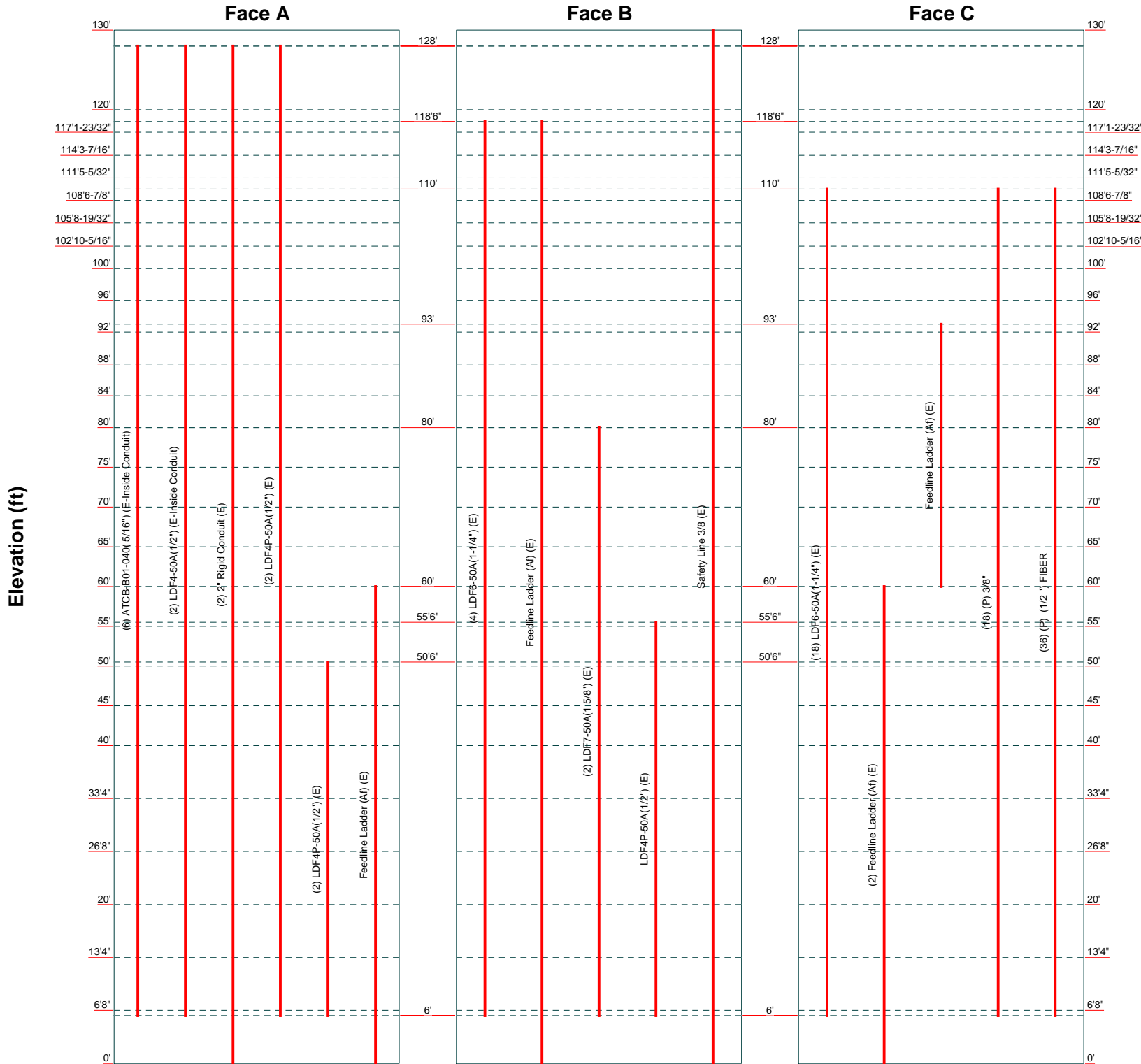
Elevation (ft)

| | | | |
|---|--|--|------------|
| <p>Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375</p> | | Job: 16-4584 | |
| | | Project: Glastonbury-main st, CT (CT46126-A-01) | |
| Client: SBA Communications Corporation | | Drawn by: bpaudel | App'd: |
| Code: TIA-222-G | | Date: 12/08/16 | Scale: NTS |
| Path: | | Dwg No. E-5 | |

Feed Line Distribution Chart

0' - 130'

— Round
 — Flat
 — App In Face
 — App Out Face
 — Truss Leg



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| | |
|--|--------------------------|
| Job: 16-4584 | |
| Project: Glastonbury-main st, CT (CT46126-A-01) | |
| Client: SBA Communications Corporation | Drawn by: bpaudel |
| Code: TIA-222-G | Date: 12/08/16 |
| Path: | Scale: NTS |
| | Dwg No. E-7 |

CALCULATION PRINTOUT

| | | |
|---|--|----------------------------------|
| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job 16-4584 130 SST | Page 1 of 52 |
| | Project Glastonbury-main st, CT (CT46126-A-01) | Date 17:28:31 12/08/16 |
| | Client SBA Communications Corporation | Designed by bpaudel |

Tower Input Data

The main tower is a 3x free standing tower with an overall height of 130' above the ground line.

The base of the tower is set at an elevation of 0' above the ground line.

The face width of the tower is 2'6" at the top and 7'6" at the base.

This tower is designed using the TIA-222-G standard.

The following design criteria apply:

Tower is located in Hartford County, Connecticut.

ASCE 7-10 Wind Data is used (wind speeds converted to nominal values).

Basic wind speed of 96 mph.

Structure Class II.

Exposure Category B.

Topographic Category 1.

Crest Height 0'.

Nominal ice thickness of 1.000 in.

Ice thickness is considered to increase with height.

Ice density of 56.000 pcf.

A wind speed of 50 mph is used in combination with ice.

Temperature drop of 50.000 °F.

Deflections calculated using a wind speed of 60 mph.

A non-linear (P-delta) analysis was used.

Pressures are calculated at each section.

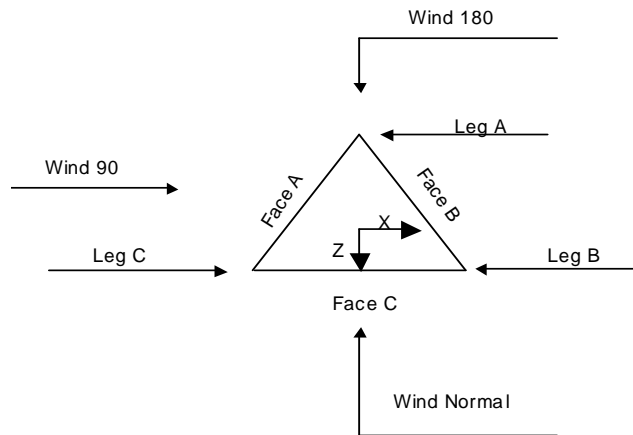
Stress ratio used in tower member design is 1.

Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

| | | |
|--|--|---|
| <ul style="list-style-type: none"> Consider Moments - Legs Consider Moments - Horizontals Consider Moments - Diagonals Use Moment Magnification √ Use Code Stress Ratios √ Use Code Safety Factors - Guys Escalate Ice Always Use Max Kz Use Special Wind Profile √ Include Bolts In Member Capacity Leg Bolts Are At Top Of Section √ Secondary Horizontal Braces Leg Use Diamond Inner Bracing (4 Sided) SR Members Have Cut Ends SR Members Are Concentric | <ul style="list-style-type: none"> Distribute Leg Loads As Uniform Assume Legs Pinned √ Assume Rigid Index Plate √ Use Clear Spans For Wind Area √ Use Clear Spans For KL/r Retension Guys To Initial Tension √ Bypass Mast Stability Checks √ Use Azimuth Dish Coefficients √ Project Wind Area of Appurt. Autocalc Torque Arm Areas Add IBC .6D+W Combination √ Sort Capacity Reports By Component Triangulate Diamond Inner Bracing Treat Feed Line Bundles As Cylinder | <ul style="list-style-type: none"> Use ASCE 10 X-Brace Ly Rules √ Calculate Redundant Bracing Forces Ignore Redundant Members in FEA √ SR Leg Bolts Resist Compression All Leg Panels Have Same Allowable √ Offset Girt At Foundation √ Consider Feed Line Torque √ Include Angle Block Shear Check Use TIA-222-G Bracing Resist. Exemption Use TIA-222-G Tension Splice Exemption <li style="text-align: center;">Poles Include Shear-Torsion Interaction Always Use Sub-Critical Flow Use Top Mounted Sockets |
|--|--|---|

| | | |
|---|--|----------------------------------|
| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job 16-4584 130 SST | Page 2 of 52 |
| | Project Glastonbury-main st, CT (CT46126-A-01) | Date 17:28:31 12/08/16 |
| | Client SBA Communications Corporation | Designed by bpaudel |



Triangular Tower

Tower Section Geometry

| Tower Section | Tower Elevation | Assembly Database | Description | Section Width | Number of Sections | Section Length |
|---------------|---------------------------|-------------------|-------------|---------------|--------------------|----------------|
| | ft | | | ft | | ft |
| T1 | 130'-120' | | | 2'6" | 1 | 10' |
| T2 | 120'-117'1-23/32" | | | 2'6" | 1 | 2'10-9/32" |
| T3 | 117'1-23/32"-114'3-7/16" | | | 2'6" | 1 | 2'10-9/32" |
| T4 | 114'3-7/16"-111'5-5/32" | | | 2'6" | 1 | 2'10-9/32" |
| T5 | 111'5-5/32"-108'6-7/8" | | | 2'6" | 1 | 2'10-9/32" |
| T6 | 108'6-7/8"-105'8-19/32" | | | 2'6" | 1 | 2'10-9/32" |
| T7 | 105'8-19/32"-102'10-5/16" | | | 2'6" | 1 | 2'10-9/32" |
| T8 | 102'10-5/16"-100'96" | | | 2'6" | 1 | 2'10-5/16" |
| T9 | 100'-96" | | | 2'6" | 1 | 4' |
| T10 | 96'-92" | | | 2'8-13/32" | 1 | 4' |
| T11 | 92'-88" | | | 2'10-13/16" | 1 | 4' |
| T12 | 88'-84" | | | 3'1-3/16" | 1 | 4' |
| T13 | 84'-80" | | | 3'3-19/32" | 1 | 4' |
| T14 | 80'-75" | | | 3'6" | 1 | 5' |
| T15 | 75'-70" | | | 3'9" | 1 | 5' |
| T16 | 70'-65" | | | 4' | 1 | 5' |
| T17 | 65'-60" | | | 4'3" | 1 | 5' |
| T18 | 60'-55" | | | 4'6" | 1 | 5' |
| T19 | 55'-50" | | | 4'9" | 1 | 5' |
| T20 | 50'-45" | | | 5' | 1 | 5' |
| T21 | 45'-40" | | | 5'3" | 1 | 5' |

| | | | | |
|---|----------------|--|--------------------|-------------------|
| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job | 16-4584 130 SST | Page | 3 of 52 |
| | Project | Glastonbury-main st, CT (CT46126-A-01) | Date | 17:28:31 12/08/16 |
| | Client | SBA Communications Corporation | Designed by | bpaudel |

| Tower Section | Tower Elevation | Assembly Database | Description | Section Width | Number of Sections | Section Length |
|---------------|-----------------|-------------------|-------------|---------------|--------------------|----------------|
| | ft | | | ft | | ft |
| T22 | 40'-33'4" | | | 5'6" | 1 | 6'8" |
| T23 | 33'4"-26'8" | | | 5'10" | 1 | 6'8" |
| T24 | 26'8"-20' | | | 6'2" | 1 | 6'8" |
| T25 | 20'-13'4" | | | 6'6" | 1 | 6'8" |
| T26 | 13'4"-6'8" | | | 6'10" | 1 | 6'8" |
| T27 | 6'8"-0' | | | 7'2" | 1 | 6'8" |

Tower Section Geometry (cont'd)

| Tower Section | Tower Elevation | Diagonal Spacing | Bracing Type | Has K Brace End Panels | Has Horizontals | Top Girt Offset | Bottom Girt Offset |
|---------------|---------------------------|------------------|--------------|------------------------|-----------------|-----------------|--------------------|
| | ft | ft | | | | in | in |
| T1 | 130'-120' | 2'5-3/4" | X Brace | No | Yes | 0.000 | 1.000 |
| T2 | 120'-117'1-23/32" | 2'9-9/32" | X Brace | No | Yes | 1.000 | 0.000 |
| T3 | 117'1-23/32"-114'3-7/16" | 2'9-9/32" | X Brace | No | Yes | 1.000 | 0.000 |
| T4 | 114'3-7/16"-111'5-5/32" | 2'10-9/32" | X Brace | No | Yes | 0.000 | 0.000 |
| T5 | 111'5-5/32"-108'6-7/8" | 2'10-9/32" | X Brace | No | Yes | 0.000 | 0.000 |
| T6 | 108'6-7/8"-105'8-19/32" | 2'10-9/32" | X Brace | No | Yes | 0.000 | 0.000 |
| T7 | 105'8-19/32"-102'10-5/16" | 2'10-9/32" | X Brace | No | Yes | 0.000 | 0.000 |
| T8 | 102'10-5/16"-100' | 2'9-5/16" | X Brace | No | Yes | 0.000 | 1.000 |
| T9 | 100'-96' | 4' | X Brace | No | Yes | 0.000 | 0.000 |
| T10 | 96'-92' | 4' | X Brace | No | Yes | 0.000 | 0.000 |
| T11 | 92'-88' | 4' | X Brace | No | Yes | 0.000 | 0.000 |
| T12 | 88'-84' | 4' | X Brace | No | Yes | 0.000 | 0.000 |
| T13 | 84'-80' | 4' | X Brace | No | Yes | 0.000 | 0.000 |
| T14 | 80'-75' | 5' | X Brace | No | Yes | 0.000 | 0.000 |
| T15 | 75'-70' | 5' | X Brace | No | Yes | 0.000 | 0.000 |
| T16 | 70'-65' | 5' | X Brace | No | Yes | 0.000 | 0.000 |
| T17 | 65'-60' | 5' | X Brace | No | Yes | 0.000 | 0.000 |
| T18 | 60'-55' | 5' | X Brace | No | Yes | 0.000 | 0.000 |
| T19 | 55'-50' | 5' | X Brace | No | Yes | 0.000 | 0.000 |
| T20 | 50'-45' | 5' | X Brace | No | Yes | 0.000 | 0.000 |
| T21 | 45'-40' | 5' | X Brace | No | Yes | 0.000 | 0.000 |
| T22 | 40'-33'4" | 6'8" | X Brace | No | Yes | 0.000 | 0.000 |
| T23 | 33'4"-26'8" | 6'8" | X Brace | No | Yes | 0.000 | 0.000 |
| T24 | 26'8"-20' | 6'8" | X Brace | No | Yes | 0.000 | 0.000 |
| T25 | 20'-13'4" | 6'8" | X Brace | No | Yes | 0.000 | 0.000 |
| T26 | 13'4"-6'8" | 6'8" | X Brace | No | Yes | 0.000 | 0.000 |
| T27 | 6'8"-0' | 6'7" | X Brace | No | Yes | 0.000 | 1.000 |

Tower Section Geometry (cont'd)

| Tower Elevation | Leg Type | Leg Size | Leg Grade | Diagonal Type | Diagonal Size | Diagonal Grade |
|-----------------|-------------|----------|-----------|---------------|---------------|----------------|
| ft | | | | | | |
| T1 130'-120' | Solid Round | 1 1/2 | A570-45 | Solid Round | 1/2 | A36 |

| | | | |
|----------------|--|--------------------|-------------------|
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| Project | Glastonbury-main st, CT (CT46126-A-01) | Date | 17:28:31 12/08/16 |
| Client | SBA Communications Corporation | Designed by | bpaudel |

| Tower Elevation ft | Leg Type | Leg Size | Leg Grade | Diagonal Type | Diagonal Size | Diagonal Grade |
|-------------------------------------|-------------|---|----------------------|-----------------------|------------------------|-------------------|
| T2 120'-117'-23/32" | Solid Round | 2 | (45 ksi) A570-45 | Solid Round | 3/4 | (36 ksi) A36 |
| T3 117'-23/32"-114' 3-7/16" | Solid Round | 2 | (45 ksi) A570-45 | Solid Round | 3/4 | (36 ksi) A36 |
| T4 114'-3-7/16"-111'5 -5/32" | Solid Round | 2 | (45 ksi) A570-45 | Solid Round | 3/4 | (36 ksi) A36 |
| T5 111'5-5/32"-108'6 -7/8" | Solid Round | 2 | (45 ksi) A570-45 | Solid Round | 3/4 | (36 ksi) A36 |
| T6 108'6-7/8"-105'8- 19/32" | Solid Round | 2 | (45 ksi) A570-45 | Solid Round | 3/4 | (36 ksi) A36 |
| T7 105'8-19/32"-102' 10-5/16" | Solid Round | 2 | (45 ksi) A570-45 | Solid Round | 3/4 | (36 ksi) A36 |
| T8 102'10-5/16"-100' | Solid Round | 2 | (45 ksi) A570-45 | Solid Round | 3/4 | (36 ksi) A36 |
| T9 100'-96' | Pipe | P4.5 x 0.237 | A500M-54 (54 ksi) | Equal Angle | L1 1/2x1 1/2x3/16 | (36 ksi) A36 |
| T10 96'-92' | Pipe | P4.5 x 0.237 | A500M-54 (54 ksi) | Equal Angle | L2x2x1/4 | (36 ksi) A36 |
| T11 92'-88' | Pipe | P4.5 x 0.237 | A500M-54 (54 ksi) | Double Equal Angle | 2L1 1/2x1 1/2x3/16x3/8 | (36 ksi) A36 |
| T12 88'-84' | Pipe | BT101341- P4.5 x 0.237 w/ HP5.625x0.375 | A500M-54 (54 ksi) | Double Equal Angle | 2L1 1/2x1 1/2x3/16x3/8 | (36 ksi) A36 |
| T13 84'-80' | Pipe | BT101341- P4.5 x 0.237 w/ HP5.625x0.375 | A500M-54 (54 ksi) | Double Equal Angle | 2L1 1/2x1 1/2x3/16x3/8 | (36 ksi) A36 |
| T14 80'-75' | Pipe | P6.625x0.280 | A500M-54 (54 ksi) | Equal Angle | L2x2x1/4 | (36 ksi) A36 |
| T15 75'-70' | Pipe | P6.625x0.280 | A500M-54 (54 ksi) | Double Equal Angle | 2L1 1/2x1 1/2x3/16x3/8 | (36 ksi) A36 |
| T16 70'-65' | Pipe | P6.625x0.280 | A500M-54 (54 ksi) | Double Equal Angle | 2L1 1/2x1 1/2x3/16x3/8 | (36 ksi) A36 |
| T17 65'-60' | Pipe | P6.625x0.280 | A500M-54 (54 ksi) | Double Equal Angle | 2L1 1/2x1 1/2x3/16x3/8 | (36 ksi) A36 |
| T18 60'-55' | Pipe | P6.625x0.280 | A500M-54 (54 ksi) | Double Equal Angle | 2L1 1/2x1 1/2x3/16x3/8 | (36 ksi) A36 |
| T19 55'-50' | Pipe | BT101341- P6.625x0.280 w/ HP7.625x0.301(45'-55') | A500M-54 (54 ksi) | Double Equal Angle | 2L1 1/2x1 1/2x3/16x3/8 | (36 ksi) A36 |
| T20 50'-45' | Pipe | BT101341- P6.625x0.280 w/ HP7.625x0.301(45'-55') | A500M-54 (54 ksi) | Double Equal Angle | 2L1 1/2x1 1/2x3/16x3/8 | (36 ksi) A36 |
| T21 45'-40' | Pipe | BT101341- P6.625x0.280 w/ HP7.625x0.301 | A500M-54 (54 ksi) | Equal Angle | L2x2x1/4 | (36 ksi) A36 |
| T22 40'-33'4" | Pipe | P6.625x.432 | A500M-54 (54 ksi) | Double Equal Angle | 2L1 3/4x1 3/4x3/16x3/8 | (36 ksi) A36 |
| T23 33'4"-26'8" | Pipe | P6.625x.432 | A500M-54 (54 ksi) | Double Equal Angle | 2L1 3/4x1 3/4x3/16x3/8 | (36 ksi) A36 |
| T24 26'8"-20' | Pipe | P6.625x.432 | A500M-54 (54 ksi) | Double Equal Angle | 2L1 3/4x1 3/4x3/16x3/8 | (36 ksi) A36 |
| T25 20'-13'4" | Pipe | P6.625x.432 | A500M-54 (54 ksi) | Equal Angle | L2x2x3/16 | (36 ksi) A36 |
| T26 13'4"-6'8" | Pipe | P6.625x.432 | A500M-54 (54 ksi) | Equal Angle | L2x2x3/16 | (36 ksi) A36 |
| T27 6'8"-0' | Pipe | BT101341- P6.625 x .432 w/ HP7.625x0.301 | A500M-54 (54 ksi) | Double Equal Angle | 2L2x2x3/16x3/8 | (36 ksi) A36 |

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|---|--|----------------------------------|
| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job 16-4584 130 SST | Page 5 of 52 |
| | Project Glastonbury-main st, CT (CT46126-A-01) | Date 17:28:31 12/08/16 |
| | Client SBA Communications Corporation | Designed by bpaudel |

Tower Section Geometry (cont'd)

| Tower Elevation ft | Top Girt Type | Top Girt Size | Top Girt Grade | Bottom Girt Type | Bottom Girt Size | Bottom Girt Grade |
|--------------------------|---------------|-------------------|-----------------|------------------|-------------------|-------------------|
| T1 130'-120' | Equal Angle | L1 1/4x1 1/4x3/16 | A36 (36 ksi) | Equal Angle | L1 1/4x1 1/4x3/16 | A36 (36 ksi) |
| T2 120'-117'-23/32" | Equal Angle | L1 1/4x1 1/4x3/16 | A36 (36 ksi) | Equal Angle | | A36 (36 ksi) |
| T8 102'10'-5/16"-100' | Solid Round | | A36 (36 ksi) | Equal Angle | L1 1/4x1 1/4x3/16 | A36 (36 ksi) |

Tower Section Geometry (cont'd)

| Tower Elevation ft | No. of Mid Girts | Mid Girt Type | Mid Girt Size | Mid Girt Grade | Horizontal Type | Horizontal Size | Horizontal Grade |
|-----------------------|------------------|---------------|---------------|-----------------|-----------------|-------------------|------------------|
| T1 130'-120' | None | Flat Bar | | A36 (36 ksi) | Equal Angle | L1 1/4x1 1/4x3/16 | A36 (36 ksi) |

Tower Section Geometry (cont'd)

| Tower Elevation ft | Secondary Horizontal Type | Secondary Horizontal Size | Secondary Horizontal Grade | Inner Bracing Type | Inner Bracing Size | Inner Bracing Grade |
|--------------------------|---------------------------|---------------------------|----------------------------|--------------------|--------------------|---------------------|
| T8 102'10'-5/16"-100' | Equal Angle | L2x2x1/8 | A36 (36 ksi) | Solid Round | | A572-50 (50 ksi) |
| T11 92'-88' | Flat Bar | 4x3/8 | A36 (36 ksi) | Solid Round | | A572-50 (50 ksi) |
| T12 88'-84' | Flat Bar | 4x3/8 | A36 (36 ksi) | Solid Round | | A572-50 (50 ksi) |
| T13 84'-80' | Flat Bar | 4x3/8 | A36 (36 ksi) | Solid Round | | A572-50 (50 ksi) |
| T18 60'-55' | Equal Angle | L2x2x1/8 | A36 (36 ksi) | Solid Round | | A572-50 (50 ksi) |
| T21 45'-40' | Equal Angle | L3x3x5/16 | A36 (36 ksi) | Solid Round | | A572-50 (50 ksi) |
| T26 13'4"-6'8" | Equal Angle | L2x2x1/4 | A36 (36 ksi) | Solid Round | | A572-50 (50 ksi) |

Tower Section Geometry (cont'd)

tnxTower

Allpro Consulting Group, Inc.
 9221 Lyndon B. Johnson Fwy, Suite #204
 Dallas, TX 75243
 Phone: 972-231-8893
 FAX: 866-364-8375

| | | | |
|----------------|--|--------------------|-------------------|
| Job | 16-4584 130 SST | Page | 6 of 52 |
| Project | Glastonbury-main st, CT (CT46126-A-01) | Date | 17:28:31 12/08/16 |
| Client | SBA Communications Corporation | Designed by | bpaudel |

| Tower Elevation | Gusset Area (per face) | Gusset Thickness | Gusset Grade | Adjust. Factor A_f | Adjust. Factor A_r | Weight Mult. | Double Angle Stitch Bolt Spacing Diagonals in | Double Angle Stitch Bolt Spacing Horizontals in | Double Angle Stitch Bolt Spacing Redundants in |
|--------------------------------|------------------------|------------------|-----------------|----------------------|----------------------|--------------|---|---|--|
| ft | ft ² | in | | | | | | | |
| T1 130'-120' | 0.000 | 0.000 | A36 (36 ksi) | 1 | 1 | 1.05 | 0.000 | 0.000 | 36.000 |
| T2 120'-117'-23/32" | 0.000 | 0.000 | A36 (36 ksi) | 1 | 1 | 1.05 | 0.000 | 0.000 | 36.000 |
| T3 117'-23/32"-14'-3-7/16" | 0.000 | 0.000 | A36 (36 ksi) | 1 | 1 | 1.05 | 0.000 | 0.000 | 36.000 |
| T4 114'-3-7/16"-11'-5-5/32" | 0.000 | 0.000 | A36 (36 ksi) | 1 | 1 | 1.05 | 0.000 | 0.000 | 36.000 |
| T5 111'-5-5/32"-10'-8'-7/8" | 0.000 | 0.000 | A36 (36 ksi) | 1 | 1 | 1.05 | 0.000 | 0.000 | 36.000 |
| T6 108'-6-7/8"-105'-8-19/32" | 0.000 | 0.000 | A36 (36 ksi) | 1 | 1 | 1.05 | 0.000 | 0.000 | 36.000 |
| T7 105'-8-19/32"-102'-10-5/16" | 0.000 | 0.000 | A36 (36 ksi) | 1 | 1 | 1.05 | 0.000 | 0.000 | 36.000 |
| T8 102'-10-5/16"-100' | 0.000 | 0.000 | A36 (36 ksi) | 1.05 | 1 | 1.05 | 0.000 | 0.000 | 36.000 |
| T9 100'-96' | 0.000 | 0.000 | A36 (36 ksi) | 1.05 | 1 | 1.05 | 0.000 | 0.000 | 36.000 |
| T10 96'-92' | 0.000 | 0.000 | A36 (36 ksi) | 1.05 | 1 | 1.05 | 0.000 | 0.000 | 36.000 |
| T11 92'-88' | 0.000 | 0.000 | A36 (36 ksi) | 1.05 | 1 | 1.05 | 0.000 | 0.000 | 36.000 |
| T12 88'-84' | 0.000 | 0.000 | A36 (36 ksi) | 1.05 | 1 | 1.05 | 0.000 | 0.000 | 36.000 |
| T13 84'-80' | 0.000 | 0.000 | A36 (36 ksi) | 1.05 | 1 | 1.05 | 0.000 | 0.000 | 36.000 |
| T14 80'-75' | 0.000 | 0.000 | A36 (36 ksi) | 1.05 | 1 | 1.05 | 0.000 | 0.000 | 36.000 |
| T15 75'-70' | 0.000 | 0.000 | A36 (36 ksi) | 1.05 | 1 | 1.05 | 0.000 | 0.000 | 36.000 |
| T16 70'-65' | 0.000 | 0.000 | A36 (36 ksi) | 1.05 | 1 | 1.05 | 0.000 | 0.000 | 36.000 |
| T17 65'-60' | 0.000 | 0.000 | A36 (36 ksi) | 1.05 | 1 | 1.05 | 0.000 | 0.000 | 36.000 |
| T18 60'-55' | 0.000 | 0.000 | A36 (36 ksi) | 1.05 | 1 | 1.05 | 0.000 | 0.000 | 36.000 |
| T19 55'-50' | 0.000 | 0.000 | A36 (36 ksi) | 1.05 | 1 | 1.05 | 0.000 | 0.000 | 36.000 |
| T20 50'-45' | 0.000 | 0.000 | A36 (36 ksi) | 1.05 | 1 | 1.05 | 0.000 | 0.000 | 36.000 |
| T21 45'-40' | 0.000 | 0.000 | A36 (36 ksi) | 1.05 | 1 | 1.05 | 0.000 | 0.000 | 36.000 |
| T22 40'-33'4" | 0.000 | 0.000 | A36 (36 ksi) | 1.05 | 1 | 1.05 | 0.000 | 0.000 | 36.000 |
| T23 33'4"-26'8" | 0.000 | 0.000 | A36 (36 ksi) | 1.05 | 1 | 1.05 | 0.000 | 0.000 | 36.000 |
| T24 26'8"-20' | 0.000 | 0.000 | A36 (36 ksi) | 1.05 | 1 | 1.05 | 0.000 | 0.000 | 36.000 |
| T25 20'-13'4" | 0.000 | 0.000 | A36 (36 ksi) | 1.05 | 1 | 1.05 | 0.000 | 0.000 | 36.000 |
| T26 13'4"-6'8" | 0.000 | 0.000 | A36 (36 ksi) | 1.05 | 1 | 1.05 | 0.000 | 0.000 | 36.000 |

| | | | |
|----------------|--|--------------------|-------------------|
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| Project | Glastonbury-main st, CT (CT46126-A-01) | Date | 17:28:31 12/08/16 |
| Client | SBA Communications Corporation | Designed by | bpaudel |

| Tower Elevation | Gusset Area (per face) | Gusset Thickness | Gusset Grade | Adjust. Factor A_f | Adjust. Factor A_r | Weight Mult. | Double Angle Stitch Bolt Spacing Diagonals in | Double Angle Stitch Bolt Spacing Horizontals in | Double Angle Stitch Bolt Spacing Redundants in |
|-----------------|------------------------|------------------|-----------------|----------------------|----------------------|--------------|---|---|--|
| ft | ft ² | in | | | | | | | |
| T27 6'8"-0' | 0.000 | 0.000 | A36 (36 ksi) | 1.05 | 1 | 1.05 | 0.000 | 0.000 | 36.000 |

Tower Section Geometry (cont'd)

| Tower Elevation | Calc K Single Angles | Calc K Solid Rounds | Legs | K Factors ¹ | | | | | | | |
|-----------------------------|----------------------|---------------------|------|------------------------|---------------|--------------|--------|--------|-------------|-------------|---|
| | | | | X Brace Diags | K Brace Diags | Single Diags | Girts | Horiz. | Sec. Horiz. | Inner Brace | |
| | | | | X Y | X Y | X Y | X Y | X Y | X Y | X Y | |
| T1 130'-120' | Yes | Yes | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| T2 | Yes | Yes | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 120'-117'-23/32" | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| T3 | Yes | Yes | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 117'-23/32"-114'-3-7/16" | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| T4 | Yes | Yes | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 114'-3-7/16"-111'-5-5/32" | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| T5 | Yes | Yes | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 111'-5-5/32"-108'-6-7/8" | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| T6 | Yes | Yes | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 108'-6-7/8"-105'-8-19/32" | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| T7 | Yes | Yes | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 105'-8-19/32"-102'-10-5/16" | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| T8 | Yes | Yes | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 102'-10-5/16"-100' | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| T9 100'-96' | Yes | No | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| T10 96'-92' | Yes | No | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| T11 92'-88' | No | No | 1 | 1 | 1 | 1 | 1 | 1 | 0.5 | 1 | 1 |
| T12 88'-84' | No | No | 1 | 1 | 1 | 1 | 1 | 1 | 0.5 | 1 | 1 |
| T13 84'-80' | No | No | 1 | 1 | 1 | 1 | 1 | 1 | 0.5 | 1 | 1 |
| T14 80'-75' | Yes | No | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| T15 75'-70' | Yes | No | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| T16 70'-65' | Yes | No | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| T17 65'-60' | Yes | No | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| T18 60'-55' | No | No | 1 | 1 | 1 | 1 | 1 | 1 | 0.5 | 1 | 1 |
| T19 55'-50' | Yes | No | 1 | 1 | 1 | 1 | 1 | 1 | 0.5 | 1 | 1 |

| | | | |
|----------------|--|--------------------|-------------------|
| Job | 16-4584 130 SST | Page | 9 of 52 |
| Project | Glastonbury-main st, CT (CT46126-A-01) | Date | 17:28:31 12/08/16 |
| Client | SBA Communications Corporation | Designed by | bpaudel |

| Tower Elevation ft | Leg | | Diagonal | | Top Girt | | Bottom Girt | | Mid Girt | | Long Horizontal | | Short Horizontal | |
|--------------------|---------------------|---|---------------------|------|---------------------|------|---------------------|------|---------------------|------|---------------------|------|---------------------|------|
| | Net Width Deduct in | U | Net Width Deduct in | U | Net Width Deduct in | U | Net Width Deduct in | U | Net Width Deduct in | U | Net Width Deduct in | U | Net Width Deduct in | U |
| T12 88'-84' | 0.000 | 1 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 |
| T13 84'-80' | 0.000 | 1 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 |
| T14 80'-75' | 0.000 | 1 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 |
| T15 75'-70' | 0.000 | 1 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 |
| T16 70'-65' | 0.000 | 1 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 |
| T17 65'-60' | 0.000 | 1 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 |
| T18 60'-55' | 0.000 | 1 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 |
| T19 55'-50' | 0.000 | 1 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 |
| T20 50'-45' | 0.000 | 1 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 |
| T21 45'-40' | 0.000 | 1 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 |
| T22 40'-33'4" | 0.000 | 1 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 |
| T23 33'4"-26'8" | 0.000 | 1 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 |
| T24 26'8"-20' | 0.000 | 1 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 |
| T25 20'-13'4" | 0.000 | 1 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 |
| T26 13'4"-6'8" | 0.000 | 1 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 |
| T27 6'8"-0' | 0.000 | 1 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 | 0.000 | 0.75 |

Tower Section Geometry (cont'd)

| Tower Elevation ft | Leg Connection Type | Leg | | Diagonal | | Top Girt | | Bottom Girt | | Mid Girt | | Long Horizontal | | Short Horizontal | |
|--------------------------------|---------------------|--------------|-----|--------------|-----|--------------|-----|--------------|-----|--------------|-----|-----------------|-----|------------------|-----|
| | | Bolt Size in | No. | Bolt Size in | No. | Bolt Size in | No. | Bolt Size in | No. | Bolt Size in | No. | Bolt Size in | No. | Bolt Size in | No. |
| T1 130'-120' | Flange | 1.000 | 1 | 0.500 | 0 | 0.625 | 0 | 0.625 | 0 | 0.625 | 0 | 0.625 | 0 | 0.500 | 0 |
| | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | |
| T2 120'-117'1"-23/32" | Flange | 0.750 | 0 | 0.500 | 0 | 0.625 | 0 | 0.000 | 0 | 0.625 | 0 | 0.625 | 0 | 0.500 | 0 |
| | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | |
| T3 117'1"-23/32"-14'3"-7/16" | Flange | 0.750 | 0 | 0.500 | 0 | 0.625 | 0 | 0.000 | 0 | 0.625 | 0 | 0.625 | 0 | 0.500 | 0 |
| | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | |
| T4 114'3"-7/16"-11'5"-5/32" | Flange | 0.750 | 0 | 0.500 | 0 | 0.625 | 0 | 0.000 | 0 | 0.625 | 0 | 0.625 | 0 | 0.500 | 0 |
| | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | |
| T5 111'5"-5/32"-10'8"-7/8" | Flange | 0.750 | 0 | 0.500 | 0 | 0.625 | 0 | 0.000 | 0 | 0.625 | 0 | 0.625 | 0 | 0.500 | 0 |
| | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | |
| T6 108'6"-7/8"-105'8"-19/32" | Flange | 0.750 | 0 | 0.500 | 0 | 0.625 | 0 | 0.000 | 0 | 0.625 | 0 | 0.625 | 0 | 0.500 | 0 |
| | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | |
| T7 105'8"-19/32"-102'10"-5/16" | Flange | 0.750 | 0 | 0.500 | 0 | 0.625 | 0 | 0.000 | 0 | 0.625 | 0 | 0.625 | 0 | 0.500 | 0 |
| | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | |
| T8 102'10"-5/16"-100' | Flange | 0.750 | 4 | 0.500 | 0 | 0.625 | 0 | 0.625 | 0 | 0.625 | 0 | 0.625 | 0 | 0.500 | 0 |
| | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | |
| T9 100'-96' | Flange | 1.000 | 0 | 0.500 | 1 | 0.625 | 0 | 0.000 | 0 | 0.625 | 0 | 0.625 | 0 | 0.500 | 0 |
| | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | |
| T10 96'-92' | Flange | 1.000 | 0 | 0.500 | 1 | 0.625 | 0 | 0.000 | 0 | 0.625 | 0 | 0.625 | 0 | 0.500 | 0 |
| | | A325N | | A325X | | A325N | | A325N | | A325N | | A325N | | A325N | |

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| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job 16-4584 130 SST | Page 10 of 52 |
| | Project Glastonbury-main st, CT (CT46126-A-01) | Date 17:28:31 12/08/16 |
| | Client SBA Communications Corporation | Designed by bpaudel |

| Tower Elevation ft | Leg Connection Type | Leg | | Diagonal | | Top Girt | | Bottom Girt | | Mid Girt | | Long Horizontal | | Short Horizontal | |
|--------------------|---------------------|--------------|-----|--------------|-----|--------------|-----|--------------|-----|--------------|-----|-----------------|-----|------------------|-----|
| | | Bolt Size in | No. | Bolt Size in | No. | Bolt Size in | No. | Bolt Size in | No. | Bolt Size in | No. | Bolt Size in | No. | Bolt Size in | No. |
| T11 92'-88' | Flange | 1.000 | 0 | 0.500 | 1 | 0.625 | 0 | 0.000 | 0 | 0.625 | 0 | 0.625 | 0 | 0.500 | 1 |
| | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | |
| T12 88'-84' | Flange | 1.000 | 0 | 0.500 | 1 | 0.625 | 0 | 0.000 | 0 | 0.625 | 0 | 0.625 | 0 | 0.500 | 1 |
| | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | |
| T13 84'-80' | Flange | 1.000 | 8 | 0.500 | 1 | 0.625 | 0 | 0.625 | 0 | 0.625 | 0 | 0.625 | 0 | 0.500 | 1 |
| | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | |
| T14 80'-75' | Flange | 1.000 | 0 | 0.500 | 1 | 0.625 | 0 | 0.000 | 0 | 0.625 | 0 | 0.625 | 0 | 0.500 | 0 |
| | | A325N | | A325X | | A325N | | A325N | | A325N | | A325N | | A325N | |
| T15 75'-70' | Flange | 1.000 | 0 | 0.500 | 1 | 0.625 | 0 | 0.000 | 0 | 0.625 | 0 | 0.625 | 0 | 0.500 | 0 |
| | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | |
| T16 70'-65' | Flange | 1.000 | 0 | 0.500 | 1 | 0.625 | 0 | 0.000 | 0 | 0.625 | 0 | 0.625 | 0 | 0.500 | 0 |
| | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | |
| T17 65'-60' | Flange | 1.000 | 8 | 0.500 | 1 | 0.625 | 0 | 0.625 | 0 | 0.625 | 0 | 0.625 | 0 | 0.500 | 0 |
| | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | |
| T18 60'-55' | Flange | 1.000 | 0 | 0.500 | 1 | 0.625 | 0 | 0.000 | 0 | 0.625 | 0 | 0.625 | 0 | 0.500 | 1 |
| | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | |
| T19 55'-50' | Flange | 1.000 | 0 | 0.500 | 1 | 0.625 | 0 | 0.000 | 0 | 0.625 | 0 | 0.625 | 0 | 0.500 | 0 |
| | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | |
| T20 50'-45' | Flange | 1.000 | 0 | 0.500 | 1 | 0.625 | 0 | 0.000 | 0 | 0.625 | 0 | 0.625 | 0 | 0.500 | 0 |
| | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | |
| T21 45'-40' | Flange | 1.000 | 8 | 0.500 | 1 | 0.625 | 0 | 0.625 | 0 | 0.625 | 0 | 0.625 | 0 | 0.500 | 1 |
| | | A325N | | A325X | | A325N | | A325N | | A325N | | A325N | | A325N | |
| T22 40'-33'4" | Flange | 1.000 | 0 | 0.500 | 1 | 0.625 | 0 | 0.000 | 0 | 0.625 | 0 | 0.625 | 0 | 0.500 | 0 |
| | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | |
| T23 33'4"-26'8" | Flange | 1.000 | 0 | 0.500 | 1 | 0.625 | 0 | 0.000 | 0 | 0.625 | 0 | 0.625 | 0 | 0.500 | 0 |
| | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | |
| T24 26'8"-20' | Flange | 1.000 | 8 | 0.500 | 1 | 0.625 | 0 | 0.625 | 0 | 0.625 | 0 | 0.625 | 0 | 0.500 | 0 |
| | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | |
| T25 20'-13'4" | Flange | 1.500 | 0 | 0.500 | 1 | 0.625 | 0 | 0.000 | 0 | 0.625 | 0 | 0.625 | 0 | 0.500 | 0 |
| | | A36M-55 | | A325X | | A325N | | A325N | | A325N | | A325N | | A325N | |
| T26 13'4"-6'8" | Flange | 1.500 | 0 | 0.500 | 1 | 0.625 | 0 | 0.000 | 0 | 0.625 | 0 | 0.625 | 0 | 0.625 | 1 |
| | | A36M-55 | | A325X | | A325N | | A325N | | A325N | | A325N | | A325N | |
| T27 6'8"-0' | Flange | 1.500 | 6 | 0.500 | 1 | 0.625 | 0 | 0.625 | 0 | 0.625 | 0 | 0.625 | 0 | 0.500 | 0 |
| | | A36M-55 | | A325N | | A325N | | A325N | | A325N | | A325N | | A325N | |

Feed Line/Linear Appurtenances - Entered As Round Or Flat

| Description | Face or Leg | Allow Shield | Component Type | Placement ft | Face Offset in | Lateral Offset (Frac FW) | # | # Per Row | Clear Spacing in | Width or Diameter in | Perimeter in | Weight klf |
|---|-------------|--------------|----------------|--------------|----------------|--------------------------|---|-----------|------------------|----------------------|--------------|------------|
| ATCB-B01-04 0(5/16") (E-Inside Conduit) | A | No | Ar (CaAa) | 128' - 6' | 0.000 | 0.2 | 6 | 6 | 0.315 | 0.000 | | 0.000 |
| LDF4-50A(1/ 2") (E-Inside Conduit) | A | No | Ar (CaAa) | 128' - 6' | 0.000 | 0.2 | 2 | 2 | 0.500 0.630 | 0.000 | | 0.000 |
| 2" Rigid Conduit (E) | A | No | Ar (CaAa) | 128' - 0' | 0.000 | 0.2 | 2 | 2 | 2.000 | 2.000 | | 0.003 |
| LDF4P-50A(1 /2") (E) | A | No | Ar (CaAa) | 128' - 6' | 0.000 | 0.1 | 2 | 2 | 0.630 | 0.630 | | 0.000 |

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| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job 16-4584 130 SST | Page 11 of 52 |
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| Description | Face or Leg | Allow Shield | Component Type | Placement ft | Face Offset in | Lateral Offset (Frac FW) | # | # Per Row | Clear Spacing in | Width or Diameter in | Perimeter in | Weight klf |
|---|-------------|--------------|----------------|-----------------|-------------------|-----------------------------|----|-----------|---------------------|-------------------------|-----------------|---------------|
| LDF4P-50A(1/2") (E) Feedline Ladder (Af) (E) *R* | A | No | Ar (CaAa) | 50'6" - 6' | 0.000 | 0.02 | 2 | 2 | 0.630 | 0.630 | | 0.000 |
| LDF6-50A(1-1/4") (E) Feedline Ladder (Af) (E) | B | No | Ar (CaAa) | 118'6" - 6' | -1.000 | 0 | 4 | 4 | 0.850 0.750 | 1.550 | | 0.001 |
| LDF6-50A(1-1/4") (E) Feedline Ladder (Af) (E) | B | No | Ar (CaAa) | 118'6" - 0' | -1.000 | 0 | 1 | 1 | 3.000 | 3.000 | | 0.008 |
| LDF6-50A(1-1/4") (E) Feedline Ladder (Af) (E) | C | No | Ar (CaAa) | 110' - 6' | -1.000 | 0 | 18 | 6 | 0.850 0.750 | 1.550 | | 0.001 |
| LDF6-50A(1-1/4") (E) Feedline Ladder (Af) (E) | C | No | Ar (CaAa) | 60' - 0' | -1.000 | 0 | 2 | 1 | 3.000 | 3.000 | | 0.008 |
| LDF6-50A(1-1/4") (E) Feedline Ladder (Af) (E) *R* | C | No | Ar (CaAa) | 93' - 60' | -1.000 | 0 | 1 | 1 | 3.000 | 3.000 | | 0.008 |
| LDF7-50A(1 5/8") (E) | B | No | Ar (CaAa) | 80' - 6' | -1.000 | 0.1 | 2 | 2 | 0.850 0.750 | 1.980 | | 0.001 |
| LDF4P-50A(1/2") (E) *R* | B | No | Ar (CaAa) | 55'6" - 6' | -1.000 | 0.08 | 1 | 1 | 0.630 | 0.630 | | 0.000 |
| Safety Line 3/8 (E) *R* | B | No | Ar (CaAa) | 130' - 0' | 0.000 | 0.5 | 1 | 1 | 0.375 | 0.375 | | 0.000 |
| **** (P) 3/8" | C | No | Ar (CaAa) | 110' - 6' | 0.000 | 0 | 18 | 6 | 0.250 | 0.440 | | 0.000 |
| (P) (1/2 ") FIBER | C | No | Ar (CaAa) | 110' - 6' | 0.000 | 0 | 36 | 12 | 0.250 | 0.630 | | 0.000 |

Feed Line/Linear Appurtenances - Entered As Area

| Description | Face or Leg | Allow Shield | Component Type | Placement ft | Total Number | C _{AA} ft ² /ft | Weight klf |
|-------------|-------------|--------------|----------------|-----------------|--------------|--|---------------|
| *R* | | | | | | | |
| *R* | | | | | | | |
| *R* | | | | | | | |

Feed Line/Linear Appurtenances Section Areas

| Tower Section | Tower Elevation ft | Face | A _R ft ² | A _F ft ² | C _{AA} In Face ft ² | C _{AA} Out Face ft ² | Weight K |
|---------------|-----------------------|------|-----------------------------------|-----------------------------------|---|--|-------------|
| T1 | 130'-120' | A | 0.000 | 0.000 | 4.208 | 0.000 | 0.053 |

| | | | | |
|--|----------------|--|--------------------|-------------------|
| <p style="text-align: center;">tnxTower</p> <p>Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375</p> | Job | 16-4584 130 SST | Page | 12 of 52 |
| | Project | Glastonbury-main st, CT (CT46126-A-01) | Date | 17:28:31 12/08/16 |
| | Client | SBA Communications Corporation | Designed by | bpaudel |

| Tower Section | Tower Elevation ft | Face | A _R ft ² | A _F ft ² | C _{AA} In Face ft ² | C _{AA} Out Face ft ² | Weight K |
|---------------|-------------------------------|------|-----------------------------------|-----------------------------------|---|--|-------------|
| | | B | 0.000 | 0.000 | 0.375 | 0.000 | 0.002 |
| | | C | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| T2 | 120'-117'1-23/32" | A | 0.000 | 0.000 | 1.503 | 0.000 | 0.019 |
| | | B | 0.000 | 0.000 | 1.355 | 0.000 | 0.016 |
| | | C | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| T3 | 117'1-23/32"-114' 3-7/16" | A | 0.000 | 0.000 | 1.503 | 0.000 | 0.019 |
| | | B | 0.000 | 0.000 | 2.735 | 0.000 | 0.032 |
| | | C | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| T4 | 114'3-7/16"-111'5- 5/32" | A | 0.000 | 0.000 | 1.503 | 0.000 | 0.019 |
| | | B | 0.000 | 0.000 | 2.735 | 0.000 | 0.032 |
| | | C | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| T5 | 111'5-5/32"-108'6- 7/8" | A | 0.000 | 0.000 | 1.503 | 0.000 | 0.019 |
| | | B | 0.000 | 0.000 | 2.735 | 0.000 | 0.032 |
| | | C | 0.000 | 0.000 | 8.348 | 0.000 | 0.032 |
| T6 | 108'6-7/8"-105'8-1 9/32" | A | 0.000 | 0.000 | 1.503 | 0.000 | 0.019 |
| | | B | 0.000 | 0.000 | 2.735 | 0.000 | 0.032 |
| | | C | 0.000 | 0.000 | 16.712 | 0.000 | 0.064 |
| T7 | 105'8-19/32"-102' 10-5/16" | A | 0.000 | 0.000 | 1.503 | 0.000 | 0.019 |
| | | B | 0.000 | 0.000 | 2.735 | 0.000 | 0.032 |
| | | C | 0.000 | 0.000 | 16.712 | 0.000 | 0.064 |
| T8 | 102'10-5/16"-100' | A | 0.000 | 0.000 | 1.504 | 0.000 | 0.019 |
| | | B | 0.000 | 0.000 | 2.738 | 0.000 | 0.032 |
| | | C | 0.000 | 0.000 | 16.727 | 0.000 | 0.064 |
| T9 | 100'-96' | A | 0.000 | 0.000 | 2.104 | 0.000 | 0.027 |
| | | B | 0.000 | 0.000 | 3.830 | 0.000 | 0.045 |
| | | C | 0.000 | 0.000 | 23.400 | 0.000 | 0.089 |
| T10 | 96'-92' | A | 0.000 | 0.000 | 2.104 | 0.000 | 0.027 |
| | | B | 0.000 | 0.000 | 3.830 | 0.000 | 0.045 |
| | | C | 0.000 | 0.000 | 23.700 | 0.000 | 0.098 |
| T11 | 92'-88' | A | 0.000 | 0.000 | 2.104 | 0.000 | 0.027 |
| | | B | 0.000 | 0.000 | 3.830 | 0.000 | 0.045 |
| | | C | 0.000 | 0.000 | 24.600 | 0.000 | 0.123 |
| T12 | 88'-84' | A | 0.000 | 0.000 | 2.104 | 0.000 | 0.027 |
| | | B | 0.000 | 0.000 | 3.830 | 0.000 | 0.045 |
| | | C | 0.000 | 0.000 | 24.600 | 0.000 | 0.123 |
| T13 | 84'-80' | A | 0.000 | 0.000 | 2.104 | 0.000 | 0.027 |
| | | B | 0.000 | 0.000 | 3.830 | 0.000 | 0.045 |
| | | C | 0.000 | 0.000 | 24.600 | 0.000 | 0.123 |
| T14 | 80'-75' | A | 0.000 | 0.000 | 2.630 | 0.000 | 0.033 |
| | | B | 0.000 | 0.000 | 6.768 | 0.000 | 0.065 |
| | | C | 0.000 | 0.000 | 30.750 | 0.000 | 0.154 |
| T15 | 75'-70' | A | 0.000 | 0.000 | 2.630 | 0.000 | 0.033 |
| | | B | 0.000 | 0.000 | 6.768 | 0.000 | 0.065 |
| | | C | 0.000 | 0.000 | 30.750 | 0.000 | 0.154 |
| T16 | 70'-65' | A | 0.000 | 0.000 | 2.630 | 0.000 | 0.033 |
| | | B | 0.000 | 0.000 | 6.768 | 0.000 | 0.065 |
| | | C | 0.000 | 0.000 | 30.750 | 0.000 | 0.154 |
| T17 | 65'-60' | A | 0.000 | 0.000 | 2.630 | 0.000 | 0.033 |
| | | B | 0.000 | 0.000 | 6.768 | 0.000 | 0.065 |
| | | C | 0.000 | 0.000 | 30.750 | 0.000 | 0.154 |
| T18 | 60'-55' | A | 0.000 | 0.000 | 4.130 | 0.000 | 0.075 |
| | | B | 0.000 | 0.000 | 6.799 | 0.000 | 0.065 |
| | | C | 0.000 | 0.000 | 32.250 | 0.000 | 0.196 |
| T19 | 55'-50' | A | 0.000 | 0.000 | 4.193 | 0.000 | 0.075 |
| | | B | 0.000 | 0.000 | 7.082 | 0.000 | 0.065 |
| | | C | 0.000 | 0.000 | 32.250 | 0.000 | 0.196 |
| T20 | 50'-45' | A | 0.000 | 0.000 | 4.760 | 0.000 | 0.077 |
| | | B | 0.000 | 0.000 | 7.082 | 0.000 | 0.065 |
| | | C | 0.000 | 0.000 | 32.250 | 0.000 | 0.196 |
| T21 | 45'-40' | A | 0.000 | 0.000 | 4.760 | 0.000 | 0.077 |
| | | B | 0.000 | 0.000 | 7.082 | 0.000 | 0.065 |

| | | | | |
|---|----------------|--|--------------------|-------------------|
| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job | 16-4584 130 SST | Page | 13 of 52 |
| | Project | Glastonbury-main st, CT (CT46126-A-01) | Date | 17:28:31 12/08/16 |
| | Client | SBA Communications Corporation | Designed by | bpaudel |

| Tower Section | Tower Elevation ft | Face | A _R ft ² | A _F ft ² | C _{AA} In Face ft ² | C _{AA} Out Face ft ² | Weight K |
|---------------|-----------------------|------|-----------------------------------|-----------------------------------|---|--|-------------|
| T22 | 40'-33'4" | C | 0.000 | 0.000 | 32.250 | 0.000 | 0.196 |
| | | A | 0.000 | 0.000 | 6.347 | 0.000 | 0.102 |
| | | B | 0.000 | 0.000 | 9.443 | 0.000 | 0.087 |
| T23 | 33'4"-26'8" | C | 0.000 | 0.000 | 43.000 | 0.000 | 0.261 |
| | | A | 0.000 | 0.000 | 6.347 | 0.000 | 0.102 |
| | | B | 0.000 | 0.000 | 9.443 | 0.000 | 0.087 |
| T24 | 26'8"-20' | C | 0.000 | 0.000 | 43.000 | 0.000 | 0.261 |
| | | A | 0.000 | 0.000 | 6.347 | 0.000 | 0.102 |
| | | B | 0.000 | 0.000 | 9.443 | 0.000 | 0.087 |
| T25 | 20'-13'4" | C | 0.000 | 0.000 | 43.000 | 0.000 | 0.261 |
| | | A | 0.000 | 0.000 | 6.347 | 0.000 | 0.102 |
| | | B | 0.000 | 0.000 | 9.443 | 0.000 | 0.087 |
| T26 | 13'4"-6'8" | C | 0.000 | 0.000 | 43.000 | 0.000 | 0.261 |
| | | A | 0.000 | 0.000 | 6.347 | 0.000 | 0.102 |
| | | B | 0.000 | 0.000 | 9.443 | 0.000 | 0.087 |
| T27 | 6'8"-0' | C | 0.000 | 0.000 | 43.000 | 0.000 | 0.261 |
| | | A | 0.000 | 0.000 | 4.835 | 0.000 | 0.094 |
| | | B | 0.000 | 0.000 | 2.969 | 0.000 | 0.060 |
| | | C | 0.000 | 0.000 | 7.900 | 0.000 | 0.127 |

Feed Line/Linear Appurtenances Section Areas - With Ice

| Tower Section | Tower Elevation ft | Face or Leg | Ice Thickness in | A _R ft ² | A _F ft ² | C _{AA} In Face ft ² | C _{AA} Out Face ft ² | Weight K |
|---------------|-------------------------------|-------------|---------------------|-----------------------------------|-----------------------------------|---|--|-------------|
| T1 | 130'-120' | A | 2.285 | 0.000 | 0.000 | 35.221 | 0.000 | 0.437 |
| | | B | | 0.000 | 0.000 | 4.945 | 0.000 | 0.076 |
| | | C | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| T2 | 120'-117'1-23/32" | A | 2.273 | 0.000 | 0.000 | 12.529 | 0.000 | 0.155 |
| | | B | | 0.000 | 0.000 | 4.910 | 0.000 | 0.091 |
| | | C | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| T3 | 117'1-23/32"-114' 3-7/16" | A | 2.267 | 0.000 | 0.000 | 12.507 | 0.000 | 0.154 |
| | | B | | 0.000 | 0.000 | 8.773 | 0.000 | 0.167 |
| | | C | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| T4 | 114'3-7/16"-111'5'- 5/32" | A | 2.262 | 0.000 | 0.000 | 12.485 | 0.000 | 0.154 |
| | | B | | 0.000 | 0.000 | 8.761 | 0.000 | 0.167 |
| | | C | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| T5 | 111'5-5/32"-108'6'- 7/8" | A | 2.256 | 0.000 | 0.000 | 12.461 | 0.000 | 0.153 |
| | | B | | 0.000 | 0.000 | 8.749 | 0.000 | 0.166 |
| | | C | | 0.000 | 0.000 | 8.535 | 0.000 | 0.188 |
| T6 | 108'6-7/8"-105'8-1 9/32" | A | 2.250 | 0.000 | 0.000 | 12.438 | 0.000 | 0.153 |
| | | B | | 0.000 | 0.000 | 8.737 | 0.000 | 0.166 |
| | | C | | 0.000 | 0.000 | 17.068 | 0.000 | 0.376 |
| T7 | 105'8-19/32"-102' 10-5/16" | A | 2.244 | 0.000 | 0.000 | 12.413 | 0.000 | 0.152 |
| | | B | | 0.000 | 0.000 | 8.724 | 0.000 | 0.165 |
| | | C | | 0.000 | 0.000 | 17.050 | 0.000 | 0.375 |
| T8 | 102'10-5/16"-100' | A | 2.238 | 0.000 | 0.000 | 12.400 | 0.000 | 0.152 |
| | | B | | 0.000 | 0.000 | 8.719 | 0.000 | 0.165 |
| | | C | | 0.000 | 0.000 | 17.047 | 0.000 | 0.374 |
| T9 | 100'-96' | A | 2.230 | 0.000 | 0.000 | 17.303 | 0.000 | 0.212 |
| | | B | | 0.000 | 0.000 | 12.174 | 0.000 | 0.230 |
| | | C | | 0.000 | 0.000 | 23.816 | 0.000 | 0.522 |
| T10 | 96'-92' | A | 2.221 | 0.000 | 0.000 | 17.251 | 0.000 | 0.211 |
| | | B | | 0.000 | 0.000 | 12.147 | 0.000 | 0.229 |
| | | C | | 0.000 | 0.000 | 24.522 | 0.000 | 0.543 |
| T11 | 92'-88' | A | 2.211 | 0.000 | 0.000 | 17.198 | 0.000 | 0.209 |
| | | B | | 0.000 | 0.000 | 12.119 | 0.000 | 0.228 |
| | | C | | 0.000 | 0.000 | 26.707 | 0.000 | 0.609 |

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| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job 16-4584 130 SST | Page 14 of 52 |
| | Project Glastonbury-main st, CT (CT46126-A-01) | Date 17:28:31 12/08/16 |
| | Client SBA Communications Corporation | Designed by bpaudel |

| Tower Section | Tower Elevation ft | Face or Leg | Ice Thickness in | A _R ft ² | A _F ft ² | C _{AA} In Face ft ² | C _{AA} Out Face ft ² | Weight K |
|---------------|-----------------------|-------------|---------------------|-----------------------------------|-----------------------------------|---|--|-------------|
| T12 | 88'-84' | A | 2.201 | 0.000 | 0.000 | 17.141 | 0.000 | 0.208 |
| | | B | | 0.000 | 0.000 | 12.090 | 0.000 | 0.227 |
| | | C | | 0.000 | 0.000 | 26.658 | 0.000 | 0.607 |
| T13 | 84'-80' | A | 2.191 | 0.000 | 0.000 | 17.083 | 0.000 | 0.207 |
| | | B | | 0.000 | 0.000 | 12.059 | 0.000 | 0.226 |
| | | C | | 0.000 | 0.000 | 26.607 | 0.000 | 0.604 |
| T14 | 80'-75' | A | 2.178 | 0.000 | 0.000 | 21.268 | 0.000 | 0.257 |
| | | B | | 0.000 | 0.000 | 21.994 | 0.000 | 0.373 |
| | | C | | 0.000 | 0.000 | 33.183 | 0.000 | 0.752 |
| T15 | 75'-70' | A | 2.164 | 0.000 | 0.000 | 21.166 | 0.000 | 0.255 |
| | | B | | 0.000 | 0.000 | 21.916 | 0.000 | 0.370 |
| | | C | | 0.000 | 0.000 | 33.095 | 0.000 | 0.748 |
| T16 | 70'-65' | A | 2.148 | 0.000 | 0.000 | 21.059 | 0.000 | 0.252 |
| | | B | | 0.000 | 0.000 | 21.832 | 0.000 | 0.367 |
| | | C | | 0.000 | 0.000 | 33.001 | 0.000 | 0.744 |
| T17 | 65'-60' | A | 2.132 | 0.000 | 0.000 | 20.944 | 0.000 | 0.250 |
| | | B | | 0.000 | 0.000 | 21.744 | 0.000 | 0.364 |
| | | C | | 0.000 | 0.000 | 32.900 | 0.000 | 0.740 |
| T18 | 60'-55' | A | 2.114 | 0.000 | 0.000 | 24.434 | 0.000 | 0.355 |
| | | B | | 0.000 | 0.000 | 21.891 | 0.000 | 0.365 |
| | | C | | 0.000 | 0.000 | 38.599 | 0.000 | 0.843 |
| T19 | 55'-50' | A | 2.095 | 0.000 | 0.000 | 24.766 | 0.000 | 0.356 |
| | | B | | 0.000 | 0.000 | 23.955 | 0.000 | 0.393 |
| | | C | | 0.000 | 0.000 | 38.469 | 0.000 | 0.837 |
| T20 | 50'-45' | A | 2.074 | 0.000 | 0.000 | 28.927 | 0.000 | 0.394 |
| | | B | | 0.000 | 0.000 | 23.822 | 0.000 | 0.389 |
| | | C | | 0.000 | 0.000 | 38.326 | 0.000 | 0.831 |
| T21 | 45'-40' | A | 2.051 | 0.000 | 0.000 | 28.704 | 0.000 | 0.389 |
| | | B | | 0.000 | 0.000 | 23.675 | 0.000 | 0.384 |
| | | C | | 0.000 | 0.000 | 38.170 | 0.000 | 0.824 |
| T22 | 40'-33'4" | A | 2.021 | 0.000 | 0.000 | 37.882 | 0.000 | 0.510 |
| | | B | | 0.000 | 0.000 | 31.311 | 0.000 | 0.503 |
| | | C | | 0.000 | 0.000 | 50.621 | 0.000 | 1.086 |
| T23 | 33'4"-26'8" | A | 1.981 | 0.000 | 0.000 | 37.361 | 0.000 | 0.499 |
| | | B | | 0.000 | 0.000 | 30.970 | 0.000 | 0.492 |
| | | C | | 0.000 | 0.000 | 50.257 | 0.000 | 1.070 |
| T24 | 26'8"-20' | A | 1.932 | 0.000 | 0.000 | 36.723 | 0.000 | 0.484 |
| | | B | | 0.000 | 0.000 | 30.552 | 0.000 | 0.479 |
| | | C | | 0.000 | 0.000 | 49.811 | 0.000 | 1.050 |
| T25 | 20'-13'4" | A | 1.868 | 0.000 | 0.000 | 35.894 | 0.000 | 0.466 |
| | | B | | 0.000 | 0.000 | 30.008 | 0.000 | 0.462 |
| | | C | | 0.000 | 0.000 | 49.233 | 0.000 | 1.025 |
| T26 | 13'4"-6'8" | A | 1.775 | 0.000 | 0.000 | 34.688 | 0.000 | 0.441 |
| | | B | | 0.000 | 0.000 | 29.218 | 0.000 | 0.437 |
| | | C | | 0.000 | 0.000 | 48.392 | 0.000 | 0.989 |
| T27 | 6'8"-0' | A | 1.590 | 0.000 | 0.000 | 14.844 | 0.000 | 0.260 |
| | | B | | 0.000 | 0.000 | 8.607 | 0.000 | 0.167 |
| | | C | | 0.000 | 0.000 | 14.917 | 0.000 | 0.300 |

Feed Line Center of Pressure

| Section | Elevation ft | CP _X in | CP _Z in | CP _X Ice in | CP _Z Ice in |
|---------|-------------------------|-----------------------|-----------------------|------------------------------|------------------------------|
| T1 | 130'-120' | -0.418 | -0.846 | 0.037 | -0.027 |
| T2 | 120'-117'1"-23/32" | 0.022 | -0.880 | 0.103 | -0.101 |
| T3 | 117'1"-23/32"-114'3"-7" | 0.350 | -0.914 | 0.249 | -0.204 |

| | | | | |
|---|----------------|--|--------------------|-------------------|
| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job | 16-4584 130 SST | Page | 15 of 52 |
| | Project | Glastonbury-main st, CT (CT46126-A-01) | Date | 17:28:31 12/08/16 |
| | Client | SBA Communications Corporation | Designed by | bpaudel |

| Section | Elevation | CP _x | CP _z | CP _x Ice | CP _z Ice |
|---------|---------------------------|-----------------|-----------------|------------------------|------------------------|
| | ft | in | in | in | in |
| T4 | 114'3-7/16"-111'5-5/32" | 0.350 | -0.912 | 0.246 | -0.202 |
| T5 | 111'5-5/32"-108'6-7/8" | 0.187 | 0.611 | 0.202 | 0.099 |
| T6 | 108'6-7/8"-105'8-19/32" | 0.128 | 1.169 | 0.172 | 0.309 |
| T7 | 105'8-19/32"-102'10-5/16" | 0.128 | 1.169 | 0.172 | 0.310 |
| T8 | 102'10-5/16"-100' | 0.122 | 1.116 | 0.027 | 0.049 |
| T9 | 100'-96' | 0.122 | 1.082 | 0.156 | 0.278 |
| T10 | 96'-92' | 0.134 | 1.142 | 0.174 | 0.318 |
| T11 | 92'-88' | 0.140 | 1.206 | 0.149 | 0.311 |
| T12 | 88'-84' | 0.153 | 1.273 | 0.170 | 0.347 |
| T13 | 84'-80' | 0.166 | 1.340 | 0.189 | 0.382 |
| T14 | 80'-75' | 0.314 | 1.291 | 0.280 | 0.451 |
| T15 | 75'-70' | 0.347 | 1.394 | 0.320 | 0.508 |
| T16 | 70'-65' | 0.374 | 1.474 | 0.348 | 0.546 |
| T17 | 65'-60' | 0.402 | 1.554 | 0.376 | 0.585 |
| T18 | 60'-55' | 0.305 | 1.491 | 0.269 | 0.534 |
| T19 | 55'-50' | 0.352 | 1.572 | 0.390 | 0.579 |
| T20 | 50'-45' | 0.319 | 1.588 | 0.375 | 0.573 |
| T21 | 45'-40' | 0.321 | 1.571 | 0.353 | 0.536 |
| T22 | 40'-33'4" | 0.361 | 1.735 | 0.430 | 0.647 |
| T23 | 33'4"-26'8" | 0.387 | 1.827 | 0.460 | 0.689 |
| T24 | 26'8"-20' | 0.413 | 1.919 | 0.489 | 0.732 |
| T25 | 20'-13'4" | 0.435 | 1.993 | 0.513 | 0.772 |
| T26 | 13'4"-6'8" | 0.450 | 2.032 | 0.513 | 0.782 |
| T27 | 6'8"-0' | -0.031 | 0.064 | 0.428 | 0.229 |

Shielding Factor Ka

| Tower Section | Feed Line Record No. | Description | Feed Line Segment Elev. | K _a No Ice | K _a Ice |
|---------------|----------------------|----------------------|-------------------------|--------------------------|-----------------------|
| T1 | 1 | ATCB-B01-040(5/16") | 120.00 - 128.00 | 0.6000 | 0.0957 |
| T1 | 2 | LDF4-50A(1/2") | 120.00 - 128.00 | 0.6000 | 0.0957 |
| T1 | 3 | 2" Rigid Conduit | 120.00 - 128.00 | 0.6000 | 0.0957 |
| T1 | 4 | LDF4P-50A(1/2") | 120.00 - 128.00 | 0.6000 | 0.0957 |
| T1 | 24 | Safety Line 3/8 | 120.00 - 130.00 | 0.6000 | 0.0957 |
| T2 | 1 | ATCB-B01-040(5/16") | 117.14 - 120.00 | 0.6000 | 0.1587 |
| T2 | 2 | LDF4-50A(1/2") | 117.14 - 120.00 | 0.6000 | 0.1587 |
| T2 | 3 | 2" Rigid Conduit | 117.14 - 120.00 | 0.6000 | 0.1587 |
| T2 | 4 | LDF4P-50A(1/2") | 117.14 - 120.00 | 0.6000 | 0.1587 |
| T2 | 8 | LDF6-50A(1-1/4") | 117.14 - 118.50 | 0.6000 | 0.1587 |
| T2 | 9 | Feedline Ladder (Af) | 117.14 - | 0.6000 | 0.1587 |

| | | | | |
|---|----------------|--|--------------------|-------------------|
| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job | 16-4584 130 SST | Page | 16 of 52 |
| | Project | Glastonbury-main st, CT (CT46126-A-01) | Date | 17:28:31 12/08/16 |
| | Client | SBA Communications Corporation | Designed by | bpaudel |

| Tower Section | Feed Line Record No. | Description | Feed Line Segment Elev. | K _a No Ice | K _a Ice |
|---------------|----------------------|----------------------|-------------------------|-----------------------|--------------------|
| | | | 118.50 | | |
| T2 | 24 | Safety Line 3/8 | 117.14 - 120.00 | 0.6000 | 0.1587 |
| T3 | 1 | ATCB-B01-040(5/16") | 114.29 - 117.14 | 0.6000 | 0.2894 |
| T3 | 2 | LDF4-50A(1/2") | 114.29 - 117.14 | 0.6000 | 0.2894 |
| T3 | 3 | 2" Rigid Conduit | 114.29 - 117.14 | 0.6000 | 0.2894 |
| T3 | 4 | LDF4P-50A(1/2") | 114.29 - 117.14 | 0.6000 | 0.2894 |
| T3 | 8 | LDF6-50A(1-1/4") | 114.29 - 117.14 | 0.6000 | 0.2894 |
| T3 | 9 | Feedline Ladder (Af) | 114.29 - 117.14 | 0.6000 | 0.2894 |
| T3 | 24 | Safety Line 3/8 | 114.29 - 117.14 | 0.6000 | 0.2894 |
| T4 | 1 | ATCB-B01-040(5/16") | 111.43 - 114.29 | 0.6000 | 0.2846 |
| T4 | 2 | LDF4-50A(1/2") | 111.43 - 114.29 | 0.6000 | 0.2846 |
| T4 | 3 | 2" Rigid Conduit | 111.43 - 114.29 | 0.6000 | 0.2846 |
| T4 | 4 | LDF4P-50A(1/2") | 111.43 - 114.29 | 0.6000 | 0.2846 |
| T4 | 8 | LDF6-50A(1-1/4") | 111.43 - 114.29 | 0.6000 | 0.2846 |
| T4 | 9 | Feedline Ladder (Af) | 111.43 - 114.29 | 0.6000 | 0.2846 |
| T4 | 24 | Safety Line 3/8 | 111.43 - 114.29 | 0.6000 | 0.2846 |
| T5 | 1 | ATCB-B01-040(5/16") | 108.57 - 111.43 | 0.6000 | 0.2858 |
| T5 | 2 | LDF4-50A(1/2") | 108.57 - 111.43 | 0.6000 | 0.2858 |
| T5 | 3 | 2" Rigid Conduit | 108.57 - 111.43 | 0.6000 | 0.2858 |
| T5 | 4 | LDF4P-50A(1/2") | 108.57 - 111.43 | 0.6000 | 0.2858 |
| T5 | 8 | LDF6-50A(1-1/4") | 108.57 - 111.43 | 0.6000 | 0.2858 |
| T5 | 9 | Feedline Ladder (Af) | 108.57 - 111.43 | 0.6000 | 0.2858 |
| T5 | 12 | LDF6-50A(1-1/4") | 108.57 - 110.00 | 0.6000 | 0.2858 |
| T5 | 24 | Safety Line 3/8 | 108.57 - 111.43 | 0.6000 | 0.2858 |
| T5 | 27 | (P) 3/8" | 108.57 - 110.00 | 0.6000 | 0.2858 |
| T5 | 28 | (P) (1/2 ") FIBER | 108.57 - 110.00 | 0.6000 | 0.2858 |
| T6 | 1 | ATCB-B01-040(5/16") | 105.72 - 108.57 | 0.6000 | 0.2871 |
| T6 | 2 | LDF4-50A(1/2") | 105.72 - 108.57 | 0.6000 | 0.2871 |
| T6 | 3 | 2" Rigid Conduit | 105.72 - 108.57 | 0.6000 | 0.2871 |
| T6 | 4 | LDF4P-50A(1/2") | 105.72 - 108.57 | 0.6000 | 0.2871 |
| T6 | 8 | LDF6-50A(1-1/4") | 105.72 - 108.57 | 0.6000 | 0.2871 |
| T6 | 9 | Feedline Ladder (Af) | 105.72 - | 0.6000 | 0.2871 |

| | | | |
|----------------|--|--------------------|-------------------|
| Job | 16-4584 130 SST | Page | 17 of 52 |
| Project | Glastonbury-main st, CT (CT46126-A-01) | Date | 17:28:31 12/08/16 |
| Client | SBA Communications Corporation | Designed by | bpaudel |

| Tower Section | Feed Line Record No. | Description | Feed Line Segment Elev. | K _a No Ice | K _a Ice |
|---------------|----------------------|----------------------|-------------------------|-----------------------|--------------------|
| | | | 108.57 | | |
| T6 | 12 | LDF6-50A(1-1/4") | 105.72 - 108.57 | 0.6000 | 0.2871 |
| T6 | 24 | Safety Line 3/8 | 105.72 - 108.57 | 0.6000 | 0.2871 |
| T6 | 27 | (P) 3/8" | 105.72 - 108.57 | 0.6000 | 0.2871 |
| T6 | 28 | (P) (1/2 ") FIBER | 105.72 - 108.57 | 0.6000 | 0.2871 |
| T7 | 1 | ATCB-B01-040(5/16") | 102.86 - 105.72 | 0.6000 | 0.2883 |
| T7 | 2 | LDF4-50A(1/2") | 102.86 - 105.72 | 0.6000 | 0.2883 |
| T7 | 3 | 2" Rigid Conduit | 102.86 - 105.72 | 0.6000 | 0.2883 |
| T7 | 4 | LDF4P-50A(1/2") | 102.86 - 105.72 | 0.6000 | 0.2883 |
| T7 | 8 | LDF6-50A(1-1/4") | 102.86 - 105.72 | 0.6000 | 0.2883 |
| T7 | 9 | Feedline Ladder (Af) | 102.86 - 105.72 | 0.6000 | 0.2883 |
| T7 | 12 | LDF6-50A(1-1/4") | 102.86 - 105.72 | 0.6000 | 0.2883 |
| T7 | 24 | Safety Line 3/8 | 102.86 - 105.72 | 0.6000 | 0.2883 |
| T7 | 27 | (P) 3/8" | 102.86 - 105.72 | 0.6000 | 0.2883 |
| T7 | 28 | (P) (1/2 ") FIBER | 102.86 - 105.72 | 0.6000 | 0.2883 |
| T8 | 1 | ATCB-B01-040(5/16") | 100.00 - 102.86 | 0.6000 | 0.0226 |
| T8 | 2 | LDF4-50A(1/2") | 100.00 - 102.86 | 0.6000 | 0.0226 |
| T8 | 3 | 2" Rigid Conduit | 100.00 - 102.86 | 0.6000 | 0.0226 |
| T8 | 4 | LDF4P-50A(1/2") | 100.00 - 102.86 | 0.6000 | 0.0226 |
| T8 | 8 | LDF6-50A(1-1/4") | 100.00 - 102.86 | 0.6000 | 0.0226 |
| T8 | 9 | Feedline Ladder (Af) | 100.00 - 102.86 | 0.6000 | 0.0226 |
| T8 | 12 | LDF6-50A(1-1/4") | 100.00 - 102.86 | 0.6000 | 0.0226 |
| T8 | 24 | Safety Line 3/8 | 100.00 - 102.86 | 0.6000 | 0.0226 |
| T8 | 27 | (P) 3/8" | 100.00 - 102.86 | 0.6000 | 0.0226 |
| T8 | 28 | (P) (1/2 ") FIBER | 100.00 - 102.86 | 0.6000 | 0.0226 |
| T9 | 1 | ATCB-B01-040(5/16") | 96.00 - 100.00 | 0.6000 | 0.2325 |
| T9 | 2 | LDF4-50A(1/2") | 96.00 - 100.00 | 0.6000 | 0.2325 |
| T9 | 3 | 2" Rigid Conduit | 96.00 - 100.00 | 0.6000 | 0.2325 |
| T9 | 4 | LDF4P-50A(1/2") | 96.00 - 100.00 | 0.6000 | 0.2325 |
| T9 | 8 | LDF6-50A(1-1/4") | 96.00 - 100.00 | 0.6000 | 0.2325 |
| T9 | 9 | Feedline Ladder (Af) | 96.00 - 100.00 | 0.6000 | 0.2325 |
| T9 | 12 | LDF6-50A(1-1/4") | 96.00 - 100.00 | 0.6000 | 0.2325 |
| T9 | 24 | Safety Line 3/8 | 96.00 - 100.00 | 0.6000 | 0.2325 |
| T9 | 27 | (P) 3/8" | 96.00 - 100.00 | 0.6000 | 0.2325 |
| T9 | 28 | (P) (1/2 ") FIBER | 96.00 - 100.00 | 0.6000 | 0.2325 |
| T10 | 1 | ATCB-B01-040(5/16") | 92.00 - 96.00 | 0.6000 | 0.2545 |
| T10 | 2 | LDF4-50A(1/2") | 92.00 - 96.00 | 0.6000 | 0.2545 |
| T10 | 3 | 2" Rigid Conduit | 92.00 - 96.00 | 0.6000 | 0.2545 |

| | | | |
|----------------|--|--------------------|-------------------|
| Job | 16-4584 130 SST | Page | 18 of 52 |
| Project | Glastonbury-main st, CT (CT46126-A-01) | Date | 17:28:31 12/08/16 |
| Client | SBA Communications Corporation | Designed by | bpaudel |

| Tower Section | Feed Line Record No. | Description | Feed Line Segment Elev. | K_a No Ice | K_a Ice |
|---------------|----------------------|----------------------|-------------------------|--------------|-----------|
| T10 | 4 | LDF4P-50A(1/2") | 92.00 - 96.00 | 0.6000 | 0.2545 |
| T10 | 8 | LDF6-50A(1-1/4") | 92.00 - 96.00 | 0.6000 | 0.2545 |
| T10 | 9 | Feedline Ladder (Af) | 92.00 - 96.00 | 0.6000 | 0.2545 |
| T10 | 12 | LDF6-50A(1-1/4") | 92.00 - 96.00 | 0.6000 | 0.2545 |
| T10 | 16 | Feedline Ladder (Af) | 92.00 - 93.00 | 0.6000 | 0.2545 |
| T10 | 24 | Safety Line 3/8 | 92.00 - 96.00 | 0.6000 | 0.2545 |
| T10 | 27 | (P) 3/8" | 92.00 - 96.00 | 0.6000 | 0.2545 |
| T10 | 28 | (P) (1/2 ") FIBER | 92.00 - 96.00 | 0.6000 | 0.2545 |
| T11 | 1 | ATCB-B01-040(5/16") | 88.00 - 92.00 | 0.6000 | 0.1848 |
| T11 | 2 | LDF4-50A(1/2") | 88.00 - 92.00 | 0.6000 | 0.1848 |
| T11 | 3 | 2" Rigid Conduit | 88.00 - 92.00 | 0.6000 | 0.1848 |
| T11 | 4 | LDF4P-50A(1/2") | 88.00 - 92.00 | 0.6000 | 0.1848 |
| T11 | 8 | LDF6-50A(1-1/4") | 88.00 - 92.00 | 0.6000 | 0.1848 |
| T11 | 9 | Feedline Ladder (Af) | 88.00 - 92.00 | 0.6000 | 0.1848 |
| T11 | 12 | LDF6-50A(1-1/4") | 88.00 - 92.00 | 0.6000 | 0.1848 |
| T11 | 16 | Feedline Ladder (Af) | 88.00 - 92.00 | 0.6000 | 0.1848 |
| T11 | 24 | Safety Line 3/8 | 88.00 - 92.00 | 0.6000 | 0.1848 |
| T11 | 27 | (P) 3/8" | 88.00 - 92.00 | 0.6000 | 0.1848 |
| T11 | 28 | (P) (1/2 ") FIBER | 88.00 - 92.00 | 0.6000 | 0.1848 |
| T12 | 1 | ATCB-B01-040(5/16") | 84.00 - 88.00 | 0.6000 | 0.2094 |
| T12 | 2 | LDF4-50A(1/2") | 84.00 - 88.00 | 0.6000 | 0.2094 |
| T12 | 3 | 2" Rigid Conduit | 84.00 - 88.00 | 0.6000 | 0.2094 |
| T12 | 4 | LDF4P-50A(1/2") | 84.00 - 88.00 | 0.6000 | 0.2094 |
| T12 | 8 | LDF6-50A(1-1/4") | 84.00 - 88.00 | 0.6000 | 0.2094 |
| T12 | 9 | Feedline Ladder (Af) | 84.00 - 88.00 | 0.6000 | 0.2094 |
| T12 | 12 | LDF6-50A(1-1/4") | 84.00 - 88.00 | 0.6000 | 0.2094 |
| T12 | 16 | Feedline Ladder (Af) | 84.00 - 88.00 | 0.6000 | 0.2094 |
| T12 | 24 | Safety Line 3/8 | 84.00 - 88.00 | 0.6000 | 0.2094 |
| T12 | 27 | (P) 3/8" | 84.00 - 88.00 | 0.6000 | 0.2094 |
| T12 | 28 | (P) (1/2 ") FIBER | 84.00 - 88.00 | 0.6000 | 0.2094 |
| T13 | 1 | ATCB-B01-040(5/16") | 80.00 - 84.00 | 0.6000 | 0.2318 |
| T13 | 2 | LDF4-50A(1/2") | 80.00 - 84.00 | 0.6000 | 0.2318 |
| T13 | 3 | 2" Rigid Conduit | 80.00 - 84.00 | 0.6000 | 0.2318 |
| T13 | 4 | LDF4P-50A(1/2") | 80.00 - 84.00 | 0.6000 | 0.2318 |
| T13 | 8 | LDF6-50A(1-1/4") | 80.00 - 84.00 | 0.6000 | 0.2318 |
| T13 | 9 | Feedline Ladder (Af) | 80.00 - 84.00 | 0.6000 | 0.2318 |
| T13 | 12 | LDF6-50A(1-1/4") | 80.00 - 84.00 | 0.6000 | 0.2318 |
| T13 | 16 | Feedline Ladder (Af) | 80.00 - 84.00 | 0.6000 | 0.2318 |
| T13 | 24 | Safety Line 3/8 | 80.00 - 84.00 | 0.6000 | 0.2318 |
| T13 | 27 | (P) 3/8" | 80.00 - 84.00 | 0.6000 | 0.2318 |
| T13 | 28 | (P) (1/2 ") FIBER | 80.00 - 84.00 | 0.6000 | 0.2318 |
| T14 | 1 | ATCB-B01-040(5/16") | 75.00 - 80.00 | 0.6000 | 0.3414 |
| T14 | 2 | LDF4-50A(1/2") | 75.00 - 80.00 | 0.6000 | 0.3414 |
| T14 | 3 | 2" Rigid Conduit | 75.00 - 80.00 | 0.6000 | 0.3414 |
| T14 | 4 | LDF4P-50A(1/2") | 75.00 - 80.00 | 0.6000 | 0.3414 |
| T14 | 8 | LDF6-50A(1-1/4") | 75.00 - 80.00 | 0.6000 | 0.3414 |
| T14 | 9 | Feedline Ladder (Af) | 75.00 - 80.00 | 0.6000 | 0.3414 |
| T14 | 12 | LDF6-50A(1-1/4") | 75.00 - 80.00 | 0.6000 | 0.3414 |
| T14 | 16 | Feedline Ladder (Af) | 75.00 - 80.00 | 0.6000 | 0.3414 |
| T14 | 21 | LDF7-50A(1 5/8") | 75.00 - 80.00 | 0.6000 | 0.3414 |
| T14 | 24 | Safety Line 3/8 | 75.00 - 80.00 | 0.6000 | 0.3414 |
| T14 | 27 | (P) 3/8" | 75.00 - 80.00 | 0.6000 | 0.3414 |
| T14 | 28 | (P) (1/2 ") FIBER | 75.00 - 80.00 | 0.6000 | 0.3414 |
| T15 | 1 | ATCB-B01-040(5/16") | 70.00 - 75.00 | 0.6000 | 0.3957 |
| T15 | 2 | LDF4-50A(1/2") | 70.00 - 75.00 | 0.6000 | 0.3957 |
| T15 | 3 | 2" Rigid Conduit | 70.00 - 75.00 | 0.6000 | 0.3957 |
| T15 | 4 | LDF4P-50A(1/2") | 70.00 - 75.00 | 0.6000 | 0.3957 |
| T15 | 8 | LDF6-50A(1-1/4") | 70.00 - 75.00 | 0.6000 | 0.3957 |
| T15 | 9 | Feedline Ladder (Af) | 70.00 - 75.00 | 0.6000 | 0.3957 |
| T15 | 12 | LDF6-50A(1-1/4") | 70.00 - 75.00 | 0.6000 | 0.3957 |
| T15 | 16 | Feedline Ladder (Af) | 70.00 - 75.00 | 0.6000 | 0.3957 |
| T15 | 21 | LDF7-50A(1 5/8") | 70.00 - 75.00 | 0.6000 | 0.3957 |

| | | | |
|----------------|--|--------------------|-------------------|
| Job | 16-4584 130 SST | Page | 19 of 52 |
| Project | Glastonbury-main st, CT (CT46126-A-01) | Date | 17:28:31 12/08/16 |
| Client | SBA Communications Corporation | Designed by | bpaudel |

| Tower Section | Feed Line Record No. | Description | Feed Line Segment Elev. | K_a No Ice | K_a Ice |
|---------------|----------------------|----------------------|-------------------------|--------------|-----------|
| T15 | 24 | Safety Line 3/8 | 70.00 - 75.00 | 0.6000 | 0.3957 |
| T15 | 27 | (P) 3/8" | 70.00 - 75.00 | 0.6000 | 0.3957 |
| T15 | 28 | (P) (1/2 ") FIBER | 70.00 - 75.00 | 0.6000 | 0.3957 |
| T16 | 1 | ATCB-B01-040(5/16") | 65.00 - 70.00 | 0.6000 | 0.4201 |
| T16 | 2 | LDF4-50A(1/2") | 65.00 - 70.00 | 0.6000 | 0.4201 |
| T16 | 3 | 2" Rigid Conduit | 65.00 - 70.00 | 0.6000 | 0.4201 |
| T16 | 4 | LDF4P-50A(1/2") | 65.00 - 70.00 | 0.6000 | 0.4201 |
| T16 | 8 | LDF6-50A(1-1/4") | 65.00 - 70.00 | 0.6000 | 0.4201 |
| T16 | 9 | Feedline Ladder (Af) | 65.00 - 70.00 | 0.6000 | 0.4201 |
| T16 | 12 | LDF6-50A(1-1/4") | 65.00 - 70.00 | 0.6000 | 0.4201 |
| T16 | 16 | Feedline Ladder (Af) | 65.00 - 70.00 | 0.6000 | 0.4201 |
| T16 | 21 | LDF7-50A(1 5/8") | 65.00 - 70.00 | 0.6000 | 0.4201 |
| T16 | 24 | Safety Line 3/8 | 65.00 - 70.00 | 0.6000 | 0.4201 |
| T16 | 27 | (P) 3/8" | 65.00 - 70.00 | 0.6000 | 0.4201 |
| T16 | 28 | (P) (1/2 ") FIBER | 65.00 - 70.00 | 0.6000 | 0.4201 |
| T17 | 1 | ATCB-B01-040(5/16") | 60.00 - 65.00 | 0.6000 | 0.4424 |
| T17 | 2 | LDF4-50A(1/2") | 60.00 - 65.00 | 0.6000 | 0.4424 |
| T17 | 3 | 2" Rigid Conduit | 60.00 - 65.00 | 0.6000 | 0.4424 |
| T17 | 4 | LDF4P-50A(1/2") | 60.00 - 65.00 | 0.6000 | 0.4424 |
| T17 | 8 | LDF6-50A(1-1/4") | 60.00 - 65.00 | 0.6000 | 0.4424 |
| T17 | 9 | Feedline Ladder (Af) | 60.00 - 65.00 | 0.6000 | 0.4424 |
| T17 | 12 | LDF6-50A(1-1/4") | 60.00 - 65.00 | 0.6000 | 0.4424 |
| T17 | 16 | Feedline Ladder (Af) | 60.00 - 65.00 | 0.6000 | 0.4424 |
| T17 | 21 | LDF7-50A(1 5/8") | 60.00 - 65.00 | 0.6000 | 0.4424 |
| T17 | 24 | Safety Line 3/8 | 60.00 - 65.00 | 0.6000 | 0.4424 |
| T17 | 27 | (P) 3/8" | 60.00 - 65.00 | 0.6000 | 0.4424 |
| T17 | 28 | (P) (1/2 ") FIBER | 60.00 - 65.00 | 0.6000 | 0.4424 |
| T18 | 1 | ATCB-B01-040(5/16") | 55.00 - 60.00 | 0.6000 | 0.3853 |
| T18 | 2 | LDF4-50A(1/2") | 55.00 - 60.00 | 0.6000 | 0.3853 |
| T18 | 3 | 2" Rigid Conduit | 55.00 - 60.00 | 0.6000 | 0.3853 |
| T18 | 4 | LDF4P-50A(1/2") | 55.00 - 60.00 | 0.6000 | 0.3853 |
| T18 | 6 | Feedline Ladder (Af) | 55.00 - 60.00 | 0.6000 | 0.3853 |
| T18 | 8 | LDF6-50A(1-1/4") | 55.00 - 60.00 | 0.6000 | 0.3853 |
| T18 | 9 | Feedline Ladder (Af) | 55.00 - 60.00 | 0.6000 | 0.3853 |
| T18 | 12 | LDF6-50A(1-1/4") | 55.00 - 60.00 | 0.6000 | 0.3853 |
| T18 | 15 | Feedline Ladder (Af) | 55.00 - 60.00 | 0.6000 | 0.3853 |
| T18 | 21 | LDF7-50A(1 5/8") | 55.00 - 60.00 | 0.6000 | 0.3853 |
| T18 | 22 | LDF4P-50A(1/2") | 55.00 - 55.50 | 0.6000 | 0.3853 |
| T18 | 24 | Safety Line 3/8 | 55.00 - 60.00 | 0.6000 | 0.3853 |
| T18 | 27 | (P) 3/8" | 55.00 - 60.00 | 0.6000 | 0.3853 |
| T18 | 28 | (P) (1/2 ") FIBER | 55.00 - 60.00 | 0.6000 | 0.3853 |
| T19 | 1 | ATCB-B01-040(5/16") | 50.00 - 55.00 | 0.6000 | 0.4818 |
| T19 | 2 | LDF4-50A(1/2") | 50.00 - 55.00 | 0.6000 | 0.4818 |
| T19 | 3 | 2" Rigid Conduit | 50.00 - 55.00 | 0.6000 | 0.4818 |
| T19 | 4 | LDF4P-50A(1/2") | 50.00 - 55.00 | 0.6000 | 0.4818 |
| T19 | 5 | LDF4P-50A(1/2") | 50.00 - 50.50 | 0.6000 | 0.4818 |
| T19 | 6 | Feedline Ladder (Af) | 50.00 - 55.00 | 0.6000 | 0.4818 |
| T19 | 8 | LDF6-50A(1-1/4") | 50.00 - 55.00 | 0.6000 | 0.4818 |
| T19 | 9 | Feedline Ladder (Af) | 50.00 - 55.00 | 0.6000 | 0.4818 |
| T19 | 12 | LDF6-50A(1-1/4") | 50.00 - 55.00 | 0.6000 | 0.4818 |
| T19 | 15 | Feedline Ladder (Af) | 50.00 - 55.00 | 0.6000 | 0.4818 |
| T19 | 21 | LDF7-50A(1 5/8") | 50.00 - 55.00 | 0.6000 | 0.4818 |
| T19 | 22 | LDF4P-50A(1/2") | 50.00 - 55.00 | 0.6000 | 0.4818 |
| T19 | 24 | Safety Line 3/8 | 50.00 - 55.00 | 0.6000 | 0.4818 |
| T19 | 27 | (P) 3/8" | 50.00 - 55.00 | 0.6000 | 0.4818 |
| T19 | 28 | (P) (1/2 ") FIBER | 50.00 - 55.00 | 0.6000 | 0.4818 |
| T20 | 1 | ATCB-B01-040(5/16") | 45.00 - 50.00 | 0.6000 | 0.4994 |
| T20 | 2 | LDF4-50A(1/2") | 45.00 - 50.00 | 0.6000 | 0.4994 |
| T20 | 3 | 2" Rigid Conduit | 45.00 - 50.00 | 0.6000 | 0.4994 |
| T20 | 4 | LDF4P-50A(1/2") | 45.00 - 50.00 | 0.6000 | 0.4994 |
| T20 | 5 | LDF4P-50A(1/2") | 45.00 - 50.00 | 0.6000 | 0.4994 |
| T20 | 6 | Feedline Ladder (Af) | 45.00 - 50.00 | 0.6000 | 0.4994 |

| | | | |
|----------------|--|--------------------|-------------------|
| Job | 16-4584 130 SST | Page | 20 of 52 |
| Project | Glastonbury-main st, CT (CT46126-A-01) | Date | 17:28:31 12/08/16 |
| Client | SBA Communications Corporation | Designed by | bpaudel |

| Tower Section | Feed Line Record No. | Description | Feed Line Segment Elev. | K _a No Ice | K _a Ice |
|---------------|----------------------|----------------------|-------------------------|-----------------------|--------------------|
| T20 | 8 | LDF6-50A(1-1/4") | 45.00 - 50.00 | 0.6000 | 0.4994 |
| T20 | 9 | Feedline Ladder (Af) | 45.00 - 50.00 | 0.6000 | 0.4994 |
| T20 | 12 | LDF6-50A(1-1/4") | 45.00 - 50.00 | 0.6000 | 0.4994 |
| T20 | 15 | Feedline Ladder (Af) | 45.00 - 50.00 | 0.6000 | 0.4994 |
| T20 | 21 | LDF7-50A(1 5/8") | 45.00 - 50.00 | 0.6000 | 0.4994 |
| T20 | 22 | LDF4P-50A(1/2") | 45.00 - 50.00 | 0.6000 | 0.4994 |
| T20 | 24 | Safety Line 3/8 | 45.00 - 50.00 | 0.6000 | 0.4994 |
| T20 | 27 | (P) 3/8" | 45.00 - 50.00 | 0.6000 | 0.4994 |
| T20 | 28 | (P) (1/2 ") FIBER | 45.00 - 50.00 | 0.6000 | 0.4994 |
| T21 | 1 | ATCB-B01-040(5/16") | 40.00 - 45.00 | 0.6000 | 0.4045 |
| T21 | 2 | LDF4-50A(1/2") | 40.00 - 45.00 | 0.6000 | 0.4045 |
| T21 | 3 | 2" Rigid Conduit | 40.00 - 45.00 | 0.6000 | 0.4045 |
| T21 | 4 | LDF4P-50A(1/2") | 40.00 - 45.00 | 0.6000 | 0.4045 |
| T21 | 5 | LDF4P-50A(1/2") | 40.00 - 45.00 | 0.6000 | 0.4045 |
| T21 | 6 | Feedline Ladder (Af) | 40.00 - 45.00 | 0.6000 | 0.4045 |
| T21 | 8 | LDF6-50A(1-1/4") | 40.00 - 45.00 | 0.6000 | 0.4045 |
| T21 | 9 | Feedline Ladder (Af) | 40.00 - 45.00 | 0.6000 | 0.4045 |
| T21 | 12 | LDF6-50A(1-1/4") | 40.00 - 45.00 | 0.6000 | 0.4045 |
| T21 | 15 | Feedline Ladder (Af) | 40.00 - 45.00 | 0.6000 | 0.4045 |
| T21 | 21 | LDF7-50A(1 5/8") | 40.00 - 45.00 | 0.6000 | 0.4045 |
| T21 | 22 | LDF4P-50A(1/2") | 40.00 - 45.00 | 0.6000 | 0.4045 |
| T21 | 24 | Safety Line 3/8 | 40.00 - 45.00 | 0.6000 | 0.4045 |
| T21 | 27 | (P) 3/8" | 40.00 - 45.00 | 0.6000 | 0.4045 |
| T21 | 28 | (P) (1/2 ") FIBER | 40.00 - 45.00 | 0.6000 | 0.4045 |
| T22 | 1 | ATCB-B01-040(5/16") | 33.33 - 40.00 | 0.6000 | 0.5516 |
| T22 | 2 | LDF4-50A(1/2") | 33.33 - 40.00 | 0.6000 | 0.5516 |
| T22 | 3 | 2" Rigid Conduit | 33.33 - 40.00 | 0.6000 | 0.5516 |
| T22 | 4 | LDF4P-50A(1/2") | 33.33 - 40.00 | 0.6000 | 0.5516 |
| T22 | 5 | LDF4P-50A(1/2") | 33.33 - 40.00 | 0.6000 | 0.5516 |
| T22 | 6 | Feedline Ladder (Af) | 33.33 - 40.00 | 0.6000 | 0.5516 |
| T22 | 8 | LDF6-50A(1-1/4") | 33.33 - 40.00 | 0.6000 | 0.5516 |
| T22 | 9 | Feedline Ladder (Af) | 33.33 - 40.00 | 0.6000 | 0.5516 |
| T22 | 12 | LDF6-50A(1-1/4") | 33.33 - 40.00 | 0.6000 | 0.5516 |
| T22 | 15 | Feedline Ladder (Af) | 33.33 - 40.00 | 0.6000 | 0.5516 |
| T22 | 21 | LDF7-50A(1 5/8") | 33.33 - 40.00 | 0.6000 | 0.5516 |
| T22 | 22 | LDF4P-50A(1/2") | 33.33 - 40.00 | 0.6000 | 0.5516 |
| T22 | 24 | Safety Line 3/8 | 33.33 - 40.00 | 0.6000 | 0.5516 |
| T22 | 27 | (P) 3/8" | 33.33 - 40.00 | 0.6000 | 0.5516 |
| T22 | 28 | (P) (1/2 ") FIBER | 33.33 - 40.00 | 0.6000 | 0.5516 |
| T23 | 1 | ATCB-B01-040(5/16") | 26.67 - 33.33 | 0.6000 | 0.5719 |
| T23 | 2 | LDF4-50A(1/2") | 26.67 - 33.33 | 0.6000 | 0.5719 |
| T23 | 3 | 2" Rigid Conduit | 26.67 - 33.33 | 0.6000 | 0.5719 |
| T23 | 4 | LDF4P-50A(1/2") | 26.67 - 33.33 | 0.6000 | 0.5719 |
| T23 | 5 | LDF4P-50A(1/2") | 26.67 - 33.33 | 0.6000 | 0.5719 |
| T23 | 6 | Feedline Ladder (Af) | 26.67 - 33.33 | 0.6000 | 0.5719 |
| T23 | 8 | LDF6-50A(1-1/4") | 26.67 - 33.33 | 0.6000 | 0.5719 |
| T23 | 9 | Feedline Ladder (Af) | 26.67 - 33.33 | 0.6000 | 0.5719 |
| T23 | 12 | LDF6-50A(1-1/4") | 26.67 - 33.33 | 0.6000 | 0.5719 |
| T23 | 15 | Feedline Ladder (Af) | 26.67 - 33.33 | 0.6000 | 0.5719 |
| T23 | 21 | LDF7-50A(1 5/8") | 26.67 - 33.33 | 0.6000 | 0.5719 |
| T23 | 22 | LDF4P-50A(1/2") | 26.67 - 33.33 | 0.6000 | 0.5719 |
| T23 | 24 | Safety Line 3/8 | 26.67 - 33.33 | 0.6000 | 0.5719 |
| T23 | 27 | (P) 3/8" | 26.67 - 33.33 | 0.6000 | 0.5719 |
| T23 | 28 | (P) (1/2 ") FIBER | 26.67 - 33.33 | 0.6000 | 0.5719 |
| T24 | 1 | ATCB-B01-040(5/16") | 20.00 - 26.67 | 0.6000 | 0.5914 |
| T24 | 2 | LDF4-50A(1/2") | 20.00 - 26.67 | 0.6000 | 0.5914 |
| T24 | 3 | 2" Rigid Conduit | 20.00 - 26.67 | 0.6000 | 0.5914 |
| T24 | 4 | LDF4P-50A(1/2") | 20.00 - 26.67 | 0.6000 | 0.5914 |
| T24 | 5 | LDF4P-50A(1/2") | 20.00 - 26.67 | 0.6000 | 0.5914 |
| T24 | 6 | Feedline Ladder (Af) | 20.00 - 26.67 | 0.6000 | 0.5914 |
| T24 | 8 | LDF6-50A(1-1/4") | 20.00 - 26.67 | 0.6000 | 0.5914 |
| T24 | 9 | Feedline Ladder (Af) | 20.00 - 26.67 | 0.6000 | 0.5914 |

| | | |
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| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job 16-4584 130 SST | Page 21 of 52 |
| | Project Glastonbury-main st, CT (CT46126-A-01) | Date 17:28:31 12/08/16 |
| | Client SBA Communications Corporation | Designed by bpaudel |

| Tower Section | Feed Line Record No. | Description | Feed Line Segment Elev. | K_a No Ice | K_a Ice |
|---------------|----------------------|----------------------|-------------------------|--------------|-----------|
| T24 | 12 | LDF6-50A(1-1/4") | 20.00 - 26.67 | 0.6000 | 0.5914 |
| T24 | 15 | Feedline Ladder (Af) | 20.00 - 26.67 | 0.6000 | 0.5914 |
| T24 | 21 | LDF7-50A(1 5/8") | 20.00 - 26.67 | 0.6000 | 0.5914 |
| T24 | 22 | LDF4P-50A(1/2") | 20.00 - 26.67 | 0.6000 | 0.5914 |
| T24 | 24 | Safety Line 3/8 | 20.00 - 26.67 | 0.6000 | 0.5914 |
| T24 | 27 | (P) 3/8" | 20.00 - 26.67 | 0.6000 | 0.5914 |
| T24 | 28 | (P) (1/2 ") FIBER | 20.00 - 26.67 | 0.6000 | 0.5914 |
| T25 | 1 | ATCB-B01-040(5/16") | 13.33 - 20.00 | 0.6000 | 0.6000 |
| T25 | 2 | LDF4-50A(1/2") | 13.33 - 20.00 | 0.6000 | 0.6000 |
| T25 | 3 | 2" Rigid Conduit | 13.33 - 20.00 | 0.6000 | 0.6000 |
| T25 | 4 | LDF4P-50A(1/2") | 13.33 - 20.00 | 0.6000 | 0.6000 |
| T25 | 5 | LDF4P-50A(1/2") | 13.33 - 20.00 | 0.6000 | 0.6000 |
| T25 | 6 | Feedline Ladder (Af) | 13.33 - 20.00 | 0.6000 | 0.6000 |
| T25 | 8 | LDF6-50A(1-1/4") | 13.33 - 20.00 | 0.6000 | 0.6000 |
| T25 | 9 | Feedline Ladder (Af) | 13.33 - 20.00 | 0.6000 | 0.6000 |
| T25 | 12 | LDF6-50A(1-1/4") | 13.33 - 20.00 | 0.6000 | 0.6000 |
| T25 | 15 | Feedline Ladder (Af) | 13.33 - 20.00 | 0.6000 | 0.6000 |
| T25 | 21 | LDF7-50A(1 5/8") | 13.33 - 20.00 | 0.6000 | 0.6000 |
| T25 | 22 | LDF4P-50A(1/2") | 13.33 - 20.00 | 0.6000 | 0.6000 |
| T25 | 24 | Safety Line 3/8 | 13.33 - 20.00 | 0.6000 | 0.6000 |
| T25 | 27 | (P) 3/8" | 13.33 - 20.00 | 0.6000 | 0.6000 |
| T25 | 28 | (P) (1/2 ") FIBER | 13.33 - 20.00 | 0.6000 | 0.6000 |
| T26 | 1 | ATCB-B01-040(5/16") | 6.67 - 13.33 | 0.6000 | 0.5656 |
| T26 | 2 | LDF4-50A(1/2") | 6.67 - 13.33 | 0.6000 | 0.5656 |
| T26 | 3 | 2" Rigid Conduit | 6.67 - 13.33 | 0.6000 | 0.5656 |
| T26 | 4 | LDF4P-50A(1/2") | 6.67 - 13.33 | 0.6000 | 0.5656 |
| T26 | 5 | LDF4P-50A(1/2") | 6.67 - 13.33 | 0.6000 | 0.5656 |
| T26 | 6 | Feedline Ladder (Af) | 6.67 - 13.33 | 0.6000 | 0.5656 |
| T26 | 8 | LDF6-50A(1-1/4") | 6.67 - 13.33 | 0.6000 | 0.5656 |
| T26 | 9 | Feedline Ladder (Af) | 6.67 - 13.33 | 0.6000 | 0.5656 |
| T26 | 12 | LDF6-50A(1-1/4") | 6.67 - 13.33 | 0.6000 | 0.5656 |
| T26 | 15 | Feedline Ladder (Af) | 6.67 - 13.33 | 0.6000 | 0.5656 |
| T26 | 21 | LDF7-50A(1 5/8") | 6.67 - 13.33 | 0.6000 | 0.5656 |
| T26 | 22 | LDF4P-50A(1/2") | 6.67 - 13.33 | 0.6000 | 0.5656 |
| T26 | 24 | Safety Line 3/8 | 6.67 - 13.33 | 0.6000 | 0.5656 |
| T26 | 27 | (P) 3/8" | 6.67 - 13.33 | 0.6000 | 0.5656 |
| T26 | 28 | (P) (1/2 ") FIBER | 6.67 - 13.33 | 0.6000 | 0.5656 |
| T27 | 1 | ATCB-B01-040(5/16") | 6.00 - 6.67 | 0.6000 | 0.6000 |
| T27 | 2 | LDF4-50A(1/2") | 6.00 - 6.67 | 0.6000 | 0.6000 |
| T27 | 3 | 2" Rigid Conduit | 0.00 - 6.67 | 0.6000 | 0.6000 |
| T27 | 4 | LDF4P-50A(1/2") | 6.00 - 6.67 | 0.6000 | 0.6000 |
| T27 | 5 | LDF4P-50A(1/2") | 6.00 - 6.67 | 0.6000 | 0.6000 |
| T27 | 6 | Feedline Ladder (Af) | 0.00 - 6.67 | 0.6000 | 0.6000 |
| T27 | 8 | LDF6-50A(1-1/4") | 6.00 - 6.67 | 0.6000 | 0.6000 |
| T27 | 9 | Feedline Ladder (Af) | 0.00 - 6.67 | 0.6000 | 0.6000 |
| T27 | 12 | LDF6-50A(1-1/4") | 6.00 - 6.67 | 0.6000 | 0.6000 |
| T27 | 15 | Feedline Ladder (Af) | 0.00 - 6.67 | 0.6000 | 0.6000 |
| T27 | 21 | LDF7-50A(1 5/8") | 6.00 - 6.67 | 0.6000 | 0.6000 |
| T27 | 22 | LDF4P-50A(1/2") | 6.00 - 6.67 | 0.6000 | 0.6000 |
| T27 | 24 | Safety Line 3/8 | 0.00 - 6.67 | 0.6000 | 0.6000 |
| T27 | 27 | (P) 3/8" | 6.00 - 6.67 | 0.6000 | 0.6000 |
| T27 | 28 | (P) (1/2 ") FIBER | 6.00 - 6.67 | 0.6000 | 0.6000 |

Discrete Tower Loads

| | | | | |
|---|----------------|--|--------------------|-------------------|
| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job | 16-4584 130 SST | Page | 22 of 52 |
| | Project | Glastonbury-main st, CT (CT46126-A-01) | Date | 17:28:31 12/08/16 |
| | Client | SBA Communications Corporation | Designed by | bpaudel |

| Description | Face or Leg | Offset Type | Offsets: | | Azimuth Adjustment | Placement | C _{AA} Front | C _{AA} Side | Weight |
|------------------------------------|-------------|-------------|----------|---------|--------------------|-----------|-----------------------|----------------------|--------|
| | | | Horz | Lateral | | | | | |
| LLPX310R w/ Mount Pipe (E) | A | From Leg | 4.000 | 0' 0' | 0.000 | 128' | No Ice 5.065 | 2.985 | 0.045 |
| | | | | 0' | | | 1/2" Ice 5.480 | 3.528 | 0.083 |
| | | | | 0' | | | 1" Ice 5.905 | 4.087 | 0.126 |
| LLPX310R w/ Mount Pipe (E) | B | From Leg | 4.000 | 0' 0' | 0.000 | 128' | No Ice 5.065 | 2.985 | 0.045 |
| | | | | 0' | | | 1/2" Ice 5.480 | 3.528 | 0.083 |
| | | | | 0' | | | 1" Ice 5.905 | 4.087 | 0.126 |
| 840 10054 w/ Mount Pipe (E) | C | From Leg | 4.000 | 0' 0' | 0.000 | 128' | No Ice 5.413 | 2.385 | 0.051 |
| | | | | 0' | | | 1/2" Ice 5.833 | 2.917 | 0.088 |
| | | | | 0' | | | 1" Ice 6.263 | 3.466 | 0.129 |
| 24"x14"x9" (E) | A | From Leg | 4.000 | 0' 0' | 0.000 | 128' | No Ice 3.442 | 2.639 | 0.064 |
| | | | | 0' | | | 1/2" Ice 3.696 | 2.870 | 0.091 |
| | | | | 0' | | | 1" Ice 3.959 | 3.111 | 0.122 |
| 24"x14"x9" (E) | B | From Leg | 4.000 | 0' 0' | 0.000 | 128' | No Ice 3.442 | 2.639 | 0.064 |
| | | | | 0' | | | 1/2" Ice 3.696 | 2.870 | 0.091 |
| | | | | 0' | | | 1" Ice 3.959 | 3.111 | 0.122 |
| 24"x14"x9" (E) | C | From Leg | 4.000 | 0' 0' | 0.000 | 128' | No Ice 3.442 | 2.639 | 0.064 |
| | | | | 0' | | | 1/2" Ice 3.696 | 2.870 | 0.091 |
| | | | | 0' | | | 1" Ice 3.959 | 3.111 | 0.122 |
| TIMING 2000 (E) | C | From Leg | 4.000 | 0' 0' | 0.000 | 128' | No Ice 0.126 | 0.126 | 0.001 |
| | | | | 0' | | | 1/2" Ice 0.177 | 0.177 | 0.002 |
| | | | | 0' | | | 1" Ice 0.237 | 0.237 | 0.005 |
| MODEM (E) | A | From Leg | 4.000 | 0' -4' | 0.000 | 128' | No Ice 0.130 | 0.107 | 0.002 |
| | | | | 0' | | | 1/2" Ice 0.183 | 0.157 | 0.003 |
| | | | | -4' | | | 1" Ice 0.244 | 0.215 | 0.005 |
| MODEM (E) | B | From Leg | 4.000 | 0' -4' | 0.000 | 128' | No Ice 0.130 | 0.107 | 0.002 |
| | | | | 0' | | | 1/2" Ice 0.183 | 0.157 | 0.003 |
| | | | | -4' | | | 1" Ice 0.244 | 0.215 | 0.005 |
| MODEM (E) | C | From Leg | 4.000 | 0' -4' | 0.000 | 128' | No Ice 0.130 | 0.107 | 0.002 |
| | | | | 0' | | | 1/2" Ice 0.183 | 0.157 | 0.003 |
| | | | | -4' | | | 1" Ice 0.244 | 0.215 | 0.005 |
| Sector Mount [SM 803-3] (E) | C | None | | | 0.000 | 128' | No Ice 40.400 | 40.400 | 0.985 |
| | | | | | | | 1/2" Ice 51.200 | 51.200 | 1.226 |
| | | | | | | | 1" Ice 62.000 | 62.000 | 1.467 |
| *R* | | | | | | | | | |
| APXVTM14-C-120 w/ Mount Pipe (E) | A | From Leg | 4.000 | 0' 1'6" | 0.000 | 118'6" | No Ice 7.134 | 4.959 | 0.077 |
| | | | | 0' | | | 1/2" Ice 7.662 | 5.754 | 0.131 |
| | | | | 1'6" | | | 1" Ice 8.183 | 6.472 | 0.193 |
| APXVTM14-C-120 w/ Mount Pipe (E) | B | From Leg | 4.000 | 0' 1'6" | 0.000 | 118'6" | No Ice 7.134 | 4.959 | 0.077 |
| | | | | 0' | | | 1/2" Ice 7.662 | 5.754 | 0.131 |
| | | | | 1'6" | | | 1" Ice 8.183 | 6.472 | 0.193 |
| APXVTM14-C-120 w/ Mount Pipe (E) | C | From Leg | 4.000 | 0' 1'6" | 0.000 | 118'6" | No Ice 7.134 | 4.959 | 0.077 |
| | | | | 0' | | | 1/2" Ice 7.662 | 5.754 | 0.131 |
| | | | | 1'6" | | | 1" Ice 8.183 | 6.472 | 0.193 |
| APXVSPP18-C-A20 w/ Mount Pipe (E) | A | From Leg | 4.000 | 0' 0' | 0.000 | 118'6" | No Ice 8.498 | 6.946 | 0.083 |
| | | | | 0' | | | 1/2" Ice 9.149 | 8.127 | 0.151 |
| | | | | 0' | | | 1" Ice 9.767 | 9.021 | 0.227 |
| APXVSPP18-C-A20 w/ Mount Pipe (E) | B | From Leg | 4.000 | 0' 0' | 0.000 | 118'6" | No Ice 8.498 | 6.946 | 0.083 |
| | | | | 0' | | | 1/2" Ice 9.149 | 8.127 | 0.151 |
| | | | | 0' | | | 1" Ice 9.767 | 9.021 | 0.227 |
| P40-16-XLPP-RR-A w/ Mount Pipe (E) | C | From Leg | 4.000 | 0' 0' | 0.000 | 118'6" | No Ice 9.373 | 4.825 | 0.073 |
| | | | | 0' | | | 1/2" Ice 9.912 | 5.571 | 0.136 |
| | | | | 0' | | | 1" Ice 10.450 | 6.265 | 0.205 |
| TD-RRH8x20-25 (E) | A | From Leg | 4.000 | 0' 1'6" | 0.000 | 118'6" | No Ice 4.720 | 1.703 | 0.070 |
| | | | | 0' | | | 1/2" Ice 5.014 | 1.920 | 0.097 |
| | | | | 1'6" | | | 1" Ice 5.316 | 2.145 | 0.128 |
| TD-RRH8x20-25 (E) | B | From Leg | 4.000 | 0' 0' | 0.000 | 118'6" | No Ice 4.720 | 1.703 | 0.070 |
| | | | | 0' | | | 1/2" Ice 5.014 | 1.920 | 0.097 |

| | | | | | | | | | | |
|---|----------------|--|--|--|--|--|--------------------|--|-------------------|--|
| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job | | 16-4584 130 SST | | | | Page | | 23 of 52 | |
| | Project | | Glastonbury-main st, CT (CT46126-A-01) | | | | Date | | 17:28:31 12/08/16 | |
| | Client | | SBA Communications Corporation | | | | Designed by | | bpaudel | |

| Description | Face or Leg | Offset Type | Offsets: | | Azimuth Adjustment | Placement | C _{AA} Front | C _{AA} Side | Weight | |
|----------------------------|-------------|-------------|----------|---------|--------------------|-----------|-----------------------|----------------------|--------|-------|
| | | | Horz | Lateral | | | | | | |
| | | | Vert | | | | | | | |
| | | | ft | ft | ° | ft | ft ² | ft ² | K | |
| | | | ft | | | | | | | |
| TD-RRH8x20-25 (E) | C | From Leg | 1'6" | | 0.000 | 118'6" | 1" Ice | 5.316 | 2.145 | 0.128 |
| | | | 4.000 | | | | No Ice | 4.720 | 1.703 | 0.070 |
| | | | 0" | | | | 1/2" Ice | 5.014 | 1.920 | 0.097 |
| 1900 MHz (E) | A | From Leg | 1'6" | | 0.000 | 118'6" | 1" Ice | 5.316 | 2.145 | 0.128 |
| | | | 4.000 | | | | No Ice | 2.781 | 1.497 | 0.044 |
| | | | 0" | | | | 1/2" Ice | 3.012 | 1.690 | 0.063 |
| 1900 MHz (E) | B | From Leg | 0" | | 0.000 | 118'6" | 1" Ice | 3.252 | 1.890 | 0.084 |
| | | | 4.000 | | | | No Ice | 2.781 | 1.497 | 0.044 |
| | | | 0" | | | | 1/2" Ice | 3.012 | 1.690 | 0.063 |
| 1900 MHz (E) | C | From Leg | 0" | | 0.000 | 118'6" | 1" Ice | 3.252 | 1.890 | 0.084 |
| | | | 4.000 | | | | No Ice | 2.781 | 1.497 | 0.044 |
| | | | 0" | | | | 1/2" Ice | 3.012 | 1.690 | 0.063 |
| 800 MHz (E) | A | From Leg | 0" | | 0.000 | 118'6" | 1" Ice | 3.252 | 1.890 | 0.084 |
| | | | 4.000 | | | | No Ice | 2.490 | 2.068 | 0.053 |
| | | | 0" | | | | 1/2" Ice | 2.706 | 2.271 | 0.074 |
| 800 MHz (E) | B | From Leg | 0" | | 0.000 | 118'6" | 1" Ice | 2.931 | 2.481 | 0.098 |
| | | | 4.000 | | | | No Ice | 2.490 | 2.068 | 0.053 |
| | | | 0" | | | | 1/2" Ice | 2.706 | 2.271 | 0.074 |
| 800 MHz (E) | C | From Leg | 0" | | 0.000 | 118'6" | 1" Ice | 2.931 | 2.481 | 0.098 |
| | | | 4.000 | | | | No Ice | 2.490 | 2.068 | 0.053 |
| | | | 0" | | | | 1/2" Ice | 2.706 | 2.271 | 0.074 |
| (2) ACU-A20-N RETs (E) | A | From Leg | 0" | | 0.000 | 118'6" | 1" Ice | 2.931 | 2.481 | 0.098 |
| | | | 4.000 | | | | No Ice | 0.078 | 0.136 | 0.001 |
| | | | 0" | | | | 1/2" Ice | 0.121 | 0.189 | 0.002 |
| ACU-A20-N RETs (E) | B | From Leg | 0" | | 0.000 | 118'6" | 1" Ice | 0.173 | 0.251 | 0.004 |
| | | | 4.000 | | | | No Ice | 0.078 | 0.136 | 0.001 |
| | | | 0" | | | | 1/2" Ice | 0.121 | 0.189 | 0.002 |
| ACU-A20-N RETs (E) | C | From Leg | 0" | | 0.000 | 118'6" | 1" Ice | 0.173 | 0.251 | 0.004 |
| | | | 4.000 | | | | No Ice | 0.078 | 0.136 | 0.001 |
| | | | 0" | | | | 1/2" Ice | 0.121 | 0.189 | 0.002 |
| 800 MHz Filter (E) | A | From Leg | 0" | | 0.000 | 118'6" | 1" Ice | 0.173 | 0.251 | 0.004 |
| | | | 4.000 | | | | No Ice | 1.820 | 0.604 | 0.009 |
| | | | 0" | | | | 1/2" Ice | 2.008 | 0.747 | 0.019 |
| 800 MHz Filter (E) | B | From Leg | 0" | | 0.000 | 118'6" | 1" Ice | 2.205 | 0.899 | 0.032 |
| | | | 4.000 | | | | No Ice | 1.820 | 0.604 | 0.009 |
| | | | 0" | | | | 1/2" Ice | 2.008 | 0.747 | 0.019 |
| 800 MHz Filter (E) | C | From Leg | 0" | | 0.000 | 118'6" | 1" Ice | 2.205 | 0.899 | 0.032 |
| | | | 4.000 | | | | No Ice | 1.820 | 0.604 | 0.009 |
| | | | 0" | | | | 1/2" Ice | 2.008 | 0.747 | 0.019 |
| 6' x 2" Mount Pipe (E) | A | From Leg | 0" | | 0.000 | 118'6" | 1" Ice | 2.205 | 0.899 | 0.032 |
| | | | 4.000 | | | | No Ice | 1.425 | 1.425 | 0.022 |
| | | | 0" | | | | 1/2" Ice | 1.925 | 1.925 | 0.033 |
| 6' x 2" Mount Pipe (E) | B | From Leg | 0" | | 0.000 | 118'6" | 1" Ice | 2.294 | 2.294 | 0.048 |
| | | | 4.000 | | | | No Ice | 1.425 | 1.425 | 0.022 |
| | | | 0" | | | | 1/2" Ice | 1.925 | 1.925 | 0.033 |
| 6' x 2" Mount Pipe (E) | C | From Leg | 0" | | 0.000 | 118'6" | 1" Ice | 2.294 | 2.294 | 0.048 |
| | | | 4.000 | | | | No Ice | 1.425 | 1.425 | 0.022 |
| | | | 0" | | | | 1/2" Ice | 1.925 | 1.925 | 0.033 |
| T-Arm Mount [TA 601-3] (E) | C | None | 0" | | 0.000 | 118'6" | 1" Ice | 2.294 | 2.294 | 0.048 |
| | | | | | | | No Ice | 10.900 | 10.900 | 0.726 |
| | | | | | | | 1/2" Ice | 14.650 | 14.650 | 0.926 |
| *R* (2) LGP13519 (E) | A | From Leg | 0" | | 0.000 | 110' | 1" Ice | 18.400 | 18.400 | 1.125 |
| | | | 4.000 | | | | No Ice | 0.338 | 0.207 | 0.005 |
| | | | 0" | | | | 1/2" Ice | 0.422 | 0.280 | 0.008 |
| (2) LGP13519 (E) | B | From Leg | 0" | | 0.000 | 110' | 1" Ice | 0.515 | 0.362 | 0.012 |
| | | | 4.000 | | | | No Ice | 0.338 | 0.207 | 0.005 |
| | | | 0" | | | | | | | |

| | | | | | | | | |
|---|----------------|--|--|--|--------------------|--|-------------------|--|
| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job | | 16-4584 130 SST | | Page | | 24 of 52 | |
| | Project | | Glastonbury-main st, CT (CT46126-A-01) | | Date | | 17:28:31 12/08/16 | |
| | Client | | SBA Communications Corporation | | Designed by | | bpaudel | |

| Description | Face or Leg | Offset Type | Offsets: | | Azimuth Adjustment | Placement | C _{AA} Front | C _{AA} Side | Weight |
|-------------------------|-------------|-------------|----------|---------|--------------------|-----------|-----------------------|----------------------|--------|
| | | | Horz | Lateral | | | | | |
| (E) | | | 0' | | | | | | 0.008 |
| (2) LGP13519 | C | From Leg | 4.000 | 0.000 | 110' | No Ice | 0.338 | 0.207 | 0.005 |
| (E) | | | 0' | | | 1/2" Ice | 0.422 | 0.280 | 0.008 |
| (2) LGP21401 | A | From Leg | 4.000 | 0.000 | 110' | No Ice | 1.288 | 0.233 | 0.014 |
| (E) | | | 0' | | | 1/2" Ice | 1.445 | 0.313 | 0.021 |
| (2) LGP21401 | B | From Leg | 4.000 | 0.000 | 110' | No Ice | 1.288 | 0.233 | 0.014 |
| (E) | | | 0' | | | 1/2" Ice | 1.445 | 0.313 | 0.021 |
| (2) LGP21401 | C | From Leg | 4.000 | 0.000 | 110' | No Ice | 1.288 | 0.233 | 0.014 |
| (E) | | | 0' | | | 1/2" Ice | 1.445 | 0.313 | 0.021 |
| (2) RRUS-11 1900MHz | A | From Face | 0.500 | 0.000 | 110' | No Ice | 2.942 | 1.190 | 0.044 |
| (E) | | | 0' | | | 1/2" Ice | 3.172 | 1.351 | 0.063 |
| (2) RRUS-11 1900MHz | B | From Face | 0.500 | 0.000 | 110' | No Ice | 2.942 | 1.190 | 0.044 |
| (E) | | | 0' | | | 1/2" Ice | 3.172 | 1.351 | 0.063 |
| (2) RRUS-11 1900MHz | C | From Face | 0.500 | 0.000 | 110' | No Ice | 2.942 | 1.190 | 0.044 |
| (E) | | | 0' | | | 1/2" Ice | 3.172 | 1.351 | 0.063 |
| DC6-48-60-18-8F | B | From Leg | 0.500 | 0.000 | 110' | No Ice | 1.467 | 1.467 | 0.019 |
| (E) | | | 0' | | | 1/2" Ice | 1.667 | 1.667 | 0.037 |
| Sector Mount [SM 409-3] | C | None | | 0.000 | 110' | No Ice | 22.470 | 22.470 | 1.035 |
| (E) | | | | | | 1/2" Ice | 31.990 | 31.990 | 1.500 |
| | | | | | | 1" Ice | 41.510 | 41.510 | 1.966 |
| *R* | | | | | | | | | |
| AIR 21 B2A/B4P | A | From Leg | 4.000 | 0.000 | 93' | No Ice | 6.522 | 4.256 | 0.092 |
| (E) | | | 0' | | | 1/2" Ice | 6.966 | 4.656 | 0.133 |
| AIR 21 B2A/B4P | B | From Leg | 4.000 | 0.000 | 93' | No Ice | 6.522 | 4.256 | 0.092 |
| (E) | | | 0' | | | 1/2" Ice | 6.966 | 4.656 | 0.133 |
| AIR 21 B2A/B4P | C | From Leg | 4.000 | 0.000 | 93' | No Ice | 6.522 | 4.256 | 0.092 |
| (E) | | | 0' | | | 1/2" Ice | 6.966 | 4.656 | 0.133 |
| AIR 21 B4A/B2P | A | From Leg | 4.000 | 0.000 | 93' | No Ice | 6.522 | 4.256 | 0.090 |
| (E) | | | 0' | | | 1/2" Ice | 6.966 | 4.656 | 0.132 |
| AIR 21 B4A/B2P | B | From Leg | 4.000 | 0.000 | 93' | No Ice | 6.522 | 4.256 | 0.090 |
| (E) | | | 0' | | | 1/2" Ice | 6.966 | 4.656 | 0.132 |
| AIR 21 B4A/B2P | C | From Leg | 4.000 | 0.000 | 93' | No Ice | 6.522 | 4.256 | 0.090 |
| (E) | | | 0' | | | 1/2" Ice | 6.966 | 4.656 | 0.132 |
| KRY 112 144/1 TMA | A | From Leg | 4.000 | 0.000 | 93' | No Ice | 0.411 | 0.189 | 0.011 |
| (E) | | | 0' | | | 1/2" Ice | 0.500 | 0.256 | 0.014 |
| KRY 112 144/1 TMA | B | From Leg | 4.000 | 0.000 | 93' | No Ice | 0.411 | 0.189 | 0.011 |
| (E) | | | 0' | | | 1/2" Ice | 0.500 | 0.256 | 0.014 |
| KRY 112 144/1 TMA | C | From Leg | 4.000 | 0.000 | 93' | No Ice | 0.411 | 0.189 | 0.011 |
| (E) | | | 0' | | | 1/2" Ice | 0.500 | 0.256 | 0.014 |
| | | | 0' | | | 1" Ice | 0.597 | 0.332 | 0.018 |

| | | | | |
|---|----------------|--|--------------------|-------------------|
| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job | 16-4584 130 SST | Page | 25 of 52 |
| | Project | Glastonbury-main st, CT (CT46126-A-01) | Date | 17:28:31 12/08/16 |
| | Client | SBA Communications Corporation | Designed by | bpaudel |

| Description | Face or Leg | Offset Type | Offsets: | | Azimuth Adjustment | Placement | C _{AA} Front | C _{AA} Side | Weight |
|--|-------------|-------------|----------|---------|--------------------|-----------|-----------------------|----------------------|--------|
| | | | Horz | Lateral | | | | | |
| LNx-6515DS-A1M w/ Mount Pipe (P) | A | From Leg | 4.000 | 0' 0' | 0.000 | 93' | No Ice 11.683 | 9.842 | 0.083 |
| | | | | 0' | | | 1/2" Ice 12.404 | 11.366 | 0.173 |
| | | | | 0' | | | 1" Ice 13.135 | 12.914 | 0.273 |
| LNx-6515DS-A1M w/ Mount Pipe (P) | B | From Leg | 4.000 | 0' 0' | 0.000 | 93' | No Ice 11.683 | 9.842 | 0.083 |
| | | | | 0' | | | 1/2" Ice 12.404 | 11.366 | 0.173 |
| | | | | 0' | | | 1" Ice 13.135 | 12.914 | 0.273 |
| LNx-6515DS-A1M w/ Mount Pipe (P) | C | From Leg | 4.000 | 0' 0' | 0.000 | 93' | No Ice 11.683 | 9.842 | 0.083 |
| | | | | 0' | | | 1/2" Ice 12.404 | 11.366 | 0.173 |
| | | | | 0' | | | 1" Ice 13.135 | 12.914 | 0.273 |
| S11B12 (P) | A | From Leg | 4.000 | 0' 0' | 0.000 | 93' | No Ice 3.306 | 1.361 | 0.051 |
| | | | | 0' | | | 1/2" Ice 3.550 | 1.540 | 0.072 |
| | | | | 0' | | | 1" Ice 3.802 | 1.728 | 0.096 |
| S11B12 (P) | B | From Leg | 4.000 | 0' 0' | 0.000 | 93' | No Ice 3.306 | 1.361 | 0.051 |
| | | | | 0' | | | 1/2" Ice 3.550 | 1.540 | 0.072 |
| | | | | 0' | | | 1" Ice 3.802 | 1.728 | 0.096 |
| S11B12 (P) | C | From Leg | 4.000 | 0' 0' | 0.000 | 93' | No Ice 3.306 | 1.361 | 0.051 |
| | | | | 0' | | | 1/2" Ice 3.550 | 1.540 | 0.072 |
| | | | | 0' | | | 1" Ice 3.802 | 1.728 | 0.096 |
| Sector Mount [SM 402-3] (E-2 Pipes Included) | C | None | | | 0.000 | 93' | No Ice 18.910 | 18.910 | 0.851 |
| | | | | | | | 1/2" Ice 26.780 | 26.780 | 1.233 |
| | | | | | | | 1" Ice 34.650 | 34.650 | 1.616 |
| Miscellaneous [NA 507-1] (P-MT-195-12) | C | None | | | 0.000 | 93' | No Ice 4.800 | 4.800 | 0.245 |
| | | | | | | | 1/2" Ice 6.700 | 6.700 | 0.294 |
| | | | | | | | 1" Ice 8.600 | 8.600 | 0.343 |
| VSR-TS-B Stabilizer Kit (P) | C | None | | | 0.000 | 93' | No Ice 14.500 | 14.500 | 0.376 |
| | | | | | | | 1/2" Ice 17.400 | 17.400 | 0.396 |
| | | | | | | | 1" Ice 20.300 | 20.300 | 0.417 |
| *R* | | | | | | | | | |
| (2) LNx-6514DS-A1M w/ Mount Pipe (E) | A | From Leg | 4.000 | 0' 0' | 0.000 | 80' | No Ice 8.648 | 7.082 | 0.065 |
| | | | | 0' | | | 1/2" Ice 9.305 | 8.273 | 0.134 |
| | | | | 0' | | | 1" Ice 9.930 | 9.185 | 0.211 |
| (2) LNx-6514DS-A1M w/ Mount Pipe (E) | B | From Leg | 4.000 | 0' 0' | 0.000 | 80' | No Ice 8.648 | 7.082 | 0.065 |
| | | | | 0' | | | 1/2" Ice 9.305 | 8.273 | 0.134 |
| | | | | 0' | | | 1" Ice 9.930 | 9.185 | 0.211 |
| (2) LNx-6514DS-A1M w/ Mount Pipe (E) | C | From Leg | 4.000 | 0' 0' | 0.000 | 80' | No Ice 8.648 | 7.082 | 0.065 |
| | | | | 0' | | | 1/2" Ice 9.305 | 8.273 | 0.134 |
| | | | | 0' | | | 1" Ice 9.930 | 9.185 | 0.211 |
| (2) HBXX-6517DS-A2M w/ Mount Pipe (E) | A | From Leg | 4.000 | 0' 0' | 0.000 | 80' | No Ice 8.976 | 6.963 | 0.067 |
| | | | | 0' | | | 1/2" Ice 9.647 | 8.182 | 0.137 |
| | | | | 0' | | | 1" Ice 10.291 | 9.144 | 0.215 |
| (2) HBXX-6517DS-A2M w/ Mount Pipe (E) | B | From Leg | 4.000 | 0' 0' | 0.000 | 80' | No Ice 8.976 | 6.963 | 0.067 |
| | | | | 0' | | | 1/2" Ice 9.647 | 8.182 | 0.137 |
| | | | | 0' | | | 1" Ice 10.291 | 9.144 | 0.215 |
| (2) HBXX-6517DS-A2M w/ Mount Pipe (E) | C | From Leg | 4.000 | 0' 0' | 0.000 | 80' | No Ice 8.976 | 6.963 | 0.067 |
| | | | | 0' | | | 1/2" Ice 9.647 | 8.182 | 0.137 |
| | | | | 0' | | | 1" Ice 10.291 | 9.144 | 0.215 |
| RRH2x60-700 (E) | A | From Leg | 4.000 | 0' 0' | 0.000 | 80' | No Ice 3.957 | 1.816 | 0.060 |
| | | | | 0' | | | 1/2" Ice 4.272 | 2.075 | 0.083 |
| | | | | 0' | | | 1" Ice 4.596 | 2.360 | 0.109 |
| RRH2x60-700 (E) | B | From Leg | 4.000 | 0' 0' | 0.000 | 80' | No Ice 3.957 | 1.816 | 0.060 |
| | | | | 0' | | | 1/2" Ice 4.272 | 2.075 | 0.083 |
| | | | | 0' | | | 1" Ice 4.596 | 2.360 | 0.109 |
| RRH2x60-700 (E) | C | From Leg | 4.000 | 0' 0' | 0.000 | 80' | No Ice 3.957 | 1.816 | 0.060 |
| | | | | 0' | | | 1/2" Ice 4.272 | 2.075 | 0.083 |
| | | | | 0' | | | 1" Ice 4.596 | 2.360 | 0.109 |
| RRH2x60-AWS (E) | A | From Leg | 4.000 | 0' 0' | 0.000 | 80' | No Ice 3.957 | 1.816 | 0.060 |
| | | | | 0' | | | 1/2" Ice 4.272 | 2.075 | 0.083 |

| | | | | |
|---|----------------|--|--------------------|-------------------|
| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job | 16-4584 130 SST | Page | 26 of 52 |
| | Project | Glastonbury-main st, CT (CT46126-A-01) | Date | 17:28:31 12/08/16 |
| | Client | SBA Communications Corporation | Designed by | bpaudel |

| Description | Face or Leg | Offset Type | Offsets: | | Azimuth Adjustment | Placement | C _{AA} Front | C _{AA} Side | Weight |
|-------------------------------|-------------|-------------|----------|---------|--------------------|-----------|-----------------------|----------------------|--------|
| | | | Horz | Lateral | | | | | |
| RRH2x60-AWS (E) | B | From Leg | 0' | 4.000 | 0.000 | 80' | 1" Ice 4.596 | 2.360 | 0.109 |
| | | | 0' | 0' | | | No Ice 3.957 | 1.816 | 0.060 |
| | | | 0' | 0' | | | 1/2" Ice 4.272 | 2.075 | 0.083 |
| RRH2x60-AWS (E) | C | From Leg | 0' | 4.000 | 0.000 | 80' | 1" Ice 4.596 | 2.360 | 0.109 |
| | | | 0' | 0' | | | No Ice 3.957 | 1.816 | 0.060 |
| | | | 0' | 0' | | | 1/2" Ice 4.272 | 2.075 | 0.083 |
| RRH2X60-PCS (E) | A | From Leg | 0' | 4.000 | 0.000 | 80' | 1" Ice 4.596 | 2.360 | 0.109 |
| | | | 0' | 0' | | | No Ice 2.567 | 2.011 | 0.055 |
| | | | 0' | 0' | | | 1/2" Ice 2.791 | 2.218 | 0.075 |
| RRH2X60-PCS (E) | B | From Leg | 0' | 4.000 | 0.000 | 80' | 1" Ice 3.025 | 2.435 | 0.099 |
| | | | 0' | 0' | | | No Ice 2.567 | 2.011 | 0.055 |
| | | | 0' | 0' | | | 1/2" Ice 2.791 | 2.218 | 0.075 |
| RRH2X60-PCS (E) | C | From Leg | 0' | 4.000 | 0.000 | 80' | 1" Ice 3.025 | 2.435 | 0.099 |
| | | | 0' | 0' | | | No Ice 2.567 | 2.011 | 0.055 |
| | | | 0' | 0' | | | 1/2" Ice 2.791 | 2.218 | 0.075 |
| (2) DB-T1-6Z-8AB-0Z (E) | C | From Leg | 0' | 4.000 | 0.000 | 80' | 1" Ice 3.025 | 2.435 | 0.099 |
| | | | 0' | 0' | | | No Ice 5.600 | 2.333 | 0.044 |
| | | | 0' | 0' | | | 1/2" Ice 5.915 | 2.558 | 0.080 |
| Sector Mount [SM 104-3] (E) | C | None | 0' | 0.000 | 0.000 | 80' | 1" Ice 6.240 | 2.791 | 0.120 |
| | | | 0' | 0' | | | No Ice 30.020 | 30.020 | 0.953 |
| | | | 0' | 0' | | | 1/2" Ice 40.480 | 40.480 | 1.405 |
| *R* GPS-QBW-20N (Reference) | C | From Leg | 0' | 3.000 | 0.000 | 55'6" | 1" Ice 50.940 | 50.940 | 1.857 |
| | | | 0' | 0' | | | No Ice 0.151 | 0.151 | 0.000 |
| | | | 0' | 0' | | | 1/2" Ice 0.208 | 0.208 | 0.002 |
| GPS (E) | C | From Leg | 0' | 3.000 | 0.000 | 55'6" | 1" Ice 0.273 | 0.273 | 0.005 |
| | | | 0' | 0' | | | No Ice 0.151 | 0.151 | 0.000 |
| | | | 0' | 0' | | | 1/2" Ice 0.208 | 0.208 | 0.002 |
| Side Arm Mount [SO 701-1] (E) | C | From Leg | 0' | 1.500 | 0.000 | 55'6" | 1" Ice 0.273 | 0.273 | 0.005 |
| | | | 0' | 0' | | | No Ice 0.850 | 1.670 | 0.065 |
| | | | 0' | 0' | | | 1/2" Ice 1.140 | 2.340 | 0.079 |
| *R* GPS (E) | A | From Leg | 0' | 3.000 | 0.000 | 50'6" | 1" Ice 1.430 | 3.010 | 0.093 |
| | | | 0' | 0' | | | No Ice 0.151 | 0.151 | 0.000 |
| | | | 0' | 0' | | | 1/2" Ice 0.208 | 0.208 | 0.002 |
| GPS (E) | B | From Leg | 0' | 3.000 | 0.000 | 50'6" | 1" Ice 0.273 | 0.273 | 0.005 |
| | | | 0' | 0' | | | No Ice 0.151 | 0.151 | 0.000 |
| | | | 0' | 0' | | | 1/2" Ice 0.208 | 0.208 | 0.002 |
| Side Arm Mount [SO 701-1] (E) | A | From Leg | 0' | 1.500 | 0.000 | 50'6" | 1" Ice 0.273 | 0.273 | 0.005 |
| | | | 0' | 0' | | | No Ice 0.850 | 1.670 | 0.065 |
| | | | 0' | 0' | | | 1/2" Ice 1.140 | 2.340 | 0.079 |
| Side Arm Mount [SO 701-1] (E) | B | From Leg | 0' | 1.500 | 0.000 | 50'6" | 1" Ice 1.430 | 3.010 | 0.093 |
| | | | 0' | 0' | | | No Ice 0.850 | 1.670 | 0.065 |
| | | | 0' | 0' | | | 1/2" Ice 1.140 | 2.340 | 0.079 |
| *R* ***** (P) HPA-65R-BUU-H6 | A | From Leg | 0' | 4.000 | 0.000 | 110' | 1" Ice 1.430 | 3.010 | 0.093 |
| | | | 0' | 0' | | | No Ice 10.122 | 5.486 | 0.043 |
| | | | 0' | 0' | | | 1/2" Ice 10.688 | 5.942 | 0.100 |
| (P) HPA-65R-BUU-H6 | B | From Leg | 0' | 4.000 | 0.000 | 110' | 1" Ice 11.263 | 6.405 | 0.164 |
| | | | 0' | 0' | | | No Ice 10.122 | 5.486 | 0.043 |
| | | | 0' | 0' | | | 1/2" Ice 10.688 | 5.942 | 0.100 |
| (2) (P) KATH 800-10121 | C | From Leg | 0' | 4.000 | 0.000 | 110' | 1" Ice 11.263 | 6.405 | 0.164 |
| | | | 0' | 0' | | | No Ice 5.458 | 3.293 | 0.046 |
| | | | 0' | 0' | | | 1/2" Ice 5.882 | 3.639 | 0.079 |
| (2) (P) KATH 800-10121 | A | From Leg | 0' | 4.000 | 0.000 | 110' | 1" Ice 6.315 | 3.994 | 0.117 |
| | | | 0' | 0' | | | No Ice 5.458 | 3.293 | 0.046 |
| | | | 0' | 0' | | | 1/2" Ice 5.882 | 3.639 | 0.079 |

| | | | | |
|---|----------------|--|--------------------|-------------------|
| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job | 16-4584 130 SST | Page | 27 of 52 |
| | Project | Glastonbury-main st, CT (CT46126-A-01) | Date | 17:28:31 12/08/16 |
| | Client | SBA Communications Corporation | Designed by | bpaudel |

| Description | Face or Leg | Offset Type | Offsets: | | Azimuth Adjustment | Placement | C _{AA} Front | C _{AA} Side | Weight |
|--------------------------------|-------------|-------------|----------|---------|--------------------|-----------|-----------------------|----------------------|--------|
| | | | Horz | Lateral | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| (2) (P) KATH 800-10121 | B | From Leg | 4.000 | 0.000 | 110' | 1/2" Ice | 5.882 | 3.639 | 0.079 |
| | | | 0' | | | 1" Ice | 6.315 | 3.994 | 0.117 |
| | | | 0' | | | No Ice | 5.458 | 3.293 | 0.046 |
| | | | 0' | | | 1/2" Ice | 5.882 | 3.639 | 0.079 |
| (P) HPA-65R-BUU-H8 | C | From Leg | 4.000 | 0.000 | 110' | 1" Ice | 6.315 | 3.994 | 0.117 |
| | | | 0' | | | No Ice | 5.162 | 3.293 | 0.046 |
| | | | 0' | | | 1/2" Ice | 5.664 | 3.716 | 0.079 |
| | | | 0' | | | 1" Ice | 6.166 | 4.139 | 0.112 |
| (P) RRUS 12 | A | From Leg | 3.500 | 0.000 | 110' | No Ice | 1.488 | 3.669 | 0.058 |
| | | | 0' | | | 1/2" Ice | 1.673 | 3.926 | 0.081 |
| | | | 0' | | | 1" Ice | 1.866 | 4.191 | 0.108 |
| (P) RRUS 12 | B | From Leg | 3.500 | 0.000 | 110' | No Ice | 1.488 | 3.669 | 0.058 |
| | | | 0' | | | 1/2" Ice | 1.673 | 3.926 | 0.081 |
| | | | 0' | | | 1" Ice | 1.866 | 4.191 | 0.108 |
| (P) RRUS 12 | C | From Leg | 3.500 | 0.000 | 110' | No Ice | 1.488 | 3.669 | 0.058 |
| | | | 0' | | | 1/2" Ice | 1.673 | 3.926 | 0.081 |
| | | | 0' | | | 1" Ice | 1.866 | 4.191 | 0.108 |
| (P) RRUS A2 | A | From Leg | 3.500 | 0.000 | 110' | No Ice | 2.411 | 0.533 | 0.022 |
| | | | 0' | | | 1/2" Ice | 2.619 | 0.665 | 0.035 |
| | | | 0' | | | 1" Ice | 2.837 | 0.806 | 0.050 |
| (P) RRUS A2 | B | From Leg | 3.500 | 0.000 | 110' | No Ice | 2.411 | 0.533 | 0.022 |
| | | | 0' | | | 1/2" Ice | 2.619 | 0.665 | 0.035 |
| | | | 0' | | | 1" Ice | 2.837 | 0.806 | 0.050 |
| (P) RRUS A2 | C | From Leg | 3.500 | 0.000 | 110' | No Ice | 2.411 | 0.533 | 0.022 |
| | | | 0' | | | 1/2" Ice | 2.619 | 0.665 | 0.035 |
| | | | 0' | | | 1" Ice | 2.837 | 0.806 | 0.050 |
| (4) (P) Kathrein 860-10025 RET | A | From Leg | 3.500 | 0.000 | 110' | No Ice | 0.110 | 0.100 | 0.001 |
| | | | 0' | | | 1/2" Ice | 0.190 | 0.170 | 0.002 |
| | | | 0' | | | 1" Ice | 0.270 | 0.240 | 0.003 |
| (4) (P) Kathrein 860-10025 RET | B | From Leg | 3.500 | 0.000 | 110' | No Ice | 0.110 | 0.100 | 0.001 |
| | | | 0' | | | 1/2" Ice | 0.190 | 0.170 | 0.002 |
| | | | 0' | | | 1" Ice | 0.270 | 0.240 | 0.003 |
| (4) (P) Kathrein 860-10025 RET | C | From Leg | 3.500 | 0.000 | 110' | No Ice | 0.110 | 0.100 | 0.001 |
| | | | 0' | | | 1/2" Ice | 0.190 | 0.170 | 0.002 |
| | | | 0' | | | 1" Ice | 0.270 | 0.240 | 0.003 |
| (2) (P) Powerwave LGP21901 | A | From Leg | 3.500 | 0.000 | 110' | No Ice | 0.230 | 0.110 | 0.000 |
| | | | 0' | | | 1/2" Ice | 0.320 | 0.180 | 0.000 |
| | | | 0' | | | 1" Ice | 0.410 | 0.250 | 0.000 |
| (2) (P) Powerwave LGP21901 | B | From Leg | 3.500 | 0.000 | 110' | No Ice | 0.230 | 0.110 | 0.000 |
| | | | 0' | | | 1/2" Ice | 0.320 | 0.180 | 0.000 |
| | | | 0' | | | 1" Ice | 0.410 | 0.250 | 0.000 |
| (2) (P) Powerwave LGP21901 | C | From Leg | 3.500 | 0.000 | 110' | No Ice | 0.230 | 0.110 | 0.000 |
| | | | 0' | | | 1/2" Ice | 0.320 | 0.180 | 0.000 |
| | | | 0' | | | 1" Ice | 0.410 | 0.250 | 0.000 |

Dishes

| | | | | |
|---|----------------|--|--------------------|-------------------|
| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job | 16-4584 130 SST | Page | 28 of 52 |
| | Project | Glastonbury-main st, CT (CT46126-A-01) | Date | 17:28:31 12/08/16 |
| | Client | SBA Communications Corporation | Designed by | bpaudel |

| Description | Face or Leg | Dish Type | Offset Type | Offsets: Horz Lateral Vert ft | Azimuth Adjustment ° | 3 dB Beam Width ° | Elevation ft | Outside Diameter ft | Aperture Area ft ² | Weight K | |
|----------------|-------------------|-----------------------------|----------------|---|----------------------------|----------------------------|-----------------|---------------------------|-------------------------------------|-------------------------|-------------------------|
| VHLP2.5 (E) | A | Paraboloid w/Shroud (HP) | From Leg | 4.000 0' -4' | 0.000 | | 128' | 2.917 | No Ice 1/2" Ice 1" Ice | 6.681 7.069 7.456 | 0.048 0.077 0.106 |
| VHLP2.5 (E) | B | Paraboloid w/Shroud (HP) | From Leg | 4.000 0' 2' | 0.000 | | 128' | 2.917 | No Ice 1/2" Ice 1" Ice | 6.681 7.069 7.456 | 0.048 0.077 0.106 |
| VHLP2.5 (E) | B | Paraboloid w/Shroud (HP) | From Leg | 4.000 0' -2' | 0.000 | | 128' | 2.917 | No Ice 1/2" Ice 1" Ice | 6.681 7.069 7.456 | 0.048 0.077 0.106 |
| *R* | | | | | | | | | | | |

Load Combinations

| Comb. No. | Description |
|--------------|--|
| 1 | Dead Only |
| 2 | 1.2 Dead+1.6 Wind 0 deg - No Ice |
| 3 | 0.9 Dead+1.6 Wind 0 deg - No Ice |
| 4 | 1.2 Dead+1.6 Wind 30 deg - No Ice |
| 5 | 0.9 Dead+1.6 Wind 30 deg - No Ice |
| 6 | 1.2 Dead+1.6 Wind 60 deg - No Ice |
| 7 | 0.9 Dead+1.6 Wind 60 deg - No Ice |
| 8 | 1.2 Dead+1.6 Wind 90 deg - No Ice |
| 9 | 0.9 Dead+1.6 Wind 90 deg - No Ice |
| 10 | 1.2 Dead+1.6 Wind 120 deg - No Ice |
| 11 | 0.9 Dead+1.6 Wind 120 deg - No Ice |
| 12 | 1.2 Dead+1.6 Wind 150 deg - No Ice |
| 13 | 0.9 Dead+1.6 Wind 150 deg - No Ice |
| 14 | 1.2 Dead+1.6 Wind 180 deg - No Ice |
| 15 | 0.9 Dead+1.6 Wind 180 deg - No Ice |
| 16 | 1.2 Dead+1.6 Wind 210 deg - No Ice |
| 17 | 0.9 Dead+1.6 Wind 210 deg - No Ice |
| 18 | 1.2 Dead+1.6 Wind 240 deg - No Ice |
| 19 | 0.9 Dead+1.6 Wind 240 deg - No Ice |
| 20 | 1.2 Dead+1.6 Wind 270 deg - No Ice |
| 21 | 0.9 Dead+1.6 Wind 270 deg - No Ice |
| 22 | 1.2 Dead+1.6 Wind 300 deg - No Ice |
| 23 | 0.9 Dead+1.6 Wind 300 deg - No Ice |
| 24 | 1.2 Dead+1.6 Wind 330 deg - No Ice |
| 25 | 0.9 Dead+1.6 Wind 330 deg - No Ice |
| 26 | 1.2 Dead+1.0 Ice+1.0 Temp |
| 27 | 1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp |
| 28 | 1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp |
| 29 | 1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp |
| 30 | 1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp |
| 31 | 1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp |
| 32 | 1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp |
| 33 | 1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp |
| 34 | 1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp |
| 35 | 1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp |
| 36 | 1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp |
| 37 | 1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp |
| 38 | 1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp |
| 39 | Dead+Wind 0 deg - Service |
| 40 | Dead+Wind 30 deg - Service |
| 41 | Dead+Wind 60 deg - Service |

| | | | | |
|---|----------------|--|--------------------|-------------------|
| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job | 16-4584 130 SST | Page | 29 of 52 |
| | Project | Glastonbury-main st, CT (CT46126-A-01) | Date | 17:28:31 12/08/16 |
| | Client | SBA Communications Corporation | Designed by | bpaudel |

| <i>Comb. No.</i> | <i>Description</i> |
|------------------|-----------------------------|
| 42 | Dead+Wind 90 deg - Service |
| 43 | Dead+Wind 120 deg - Service |
| 44 | Dead+Wind 150 deg - Service |
| 45 | Dead+Wind 180 deg - Service |
| 46 | Dead+Wind 210 deg - Service |
| 47 | Dead+Wind 240 deg - Service |
| 48 | Dead+Wind 270 deg - Service |
| 49 | Dead+Wind 300 deg - Service |
| 50 | Dead+Wind 330 deg - Service |

Maximum Member Forces

| <i>Section No.</i> | <i>Elevation ft</i> | <i>Component Type</i> | <i>Condition</i> | <i>Gov. Load Comb.</i> | <i>Axial K</i> | <i>Major Axis Moment kip-ft</i> | <i>Minor Axis Moment kip-ft</i> |
|--------------------|---------------------|-----------------------|------------------|------------------------|----------------|---------------------------------|---------------------------------|
| T1 | 130 - 120 | Leg | Max Tension | 23 | 8.779 | 0.030 | 0.011 |
| | | | Max. Compression | 10 | -10.102 | -0.117 | -0.075 |
| | | | Max. Mx | 8 | -0.437 | 0.168 | -0.003 |
| | | | Max. My | 14 | -0.556 | 0.007 | 0.164 |
| | | | Max. Vy | 18 | -1.132 | 0.128 | -0.056 |
| | | | Max. Vx | 2 | -1.255 | 0.022 | 0.136 |
| | | Diagonal | Max Tension | 14 | 1.504 | 0.000 | 0.000 |
| | | | Max. Compression | 24 | -1.554 | 0.000 | 0.000 |
| | | | Max. Mx | 30 | 0.370 | -0.002 | 0.000 |
| | | | Max. My | 16 | -1.018 | -0.001 | -0.001 |
| | | | Max. Vy | 30 | 0.007 | -0.002 | 0.000 |
| | | | Max. Vx | 16 | -0.000 | 0.000 | 0.000 |
| | | Horizontal | Max Tension | 18 | 0.309 | 0.000 | 0.000 |
| | | | Max. Compression | 23 | -0.270 | 0.000 | 0.000 |
| | | | Max. Mx | 31 | 0.041 | -0.010 | 0.000 |
| | | | Max. My | 16 | 0.014 | 0.000 | 0.000 |
| | | | Max. Vy | 31 | 0.016 | 0.000 | 0.000 |
| | | | Max. Vx | 16 | -0.000 | 0.000 | 0.000 |
| | | Top Girt | Max Tension | 10 | 0.057 | 0.000 | 0.000 |
| | | | Max. Compression | 22 | -0.064 | 0.000 | 0.000 |
| | | | Max. Mx | 31 | 0.013 | -0.010 | 0.000 |
| | | | Max. My | 16 | 0.004 | 0.000 | 0.000 |
| | | | Max. Vy | 31 | 0.016 | 0.000 | 0.000 |
| | | | Max. Vx | 16 | -0.000 | 0.000 | 0.000 |
| | | Bottom Girt | Max Tension | 22 | 0.242 | 0.000 | 0.000 |
| | | | Max. Compression | 11 | -0.212 | 0.000 | 0.000 |
| | | | Max. Mx | 26 | 0.037 | -0.010 | 0.000 |
| | | | Max. My | 16 | -0.002 | 0.000 | 0.000 |
| | | | Max. Vy | 26 | 0.016 | 0.000 | 0.000 |
| | | | Max. Vx | 16 | -0.000 | 0.000 | 0.000 |
| T2 | 120 - 117.143 | Leg | Max Tension | 23 | 10.987 | 0.201 | 0.138 |
| | | | Max. Compression | 10 | -13.486 | -0.036 | -0.022 |
| | | | Max. Mx | 8 | -0.276 | 0.369 | -0.004 |
| | | | Max. My | 14 | -7.005 | -0.025 | 0.364 |
| | | | Max. Vy | 18 | -1.132 | 0.222 | -0.099 |
| | | | Max. Vx | 2 | -1.254 | 0.042 | 0.241 |
| | | Diagonal | Max Tension | 14 | 2.379 | 0.000 | 0.000 |
| | | | Max. Compression | 24 | -2.310 | 0.000 | 0.000 |
| | | | Max. Mx | 30 | 0.692 | -0.003 | 0.000 |
| | | | Max. My | 16 | -1.138 | -0.002 | -0.001 |
| | | | Max. Vy | 30 | 0.008 | -0.003 | 0.000 |
| | | | Max. Vx | 16 | -0.001 | 0.000 | 0.000 |
| | | Top Girt | Max Tension | 35 | 0.077 | 0.000 | 0.000 |
| | | | Max. Compression | 23 | -0.030 | 0.000 | 0.000 |

| | | | | |
|---|----------------|--|--------------------|-------------------|
| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job | 16-4584 130 SST | Page | 30 of 52 |
| | Project | Glastonbury-main st, CT (CT46126-A-01) | Date | 17:28:31 12/08/16 |
| | Client | SBA Communications Corporation | Designed by | bpaudel |

| Section No. | Elevation ft | Component Type | Condition | Gov. Load Comb. | Axial K | Major Axis Moment kip-ft | Minor Axis Moment kip-ft | | | |
|-------------|-------------------|----------------|------------------|-------------------|---------|--------------------------|--------------------------|---------|--------|--------|
| T3 | 117.143 - 114.286 | Leg | Max. Mx | 26 | 0.041 | -0.010 | 0.000 | | | |
| | | | Max. My | 16 | 0.017 | 0.000 | 0.000 | | | |
| | | | Max. Vy | 26 | -0.016 | 0.000 | 0.000 | | | |
| | | | Max. Vx | 16 | -0.000 | 0.000 | 0.000 | | | |
| | | | Max Tension | 23 | 17.121 | 0.213 | 0.142 | | | |
| | | | Max. Compression | 10 | -19.814 | 0.072 | 0.049 | | | |
| | | | Max. Mx | 8 | 13.913 | -0.231 | 0.051 | | | |
| | | | Max. My | 14 | 16.219 | -0.016 | -0.256 | | | |
| | | | Max. Vy | 18 | -2.244 | 0.224 | -0.130 | | | |
| | | | Max. Vx | 2 | -2.519 | 0.016 | 0.254 | | | |
| | | | Diagonal | Max Tension | 24 | 3.011 | 0.000 | 0.000 | | |
| | | | | Max. Compression | 24 | -3.004 | 0.000 | 0.000 | | |
| | | | | Max. Mx | 10 | -0.274 | -0.004 | -0.001 | | |
| | | | | Max. My | 14 | -2.772 | -0.001 | -0.002 | | |
| Max. Vy | 32 | 0.009 | | -0.004 | -0.000 | | | | | |
| Max. Vx | 14 | -0.001 | | 0.000 | 0.000 | | | | | |
| T4 | 114.286 - 111.43 | Leg | Max Tension | 23 | 23.594 | -0.072 | -0.049 | | | |
| | | | Max. Compression | 10 | -26.328 | -0.200 | -0.132 | | | |
| | | | Max. Mx | 20 | -22.364 | 0.221 | -0.026 | | | |
| | | | Max. My | 2 | -25.820 | 0.019 | 0.239 | | | |
| | | | Max. Vy | 20 | -0.108 | 0.221 | -0.026 | | | |
| | | | Max. Vx | 2 | -0.122 | 0.019 | 0.239 | | | |
| | | | Diagonal | Max Tension | 24 | 2.801 | 0.000 | 0.000 | | |
| | | | | Max. Compression | 24 | -2.836 | 0.000 | 0.000 | | |
| | | | | Max. Mx | 31 | 0.720 | -0.004 | 0.000 | | |
| | | | | Max. My | 16 | -1.962 | 0.001 | -0.001 | | |
| | | | | Max. Vy | 31 | 0.009 | -0.004 | 0.000 | | |
| | | | | Max. Vx | 16 | 0.001 | 0.001 | -0.001 | | |
| | | | T5 | 111.43 - 108.573 | Leg | Max Tension | 23 | 30.717 | 0.198 | 0.131 |
| | | | | | | Max. Compression | 10 | -34.460 | -0.167 | -0.111 |
| Max. Mx | 8 | -1.834 | | | | 0.400 | -0.007 | | | |
| Max. My | 14 | -19.351 | | | | 0.022 | 0.423 | | | |
| Max. Vy | 20 | -0.452 | | | | 0.240 | -0.001 | | | |
| Max. Vx | 2 | -0.469 | | | | -0.013 | 0.241 | | | |
| Diagonal | Max Tension | 24 | | | | 3.751 | 0.000 | 0.000 | | |
| | Max. Compression | 24 | | | | -3.747 | 0.000 | 0.000 | | |
| | Max. Mx | 30 | | | | 1.218 | -0.004 | 0.000 | | |
| | Max. My | 14 | | | | -3.196 | 0.000 | -0.002 | | |
| | Max. Vy | 30 | | | | 0.009 | -0.004 | 0.000 | | |
| | Max. Vx | 14 | | | | -0.001 | 0.000 | 0.000 | | |
| T6 | 108.573 - 105.716 | Leg | | | | Max Tension | 23 | 40.019 | 0.173 | 0.114 |
| | | | | | | Max. Compression | 10 | -44.444 | -0.050 | -0.025 |
| | | | Max. Mx | 20 | -4.017 | 0.240 | -0.001 | | | |
| | | | Max. My | 2 | 19.714 | -0.013 | 0.241 | | | |
| | | | Max. Vy | 20 | 0.098 | 0.240 | -0.001 | | | |
| | | | Max. Vx | 2 | 0.095 | -0.013 | 0.241 | | | |
| | | | Diagonal | Max Tension | 24 | 4.648 | 0.000 | 0.000 | | |
| | | | | Max. Compression | 24 | -4.720 | 0.000 | 0.000 | | |
| | | | | Max. Mx | 31 | 1.338 | -0.005 | -0.000 | | |
| | | | | Max. My | 14 | -4.188 | 0.000 | -0.002 | | |
| | | | | Max. Vy | 32 | 0.009 | -0.005 | -0.000 | | |
| | | | | Max. Vx | 14 | -0.001 | 0.000 | 0.000 | | |
| | | | T7 | 105.716 - 102.859 | Leg | Max Tension | 23 | 51.121 | 0.040 | 0.019 |
| | | | | | | Max. Compression | 10 | -55.815 | 0.037 | 0.018 |
| Max. Mx | 20 | -4.427 | | | | 0.184 | -0.015 | | | |
| Max. My | 24 | -3.554 | | | | 0.080 | 0.166 | | | |

| | | |
|---|--|----------------------------------|
| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job 16-4584 130 SST | Page 31 of 52 |
| | Project Glastonbury-main st, CT (CT46126-A-01) | Date 17:28:31 12/08/16 |
| | Client SBA Communications Corporation | Designed by bpaudel |

| Section No. | Elevation ft | Component Type | Condition | Gov. Load Comb. | Axial K | Major Axis Moment kip-ft | Minor Axis Moment kip-ft | |
|-------------|------------------|------------------|----------------------|------------------|---------|--------------------------|--------------------------|--------|
| T8 | 102.859 - 100 | Diagonal | Max. Vy | 20 | -0.078 | 0.184 | -0.015 | |
| | | | Max. Vx | 4 | -0.074 | -0.078 | 0.164 | |
| | | | Max Tension | 24 | 4.631 | 0.000 | 0.000 | |
| | | | Max. Compression | 24 | -4.677 | 0.000 | 0.000 | |
| | | | Max. Mx | 20 | 2.149 | -0.005 | -0.000 | |
| | | | Max. My | 14 | -4.354 | 0.001 | -0.003 | |
| | | | Max. Vy | 31 | 0.009 | -0.005 | -0.000 | |
| | | | Max. Vx | 14 | -0.001 | 0.000 | 0.000 | |
| | | | Max Tension | 23 | 67.273 | 0.063 | 0.031 | |
| | | | Max. Compression | 10 | -72.359 | -0.347 | -0.217 | |
| | | | Max. Mx | 18 | -71.228 | 0.357 | -0.190 | |
| | | | Max. My | 2 | -71.461 | 0.028 | 0.403 | |
| | | Diagonal | Max. Vy | 18 | -3.539 | 0.357 | -0.190 | |
| | | | Max. Vx | 14 | 4.016 | -0.032 | -0.400 | |
| | | | Max Tension | 24 | 4.810 | -0.002 | 0.001 | |
| | | | Max. Compression | 24 | -4.936 | 0.000 | 0.000 | |
| | | | Max. Mx | 10 | 3.632 | -0.006 | 0.002 | |
| | | | Max. My | 14 | -2.698 | 0.005 | -0.003 | |
| | | | Max. Vy | 31 | 0.010 | -0.006 | 0.001 | |
| | | | Max. Vx | 14 | 0.001 | 0.005 | -0.003 | |
| | | | Max Tension | 10 | 1.143 | 0.000 | 0.000 | |
| | | | Secondary Horizontal | Max. Compression | 10 | -1.143 | 0.010 | -0.004 |
| | | | | Max. Mx | 22 | 0.609 | 0.023 | -0.002 |
| | | | | Max. My | 2 | 1.128 | 0.010 | -0.004 |
| | | Max. Vy | | 29 | 0.024 | 0.018 | -0.001 | |
| | | Max. Vx | | 2 | -0.003 | 0.010 | -0.004 | |
| | | Max Tension | | 22 | 0.851 | 0.000 | 0.000 | |
| | | Bottom Girt | Max. Compression | 10 | -0.835 | 0.000 | 0.000 | |
| Max. Mx | 26 | | 0.094 | -0.010 | 0.000 | | | |
| Max. My | 16 | | -0.010 | 0.000 | 0.000 | | | |
| Max. Vy | 26 | | -0.016 | 0.000 | 0.000 | | | |
| Max. Vx | 16 | | -0.000 | 0.000 | 0.000 | | | |
| Max Tension | 23 | | 70.719 | -0.405 | -0.017 | | | |
| Leg | Max. Compression | | 10 | -75.468 | 1.163 | 0.041 | | |
| | Max. Mx | | 22 | 70.627 | -1.187 | -0.035 | | |
| | Max. My | | 16 | -4.336 | -0.001 | 1.568 | | |
| | Max. Vy | | 22 | 0.216 | -1.187 | -0.035 | | |
| | Max. Vx | | 24 | -0.374 | -0.003 | 1.530 | | |
| | Max Tension | | 14 | 3.843 | 0.037 | 0.008 | | |
| | Diagonal | Max. Compression | 2 | -4.011 | 0.000 | 0.000 | | |
| | | Max. Mx | 24 | 2.152 | 0.039 | 0.001 | | |
| | | Max. My | 24 | -3.674 | -0.028 | -0.015 | | |
| | | Max. Vy | 24 | 0.017 | 0.039 | 0.001 | | |
| | | Max. Vx | 24 | 0.007 | 0.000 | 0.000 | | |
| | | Max Tension | 23 | 82.030 | -1.172 | -0.035 | | |
| T10 | 96 - 92 | Leg | Max. Compression | 10 | -88.280 | 0.025 | 0.012 | |
| | | | Max. Mx | 22 | 82.014 | -1.187 | -0.035 | |
| | | | Max. My | 16 | -4.843 | -0.001 | 1.568 | |
| | | | Max. Vy | 10 | 0.502 | 1.163 | 0.041 | |
| | | | Max. Vx | 12 | 0.563 | -0.056 | -1.243 | |
| | | | Max Tension | 12 | 4.389 | 0.094 | -0.004 | |
| | | Diagonal | Max. Compression | 24 | -4.670 | 0.000 | 0.000 | |
| | | | Max. Mx | 25 | -1.788 | -0.124 | -0.011 | |
| | | | Max. My | 16 | -3.415 | -0.091 | 0.016 | |
| | | | Max. Vy | 24 | 0.055 | 0.000 | 0.000 | |
| | | | Max. Vx | 16 | -0.007 | -0.091 | 0.016 | |
| | | | Max Tension | 23 | 89.759 | -0.168 | -0.009 | |
| T11 | 92 - 88 | Leg | Max. Compression | 10 | -96.762 | 3.488 | -0.004 | |
| | | | Max. Mx | 10 | -96.762 | 3.488 | -0.004 | |
| | | | Max. My | 20 | -6.039 | -0.233 | -1.807 | |

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| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job 16-4584 130 SST | Page 32 of 52 |
| | Project Glastonbury-main st, CT (CT46126-A-01) | Date 17:28:31 12/08/16 |
| | Client SBA Communications Corporation | Designed by bpaudel |

| Section No. | Elevation ft | Component Type | Condition | Gov. Load Comb. | Axial K | Major Axis Moment kip-ft | Minor Axis Moment kip-ft | |
|----------------------|----------------------|------------------|------------------|------------------|----------|--------------------------|--------------------------|--------|
| T12 | 88 - 84 | Diagonal | Max. Vy | 10 | 2.686 | 3.488 | -0.004 | |
| | | | Max. Vx | 24 | -0.927 | -0.214 | 1.804 | |
| | | | Max Tension | 14 | 6.873 | -0.055 | -0.000 | |
| | | | Max. Compression | 2 | -7.276 | 0.000 | 0.000 | |
| | | | Max. Mx | 10 | 1.984 | -0.080 | 0.012 | |
| | | | Max. My | 16 | 2.990 | -0.071 | -0.023 | |
| | | | Max. Vy | 10 | 0.037 | -0.080 | 0.012 | |
| | | | Max. Vx | 16 | 0.010 | 0.000 | 0.000 | |
| | | | Max Tension | 24 | 2.989 | -0.083 | 0.006 | |
| | | | Max. Compression | 25 | -2.783 | 0.064 | -0.006 | |
| | | | Max. Mx | 22 | -0.864 | -0.114 | 0.005 | |
| | | | Max. My | 24 | 2.989 | -0.083 | 0.006 | |
| | | Leg | Max. Vy | 22 | 0.081 | -0.114 | 0.005 | |
| | | | Max. Vx | 24 | 0.004 | -0.083 | 0.006 | |
| | | | Max Tension | 23 | 102.133 | 1.683 | -0.018 | |
| | | | Max. Compression | 10 | -109.863 | 3.698 | -0.002 | |
| | | | Max. Mx | 10 | -109.863 | 3.698 | -0.002 | |
| | | | Max. My | 20 | -6.402 | -0.233 | -1.807 | |
| | | | Max. Vy | 10 | -2.971 | 3.698 | -0.002 | |
| | | | Max. Vx | 20 | -0.988 | -0.233 | -1.807 | |
| | | | Diagonal | Max Tension | 14 | 6.529 | -0.039 | -0.002 |
| | | | | Max. Compression | 2 | -6.821 | 0.000 | 0.000 |
| | | | | Max. Mx | 10 | 1.482 | -0.056 | 0.006 |
| | | | | Max. My | 4 | 2.233 | -0.051 | 0.015 |
| Max. Vy | 31 | 0.030 | | -0.037 | 0.004 | | | |
| Max. Vx | 4 | -0.006 | | 0.000 | 0.000 | | | |
| Secondary Horizontal | Max Tension | 24 | | 3.693 | -0.052 | 0.004 | | |
| | Max. Compression | 25 | | -3.383 | 0.027 | -0.004 | | |
| | Max. Mx | 20 | | 2.019 | -0.074 | 0.002 | | |
| | Max. My | 24 | | 3.693 | -0.052 | 0.004 | | |
| | Max. Vy | 33 | | 0.054 | -0.057 | 0.002 | | |
| | Max. Vx | 24 | | 0.003 | 0.000 | 0.000 | | |
| | Leg | Max Tension | 23 | 113.711 | 1.575 | -0.014 | | |
| | | Max. Compression | 10 | -122.002 | 3.582 | -0.006 | | |
| | | Max. Mx | 10 | -122.002 | 3.582 | -0.006 | | |
| | | Max. My | 20 | -6.738 | -0.165 | -1.552 | | |
| | | Max. Vy | 10 | -2.807 | 3.582 | -0.006 | | |
| | | Max. Vx | 24 | 0.838 | -0.151 | 1.548 | | |
| Diagonal | | Max Tension | 14 | 5.748 | -0.045 | -0.016 | | |
| | | Max. Compression | 2 | -6.001 | 0.000 | 0.000 | | |
| | | Max. Mx | 12 | 2.896 | -0.053 | -0.012 | | |
| | | Max. My | 12 | -5.491 | 0.034 | -0.019 | | |
| | | Max. Vy | 31 | 0.029 | -0.032 | -0.002 | | |
| | | Max. Vx | 12 | -0.007 | 0.000 | 0.000 | | |
| | Secondary Horizontal | Max Tension | 24 | 3.134 | 0.062 | 0.004 | | |
| | | Max. Compression | 25 | -2.924 | -0.053 | -0.004 | | |
| | | Max. Mx | 24 | 3.134 | 0.062 | 0.004 | | |
| | | Max. My | 20 | -2.871 | -0.052 | -0.004 | | |
| | | Max. Vy | 33 | 0.045 | 0.000 | 0.000 | | |
| | | Max. Vx | 24 | 0.002 | 0.000 | 0.000 | | |
| Leg | | Max Tension | 23 | 129.243 | 0.255 | -0.035 | | |
| | | Max. Compression | 10 | -139.008 | 2.775 | 0.030 | | |
| | | Max. Mx | 22 | 128.242 | -2.809 | -0.008 | | |
| | | Max. My | 20 | -8.105 | 0.023 | -3.043 | | |
| | | Max. Vy | 10 | -0.677 | 2.775 | 0.030 | | |
| | | Max. Vx | 12 | -0.942 | -0.085 | -1.499 | | |
| | Diagonal | Max Tension | 24 | 5.707 | 0.066 | -0.006 | | |
| | | Max. Compression | 24 | -6.076 | 0.000 | 0.000 | | |

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| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job 16-4584 130 SST | Page 33 of 52 |
| | Project Glastonbury-main st, CT (CT46126-A-01) | Date 17:28:31 12/08/16 |
| | Client SBA Communications Corporation | Designed by bpaudel |

| Section No. | Elevation ft | Component Type | Condition | Gov. Load Comb. | Axial K | Major Axis Moment kip-ft | Minor Axis Moment kip-ft |
|-------------|--------------|----------------------|------------------|-----------------|----------|--------------------------|--------------------------|
| T15 | 75 - 70 | Leg | Max. Mx | 22 | 5.244 | 0.082 | 0.004 |
| | | | Max. My | 14 | -5.075 | -0.034 | 0.011 |
| | | | Max. Vy | 31 | -0.031 | 0.046 | 0.001 |
| | | | Max. Vx | 14 | -0.004 | 0.000 | 0.000 |
| | | | Max Tension | 23 | 146.206 | -2.779 | -0.009 |
| | | | Max. Compression | 10 | -157.171 | 2.424 | 0.018 |
| | | | Max. Mx | 22 | 145.930 | -2.809 | -0.008 |
| | | Diagonal | Max. My | 20 | -8.371 | 0.023 | -3.043 |
| | | | Max. Vy | 22 | -0.118 | -2.809 | -0.008 |
| | | | Max. Vx | 16 | 0.258 | 0.009 | 3.029 |
| | | | Max Tension | 24 | 6.300 | -0.046 | -0.002 |
| | | | Max. Compression | 24 | -6.785 | 0.000 | 0.000 |
| | | | Max. Mx | 10 | 5.538 | -0.055 | -0.003 |
| | | | Max. My | 16 | -6.258 | 0.040 | -0.009 |
| T16 | 70 - 65 | Leg | Max. Vy | 31 | 0.031 | -0.041 | -0.002 |
| | | | Max. Vx | 16 | 0.003 | 0.038 | -0.009 |
| | | | Max Tension | 23 | 162.541 | -2.384 | -0.006 |
| | | | Max. Compression | 10 | -174.160 | 2.880 | 0.026 |
| | | | Max. Mx | 10 | -174.160 | 2.880 | 0.026 |
| | | | Max. My | 20 | -8.686 | 0.035 | -2.827 |
| | | | Max. Vy | 22 | 0.127 | -2.857 | -0.007 |
| | | Diagonal | Max. Vx | 16 | -0.213 | 0.025 | 2.805 |
| | | | Max Tension | 24 | 5.497 | -0.046 | 0.005 |
| | | | Max. Compression | 24 | -6.053 | 0.000 | 0.000 |
| | | | Max. Mx | 22 | 4.681 | -0.056 | -0.003 |
| | | | Max. My | 14 | -5.506 | 0.022 | -0.009 |
| | | | Max. Vy | 31 | 0.031 | -0.039 | -0.001 |
| | | | Max. Vx | 14 | 0.003 | 0.000 | 0.000 |
| T17 | 65 - 60 | Leg | Max Tension | 23 | 177.389 | -2.833 | -0.007 |
| | | | Max. Compression | 10 | -189.884 | 0.396 | 0.026 |
| | | | Max. Mx | 10 | -189.735 | 2.880 | 0.026 |
| | | | Max. My | 20 | -8.998 | -0.100 | -3.121 |
| | | | Max. Vy | 10 | 0.528 | 2.880 | 0.026 |
| | | | Max. Vx | 16 | -0.095 | -0.104 | 3.099 |
| | | | Max Tension | 24 | 5.789 | 0.000 | 0.000 |
| | | Diagonal | Max. Compression | 24 | -6.266 | 0.000 | 0.000 |
| | | | Max. Mx | 10 | 4.990 | -0.058 | -0.005 |
| | | | Max. My | 16 | -5.819 | 0.040 | -0.011 |
| | | | Max. Vy | 31 | 0.033 | -0.042 | -0.003 |
| | | | Max. Vx | 16 | 0.004 | 0.038 | -0.011 |
| | | | Max Tension | 23 | 188.863 | -0.674 | -0.007 |
| | | | Max. Compression | 10 | -201.900 | 7.414 | 0.012 |
| T18 | 60 - 55 | Leg | Max. Mx | 10 | -201.900 | 7.414 | 0.012 |
| | | | Max. My | 20 | -8.875 | -0.100 | -3.121 |
| | | | Max. Vy | 10 | -2.900 | 7.414 | 0.012 |
| | | | Max. Vx | 24 | 0.885 | -0.102 | 3.117 |
| | | | Max Tension | 7 | 7.254 | -0.045 | 0.010 |
| | | | Max. Compression | 18 | -7.833 | 0.000 | 0.000 |
| | | | Max. Mx | 10 | 2.263 | -0.057 | 0.020 |
| | | Diagonal | Max. My | 18 | 2.093 | -0.057 | -0.022 |
| | | | Max. Vy | 31 | 0.034 | -0.041 | -0.009 |
| | | | Max. Vx | 18 | 0.007 | 0.000 | 0.000 |
| | | | Max Tension | 10 | 3.498 | -0.002 | -0.020 |
| | | | Max. Compression | 10 | -3.498 | 0.000 | 0.000 |
| | | | Max. Mx | 35 | 0.429 | 0.013 | -0.001 |
| | | | Max. My | 20 | -3.235 | 0.001 | 0.023 |
| T19 | 55 - 50 | Leg | Max. Vy | 35 | -0.023 | 0.013 | -0.001 |
| | | | Max. Vx | 20 | 0.010 | 0.000 | 0.000 |
| | | | Max Tension | 23 | 205.426 | -0.569 | -0.008 |
| | | | Max. Compression | 10 | -219.760 | 3.179 | 0.025 |
| | | | Max. Mx | 10 | -219.760 | 3.179 | 0.025 |
| | | | Max. My | 20 | -8.875 | -0.100 | -3.121 |
| | | | Max. Vy | 10 | -2.900 | 7.414 | 0.012 |
| | | Secondary Horizontal | Max. Vx | 24 | 0.885 | -0.102 | 3.117 |
| | | | Max Tension | 7 | 7.254 | -0.045 | 0.010 |
| | | | Max. Compression | 18 | -7.833 | 0.000 | 0.000 |
| | | | Max. Mx | 10 | 2.263 | -0.057 | 0.020 |
| | | | Max. My | 18 | 2.093 | -0.057 | -0.022 |
| | | | Max. Vy | 31 | 0.034 | -0.041 | -0.009 |
| | | | Max. Vx | 18 | 0.007 | 0.000 | 0.000 |

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| | Project Glastonbury-main st, CT (CT46126-A-01) | Date 17:28:31 12/08/16 |
| | Client SBA Communications Corporation | Designed by bpaudel |

| Section No. | Elevation ft | Component Type | Condition | Gov. Load Comb. | Axial K | Major Axis Moment kip-ft | Minor Axis Moment kip-ft | |
|----------------------|------------------|----------------|------------------|------------------|----------|--------------------------|--------------------------|--------|
| T20 | 50 - 45 | Diagonal | Max. Mx | 10 | -219.760 | 3.179 | 0.025 | |
| | | | Max. My | 24 | -9.468 | -0.003 | 3.439 | |
| | | | Max. Vy | 18 | -0.620 | 3.174 | 0.037 | |
| | | | Max. Vx | 16 | -0.255 | -0.008 | 3.417 | |
| | | | Max Tension | 8 | 4.683 | 0.000 | 0.000 | |
| | | | Max. Compression | 20 | -5.083 | 0.000 | 0.000 | |
| | | | Max. Mx | 22 | 3.970 | -0.044 | -0.005 | |
| | | | Max. My | 6 | -4.743 | 0.013 | 0.010 | |
| | | Leg | Max. Vy | 31 | 0.032 | -0.035 | -0.001 | |
| | | | Max. Vx | 6 | -0.003 | 0.000 | 0.000 | |
| | | | Max Tension | 23 | 217.542 | -3.124 | -0.003 | |
| | | | Max. Compression | 10 | -232.743 | 0.389 | 0.016 | |
| | | | Max. Mx | 10 | -232.560 | 3.179 | 0.025 | |
| | | | Max. My | 24 | -9.601 | -0.003 | 3.439 | |
| | | | Max. Vy | 10 | 0.588 | 3.179 | 0.025 | |
| | | | Max. Vx | 16 | 0.287 | -0.008 | 3.417 | |
| T21 | 45 - 40 | Diagonal | Max Tension | 20 | 5.629 | 0.000 | 0.000 | |
| | | | Max. Compression | 20 | -6.072 | 0.000 | 0.000 | |
| | | | Max. Mx | 10 | 4.731 | -0.046 | -0.008 | |
| | | | Max. My | 16 | -5.690 | 0.027 | -0.016 | |
| | | | Max. Vy | 31 | 0.034 | -0.040 | -0.005 | |
| | | | Max. Vx | 16 | 0.005 | 0.025 | -0.016 | |
| | | | Max Tension | 23 | 228.126 | -0.554 | -0.004 | |
| | | | Max. Compression | 10 | -244.163 | 8.127 | 0.002 | |
| | | Leg | Max. Mx | 10 | -244.039 | 8.127 | 0.002 | |
| | | | Max. My | 20 | -10.192 | -0.067 | -2.985 | |
| | | | Max. Vy | 10 | -3.183 | 8.127 | 0.002 | |
| | | | Max. Vx | 16 | -1.101 | -0.071 | 2.982 | |
| | | | Max Tension | 7 | 6.346 | 0.052 | -0.018 | |
| | | | Max. Compression | 18 | -6.737 | 0.000 | 0.000 | |
| | | | Max. Mx | 18 | 2.553 | 0.065 | -0.012 | |
| | | | Max. My | 18 | -6.726 | -0.046 | 0.020 | |
| Secondary Horizontal | Max. Vy | 31 | -0.033 | 0.043 | -0.006 | | | |
| | Max. Vx | 18 | 0.005 | 0.000 | 0.000 | | | |
| | Max Tension | 10 | 4.230 | -0.021 | -0.020 | | | |
| | Max. Compression | 10 | -4.230 | 0.000 | 0.000 | | | |
| | Max. Mx | 16 | -3.659 | 0.034 | 0.026 | | | |
| | Max. My | 20 | -3.692 | 0.033 | 0.026 | | | |
| | Max. Vy | 30 | -0.039 | 0.020 | 0.010 | | | |
| | Max. Vx | 20 | 0.010 | 0.000 | 0.000 | | | |
| | T22 | 40 - 33.3333 | Leg | Max Tension | 23 | 243.182 | -0.931 | -0.003 |
| | | | | Max. Compression | 10 | -259.968 | 2.618 | 0.022 |
| Max. Mx | | | | 22 | 242.337 | -2.654 | -0.000 | |
| Max. My | | | | 20 | -10.905 | -0.037 | -3.517 | |
| Max. Vy | | | | 10 | -0.321 | 2.618 | 0.022 | |
| Max. Vx | | | | 24 | -0.121 | -0.039 | 3.510 | |
| Max Tension | | | | 7 | 5.514 | 0.000 | 0.000 | |
| Max. Compression | | | | 8 | -6.042 | 0.000 | 0.000 | |
| Diagonal | | | Max. Mx | 22 | 5.296 | -0.070 | -0.012 | |
| | | | Max. My | 20 | -6.023 | 0.043 | -0.023 | |
| | | | Max. Vy | 31 | 0.040 | -0.052 | -0.002 | |
| | | | Max. Vx | 20 | 0.006 | 0.000 | 0.000 | |
| | | | Leg | Max Tension | 23 | 259.186 | -2.627 | -0.001 |
| | | | | Max. Compression | 10 | -277.072 | 2.975 | 0.004 |
| | | | | Max. Mx | 10 | -277.072 | 2.975 | 0.004 |
| | | | | Max. My | 20 | -11.266 | -0.037 | -3.517 |
| Max. Vy | 2 | -0.090 | | 2.960 | -0.026 | | | |
| Max. Vx | 24 | 0.319 | | -0.039 | 3.510 | | | |
| Diagonal | Max Tension | 8 | | 5.602 | 0.000 | 0.000 | | |

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| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job 16-4584 130 SST | Page 35 of 52 |
| | Project Glastonbury-main st, CT (CT46126-A-01) | Date 17:28:31 12/08/16 |
| | Client SBA Communications Corporation | Designed by bpaudel |

| Section No. | Elevation ft | Component Type | Condition | Gov. Load Comb. | Axial K | Major Axis Moment kip-ft | Minor Axis Moment kip-ft | |
|------------------|-------------------|----------------------|------------------|------------------|----------|--------------------------|--------------------------|-------|
| T24 | 26.6667 - 20 | Leg | Max. Compression | 20 | -6.361 | 0.000 | 0.000 | |
| | | | Max. Mx | 10 | 5.284 | -0.072 | -0.006 | |
| | | | Max. My | 17 | -5.940 | 0.043 | -0.014 | |
| | | | Max. Vy | 31 | 0.042 | -0.060 | -0.005 | |
| | | | Max. Vx | 16 | 0.003 | 0.040 | -0.014 | |
| | | | Max Tension | 23 | 273.179 | -2.877 | 0.002 | |
| | | | Max. Compression | 10 | -292.298 | 2.191 | 0.030 | |
| | | Diagonal | Max. Mx | 10 | -292.027 | 2.975 | 0.004 | |
| | | | Max. My | 20 | -11.979 | -0.082 | -3.183 | |
| | | | Max. Vy | 2 | 0.154 | 2.960 | -0.026 | |
| | | | Max. Vx | 24 | -0.268 | -0.082 | 3.167 | |
| | | | Max Tension | 21 | 5.201 | 0.000 | 0.000 | |
| | | | Max. Compression | 20 | -5.971 | 0.000 | 0.000 | |
| | | | Max. Mx | 22 | 4.489 | -0.067 | 0.004 | |
| T25 | 20 - 13.3333 | Leg | Max. My | 6 | -5.362 | 0.019 | 0.012 | |
| | | | Max. Vy | 31 | 0.042 | -0.057 | 0.001 | |
| | | | Max. Vx | 6 | -0.003 | 0.000 | 0.000 | |
| | | | Max Tension | 23 | 286.235 | -2.257 | -0.005 | |
| | | | Max. Compression | 10 | -306.755 | 0.718 | 0.010 | |
| | | | Max. Mx | 22 | 285.226 | -2.290 | -0.004 | |
| | | | Max. My | 20 | -12.178 | -0.082 | -3.183 | |
| | | Diagonal | Max. Vy | 22 | -0.259 | -2.290 | -0.004 | |
| | | | Max. Vx | 24 | 0.187 | -0.082 | 3.167 | |
| | | | Max Tension | 21 | 5.557 | 0.000 | 0.000 | |
| | | | Max. Compression | 20 | -6.096 | 0.000 | 0.000 | |
| | | | Max. Mx | 10 | 4.670 | 0.052 | 0.001 | |
| | | | Max. My | 17 | -5.676 | -0.030 | 0.008 | |
| | | | Max. Vy | 31 | -0.032 | 0.045 | 0.003 | |
| T26 | 13.3333 - 6.66667 | Leg | Max. Vx | 16 | -0.002 | -0.029 | 0.008 | |
| | | | Max Tension | 23 | 297.972 | -0.824 | 0.001 | |
| | | | Diagonal | Max. Compression | 10 | -319.690 | 0.336 | 0.017 |
| | | | | Max. Mx | 10 | -319.552 | 8.462 | 0.000 |
| | | | | Max. My | 16 | -12.479 | -0.291 | 6.670 |
| | | | | Max. Vy | 10 | 2.399 | 8.462 | 0.000 |
| | | | | Max. Vx | 16 | -1.963 | -0.291 | 6.670 |
| | | Max Tension | | 7 | 5.512 | 0.041 | -0.010 | |
| | | Max. Compression | | 20 | -5.949 | 0.000 | 0.000 | |
| | | Secondary Horizontal | Max. Mx | 18 | 3.410 | 0.048 | -0.007 | |
| | | | Max. My | 18 | -5.928 | -0.032 | 0.013 | |
| | | | Max. Vy | 31 | -0.032 | 0.047 | -0.003 | |
| | | | Max. Vx | 18 | 0.003 | 0.000 | 0.000 | |
| | | | Max Tension | 10 | 5.539 | -0.004 | -0.009 | |
| Max. Compression | 10 | | -5.539 | 0.000 | 0.000 | | | |
| Max. Mx | 37 | | -0.682 | 0.031 | 0.007 | | | |
| T27 | 6.66667 - 0 | Leg | Max. My | 16 | -3.358 | 0.014 | 0.017 | |
| | | | Max. Vy | 37 | 0.033 | 0.031 | 0.007 | |
| | | | Max. Vx | 16 | -0.005 | 0.000 | 0.000 | |
| | | | Max Tension | 23 | 318.997 | 0.684 | -0.003 | |
| | | | Max. Compression | 10 | -343.252 | 0.000 | -0.000 | |
| | | | Max. Mx | 27 | -137.019 | 0.915 | -0.015 | |
| | | | Max. My | 16 | -12.693 | -0.291 | 6.670 | |
| | | Diagonal | Max. Vy | 18 | -9.369 | 0.000 | 0.000 | |
| | | | Max. Vx | 16 | 1.043 | -0.291 | 6.670 | |
| | | | Max Tension | 7 | 6.882 | 0.000 | 0.000 | |
| | | | Max. Compression | 18 | -7.676 | 0.000 | 0.000 | |
| | | | Max. Mx | 18 | 3.388 | -0.089 | -0.026 | |
| | | | Max. My | 17 | -6.141 | 0.044 | -0.040 | |
| | | | Max. Vy | 31 | 0.043 | -0.056 | -0.012 | |
| Max. Vx | 16 | 0.009 | 0.039 | -0.040 | | | | |

| | | |
|---|--|----------------------------------|
| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job 16-4584 130 SST | Page 36 of 52 |
| | Project Glastonbury-main st, CT (CT46126-A-01) | Date 17:28:31 12/08/16 |
| | Client SBA Communications Corporation | Designed by bpaudel |

| Section No. | Elevation ft | Component Type | Condition | Gov. Load Comb. | Axial K | Major Axis Moment kip-ft | Minor Axis Moment kip-ft |
|-------------|--------------|----------------|-----------|-----------------|---------|--------------------------|--------------------------|
|-------------|--------------|----------------|-----------|-----------------|---------|--------------------------|--------------------------|

Maximum Reactions

| Location | Condition | Gov. Load Comb. | Vertical K | Horizontal, X K | Horizontal, Z K |
|----------|---------------------|-----------------|------------|-----------------|-----------------|
| Leg C | Max. Vert | 18 | 342.775 | 16.310 | -9.274 |
| | Max. H _x | 18 | 342.775 | 16.310 | -9.274 |
| | Max. H _z | 7 | -316.398 | -15.446 | 8.769 |
| | Min. Vert | 7 | -316.398 | -15.446 | 8.769 |
| | Min. H _x | 7 | -316.398 | -15.446 | 8.769 |
| | Min. H _z | 18 | 342.775 | 16.310 | -9.274 |
| Leg B | Max. Vert | 10 | 342.867 | -16.266 | -9.316 |
| | Max. H _x | 23 | -318.601 | 15.465 | 8.886 |
| | Max. H _z | 23 | -318.601 | 15.465 | 8.886 |
| | Min. Vert | 23 | -318.601 | 15.465 | 8.886 |
| | Min. H _x | 10 | 342.867 | -16.266 | -9.316 |
| | Min. H _z | 10 | 342.867 | -16.266 | -9.316 |
| Leg A | Max. Vert | 2 | 341.132 | 0.058 | 18.697 |
| | Max. H _x | 8 | 9.869 | 0.807 | 0.367 |
| | Max. H _z | 2 | 341.132 | 0.058 | 18.697 |
| | Min. Vert | 15 | -317.058 | -0.093 | -17.759 |
| | Min. H _x | 20 | 13.482 | -0.818 | 0.489 |
| | Min. H _z | 15 | -317.058 | -0.093 | -17.759 |

Tower Mast Reaction Summary

| Load Combination | Vertical K | Shear _x K | Shear _z K | Overturning Moment, M _x kip-ft | Overturning Moment, M _z kip-ft | Torque kip-ft |
|------------------------------------|------------|----------------------|----------------------|---|---|---------------|
| Dead Only | 28.631 | 0.000 | -0.000 | 2.622 | -0.398 | -0.000 |
| 1.2 Dead+1.6 Wind 0 deg - No Ice | 34.358 | -0.174 | -26.386 | -2141.331 | 24.921 | 1.169 |
| 0.9 Dead+1.6 Wind 0 deg - No Ice | 25.768 | -0.174 | -26.386 | -2132.742 | 24.886 | 1.165 |
| 1.2 Dead+1.6 Wind 30 deg - No Ice | 34.358 | 12.783 | -22.041 | -1799.242 | -1046.348 | 2.365 |
| 0.9 Dead+1.6 Wind 30 deg - No Ice | 25.768 | 12.784 | -22.040 | -1792.119 | -1041.602 | 2.353 |
| 1.2 Dead+1.6 Wind 60 deg - No Ice | 34.358 | 22.524 | -12.915 | -1048.195 | -1842.676 | 1.881 |
| 0.9 Dead+1.6 Wind 60 deg - No Ice | 25.768 | 22.525 | -12.915 | -1044.392 | -1834.428 | 1.868 |
| 1.2 Dead+1.6 Wind 90 deg - No Ice | 34.358 | 25.537 | 0.035 | 10.284 | -2092.180 | 0.960 |
| 0.9 Dead+1.6 Wind 90 deg - No Ice | 25.768 | 25.537 | 0.034 | 9.434 | -2082.826 | 0.950 |
| 1.2 Dead+1.6 Wind 120 deg - No Ice | 34.358 | 22.865 | 13.258 | 1085.965 | -1858.630 | 0.629 |
| 0.9 Dead+1.6 Wind 120 deg - No Ice | 25.768 | 22.865 | 13.258 | 1080.385 | -1850.361 | 0.621 |
| 1.2 Dead+1.6 Wind 150 deg - No Ice | 34.358 | 12.802 | 22.072 | 1812.458 | -1052.880 | -0.191 |

| | | | | |
|--|----------------|--|--------------------|-------------------|
| <p style="text-align: center;">tnxTower</p> <p>Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375</p> | Job | 16-4584 130 SST | Page | 37 of 52 |
| | Project | Glastonbury-main st, CT (CT46126-A-01) | Date | 17:28:31 12/08/16 |
| | Client | SBA Communications Corporation | Designed by | bpaudel |

| Load Combination | Vertical K | Shear _x K | Shear _z K | Overturning Moment, M _x kip-ft | Overturning Moment, M _z kip-ft | Torque kip-ft |
|--|---------------|-------------------------|-------------------------|---|---|------------------|
| 0.9 Dead+1.6 Wind 150 deg - No Ice | 25.768 | 12.802 | 22.072 | 1803.651 | -1048.103 | -0.196 |
| 1.2 Dead+1.6 Wind 180 deg - No Ice | 34.358 | 0.082 | 25.940 | 2125.312 | -13.903 | -1.432 |
| 0.9 Dead+1.6 Wind 180 deg - No Ice | 25.768 | 0.082 | 25.940 | 2115.142 | -13.685 | -1.427 |
| 1.2 Dead+1.6 Wind 210 deg - No Ice | 34.358 | -12.724 | 22.130 | 1817.453 | 1036.999 | -2.366 |
| 0.9 Dead+1.6 Wind 210 deg - No Ice | 25.768 | -12.724 | 22.130 | 1808.625 | 1032.583 | -2.354 |
| 1.2 Dead+1.6 Wind 240 deg - No Ice | 34.358 | -22.984 | 13.126 | 1064.081 | 1870.569 | -1.794 |
| 0.9 Dead+1.6 Wind 240 deg - No Ice | 25.768 | -22.984 | 13.126 | 1058.650 | 1862.487 | -1.781 |
| 1.2 Dead+1.6 Wind 270 deg - No Ice | 34.358 | -25.634 | -0.103 | -13.180 | 2103.804 | -0.956 |
| 0.9 Dead+1.6 Wind 270 deg - No Ice | 25.768 | -25.634 | -0.104 | -13.868 | 2094.629 | -0.945 |
| 1.2 Dead+1.6 Wind 300 deg - No Ice | 34.358 | -22.552 | -13.025 | -1067.334 | 1848.016 | -0.454 |
| 0.9 Dead+1.6 Wind 300 deg - No Ice | 25.768 | -22.553 | -13.025 | -1063.399 | 1839.975 | -0.445 |
| 1.2 Dead+1.6 Wind 330 deg - No Ice | 34.358 | -12.862 | -22.093 | -1808.834 | 1060.213 | 0.189 |
| 0.9 Dead+1.6 Wind 330 deg - No Ice | 25.768 | -12.862 | -22.093 | -1801.644 | 1055.616 | 0.193 |
| 1.2 Dead+1.0 Ice+1.0 Temp | 108.224 | 0.000 | 0.000 | 11.599 | -3.851 | -0.001 |
| 1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp | 108.224 | -0.038 | -7.995 | -672.033 | 2.007 | 0.309 |
| 1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp | 108.224 | 3.975 | -6.866 | -575.988 | -344.272 | 0.502 |
| 1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp | 108.224 | 6.883 | -3.954 | -326.429 | -594.392 | 0.381 |
| 1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp | 108.224 | 7.946 | 0.009 | 13.433 | -684.837 | 0.166 |
| 1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp | 108.224 | 6.927 | 4.013 | 356.072 | -596.207 | 0.045 |
| 1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp | 108.224 | 3.982 | 6.873 | 601.087 | -345.938 | -0.147 |
| 1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp | 108.224 | 0.019 | 7.934 | 692.594 | -7.040 | -0.366 |
| 1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp | 108.224 | -3.964 | 6.884 | 602.111 | 334.596 | -0.503 |
| 1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp | 108.224 | -6.952 | 3.983 | 350.902 | 591.268 | -0.355 |
| 1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp | 108.224 | -7.967 | -0.022 | 7.877 | 679.935 | -0.166 |
| 1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp | 108.224 | -6.890 | -3.980 | -330.969 | 588.172 | -0.015 |
| 1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp | 108.224 | -3.993 | -6.879 | -578.277 | 340.074 | 0.146 |
| Dead+Wind 0 deg - Service | 28.631 | -0.042 | -6.442 | -519.485 | 5.774 | 0.286 |
| Dead+Wind 30 deg - Service | 28.631 | 3.121 | -5.381 | -436.184 | -255.022 | 0.563 |
| Dead+Wind 60 deg - Service | 28.631 | 5.499 | -3.153 | -253.321 | -448.908 | 0.457 |
| Dead+Wind 90 deg - Service | 28.631 | 6.235 | 0.008 | 4.394 | -509.665 | 0.245 |
| Dead+Wind 120 deg - Service | 28.631 | 5.582 | 3.237 | 266.286 | -452.826 | 0.153 |
| Dead+Wind 150 deg - Service | 28.631 | 3.125 | 5.389 | 443.146 | -256.638 | -0.060 |
| Dead+Wind 180 deg - Service | 28.631 | 0.020 | 6.333 | 519.313 | -3.665 | -0.351 |
| Dead+Wind 210 deg - Service | 28.631 | -3.106 | 5.403 | 444.356 | 252.205 | -0.564 |
| Dead+Wind 240 deg - Service | 28.631 | -5.611 | 3.205 | 260.961 | 455.153 | -0.435 |
| Dead+Wind 270 deg - Service | 28.631 | -6.258 | -0.026 | -1.310 | 511.913 | -0.244 |

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| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job 16-4584 130 SST | Page 38 of 52 |
| | Project Glastonbury-main st, CT (CT46126-A-01) | Date 17:28:31 12/08/16 |
| | Client SBA Communications Corporation | Designed by bpaudel |

| Load Combination | Vertical K | Shear _x K | Shear _z K | Overturning Moment, M _x kip-ft | Overturning Moment, M _z kip-ft | Torque kip-ft |
|-----------------------------|---------------|-------------------------|-------------------------|---|---|------------------|
| Dead+Wind 300 deg - Service | 28.631 | -5.506 | -3.180 | -257.970 | 449.630 | -0.110 |
| Dead+Wind 330 deg - Service | 28.631 | -3.141 | -5.394 | -438.513 | 257.821 | 0.060 |

Solution Summary

| Load Comb. | Sum of Applied Forces | | | Sum of Reactions | | | % Error |
|------------|-----------------------|----------|---------|------------------|---------|---------|---------|
| | PX K | PY K | PZ K | PX K | PY K | PZ K | |
| 1 | 0.000 | -28.631 | 0.000 | 0.000 | 28.631 | 0.000 | 0.000% |
| 2 | -0.174 | -34.358 | -26.386 | 0.174 | 34.358 | 26.386 | 0.000% |
| 3 | -0.174 | -25.768 | -26.386 | 0.174 | 25.768 | 26.386 | 0.000% |
| 4 | 12.785 | -34.358 | -22.041 | -12.783 | 34.358 | 22.041 | 0.004% |
| 5 | 12.785 | -25.768 | -22.041 | -12.784 | 25.768 | 22.040 | 0.004% |
| 6 | 22.525 | -34.358 | -12.915 | -22.524 | 34.358 | 12.915 | 0.003% |
| 7 | 22.525 | -25.768 | -12.915 | -22.525 | 25.768 | 12.915 | 0.003% |
| 8 | 25.538 | -34.358 | 0.033 | -25.537 | 34.358 | -0.035 | 0.004% |
| 9 | 25.538 | -25.768 | 0.033 | -25.537 | 25.768 | -0.034 | 0.004% |
| 10 | 22.865 | -34.358 | 13.258 | -22.865 | 34.358 | -13.258 | 0.000% |
| 11 | 22.865 | -25.768 | 13.258 | -22.865 | 25.768 | -13.258 | 0.000% |
| 12 | 12.801 | -34.358 | 22.073 | -12.802 | 34.358 | -22.072 | 0.004% |
| 13 | 12.801 | -25.768 | 22.073 | -12.802 | 25.768 | -22.072 | 0.004% |
| 14 | 0.082 | -34.358 | 25.941 | -0.082 | 34.358 | -25.940 | 0.003% |
| 15 | 0.082 | -25.768 | 25.941 | -0.082 | 25.768 | -25.940 | 0.003% |
| 16 | -12.723 | -34.358 | 22.132 | 12.724 | 34.358 | -22.130 | 0.005% |
| 17 | -12.723 | -25.768 | 22.132 | 12.724 | 25.768 | -22.130 | 0.004% |
| 18 | -22.984 | -34.358 | 13.126 | 22.984 | 34.358 | -13.126 | 0.000% |
| 19 | -22.984 | -25.768 | 13.126 | 22.984 | 25.768 | -13.126 | 0.000% |
| 20 | -25.635 | -34.358 | -0.105 | 25.634 | 34.358 | 0.103 | 0.004% |
| 21 | -25.635 | -25.768 | -0.105 | 25.634 | 25.768 | 0.104 | 0.004% |
| 22 | -22.554 | -34.358 | -13.026 | 22.552 | 34.358 | 13.025 | 0.003% |
| 23 | -22.554 | -25.768 | -13.026 | 22.553 | 25.768 | 13.025 | 0.003% |
| 24 | -12.864 | -34.358 | -22.093 | 12.862 | 34.358 | 22.093 | 0.004% |
| 25 | -12.864 | -25.768 | -22.093 | 12.862 | 25.768 | 22.093 | 0.004% |
| 26 | 0.000 | -108.224 | 0.000 | -0.000 | 108.224 | -0.000 | 0.000% |
| 27 | -0.038 | -108.224 | -7.994 | 0.038 | 108.224 | 7.995 | 0.001% |
| 28 | 3.976 | -108.224 | -6.866 | -3.975 | 108.224 | 6.866 | 0.001% |
| 29 | 6.884 | -108.224 | -3.955 | -6.883 | 108.224 | 3.954 | 0.001% |
| 30 | 7.946 | -108.224 | 0.008 | -7.946 | 108.224 | -0.009 | 0.001% |
| 31 | 6.926 | -108.224 | 4.012 | -6.927 | 108.224 | -4.013 | 0.001% |
| 32 | 3.981 | -108.224 | 6.874 | -3.982 | 108.224 | -6.873 | 0.001% |
| 33 | 0.019 | -108.224 | 7.935 | -0.019 | 108.224 | -7.934 | 0.001% |
| 34 | -3.962 | -108.224 | 6.885 | 3.964 | 108.224 | -6.884 | 0.001% |
| 35 | -6.950 | -108.224 | 3.982 | 6.952 | 108.224 | -3.983 | 0.001% |
| 36 | -7.967 | -108.224 | -0.023 | 7.967 | 108.224 | 0.022 | 0.001% |
| 37 | -6.891 | -108.224 | -3.980 | 6.890 | 108.224 | 3.980 | 0.001% |
| 38 | -3.994 | -108.224 | -6.878 | 3.993 | 108.224 | 6.879 | 0.001% |
| 39 | -0.042 | -28.631 | -6.442 | 0.042 | 28.631 | 6.442 | 0.000% |
| 40 | 3.121 | -28.631 | -5.381 | -3.121 | 28.631 | 5.381 | 0.000% |
| 41 | 5.499 | -28.631 | -3.153 | -5.499 | 28.631 | 3.153 | 0.000% |
| 42 | 6.235 | -28.631 | 0.008 | -6.235 | 28.631 | -0.008 | 0.000% |
| 43 | 5.582 | -28.631 | 3.237 | -5.582 | 28.631 | -3.237 | 0.000% |
| 44 | 3.125 | -28.631 | 5.389 | -3.125 | 28.631 | -5.389 | 0.000% |
| 45 | 0.020 | -28.631 | 6.333 | -0.020 | 28.631 | -6.333 | 0.000% |
| 46 | -3.106 | -28.631 | 5.403 | 3.106 | 28.631 | -5.403 | 0.000% |
| 47 | -5.611 | -28.631 | 3.205 | 5.611 | 28.631 | -3.205 | 0.000% |
| 48 | -6.258 | -28.631 | -0.026 | 6.258 | 28.631 | 0.026 | 0.000% |
| 49 | -5.506 | -28.631 | -3.180 | 5.506 | 28.631 | 3.180 | 0.000% |
| 50 | -3.141 | -28.631 | -5.394 | 3.141 | 28.631 | 5.394 | 0.000% |

| | | | | |
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| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job | 16-4584 130 SST | Page | 39 of 52 |
| | Project | Glastonbury-main st, CT (CT46126-A-01) | Date | 17:28:31 12/08/16 |
| | Client | SBA Communications Corporation | Designed by | bpaudel |

Non-Linear Convergence Results

| <i>Load Combination</i> | <i>Converged?</i> | <i>Number of Cycles</i> | <i>Displacement Tolerance</i> | <i>Force Tolerance</i> |
|-----------------------------|-------------------|-----------------------------|-----------------------------------|----------------------------|
| 1 | Yes | 4 | 0.00000001 | 0.00000001 |
| 2 | Yes | 4 | 0.00000001 | 0.00001619 |
| 3 | Yes | 4 | 0.00000001 | 0.00000771 |
| 4 | Yes | 4 | 0.00000001 | 0.00004066 |
| 5 | Yes | 4 | 0.00000001 | 0.00003306 |
| 6 | Yes | 4 | 0.00000001 | 0.00003029 |
| 7 | Yes | 4 | 0.00000001 | 0.00001795 |
| 8 | Yes | 4 | 0.00000001 | 0.00003917 |
| 9 | Yes | 4 | 0.00000001 | 0.00003344 |
| 10 | Yes | 4 | 0.00000001 | 0.00001919 |
| 11 | Yes | 4 | 0.00000001 | 0.00000841 |
| 12 | Yes | 4 | 0.00000001 | 0.00004144 |
| 13 | Yes | 4 | 0.00000001 | 0.00003408 |
| 14 | Yes | 4 | 0.00000001 | 0.00002712 |
| 15 | Yes | 4 | 0.00000001 | 0.00001689 |
| 16 | Yes | 4 | 0.00000001 | 0.00004095 |
| 17 | Yes | 4 | 0.00000001 | 0.00003340 |
| 18 | Yes | 4 | 0.00000001 | 0.00001921 |
| 19 | Yes | 4 | 0.00000001 | 0.00000861 |
| 20 | Yes | 4 | 0.00000001 | 0.00003971 |
| 21 | Yes | 4 | 0.00000001 | 0.00003400 |
| 22 | Yes | 4 | 0.00000001 | 0.00003053 |
| 23 | Yes | 4 | 0.00000001 | 0.00001804 |
| 24 | Yes | 4 | 0.00000001 | 0.00004162 |
| 25 | Yes | 4 | 0.00000001 | 0.00003425 |
| 26 | Yes | 4 | 0.00000001 | 0.00002692 |
| 27 | Yes | 4 | 0.00000001 | 0.00056530 |
| 28 | Yes | 4 | 0.00000001 | 0.00057676 |
| 29 | Yes | 4 | 0.00000001 | 0.00058598 |
| 30 | Yes | 4 | 0.00000001 | 0.00057658 |
| 31 | Yes | 4 | 0.00000001 | 0.00057155 |
| 32 | Yes | 4 | 0.00000001 | 0.00057924 |
| 33 | Yes | 4 | 0.00000001 | 0.00058428 |
| 34 | Yes | 4 | 0.00000001 | 0.00057670 |
| 35 | Yes | 4 | 0.00000001 | 0.00056694 |
| 36 | Yes | 4 | 0.00000001 | 0.00057297 |
| 37 | Yes | 4 | 0.00000001 | 0.00058318 |
| 38 | Yes | 4 | 0.00000001 | 0.00057530 |
| 39 | Yes | 4 | 0.00000001 | 0.00001028 |
| 40 | Yes | 4 | 0.00000001 | 0.00001080 |
| 41 | Yes | 4 | 0.00000001 | 0.00001116 |
| 42 | Yes | 4 | 0.00000001 | 0.00001075 |
| 43 | Yes | 4 | 0.00000001 | 0.00001031 |
| 44 | Yes | 4 | 0.00000001 | 0.00001080 |
| 45 | Yes | 4 | 0.00000001 | 0.00001114 |
| 46 | Yes | 4 | 0.00000001 | 0.00001080 |
| 47 | Yes | 4 | 0.00000001 | 0.00001029 |
| 48 | Yes | 4 | 0.00000001 | 0.00001078 |
| 49 | Yes | 4 | 0.00000001 | 0.00001119 |
| 50 | Yes | 4 | 0.00000001 | 0.00001082 |

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| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job 16-4584 130 SST | Page 40 of 52 |
| | Project Glastonbury-main st, CT (CT46126-A-01) | Date 17:28:31 12/08/16 |
| | Client SBA Communications Corporation | Designed by bpaudel |

Maximum Tower Deflections - Service Wind

| Section No. | Elevation ft | Horz. Deflection in | Gov. Load Comb. | Tilt ° | Twist ° |
|-------------|-------------------|------------------------|-----------------|-----------|------------|
| T1 | 130 - 120 | 8.787 | 43 | 0.615 | 0.087 |
| T2 | 120 - 117.143 | 7.494 | 43 | 0.607 | 0.063 |
| T3 | 117.143 - 114.286 | 7.129 | 43 | 0.604 | 0.059 |
| T4 | 114.286 - 111.43 | 6.765 | 43 | 0.598 | 0.055 |
| T5 | 111.43 - 108.573 | 6.407 | 43 | 0.590 | 0.051 |
| T6 | 108.573 - 105.716 | 6.052 | 43 | 0.581 | 0.046 |
| T7 | 105.716 - 102.859 | 5.703 | 43 | 0.568 | 0.041 |
| T8 | 102.859 - 100 | 5.362 | 43 | 0.552 | 0.037 |
| T9 | 100 - 96 | 5.033 | 43 | 0.532 | 0.032 |
| T10 | 96 - 92 | 4.592 | 43 | 0.503 | 0.025 |
| T11 | 92 - 88 | 4.182 | 43 | 0.471 | 0.021 |
| T12 | 88 - 84 | 3.797 | 43 | 0.439 | 0.019 |
| T13 | 84 - 80 | 3.436 | 43 | 0.416 | 0.017 |
| T14 | 80 - 75 | 3.095 | 43 | 0.391 | 0.015 |
| T15 | 75 - 70 | 2.692 | 43 | 0.364 | 0.013 |
| T16 | 70 - 65 | 2.321 | 43 | 0.335 | 0.012 |
| T17 | 65 - 60 | 1.980 | 43 | 0.305 | 0.010 |
| T18 | 60 - 55 | 1.672 | 43 | 0.274 | 0.009 |
| T19 | 55 - 50 | 1.397 | 43 | 0.243 | 0.008 |
| T20 | 50 - 45 | 1.150 | 43 | 0.219 | 0.007 |
| T21 | 45 - 40 | 0.930 | 43 | 0.194 | 0.006 |
| T22 | 40 - 33.3333 | 0.733 | 43 | 0.170 | 0.006 |
| T23 | 33.3333 - 26.6667 | 0.508 | 43 | 0.141 | 0.005 |
| T24 | 26.6667 - 20 | 0.327 | 43 | 0.111 | 0.004 |
| T25 | 20 - 13.3333 | 0.186 | 43 | 0.082 | 0.003 |
| T26 | 13.3333 - 6.66667 | 0.083 | 43 | 0.053 | 0.002 |
| T27 | 6.66667 - 0 | 0.019 | 47 | 0.024 | 0.001 |

Critical Deflections and Radius of Curvature - Service Wind

| Elevation ft | Appurtenance | Gov. Load Comb. | Deflection in | Tilt ° | Twist ° | Radius of Curvature ft |
|-----------------|----------------------------------|-----------------|------------------|-----------|------------|---------------------------|
| 130' | VHLP2.5 | 43 | 8.787 | 0.615 | 0.087 | 60098 |
| 128' | LLPX310R w/ Mount Pipe | 43 | 8.527 | 0.614 | 0.082 | 60098 |
| 126' | VHLP2.5 | 43 | 8.268 | 0.613 | 0.077 | 60098 |
| 124' | VHLP2.5 | 43 | 8.009 | 0.611 | 0.072 | 50403 |
| 118'6" | APXVTM14-C-120 w/ Mount Pipe | 43 | 7.302 | 0.606 | 0.061 | 51634 |
| 110' | (2) LGP13519 | 43 | 6.229 | 0.586 | 0.049 | 20653 |
| 93' | AIR 21 B2A/B4P | 43 | 4.281 | 0.480 | 0.022 | 6898 |
| 80' | (2) LNX-6514DS-A1M w/ Mount Pipe | 43 | 3.095 | 0.391 | 0.015 | 11060 |
| 55'6" | GPS-QBW-20N | 43 | 1.423 | 0.245 | 0.008 | 10457 |
| 50'6" | GPS | 43 | 1.173 | 0.221 | 0.007 | 11302 |

Maximum Tower Deflections - Design Wind

| | | | | |
|---|----------------|--|--------------------|-------------------|
| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job | 16-4584 130 SST | Page | 41 of 52 |
| | Project | Glastonbury-main st, CT (CT46126-A-01) | Date | 17:28:31 12/08/16 |
| | Client | SBA Communications Corporation | Designed by | bpaudel |

| Section No. | Elevation ft | Horz. Deflection in | Gov. Load Comb. | Tilt ° | Twist ° |
|-------------|-------------------|------------------------|-----------------|-----------|------------|
| T1 | 130 - 120 | 35.974 | 22 | 2.518 | 0.360 |
| T2 | 120 - 117.143 | 30.685 | 10 | 2.490 | 0.260 |
| T3 | 117.143 - 114.286 | 29.193 | 10 | 2.476 | 0.243 |
| T4 | 114.286 - 111.43 | 27.705 | 10 | 2.453 | 0.226 |
| T5 | 111.43 - 108.573 | 26.239 | 10 | 2.422 | 0.209 |
| T6 | 108.573 - 105.716 | 24.786 | 10 | 2.382 | 0.190 |
| T7 | 105.716 - 102.859 | 23.357 | 10 | 2.329 | 0.170 |
| T8 | 102.859 - 100 | 21.962 | 10 | 2.263 | 0.151 |
| T9 | 100 - 96 | 20.615 | 10 | 2.183 | 0.131 |
| T10 | 96 - 92 | 18.810 | 10 | 2.062 | 0.102 |
| T11 | 92 - 88 | 17.128 | 10 | 1.932 | 0.089 |
| T12 | 88 - 84 | 15.554 | 10 | 1.799 | 0.079 |
| T13 | 84 - 80 | 14.076 | 10 | 1.703 | 0.071 |
| T14 | 80 - 75 | 12.677 | 10 | 1.602 | 0.064 |
| T15 | 75 - 70 | 11.028 | 10 | 1.491 | 0.056 |
| T16 | 70 - 65 | 9.505 | 10 | 1.373 | 0.049 |
| T17 | 65 - 60 | 8.108 | 10 | 1.249 | 0.044 |
| T18 | 60 - 55 | 6.847 | 10 | 1.122 | 0.039 |
| T19 | 55 - 50 | 5.720 | 10 | 0.994 | 0.034 |
| T20 | 50 - 45 | 4.710 | 10 | 0.895 | 0.030 |
| T21 | 45 - 40 | 3.807 | 10 | 0.796 | 0.027 |
| T22 | 40 - 33.3333 | 3.001 | 10 | 0.695 | 0.023 |
| T23 | 33.3333 - 26.6667 | 2.082 | 10 | 0.575 | 0.019 |
| T24 | 26.6667 - 20 | 1.341 | 10 | 0.455 | 0.015 |
| T25 | 20 - 13.3333 | 0.762 | 18 | 0.335 | 0.012 |
| T26 | 13.3333 - 6.66667 | 0.340 | 18 | 0.216 | 0.007 |
| T27 | 6.66667 - 0 | 0.078 | 18 | 0.097 | 0.002 |

Critical Deflections and Radius of Curvature - Design Wind

| Elevation ft | Appurtenance | Gov. Load Comb. | Deflection in | Tilt ° | Twist ° | Radius of Curvature ft |
|-----------------|----------------------------------|-----------------|------------------|-----------|------------|---------------------------|
| 130' | VHLP2.5 | 22 | 35.974 | 2.518 | 0.360 | 15599 |
| 128' | LLPX310R w/ Mount Pipe | 22 | 34.909 | 2.514 | 0.337 | 15599 |
| 126' | VHLP2.5 | 10 | 33.847 | 2.509 | 0.315 | 15599 |
| 124' | VHLP2.5 | 10 | 32.789 | 2.504 | 0.295 | 13085 |
| 118'6" | APXVTM14-C-120 w/ Mount Pipe | 10 | 29.901 | 2.483 | 0.251 | 13424 |
| 110' | (2) LGP13519 | 10 | 25.510 | 2.403 | 0.200 | 5094 |
| 93' | AIR 21 B2A/B4P | 10 | 17.538 | 1.966 | 0.091 | 1674 |
| 80' | (2) LNX-6514DS-A1M w/ Mount Pipe | 10 | 12.677 | 1.602 | 0.064 | 2692 |
| 55'6" | GPS-QBW-20N | 10 | 5.827 | 1.005 | 0.035 | 2547 |
| 50'6" | GPS | 10 | 4.806 | 0.904 | 0.031 | 2743 |

Bolt Design Data

| Section No. | Elevation ft | Component Type | Bolt Grade | Bolt Size in | Number Of Bolts | Maximum Load per Bolt K | Allowable Load K | Ratio Load Allowable | Allowable Ratio | Criteria |
|-------------|-----------------|----------------|------------|-----------------|-----------------|----------------------------|---------------------|----------------------|-----------------|--------------|
| T1 | 130 | Leg | A325N | 1.000 | 1 | 8.779 | 53.014 | 0.166 | 1 | Bolt Tension |

| | | | | |
|---|----------------|--|--------------------|-------------------|
| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job | 16-4584 130 SST | Page | 42 of 52 |
| | Project | Glastonbury-main st, CT (CT46126-A-01) | Date | 17:28:31 12/08/16 |
| | Client | SBA Communications Corporation | Designed by | bpaudel |

| Section No. | Elevation ft | Component Type | Bolt Grade | Bolt Size in | Number Of Bolts | Maximum Load per Bolt K | Allowable Load K | Ratio Load Allowable | Allowable Ratio | Criteria | |
|-------------|-----------------|----------------------|------------|-----------------|-----------------|----------------------------|---------------------|-------------------------|-----------------|----------|--------------------|
| T8 | 102.859 | Leg | A325N | 0.750 | 4 | 16.818 | 29.821 | 0.564 | ✓ | 1 | Bolt Tension |
| T9 | 100 | Diagonal | A325N | 0.500 | 1 | 3.843 | 4.690 | 0.819 | ✓ | 1 | Member Block Shear |
| T10 | 96 | Diagonal | A325X | 0.500 | 1 | 4.670 | 9.719 | 0.481 | ✓ | 1 | Bolt Shear |
| T11 | 92 | Diagonal | A325N | 0.500 | 1 | 6.873 | 9.380 | 0.733 | ✓ | 1 | Member Block Shear |
| T12 | 88 | Secondary Horizontal | A325N | 0.500 | 1 | 2.989 | 7.952 | 0.376 | ✓ | 1 | Bolt Shear |
| | | Diagonal | A325N | 0.500 | 1 | 6.529 | 9.380 | 0.696 | ✓ | 1 | Member Block Shear |
| T13 | 84 | Secondary Horizontal | A325N | 0.500 | 1 | 3.693 | 7.952 | 0.464 | ✓ | 1 | Bolt Shear |
| | | Leg | A325N | 1.000 | 8 | 14.198 | 53.014 | 0.268 | ✓ | 1 | Bolt Tension |
| T14 | 80 | Diagonal | A325N | 0.500 | 1 | 5.748 | 9.380 | 0.613 | ✓ | 1 | Member Block Shear |
| | | Secondary Horizontal | A325N | 0.500 | 1 | 3.134 | 7.952 | 0.394 | ✓ | 1 | Bolt Shear |
| T15 | 75 | Diagonal | A325X | 0.500 | 1 | 6.076 | 9.719 | 0.625 | ✓ | 1 | Bolt Shear |
| T16 | 70 | Diagonal | A325N | 0.500 | 1 | 6.300 | 9.380 | 0.672 | ✓ | 1 | Member Block Shear |
| T17 | 65 | Diagonal | A325N | 0.500 | 1 | 5.497 | 9.380 | 0.586 | ✓ | 1 | Member Block Shear |
| | | Leg | A325N | 1.000 | 8 | 22.174 | 53.014 | 0.418 | ✓ | 1 | Bolt Tension |
| T18 | 60 | Diagonal | A325N | 0.500 | 1 | 5.789 | 9.380 | 0.617 | ✓ | 1 | Member Block Shear |
| | | Secondary Horizontal | A325N | 0.500 | 1 | 7.254 | 9.380 | 0.773 | ✓ | 1 | Member Block Shear |
| T19 | 55 | Diagonal | A325N | 0.500 | 1 | 3.498 | 4.133 | 0.846 | ✓ | 1 | Member Bearing |
| T20 | 50 | Diagonal | A325N | 0.500 | 1 | 4.683 | 9.380 | 0.499 | ✓ | 1 | Member Block Shear |
| T21 | 45 | Diagonal | A325N | 0.500 | 1 | 5.629 | 9.380 | 0.600 | ✓ | 1 | Member Block Shear |
| | | Leg | A325N | 1.000 | 8 | 28.487 | 53.014 | 0.537 | ✓ | 1 | Bolt Tension |
| | | Diagonal | A325X | 0.500 | 1 | 6.737 | 9.719 | 0.693 | ✓ | 1 | Bolt Shear |
| T22 | 40 | Secondary Horizontal | A325N | 0.500 | 1 | 4.230 | 7.952 | 0.532 | ✓ | 1 | Bolt Shear |
| | | Diagonal | A325N | 0.500 | 1 | 5.514 | 11.419 | 0.483 | ✓ | 1 | Member Block Shear |
| T23 | 33.3333 | Diagonal | A325N | 0.500 | 1 | 5.514 | 11.419 | 0.483 | ✓ | 1 | Member Block Shear |
| T24 | 26.6667 | Diagonal | A325N | 0.500 | 1 | 5.602 | 11.419 | 0.491 | ✓ | 1 | Member Block Shear |
| | | Leg | A325N | 1.000 | 8 | 34.147 | 53.014 | 0.644 | ✓ | 1 | Bolt Tension |
| T25 | 20 | Diagonal | A325X | 0.500 | 1 | 5.201 | 11.419 | 0.456 | ✓ | 1 | Member Block Shear |
| T26 | 13.3333 | Diagonal | A325X | 0.500 | 1 | 5.557 | 6.199 | 0.896 | ✓ | 1 | Member Bearing |
| T27 | 6.66667 | Diagonal | A325X | 0.500 | 1 | 5.512 | 6.199 | 0.889 | ✓ | 1 | Member Bearing |
| | | Secondary Horizontal | A325N | 0.625 | 1 | 5.539 | 10.500 | 0.528 | ✓ | 1 | Member Block Shear |
| T27 | 6.66667 | Leg | A36M-55 | 1.500 | 6 | 53.166 | 84.492 | 0.629 | ✓ | 1 | Bolt Tension |
| | | Diagonal | A325N | 0.500 | 1 | 6.882 | 12.398 | 0.555 | ✓ | 1 | Member Bearing |

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| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job 16-4584 130 SST | Page 43 of 52 |
| | Project Glastonbury-main st, CT (CT46126-A-01) | Date 17:28:31 12/08/16 |
| | Client SBA Communications Corporation | Designed by bpaudel |

Compression Checks

Leg Design Data (Compression)

| Section No. | Elevation ft | Size | L ft | L _u ft | Kl/r | A in ² | P _u K | φP _n K | Ratio $\frac{P_u}{\phi P_n}$ |
|-------------|-------------------|--|------------|----------------------|----------------|----------------------|---------------------|----------------------|---------------------------------|
| T1 | 130 - 120 | 1 1/2 | 10' | 2'5-3/4" | 79.3 K=1.00 | 1.767 | -8.407 | 47.300 | 0.178 ¹ ✓ |
| T2 | 120 - 117.143 | 2 | 2'10-9/32" | 2'9-9/32" | 66.6 K=1.00 | 3.142 | -13.486 | 95.057 | 0.142 ¹ ✓ |
| T3 | 117.143 - 114.286 | 2 | 2'10-9/32" | 2'9-9/32" | 66.6 K=1.00 | 3.142 | -19.814 | 95.057 | 0.208 ¹ ✓ |
| T4 | 114.286 - 111.43 | 2 | 2'10-9/32" | 2'10-9/32" | 68.6 K=1.00 | 3.142 | -26.328 | 93.381 | 0.282 ¹ ✓ |
| T5 | 111.43 - 108.573 | 2 | 2'10-9/32" | 2'10-9/32" | 68.6 K=1.00 | 3.142 | -34.461 | 93.381 | 0.369 ¹ ✓ |
| T6 | 108.573 - 105.716 | 2 | 2'10-9/32" | 2'10-9/32" | 68.6 K=1.00 | 3.142 | -44.444 | 93.381 | 0.476 ¹ ✓ |
| T7 | 105.716 - 102.859 | 2 | 2'10-9/32" | 2'10-9/32" | 68.6 K=1.00 | 3.142 | -55.815 | 93.381 | 0.598 ¹ ✓ |
| T8 | 102.859 - 100 | 2 | 2'10-5/16" | 1" | 2.0 K=1.00 | 3.142 | -72.359 | 127.201 | 0.569 ¹ ✓ |
| T9 | 100 - 96 | P4.5 x 0.237 | 4'1/32" | 4'1/32" | 31.8 K=1.00 | 3.174 | -75.468 | 142.411 | 0.530 ¹ ✓ |
| T10 | 96 - 92 | P4.5 x 0.237 | 4'1/32" | 4'1/32" | 31.8 K=1.00 | 3.174 | -88.280 | 142.411 | 0.620 ¹ ✓ |
| T11 | 92 - 88 | P4.5 x 0.237 | 4'1/32" | 2'13/16" | 16.4 K=1.00 | 3.174 | -96.636 | 151.005 | 0.640 ¹ ✓ |
| T12 | 88 - 84 | BT101341- P4.5 x 0.237 w/ HP5.625x0.375 | 4'1/32" | 2'25/32" | 16.8 K=1.00 | 4.658 | -109.738 | 221.384 | 0.496 ¹ ✓ |
| T13 | 84 - 80 | BT101341- P4.5 x 0.237 w/ HP5.625x0.375 | 4'1/32" | 2'23/32" | 16.8 K=1.00 | 4.658 | -121.987 | 221.402 | 0.551 ¹ ✓ |
| T14 | 80 - 75 | P6.625x0.280 | 5'1/32" | 5'1/32" | 26.7 K=1.00 | 5.581 | -139.008 | 256.371 | 0.542 ¹ ✓ |
| T15 | 75 - 70 | P6.625x0.280 | 5'1/32" | 5'1/32" | 26.7 K=1.00 | 5.581 | -157.171 | 256.371 | 0.613 ¹ ✓ |
| T16 | 70 - 65 | P6.625x0.280 | 5'1/32" | 5'1/32" | 26.7 K=1.00 | 5.581 | -174.160 | 256.371 | 0.679 ¹ ✓ |
| T17 | 65 - 60 | P6.625x0.280 | 5'1/32" | 5'1/32" | 26.7 K=1.00 | 5.581 | -189.884 | 256.371 | 0.741 ¹ ✓ |
| T18 | 60 - 55 | P6.625x0.280 | 5'1/32" | 2'6-13/16" | 13.7 K=1.00 | 5.581 | -201.815 | 267.248 | 0.755 ¹ ✓ |
| T19 | 55 - 50 | BT101341- P6.625x0.280 w/ HP7.625x0.301(45'-55') | 5'1/32" | 5'1/32" | 27.1 K=1.00 | 7.511 | -219.760 | 344.376 | 0.638 ¹ ✓ |
| T20 | 50 - 45 | BT101341- P6.625x0.280 w/ HP7.625x0.301(45'-55') | 5'1/32" | 5'1/32" | 27.1 K=1.00 | 7.511 | -232.743 | 344.376 | 0.676 ¹ ✓ |
| T21 | 45 - 40 | BT101341- P6.625x0.280 w/ HP7.625x0.301 | 5'1/32" | 2'6-23/32" | 13.9 K=1.00 | 7.382 | -244.131 | 353.331 | 0.691 ¹ ✓ |
| T22 | 40 - 33.3333 | P6.625x.432 | 6'8-1/32" | 6'8-1/32" | 36.5 K=1.00 | 8.405 | -259.968 | 367.767 | 0.707 ¹ ✓ |
| T23 | 33.3333 - | P6.625x.432 | 6'8-1/32" | 6'8-1/32" | 36.5 | 8.405 | -277.072 | 367.767 | 0.753 ¹ ✓ |

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| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job 16-4584 130 SST | Page 44 of 52 |
| | Project Glastonbury-main st, CT (CT46126-A-01) | Date 17:28:31 12/08/16 |
| | Client SBA Communications Corporation | Designed by bpaudel |

| Section No. | Elevation ft | Size | L ft | L _u ft | Kl/r | A in ² | P _u K | φP _n K | Ratio $\frac{P_u}{\phi P_n}$ |
|-------------|----------------------|---|-----------|----------------------|----------------|----------------------|---------------------|----------------------|---------------------------------|
| | 26.6667 | | | | K=1.00 | | | | ✓ |
| T24 | 26.6667 - 20 | P6.625x.432 | 6'8-1/32' | 6'8-1/32' | 36.5 K=1.00 | 8.405 | -292.298 | 367.767 | 0.795 ¹ ✓ |
| T25 | 20 - 13.3333 | P6.625x.432 | 6'8-1/32' | 6'8-1/32' | 36.5 K=1.00 | 8.405 | -306.755 | 367.767 | 0.834 ¹ ✓ |
| T26 | 13.3333 - 6.66667 | P6.625x.432 | 6'8-1/32' | 3'4-31/3 2" | 18.7 K=1.00 | 8.405 | -319.690 | 397.395 | 0.804 ¹ ✓ |
| T27 | 6.66667 - 0 | BT101341- P6.625 x .432 w/ HP7.625x0.301 | 6'8-1/32' | 6'7-1/32' | 36.5 K=1.00 | 10.183 | -332.934 | 445.367 | 0.748 ¹ ✓ |

¹ P_u / φP_n controls

Diagonal Design Data (Compression)

| Section No. | Elevation ft | Size | L ft | L _u ft | Kl/r | A in ² | P _u K | φP _n K | Ratio $\frac{P_u}{\phi P_n}$ |
|-------------|----------------------|------------------------|-----------------|----------------------|-----------------|----------------------|---------------------|----------------------|---------------------------------|
| T1 | 130 - 120 | 1/2 | 3'6-1/4" | 1'8-1/16' | 144.5 K=0.90 | 0.196 | -1.554 | 2.125 | 0.731 ¹ ✓ |
| T2 | 120 - 117.143 | 3/4 | 3'8-13/1 6" | 1'8-29/3 2" | 105.1 K=0.94 | 0.442 | -2.310 | 8.003 | 0.289 ¹ ✓ |
| T3 | 117.143 - 114.286 | 3/4 | 3'8-13/1 6" | 1'8-29/3 2" | 105.1 K=0.94 | 0.442 | -3.004 | 8.003 | 0.375 ¹ ✓ |
| T4 | 114.286 - 111.43 | 3/4 | 3'9-9/16' | 1'9-1/4" | 105.8 K=0.93 | 0.442 | -2.836 | 7.941 | 0.357 ¹ ✓ |
| T5 | 111.43 - 108.573 | 3/4 | 3'9-9/16' | 1'9-1/4" | 105.8 K=0.93 | 0.442 | -3.747 | 7.941 | 0.472 ¹ ✓ |
| T6 | 108.573 - 105.716 | 3/4 | 3'9-9/16' | 1'9-1/4" | 105.8 K=0.93 | 0.442 | -4.720 | 7.941 | 0.594 ¹ ✓ |
| T7 | 105.716 - 102.859 | 3/4 | 3'9-9/16' | 1'9-1/4" | 105.8 K=0.93 | 0.442 | -4.677 | 7.941 | 0.589 ¹ ✓ |
| T8 | 102.859 - 100 | 3/4 | 3'8-27/3 2" | 1'8-29/3 2" | 105.1 K=0.94 | 0.442 | -4.936 | 8.001 | 0.617 ¹ ✓ |
| T9 | 100 - 96 | L1 1/2x1 1/2x3/16 | 4'9-1/4" | 2'7/16" | 92.5 K=1.11 | 0.527 | -4.011 | 10.892 | 0.368 ¹ ✓ |
| T10 | 96 - 92 | L2x2x1/4 | 4'10-19/ 32" | 2'15/16" | 77.8 K=1.22 | 0.938 | -4.670 | 22.096 | 0.211 ¹ ✓ |
| T11 | 92 - 88 | 2L1 1/2x1 1/2x3/16x3/8 | 5' | 2'3-1/4" | 59.7 K=1.00 | 1.055 | -7.276 | 28.334 | 0.257 ¹ ✓ |
| T12 | 88 - 84 | 2L1 1/2x1 1/2x3/16x3/8 | 5'1-15/3 2" | 2'4-3/32' | 61.5 K=1.00 | 1.055 | -6.821 | 27.999 | 0.244 ¹ ✓ |
| T13 | 84 - 80 | 2L1 1/2x1 1/2x3/16x3/8 | 5'3" | 2'4-31/3 2" | 63.4 K=1.00 | 1.055 | -6.001 | 27.654 | 0.217 ¹ ✓ |
| T14 | 80 - 75 | L2x2x1/4 | 6'2-1/8" | 2'7-3/16' | 89.8 K=1.13 | 0.938 | -6.076 | 19.872 | 0.306 ¹ ✓ |
| T15 | 75 - 70 | 2L1 1/2x1 1/2x3/16x3/8 | 6'3-29/3 2" | 2'8-17/3 2" | 71.2 K=1.00 | 1.055 | -6.785 | 26.164 | 0.259 ¹ ✓ |
| T16 | 70 - 65 | 2L1 1/2x1 1/2x3/16x3/8 | 6'5-25/3 2" | 2'9-5/8" | 73.6 K=1.00 | 1.055 | -6.053 | 25.691 | 0.236 ¹ ✓ |

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| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job 16-4584 130 SST | Page 45 of 52 |
| | Project Glastonbury-main st, CT (CT46126-A-01) | Date 17:28:31 12/08/16 |
| | Client SBA Communications Corporation | Designed by bpaudel |

| Section No. | Elevation ft | Size | L ft | L _u ft | Kl/r | A in ² | P _u K | φP _n K | Ratio $\frac{P_u}{\phi P_n}$ |
|-------------|----------------------|------------------------|-----------------|----------------------|-----------------|----------------------|---------------------|----------------------|---------------------------------|
| T17 | 65 - 60 | 2L1 1/2x1 1/2x3/16x3/8 | 6'7-23/3 2" | 2'10-23/ 32" | 76.0 K=1.00 | 1.055 | -6.266 | 25.205 | 0.249 ¹ ✓ |
| T18 | 60 - 55 | 2L1 1/2x1 1/2x3/16x3/8 | 6'9-23/3 2" | 3'1-3/32' ' | 81.2 K=1.00 | 1.055 | -7.833 | 24.144 | 0.324 ¹ ✓ |
| T19 | 55 - 50 | 2L1 1/2x1 1/2x3/16x3/8 | 6'11-13/ 16" | 3'31/32" | 81.0 K=1.00 | 1.055 | -5.083 | 24.196 | 0.210 ¹ ✓ |
| T20 | 50 - 45 | 2L1 1/2x1 1/2x3/16x3/8 | 7'1-29/3 2" | 3'2-1/8" | 83.5 K=1.00 | 1.055 | -6.072 | 23.674 | 0.256 ¹ ✓ |
| T21 | 45 - 40 | L2x2x1/4 | 7'4-3/32' ' | 3'4-9/16' ' | 103.7 K=1.00 | 0.938 | -6.737 | 17.253 | 0.390 ¹ ✓ |
| T22 | 40 - 33.3333 | 2L1 3/4x1 3/4x3/16x3/8 | 8'9" | 3'11-11/ 16" | 88.8 K=1.00 | 1.242 | -6.042 | 26.573 | 0.227 ¹ ✓ |
| T23 | 33.3333 - 26.6667 | 2L1 3/4x1 3/4x3/16x3/8 | 8'11-5/8' ' | 4'1-1/8" | 91.5 K=1.00 | 1.242 | -6.361 | 25.910 | 0.246 ¹ ✓ |
| T24 | 26.6667 - 20 | 2L1 3/4x1 3/4x3/16x3/8 | 9'2-11/3 2" | 4'2-9/16' ' | 94.2 K=1.00 | 1.242 | -5.971 | 25.232 | 0.237 ¹ ✓ |
| T25 | 20 - 13.3333 | L2x2x3/16 | 9'5-5/32' ' | 4'4-1/16' ' | 132.2 K=1.00 | 0.715 | -6.096 | 9.232 | 0.660 ¹ ✓ |
| T26 | 13.3333 - 6.66667 | L2x2x3/16 | 9'8" | 4'6-13/1 6" | 139.2 K=1.00 | 0.715 | -5.949 | 8.336 | 0.714 ¹ ✓ |
| T27 | 6.66667 - 0 | 2L2x2x3/16x3/8 | 9'10-1/4' ' | 4'6-3/4" | 88.7 K=1.00 | 1.430 | -7.676 | 30.610 | 0.251 ¹ ✓ |

¹ P_u / φP_n controls

Horizontal Design Data (Compression)

| Section No. | Elevation ft | Size | L ft | L _u ft | Kl/r | A in ² | P _u K | φP _n K | Ratio $\frac{P_u}{\phi P_n}$ |
|-------------|-----------------|-------------------|---------|----------------------|-----------------|----------------------|---------------------|----------------------|---------------------------------|
| T1 | 130 - 120 | L1 1/4x1 1/4x3/16 | 2'6" | 2'4-1/2" | 118.5 K=1.01 | 0.434 | -0.270 | 6.709 | 0.040 ¹ ✓ |

¹ P_u / φP_n controls

Secondary Horizontal Design Data (Compression)

| Section No. | Elevation ft | Size | L ft | L _u ft | Kl/r | A in ² | P _u K | φP _n K | Ratio $\frac{P_u}{\phi P_n}$ |
|-------------|-----------------|----------|-----------------|----------------------|-----------------|----------------------|---------------------|----------------------|---------------------------------|
| T8 | 102.859 - 100 | L2x2x1/8 | 2'6" | 2'4" | 82.4 K=1.84 | 0.484 | -1.143 | 10.739 | 0.106 ¹ ✓ |
| T11 | 92 - 88 | 4x3/8 | 2'11-31/ 32" | 2'7-15/3 2" | 145.3 K=0.50 | 1.500 | -2.783 | 16.048 | 0.173 ¹ ✓ |
| T12 | 88 - 84 | 4x3/8 | 3'2-11/3 2" | 2'9-27/3 2" | 156.4 K=0.50 | 1.500 | -3.383 | 13.861 | 0.244 ¹ ✓ |
| T13 | 84 - 80 | 4x3/8 | 3'4-3/4" | 3'1/4" | 167.5 | 1.500 | -2.924 | 12.081 | 0.242 ¹ ✓ |

| | | | | |
|---|----------------|--|--------------------|-------------------|
| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job | 16-4584 130 SST | Page | 46 of 52 |
| | Project | Glastonbury-main st, CT (CT46126-A-01) | Date | 17:28:31 12/08/16 |
| | Client | SBA Communications Corporation | Designed by | bpaudel |

| Section No. | Elevation ft | Size | L ft | L _u ft | Kl/r | A in ² | P _u K | φP _n K | Ratio $\frac{P_u}{\phi P_n}$ |
|-------------|-------------------|-----------|-------------|----------------------|----------------|----------------------|---------------------|----------------------|---------------------------------|
| T18 | 60 - 55 | L2x2x1/8 | 4'7-15/32" | 4'27/32" | 39.0 K=0.50 | 0.484 | -3.498 | 14.034 | 0.249 ¹ ✓ |
| T21 | 45 - 40 | L3x3x5/16 | 5'4-15/32" | 4'9-27/32" | 31.4 K=0.50 | 1.780 | -4.230 | 54.761 | 0.077 ¹ ✓ |
| T26 | 13.3333 - 6.66667 | L2x2x1/4 | 6'11-15/16" | 6'5-5/16" | 63.5 K=0.50 | 0.938 | -5.539 | 24.581 | 0.225 ¹ ✓ |

¹ P_u / φP_n controls

Top Girt Design Data (Compression)

| Section No. | Elevation ft | Size | L ft | L _u ft | Kl/r | A in ² | P _u K | φP _n K | Ratio $\frac{P_u}{\phi P_n}$ |
|-------------|-----------------|-------------------|---------|----------------------|-----------------|----------------------|---------------------|----------------------|---------------------------------|
| T1 | 130 - 120 | L1 1/4x1 1/4x3/16 | 2'6" | 2'4-1/2" | 118.5 K=1.01 | 0.434 | -0.064 | 6.709 | 0.009 ¹ ✓ |
| T2 | 120 - 117.143 | L1 1/4x1 1/4x3/16 | 2'6" | 2'4" | 117.5 K=1.02 | 0.434 | -0.030 | 6.795 | 0.004 ¹ ✓ |

¹ P_u / φP_n controls

Bottom Girt Design Data (Compression)

| Section No. | Elevation ft | Size | L ft | L _u ft | Kl/r | A in ² | P _u K | φP _n K | Ratio $\frac{P_u}{\phi P_n}$ |
|-------------|-----------------|-------------------|---------|----------------------|-----------------|----------------------|---------------------|----------------------|---------------------------------|
| T1 | 130 - 120 | L1 1/4x1 1/4x3/16 | 2'6" | 2'4-1/2" | 118.5 K=1.01 | 0.434 | -0.212 | 6.709 | 0.032 ¹ ✓ |
| T8 | 102.859 - 100 | L1 1/4x1 1/4x3/16 | 2'6" | 2'4" | 117.5 K=1.02 | 0.434 | -0.835 | 6.795 | 0.123 ¹ ✓ |

¹ P_u / φP_n controls

Tension Checks

Leg Design Data (Tension)

| Section No. | Elevation ft | Size | L ft | L _u ft | Kl/r | A in ² | P _u K | φP _n K | Ratio $\frac{P_u}{\phi P_n}$ |
|-------------|-----------------|-------|---------|----------------------|------|----------------------|---------------------|----------------------|---------------------------------|
| T1 | 130 - 120 | 1 1/2 | 10' | 1" | 2.7 | 1.767 | 8.779 | 71.569 | 0.123 ¹ |

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|--|----------------|--|--------------------|-------------------|
| <p>tnxTower</p> <p>Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375</p> | Job | 16-4584 130 SST | Page | 47 of 52 |
| | Project | Glastonbury-main st, CT (CT46126-A-01) | Date | 17:28:31 12/08/16 |
| | Client | SBA Communications Corporation | Designed by | bpaudel |

| Section No. | Elevation ft | Size | L ft | L _u ft | Kl/r | A in ² | P _u K | φP _n K | Ratio $\frac{P_u}{\phi P_n}$ |
|-------------|----------------------|---|----------------|----------------------|------|----------------------|---------------------|----------------------|---------------------------------|
| T2 | 120 - 117.143 | 2 | 2'10-9/3 2" | 2'9-9/32' ' | 66.6 | 3.142 | 10.987 | 127.235 | 0.086 ¹ |
| T3 | 117.143 - 114.286 | 2 | 2'10-9/3 2" | 2'9-9/32' ' | 66.6 | 3.142 | 17.121 | 127.235 | 0.135 ¹ |
| T4 | 114.286 - 111.43 | 2 | 2'10-9/3 2" | 2'10-9/3 2" | 68.6 | 3.142 | 23.594 | 127.235 | 0.185 ¹ |
| T5 | 111.43 - 108.573 | 2 | 2'10-9/3 2" | 2'10-9/3 2" | 68.6 | 3.142 | 30.717 | 127.235 | 0.241 ¹ |
| T6 | 108.573 - 105.716 | 2 | 2'10-9/3 2" | 2'10-9/3 2" | 68.6 | 3.142 | 40.019 | 127.235 | 0.315 ¹ |
| T7 | 105.716 - 102.859 | 2 | 2'10-9/3 2" | 2'10-9/3 2" | 68.6 | 3.142 | 51.121 | 127.235 | 0.402 ¹ |
| T8 | 102.859 - 100 | 2 | 2'10-5/1 6" | 1" | 2.0 | 3.142 | 67.273 | 127.235 | 0.529 ¹ |
| T9 | 100 - 96 | P4.5 x 0.237 | 4'1/32" | 4'1/32" | 31.8 | 3.174 | 70.719 | 154.259 | 0.458 ¹ |
| T10 | 96 - 92 | P4.5 x 0.237 | 4'1/32" | 4'1/32" | 31.8 | 3.174 | 82.030 | 154.259 | 0.532 ¹ |
| T11 | 92 - 88 | P4.5 x 0.237 | 4'1/32" | 1'11-7/3 2" | 15.4 | 3.174 | 89.759 | 154.259 | 0.582 ¹ |
| T12 | 88 - 84 | BT101341- P4.5 x 0.237 w/ HP5.625x0.375 | 4'1/32" | 1'11-1/4' ' | 15.8 | 4.658 | 102.133 | 226.401 | 0.451 ¹ |
| T13 | 84 - 80 | BT101341- P4.5 x 0.237 w/ HP5.625x0.375 | 4'1/32" | 1'11-5/1 6" | 15.9 | 4.658 | 113.711 | 226.401 | 0.502 ¹ |
| T14 | 80 - 75 | P6.625x0.280 | 5'1/32" | 5'1/32" | 26.7 | 5.581 | 129.243 | 271.254 | 0.476 ¹ |
| T15 | 75 - 70 | P6.625x0.280 | 5'1/32" | 5'1/32" | 26.7 | 5.581 | 146.206 | 271.254 | 0.539 ¹ |
| T16 | 70 - 65 | P6.625x0.280 | 5'1/32" | 5'1/32" | 26.7 | 5.581 | 162.541 | 271.254 | 0.599 ¹ |
| T17 | 65 - 60 | P6.625x0.280 | 5'1/32" | 5'1/32" | 26.7 | 5.581 | 177.389 | 271.254 | 0.654 ¹ |
| T18 | 60 - 55 | P6.625x0.280 | 5'1/32" | 2'5-3/16' ' | 13.0 | 5.581 | 188.863 | 271.254 | 0.696 ¹ |
| T19 | 55 - 50 | BT101341- P6.625x0.280 w/ HP7.625x0.301(45'-55') | 5'1/32" | 5'1/32" | 27.1 | 7.511 | 205.426 | 365.013 | 0.563 ¹ |
| T20 | 50 - 45 | BT101341- P6.625x0.280 w/ HP7.625x0.301(45'-55') | 5'1/32" | 5'1/32" | 27.1 | 7.511 | 217.542 | 365.013 | 0.596 ¹ |
| T21 | 45 - 40 | BT101341- P6.625x0.280 w/ HP7.625x0.301 | 5'1/32" | 2'5-5/16' ' | 13.2 | 7.382 | 228.126 | 358.744 | 0.636 ¹ |
| T22 | 40 - 33.3333 | P6.625x.432 | 6'8-1/32' ' | 6'8-1/32' ' | 36.5 | 8.405 | 243.182 | 408.480 | 0.595 ¹ |
| T23 | 33.3333 - 26.6667 | P6.625x.432 | 6'8-1/32' ' | 6'8-1/32' ' | 36.5 | 8.405 | 259.186 | 408.480 | 0.635 ¹ |
| T24 | 26.6667 - 20 | P6.625x.432 | 6'8-1/32' ' | 6'8-1/32' ' | 36.5 | 8.405 | 273.179 | 408.480 | 0.669 ¹ |
| T25 | 20 - 13.3333 | P6.625x.432 | 6'8-1/32' ' | 6'8-1/32' ' | 36.5 | 8.405 | 286.235 | 408.480 | 0.701 ¹ |
| T26 | 13.3333 - 6.66667 | P6.625x.432 | 6'8-1/32' ' | 3'3-1/16' ' | 17.8 | 8.405 | 297.972 | 408.480 | 0.729 ¹ |
| T27 | 6.66667 - 0 | BT101341- P6.625 x .432 w/ | 6'8-1/32' | 1" | 0.5 | 10.183 | 318.997 | 494.913 | 0.645 ¹ |

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| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job 16-4584 130 SST | Page 48 of 52 |
| | Project Glastonbury-main st, CT (CT46126-A-01) | Date 17:28:31 12/08/16 |
| | Client SBA Communications Corporation | Designed by bpaudel |

| Section No. | Elevation ft | Size | L ft | L _u ft | Kl/r | A in ² | P _u K | φP _n K | Ratio $\frac{P_u}{\phi P_n}$ |
|-------------|-----------------|---------------|---------|----------------------|------|----------------------|---------------------|----------------------|---------------------------------|
| | | HP7.625x0.301 | | | | | | | ✓ |

¹ P_u / φP_n controls

Diagonal Design Data (Tension)

| Section No. | Elevation ft | Size | L ft | L _u ft | Kl/r | A in ² | P _u K | φP _n K | Ratio $\frac{P_u}{\phi P_n}$ |
|-------------|-------------------|------------------------|-------------|----------------------|-------|----------------------|---------------------|----------------------|---------------------------------|
| T1 | 130 - 120 | 1/2 | 3'6-1/4" | 1'8-1/16' | 160.6 | 0.196 | 1.504 | 6.362 | 0.236 ¹ ✓ |
| T2 | 120 - 117.143 | 3/4 | 3'8-13/16" | 1'8-29/32" | 111.5 | 0.442 | 2.379 | 14.314 | 0.166 ¹ ✓ |
| T3 | 117.143 - 114.286 | 3/4 | 3'8-13/16" | 1'8-29/32" | 111.5 | 0.442 | 3.011 | 14.314 | 0.210 ¹ ✓ |
| T4 | 114.286 - 111.43 | 3/4 | 3'9-9/16" | 1'9-1/4" | 113.4 | 0.442 | 2.801 | 14.314 | 0.196 ¹ ✓ |
| T5 | 111.43 - 108.573 | 3/4 | 3'9-9/16" | 1'9-1/4" | 113.4 | 0.442 | 3.751 | 14.314 | 0.262 ¹ ✓ |
| T6 | 108.573 - 105.716 | 3/4 | 3'9-9/16" | 1'9-1/4" | 113.4 | 0.442 | 4.648 | 14.314 | 0.325 ¹ ✓ |
| T7 | 105.716 - 102.859 | 3/4 | 3'9-9/16" | 1'9-1/4" | 113.4 | 0.442 | 4.631 | 14.314 | 0.324 ¹ ✓ |
| T8 | 102.859 - 100 | 3/4 | 3'8-27/32" | 1'8-29/32" | 111.6 | 0.442 | 4.810 | 14.314 | 0.336 ¹ ✓ |
| T9 | 100 - 96 | L1 1/2x1 1/2x3/16 | 4'9-1/4" | 2'7/16" | 56.3 | 0.308 | 3.843 | 13.381 | 0.287 ¹ ✓ |
| T10 | 96 - 92 | L2x2x1/4 | 4'10-19/32" | 2'15/16" | 43.4 | 0.586 | 4.389 | 25.505 | 0.172 ¹ ✓ |
| T11 | 92 - 88 | 2L1 1/2x1 1/2x3/16x3/8 | 5' | 2'3-1/4" | 59.7 | 0.615 | 6.873 | 26.763 | 0.257 ¹ ✓ |
| T12 | 88 - 84 | 2L1 1/2x1 1/2x3/16x3/8 | 5'1-15/32" | 2'4-3/32" | 61.5 | 0.615 | 6.529 | 26.763 | 0.244 ¹ ✓ |
| T13 | 84 - 80 | 2L1 1/2x1 1/2x3/16x3/8 | 5'3" | 2'4-31/32" | 63.4 | 0.615 | 5.748 | 26.763 | 0.215 ¹ ✓ |
| T14 | 80 - 75 | L2x2x1/4 | 6'2-1/8" | 2'7-3/16" | 53.7 | 0.586 | 5.707 | 25.505 | 0.224 ¹ ✓ |
| T15 | 75 - 70 | 2L1 1/2x1 1/2x3/16x3/8 | 6'3-29/32" | 2'8-17/32" | 74.0 | 0.615 | 6.300 | 26.763 | 0.235 ¹ ✓ |
| T16 | 70 - 65 | 2L1 1/2x1 1/2x3/16x3/8 | 6'5-25/32" | 2'9-5/8" | 76.4 | 0.615 | 5.497 | 26.763 | 0.205 ¹ ✓ |
| T17 | 65 - 60 | 2L1 1/2x1 1/2x3/16x3/8 | 6'7-23/32" | 2'10-23/32" | 78.8 | 0.615 | 5.789 | 26.763 | 0.216 ¹ ✓ |
| T18 | 60 - 55 | 2L1 1/2x1 1/2x3/16x3/8 | 6'9-23/32" | 3'1-3/32" | 81.2 | 0.615 | 7.254 | 26.763 | 0.271 ¹ ✓ |
| T19 | 55 - 50 | 2L1 1/2x1 1/2x3/16x3/8 | 6'11-13/16" | 3'31/32" | 83.7 | 0.615 | 4.683 | 26.763 | 0.175 ¹ ✓ |
| T20 | 50 - 45 | 2L1 1/2x1 1/2x3/16x3/8 | 7'1-29/32" | 3'2-1/8" | 86.2 | 0.615 | 5.629 | 26.763 | 0.210 ¹ ✓ |

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| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job 16-4584 130 SST | Page 49 of 52 |
| | Project Glastonbury-main st, CT (CT46126-A-01) | Date 17:28:31 12/08/16 |
| | Client SBA Communications Corporation | Designed by bpaudel |

| Section No. | Elevation ft | Size | L ft | L _u ft | Kl/r | A in ² | P _u K | φP _n K | Ratio $\frac{P_u}{\phi P_n}$ |
|-------------|-------------------|------------------------|------------|----------------------|------|----------------------|---------------------|----------------------|---------------------------------|
| T21 | 45 - 40 | L2x2x1/4 | 7'4-3/32' | 3'4-9/16' | 66.6 | 0.586 | 6.346 | 25.505 | 0.249 ¹ |
| T22 | 40 - 33.3333 | 2L1 3/4x1 3/4x3/16x3/8 | 8'9" | 3'11-11/16" | 91.1 | 0.756 | 5.514 | 32.880 | 0.168 ¹ |
| T23 | 33.3333 - 26.6667 | 2L1 3/4x1 3/4x3/16x3/8 | 8'11-5/8" | 4'1-1/8" | 93.8 | 0.756 | 5.602 | 32.880 | 0.170 ¹ |
| T24 | 26.6667 - 20 | 2L1 3/4x1 3/4x3/16x3/8 | 9'2-11/32" | 4'2-9/16" | 96.5 | 0.756 | 5.201 | 32.880 | 0.158 ¹ |
| T25 | 20 - 13.3333 | L2x2x3/16 | 9'5-5/32' | 4'4-1/16' | 86.3 | 0.448 | 5.557 | 19.499 | 0.285 ¹ |
| T26 | 13.3333 - 6.66667 | L2x2x3/16 | 9'8" | 4'6-13/16" | 88.8 | 0.448 | 5.512 | 19.499 | 0.283 ¹ |
| T27 | 6.66667 - 0 | 2L2x2x3/16x3/8 | 9'10-1/4" | 4'6-3/4" | 90.8 | 0.897 | 6.882 | 39.007 | 0.176 ¹ |

¹ P_u / φP_n controls

Horizontal Design Data (Tension)

| Section No. | Elevation ft | Size | L ft | L _u ft | Kl/r | A in ² | P _u K | φP _n K | Ratio $\frac{P_u}{\phi P_n}$ |
|-------------|-----------------|-------------------|---------|----------------------|------|----------------------|---------------------|----------------------|---------------------------------|
| T1 | 130 - 120 | L1 1/4x1 1/4x3/16 | 2'6" | 2'4-1/2" | 75.7 | 0.434 | 0.309 | 14.048 | 0.022 ¹ |

¹ P_u / φP_n controls

Secondary Horizontal Design Data (Tension)

| Section No. | Elevation ft | Size | L ft | L _u ft | Kl/r | A in ² | P _u K | φP _n K | Ratio $\frac{P_u}{\phi P_n}$ |
|-------------|-------------------|-----------|-------------|----------------------|-------|----------------------|---------------------|----------------------|---------------------------------|
| T8 | 102.859 - 100 | L2x2x1/8 | 2'6" | 2'4" | 44.7 | 0.484 | 1.143 | 15.694 | 0.073 ¹ |
| T11 | 92 - 88 | 4x3/8 | 2'11-31/32" | 2'7-15/32" | 290.6 | 0.949 | 2.989 | 41.291 | 0.072 ¹ |
| T12 | 88 - 84 | 4x3/8 | 3'2-11/32" | 2'9-27/32" | 312.7 | 0.949 | 3.693 | 41.291 | 0.089 ¹ |
| T13 | 84 - 80 | 4x3/8 | 3'4-3/4" | 3'1/4" | 335.0 | 0.949 | 3.134 | 41.291 | 0.076 ¹ |
| T18 | 60 - 55 | L2x2x1/8 | 4'7-15/32" | 4'27/32" | 78.0 | 0.305 | 3.498 | 13.254 | 0.264 ¹ |
| T21 | 45 - 40 | L3x3x5/16 | 5'4-15/32" | 4'9-27/32" | 62.7 | 1.189 | 4.230 | 51.700 | 0.082 ¹ |
| T26 | 13.3333 - 6.66667 | L2x2x1/4 | 6'11-15/16" | 6'5-5/16" | 127.0 | 0.563 | 5.539 | 24.485 | 0.226 ¹ |

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|---|--|----------------------------------|
| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job 16-4584 130 SST | Page 50 of 52 |
| | Project Glastonbury-main st, CT (CT46126-A-01) | Date 17:28:31 12/08/16 |
| | Client SBA Communications Corporation | Designed by bpaudel |

| Section No. | Elevation ft | Size | L ft | L _u ft | Kl/r | A in ² | P _u K | φP _n K | Ratio $\frac{P_u}{\phi P_n}$ |
|-------------|-----------------|------|---------|----------------------|------|----------------------|---------------------|----------------------|---------------------------------|
|-------------|-----------------|------|---------|----------------------|------|----------------------|---------------------|----------------------|---------------------------------|

¹ P_u / φP_n controls

Top Girt Design Data (Tension)

| Section No. | Elevation ft | Size | L ft | L _u ft | Kl/r | A in ² | P _u K | φP _n K | Ratio $\frac{P_u}{\phi P_n}$ |
|-------------|-----------------|-------------------|---------|----------------------|------|----------------------|---------------------|----------------------|---------------------------------|
| T1 | 130 - 120 | L1 1/4x1 1/4x3/16 | 2'6" | 2'4-1/2" | 75.7 | 0.434 | 0.057 | 14.048 | 0.004 ¹ ✓ |
| T2 | 120 - 117.143 | L1 1/4x1 1/4x3/16 | 2'6" | 2'4" | 74.4 | 0.434 | 0.077 | 14.048 | 0.006 ¹ ✓ |

¹ P_u / φP_n controls

Bottom Girt Design Data (Tension)

| Section No. | Elevation ft | Size | L ft | L _u ft | Kl/r | A in ² | P _u K | φP _n K | Ratio $\frac{P_u}{\phi P_n}$ |
|-------------|-----------------|-------------------|---------|----------------------|------|----------------------|---------------------|----------------------|---------------------------------|
| T1 | 130 - 120 | L1 1/4x1 1/4x3/16 | 2'6" | 2'4-1/2" | 75.7 | 0.434 | 0.242 | 14.048 | 0.017 ¹ ✓ |
| T8 | 102.859 - 100 | L1 1/4x1 1/4x3/16 | 2'6" | 2'4" | 74.4 | 0.434 | 0.851 | 14.048 | 0.061 ¹ ✓ |

¹ P_u / φP_n controls

Section Capacity Table

| Section No. | Elevation ft | Component Type | Size | Critical Element | P K | φP _{allow} K | % Capacity | Pass Fail |
|-------------|-------------------|----------------|--------------|------------------|---------|--------------------------|---------------|--------------|
| T1 | 130 - 120 | Leg | 1 1/2 | 2 | -8.407 | 47.300 | 17.8 | Pass |
| T2 | 120 - 117.143 | Leg | 2 | 44 | -13.486 | 95.057 | 14.2 | Pass |
| T3 | 117.143 - 114.286 | Leg | 2 | 56 | -19.814 | 95.057 | 20.8 | Pass |
| T4 | 114.286 - 111.43 | Leg | 2 | 65 | -26.328 | 93.381 | 28.2 | Pass |
| T5 | 111.43 - 108.573 | Leg | 2 | 74 | -34.461 | 93.381 | 36.9 | Pass |
| T6 | 108.573 - 105.716 | Leg | 2 | 83 | -44.444 | 93.381 | 47.6 | Pass |
| T7 | 105.716 - 102.859 | Leg | 2 | 92 | -55.815 | 93.381 | 59.8 | Pass |
| T8 | 102.859 - 100 | Leg | 2 | 101 | -72.359 | 127.201 | 56.9 | Pass |
| T9 | 100 - 96 | Leg | P4.5 x 0.237 | 116 | -75.468 | 142.411 | 53.0 | Pass |
| T10 | 96 - 92 | Leg | P4.5 x 0.237 | 125 | -88.280 | 142.411 | 62.0 | Pass |
| T11 | 92 - 88 | Leg | P4.5 x 0.237 | 134 | -96.636 | 151.005 | 64.0 | Pass |

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|----------------|--|--------------------|-------------------|
| Job | 16-4584 130 SST | Page | 51 of 52 |
| Project | Glastonbury-main st, CT (CT46126-A-01) | Date | 17:28:31 12/08/16 |
| Client | SBA Communications Corporation | Designed by | bpaudel |

| Section No. | Elevation ft | Component Type | Size | Critical Element | P K | ϕP_{allow} K | % Capacity | Pass Fail |
|-------------|-------------------|----------------|--|------------------|----------|--------------------|------------------------------|-----------|
| T12 | 88 - 84 | Leg | BT101341- P4.5 x 0.237 w/ HP5.625x0.375 | 146 | -109.738 | 221.384 | 49.6 | Pass |
| T13 | 84 - 80 | Leg | BT101341- P4.5 x 0.237 w/ HP5.625x0.375 | 158 | -121.987 | 221.402 | 55.1 | Pass |
| T14 | 80 - 75 | Leg | P6.625x0.280 | 170 | -139.008 | 256.371 | 54.2 | Pass |
| T15 | 75 - 70 | Leg | P6.625x0.280 | 179 | -157.171 | 256.371 | 61.3 | Pass |
| T16 | 70 - 65 | Leg | P6.625x0.280 | 188 | -174.160 | 256.371 | 67.9 | Pass |
| T17 | 65 - 60 | Leg | P6.625x0.280 | 197 | -189.884 | 256.371 | 74.1 | Pass |
| T18 | 60 - 55 | Leg | P6.625x0.280 | 206 | -201.815 | 267.248 | 75.5 | Pass |
| T19 | 55 - 50 | Leg | BT101341- P6.625x0.280 w/ HP7.625x0.301(45'-55') | 218 | -219.760 | 344.376 | 63.8 | Pass |
| T20 | 50 - 45 | Leg | BT101341- P6.625x0.280 w/ HP7.625x0.301(45'-55') | 227 | -232.743 | 344.376 | 67.6 | Pass |
| T21 | 45 - 40 | Leg | BT101341- P6.625x0.280 w/ HP7.625x0.301 | 236 | -244.131 | 353.331 | 69.1 | Pass |
| T22 | 40 - 33.3333 | Leg | P6.625x.432 | 248 | -259.968 | 367.767 | 70.7 | Pass |
| T23 | 33.3333 - 26.6667 | Leg | P6.625x.432 | 257 | -277.072 | 367.767 | 75.3 | Pass |
| T24 | 26.6667 - 20 | Leg | P6.625x.432 | 266 | -292.298 | 367.767 | 79.5 | Pass |
| T25 | 20 - 13.3333 | Leg | P6.625x.432 | 275 | -306.755 | 367.767 | 83.4 | Pass |
| T26 | 13.3333 - 6.66667 | Leg | P6.625x.432 | 284 | -319.690 | 397.395 | 80.4 | Pass |
| T27 | 6.66667 - 0 | Leg | BT101341- P6.625 x .432 w/ HP7.625x0.301 | 296 | -332.934 | 445.367 | 74.8 | Pass |
| T1 | 130 - 120 | Diagonal | 1/2 | 13 | -1.554 | 2.125 | 73.1 | Pass |
| T2 | 120 - 117.143 | Diagonal | 3/4 | 52 | -2.310 | 8.003 | 28.9 | Pass |
| T3 | 117.143 - 114.286 | Diagonal | 3/4 | 61 | -3.004 | 8.003 | 37.5 | Pass |
| T4 | 114.286 - 111.43 | Diagonal | 3/4 | 70 | -2.836 | 7.941 | 35.7 | Pass |
| T5 | 111.43 - 108.573 | Diagonal | 3/4 | 79 | -3.747 | 7.941 | 47.2 | Pass |
| T6 | 108.573 - 105.716 | Diagonal | 3/4 | 88 | -4.720 | 7.941 | 59.4 | Pass |
| T7 | 105.716 - 102.859 | Diagonal | 3/4 | 97 | -4.677 | 7.941 | 58.9 | Pass |
| T8 | 102.859 - 100 | Diagonal | 3/4 | 109 | -4.936 | 8.001 | 61.7 | Pass |
| T9 | 100 - 96 | Diagonal | L1 1/2x1 1/2x3/16 | 121 | -4.011 | 10.892 | 36.8 | Pass |
| T10 | 96 - 92 | Diagonal | L2x2x1/4 | 130 | -4.670 | 22.096 | 81.9 (b) 21.1 | Pass |
| T11 | 92 - 88 | Diagonal | 2L1 1/2x1 1/2x3/16x3/8 | 139 | 6.873 | 26.763 | 48.1 (b) 25.7 | Pass |
| T12 | 88 - 84 | Diagonal | 2L1 1/2x1 1/2x3/16x3/8 | 151 | 6.529 | 26.763 | 73.3 (b) 24.4 | Pass |
| T13 | 84 - 80 | Diagonal | 2L1 1/2x1 1/2x3/16x3/8 | 163 | -6.001 | 27.654 | 69.6 (b) 21.7 | Pass |
| T14 | 80 - 75 | Diagonal | L2x2x1/4 | 175 | -6.076 | 19.872 | 61.3 (b) 30.6 | Pass |
| T15 | 75 - 70 | Diagonal | 2L1 1/2x1 1/2x3/16x3/8 | 184 | -6.785 | 26.164 | 62.5 (b) 25.9 | Pass |
| T16 | 70 - 65 | Diagonal | 2L1 1/2x1 1/2x3/16x3/8 | 193 | -6.053 | 25.691 | 67.2 (b) 23.6 | Pass |
| T17 | 65 - 60 | Diagonal | 2L1 1/2x1 1/2x3/16x3/8 | 202 | -6.266 | 25.205 | 58.6 (b) 24.9 | Pass |
| T18 | 60 - 55 | Diagonal | 2L1 1/2x1 1/2x3/16x3/8 | 208 | -7.833 | 24.144 | 61.7 (b) 32.4 | Pass |
| T19 | 55 - 50 | Diagonal | 2L1 1/2x1 1/2x3/16x3/8 | 220 | -5.083 | 24.196 | 77.3 (b) 21.0 | Pass |
| T20 | 50 - 45 | Diagonal | 2L1 1/2x1 1/2x3/16x3/8 | 229 | -6.072 | 23.674 | 49.9 (b) 25.6 | Pass |
| T21 | 45 - 40 | Diagonal | L2x2x1/4 | 238 | -6.737 | 17.253 | 60.0 (b) 39.0 69.3 (b) | Pass |

| | | |
|---|--|----------------------------------|
| tnxTower Allpro Consulting Group, Inc. 9221 Lyndon B. Johnson Fwy, Suite #204 Dallas, TX 75243 Phone: 972-231-8893 FAX: 866-364-8375 | Job 16-4584 130 SST | Page 52 of 52 |
| | Project Glastonbury-main st, CT (CT46126-A-01) | Date 17:28:31 12/08/16 |
| | Client SBA Communications Corporation | Designed by bpaudel |

| Section No. | Elevation ft | Component Type | Size | Critical Element | P K | ϕP_{allow} K | % Capacity | Pass Fail | |
|-------------|-------------------|----------------------|------------------------|------------------|--------|--------------------|----------------------------|-------------|-------------|
| T22 | 40 - 33.3333 | Diagonal | 2L1 3/4x1 3/4x3/16x3/8 | 251 | -6.042 | 26.573 | 22.7 | Pass | |
| T23 | 33.3333 - 26.6667 | Diagonal | 2L1 3/4x1 3/4x3/16x3/8 | 259 | -6.361 | 25.910 | 48.3 (b) 24.6 | Pass | |
| T24 | 26.6667 - 20 | Diagonal | 2L1 3/4x1 3/4x3/16x3/8 | 268 | -5.971 | 25.232 | 49.1 (b) 23.7 | Pass | |
| T25 | 20 - 13.3333 | Diagonal | L2x2x3/16 | 277 | -6.096 | 9.232 | 45.6 (b) 66.0 | Pass | |
| T26 | 13.3333 - 6.66667 | Diagonal | L2x2x3/16 | 286 | -5.949 | 8.336 | 89.6 (b) 71.4 | Pass | |
| T27 | 6.66667 - 0 | Diagonal | 2L2x2x3/16x3/8 | 298 | -7.676 | 30.610 | 88.9 (b) 25.1 | Pass | |
| T1 | 130 - 120 | Horizontal | L1 1/4x1 1/4x3/16 | 36 | -0.270 | 6.709 | 55.5 (b) 4.0 | Pass | |
| T8 | 102.859 - 100 | Secondary Horizontal | L2x2x1/8 | 112 | -1.143 | 10.739 | 10.6 | Pass | |
| T11 | 92 - 88 | Secondary Horizontal | 4x3/8 | 142 | -2.783 | 16.048 | 17.3 | Pass | |
| T12 | 88 - 84 | Secondary Horizontal | 4x3/8 | 154 | -3.383 | 13.861 | 37.6 (b) 24.4 | Pass | |
| T13 | 84 - 80 | Secondary Horizontal | 4x3/8 | 166 | -2.924 | 12.081 | 46.4 (b) 24.2 | Pass | |
| T18 | 60 - 55 | Secondary Horizontal | L2x2x1/8 | 214 | 3.498 | 13.254 | 39.4 (b) 26.4 | Pass | |
| T21 | 45 - 40 | Secondary Horizontal | L3x3x5/16 | 244 | 4.230 | 51.700 | 84.6 (b) 8.2 | Pass | |
| T26 | 13.3333 - 6.66667 | Secondary Horizontal | L2x2x1/4 | 292 | 5.539 | 24.485 | 53.2 (b) 22.6 | Pass | |
| T1 | 130 - 120 | Top Girt | L1 1/4x1 1/4x3/16 | 6 | -0.064 | 6.709 | 52.8 (b) 0.9 | Pass | |
| T2 | 120 - 117.143 | Top Girt | L1 1/4x1 1/4x3/16 | 47 | 0.077 | 14.048 | 0.6 | Pass | |
| T1 | 130 - 120 | Bottom Girt | L1 1/4x1 1/4x3/16 | 9 | -0.212 | 6.709 | 3.2 | Pass | |
| T8 | 102.859 - 100 | Bottom Girt | L1 1/4x1 1/4x3/16 | 105 | -0.835 | 6.795 | 12.3 | Pass | |
| | | | | | | | Summary | | |
| | | | | | | | Leg (T25) | 83.4 | Pass |
| | | | | | | | Diagonal (T25) | 89.6 | Pass |
| | | | | | | | Horizontal (T1) | 4.0 | Pass |
| | | | | | | | Secondary Horizontal (T18) | 84.6 | Pass |
| | | | | | | | Top Girt (T1) | 0.9 | Pass |
| | | | | | | | Bottom Girt (T8) | 12.3 | Pass |
| | | | | | | | Bolt Checks | 89.6 | Pass |
| | | | | | | | RATING = | 89.6 | Pass |



MATHCAD CALCULATION PRINTOUT

SELF SUPPORTING TOWER

MAT FOUNDATION CHECK

Existing 130' Self-Support Tower

SBA Site Name: Glastonbury-main St.

SBA Site ID: CT46126-A-01

Carrier Name: AT&T

Carrier Site Name: 10071041

Site Location:

2577 Main Street

Glastonbury, CT 06033

Latitude: 41.714389°

Longitude: -72.613028°

ACGI Job # 16-4584

By:

Allpro Consulting Group, Inc.

9221 Lyndon B. Johnson Freeway, #204

Dallas, TX 75243

Phone: 972-231-8893

Fax: 866-364-8375

Foundation check

-Foundation Reactions-

((As per TNX output results from the Tower Structural Analysis by Allpro Consulting Group Inc.)

| | | | |
|----------------------------|-------------------------------|--------------------------|-----------------------------------|
| Total Shear | $S := 26 \cdot \text{kips}$ | Compression on Pedestal: | $P_c := 343 \cdot \text{kips}$ |
| Moment | $M := 2153 \cdot \text{ft}_K$ | Uplift on Pedestal: | $P_{up} := 319 \cdot \text{kips}$ |
| Down load, Tower weight | $P_v := 34 \cdot \text{kips}$ | Shear on Pedestal: | $Sh := 19 \cdot \text{kips}$ |

-Soil Properties- Soil data is as per Geotechnical Report by Tectonic Engineering Project #1170.C057, dated 08/26/1999 & previous structural analysis by B+T Group, Job #101341.001.01a, dated 09/29/2015.

| | |
|-------------------------------------|---|
| Allowable Bearing Capacity | $Brg_{allw} := 3000 \cdot \text{psf}$ |
| | $SF_b := 2$ |
| Ultimate Bearing Capacity | $Brg_{ult} := Brg_{allw} \cdot SF_b = 6 \cdot \text{ksf}$ |
| Passive earth pressure coefficient | $K_p := 1.0$ |
| Internal angle of friction for soil | $\phi := 0$ |
| Unit wt. of soil, | $\gamma_s := 0.12 \cdot \text{kcf}$ |
| Allowable Passive Pressure | see next page |
| Cohesion of soil, | $c_u := 0 \cdot \text{ksf}$ |
| Friction Factor | $FF := 0.35$ (Assumed) |
| Depth to be neglected | $L_{neg} := 1 \cdot \text{ft}$ |

-Material Parameters-

Conforming to the design requirements as in ACI 318-99

| | |
|--------------------------------|--------------------------------------|
| Unit wt. of concrete, | $\gamma_c := 0.150 \cdot \text{kcf}$ |
| Concrete compressive strength, | $f_c := 3000 \cdot \text{psi}$ |
| Rebar yield strength, | $f_w := 60000 \cdot \text{psi}$ |

-Factor of Safety for soil strength-

| | |
|------------------------------|---|
| $\phi_{s_Bear} := 0.75$ | as per TIA-222-G code for bearing, 9.4.1 |
| $\phi_{s_friction} := 0.75$ | as per TIA-222-G code for skin friction resistance, 9.4.1 |
| $\phi_{s_lateral} := 0.75$ | as per TIA-222-G code for lateral resistance, 9.4.1 |
| $\phi_{s_uplift} := 0.75$ | as per TIA-222-G code for lateral resistance, 9.4.1 |

DIMENSIONS

Original Tower Design by FRED A. NUDD Corporation PJ No. 6893, Sept. 1999

| | | | |
|------------------|-------------------------------|-----------|-------------------------------|
| Tower face width | $TWFW := 7.5 \cdot \text{ft}$ | Tower ht. | $TWht := 130 \cdot \text{ft}$ |
|------------------|-------------------------------|-----------|-------------------------------|

The tower location is eccentric by $L_{pe} := 0 \cdot \text{ft}$

with respect to the mat foundation center towards the base

Type of column, $\text{col.t}=0$ for circular, $=1$ for rectangular/square $\text{col}_t := 0$

Depth of mat, $D_f := 4 \cdot \text{ft}$

Thickness of mat, $T_f := 3 \cdot \text{ft}$

Pedestal size, $\text{Ped}_s := 3 \cdot \text{ft}$ No. of pedestals $\text{Nped} := 3$

Extension above the grade, $E_g := 0.5 \cdot \text{ft}$

Mat Dimensions, LxB $L := 26 \cdot \text{ft}$ x $B := 26 \cdot \text{ft}$

MAT CALCULATIONS

$$P_{\text{pave}} := \frac{(D_f - T_f - L_{\text{neg}}) \cdot K_p \cdot \gamma_s + (D_f - L_{\text{neg}}) \cdot K_p \cdot \gamma_s}{2} \quad P_{\text{pave}} = 0.18 \cdot \text{ksf}$$

Safety against overturning and location of resultant on the base

| <u>Resisting Moments about mid axis parallel to base</u> | | $\text{Area}_{\text{ped}} := \text{if}(\text{col}_t = 1, \text{Ped}_s^2, \frac{\pi}{4} \cdot \text{Ped}_s^2)$ $\text{Area}_{\text{ped}} = 7.069 \text{ ft}^2$ | |
|--|--|---|--|
| component | value, kips | lever arm, ft | resisting moment, ft-kips |
| 1) Concrete wt. | $C_w := L \cdot B \cdot T_f \cdot (\gamma_c) + \text{Area}_{\text{ped}} \cdot \gamma_c \cdot (D_f + E_g - T_f) \cdot \text{Nped}$ $C_w = 308.971 \cdot \text{kips}$ | $L_c := \frac{L}{2}$ $L_c = 13 \text{ ft}$ | $R_c := C_w \cdot L_c$ $R_c = 4016.627 \cdot \text{ft}_K$ |
| 2) Soil wt. | $S_w := [L \cdot B \cdot (D_f - T_f) - \text{Area}_{\text{ped}} \cdot (D_f - T_f) \cdot \text{Nped}] \cdot \gamma_s$ $S_w = 78.575 \cdot \text{kips}$ | $L_s := \frac{L}{2}$ $L_s = 13 \text{ ft}$ | $R_s := S_w \cdot L_s$ $R_s = 1021.479 \cdot \text{ft}_K$ |
| 3) Wt. of soil wedge | $W_w := (D_f) \cdot \frac{1}{2} \cdot (D_f \cdot \tan(\phi)) \cdot B \cdot (\gamma_s)$ $W_w = 0 \cdot \text{kips}$ | $L_w := \left(L + D_f \cdot \frac{\tan(\phi)}{3} \right)$ $L_w = 26 \text{ ft}$ | $R_w := W_w \cdot L_w$ $R_w = 0 \cdot \text{ft}_K$ |
| 4) Passive pressure | $P_{ep} := T_f \cdot B \cdot P_{\text{pave}}$ $P_{ep} = 14.04 \cdot \text{kips}$ | $L_p := \frac{T_f}{3}$ $L_p = 1 \text{ ft}$ | $R_p := P_{ep} \cdot L_p$ $R_p = 14.04 \cdot \text{ft}_K$ |
| 5) Vertical | $P_v = 34 \cdot \text{kips}$ $S_{w1} := L \cdot B \cdot D_f \cdot \gamma_s$ $S_{w1} = 324.48 \cdot \text{kips}$ <--- for net calcs | $L_v := \frac{L}{2}$ | $R_v := P_v \cdot L_v$ |

Total weight $T_w := C_w + S_w + W_w + P_v$ $T_w = 421.547 \cdot \text{kips}$ $L_v = 13 \text{ ft}$ $R_v = 442 \cdot \text{ft}_K$

Total resisting Moment= $M_r := R_c + R_s + R_w + R_p + R_v$ $M_r = 5494.146 \cdot \text{ft}_K$

Overturning Moments
component

| | value, kips | lever arm, ft | Overturning Moment ft-kips |
|--|------------------------------|--|--|
| 1) Moment on foundation due to eccentric location of tower | $P_v = 34 \cdot \text{kips}$ | $L_{pe} = 0$ | $M_{pe} := L_{pe} \cdot P_v$ $M_{pe} = 0 \cdot \text{ft}_K$ |
| 2) Moment on foundation | - | - | $M = 2153 \cdot \text{ft}_K$ |
| 3) Moment due to horizontal shear | $S_t := S$ | $L_{hs} := D_f + E_g$ $L_{hs} = 4.5 \text{ ft}$ | $O_{hs} := L_{hs} \cdot S_t$ $O_{hs} = 117 \cdot \text{ft}_K$ |

Total Overturning Moment= $M_o := M + O_{hs} + M_{pe}$ $M_o = 2270 \cdot \text{ft}_K$

Check Safety Factor against Overturning about mid axis parallel to base

$SF := \frac{M_r}{M_o}$ **SF = 2.42** > 1.5 **O.K!**

Calculate eccentricity, e

$e := \frac{M_o}{T_w}$ $e = 5.385 \text{ ft}$

Check location of eccentricity and determine pressure distribution under the mat

$L_{loc} := \frac{L}{6}$ $L_{loc} = 4.333 \text{ ft}$ For net bearing calcs $T_{w1} := S_{w1}$ $T_{w1} = 324.48 \cdot \text{kips}$

$P_{max1} := \text{if} \left[e \leq L_{loc}, \frac{T_w}{L \cdot B} \cdot \left[1 + \left(6 \cdot \frac{e}{L} \right) \right], 4 \cdot \frac{T_w}{3 \cdot B \cdot (L - 2 \cdot e)} \right]$ $P_{max1} = 1.419 \cdot \text{ksf}$

$P_{max2} := \left(\frac{T_{w1}}{L \cdot B} \right)$ $P_{max2} = 0.48 \cdot \text{ksf}$ $P_{net} := P_{max1} - P_{max2}$ $P_{max} := P_{net}$

Net soil pressure, **$P_{net} = 0.939 \cdot \text{ksf}$** < **$Brg_{ult} \cdot \phi_s \cdot \text{Bear} = 4.5 \cdot \text{ksf}$** **O.K.!**

$P_{min} := \text{if} \left[e \leq L_{loc}, \frac{T_w}{L \cdot B} \cdot \left[1 - \left(6 \cdot \frac{e}{L} \right) \right], 0 \cdot \text{ksf} \right]$ $P_{min} = 0 \cdot \text{ksf}$

Check for horizontal shear $P_{hor} := P_{ep} + (P_v + C_w + S_w) \cdot FF$

$P_{hor} = 161.581 \cdot \text{kips}$ > **$S = 26 \cdot \text{kips}$** Since $P_{hor} < S$ It is safe!

REINFORCED CONCRETE CHECK CALCULATIONS

General Input parameters

Rebar yield strength, $f_y := 60000 \text{ psi}$

Concrete Cover $cc := 3.0 \text{ in}$

Reduction factors as per respective ACI 318-11 sections

$\phi_{\text{shear}} := 0.85$ as per ACI 9.3.2.3 Reinforced concrete load $RC_{\text{fac}} := 1.0$

$\phi_{\text{compr}} := 0.75$ as per ACI 9.3.2.2 factor as per EIA 3.1.16

$\phi_{\text{axten}} := 0.9$ as per ACI 9.3.2.2 a (Loads already factored under TIA/EIA-222-G Co

Check for wide beam or single shear in mat

Allowable shear stress in concrete for wide beam shear criteria=

$$v_{\text{wide}} := 2 \cdot \phi_{\text{shear}} \cdot \sqrt{f_c \cdot \text{psi}} \quad v_{\text{wide}} = 416.413 \cdot \text{psi}$$

Effective depth of steed $:= T_f - cc \quad d = 33 \text{ in} \quad L_{\text{eff}} := \text{if}(e \leq L_{\text{loc}}, L, L - 2 \cdot e) \quad L_{\text{eff}} = 15.23 \text{ ft}$

$$\text{dist} := \text{if} \left[N_{\text{ped}} = 3, \left(\frac{L}{2} - \frac{1}{3} \cdot \sin(60 \cdot \text{deg}) \cdot \text{TFWW} - \frac{1}{2} \cdot \text{Ped}_s - d \right), \left(\frac{L}{2} - \frac{\text{TFWW}}{2} - \frac{1}{2} \cdot \text{Ped}_s - d \right) \right]$$

Factor load by RC $P_{\text{maxf}} := P_{\text{max}} \cdot RC_{\text{fac}} \quad P_{\text{minf}} := P_{\text{min}} \cdot RC_{\text{fac}}$

shear on the face of concrete=

$$\text{Shear}_{\text{wide}} := (\text{dist}) \cdot B \cdot \left[\frac{P_{\text{maxf}} + \left[P_{\text{maxf}} - \frac{P_{\text{maxf}} - P_{\text{minf}}}{L_{\text{eff}}} \cdot (\text{dist}) \right]}{2} \right] \quad \text{Shear}_{\text{wide}} = 126.065 \cdot \text{kips}$$

Area of concrete in shear $= A_{\text{shear}} := B \cdot d \quad A_{\text{shear}} = 10296 \cdot \text{in}^2$

Shear stress acting on concrete face= $v_{\text{act}} := \frac{\text{Shear}_{\text{wide}}}{A_{\text{shear}}} \quad v_{\text{act}} = 12.244 \cdot \text{psi}$

Check for punching or two-way shear in mat

Calculate allowable shear stress in concrete for punching/two-way shear

$$\beta := \frac{L}{B} \quad \beta = 1 \quad v_{\text{punch}} := \text{if} \left[\left(2 + \frac{4}{\beta} \right) \cdot \phi_{\text{shear}} \cdot \sqrt{f_c \cdot \text{psi}} \leq 4 \cdot \phi_{\text{shear}} \cdot \sqrt{f_c \cdot \text{psi}}, \left(2 + \frac{4}{\beta} \right) \cdot \phi_{\text{shear}} \cdot \sqrt{f_c \cdot \text{psi}}, 4 \cdot \phi_{\text{shear}} \right]$$

$$v_{\text{punch}} = 832.827 \cdot \text{psi} \quad \text{Area}_{\text{col}} := \text{if} \left[\text{col}_t = 0, \frac{\pi}{4} \cdot (\text{Ped}_s + d)^2, (\text{Ped}_s + d)^2 \right]$$

$$P_{\text{avg}} := \frac{P_{\text{maxf}} + P_{\text{minf}}}{2} \quad \text{Peri}_{\text{col}} := \text{if} \left[\text{col}_t = 0, 2 \cdot \pi \cdot \frac{\text{Ped}_s + d}{2}, 4 \cdot (\text{Ped}_s + d) \right]$$

Factor vertical load $P_{\text{vf}} := RC_{\text{fac}} \cdot P_{\text{v}}$

Shear stress acting on the concrete face= $v_{\text{act}} := \frac{P_{\text{c}} - \text{Area}_{\text{col}} \cdot P_{\text{avg}}}{\text{Peri}_{\text{col}} \cdot d \cdot 4}$

$$v_{\text{act}} = 11.561 \cdot \text{psi} < v_{\text{punch}} = 832.827 \cdot \text{psi} \quad \text{O.K!}$$

Check of Pedestal Column

Check pedestal steel for uplift

$$d_j := \text{Ped}_s - 2 \cdot cc \quad d_j = 30 \cdot \text{in}$$

$$\text{Effective diameter/size} = D_{\text{eff}} := \text{Ped}_s - cc \cdot 2 \quad D_{\text{eff}} = 30 \cdot \text{in} \quad h := \text{Ped}_s \quad h = 36 \cdot \text{in}$$

$$D_{\text{pier}} := \text{Ped}_s$$

$$M_{\text{col}} := Sh \cdot (D_f - T_f + E_g) \quad M_{\text{col}} = 28.5 \cdot \text{ft}_K \quad \sigma_{\text{bend}} := 0.6 \cdot f_y \quad \sigma_{\text{bend}} = 36000 \cdot \text{psi}$$

-Minimum required area of steel per ACI-

$$\text{Area}_{\text{stlmin}} := 0.005 \cdot \frac{\pi}{4} \cdot D_{\text{pier}}^2 \quad \text{-(ACI 10.8.4) \& (ACI 10.9.1)}$$

$$\text{Area}_{\text{stlmin}} = 5.089 \cdot \text{in}^2$$

-Rebar details-

Selected rebar size $d_{\text{bar}} := 8$

-Rebar details-

$$\text{No} := (0 \ 1 \ 2 \ 3 \ 4 \ 5 \ 6 \ 7 \ 8 \ 9 \ 10 \ 11 \ 12 \ 13 \ 14 \ 15 \ 16 \ 17 \ 18)^T$$

$$d_h := (0 \ 0 \ 0 \ 0.375 \ 0.5 \ 0.625 \ 0.75 \ 0.875 \ 1.00 \ 1.125 \ 1.25 \ 1.41 \ 0 \ 0 \ 1.693 \ 0 \ 0 \ 0 \ 2.257)^T \cdot \text{in}$$

$$A_b := (0 \ 0 \ 0 \ 0.11 \ 0.20 \ 0.31 \ 0.44 \ 0.60 \ 0.79 \ 1.00 \ 1.27 \ 1.56 \ 0 \ 0 \ 2.25 \ 0 \ 0 \ 0 \ 4.00)^T \cdot \text{in}^2$$

$$B_1 := d_{\text{bar}} \quad d_{b_{B_1}} = 1 \cdot \text{in} \quad \text{Bar area} = \text{Area}_{\text{abar}} := A_{b_{B_1}} \quad \text{Area}_{\text{abar}} = 0.79 \cdot \text{in}^2$$

-Number of vertical rebars required-

$$L_{\text{gdia}} := d_{b_{B_1}}$$

$$\text{NRB} := \text{ceil} \left(\frac{\text{Area}_{\text{stlmin}}}{\text{Area}_{\text{abar}}} \right) \quad \text{NRB} = 7 \quad \text{Area}_{\text{stluse}} := \text{Area}_{\text{abar}} \cdot \text{NRB} \quad \text{Area}_{\text{stluse}} = 5.53 \cdot \text{in}^2$$

Provided $\text{NRB} := 11$

Provided (NRB = 11) $d_{\text{bar}} = 8$ vertical bars **OK**

$$M_n := 10273.63991 \cdot \text{in} \cdot \text{kips}$$

$$0.9 \cdot M_n = 770.523 \cdot \text{kips} \cdot \text{ft} \quad > \quad M_{\text{col}} = 28.5 \cdot \text{kips} \cdot \text{ft} \quad \text{OK} \quad \frac{M_{\text{col}}}{0.9M_n} = 3.699 \cdot \%$$

Check pedestal in compression

$$\text{Allowable compressive load on column ACI 10.15} = P_{\text{comp}} := \phi_{\text{compr}} \cdot 0.85 \cdot f_c \cdot \text{Area}_{\text{ped}} \quad P_{\text{comp}} = 38933.758 \cdot \text{kips}$$

$$P_{\text{comp}} = 38933.758 \cdot \text{kips} > \quad P_c = 343 \cdot \text{kips} \quad \text{O.K.}$$

Check of mat footing

$$C_{wped} := \text{Area}_{ped} \cdot \gamma_c \cdot (D_f + E_g - T_f) \cdot N_{ped} \quad \text{Wt. of concrete pedestals}$$

$$P_{upnet} := P_{up} - \frac{C_{wped} + S_w \cdot 0.95}{N_{ped}} \quad P_{upnet} = 292.527 \cdot \text{kips} \quad \text{Net uplift acting at mat level creating bending}$$

Calculate bending moment for mat design:

$$\phi_{bend} := 0.9 \quad \text{Langle} := \text{if}(N_{ped} = 3, \sin(60 \cdot \text{deg}), 1) \quad \text{moment in the slab. Soil wt. reduced by 5 \% to account for variation in compaction.} \quad \text{ACI 9.3.2.2}$$

$$\beta_1 := \text{if} \left[f_c \leq 4000 \cdot \text{psi}, 0.85, \text{if} \left[f_c \geq 8000 \cdot \text{psi}, 0.65, 0.85 - \left(\frac{f_c}{\text{psi}} - 4000 \right) \cdot 0.05 \right] \right] \quad \text{ACI 10.2.7.3}$$

$$B_{mo} := RC_{fac} \cdot \left[(TWF_{W} \cdot P_{upnet}) \cdot \text{Langle} + S_t \cdot (D_f + E_g) \right] \quad B_{mo} = 2017.021 \cdot \text{ft}_K$$

required R_u $R_u := \frac{B_{mo}}{\phi_{bend} \cdot B \cdot d}$ $R_u = 79.153 \cdot \text{psi}$ $m := \frac{f_y}{\beta_1 \cdot f_c}$ $m = 1.538$

required

$$\rho := \frac{1}{m} \cdot \left[1 - \sqrt{1 - \left(\frac{2 \cdot m \cdot R_u}{f_y} \right)} \right] \quad \rho = 0.001$$

required area of steel for mat=

$$A_{stf} := \rho \cdot B \cdot d \quad A_{stf} = 13.596 \cdot \text{in}^2$$

minimum area of steel required,

$$A_{st_{minf}} := .0018 \cdot B \cdot T_f \quad A_{st_{minf}} = 20.218 \cdot \text{in}^2 \quad \text{per ACI 10.5.3 \& 7.12}$$

$$A_{st_{fuse}} := \text{if}(A_{stf} > A_{st_{minf}}, A_{stf}, A_{st_{minf}}) \quad A_{st_{fuse}} = 20.218 \cdot \text{in}^2$$

bar size provided

$$f_{bar} := 8 \quad f_{dia} := \frac{f_{bar}}{8} \cdot \text{in} \quad f_{dia} = 1 \cdot \text{in} \quad f_{abar} := \pi \cdot \frac{f_{dia}^2}{4} \quad f_{abar} = 0.785 \cdot \text{in}^2$$

Number of bars required=

$$N_{fbars} := \frac{A_{st_{fuse}}}{f_{abar}} \quad N_{fbars} = 25.742 \quad N_{fbars} := \text{ceil}(N_{fbars})$$

Required $N_{fbars} = 26$ bars each way in the footing at the top and bottom

Provided Reinforcement is 34#8 bars Top and bottom OK!

Summary

-Foundation Reactions-

Shear $S = 26 \cdot \text{kips}$
 Down load $P_v = 34 \cdot \text{kips}$ (Weight)
 Uplift load $P_{up} = 319 \cdot \text{kips}$
 Moment; $M = 2153 \cdot \text{ft} \cdot \text{kip}$

Size of Mat

$L = 26 \text{ft}$ $B = 26 \text{ft}$
 Depth of base of mat $D_f = 4 \text{ft}$ Thickness of Mat $T_f = 3 \text{ft}$
 Pedestal size $Ped_s = 3 \text{ft}$

Stability Calculations

Safety Factor against Overturning $SF = 2.42 > 1.5$ $\frac{1.5}{SF} = 61.975\%$ **O.K.!**

Net soil pressure $P_{net} = 0.939 \cdot \text{ksf} < Br_{gult} \cdot \phi_{s_Bear} = 4.5 \cdot \text{ksf}$ $\frac{P_{net}}{Br_{gult} \cdot \phi_{s_Bear}} = 20.876\%$ **O.K.!**

Check for horizontal shear $P_{hor} = 161.581 \cdot \text{kips} > S = 26 \cdot \text{kips}$ $\frac{S}{P_{hor}} = 16.091\%$ **O.K.!**

Results: Based on the above calculations the existing Mat foundation will be able to support the load imposed from the self supporting tower.

=====
LPILE Plus for Windows, Version 5.0 (5.0.47)

Analysis of Individual Piles and Drilled Shafts
Subjected to Lateral Loading Using the p-y Method

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=====

This program is licensed to:

Allpro
Allpro Consulting Group Inc

Files Used for Analysis

Path to file locations: P:\2016\Structural\16-4584 CT46126-A-01 Glastonbury
Structural Analysis-G code\LPILE\
Name of input data file: 36 PEDESTAL.lpd
Name of output file: 36 PEDESTAL.lpo
Name of plot output file: 36 PEDESTAL.lpp
Name of runtime file: 36 PEDESTAL.lpr

Time and Date of Analysis

Date: December 8, 2016 Time: 18:36:41

Problem Title

16-4584 L-Pile

Program Options

Units Used in Computations - US Customary Units: Inches, Pounds

Basic Program Options:

Analysis Type 2:

- Computation of Ultimate Bending Moment of Cross Section (Section Design)

 Computations of Nominal Moment Capacity and Nonlinear Bending Stiffness

Number of sections = 1

Pile Section No. 1

The sectional shape is a circular drilled shaft (bored pile).

Outside Diameter = 36.0000 in

Material Properties:

Compressive Strength of Concrete = 3.000 kip/in**2
 Yield Stress of Reinforcement = 60. kip/in**2
 Modulus of Elasticity of Reinforcement = 29000. kip/in**2
 Number of Reinforcing Bars = 11
 Area of Single Bar = 0.79000 in**2
 Number of Rows of Reinforcing Bars = 11
 Area of Steel = 8.690 in**2
 Area of Shaft = 1017.876 in**2
 Percentage of Steel Reinforcement = 0.854 percent
 Cover Thickness (edge to bar center) = 3.700 in

Unfactored Axial Squash Load Capacity = 3094.82 kip

Distribution and Area of Steel Reinforcement

| Row Number | Area of Reinforcement in**2 | Distance to Centroidal Axis in |
|------------|--------------------------------|-----------------------------------|
| 1 | 0.790 | 14.154 |
| 2 | 0.790 | 13.008 |
| 3 | 0.790 | 10.807 |
| 4 | 0.790 | 7.731 |
| 5 | 0.790 | 4.029 |
| 6 | 0.790 | 0.000 |
| 7 | 0.790 | -4.029 |
| 8 | 0.790 | -7.731 |
| 9 | 0.790 | -10.807 |
| 10 | 0.790 | -13.008 |
| 11 | 0.790 | -14.154 |

Axial Thrust Force = -319000.00 lbs

| Bending Max. Steel Stress | Bending Stiffness | Bending Curvature | Maximum Strain | Neutral Axis Position | Max. Concrete Stress |
|---------------------------------|----------------------|----------------------|-------------------|--------------------------|-------------------------|
| in-lbs | lb-in2 | rad/in | in/in | inches | psi |

| | | | | | |
|--------------|--------------|------------|--------------|------------|---------|
| 353194.94438 | 2.825560E+11 | 0.00000125 | 1.341105E-12 | 0.00000107 | 0.00000 |
| 1165.59865 | | | | | |
| 697346.65086 | 2.789387E+11 | 0.00000250 | 2.682209E-12 | 0.00000107 | 0.00000 |
| 2331.19730 | | | | | |
| 1032455. | 2.753214E+11 | 0.00000375 | 4.023314E-12 | 0.00000107 | 0.00000 |
| 3496.79595 | | | | | |
| 1032455. | 2.064910E+11 | 0.00000500 | 5.364418E-12 | 0.00000107 | 0.00000 |
| 4662.39460 | | | | | |
| 1032455. | 1.651928E+11 | 0.00000625 | 6.705523E-12 | 0.00000107 | 0.00000 |
| 5827.99326 | | | | | |
| 1032455. | 1.376607E+11 | 0.00000750 | 8.046627E-12 | 0.00000107 | 0.00000 |
| 6993.59191 | | | | | |
| 1032455. | 1.179949E+11 | 0.00000875 | 9.387732E-12 | 0.00000107 | 0.00000 |
| 8159.19056 | | | | | |
| 1032455. | 1.032455E+11 | 0.00001000 | 1.072884E-11 | 0.00000107 | 0.00000 |
| 9324.78921 | | | | | |
| 1032455. | 9.177379E+10 | 0.00001125 | 1.206994E-11 | 0.00000107 | 0.00000 |
| 10490.38786 | | | | | |
| 1032455. | 8.259641E+10 | 0.00001250 | 1.341105E-11 | 0.00000107 | 0.00000 |
| 11655.98651 | | | | | |
| 1032455. | 7.508765E+10 | 0.00001375 | 1.475215E-11 | 0.00000107 | 0.00000 |
| 12821.58516 | | | | | |
| 1032455. | 6.883034E+10 | 0.00001500 | 1.609325E-11 | 0.00000107 | 0.00000 |
| 13987.18381 | | | | | |
| 1032455. | 6.353570E+10 | 0.00001625 | 1.743436E-11 | 0.00000107 | 0.00000 |
| 15152.78246 | | | | | |
| 1032455. | 5.899744E+10 | 0.00001750 | 1.877546E-11 | 0.00000107 | 0.00000 |
| 16318.38111 | | | | | |
| 1032455. | 5.506427E+10 | 0.00001875 | 2.011657E-11 | 0.00000107 | 0.00000 |
| 17483.97977 | | | | | |
| 1032455. | 5.162276E+10 | 0.00002000 | 2.145767E-11 | 0.00000107 | 0.00000 |
| 18649.57842 | | | | | |
| 1032455. | 4.858612E+10 | 0.00002125 | 2.279878E-11 | 0.00000107 | 0.00000 |
| 19815.17707 | | | | | |
| 1032455. | 4.588689E+10 | 0.00002250 | 2.413988E-11 | 0.00000107 | 0.00000 |
| 20980.77572 | | | | | |
| 1032455. | 4.347179E+10 | 0.00002375 | 2.548099E-11 | 0.00000107 | 0.00000 |
| 22146.37437 | | | | | |
| 1032455. | 4.129820E+10 | 0.00002500 | 2.682209E-11 | 0.00000107 | 0.00000 |
| 23311.97302 | | | | | |
| 1032455. | 3.933162E+10 | 0.00002625 | 2.816319E-11 | 0.00000107 | 0.00000 |
| 24477.57167 | | | | | |
| 1032455. | 3.754382E+10 | 0.00002750 | 2.950430E-11 | 0.00000107 | 0.00000 |
| 25643.17032 | | | | | |
| 1032455. | 3.591148E+10 | 0.00002875 | 3.084540E-11 | 0.00000107 | 0.00000 |
| 26808.76897 | | | | | |
| 1032455. | 3.441517E+10 | 0.00003000 | 3.218651E-11 | 0.00000107 | 0.00000 |
| 27974.36763 | | | | | |
| 1032455. | 3.303856E+10 | 0.00003125 | 3.352761E-11 | 0.00000107 | 0.00000 |
| 29139.96628 | | | | | |
| 1032455. | 3.176785E+10 | 0.00003250 | 3.486872E-11 | 0.00000107 | 0.00000 |
| 30305.56493 | | | | | |
| 1032455. | 3.059126E+10 | 0.00003375 | 3.620982E-11 | 0.00000107 | 0.00000 |
| 31471.16358 | | | | | |

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|-------------|--------------|------------|--------------|------------|-------------|
| 1032455. | 2.949872E+10 | 0.00003500 | 3.755093E-11 | 0.00000107 | 0.00000 |
| 32636.76223 | | | | | |
| 1032455. | 2.848152E+10 | 0.00003625 | 3.889203E-11 | 0.00000107 | 0.00000 |
| 33802.36088 | | | | | |
| 1032455. | 2.753214E+10 | 0.00003750 | 4.023314E-11 | 0.00000107 | 0.00000 |
| 34967.95953 | | | | | |
| 1032455. | 2.664400E+10 | 0.00003875 | 4.157424E-11 | 0.00000107 | 0.00000 |
| 36133.55818 | | | | | |
| 1032455. | 2.581138E+10 | 0.00004000 | 4.291534E-11 | 0.00000107 | 0.00000 |
| 37299.15683 | | | | | |
| 1062879. | 2.576676E+10 | 0.00004125 | 4.425645E-11 | 0.00000107 | 0.00000 |
| 38464.75548 | | | | | |
| 1095087. | 2.576676E+10 | 0.00004250 | 4.559755E-11 | 0.00000107 | 0.00000 |
| 39630.35414 | | | | | |
| 1127296. | 2.576676E+10 | 0.00004375 | 4.693866E-11 | 0.00000107 | 0.00000 |
| 40795.95279 | | | | | |
| 1159504. | 2.576676E+10 | 0.00004500 | 4.827976E-11 | 0.00000107 | 0.00000 |
| 41961.55144 | | | | | |
| 1191713. | 2.576676E+10 | 0.00004625 | 4.962087E-11 | 0.00000107 | 0.00000 |
| 43127.15009 | | | | | |
| 1223921. | 2.576676E+10 | 0.00004750 | 5.096197E-11 | 0.00000107 | 0.00000 |
| 44292.74874 | | | | | |
| 1256130. | 2.576676E+10 | 0.00004875 | 5.230308E-11 | 0.00000107 | 0.00000 |
| 45458.34739 | | | | | |
| 1320547. | 2.576676E+10 | 0.00005125 | 5.498528E-11 | 0.00000107 | 0.00000 |
| 47789.54469 | | | | | |
| 1384963. | 2.576676E+10 | 0.00005375 | 5.766749E-11 | 0.00000107 | 0.00000 |
| 50120.74199 | | | | | |
| 1449380. | 2.576676E+10 | 0.00005625 | 6.034970E-11 | 0.00000107 | 0.00000 |
| 52451.93930 | | | | | |
| 1513797. | 2.576676E+10 | 0.00005875 | 6.303191E-11 | 0.00000107 | 0.00000 |
| 54783.13660 | | | | | |
| 1578214. | 2.576676E+10 | 0.00006125 | 6.571412E-11 | 0.00000107 | 0.00000 |
| 57114.33390 | | | | | |
| 1642631. | 2.576676E+10 | 0.00006375 | 6.839633E-11 | 0.00000107 | 0.00000 |
| 59445.53120 | | | | | |
| 1687181. | 2.546688E+10 | 0.00006625 | 7.107854E-11 | 0.00000107 | 0.00000 |
| 60000.00000 | | | | | |
| 1706810. | 2.482633E+10 | 0.00006875 | 7.376075E-11 | 0.00000107 | 0.00000 |
| 60000.00000 | | | | | |
| 1722058. | 2.416924E+10 | 0.00007125 | 7.644296E-11 | 0.00000107 | 0.00000 |
| 60000.00000 | | | | | |
| 1734705. | 2.352142E+10 | 0.00007375 | 0.00001283 | 0.17390263 | 0.00000 |
| 60000.00000 | | | | | |
| 1765962. | 2.316016E+10 | 0.00007625 | 0.00004596 | 0.60275137 | 72.18513998 |
| 60000.00000 | | | | | |
| 1799120. | 2.284597E+10 | 0.00007875 | 0.00007909 | 1.00437462 | 171.70388 |
| 60000.00000 | | | | | |
| 1840408. | 2.265118E+10 | 0.00008125 | 0.00010821 | 1.33178008 | 257.18726 |
| 60000.00000 | | | | | |
| 1879730. | 2.244454E+10 | 0.00008375 | 0.00013822 | 1.65040290 | 343.74777 |
| 60000.00000 | | | | | |
| 1927662. | 2.234971E+10 | 0.00008625 | 0.00016374 | 1.89842999 | 415.70881 |
| 60000.00000 | | | | | |
| 1962920. | 2.211741E+10 | 0.00008875 | 0.00018816 | 2.12014353 | 483.37279 |
| 60000.00000 | | | | | |

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|-------------|--------------|------------|------------|------------|------------|
| 1992648. | 2.183724E+10 | 0.00009125 | 0.00021116 | 2.31409729 | 545.97161 |
| 60000.00000 | | | | | |
| 2028559. | 2.163797E+10 | 0.00009375 | 0.00022924 | 2.44524443 | 594.06515 |
| 60000.00000 | | | | | |
| 2061022. | 2.141322E+10 | 0.00009625 | 0.00024999 | 2.59729135 | 648.83498 |
| 60000.00000 | | | | | |
| 2093346. | 2.119844E+10 | 0.00009875 | 0.00027080 | 2.74224436 | 702.98710 |
| 60000.00000 | | | | | |
| 2125529. | 2.099288E+10 | 0.00010125 | 0.00029166 | 2.88063776 | 756.51688 |
| 60000.00000 | | | | | |
| 2171214. | 2.092736E+10 | 0.00010375 | 0.00031125 | 3.00000036 | 805.92077 |
| 60000.00000 | | | | | |
| 2196552. | 2.067343E+10 | 0.00010625 | 0.00032742 | 3.08157384 | 845.84527 |
| 60000.00000 | | | | | |
| 2230500. | 2.051034E+10 | 0.00010875 | 0.00034659 | 3.18698895 | 892.93429 |
| 60000.00000 | | | | | |
| 2258340. | 2.029968E+10 | 0.00011125 | 0.00036431 | 3.27466500 | 935.74125 |
| 60000.00000 | | | | | |
| 2278620. | 2.003182E+10 | 0.00011375 | 0.00038019 | 3.34234893 | 973.44542 |
| 60000.00000 | | | | | |
| 2298833. | 1.977490E+10 | 0.00011625 | 0.00039611 | 3.40744078 | 1010.79479 |
| 60000.00000 | | | | | |
| 2318978. | 1.952824E+10 | 0.00011875 | 0.00041208 | 3.47010791 | 1047.78714 |
| 60000.00000 | | | | | |
| 2339057. | 1.929119E+10 | 0.00012125 | 0.00042807 | 3.53050482 | 1084.42043 |
| 60000.00000 | | | | | |
| 2359067. | 1.906317E+10 | 0.00012375 | 0.00044411 | 3.58877099 | 1120.69184 |
| 60000.00000 | | | | | |
| 2362419. | 1.871223E+10 | 0.00012625 | 0.00045450 | 3.59999979 | 1143.33040 |
| 60000.00000 | | | | | |
| 2403118. | 1.866499E+10 | 0.00012875 | 0.00046909 | 3.64342582 | 1175.52025 |
| 60000.00000 | | | | | |
| 2423602. | 1.846554E+10 | 0.00013125 | 0.00048413 | 3.68860281 | 1208.35871 |
| 60000.00000 | | | | | |
| 2444028. | 1.827311E+10 | 0.00013375 | 0.00049920 | 3.73233140 | 1240.87271 |
| 60000.00000 | | | | | |
| 2464395. | 1.808730E+10 | 0.00013625 | 0.00051430 | 3.77469313 | 1273.06011 |
| 60000.00000 | | | | | |
| 2484701. | 1.790775E+10 | 0.00013875 | 0.00052944 | 3.81576312 | 1304.91857 |
| 60000.00000 | | | | | |
| 2504947. | 1.773414E+10 | 0.00014125 | 0.00054461 | 3.85561430 | 1336.44670 |
| 60000.00000 | | | | | |
| 2525133. | 1.756614E+10 | 0.00014375 | 0.00055981 | 3.89431322 | 1367.64260 |
| 60000.00000 | | | | | |
| 2545257. | 1.740347E+10 | 0.00014625 | 0.00057504 | 3.93191993 | 1398.50376 |
| 60000.00000 | | | | | |
| 2559648. | 1.720772E+10 | 0.00014875 | 0.00058861 | 3.95707476 | 1425.47898 |
| 60000.00000 | | | | | |
| 2581165. | 1.678807E+10 | 0.00015375 | 0.00061368 | 3.99141347 | 1474.22330 |
| 60000.00000 | | | | | |
| 2602554. | 1.639404E+10 | 0.00015875 | 0.00063883 | 4.02409565 | 1522.04843 |
| 60000.00000 | | | | | |
| 2623814. | 1.602329E+10 | 0.00016375 | 0.00066405 | 4.05528438 | 1568.94690 |
| 60000.00000 | | | | | |
| 2644943. | 1.567374E+10 | 0.00016875 | 0.00068936 | 4.08511913 | 1614.90949 |
| 60000.00000 | | | | | |

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|-------------|--------------|------------|------------|------------|------------|
| 2665940. | 1.534354E+10 | 0.00017375 | 0.00071476 | 4.11372435 | 1659.92705 |
| 60000.00000 | | | | | |
| 2686804. | 1.503107E+10 | 0.00017875 | 0.00074024 | 4.14121377 | 1703.99120 |
| 60000.00000 | | | | | |
| 2707532. | 1.473487E+10 | 0.00018375 | 0.00076581 | 4.16768396 | 1747.09158 |
| 60000.00000 | | | | | |
| 2728122. | 1.445363E+10 | 0.00018875 | 0.00079147 | 4.19322288 | 1789.21818 |
| 60000.00000 | | | | | |
| 2737739. | 1.413027E+10 | 0.00019375 | 0.00081375 | 4.19999921 | 1824.54318 |
| 60000.00000 | | | | | |
| 2743114. | 1.380183E+10 | 0.00019875 | 0.00083475 | 4.19999921 | 1856.93001 |
| 60000.00000 | | | | | |
| 2791175. | 1.369902E+10 | 0.00020375 | 0.00085770 | 4.20959079 | 1891.70822 |
| 60000.00000 | | | | | |
| 2811464. | 1.346809E+10 | 0.00020875 | 0.00088270 | 4.22851002 | 1928.77119 |
| 60000.00000 | | | | | |
| 2829373. | 1.323683E+10 | 0.00021375 | 0.00090688 | 4.24272144 | 1963.52688 |
| 60000.00000 | | | | | |
| 2838972. | 1.297816E+10 | 0.00021875 | 0.00092786 | 4.24163568 | 1992.57408 |
| 60000.00000 | | | | | |
| 2848497. | 1.273071E+10 | 0.00022375 | 0.00094888 | 4.24079025 | 2020.94512 |
| 60000.00000 | | | | | |
| 2857946. | 1.249376E+10 | 0.00022875 | 0.00096994 | 4.24017227 | 2048.63604 |
| 60000.00000 | | | | | |
| 2867321. | 1.226661E+10 | 0.00023375 | 0.00099105 | 4.23976886 | 2075.64241 |
| 60000.00000 | | | | | |
| 2876620. | 1.204867E+10 | 0.00023875 | 0.00101220 | 4.23956931 | 2101.96008 |
| 60000.00000 | | | | | |
| 2885843. | 1.183935E+10 | 0.00024375 | 0.00103339 | 4.23956287 | 2127.58448 |
| 60000.00000 | | | | | |
| 2894989. | 1.163814E+10 | 0.00024875 | 0.00105464 | 4.23974097 | 2152.51139 |
| 60000.00000 | | | | | |
| 2904056. | 1.144455E+10 | 0.00025375 | 0.00107592 | 4.24009287 | 2176.73559 |
| 60000.00000 | | | | | |
| 2913047. | 1.125815E+10 | 0.00025875 | 0.00109726 | 4.24061430 | 2200.25351 |
| 60000.00000 | | | | | |
| 2921957. | 1.107851E+10 | 0.00026375 | 0.00111864 | 4.24129450 | 2223.05935 |
| 60000.00000 | | | | | |
| 2930790. | 1.090526E+10 | 0.00026875 | 0.00114007 | 4.24212921 | 2245.14900 |
| 60000.00000 | | | | | |
| 2939542. | 1.073805E+10 | 0.00027375 | 0.00116155 | 4.24311197 | 2266.51740 |
| 60000.00000 | | | | | |
| 2948214. | 1.057655E+10 | 0.00027875 | 0.00118308 | 4.24423635 | 2287.15930 |
| 60000.00000 | | | | | |
| 2956803. | 1.042045E+10 | 0.00028375 | 0.00120466 | 4.24549592 | 2307.06922 |
| 60000.00000 | | | | | |
| 2965311. | 1.026948E+10 | 0.00028875 | 0.00122629 | 4.24688852 | 2326.24266 |
| 60000.00000 | | | | | |
| 2973736. | 1.012336E+10 | 0.00029375 | 0.00124797 | 4.24840772 | 2344.67373 |
| 60000.00000 | | | | | |
| 2982078. | 9.981850E+09 | 0.00029875 | 0.00126970 | 4.25005138 | 2362.35749 |
| 60000.00000 | | | | | |
| 2990333. | 9.844719E+09 | 0.00030375 | 0.00129149 | 4.25181305 | 2379.28767 |
| 60000.00000 | | | | | |
| 2998503. | 9.711752E+09 | 0.00030875 | 0.00131333 | 4.25369060 | 2395.45895 |
| 60000.00000 | | | | | |

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| 3006590. | 9.582758E+09 | 0.00031375 | 0.00133522 | 4.25568402 | 2410.86628 |
| 60000.00000 | | | | | |
| 3014588. | 9.457530E+09 | 0.00031875 | 0.00135717 | 4.25778472 | 2425.50239 |
| 60000.00000 | | | | | |
| 3022499. | 9.335904E+09 | 0.00032375 | 0.00137917 | 4.25999486 | 2439.36235 |
| 60000.00000 | | | | | |
| 3030320. | 9.217703E+09 | 0.00032875 | 0.00140123 | 4.26230800 | 2452.43910 |
| 60000.00000 | | | | | |
| 3038053. | 9.102782E+09 | 0.00033375 | 0.00142335 | 4.26472628 | 2464.72723 |
| 60000.00000 | | | | | |
| 3045695. | 8.990981E+09 | 0.00033875 | 0.00144553 | 4.26724327 | 2476.21943 |
| 60000.00000 | | | | | |
| 3053246. | 8.882172E+09 | 0.00034375 | 0.00146776 | 4.26986110 | 2486.90983 |
| 60000.00000 | | | | | |
| 3057321. | 8.766512E+09 | 0.00034875 | 0.00148747 | 4.26513398 | 2495.60399 |
| 60000.00000 | | | | | |
| 3063220. | 8.538593E+09 | 0.00035875 | 0.00152539 | 4.25196326 | 2510.48332 |
| 60000.00000 | | | | | |
| 3068894. | 8.322423E+09 | 0.00036875 | 0.00156347 | 4.23991048 | 2523.03843 |
| 60000.00000 | | | | | |
| 3074336. | 8.117060E+09 | 0.00037875 | 0.00160169 | 4.22889411 | 2533.23956 |
| 60000.00000 | | | | | |
| 3079543. | 7.921654E+09 | 0.00038875 | 0.00164007 | 4.21884120 | 2541.05607 |
| 60000.00000 | | | | | |
| 3084515. | 7.735461E+09 | 0.00039875 | 0.00167862 | 4.20969379 | 2546.45681 |
| 60000.00000 | | | | | |
| 3089244. | 7.557784E+09 | 0.00040875 | 0.00171732 | 4.20138967 | 2549.40869 |
| 60000.00000 | | | | | |
| 3089244. | 7.377299E+09 | 0.00041875 | 0.00175875 | 4.19999921 | 2547.58463 |
| 60000.00000 | | | | | |
| 3089244. | 7.205234E+09 | 0.00042875 | 0.00180075 | 4.19999921 | 2540.74376 |
| 60000.00000 | | | | | |
| 3089244. | 7.041012E+09 | 0.00043875 | 0.00184275 | 4.19999921 | 2533.90290 |
| 60000.00000 | | | | | |
| 3089244. | 6.884109E+09 | 0.00044875 | 0.00188475 | 4.19999921 | 2531.35239 |
| 60000.00000 | | | | | |
| 3089244. | 6.734047E+09 | 0.00045875 | 0.00192675 | 4.19999921 | 2539.18102 |
| 60000.00000 | | | | | |
| 3089244. | 6.590387E+09 | 0.00046875 | 0.00196875 | 4.19999921 | 2544.89171 |
| 60000.00000 | | | | | |
| 3089244. | 6.452729E+09 | 0.00047875 | 0.00201075 | 4.19999921 | 2548.48445 |
| 60000.00000 | | | | | |
| 3089244. | 6.320704E+09 | 0.00048875 | 0.00205275 | 4.19999921 | 2549.95925 |
| 60000.00000 | | | | | |
| 3089244. | 6.193973E+09 | 0.00049875 | 0.00209475 | 4.19999921 | 2545.34820 |
| 60000.00000 | | | | | |
| 3091372. | 6.076407E+09 | 0.00050875 | 0.00213675 | 4.19999921 | 2539.55978 |
| 60000.00000 | | | | | |
| 3094919. | 5.966109E+09 | 0.00051875 | 0.00217875 | 4.19999921 | 2533.77136 |
| 60000.00000 | | | | | |
| 3098021. | 5.859142E+09 | 0.00052875 | 0.00222075 | 4.19999921 | 2527.98294 |
| 60000.00000 | | | | | |
| 3100679. | 5.755320E+09 | 0.00053875 | 0.00226275 | 4.19999921 | 2523.61262 |
| 60000.00000 | | | | | |
| 3102891. | 5.654471E+09 | 0.00054875 | 0.00230475 | 4.19999921 | 2531.55381 |
| 60000.00000 | | | | | |

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|------------------------------------|--------------|------------|------------|--------------|---------------|
| 3104658. | 5.556435E+09 | 0.00055875 | 0.00234675 | 4.19999921 | 2538.07721 |
| 60000.00000 | | | | | |
| 3105980. | 5.461063E+09 | 0.00056875 | 0.00238875 | 4.19999921 | 2543.18281 |
| 60000.00000 | | | | | |
| 3106857. | 5.368219E+09 | 0.00057875 | 0.00243075 | 4.19999921 | 2546.87061 |
| 60000.00000 | | | | | |
| 3107289. | 5.277773E+09 | 0.00058875 | 0.00247275 | 4.19999921 | 2549.14062 |
| 60000.00000 | | | | | |
| 3107289. | 5.189626E+09 | 0.00059875 | 0.00251475 | 4.19999921 | 2549.99283 |
| 60000.00000 | | | | | |
| 3107289. | 5.104376E+09 | 0.00060875 | 0.00255675 | 4.19999921 | 2545.74288 |
| 60000.00000 | | | | | |
| 3107289. | 5.021881E+09 | 0.00061875 | 0.00259875 | 4.19999921 | 2541.00690 |
| 60000.00000 | | | | | |
| 3107289. | 4.942010E+09 | 0.00062875 | 0.00264075 | 4.19999921 | 2536.27092 |
| 60000.00000 | | | | | |
| 3107289. | 4.864640E+09 | 0.00063875 | 0.00268275 | 4.19999921 | 2531.53494 |
| 60000.00000 | | | | | |
| 3107289. | 4.789655E+09 | 0.00064875 | 0.00272475 | 4.19999921 | 2526.79896 |
| 60000.00000 | | | | | |
| Axial Thrust Force = 343000.00 lbs | | | | | |
| Bending | Bending | Bending | Maximum | Neutral Axis | Max. Concrete |
| Max. Steel | | | | | |
| Moment | Stiffness | Curvature | Strain | Position | Stress |
| Stress | | | | | |
| in-lbs | lb-in2 | rad/in | in/in | inches | psi |
| psi | | | | | |
| ----- | ----- | ----- | ----- | ----- | ----- |
| 337012.53236 | 2.696100E+11 | 0.00000125 | 0.00012512 | 100.09352 | 377.73126 |
| 3488.98896 | | | | | |
| 673947.34751 | 2.695789E+11 | 0.00000250 | 0.00014781 | 59.12410820 | 442.12191 |
| 4007.69522 | | | | | |
| 1010758. | 2.695356E+11 | 0.00000375 | 0.00017058 | 45.48797429 | 505.75888 |
| 4528.61327 | | | | | |
| 1347400. | 2.694800E+11 | 0.00000500 | 0.00019343 | 38.68516695 | 568.63229 |
| 5051.74397 | | | | | |
| 1684138. | 2.694621E+11 | 0.00000625 | 0.00021635 | 34.61665070 | 630.74853 |
| 5577.26139 | | | | | |
| 2018707. | 2.691610E+11 | 0.00000750 | 0.00023932 | 31.90927398 | 691.97569 |
| 6103.85923 | | | | | |
| 2355102. | 2.691545E+11 | 0.00000875 | 0.00026242 | 29.99067485 | 752.56297 |
| 6634.32457 | | | | | |
| 2685702. | 2.685702E+11 | 0.00001000 | 0.00028546 | 28.54604781 | 811.99836 |
| 7163.14338 | | | | | |
| 3015446. | 2.680397E+11 | 0.00001125 | 0.00030858 | 27.42935836 | 870.63317 |
| 7694.21638 | | | | | |
| 3340143. | 2.672114E+11 | 0.00001250 | 0.00033164 | 26.53094494 | 928.10293 |
| 8223.45444 | | | | | |
| 3340143. | 2.429195E+11 | 0.00001375 | 0.00033742 | 24.53932965 | 941.64776 |
| 8251.64329 | | | | | |
| 3340143. | 2.226762E+11 | 0.00001500 | 0.00035539 | 23.69236958 | 985.35479 |
| 8633.36505 | | | | | |

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| 3340143. | 2.055473E+11 | 0.00001625 | 0.00037299 | 22.95323217 | 1027.57097 |
| 9004.49363 | | | | | |
| 3348050. | 1.913171E+11 | 0.00001750 | 0.00039026 | 22.30036104 | 1068.39807 |
| 9365.81489 | | | | | |
| 3464470. | 1.847717E+11 | 0.00001875 | 0.00040722 | 21.71825731 | 1107.94733 |
| 9718.28276 | | | | | |
| 3575484. | 1.787742E+11 | 0.00002000 | 0.00042391 | 21.19563425 | 1146.34091 |
| 10063.04690 | | | | | |
| 3682157. | 1.732780E+11 | 0.00002125 | 0.00044039 | 20.72420275 | 1183.71227 |
| 10401.46767 | | | | | |
| 3785487. | 1.682439E+11 | 0.00002250 | 0.00045670 | 20.29789245 | 1220.20792 |
| 10735.15124 | | | | | |
| 3881828. | 1.634454E+11 | 0.00002375 | 0.00047255 | 19.89702666 | 1255.17409 |
| 11055.45222 | | | | | |
| 3978357. | 1.591343E+11 | 0.00002500 | 0.00048847 | 19.53877366 | 1289.81423 |
| 11377.58470 | | | | | |
| 4070073. | 1.550504E+11 | 0.00002625 | 0.00050405 | 19.20178950 | 1323.24796 |
| 11689.93474 | | | | | |
| 4161491. | 1.513270E+11 | 0.00002750 | 0.00051965 | 18.89623439 | 1356.27926 |
| 12002.91811 | | | | | |
| 4249032. | 1.477924E+11 | 0.00002875 | 0.00053495 | 18.60701287 | 1388.23424 |
| 12307.36685 | | | | | |
| 4336884. | 1.445628E+11 | 0.00003000 | 0.00055034 | 18.34451687 | 1419.92073 |
| 12614.09824 | | | | | |
| 4420682. | 1.414618E+11 | 0.00003125 | 0.00056537 | 18.09188926 | 1450.44984 |
| 12910.74189 | | | | | |
| 4506353. | 1.386570E+11 | 0.00003250 | 0.00058066 | 17.86645496 | 1481.07525 |
| 13466.43214 | | | | | |
| 4586826. | 1.359059E+11 | 0.00003375 | 0.00059543 | 17.64242399 | 1510.23022 |
| 14203.64215 | | | | | |
| 4667079. | 1.333451E+11 | 0.00003500 | 0.00061023 | 17.43503988 | 1539.02681 |
| 14940.19784 | | | | | |
| 4749063. | 1.310086E+11 | 0.00003625 | 0.00062528 | 17.24918640 | 1567.93121 |
| 15669.15481 | | | | | |
| 4826401. | 1.287040E+11 | 0.00003750 | 0.00063982 | 17.06186521 | 1595.41528 |
| 16413.18228 | | | | | |
| 4903527. | 1.265426E+11 | 0.00003875 | 0.00065438 | 16.88718903 | 1622.55050 |
| 17156.58071 | | | | | |
| 4983563. | 1.245891E+11 | 0.00004000 | 0.00066939 | 16.73486531 | 1650.15041 |
| 17886.71432 | | | | | |
| 5058164. | 1.226222E+11 | 0.00004125 | 0.00068370 | 16.57465804 | 1676.03220 |
| 18637.32209 | | | | | |
| 5132562. | 1.207662E+11 | 0.00004250 | 0.00069804 | 16.42436850 | 1701.57444 |
| 19387.32128 | | | | | |
| 5206759. | 1.190116E+11 | 0.00004375 | 0.00071239 | 16.28315127 | 1726.77581 |
| 20136.70598 | | | | | |
| 5284321. | 1.174294E+11 | 0.00004500 | 0.00072734 | 16.16306984 | 1752.65083 |
| 20868.74669 | | | | | |
| 5356366. | 1.158133E+11 | 0.00004625 | 0.00074145 | 16.03142059 | 1776.66479 |
| 21625.00866 | | | | | |
| 5428216. | 1.142782E+11 | 0.00004750 | 0.00075559 | 15.90713131 | 1800.34655 |
| 22380.67683 | | | | | |
| 5499871. | 1.128179E+11 | 0.00004875 | 0.00076974 | 15.78963983 | 1823.69478 |
| 23135.74560 | | | | | |
| 5646561. | 1.101768E+11 | 0.00005125 | 0.00079888 | 15.58787119 | 1870.61850 |
| 24622.07273 | | | | | |

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| 5785698. | 1.076409E+11 | 0.00005375 | 0.00082681 | 15.38248050 | 1914.08398 |
| 26143.30218 | | | | | |
| 5924081. | 1.053170E+11 | 0.00005625 | 0.00085482 | 15.19681156 | 1956.23791 |
| 27662.14220 | | | | | |
| 6061697. | 1.031778E+11 | 0.00005875 | 0.00088292 | 15.02835810 | 1997.06820 |
| 29178.57331 | | | | | |
| 6201174. | 1.012437E+11 | 0.00006125 | 0.00091172 | 14.88517320 | 2037.44072 |
| 30674.54691 | | | | | |
| 6335131. | 9.937461E+10 | 0.00006375 | 0.00093949 | 14.73710883 | 2074.88784 |
| 32200.30324 | | | | | |
| 6468340. | 9.763531E+10 | 0.00006625 | 0.00096735 | 14.60148990 | 2111.02468 |
| 33723.61809 | | | | | |
| 6600789. | 9.601147E+10 | 0.00006875 | 0.00099529 | 14.47697532 | 2145.83935 |
| 35244.45840 | | | | | |
| 6736325. | 9.454492E+10 | 0.00007125 | 0.00102448 | 14.37869918 | 2180.71180 |
| 36729.13814 | | | | | |
| 6865727. | 9.309460E+10 | 0.00007375 | 0.00105216 | 14.26660645 | 2212.28230 |
| 38257.61816 | | | | | |
| 6994384. | 9.172963E+10 | 0.00007625 | 0.00107993 | 14.16302168 | 2242.53889 |
| 39783.53839 | | | | | |
| 7122285. | 9.044172E+10 | 0.00007875 | 0.00110779 | 14.06714880 | 2271.46883 |
| 41306.86638 | | | | | |
| 7249419. | 8.922362E+10 | 0.00008125 | 0.00113574 | 13.97829258 | 2299.05930 |
| 42827.56294 | | | | | |
| 7375774. | 8.806895E+10 | 0.00008375 | 0.00116378 | 13.89584148 | 2325.29723 |
| 44345.58723 | | | | | |
| 7501339. | 8.697205E+10 | 0.00008625 | 0.00119191 | 13.81925476 | 2350.16918 |
| 45860.89865 | | | | | |
| 7629551. | 8.596677E+10 | 0.00008875 | 0.00122164 | 13.76493895 | 2374.90035 |
| 47329.99536 | | | | | |
| 7752606. | 8.496007E+10 | 0.00009125 | 0.00124960 | 13.69428313 | 2396.64011 |
| 48850.20764 | | | | | |
| 7874878. | 8.399869E+10 | 0.00009375 | 0.00127767 | 13.62845743 | 2417.01100 |
| 50367.53312 | | | | | |
| 7996350. | 8.307896E+10 | 0.00009625 | 0.00130583 | 13.56710136 | 2435.99818 |
| 51881.92746 | | | | | |
| 8117012. | 8.219759E+10 | 0.00009875 | 0.00133410 | 13.50989521 | 2453.58668 |
| 53393.33411 | | | | | |
| 8236851. | 8.135162E+10 | 0.00010125 | 0.00136248 | 13.45655143 | 2469.76108 |
| 54901.69474 | | | | | |
| 8355852. | 8.053834E+10 | 0.00010375 | 0.00139096 | 13.40680826 | 2484.50536 |
| 56406.95692 | | | | | |
| 8474002. | 7.975531E+10 | 0.00010625 | 0.00141955 | 13.36043179 | 2497.80321 |
| 57909.05819 | | | | | |
| 8591286. | 7.900033E+10 | 0.00010875 | 0.00144825 | 13.31720960 | 2509.63777 |
| 59407.93624 | | | | | |
| 8692579. | 7.813554E+10 | 0.00011125 | 0.00147625 | 13.26970232 | 2519.71562 |
| 60000.00000 | | | | | |
| 8783220. | 7.721512E+10 | 0.00011375 | 0.00150384 | 13.22056210 | 2528.22544 |
| 60000.00000 | | | | | |
| 8876399. | 7.635612E+10 | 0.00011625 | 0.00153402 | 13.19588792 | 2535.94884 |
| 60000.00000 | | | | | |
| 8941259. | 7.529481E+10 | 0.00011875 | 0.00156001 | 13.13692868 | 2541.22976 |
| 60000.00000 | | | | | |
| 9005540. | 7.427250E+10 | 0.00012125 | 0.00158609 | 13.08117950 | 2545.28465 |
| 60000.00000 | | | | | |

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| 9069235. | 7.328675E+10 | 0.00012375 | 0.00161227 | 13.02846014 | 2548.09972 |
| 60000.00000 | | | | | |
| 9132334. | 7.233532E+10 | 0.00012625 | 0.00163855 | 12.97860539 | 2549.66076 |
| 60000.00000 | | | | | |
| 9194743. | 7.141548E+10 | 0.00012875 | 0.00166493 | 12.93145859 | 2548.78167 |
| 60000.00000 | | | | | |
| 9247535. | 7.045741E+10 | 0.00013125 | 0.00169076 | 12.88200510 | 2547.87791 |
| 60000.00000 | | | | | |
| 9289170. | 6.945174E+10 | 0.00013375 | 0.00171592 | 12.82929862 | 2549.44879 |
| 60000.00000 | | | | | |
| 9330381. | 6.847986E+10 | 0.00013625 | 0.00174117 | 12.77919495 | 2549.99943 |
| 60000.00000 | | | | | |
| 9370947. | 6.753836E+10 | 0.00013875 | 0.00176654 | 12.73179495 | 2546.38853 |
| 60000.00000 | | | | | |
| 9411129. | 6.662746E+10 | 0.00014125 | 0.00179199 | 12.68668449 | 2548.50317 |
| 60000.00000 | | | | | |
| 9450929. | 6.574559E+10 | 0.00014375 | 0.00181754 | 12.64374340 | 2549.70428 |
| 60000.00000 | | | | | |
| 9490284. | 6.489083E+10 | 0.00014625 | 0.00184318 | 12.60293519 | 2549.21949 |
| 60000.00000 | | | | | |
| 9534445. | 6.409711E+10 | 0.00014875 | 0.00187284 | 12.59051764 | 2546.62776 |
| 60000.00000 | | | | | |
| 9609542. | 6.250108E+10 | 0.00015375 | 0.00192368 | 12.51173365 | 2549.66547 |
| 60000.00000 | | | | | |
| 9668073. | 6.090125E+10 | 0.00015875 | 0.00197335 | 12.43056571 | 2546.38263 |
| 60000.00000 | | | | | |
| 9712156. | 5.931088E+10 | 0.00016375 | 0.00202196 | 12.34785283 | 2548.48148 |
| 60000.00000 | | | | | |
| 9755469. | 5.781019E+10 | 0.00016875 | 0.00207083 | 12.27155578 | 2549.98329 |
| 60000.00000 | | | | | |
| 9797613. | 5.638914E+10 | 0.00017375 | 0.00212004 | 12.20167029 | 2544.86214 |
| 60000.00000 | | | | | |
| 9839074. | 5.504377E+10 | 0.00017875 | 0.00216949 | 12.13702905 | 2548.46476 |
| 60000.00000 | | | | | |
| 9879892. | 5.376812E+10 | 0.00018375 | 0.00221918 | 12.07715571 | 2549.95834 |
| 60000.00000 | | | | | |
| 9919715. | 5.255478E+10 | 0.00018875 | 0.00226919 | 12.02217472 | 2545.27175 |
| 60000.00000 | | | | | |
| 9983743. | 5.152900E+10 | 0.00019375 | 0.00232500 | 12.00000036 | 2547.57108 |
| 60000.00000 | | | | | |
| 10002563. | 5.032736E+10 | 0.00019875 | 0.00237549 | 11.95216691 | 2549.64956 |
| 60000.00000 | | | | | |
| 10039625. | 4.927423E+10 | 0.00020375 | 0.00242525 | 11.90304387 | 2548.02393 |
| 60000.00000 | | | | | |
| 10060395. | 4.819351E+10 | 0.00020875 | 0.00247257 | 11.84464252 | 2543.14342 |
| 60000.00000 | | | | | |
| 10079255. | 4.715441E+10 | 0.00021375 | 0.00251974 | 11.78826892 | 2546.32376 |
| 60000.00000 | | | | | |
| 10097885. | 4.616176E+10 | 0.00021875 | 0.00256706 | 11.73510969 | 2548.69221 |
| 60000.00000 | | | | | |
| 10116284. | 4.521244E+10 | 0.00022375 | 0.00261451 | 11.68496740 | 2549.86656 |
| 60000.00000 | | | | | |
| 10134283. | 4.430288E+10 | 0.00022875 | 0.00266218 | 11.63795578 | 2547.64028 |
| 60000.00000 | | | | | |
| 10151965. | 4.343086E+10 | 0.00023375 | 0.00271003 | 11.59372938 | 2543.19339 |
| 60000.00000 | | | | | |

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|-------------|--------------|------------|------------|-------------|------------|
| 10169482. | 4.259469E+10 | 0.00023875 | 0.00275800 | 11.55182898 | 2543.93430 |
| 60000.00000 | | | | | |
| 10186832. | 4.179213E+10 | 0.00024375 | 0.00280608 | 11.51211941 | 2546.90687 |
| 60000.00000 | | | | | |
| 10204013. | 4.102116E+10 | 0.00024875 | 0.00285428 | 11.47447836 | 2548.89555 |
| 60000.00000 | | | | | |
| 10221020. | 4.027988E+10 | 0.00025375 | 0.00290259 | 11.43879211 | 2549.88485 |
| 60000.00000 | | | | | |
| 10237711. | 3.956603E+10 | 0.00025875 | 0.00295110 | 11.40522158 | 2547.87380 |
| 60000.00000 | | | | | |
| 10278600. | 3.897099E+10 | 0.00026375 | 0.00300675 | 11.40000093 | 2542.58543 |
| 60000.00000 | | | | | |
| 10278600. | 3.824595E+10 | 0.00026875 | 0.00305962 | 11.38464367 | 2541.83985 |
| 60000.00000 | | | | | |
| 10292114. | 3.759676E+10 | 0.00027375 | 0.00310743 | 11.35134566 | 2544.91722 |
| 60000.00000 | | | | | |
| 10305498. | 3.697040E+10 | 0.00027875 | 0.00315632 | 11.32312024 | 2547.37983 |
| 60000.00000 | | | | | |
| 10316728. | 3.635851E+10 | 0.00028375 | 0.00320631 | 11.29977214 | 2549.10031 |
| 60000.00000 | | | | | |
| 10327805. | 3.576729E+10 | 0.00028875 | 0.00325643 | 11.27769220 | 2549.92485 |
| 60000.00000 | | | | | |
| 10338583. | 3.519517E+10 | 0.00029375 | 0.00330680 | 11.25718296 | 2547.70779 |
| 60000.00000 | | | | | |
| 10349149. | 3.464150E+10 | 0.00029875 | 0.00335734 | 11.23795044 | 2543.84179 |
| 60000.00000 | | | | | |
| 10359617. | 3.410574E+10 | 0.00030375 | 0.00340798 | 11.21968353 | 2539.95808 |
| 60000.00000 | | | | | |
| 10364238. | 3.356838E+10 | 0.00030875 | 0.00345639 | 11.19479477 | 2538.63966 |
| 60000.00000 | | | | | |
| 10366982. | 3.304217E+10 | 0.00031375 | 0.00350415 | 11.16859281 | 2541.79936 |
| 60000.00000 | | | | | |
| 10369671. | 3.253230E+10 | 0.00031875 | 0.00355197 | 11.14344227 | 2544.45605 |
| 60000.00000 | | | | | |
| 10372306. | 3.203801E+10 | 0.00032375 | 0.00359987 | 11.11930025 | 2546.60297 |
| 60000.00000 | | | | | |
| 10374885. | 3.155859E+10 | 0.00032875 | 0.00364785 | 11.09612381 | 2548.23303 |
| 60000.00000 | | | | | |
| 10377409. | 3.109336E+10 | 0.00033375 | 0.00369591 | 11.07387435 | 2549.33901 |
| 60000.00000 | | | | | |
| 10379872. | 3.064169E+10 | 0.00033875 | 0.00374404 | 11.05251110 | 2549.91340 |
| 60000.00000 | | | | | |
| 10381351. | 3.020029E+10 | 0.00034375 | 0.00379297 | 11.03409827 | 2548.59819 |
| 60000.00000 | | | | | |
| 10381351. | 2.976731E+10 | 0.00034875 | 0.00384352 | 11.02084172 | 2545.25718 |
| 60000.00000 | | | | | |

Unfactored (Nominal) Moment Capacity at Concrete Strain of 0.003 = 10273.63991 in-kip

The analysis ended normally.