

Date: **December 1, 2022**



FL COA# 31011

Tower Engineering Professionals
326 Tryon Road
Raleigh, NC 27603
(919) 661-6351

Subject: Structural Analysis Report

Carrier Designation:

AT&T Mobility Co-Locate

Site Number: 10152021
Site Name: Lake City South
FA Number: 10152021

Crown Castle Designation:

BU Number: 870081
Site Name: Lake City (SR 47 & US 41)
JDE Job Number: 723258
Work Order Number: 2180986
Order Number: 623798 Rev. 0

Engineering Firm Designation:

TEP Project Number: 145283.791998

Site Data:

267 SW Crystal Gln, Lake City, Columbia County, FL 32025
Latitude 30° 8' 43.70", Longitude -82° 39' 10.90"
350 Foot - Guyed Tower

Tower Engineering Professionals is pleased to submit this "**Structural Analysis Report**" to determine the structural integrity of the above-mentioned tower.

The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation, under the following load case, to be:

LC7: Proposed Equipment Configuration

Sufficient Capacity

This analysis utilizes an ultimate 3-second gust wind speed of 118 mph as required by the 2020 Florida Building Code, 7th Edition. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

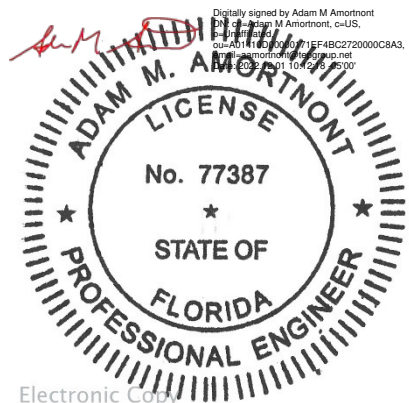
Structural analysis prepared by: Gautam Sopal, E.I. / WAT

Respectfully submitted by:

Adam M. Amortnont, P.E.

This item has been electronically signed and sealed by Adam M. Amortnont, P.E. on 12/1/2022 using a Digital Signature.

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TABLE OF CONTENTS

1) INTRODUCTION

2) ANALYSIS CRITERIA

Table 1 - Proposed Equipment Configuration

Table 2 - Other Considered Equipment

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

3.1) Analysis Method

3.2) Assumptions

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)

Table 5 - Tower Component Stresses vs. Capacity

4.1) Recommendations

5) APPENDIX A

tnxTower Output

6) APPENDIX B

Base Level Drawing

7) APPENDIX C

Additional Calculations

1) INTRODUCTION

This tower is a 350-ft guyed tower designed by FWT, Inc. and mapped by Pinnacle Towers, Inc. in December of 2000.

2) ANALYSIS CRITERIA

TIA-222 Revision: TIA-222-H
Risk Category: II
Wind Speed: 118 mph
Exposure Category: C
Topographic Factor: 1.0
Service Wind Speed: 60 mph

Table 1 - Proposed Equipment Configuration

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
201.0	205.0	3	Ericsson	AIR 6449 B77D_CCIV3 w/ Mount Pipe	12 2 6 3 3	1-5/8 7/8 3/4 3/8 5/16
	203.0	3	Commscope	NNHH-65B-R4 w/ Mount Pipe		
		6	Commscope	SBNHH-1D85B w/ Mount Pipe		
		3	Ericsson	RRUS 4449 B5/B12		
		3	Ericsson	RRUS 4478 B14		
		3	Ericsson	RRUS 8843 B2/B66A_CCIV2		
		3	Ericsson	RRUS 32 B30		
		1	Raycap	DC6-48-60-18-8F		
		2	Raycap	DC9-48-60-24-8C-EV_CCIV3		
	201.0	3	Ericsson	AIR 6419 B77G_CCIV3 w/ Mount Pipe		
		3	Generic	2.0 SCH 40 x 6' Mount Pipes		
		6	Commscope	XP-2020 Crossover Plate Kits		
		1	Tower Mounts	Sector Mount [SM 503-3]		

Table 2 - Other Considered Equipment

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
345.0	355.0	1	Decibel	DB420D-D	3	7/8
	345.0	2	Tower Mounts	Side Arm Mount [SO 602-3]		
	344.0	1	Decibel	DB228-B		
	334.0	1	Decibel	DB420D-D		
324.0	336.0	1	Sinclair	SD214	7	7/8
	333.0	4	Sinclair	SRL-224NM-4		
	324.0	2	Tower Mounts	Side Arm Mount [SO 602-3]		
270.0	278.0	4	Sinclair	SRL-224NM-4	2	7/8
	270.0	4	Tower Mounts	Side Arm Mount [SO 602-1]	1	1/2

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
255.0	271.0	1	RFS Celwave	PD322-2	1	1/2
	255.0	1	Tower Mounts	Side Arm Mount [SO 305-1]		
250.0	250.0	6	CSS	X7CQAP-665-VR0 w/ Mount Pipe	1 11 2	2 1-5/8 1-1/2
		3	Ericsson	AIR 6449 w/ Mount Pipe		
		1	JMA Wireless	X7CQAP-FRO-645-V w/ Mount Pipe		
		2	Raycap	RDC-4276-PF-48		
		8	Ericsson	RRUS 32		
		3	Commscope	TD-850B-LTE78-43		
		1	Raycap	RCMDC-6627-PF-48		
		4	Ericsson	4449		
		1	CSS	DBC-AP		
		1	Tower Mounts	Pipe Mount [PM 601-3]		
		1	Tower Mounts	Sector Mount [SM 503-3]		
		3	Commscope	VZWSMART-SFK3		
		3	Commscope	VZWSMART-SFK1		
		3	Tower Mounts	150" Long P2.5 STD		
229.0	231.0	3	Commscope	FFV-65C-R3-V1_TMO w/ Mount Pipe	8	1-5/8
		3	Ericsson	AIR6449 B41_T-Mobile w/ Mount Pipe		
		3	Ericsson	RADIO 4460 B2/B25 B66_TMO		
		3	Ericsson	Radio 4480_TMOV2		
	229.0	1	Tower Mounts	Sector Mount [SM 504-3]		
		1	Tower Mounts	Pipe Mount [PM 601-3]		
222.0	222.0	1	Tower Mounts	Sector Mount [SM 502-3]	3 1	1-3/16 7/8
	220.0	2	Commscope	DT465B-2XR w/ Mount Pipe		
		3	RFS Celwave	APXVSP18-C w/ Mount Pipe		
		3	Ericsson	RRUS 82 W/SOLAR SHIELD		
		6	Ericsson	RRUS-11 800MHZ		
		3	Ericsson	RRUS 31 B25		
		3	Ericsson	800MHZ SMR FILTER		
		9	RFS Celwave	ACU-A20-N		
215.0	225.0	1	Decibel	DB567R90-CR	1	7/8
	215.0	1	Tower Mounts	Side Arm Mount [SO 602-1]		
164.0	166.0	1	Radiowaves	HPLPD2-11	1 1	7/8 3/8
		1	Ceragon	RFU-C-PD		
	165.0	1	Radiowaves	HPD4-11		
		1	Ceragon	RFU-C-PD		
	164.0	1	Andrew	HPX6-59-P3A/K		
		1	Tower Mounts	Pipe Mount [PM 601-3]		
156.0	157.0	9	Decibel	DB848H105ESX w/ Mount Pipe	7	7/8
	156.0	1	Tower Mounts	Sector Mount [SM 1305-3]		

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
11.0	11.0	1	Channel Master	1.2M	1	3/64
		1	Tower Mounts	Side Arm Mount [SO 301-1]		

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Reference	Source
Geotechnical Report	1467434	CCISites
Tower Foundation Drawings	1467548	CCISites
Tower Manufacturer Drawings / Tower Mapping Report	1467491	CCISites

3.1) Analysis Method

tnxTower (version 8.1.1.0), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A. When applicable, Crown Castle has calculated and provided the effective area for panel antennas using approved methods following the intent of the TIA-222 Standard.

3.2) Assumptions

- 1) The tower and structures were maintained in accordance with the TIA-222 Standard.
- 2) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2, and the referenced drawings.

This analysis may be affected if any assumptions are not valid or have been made in error. Tower Engineering Professionals should be notified to determine the effect on the structural integrity of the tower.

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (k)	ϕP_{allow} (k)	% Capacity	Pass / Fail
T1	350 - 341.945	Leg	2 1/4	2	-3.40	113.53	3.0	Pass
T2	341.945 - 340	Leg	2 1/4	23	-5.30	171.18	3.1	Pass
T3	340 - 320	Leg	2 1/4	37	-26.79	113.53	23.6	Pass
T4	320 - 300	Leg	2 1/4	89	-35.54	113.53	31.3	Pass
T5	300 - 280	Leg	3	141	-61.40	251.58	24.4	Pass
T6	280 - 260	Leg	3	190	-75.74	251.58	30.1	Pass
T7	260 - 240	Leg	3	241	-76.31	251.58	30.3	Pass
T8	240 - 220	Leg	3	293	-114.04	251.58	45.3	Pass
T9	220 - 200	Leg	3	344	-116.42	251.58	46.3	Pass
T10	200 - 180	Leg	3 1/2	395	-109.26	369.17	29.6	Pass
T11	180 - 160	Leg	3 1/2	445	-126.19	369.17	34.2	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (k)	ΔP_{allow} (k)	% Capacity	Pass / Fail
T12	160 - 140	Leg	3 1/2	496	-108.77	369.17	29.5	Pass
T13	140 - 120	Leg	3 1/2	547	-128.88	369.17	34.9	Pass
T14	120 - 100	Leg	3 1/2	598	-141.65	369.17	38.4	Pass
T15	100 - 80	Leg	3 1/2	651	-122.72	369.17	33.2	Pass
T16	80 - 60	Leg	3 1/2	702	-123.73	369.17	33.5	Pass
T17	60 - 40	Leg	3 1/2	753	-134.00	369.17	36.3	Pass
T18	40 - 20	Leg	3 1/2	804	-138.83	369.17	37.6	Pass
T19	20 - 8.05469	Leg	3 1/2	855	-137.34	369.17	37.2	Pass
T20	8.05469 - 6	Leg	3 1/2	885	-129.18	435.19	29.7	Pass
T21	6 - 2.66927	Leg	3 1/2	900	-136.19	384.88	35.4	Pass
T22	2.66927 - 0	Leg	3 1/2	915	-136.57	428.91	31.8	Pass
T1	350 - 341.945	Diagonal	3/4	9	2.42	15.03	16.1	Pass
T2	341.945 - 340	Diagonal	3/4	34	3.26	15.03	21.7	Pass
T3	340 - 320	Diagonal	3/4	84	3.58	15.03	23.8	Pass
T4	320 - 300	Diagonal	3/4	99	3.70	15.03	24.6	Pass
T5	300 - 280	Diagonal	7/8	166	6.23	20.46	30.4	Pass
T6	280 - 260	Diagonal	7/8	235	5.52	20.46	27.0	Pass
T7	260 - 240	Diagonal	2x1/2	250	9.57	34.02	28.1	Pass
T8	240 - 220	Diagonal	2x1/2	333	10.81	34.02	31.8	Pass
T9	220 - 200	Diagonal	7/8	352	3.59	20.46	17.5	Pass
T10	200 - 180	Diagonal	7/8	408	11.23	20.46	54.9	Pass
T11	180 - 160	Diagonal	7/8	495	10.28	20.46	50.3	Pass
T12	160 - 140	Diagonal	7/8	544	3.62	20.46	17.7	Pass
T13	140 - 120	Diagonal	7/8	561	7.74	20.46	37.8	Pass
T14	120 - 100	Diagonal	7/8	648	7.00	20.46	34.2	Pass
T15	100 - 80	Diagonal	3/4	699	4.61	15.03	30.7	Pass
T16	80 - 60	Diagonal	3/4	714	3.66	15.03	24.4	Pass
T17	60 - 40	Diagonal	3/4	779	3.92	15.03	26.1	Pass
T18	40 - 20	Diagonal	3/4	850	2.14	15.03	14.3	Pass
T19	20 - 8.05469	Diagonal	3/4	859	3.11	15.03	20.7	Pass
T20	8.05469 - 6	Diagonal	3/4	892	3.72	15.03	24.8	Pass
T21	6 - 2.66927	Diagonal	2x1/2	907	0.07	34.02	0.2	Pass
T1	350 - 341.945	Horizontal	L2x2x3/16	14	-1.01	15.18	6.7	Pass
T3	340 - 320	Horizontal	L2x2x3/16	80	5.38	24.32	22.1	Pass
T4	320 - 300	Horizontal	L2x2x3/16	104	-2.46	15.18	16.2	Pass
T5	300 - 280	Horizontal	L2x2x1/4	172	-4.40	20.05	22.0	Pass
T6	280 - 260	Horizontal	L2x2x1/4	232	-3.66	20.05	18.3	Pass
T7	260 - 240	Horizontal	L2 1/2x2 1/2x1/4	256	-6.42	29.14	22.0	Pass
T8	240 - 220	Horizontal	L2 1/2x2 1/2x1/4	336	12.37	40.48	30.5	Pass
T9	220 - 200	Horizontal	L2x2x1/4	376	-2.02	20.05	10.1	Pass
T10	200 - 180	Horizontal	L2x2x1/4	411	-7.17	20.21	35.5	Pass
T11	180 - 160	Horizontal	L2x2x1/4	488	11.17	31.89	35.0	Pass
T12	160 - 140	Horizontal	L2x2x1/4	511	-1.89	20.21	9.4	Pass
T13	140 - 120	Horizontal	L2x2x1/4	564	-4.84	20.21	24.0	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (k)	ΔP_{allow} (k)	% Capacity	Pass / Fail
T14	120 - 100	Horizontal	L2x2x1/4	641	8.83	31.89	27.7	Pass
T15	100 - 80	Horizontal	L2x2x3/16	693	-2.87	15.50	18.5	Pass
T16	80 - 60	Horizontal	L2x2x3/16	717	-2.28	15.50	14.7	Pass
T17	60 - 40	Horizontal	L2x2x3/16	794	4.87	24.32	20.0	Pass
T18	40 - 20	Horizontal	L2x2x3/16	818	-2.40	15.50	15.5	Pass
T19	20 - 8.05469	Horizontal	L2x2x3/16	866	-2.38	15.50	15.3	Pass
T1	350 - 341.945	Top Girt	L2x2x3/16	6	-0.08	15.18	0.5	Pass
T2	341.945 - 340	Top Girt	L2x2x3/16	26	-2.34	15.18	15.4	Pass
T3	340 - 320	Top Girt	L2x2x3/16	41	-1.33	15.18	8.8	Pass
T4	320 - 300	Top Girt	L2x2x3/16	92	-0.94	15.18	6.2	Pass
T5	300 - 280	Top Girt	L2x2x1/4	143	-1.55	20.05	7.7	Pass
T6	280 - 260	Top Girt	L2x2x1/4	193	-2.18	20.05	10.9	Pass
T7	260 - 240	Top Girt	L2 1/2x2 1/2x1/4	246	-1.32	29.14	4.5	Pass
T8	240 - 220	Top Girt	L2 1/2x2 1/2x1/4	295	-3.64	29.14	12.5	Pass
T9	220 - 200	Top Girt	L2x2x1/4	346	-2.02	20.05	10.1	Pass
T10	200 - 180	Top Girt	L2x2x1/4	397	-2.48	20.21	12.3	Pass
T11	180 - 160	Top Girt	L2x2x1/4	450	-3.67	20.21	18.2	Pass
T12	160 - 140	Top Girt	L2x2x1/4	501	-1.88	20.21	9.3	Pass
T13	140 - 120	Top Girt	L2x2x1/4	552	-2.23	20.21	11.1	Pass
T14	120 - 100	Top Girt	L2x2x1/4	603	-2.47	20.21	12.2	Pass
T15	100 - 80	Top Girt	L2x2x3/16	653	-2.13	15.50	13.7	Pass
T16	80 - 60	Top Girt	L2x2x3/16	704	-2.14	15.50	13.8	Pass
T17	60 - 40	Top Girt	L2x2x3/16	755	-2.32	15.50	15.0	Pass
T18	40 - 20	Top Girt	L2x2x3/16	806	-2.40	15.50	15.5	Pass
T19	20 - 8.05469	Top Girt	L2x2x3/16	857	-2.38	15.50	15.3	Pass
T20	8.05469 - 6	Top Girt	L2x2x3/16	886	-2.70	15.50	17.4	Pass
T21	6 - 2.66927	Top Girt	L3x3x3/8	901	20.57	71.78	28.7	Pass
T2	341.945 - 340	Bottom Girt	L2x2x3/16	29	-1.59	15.18	10.5	Pass
T3	340 - 320	Bottom Girt	L2x2x3/16	44	-0.73	15.18	4.8	Pass
T4	320 - 300	Bottom Girt	L2x2x3/16	95	-1.33	15.18	8.8	Pass
T5	300 - 280	Bottom Girt	L2x2x1/4	145	-2.15	20.05	10.7	Pass
T6	280 - 260	Bottom Girt	L2x2x1/4	198	-1.31	20.05	6.5	Pass
T7	260 - 240	Bottom Girt	L2 1/2x2 1/2x1/4	247	-3.61	29.14	12.4	Pass
T8	240 - 220	Bottom Girt	L2 1/2x2 1/2x1/4	300	-2.24	29.14	7.7	Pass
T9	220 - 200	Bottom Girt	L2x2x1/4	349	-2.02	20.05	10.1	Pass
T10	200 - 180	Bottom Girt	L2x2x1/4	402	-4.09	20.21	20.2	Pass
T11	180 - 160	Bottom Girt	L2x2x1/4	453	-2.19	20.21	10.8	Pass
T12	160 - 140	Bottom Girt	L2x2x1/4	504	-1.88	20.21	9.3	Pass
T13	140 - 120	Bottom Girt	L2x2x1/4	553	-2.97	20.21	14.7	Pass
T14	120 - 100	Bottom Girt	L2x2x1/4	606	-2.45	20.21	12.1	Pass
T15	100 - 80	Bottom Girt	L2x2x3/16	656	-2.13	15.50	13.7	Pass
T16	80 - 60	Bottom Girt	L2x2x3/16	707	-2.14	15.50	13.8	Pass
T17	60 - 40	Bottom Girt	L2x2x3/16	758	-2.32	15.50	15.0	Pass
T18	40 - 20	Bottom Girt	L2x2x3/16	809	-2.40	15.50	15.5	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (k)	ΔP_{allow} (k)	% Capacity	Pass / Fail
T20	8.05469 - 6	Bottom Girt	L2x2x3/16	889	6.05	24.32	24.9	Pass
T21	6 - 2.66927	Bottom Girt	L2x2x1/4	905	-2.49	27.79	9.0	Pass
T22	2.66927 - 0	Bottom Girt	18x3/8	916	-3.14	223.25	5.3	Pass
T3	340 - 320	Guy A@335.836	7/8	953	18.12	50.21	36.1	Pass
T5	300 - 280	Guy A@295.836	7/8	948	19.05	50.21	37.9	Pass
T8	240 - 220	Guy A@235.836	1	942	27.96	65.83	42.5	Pass
T11	180 - 160	Guy A@175.836	7/8	936	21.31	50.21	42.4	Pass
T14	120 - 100	Guy A@115.836	3/4	930	14.13	36.73	38.5	Pass
T17	60 - 40	Guy A@55.8359	9/16	924	7.39	22.05	33.5	Pass
T3	340 - 320	Guy B@335.836	7/8	951	18.38	50.21	36.6	Pass
T5	300 - 280	Guy B@295.836	7/8	945	19.26	50.21	38.4	Pass
T8	240 - 220	Guy B@235.836	1	939	27.70	65.83	42.1	Pass
T11	180 - 160	Guy B@175.836	7/8	933	20.68	50.21	41.2	Pass
T14	120 - 100	Guy B@115.836	3/4	927	13.67	36.73	37.2	Pass
T17	60 - 40	Guy B@55.8359	9/16	921	7.16	22.05	32.5	Pass
T3	340 - 320	Guy C@335.836	7/8	950	18.30	50.21	36.4	Pass
T5	300 - 280	Guy C@295.836	7/8	944	18.92	50.21	37.7	Pass
T8	240 - 220	Guy C@235.836	1	937	27.81	65.83	42.2	Pass
T11	180 - 160	Guy C@175.836	7/8	931	21.26	50.21	42.3	Pass
T14	120 - 100	Guy C@115.836	3/4	925	14.29	36.73	38.9	Pass
T17	60 - 40	Guy C@55.8359	9/16	919	7.51	22.05	34.1	Pass
							Summary	
						Leg (T9)	46.3	Pass
						Diagonal (T10)	54.9	Pass
						Horizontal (T10)	35.5	Pass
						Top Girt (T21)	28.7	Pass
						Bottom Girt (T20)	24.9	Pass
						Guy A (T8)	42.5	Pass
						Guy B (T8)	42.1	Pass
						Guy C (T11)	42.3	Pass
						Bolt Checks	48.2	Pass
						Rating =	54.9	Pass

Table 5 - Tower Component Stresses vs. Capacity - LC7

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1,2	Mast Foundation Structural	-	1.3	Pass
1,2	Mast Foundation Soil Interaction	-	36.9	Pass
1,2	Guy Anchor Structural	-	82.9	Pass
1,2	Guy Anchor Soil Interaction	-	30.3	Pass

Structure Rating (max from all components) =	82.9%
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Notes:

- 1) See additional documentation in "Appendix C - Additional Calculations" for calculations supporting the % capacity listed.
- 2) Rating per TIA-222-H Section 15.5

4.1) Recommendations

- 1) The tower and its base and anchor foundations have sufficient capacity to carry the proposed load configuration. No modifications are required at this time.

APPENDIX A

TNXTOWER OUTPUT

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job Lake City (SR 47 & US 41) (BU 870081)	Page 1 of 63
	Project TEP No. 145283.791998	Date 16:40:56 12/01/22
	Client Crown Castle	Designed by SPT

Tower Input Data

The main tower is a 3x guyed tower with an overall height of 350' 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 4' at the top and tapered at the base.

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

The following design criteria apply:

Tower is located in Columbia County, Florida.

Tower base elevation above sea level: 140'.

Basic wind speed of 118 mph.

Risk Category II.

Exposure Category C.

Simplified Topographic Factor Procedure for wind speed-up calculations is used.

Topographic Category: 1.

Crest Height: 0'.

Deflections calculated using a wind speed of 60 mph.

Pressures are calculated at each section.

Stress ratio used in tower member design is 1.

Safety factor used in guy design is 1.

Tower analysis based on target reliabilities in accordance with Annex S.

Load Modification Factors used: $K_{es}(F_w) = 0.95$.

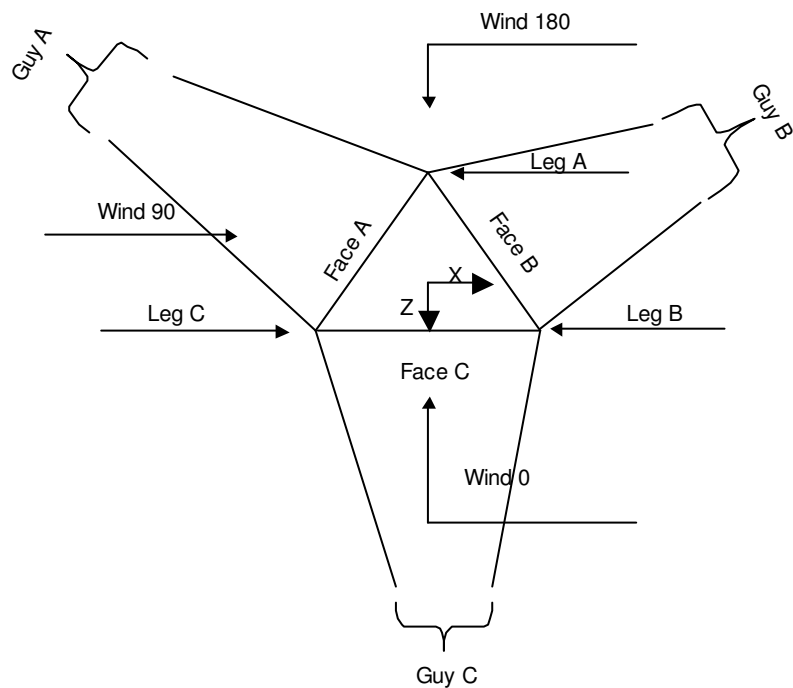
Maximum demand-capacity ratio is: 1.05.

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

Options

Consider Moments - Legs	Distribute Leg Loads As Uniform	Use ASCE 10 X-Brace Ly Rules
Consider Moments - Horizontals	Assume Legs Pinned	√ Calculate Redundant Bracing Forces
Consider Moments - Diagonals	√ Assume Rigid Index Plate	Ignore Redundant Members in FEA
Use Moment Magnification	√ Use Clear Spans For Wind Area	SR Leg Bolts Resist Compression
√ Use Code Stress Ratios	√ Use Clear Spans For KL/r	All Leg Panels Have Same Allowable
√ Use Code Safety Factors - Guys	√ Retension Guys To Initial Tension	Offset Girt At Foundation
Escalate Ice	√ Bypass Mast Stability Checks	√ Consider Feed Line Torque
Always Use Max Kz	√ Use Azimuth Dish Coefficients	√ Include Angle Block Shear Check
Use Special Wind Profile	√ Project Wind Area of Appurt.	Use TIA-222-H Bracing Resist. Exemption
Include Bolts In Member Capacity	√ Autocalc Torque Arm Areas	Use TIA-222-H Tension Splice Exemption
Leg Bolts Are At Top Of Section	Add IBC .6D+W Combination	Poles
√ Secondary Horizontal Braces Leg	√ Sort Capacity Reports By Component	Include Shear-Torsion Interaction
Use Diamond Inner Bracing (4 Sided)	Triangulate Diamond Inner Bracing	Always Use Sub-Critical Flow
√ SR Members Have Cut Ends	Treat Feed Line Bundles As Cylinder	Use Top Mounted Sockets
SR Members Are Concentric	Ignore KL/ry For 60 Deg. Angle Legs	Pole Without Linear Attachments
		Pole With Shroud Or No Appurtenances
		Outside and Inside Corner Radii Are Known

tnxTower Tower Engineering Professionals 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job Lake City (SR 47 & US 41) (BU 870081)	Page 2 of 63
	Project TEP No. 145283.791998	Date 16:40:56 12/01/22
	Client Crown Castle	Designed by SPT



Face Guyed

Tower Section Geometry

Tower Section	Tower Elevation	Assembly Database	Description	Section Width	Number of Sections	Section Length
	ft			ft		ft
T1	350'-341'11-13/32"			4'	1	8'19/32"
T2	341'11-13/32"-340'			4'	1	1'11-13/32"
T3	340'-320'			4'	1	20'
T4	320'-300'			4'	1	20'
T5	300'-280'			4'	1	20'
T6	280'-260'			4'	1	20'
T7	260'-240'			4'	1	20'
T8	240'-220'			4'	1	20'
T9	220'-200'			4'	1	20'
T10	200'-180'			4'	1	20'
T11	180'-160'			4'	1	20'
T12	160'-140'			4'	1	20'
T13	140'-120'			4'	1	20'
T14	120'-100'			4'	1	20'

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	3 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

<i>Tower Section</i>	<i>Tower Elevation</i>	<i>Assembly Database</i>	<i>Description</i>	<i>Section Width</i>	<i>Number of Sections</i>	<i>Section Length</i>
	<i>ft</i>			<i>ft</i>		<i>ft</i>
T15	100'-80'			4'	1	20'
T16	80'-60'			4'	1	20'
T17	60'-40'			4'	1	20'
T18	40'-20'			4'	1	20'
T19	20'-8'19/32"			4'	1	11'11-13/32"
T20	8'19/32"-6'			4'	1	2'19/32"
T21	6'-2'8-1/32"			4'	1	3'3-31/32"
T22	2'8-1/32"-0'			1'9-3/8"	1	2'8-1/32"

Tower Section Geometry (cont'd)

<i>Tower Section</i>	<i>Tower Elevation</i>	<i>Diagonal Spacing</i>	<i>Bracing Type</i>	<i>Has K Brace End Panels</i>	<i>Has Horizontals</i>	<i>Top Girt Offset</i>	<i>Bottom Girt Offset</i>
	<i>ft</i>	<i>ft</i>				<i>in</i>	<i>in</i>
T1	350'-341'11-13/32"	3'10-11/16"	TX Brace	No	Yes	3.2813	0.0000
T2	341'11-13/32"-340'	1'8-1/32"	TX Brace	No	Yes	0.0000	3.2813
T3	340'-320'	3'10-11/16"	TX Brace	No	Yes	3.2813	3.2813
T4	320'-300'	3'10-11/16"	TX Brace	No	Yes	3.2813	3.2813
T5	300'-280'	3'10-11/16"	TX Brace	No	Yes	3.2813	3.2813
T6	280'-260'	3'10-11/16"	TX Brace	No	Yes	3.2813	3.2813
T7	260'-240'	3'10-11/16"	TX Brace	No	Yes	3.2813	3.2813
T8	240'-220'	3'10-11/16"	TX Brace	No	Yes	3.2813	3.2813
T9	220'-200'	3'10-11/16"	TX Brace	No	Yes	3.2813	3.2813
T10	200'-180'	3'10-11/16"	TX Brace	No	Yes	3.2813	3.2813
T11	180'-160'	3'10-11/16"	TX Brace	No	Yes	3.2813	3.2813
T12	160'-140'	3'10-11/16"	TX Brace	No	Yes	3.2813	3.2813
T13	140'-120'	3'10-11/16"	TX Brace	No	Yes	3.2813	3.2813
T14	120'-100'	3'10-11/16"	TX Brace	No	Yes	3.2813	3.2813
T15	100'-80'	3'10-11/16"	TX Brace	No	Yes	3.2813	3.2813
T16	80'-60'	3'10-11/16"	TX Brace	No	Yes	3.2813	3.2813
T17	60'-40'	3'10-11/16"	TX Brace	No	Yes	3.2813	3.2813
T18	40'-20'	3'10-11/16"	TX Brace	No	Yes	3.2813	3.2813
T19	20'-8'19/32"	3'10-11/16"	TX Brace	No	Yes	3.2813	0.0000
T20	8'19/32"-6'	1'9-3/8"	TX Brace	No	Yes	0.0000	3.2813
T21	6'-2'8-1/32"	3'3"	TX Brace	No	Yes	1.0000	0.0000
T22	2'8-1/32"-0'	1'11-1/32"	X Brace	No	Yes	0.0000	9.0000

Tower Section Geometry (cont'd)

<i>Tower Elevation</i>	<i>Leg Type</i>	<i>Leg Size</i>	<i>Leg Grade</i>	<i>Diagonal Type</i>	<i>Diagonal Size</i>	<i>Diagonal Grade</i>
<i>ft</i>						
T1 350'-341'11-13/32"	Solid Round	2 1/4	A572-50 (50 ksi)	Solid Round	3/4	A36 (36 ksi)
T2 341'11-13/32"-340'	Solid Round	2 1/4	A572-50 (50 ksi)	Solid Round	3/4	A36 (36 ksi)
T3 340'-320'	Solid Round	2 1/4	A572-50	Solid Round	3/4	A36

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	4 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

<i>Tower Elevation ft</i>	<i>Leg Type</i>	<i>Leg Size</i>	<i>Leg Grade</i>	<i>Diagonal Type</i>	<i>Diagonal Size</i>	<i>Diagonal Grade</i>
T4 320'-300'	Solid Round	2 1/4	(50 ksi) A572-50	Solid Round	3/4	(36 ksi) A36
T5 300'-280'	Solid Round	3	(50 ksi) A572-50	Solid Round	7/8	(36 ksi) A36
T6 280'-260'	Solid Round	3	(50 ksi) A572-50	Solid Round	7/8	(36 ksi) A36
T7 260'-240'	Solid Round	3	(50 ksi) A572-50	Flat Bar	2x1/2	(36 ksi) A36
T8 240'-220'	Solid Round	3	(50 ksi) A572-50	Flat Bar	2x1/2	(36 ksi) A36
T9 220'-200'	Solid Round	3	(50 ksi) A572-50	Solid Round	7/8	(36 ksi) A36
T10 200'-180'	Solid Round	3 1/2	(50 ksi) A572-50	Solid Round	7/8	(36 ksi) A36
T11 180'-160'	Solid Round	3 1/2	(50 ksi) A572-50	Solid Round	7/8	(36 ksi) A36
T12 160'-140'	Solid Round	3 1/2	(50 ksi) A572-50	Solid Round	7/8	(36 ksi) A36
T13 140'-120'	Solid Round	3 1/2	(50 ksi) A572-50	Solid Round	7/8	(36 ksi) A36
T14 120'-100'	Solid Round	3 1/2	(50 ksi) A572-50	Solid Round	7/8	(36 ksi) A36
T15 100'-80'	Solid Round	3 1/2	(50 ksi) A572-50	Solid Round	3/4	(36 ksi) A36
T16 80'-60'	Solid Round	3 1/2	(50 ksi) A572-50	Solid Round	3/4	(36 ksi) A36
T17 60'-40'	Solid Round	3 1/2	(50 ksi) A572-50	Solid Round	3/4	(36 ksi) A36
T18 40'-20'	Solid Round	3 1/2	(50 ksi) A572-50	Solid Round	3/4	(36 ksi) A36
T19 20'-8'-19/32"	Solid Round	3 1/2	(50 ksi) A572-50	Solid Round	3/4	(36 ksi) A36
T20 8'-19/32"-6"	Solid Round	3 1/2	(50 ksi) A572-50	Solid Round	3/4	(36 ksi) A36
T21 6'-2'-8'-1/32"	Solid Round	3 1/2	(50 ksi) A572-50	Flat Bar	2x1/2	(36 ksi) A36
T22 2'-8'-1/32"-0'	Solid Round	3 1/2	(50 ksi) A572-50	Flat Bar		(36 ksi) A36

Tower Section Geometry (cont'd)

<i>Tower Elevation ft</i>	<i>Top Girt Type</i>	<i>Top Girt Size</i>	<i>Top Girt Grade</i>	<i>Bottom Girt Type</i>	<i>Bottom Girt Size</i>	<i>Bottom Girt Grade</i>
T1 350'-341'11-13/32"	Single Angle	L2x2x3/16	A36 (36 ksi)	Single Angle		A36 (36 ksi)
T2 341'11-13/32"-340'	Single Angle	L2x2x3/16	A36 (36 ksi)	Single Angle	L2x2x3/16	A36 (36 ksi)
T3 340'-320'	Single Angle	L2x2x3/16	A36 (36 ksi)	Single Angle	L2x2x3/16	A36 (36 ksi)
T4 320'-300'	Single Angle	L2x2x3/16	A36 (36 ksi)	Single Angle	L2x2x3/16	A36 (36 ksi)
T5 300'-280'	Single Angle	L2x2x1/4	A36	Single Angle	L2x2x1/4	A36

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	Project TEP No. 145283.791998	Date 16:40:56 12/01/22
	Client Crown Castle	Designed by SPT

<i>Tower Elevation ft</i>	<i>Top Girt Type</i>	<i>Top Girt Size</i>	<i>Top Girt Grade</i>	<i>Bottom Girt Type</i>	<i>Bottom Girt Size</i>	<i>Bottom Girt Grade</i>
T6 280'-260'	Single Angle	L2x2x1/4	(36 ksi) A36	Single Angle	L2x2x1/4	(36 ksi) A36
T7 260'-240'	Single Angle	L2 1/2x2 1/2x1/4	(36 ksi) A36	Single Angle	L2 1/2x2 1/2x1/4	(36 ksi) A36
T8 240'-220'	Single Angle	L2 1/2x2 1/2x1/4	(36 ksi) A36	Single Angle	L2 1/2x2 1/2x1/4	(36 ksi) A36
T9 220'-200'	Single Angle	L2x2x1/4	(36 ksi) A36	Single Angle	L2x2x1/4	(36 ksi) A36
T10 200'-180'	Single Angle	L2x2x1/4	(36 ksi) A36	Single Angle	L2x2x1/4	(36 ksi) A36
T11 180'-160'	Single Angle	L2x2x1/4	(36 ksi) A36	Single Angle	L2x2x1/4	(36 ksi) A36
T12 160'-140'	Single Angle	L2x2x1/4	(36 ksi) A36	Single Angle	L2x2x1/4	(36 ksi) A36
T13 140'-120'	Single Angle	L2x2x1/4	(36 ksi) A36	Single Angle	L2x2x1/4	(36 ksi) A36
T14 120'-100'	Single Angle	L2x2x1/4	(36 ksi) A36	Single Angle	L2x2x1/4	(36 ksi) A36
T15 100'-80'	Single Angle	L2x2x3/16	(36 ksi) A36	Single Angle	L2x2x3/16	(36 ksi) A36
T16 80'-60'	Single Angle	L2x2x3/16	(36 ksi) A36	Single Angle	L2x2x3/16	(36 ksi) A36
T17 60'-40'	Single Angle	L2x2x3/16	(36 ksi) A36	Single Angle	L2x2x3/16	(36 ksi) A36
T18 40'-20'	Single Angle	L2x2x3/16	(36 ksi) A36	Single Angle	L2x2x3/16	(36 ksi) A36
T19 20'-8'-19/32"	Single Angle	L2x2x3/16	(36 ksi) A36	Single Angle		(36 ksi) A36
T20 8'-19/32"-6'	Single Angle	L2x2x3/16	(36 ksi) A36	Single Angle	L2x2x3/16	(36 ksi) A36
T21 6'-2'-8'-1/32"	Single Angle	L3x3x3/8	(36 ksi) A36	Single Angle	L2x2x1/4	(36 ksi) A36
T22 2'-8'-1/32"-0'	Single Angle		(36 ksi) A36	Flat Bar	18x3/8	(36 ksi) A36

Tower Section Geometry (*cont'd*)

<i>Tower Elevation ft</i>	<i>No. of Mid Girts</i>	<i>Mid Girt Type</i>	<i>Mid Girt Size</i>	<i>Mid Girt Grade</i>	<i>Horizontal Type</i>	<i>Horizontal Size</i>	<i>Horizontal Grade</i>
T1 350'-341'11"-13/32"	None	Solid Round		A572-50 (50 ksi)	Single Angle	L2x2x3/16	A36 (36 ksi)
T2 341'11"-13/32"-340'	None	Solid Round		A572-50 (50 ksi)	Single Angle	L2x2x3/16	A36 (36 ksi)
T3 340'-320'	None	Solid Round		A572-50 (50 ksi)	Single Angle	L2x2x3/16	A36 (36 ksi)
T4 320'-300'	None	Solid Round		A572-50 (50 ksi)	Single Angle	L2x2x3/16	A36 (36 ksi)
T5 300'-280'	None	Solid Round		A572-50 (50 ksi)	Single Angle	L2x2x1/4	A36 (36 ksi)
T6 280'-260'	None	Solid Round		A572-50 (50 ksi)	Single Angle	L2x2x1/4	A36 (36 ksi)

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	6 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

<i>Tower Elevation</i> <i>ft</i>	<i>No. of Mid Girts</i>	<i>Mid Girt Type</i>	<i>Mid Girt Size</i>	<i>Mid Girt Grade</i>	<i>Horizontal Type</i>	<i>Horizontal Size</i>	<i>Horizontal Grade</i>
T7 260'-240'	None	Solid Round		A572-50 (50 ksi)	Single Angle	L2 1/2x2 1/2x1/4	A36 (36 ksi)
T8 240'-220'	None	Solid Round		A572-50 (50 ksi)	Single Angle	L2 1/2x2 1/2x1/4	A36 (36 ksi)
T9 220'-200'	None	Solid Round		A572-50 (50 ksi)	Single Angle	L2x2x1/4	A36 (36 ksi)
T10 200'-180'	None	Solid Round		A572-50 (50 ksi)	Single Angle	L2x2x1/4	A36 (36 ksi)
T11 180'-160'	None	Solid Round		A572-50 (50 ksi)	Single Angle	L2x2x1/4	A36 (36 ksi)
T12 160'-140'	None	Solid Round		A572-50 (50 ksi)	Single Angle	L2x2x1/4	A36 (36 ksi)
T13 140'-120'	None	Solid Round		A572-50 (50 ksi)	Single Angle	L2x2x1/4	A36 (36 ksi)
T14 120'-100'	None	Solid Round		A572-50 (50 ksi)	Single Angle	L2x2x1/4	A36 (36 ksi)
T15 100'-80'	None	Solid Round		A572-50 (50 ksi)	Single Angle	L2x2x3/16	A36 (36 ksi)
T16 80'-60'	None	Solid Round		A572-50 (50 ksi)	Single Angle	L2x2x3/16	A36 (36 ksi)
T17 60'-40'	None	Solid Round		A572-50 (50 ksi)	Single Angle	L2x2x3/16	A36 (36 ksi)
T18 40'-20'	None	Solid Round		A572-50 (50 ksi)	Single Angle	L2x2x3/16	A36 (36 ksi)
T19 20'-8'19/32"	None	Solid Round		A572-50 (50 ksi)	Single Angle	L2x2x3/16	A36 (36 ksi)
T20 8'19/32"-6'	None	Solid Round		A572-50 (50 ksi)	Single Angle	L2x2x3/16	A36 (36 ksi)
T21 6'-2'8-1/32"	None	Solid Round		A572-50 (50 ksi)	Single Angle	L3x3x3/8	A36 (36 ksi)

Tower Section Geometry (cont'd)

<i>Tower Elevation</i> <i>ft</i>	<i>Gusset Area</i> <i>(per face)</i> <i>ft²</i>	<i>Gusset Thickness</i> <i>in</i>	<i>Gusset Grade</i>	<i>Adjust. Factor</i> <i>A_f</i>	<i>Adjust. Factor</i> <i>A_r</i>	<i>Weight Mult.</i>	<i>Double Angle</i> <i>Stitch Bolt</i> <i>Spacing</i> <i>Diagonals</i> <i>in</i>	<i>Double Angle</i> <i>Stitch Bolt</i> <i>Spacing</i> <i>Horizontals</i> <i>in</i>	<i>Double Angle</i> <i>Stitch Bolt</i> <i>Spacing</i> <i>Redundants</i> <i>in</i>
T1 350'-341'11-13/32"	0.00	0.0000	A36 (36 ksi)	1	1	1	Mid-Pt	Mid-Pt	Mid-Pt
T2 341'11-13/32"-340'	0.00	0.0000	A36 (36 ksi)	1	1	1	Mid-Pt	Mid-Pt	Mid-Pt
T3 340'-320'	0.00	0.0000	A36 (36 ksi)	1	1	1	Mid-Pt	Mid-Pt	Mid-Pt
T4 320'-300'	0.00	0.0000	A36 (36 ksi)	1	1	1	Mid-Pt	Mid-Pt	Mid-Pt
T5 300'-280'	0.00	0.0000	A36 (36 ksi)	1	1	1	Mid-Pt	Mid-Pt	Mid-Pt
T6 280'-260'	0.00	0.0000	A36 (36 ksi)	1	1	1	Mid-Pt	Mid-Pt	Mid-Pt
T7 260'-240'	0.00	0.0000	A36 (36 ksi)	1	1	1	Mid-Pt	Mid-Pt	Mid-Pt
T8 240'-220'	0.00	0.0000	A36	1	1	1	Mid-Pt	Mid-Pt	Mid-Pt

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	7 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

<i>Tower Elevation</i>	<i>Gusset Area (per face)</i>	<i>Gusset Thickness</i>	<i>Gusset Grade</i>	<i>Adjust. Factor A_f</i>	<i>Adjust. Factor A_r</i>	<i>Weight Mult.</i>	<i>Double Angle Stitch Bolt Spacing Diagonals in</i>	<i>Double Angle Stitch Bolt Spacing Horizontals in</i>	<i>Double Angle Stitch Bolt Spacing Redundants in</i>
<i>ft</i>	<i>ft²</i>	<i>in</i>							
T9 220'-200'	0.00	0.0000	(36 ksi) A36	1	1	1	Mid-Pt	Mid-Pt	Mid-Pt
T10 200'-180'	0.00	0.0000	(36 ksi) A36	1	1	1	Mid-Pt	Mid-Pt	Mid-Pt
T11 180'-160'	0.00	0.0000	(36 ksi) A36	1	1	1	Mid-Pt	Mid-Pt	Mid-Pt
T12 160'-140'	0.00	0.0000	(36 ksi) A36	1	1	1	Mid-Pt	Mid-Pt	Mid-Pt
T13 140'-120'	0.00	0.0000	(36 ksi) A36	1	1	1	Mid-Pt	Mid-Pt	Mid-Pt
T14 120'-100'	0.00	0.0000	(36 ksi) A36	1	1	1	Mid-Pt	Mid-Pt	Mid-Pt
T15 100'-80'	0.00	0.0000	(36 ksi) A36	1	1	1	Mid-Pt	Mid-Pt	Mid-Pt
T16 80'-60'	0.00	0.0000	(36 ksi) A36	1	1	1	Mid-Pt	Mid-Pt	Mid-Pt
T17 60'-40'	0.00	0.0000	(36 ksi) A36	1	1	1	Mid-Pt	Mid-Pt	Mid-Pt
T18 40'-20'	0.00	0.0000	(36 ksi) A36	1	1	1	Mid-Pt	Mid-Pt	Mid-Pt
T19 20'-8'19/32"	0.00	0.0000	(36 ksi) A36	1	1	1	Mid-Pt	Mid-Pt	Mid-Pt
T20 8'19/32"-6'	0.00	0.0000	(36 ksi) A36	1	1	1	Mid-Pt	Mid-Pt	Mid-Pt
T21 6'-2'8-1/32"	0.00	0.0000	(36 ksi) A36	1	1	1	Mid-Pt	Mid-Pt	Mid-Pt
T22 2'8-1/32"-0'	0.00	0.0000	(36 ksi) A36	1	1	1	Mid-Pt	Mid-Pt	Mid-Pt

Tower Section Geometry (cont'd)

<i>Tower Elevation</i>	<i>Calc K Single Angles</i>	<i>Calc K Solid Rounds</i>	<i>Legs</i>	<i>K Factors¹</i>						
				<i>X Brace Diags</i>	<i>K Brace Diags</i>	<i>Single Diags</i>	<i>Girts</i>	<i>Horiz.</i>	<i>Sec. Horiz.</i>	<i>Inner Brace</i>
				<i>X Y</i>	<i>X Y</i>	<i>X Y</i>	<i>X Y</i>	<i>X Y</i>	<i>X Y</i>	<i>X Y</i>
T1 350'-341'11-1/32"	Yes	Yes	1	1	1	1	1	1	1	1
T2 341'11-13/32"-340'	Yes	Yes	1	1	1	1	1	1	1	1
T3 340'-320'	Yes	Yes	1	1	1	1	1	1	1	1
T4 320'-300'	Yes	Yes	1	1	1	1	1	1	1	1
T5 300'-280'	Yes	Yes	1	1	1	1	1	1	1	1
T6 280'-260'	Yes	Yes	1	1	1	1	1	1	1	1
T7 260'-240'	Yes	Yes	1	1	1	1	1	1	1	1
T8 240'-220'	Yes	Yes	1	1	1	1	1	1	1	1

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	8 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

Tower Elevation ft	Calc K Single Angles	Calc K Solid Rounds	K Factors ¹							
			Legs	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
T9 220'-200'	Yes	Yes	1	1	1	1	1	1	1	1
T10 200'-180'	Yes	Yes	1	1	1	1	1	1	1	1
T11 180'-160'	Yes	Yes	1	1	1	1	1	1	1	1
T12 160'-140'	Yes	Yes	1	1	1	1	1	1	1	1
T13 140'-120'	Yes	Yes	1	1	1	1	1	1	1	1
T14 120'-100'	Yes	Yes	1	1	1	1	1	1	1	1
T15 100'-80'	Yes	Yes	1	1	1	1	1	1	1	1
T16 80'-60'	Yes	Yes	1	1	1	1	1	1	1	1
T17 60'-40'	Yes	Yes	1	1	1	1	1	1	1	1
T18 40'-20'	Yes	Yes	1	1	1	1	1	1	1	1
T19 20'-8'-19/32"	Yes	Yes	1	1	1	1	1	1	1	1
T20 8'-19/32"-6'	Yes	Yes	1	1	1	1	1	1	1	1
T21 6'-2'-8-1/32"	Yes	Yes	1	1	1	1	1	1	1	1
T22 2'-8-1/32"-0'	Yes	Yes	1	1	1	1	1	1	1	1

¹Note: K factors are applied to member segment lengths. K-braces without inner supporting members will have the K factor in the out-of-plane direction applied to the overall length.

Tower Section Geometry (cont'd)

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
T1 350'-341'-11-13/32"	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	1	0.0000	1
T2 341'-11-13/32"-340'	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	1	0.0000	1
T3 340'-320'	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	1	0.0000	1
T4 320'-300'	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	1	0.0000	1
T5 300'-280'	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	1	0.0000	1
T6 280'-260'	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	1	0.0000	1
T7 260'-240'	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	1	0.0000	1
T8 240'-220'	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	1	0.0000	1
T9 220'-200'	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	1	0.0000	1

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job Lake City (SR 47 & US 41) (BU 870081)	Page 10 of 63
	Project TEP No. 145283.791998	Date 16:40:56 12/01/22
	Client Crown Castle	Designed by SPT

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 350'-341'11"-13 /32"	Flange	0.0000 A325N	0	0.0000 A325N	0	0.0000 A325N	0	0.0000 A325N	0	0.6250 A325N	0	0.0000 A325N	0	0.6250 A325N	0
T2 341'11"-13/32"- 340'	Flange	0.7500 A325N	3	0.0000 A325N	0	0.0000 A325N	0	0.0000 A325N	0	0.6250 A325N	0	0.0000 A325N	0	0.6250 A325N	0
T3 340'-320'	Flange	0.7500 A325N	3	0.0000 A325N	0	0.0000 A325N	0	0.0000 A325N	0	0.6250 A325N	0	0.0000 A325N	0	0.6250 A325N	0
T4 320'-300'	Flange	0.7500 A325N	3	0.0000 A325N	0	0.0000 A325N	0	0.0000 A325N	0	0.6250 A325N	0	0.0000 A325N	0	0.6250 A325N	0
T5 300'-280'	Flange	0.7500 A325N	3	0.0000 A325N	0	0.0000 A325N	0	0.0000 A325N	0	0.6250 A325N	0	0.0000 A325N	0	0.6250 A325N	0
T6 280'-260'	Flange	0.7500 A325N	3	0.0000 A325N	0	0.0000 A325N	0	0.0000 A325N	0	0.6250 A325N	0	0.0000 A325N	0	0.6250 A325N	0
T7 260'-240'	Flange	0.7500 A325N	3	0.0000 A325N	0	0.0000 A325N	0	0.0000 A325N	0	0.6250 A325N	0	0.0000 A325N	0	0.6250 A325N	0
T8 240'-220'	Flange	0.7500 A325N	3	0.0000 A325N	0	0.0000 A325N	0	0.0000 A325N	0	0.6250 A325N	0	0.0000 A325N	0	0.6250 A325N	0
T9 220'-200'	Flange	0.7500 A325N	3	0.0000 A325N	0	0.0000 A325N	0	0.0000 A325N	0	0.6250 A325N	0	0.0000 A325N	0	0.6250 A325N	0
T10 200'-180'	Flange	0.7500 A325N	3	0.0000 A325N	0	0.0000 A325N	0	0.0000 A325N	0	0.6250 A325N	0	0.0000 A325N	0	0.6250 A325N	0
T11 180'-160'	Flange	0.7500 A325N	3	0.0000 A325N	0	0.0000 A325N	0	0.0000 A325N	0	0.6250 A325N	0	0.0000 A325N	0	0.6250 A325N	0
T12 160'-140'	Flange	0.7500 A325N	3	0.0000 A325N	0	0.0000 A325N	0	0.0000 A325N	0	0.6250 A325N	0	0.0000 A325N	0	0.6250 A325N	0
T13 140'-120'	Flange	0.7500 A325N	3	0.0000 A325N	0	0.0000 A325N	0	0.0000 A325N	0	0.6250 A325N	0	0.0000 A325N	0	0.6250 A325N	0
T14 120'-100'	Flange	0.7500 A325N	3	0.0000 A325N	0	0.0000 A325N	0	0.0000 A325N	0	0.6250 A325N	0	0.0000 A325N	0	0.6250 A325N	0
T15 100'-80'	Flange	0.7500 A325N	3	0.0000 A325N	0	0.0000 A325N	0	0.0000 A325N	0	0.6250 A325N	0	0.0000 A325N	0	0.6250 A325N	0
T16 80'-60'	Flange	0.7500 A325N	3	0.0000 A325N	0	0.0000 A325N	0	0.0000 A325N	0	0.6250 A325N	0	0.0000 A325N	0	0.6250 A325N	0
T17 60'-40'	Flange	0.7500 A325N	3	0.0000 A325N	0	0.0000 A325N	0	0.0000 A325N	0	0.6250 A325N	0	0.0000 A325N	0	0.6250 A325N	0
T18 40'-20'	Flange	0.7500 A325N	3	0.0000 A325N	0	0.0000 A325N	0	0.0000 A325N	0	0.6250 A325N	0	0.0000 A325N	0	0.6250 A325N	0
T19 20'-8'19/32"	Flange	0.0000 A325N	0	0.0000 A325N	0	0.0000 A325N	0	0.0000 A325N	0	0.6250 A325N	0	0.0000 A325N	0	0.6250 A325N	0
T20 8'19/32"-6'	Flange	0.7500 A325N	3	0.0000 A325N	0	0.0000 A325N	0	0.0000 A325N	0	0.6250 A325N	0	0.0000 A325N	0	0.6250 A325N	0
T21 6'-2'8-1/32"	Flange	0.0000 A325N	0	0.0000 A325N	0	0.0000 A325N	0	0.0000 A325N	0	0.6250 A325N	0	0.0000 A325N	0	0.6250 A325N	0
T22 2'8-1/32"-0'	Flange	0.0000 A325N	0	0.0000 A325N	0	0.0000 A325N	0	0.0000 A325N	0	0.6250 A325N	0	0.0000 A325N	0	0.6250 A325N	0

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	11 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

<i>Guy Elevation</i>	<i>Guy Grade</i>	<i>Guy Size</i>	<i>Initial Tension</i>	<i>%</i>	<i>Guy Modulus</i>	<i>Guy Weight</i>	<i>L_u</i>	<i>Anchor Radius</i>	<i>Anchor Azimuth Adj.</i>	<i>Anchor Elevation</i>	<i>End Fitting Efficiency</i>
<i>ft</i>			<i>K</i>		<i>ksi</i>	<i>plf</i>	<i>ft</i>	<i>ft</i>	<i>°</i>	<i>ft</i>	<i>%</i>
55.8359	EHS	A 9/16	3.50	10%	23000	0.671	180'6-27/32"	173'	0.0000	0'	100%
		B 9/16	3.50	10%	23000	0.671	180'6-27/32"	173'	0.0000	0'	100%
		C 9/16	3.50	10%	23000	0.671	180'6-27/32"	173'	0.0000	0'	100%
115.836	EHS	A 3/4	5.83	10%	24000	1.155	207'1-5/16"	173'	0.0000	0'	100%
		B 3/4	5.83	10%	24000	1.155	207'1-5/16"	173'	0.0000	0'	100%
		C 3/4	5.83	10%	24000	1.155	207'1-5/16"	173'	0.0000	0'	100%
175.836	EHS	A 7/8	7.97	10%	24000	1.581	245'8-13/32"	173'	0.0000	0'	100%
		B 7/8	7.97	10%	24000	1.581	245'8-13/32"	173'	0.0000	0'	100%
		C 7/8	7.97	10%	24000	1.581	245'8-13/32"	173'	0.0000	0'	100%
235.836	EHS	A 1	10.45	10%	24000	2.100	291'7-5/16"	173'	0.0000	0'	100%
		B 1	10.45	10%	24000	2.100	291'7-5/16"	173'	0.0000	0'	100%
		C 1	10.45	10%	24000	2.100	291'7-5/16"	173'	0.0000	0'	100%
295.836	EHS	A 7/8	7.97	10%	24000	1.581	341'10-11/16	173'	0.0000	0'	100%
		B 7/8	7.97	10%	24000	1.581	"	173'	0.0000	0'	100%
		C 7/8	7.97	10%	24000	1.581	341'10-11/16	173'	0.0000	0'	100%
							"				
							341'10-11/16				
							"				
335.836	EHS	A 7/8	7.97	10%	24000	1.581	376'11-7/8"	173'	0.0000	0'	100%
		B 7/8	7.97	10%	24000	1.581	376'11-7/8"	173'	0.0000	0'	100%
		C 7/8	7.97	10%	24000	1.581	376'11-7/8"	173'	0.0000	0'	100%

Guy Data(cont'd)

<i>Guy Elevation</i>	<i>Mount Type</i>	<i>Torque-Arm Spread</i>	<i>Torque-Arm Leg Angle</i>	<i>Torque-Arm Style</i>	<i>Torque-Arm Grade</i>	<i>Torque-Arm Type</i>	<i>Torque-Arm Size</i>
<i>ft</i>		<i>ft</i>	<i>°</i>				
55.8359	Face						
115.836	Face						
175.836	Face						
235.836	Face						
295.836	Face						
335.836	Face						

Guy Data (cont'd)

<i>Guy Elevation</i>	<i>Diagonal Grade</i>	<i>Diagonal Type</i>	<i>Upper Diagonal Size</i>	<i>Lower Diagonal Size</i>	<i>Is Strap.</i>	<i>Pull-Off Grade</i>	<i>Pull-Off Type</i>	<i>Pull-Off Size</i>
<i>ft</i>								
55'10-3/32'	A572-50 (50 ksi)	Solid Round				A36 (36 ksi)	Flat Bar	
115'10-3/32"	A572-50 (50 ksi)	Solid Round				A36 (36 ksi)	Flat Bar	
175'10-3/32"	A572-50 (50 ksi)	Solid Round				A36 (36 ksi)	Flat Bar	
235'10-3/32"	A572-50 (50 ksi)	Solid Round				A36 (36 ksi)	Flat Bar	
295'10-3/32"	A572-50 (50 ksi)	Solid Round				A36 (36 ksi)	Flat Bar	

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job Lake City (SR 47 & US 41) (BU 870081)	Page 12 of 63
	Project TEP No. 145283.791998	Date 16:40:56 12/01/22
	Client Crown Castle	Designed by SPT

<i>Guy Elevation</i> <i>ft</i>	<i>Diagonal Grade</i>	<i>Diagonal Type</i>	<i>Upper Diagonal Size</i>	<i>Lower Diagonal Size</i>	<i>Is Strap.</i>	<i>Pull-Off Grade</i>	<i>Pull-Off Type</i>	<i>Pull-Off Size</i>
335'10-3/32"	A572-50 (50 ksi)	Solid Round				A36 (36 ksi)	Flat Bar	

Guy Data (cont'd)

<i>Guy Elevation</i> <i>ft</i>	<i>Cable Weight A</i> <i>K</i>	<i>Cable Weight B</i> <i>K</i>	<i>Cable Weight C</i> <i>K</i>	<i>Cable Weight D</i> <i>K</i>	<i>Tower Intercept A</i> <i>ft</i>	<i>Tower Intercept B</i> <i>ft</i>	<i>Tower Intercept C</i> <i>ft</i>	<i>Tower Intercept D</i> <i>ft</i>
55.8359	0.12	0.12	0.12		3'1-5/16"	3'1-5/16"	3'1-5/16"	
					3.0 sec/pulse	3.0 sec/pulse	3.0 sec/pulse	
115.836	0.24	0.24	0.24		4'2-13/32"	4'2-13/32"	4'2-13/32"	
					3.5 sec/pulse	3.5 sec/pulse	3.5 sec/pulse	
175.836	0.39	0.39	0.39		5'10-11/16"	5'10-11/16"	5'10-11/16"	
					4.2 sec/pulse	4.2 sec/pulse	4.2 sec/pulse	
235.836	0.61	0.61	0.61		8'4-3/16"	8'4-3/16"	8'4-3/16"	
					5.0 sec/pulse	5.0 sec/pulse	5.0 sec/pulse	
295.836	0.54	0.54	0.54		11'3-1/4"	11'3-1/4"	11'3-1/4"	
					5.8 sec/pulse	5.8 sec/pulse	5.8 sec/pulse	
335.836	0.60	0.60	0.60		13'7-13/16"	13'7-13/16"	13'7-13/16"	
					6.4 sec/pulse	6.4 sec/pulse	6.4 sec/pulse	

Guy Data (cont'd)

<i>Guy Elevation</i> <i>ft</i>	<i>Calc K</i> <i>Single Angles</i>	<i>Calc K</i> <i>Solid Rounds</i>	<i>Torque Arm</i>		<i>Pull Off</i>		<i>Diagonal</i>	
			<i>K_x</i>	<i>K_y</i>	<i>K_x</i>	<i>K_y</i>	<i>K_x</i>	<i>K_y</i>
55.8359	No	No			0.7	0.7	1	1
115.836	No	No			0.7	0.7	1	1
175.836	No	No			0.7	0.7	1	1
235.836	No	No			0.7	0.7	1	1
295.836	No	No			0.7	0.7	1	1
335.836	No	No			0.7	0.7	1	1

Guy Data (cont'd)

<i>Guy Elevation</i> <i>ft</i>	<i>Torque-Arm</i>				<i>Pull Off</i>				<i>Diagonal</i>			
	<i>Bolt Size</i> <i>in</i>	<i>Number</i>	<i>Net Width</i> <i>Deduct</i> <i>in</i>	<i>U</i>	<i>Bolt Size</i> <i>in</i>	<i>Number</i>	<i>Net Width</i> <i>Deduct</i> <i>in</i>	<i>U</i>	<i>Bolt Size</i> <i>in</i>	<i>Number</i>	<i>Net Width</i> <i>Deduct</i> <i>in</i>	<i>U</i>
55.8359	0.0000	0	0.0000	1	0.0000	0	0.0000	1	0.0000	0	0.0000	1
					A325N				A325N			
115.836	0.6250	0	0.0000	0.75	0.0000	0	0.0000	1	0.0000	0	0.0000	1
	A325N				A325N				A325N			
175.836	0.6250	0	0.0000	0.75	0.0000	0	0.0000	1	0.0000	0	0.0000	1
	A325N				A325N				A325N			
235.836	0.6250	0	0.0000	0.75	0.0000	0	0.0000	1	0.0000	0	0.0000	1
	A325N				A325N				A325N			

tnxTower Tower Engineering Professionals 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	13 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

Guy Elevation ft	Torque-Arm				Pull Off				Diagonal			
	Bolt Size in	Number	Net Width Deduct in	U	Bolt Size in	Number	Net Width Deduct in	U	Bolt Size in	Number	Net Width Deduct in	U
295.836	0.6250 A325N	0	0.0000	0.75	0.0000 A325N	0	0.0000	1	0.0000 A325N	0	0.0000	1
335.836	0.6250 A325N	0	0.0000	0.75	0.0000 A325N	0	0.0000	1	0.0000 A325N	0	0.0000	1

Guy Pressures

Guy Elevation ft	Guy Location	z ft	q _z psf	q _z Ice psf	Ice Thickness in
55.8359	A	27'11-1/32"	28		
	B	27'11-1/32"	28		
	C	27'11-1/32"	28		
115.836	A	57'11-1/32"	32		
	B	57'11-1/32"	32		
	C	57'11-1/32"	32		
175.836	A	87'11-1/32"	35		
	B	87'11-1/32"	35		
	C	87'11-1/32"	35		
235.836	A	117'11-1/32"	38		
	B	117'11-1/32"	38		
	C	117'11-1/32"	38		
295.836	A	147'11-1/32"	39		
	B	147'11-1/32"	39		
	C	147'11-1/32"	39		
335.836	A	167'11-1/32"	40		
	B	167'11-1/32"	40		
	C	167'11-1/32"	40		

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
* FACE A*													
LDF7-50A(1-5/8)	A	No	No	Ar (CaAa)	250' - 0'	0.0000	-0.2	7	4	0.5000	1.9800		0.82
LDF7-50A(1-5/8)	A	No	No	Ar (CaAa)	250' - 0'	0.0000	0.3	4	4	0.5000	1.9800		0.82
MLC	A	No	No	Ar (CaAa)	250' - 0'	2.0000	0.34	2	2	0.5000	1.5500		1.85
HYBRID 6X12 LI(1-1/2)													
HFT2406-48S V3-XXX(2)	A	No	No	Ar (CaAa)	250' - 0'	2.0000	0.2	1	1	0.5000	2.0000		3.10
Waveguide Brackets	A	No	No	Af (CaAa)	350' - 0'	0.0000	0	1	1	1.7500	1.7500		1.27
*													
Thin Flat Climbing Ladder	A	No	No	Af (CaAa)	350' - 0'	-0.5000	0	1	1	2.0000	2.0000		4.00

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job Lake City (SR 47 & US 41) (BU 870081)	Page 14 of 63
	Project TEP No. 145283.791998	Date 16:40:56 12/01/22
	Client Crown Castle	Designed by SPT

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
Safety Line 3/8 *	A	No	No	Ar (CaAa)	350' - 0'	-0.5000	0	1	1	0.3750	0.3750		0.22
TSZ 999	A	No	No	Ar (CaAa)	222' - 0'	-2.5000	-0.375	3	2	0.5000	1.1900		1.07
067/xxxM-8A WG(1-3/16) FIBER ONLY CABLE 48(7/8") * * *	A	No	No	Ar (CaAa)	222' - 0'	-2.5000	-0.39	1	1	0.5000	0.8670		0.25
RG-8(3/64") *	A	No	No	Ar (CaAa)	11' - 0'	0.0000	-0.485	1	1	0.5000	0.0450		0.09
* FACE B*													
CR 50	B	No	No	Ar (CaAa)	156' - 0'	0.0000	0.35	4	4	0.5000	1.1700		0.28
1070(7/8) CR 50	B	No	No	Ar (CaAa)	270' - 0'	0.0000	-0.15	12	9	0.5000	1.1700		0.28
1070(7/8) CR 50	B	No	No	Ar (CaAa)	324' - 270'	0.0000	-0.15	10	9	0.5000	1.1700		0.28
1070(7/8) CR 50 1070(7/8) *	B	No	No	Ar (CaAa)	345' - 324'	0.0000	-0.15	3	3	0.5000	1.1700		0.28
LDF4-50A(1/ 2")	B	No	No	Ar (CaAa)	255' - 0'	2.0000	0.4	2	2	0.5000	0.6300		0.15
LDF4-50A(1/ 2") *	B	No	No	Ar (CaAa)	270' - 255'	2.0000	0.4	1	1	0.5000	0.6300		0.15
Waveguide Brackets *	B	No	No	Af (CaAa)	350' - 0'	0.0000	0	1	1	1.7500	1.7500		1.27
* FACE C*													
LDF7-50A(1- 5/8") *	C	No	No	Ar (CaAa)	229' - 0'	0.0000	-0.17	8	3	0.5000	1.9800		0.82
CR 50	C	No	No	Ar (CaAa)	156' - 0'	0.0000	-0.35	4	4	0.5000	1.1700		0.28
1070(7/8) CR 50 1070(7/8) *	C	No	No	Ar (CaAa)	215' - 156'	0.0000	-0.35	1	1	0.5000	1.1700		0.28
FXL-1873(1-5 /8")	C	No	No	Ar (CaAa)	201' - 0'	0.0000	0.2	12	6	0.5000	1.9800		0.67
ATCB-B01-00 1(5/16) *	C	No	No	Ar (CaAa)	201' - 0'	5.5000	0.4	3	3	0.5000	0.3150		0.07
LMR-400(3/8")	C	No	No	Ar (CaAa)	164' - 0'	0.0000	0.45	1	1	0.5000	0.4050		0.07
EC5-50(7/8") *	A	No	No	Ar (CaAa)	164' - 0'	0.0000	-0.45	1	1	0.5000	1.1020		0.36
Waveguide Brackets *	C	No	No	Af (CaAa)	350' - 0'	0.0000	0	1	1	1.7500	1.7500		1.27
RPM 777 380(3/8")	C	No	No	Ar (CaAa)	210' - 0'	0.0000	0.5	2	2	0.3800	0.3800		0.22
RPM 777 380(3/8") ***** ***** *****	C	No	No	Ar (CaAa)	350' - 210'	0.0000	0.5	1	1	0.3800	0.3800		0.22

tnxTower Tower Engineering Professionals 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	15 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
FB-L98B-034-XXX(3/8)	C	No	No	Ar (CaAa)	201' - 0'	5.5000	0.2	3	3	0.3937	0.3937		0.06
WR-VG86ST-BRD (3/4)	C	No	No	Ar (CaAa)	201' - 0'	4.5000	0.3	6	6	0.5000	0.7740		0.59
WR-VG66ST-BRD_CCIV3(7/8) ***	C	No	No	Ar (CaAa)	201' - 0'	0.0000	0.15	2	1	0.5000 0.9370	0.9370		0.87

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	C _A A _A ft ² /ft	Weight plf
*								
*								

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _A A _A In Face ft ²	C _A A _A Out Face ft ²	Weight K
T1	350'-341'11"-13/32'	A	0.000	0.000	5.336	0.000	0.04
		B	0.000	0.000	3.421	0.000	0.01
		C	0.000	0.000	2.655	0.000	0.01
T2	341'11"-13/32"-340'	A	0.000	0.000	1.289	0.000	0.01
		B	0.000	0.000	1.250	0.000	0.00
		C	0.000	0.000	0.641	0.000	0.00
T3	340'-320'	A	0.000	0.000	13.250	0.000	0.11
		B	0.000	0.000	16.129	0.000	0.05
		C	0.000	0.000	6.593	0.000	0.03
T4	320'-300'	A	0.000	0.000	13.250	0.000	0.11
		B	0.000	0.000	29.233	0.000	0.08
		C	0.000	0.000	6.593	0.000	0.03
T5	300'-280'	A	0.000	0.000	13.250	0.000	0.11
		B	0.000	0.000	29.233	0.000	0.08
		C	0.000	0.000	6.593	0.000	0.03
T6	280'-260'	A	0.000	0.000	13.250	0.000	0.11
		B	0.000	0.000	32.203	0.000	0.09
		C	0.000	0.000	6.593	0.000	0.03
T7	260'-240'	A	0.000	0.000	40.130	0.000	0.27
		B	0.000	0.000	36.118	0.000	0.10
		C	0.000	0.000	6.593	0.000	0.03
T8	240'-220'	A	0.000	0.000	67.897	0.000	0.43
		B	0.000	0.000	36.433	0.000	0.10
		C	0.000	0.000	20.849	0.000	0.09

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	16 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

<i>Tower Section</i>	<i>Tower Elevation</i> <i>ft</i>	<i>Face</i>	<i>A_R</i> <i>ft²</i>	<i>A_F</i> <i>ft²</i>	<i>C_AA_A</i> <i>In Face</i> <i>ft²</i>	<i>C_AA_A</i> <i>Out Face</i> <i>ft²</i>	<i>Weight</i> <i>K</i>
T9	220'-200'	A	0.000	0.000	75.884	0.000	0.50
		B	0.000	0.000	36.433	0.000	0.10
		C	0.000	0.000	43.649	0.000	0.18
T10	200'-180'	A	0.000	0.000	75.884	0.000	0.50
		B	0.000	0.000	36.433	0.000	0.10
		C	0.000	0.000	106.182	0.000	0.45
T11	180'-160'	A	0.000	0.000	76.325	0.000	0.50
		B	0.000	0.000	36.433	0.000	0.10
		C	0.000	0.000	106.344	0.000	0.45
T12	160'-140'	A	0.000	0.000	78.088	0.000	0.50
		B	0.000	0.000	43.921	0.000	0.12
		C	0.000	0.000	112.608	0.000	0.46
T13	140'-120'	A	0.000	0.000	78.088	0.000	0.50
		B	0.000	0.000	45.793	0.000	0.12
		C	0.000	0.000	114.012	0.000	0.46
T14	120'-100'	A	0.000	0.000	78.088	0.000	0.50
		B	0.000	0.000	45.793	0.000	0.12
		C	0.000	0.000	114.012	0.000	0.46
T15	100'-80'	A	0.000	0.000	78.088	0.000	0.50
		B	0.000	0.000	45.793	0.000	0.12
		C	0.000	0.000	114.012	0.000	0.46
T16	80'-60'	A	0.000	0.000	78.088	0.000	0.50
		B	0.000	0.000	45.793	0.000	0.12
		C	0.000	0.000	114.012	0.000	0.46
T17	60'-40'	A	0.000	0.000	78.088	0.000	0.50
		B	0.000	0.000	45.793	0.000	0.12
		C	0.000	0.000	114.012	0.000	0.46
T18	40'-20'	A	0.000	0.000	78.088	0.000	0.50
		B	0.000	0.000	45.793	0.000	0.12
		C	0.000	0.000	114.012	0.000	0.46
T19	20'-8'19/32"	A	0.000	0.000	46.653	0.000	0.30
		B	0.000	0.000	27.351	0.000	0.07
		C	0.000	0.000	68.095	0.000	0.28
T20	8'19/32"-6'	A	0.000	0.000	8.032	0.000	0.05
		B	0.000	0.000	4.705	0.000	0.01
		C	0.000	0.000	11.713	0.000	0.05
T21	6'-2'8-1/32"	A	0.000	0.000	13.019	0.000	0.08
		B	0.000	0.000	7.626	0.000	0.02
		C	0.000	0.000	18.987	0.000	0.08
T22	2'8-1/32"-0'	A	0.000	0.000	10.434	0.000	0.07
		B	0.000	0.000	6.112	0.000	0.02
		C	0.000	0.000	15.216	0.000	0.06

Feed Line Center of Pressure

<i>Section</i>	<i>Elevation</i> <i>ft</i>	<i>CP_x</i> <i>in</i>	<i>CP_z</i> <i>in</i>	<i>CP_x</i> <i>Ice</i> <i>in</i>	<i>CP_z</i> <i>Ice</i> <i>in</i>
T1	350'-341'11-13/32"	-0.9965	-0.9802	-0.9965	-0.9802
T2	341'11-13/32"-340'	-0.3451	-1.2217	-0.3451	-1.2217
T3	340'-320'	-0.2365	-2.2998	-0.2365	-2.2998
T4	320'-300'	0.7425	-4.1089	0.7425	-4.1089
T5	300'-280'	0.6936	-3.8513	0.6936	-3.8513
T6	280'-260'	0.8636	-4.0181	0.8636	-4.0181
T7	260'-240'	-0.6998	-4.6247	-0.6998	-4.6247
T8	240'-220'	-1.5148	-4.4052	-1.5148	-4.4052
T9	220'-200'	-2.0919	-2.7534	-2.0919	-2.7534
T10	200'-180'	-4.1377	-0.9043	-4.1306	-0.9027

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	17 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

Section	Elevation	CP _x	CP _z	CP _x	CP _z
	ft	in	in	Ice in	Ice in
T11	180'-160'	-4.1915	-0.8635	-4.1858	-0.8623
T12	160'-140'	-3.2929	-0.3770	-3.2899	-0.3767
T13	140'-120'	-3.0296	-0.2991	-3.0281	-0.2989
T14	120'-100'	-3.0282	-0.2989	-3.0281	-0.2989
T15	100'-80'	-3.0417	-0.3004	-3.0417	-0.3004
T16	80'-60'	-3.0417	-0.3004	-3.0417	-0.3004
T17	60'-40'	-3.0417	-0.3004	-3.0417	-0.3004
T18	40'-20'	-3.0417	-0.3004	-3.0417	-0.3004
T19	20'-8'19/32"	-3.0743	-0.3015	-3.0743	-0.3015
T20	8'19/32"-6'	-2.6878	-0.2625	-2.6878	-0.2625
T21	6'-2'8-1/32"	-1.9596	-0.1251	-1.9596	-0.1251
T22	2'8-1/32"-0'	-0.9749	0.0025	-0.9749	0.0025

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
T1	10	Waveguide Brackets	341.95 - 350.00	0.6000	0.6000
T1	12	Thin Flat Climbing Ladder	341.95 - 350.00	0.6000	0.6000
T1	13	Safety Line 3/8	341.95 - 350.00	0.6000	0.6000
T1	29	CR 50 1070(7/8)	341.95 - 345.00	0.6000	0.6000
T1	37	Waveguide Brackets	341.95 - 350.00	0.6000	0.6000
T1	59	Waveguide Brackets	341.95 - 350.00	0.6000	0.6000
T1	62	RPM 777 380(3/8")	341.95 - 350.00	0.6000	0.6000
T2	10	Waveguide Brackets	340.00 - 341.95	0.6000	0.6000
T2	12	Thin Flat Climbing Ladder	340.00 - 341.95	0.6000	0.6000
T2	13	Safety Line 3/8	340.00 - 341.95	0.6000	0.6000
T2	29	CR 50 1070(7/8)	340.00 - 341.95	0.6000	0.6000
T2	37	Waveguide Brackets	340.00 - 341.95	0.6000	0.6000
T2	59	Waveguide Brackets	340.00 - 341.95	0.6000	0.6000
T2	62	RPM 777 380(3/8")	340.00 - 341.95	0.6000	0.6000
T3	10	Waveguide Brackets	320.00 - 340.00	0.6000	0.6000
T3	12	Thin Flat Climbing Ladder	320.00 - 340.00	0.6000	0.6000
T3	13	Safety Line 3/8	320.00 - 340.00	0.6000	0.6000
T3	28	CR 50 1070(7/8)	320.00 - 324.00	0.6000	0.6000
T3	29	CR 50 1070(7/8)	324.00 - 340.00	0.6000	0.6000

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job Lake City (SR 47 & US 41) (BU 870081)	Page 18 of 63
	Project TEP No. 145283.791998	Date 16:40:56 12/01/22
	Client Crown Castle	Designed by SPT

<i>Tower Section</i>	<i>Feed Line Record No.</i>	<i>Description</i>	<i>Feed Line Segment Elev.</i>	<i>K_a No Ice</i>	<i>K_a Ice</i>
T3	37	Waveguide Brackets	320.00 - 340.00	0.6000	0.6000
T3	59	Waveguide Brackets	320.00 - 340.00	0.6000	0.6000
T3	62	RPM 777 380(3/8")	320.00 - 340.00	0.6000	0.6000
T4	10	Waveguide Brackets	300.00 - 320.00	0.6000	0.6000
T4	12	Thin Flat Climbing Ladder	300.00 - 320.00	0.6000	0.6000
T4	13	Safety Line 3/8	300.00 - 320.00	0.6000	0.6000
T4	28	CR 50 1070(7/8)	300.00 - 320.00	0.6000	0.6000
T4	37	Waveguide Brackets	300.00 - 320.00	0.6000	0.6000
T4	59	Waveguide Brackets	300.00 - 320.00	0.6000	0.6000
T4	62	RPM 777 380(3/8")	300.00 - 320.00	0.6000	0.6000
T5	10	Waveguide Brackets	280.00 - 300.00	0.6000	0.6000
T5	12	Thin Flat Climbing Ladder	280.00 - 300.00	0.6000	0.6000
T5	13	Safety Line 3/8	280.00 - 300.00	0.6000	0.6000
T5	28	CR 50 1070(7/8)	280.00 - 300.00	0.6000	0.6000
T5	37	Waveguide Brackets	280.00 - 300.00	0.6000	0.6000
T5	59	Waveguide Brackets	280.00 - 300.00	0.6000	0.6000
T5	62	RPM 777 380(3/8")	280.00 - 300.00	0.6000	0.6000
T6	10	Waveguide Brackets	260.00 - 280.00	0.6000	0.6000
T6	12	Thin Flat Climbing Ladder	260.00 - 280.00	0.6000	0.6000
T6	13	Safety Line 3/8	260.00 - 280.00	0.6000	0.6000
T6	27	CR 50 1070(7/8)	260.00 - 270.00	0.6000	0.6000
T6	28	CR 50 1070(7/8)	270.00 - 280.00	0.6000	0.6000
T6	35	LDF4-50A(1/2")	260.00 - 270.00	0.6000	0.6000
T6	37	Waveguide Brackets	260.00 - 280.00	0.6000	0.6000
T6	59	Waveguide Brackets	260.00 - 280.00	0.6000	0.6000
T6	62	RPM 777 380(3/8")	260.00 - 280.00	0.6000	0.6000
T7	6	LDF7-50A(1-5/8)	240.00 - 250.00	0.6000	0.6000
T7	7	LDF7-50A(1-5/8)	240.00 - 250.00	0.6000	0.6000
T7	8	MLC HYBRID 6X12 LI(1-1/2)	240.00 - 250.00	0.6000	0.6000
T7	9	HFT2406-48SV3-XXX(2)	240.00 - 250.00	0.6000	0.6000
T7	10	Waveguide Brackets	240.00 - 260.00	0.6000	0.6000

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job Lake City (SR 47 & US 41) (BU 870081)	Page 19 of 63
	Project TEP No. 145283.791998	Date 16:40:56 12/01/22
	Client Crown Castle	Designed by SPT

<i>Tower Section</i>	<i>Feed Line Record No.</i>	<i>Description</i>	<i>Feed Line Segment Elev.</i>	<i>K_a No Ice</i>	<i>K_a Ice</i>
T7	12	Thin Flat Climbing Ladder	240.00 - 260.00	0.6000	0.6000
T7	13	Safety Line 3/8	240.00 - 260.00	0.6000	0.6000
T7	27	CR 50 1070(7/8)	240.00 - 260.00	0.6000	0.6000
T7	34	LDF4-50A(1/2")	240.00 - 255.00	0.6000	0.6000
T7	35	LDF4-50A(1/2")	255.00 - 260.00	0.6000	0.6000
T7	37	Waveguide Brackets	240.00 - 260.00	0.6000	0.6000
T7	59	Waveguide Brackets	240.00 - 260.00	0.6000	0.6000
T7	62	RPM 777 380(3/8")	240.00 - 260.00	0.6000	0.6000
T8	6	LDF7-50A(1-5/8)	220.00 - 240.00	0.6000	0.6000
T8	7	LDF7-50A(1-5/8)	220.00 - 240.00	0.6000	0.6000
T8	8	MLC HYBRID 6X12 LI(1-1/2)	220.00 - 240.00	0.6000	0.6000
T8	9	HFT2406-48SV3-XXX(2)	220.00 - 240.00	0.6000	0.6000
T8	10	Waveguide Brackets	220.00 - 240.00	0.6000	0.6000
T8	12	Thin Flat Climbing Ladder	220.00 - 240.00	0.6000	0.6000
T8	13	Safety Line 3/8	220.00 - 240.00	0.6000	0.6000
T8	15	TSZ 999	220.00 - 222.00	0.6000	0.6000
T8	16	067/xxxM-8AWG(1-3/16) FIBER ONLY CABLE	220.00 - 222.00	0.6000	0.6000
T8	27	48(7/8") CR 50 1070(7/8)	220.00 - 240.00	0.6000	0.6000
T8	34	LDF4-50A(1/2")	220.00 - 240.00	0.6000	0.6000
T8	37	Waveguide Brackets	220.00 - 240.00	0.6000	0.6000
T8	40	LDF7-50A(1-5/8")	220.00 - 229.00	0.6000	0.6000
T8	59	Waveguide Brackets	220.00 - 240.00	0.6000	0.6000
T8	62	RPM 777 380(3/8")	220.00 - 240.00	0.6000	0.6000
T9	6	LDF7-50A(1-5/8)	200.00 - 220.00	0.6000	0.6000
T9	7	LDF7-50A(1-5/8)	200.00 - 220.00	0.6000	0.6000
T9	8	MLC HYBRID 6X12 LI(1-1/2)	200.00 - 220.00	0.6000	0.6000
T9	9	HFT2406-48SV3-XXX(2)	200.00 - 220.00	0.6000	0.6000
T9	10	Waveguide Brackets	200.00 - 220.00	0.6000	0.6000
T9	12	Thin Flat Climbing Ladder	200.00 - 220.00	0.6000	0.6000
T9	13	Safety Line 3/8	200.00 - 220.00	0.6000	0.6000
T9	15	TSZ 999	200.00 - 220.00	0.6000	0.6000
T9		067/xxxM-8AWG(1-3/16)	220.00		

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job Lake City (SR 47 & US 41) (BU 870081)	Page 20 of 63
	Project TEP No. 145283.791998	Date 16:40:56 12/01/22
	Client Crown Castle	Designed by SPT

<i>Tower Section</i>	<i>Feed Line Record No.</i>	<i>Description</i>	<i>Feed Line Segment Elev.</i>	<i>K_a No Ice</i>	<i>K_a Ice</i>
T9	16	FIBER ONLY CABLE	200.00 -	0.6000	0.6000
		48(7/8")	220.00		
T9	27	CR 50 1070(7/8)	200.00 -	0.6000	0.6000
			220.00		
T9	34	LDF4-50A(1/2")	200.00 -	0.6000	0.6000
			220.00		
T9	37	Waveguide Brackets	200.00 -	0.6000	0.6000
			220.00		
T9	40	LDF7-50A(1-5/8")	200.00 -	0.6000	0.6000
			220.00		
T9	43	CR 50 1070(7/8)	200.00 -	0.6000	0.6000
			215.00		
T9	45	FXL-1873(1-5/8")	200.00 -	0.6000	0.6000
			201.00		
T9	47	ATCB-B01-001(5/16)	200.00 -	0.6000	0.6000
			201.00		
T9	59	Waveguide Brackets	200.00 -	0.6000	0.6000
			220.00		
T9	61	RPM 777 380(3/8")	200.00 -	0.6000	0.6000
			210.00		
T9	62	RPM 777 380(3/8")	210.00 -	0.6000	0.6000
			220.00		
T9	66	FB-L98B-034-XXX(3/8)	200.00 -	0.6000	0.6000
			201.00		
T9	67	WR-VG86ST-BRD (3/4)	200.00 -	0.6000	0.6000
			201.00		
T9	68	WR-VG66ST-BRD_CCIV3(	200.00 -	0.6000	0.6000
		7/8)	201.00		
T10	6	LDF7-50A(1-5/8)	180.00 -	0.6000	0.6000
			200.00		
T10	7	LDF7-50A(1-5/8)	180.00 -	0.6000	0.6000
			200.00		
T10	8	MLC HYBRID 6X12	180.00 -	0.6000	0.6000
		LI(1-1/2)	200.00		
T10	9	HFT2406-48SV3-XXX(2)	180.00 -	0.6000	0.6000
			200.00		
T10	10	Waveguide Brackets	180.00 -	0.6000	0.6000
			200.00		
T10	12	Thin Flat Climbing Ladder	180.00 -	0.6000	0.6000
			200.00		
T10	13	Safety Line 3/8	180.00 -	0.6000	0.6000
			200.00		
T10	15	TSZ 999	180.00 -	0.6000	0.6000
		067/xxxM-8AWG(1-3/16)	200.00		
T10	16	FIBER ONLY CABLE	180.00 -	0.6000	0.6000
		48(7/8")	200.00		
T10	27	CR 50 1070(7/8)	180.00 -	0.6000	0.6000
			200.00		
T10	34	LDF4-50A(1/2")	180.00 -	0.6000	0.6000
			200.00		
T10	37	Waveguide Brackets	180.00 -	0.6000	0.6000
			200.00		
T10	40	LDF7-50A(1-5/8")	180.00 -	0.6000	0.6000
			200.00		
T10	43	CR 50 1070(7/8)	180.00 -	0.6000	0.6000
			200.00		
T10	45	FXL-1873(1-5/8")	180.00 -	0.6000	0.6000
			200.00		
T10	47	ATCB-B01-001(5/16)	180.00 -	0.6000	0.6000
			200.00		
T10	59	Waveguide Brackets	180.00 -	0.6000	0.6000
			200.00		

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job Lake City (SR 47 & US 41) (BU 870081)	Page 21 of 63
	Project TEP No. 145283.791998	Date 16:40:56 12/01/22
	Client Crown Castle	Designed by SPT

<i>Tower Section</i>	<i>Feed Line Record No.</i>	<i>Description</i>	<i>Feed Line Segment Elev.</i>	<i>K_a No Ice</i>	<i>K_a Ice</i>
T10	61	RPM 777 380(3/8")	180.00 - 200.00	0.6000	0.6000
T10	66	FB-L98B-034-XXX(3/8)	180.00 - 200.00	0.6000	0.6000
T10	67	WR-VG86ST-BRD (3/4)	180.00 - 200.00	0.6000	0.6000
T10	68	WR-VG66ST-BRD_CCIV3(7/8)	180.00 - 200.00	0.6000	0.6000
T11	6	LDF7-50A(1-5/8)	160.00 - 180.00	0.6000	0.6000
T11	7	LDF7-50A(1-5/8)	160.00 - 180.00	0.6000	0.6000
T11	8	MLC HYBRID 6X12 LI(1-1/2)	160.00 - 180.00	0.6000	0.6000
T11	9	HFT2406-48SV3-XXX(2)	160.00 - 180.00	0.6000	0.6000
T11	10	Waveguide Brackets	160.00 - 180.00	0.6000	0.6000
T11	12	Thin Flat Climbing Ladder	160.00 - 180.00	0.6000	0.6000
T11	13	Safety Line 3/8	160.00 - 180.00	0.6000	0.6000
T11	15	TSZ 999	160.00 - 180.00	0.6000	0.6000
T11	16	067/xxxM-8AWG(1-3/16) FIBER ONLY CABLE	160.00 - 180.00	0.6000	0.6000
T11	27	48(7/8") CR 50 1070(7/8)	160.00 - 180.00	0.6000	0.6000
T11	34	LDF4-50A(1/2")	160.00 - 180.00	0.6000	0.6000
T11	37	Waveguide Brackets	160.00 - 180.00	0.6000	0.6000
T11	40	LDF7-50A(1-5/8")	160.00 - 180.00	0.6000	0.6000
T11	43	CR 50 1070(7/8)	160.00 - 180.00	0.6000	0.6000
T11	45	FXL-1873(1-5/8")	160.00 - 180.00	0.6000	0.6000
T11	47	ATCB-B01-001(5/16)	160.00 - 180.00	0.6000	0.6000
T11	56	LMR-400(3/8")	160.00 - 164.00	0.6000	0.6000
T11	57	EC5-50(7/8")	160.00 - 164.00	0.6000	0.6000
T11	59	Waveguide Brackets	160.00 - 180.00	0.6000	0.6000
T11	61	RPM 777 380(3/8")	160.00 - 180.00	0.6000	0.6000
T11	66	FB-L98B-034-XXX(3/8)	160.00 - 180.00	0.6000	0.6000
T11	67	WR-VG86ST-BRD (3/4)	160.00 - 180.00	0.6000	0.6000
T11	68	WR-VG66ST-BRD_CCIV3(7/8)	160.00 - 180.00	0.6000	0.6000
T12	6	LDF7-50A(1-5/8)	140.00 - 160.00	0.6000	0.6000
T12	7	LDF7-50A(1-5/8)	140.00 - 160.00	0.6000	0.6000
T12	8	MLC HYBRID 6X12 LI(1-1/2)	140.00 - 160.00	0.6000	0.6000
T12	9	HFT2406-48SV3-XXX(2)	140.00 - 160.00	0.6000	0.6000

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job Lake City (SR 47 & US 41) (BU 870081)	Page 22 of 63
	Project TEP No. 145283.791998	Date 16:40:56 12/01/22
	Client Crown Castle	Designed by SPT

<i>Tower Section</i>	<i>Feed Line Record No.</i>	<i>Description</i>	<i>Feed Line Segment Elev.</i>	<i>K_a No Ice</i>	<i>K_a Ice</i>
T12	10	Waveguide Brackets	140.00 - 160.00	0.6000	0.6000
T12	12	Thin Flat Climbing Ladder	140.00 - 160.00	0.6000	0.6000
T12	13	Safety Line 3/8	140.00 - 160.00	0.6000	0.6000
T12	15	TSZ 999	140.00 - 160.00	0.6000	0.6000
T12	16	067/xxxM-8AWG(1-3/16)	140.00 - 160.00	0.6000	0.6000
T12	16	FIBER ONLY CABLE	140.00 - 160.00	0.6000	0.6000
T12	26	48(7/8")	140.00 - 160.00	0.6000	0.6000
T12	26	CR 50 1070(7/8)	140.00 - 156.00	0.6000	0.6000
T12	27	CR 50 1070(7/8)	140.00 - 160.00	0.6000	0.6000
T12	34	LDF4-50A(1/2")	140.00 - 160.00	0.6000	0.6000
T12	37	Waveguide Brackets	140.00 - 160.00	0.6000	0.6000
T12	40	LDF7-50A(1-5/8")	140.00 - 160.00	0.6000	0.6000
T12	42	CR 50 1070(7/8)	140.00 - 156.00	0.6000	0.6000
T12	43	CR 50 1070(7/8)	156.00 - 160.00	0.6000	0.6000
T12	45	FXL-1873(1-5/8")	140.00 - 160.00	0.6000	0.6000
T12	47	ATCB-B01-001(5/16)	140.00 - 160.00	0.6000	0.6000
T12	56	LMR-400(3/8")	140.00 - 160.00	0.6000	0.6000
T12	57	EC5-50(7/8")	140.00 - 160.00	0.6000	0.6000
T12	59	Waveguide Brackets	140.00 - 160.00	0.6000	0.6000
T12	61	RPM 777 380(3/8")	140.00 - 160.00	0.6000	0.6000
T12	66	FB-L98B-034-XXX(3/8)	140.00 - 160.00	0.6000	0.6000
T12	67	WR-VG86ST-BRD (3/4)	140.00 - 160.00	0.6000	0.6000
T12	68	WR-VG66ST-BRD_CCIV3(	140.00 - 160.00	0.6000	0.6000
T12	68	7/8)	140.00 - 160.00	0.6000	0.6000
T13	6	LDF7-50A(1-5/8)	120.00 - 140.00	0.6000	0.6000
T13	7	LDF7-50A(1-5/8)	120.00 - 140.00	0.6000	0.6000
T13	8	MLC HYBRID 6X12	120.00 - 140.00	0.6000	0.6000
T13	8	LI(1-1/2)	120.00 - 140.00	0.6000	0.6000
T13	9	HFT2406-48SV3-XXX(2)	120.00 - 140.00	0.6000	0.6000
T13	10	Waveguide Brackets	120.00 - 140.00	0.6000	0.6000
T13	12	Thin Flat Climbing Ladder	120.00 - 140.00	0.6000	0.6000
T13	13	Safety Line 3/8	120.00 - 140.00	0.6000	0.6000
T13	15	TSZ 999	120.00 - 140.00	0.6000	0.6000
T13	15	067/xxxM-8AWG(1-3/16)	120.00 - 140.00	0.6000	0.6000
T13	16	FIBER ONLY CABLE	120.00 - 140.00	0.6000	0.6000
T13	16	48(7/8")	120.00 - 140.00	0.6000	0.6000
T13	26	CR 50 1070(7/8)	120.00 - 140.00	0.6000	0.6000

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job Lake City (SR 47 & US 41) (BU 870081)	Page 23 of 63
	Project TEP No. 145283.791998	Date 16:40:56 12/01/22
	Client Crown Castle	Designed by SPT

<i>Tower Section</i>	<i>Feed Line Record No.</i>	<i>Description</i>	<i>Feed Line Segment Elev.</i>	<i>K_a No Ice</i>	<i>K_a Ice</i>
T13	27	CR 50 1070(7/8)	120.00 - 140.00	0.6000	0.6000
T13	34	LDF4-50A(1/2")	120.00 - 140.00	0.6000	0.6000
T13	37	Waveguide Brackets	120.00 - 140.00	0.6000	0.6000
T13	40	LDF7-50A(1-5/8")	120.00 - 140.00	0.6000	0.6000
T13	42	CR 50 1070(7/8)	120.00 - 140.00	0.6000	0.6000
T13	45	FXL-1873(1-5/8")	120.00 - 140.00	0.6000	0.6000
T13	47	ATCB-B01-001(5/16)	120.00 - 140.00	0.6000	0.6000
T13	56	LMR-400(3/8")	120.00 - 140.00	0.6000	0.6000
T13	57	EC5-50(7/8")	120.00 - 140.00	0.6000	0.6000
T13	59	Waveguide Brackets	120.00 - 140.00	0.6000	0.6000
T13	61	RPM 777 380(3/8")	120.00 - 140.00	0.6000	0.6000
T13	66	FB-L98B-034-XXX(3/8)	120.00 - 140.00	0.6000	0.6000
T13	67	WR-VG86ST-BRD (3/4)	120.00 - 140.00	0.6000	0.6000
T13	68	WR-VG66ST-BRD_CCIV3(7/8)	120.00 - 140.00	0.6000	0.6000
T14	6	LDF7-50A(1-5/8)	100.00 - 120.00	0.6000	0.6000
T14	7	LDF7-50A(1-5/8)	100.00 - 120.00	0.6000	0.6000
T14	8	MLC HYBRID 6X12 LI(1-1/2)	100.00 - 120.00	0.6000	0.6000
T14	9	HFT2406-48SV3-XXX(2)	100.00 - 120.00	0.6000	0.6000
T14	10	Waveguide Brackets	100.00 - 120.00	0.6000	0.6000
T14	12	Thin Flat Climbing Ladder	100.00 - 120.00	0.6000	0.6000
T14	13	Safety Line 3/8	100.00 - 120.00	0.6000	0.6000
T14	15	TSZ 999 067/xxxM-8AWG(1-3/16)	100.00 - 120.00	0.6000	0.6000
T14	16	FIBER ONLY CABLE 48(7/8")	100.00 - 120.00	0.6000	0.6000
T14	26	CR 50 1070(7/8)	100.00 - 120.00	0.6000	0.6000
T14	27	CR 50 1070(7/8)	100.00 - 120.00	0.6000	0.6000
T14	34	LDF4-50A(1/2")	100.00 - 120.00	0.6000	0.6000
T14	37	Waveguide Brackets	100.00 - 120.00	0.6000	0.6000
T14	40	LDF7-50A(1-5/8")	100.00 - 120.00	0.6000	0.6000
T14	42	CR 50 1070(7/8)	100.00 - 120.00	0.6000	0.6000
T14	45	FXL-1873(1-5/8")	100.00 - 120.00	0.6000	0.6000
T14	47	ATCB-B01-001(5/16)	100.00 - 120.00	0.6000	0.6000

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job Lake City (SR 47 & US 41) (BU 870081)	Page 24 of 63
	Project TEP No. 145283.791998	Date 16:40:56 12/01/22
	Client Crown Castle	Designed by SPT

<i>Tower Section</i>	<i>Feed Line Record No.</i>	<i>Description</i>	<i>Feed Line Segment Elev.</i>	<i>K_a No Ice</i>	<i>K_a Ice</i>
T14	56	LMR-400(3/8")	100.00 - 120.00	0.6000	0.6000
T14	57	EC5-50(7/8")	100.00 - 120.00	0.6000	0.6000
T14	59	Waveguide Brackets	100.00 - 120.00	0.6000	0.6000
T14	61	RPM 777 380(3/8")	100.00 - 120.00	0.6000	0.6000
T14	66	FB-L98B-034-XXX(3/8)	100.00 - 120.00	0.6000	0.6000
T14	67	WR-VG86ST-BRD (3/4)	100.00 - 120.00	0.6000	0.6000
T14	68	WR-VG66ST-BRD_CCIV3(7/8)	100.00 - 120.00	0.6000	0.6000
T15	6	LDF7-50A(1-5/8)	80.00 - 100.00	0.6000	0.6000
T15	7	LDF7-50A(1-5/8)	80.00 - 100.00	0.6000	0.6000
T15	8	MLC HYBRID 6X12 LI(1-1/2)	80.00 - 100.00	0.6000	0.6000
T15	9	HFT2406-48SV3-XXX(2)	80.00 - 100.00	0.6000	0.6000
T15	10	Waveguide Brackets	80.00 - 100.00	0.6000	0.6000
T15	12	Thin Flat Climbing Ladder	80.00 - 100.00	0.6000	0.6000
T15	13	Safety Line 3/8	80.00 - 100.00	0.6000	0.6000
T15	15	TSZ 999	80.00 - 100.00	0.6000	0.6000
T15	16	067/xxxM-8AWG(1-3/16) FIBER ONLY CABLE	80.00 - 100.00	0.6000	0.6000
T15	26	CR 50 1070(7/8)	80.00 - 100.00	0.6000	0.6000
T15	27	CR 50 1070(7/8)	80.00 - 100.00	0.6000	0.6000
T15	34	LDF4-50A(1/2")	80.00 - 100.00	0.6000	0.6000
T15	37	Waveguide Brackets	80.00 - 100.00	0.6000	0.6000
T15	40	LDF7-50A(1-5/8")	80.00 - 100.00	0.6000	0.6000
T15	42	CR 50 1070(7/8)	80.00 - 100.00	0.6000	0.6000
T15	45	FXL-1873(1-5/8")	80.00 - 100.00	0.6000	0.6000
T15	47	ATCB-B01-001(5/16)	80.00 - 100.00	0.6000	0.6000
T15	56	LMR-400(3/8")	80.00 - 100.00	0.6000	0.6000
T15	57	EC5-50(7/8")	80.00 - 100.00	0.6000	0.6000
T15	59	Waveguide Brackets	80.00 - 100.00	0.6000	0.6000
T15	61	RPM 777 380(3/8")	80.00 - 100.00	0.6000	0.6000
T15	66	FB-L98B-034-XXX(3/8)	80.00 - 100.00	0.6000	0.6000
T15	67	WR-VG86ST-BRD (3/4)	80.00 - 100.00	0.6000	0.6000
T15	68	WR-VG66ST-BRD_CCIV3(7/8)	80.00 - 100.00	0.6000	0.6000
T16	6	LDF7-50A(1-5/8)	60.00 - 80.00	0.6000	0.6000
T16	7	LDF7-50A(1-5/8)	60.00 - 80.00	0.6000	0.6000
T16	8	MLC HYBRID 6X12 LI(1-1/2)	60.00 - 80.00	0.6000	0.6000
T16	9	HFT2406-48SV3-XXX(2)	60.00 - 80.00	0.6000	0.6000
T16	10	Waveguide Brackets	60.00 - 80.00	0.6000	0.6000
T16	12	Thin Flat Climbing Ladder	60.00 - 80.00	0.6000	0.6000
T16	13	Safety Line 3/8	60.00 - 80.00	0.6000	0.6000
T16	15	TSZ 999	60.00 - 80.00	0.6000	0.6000
T16	16	067/xxxM-8AWG(1-3/16) FIBER ONLY CABLE	60.00 - 80.00	0.6000	0.6000
T16	26	CR 50 1070(7/8)	60.00 - 80.00	0.6000	0.6000
T16	27	CR 50 1070(7/8)	60.00 - 80.00	0.6000	0.6000
T16	34	LDF4-50A(1/2")	60.00 - 80.00	0.6000	0.6000
T16	37	Waveguide Brackets	60.00 - 80.00	0.6000	0.6000
T16	40	LDF7-50A(1-5/8")	60.00 - 80.00	0.6000	0.6000
T16	42	CR 50 1070(7/8)	60.00 - 80.00	0.6000	0.6000
T16	45	FXL-1873(1-5/8")	60.00 - 80.00	0.6000	0.6000
T16	47	ATCB-B01-001(5/16)	60.00 - 80.00	0.6000	0.6000

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	25 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

<i>Tower Section</i>	<i>Feed Line Record No.</i>	<i>Description</i>	<i>Feed Line Segment Elev.</i>	<i>K_a No Ice</i>	<i>K_a Ice</i>
T16	56	LMR-400(3/8")	60.00 - 80.00	0.6000	0.6000
T16	57	EC5-50(7/8")	60.00 - 80.00	0.6000	0.6000
T16	59	Waveguide Brackets	60.00 - 80.00	0.6000	0.6000
T16	61	RPM 777 380(3/8")	60.00 - 80.00	0.6000	0.6000
T16	66	FB-L98B-034-XXX(3/8)	60.00 - 80.00	0.6000	0.6000
T16	67	WR-VG86ST-BRD (3/4)	60.00 - 80.00	0.6000	0.6000
T16	68	WR-VG66ST-BRD_CCIV3(7/8)	60.00 - 80.00	0.6000	0.6000
T17	6	LDF7-50A(1-5/8)	40.00 - 60.00	0.6000	0.6000
T17	7	LDF7-50A(1-5/8)	40.00 - 60.00	0.6000	0.6000
T17	8	MLC HYBRID 6X12 LI(1-1/2)	40.00 - 60.00	0.6000	0.6000
T17	9	HFT2406-48SV3-XXX(2)	40.00 - 60.00	0.6000	0.6000
T17	10	Waveguide Brackets	40.00 - 60.00	0.6000	0.6000
T17	12	Thin Flat Climbing Ladder	40.00 - 60.00	0.6000	0.6000
T17	13	Safety Line 3/8	40.00 - 60.00	0.6000	0.6000
T17	15	TSZ 999	40.00 - 60.00	0.6000	0.6000
T17	16	067/xxxM-8AWG(1-3/16) FIBER ONLY CABLE 48(7/8")	40.00 - 60.00	0.6000	0.6000
T17	26	CR 50 1070(7/8)	40.00 - 60.00	0.6000	0.6000
T17	27	CR 50 1070(7/8)	40.00 - 60.00	0.6000	0.6000
T17	34	LDF4-50A(1/2")	40.00 - 60.00	0.6000	0.6000
T17	37	Waveguide Brackets	40.00 - 60.00	0.6000	0.6000
T17	40	LDF7-50A(1-5/8")	40.00 - 60.00	0.6000	0.6000
T17	42	CR 50 1070(7/8)	40.00 - 60.00	0.6000	0.6000
T17	45	FXL-1873(1-5/8")	40.00 - 60.00	0.6000	0.6000
T17	47	ATCB-B01-001(5/16)	40.00 - 60.00	0.6000	0.6000
T17	56	LMR-400(3/8")	40.00 - 60.00	0.6000	0.6000
T17	57	EC5-50(7/8")	40.00 - 60.00	0.6000	0.6000
T17	59	Waveguide Brackets	40.00 - 60.00	0.6000	0.6000
T17	61	RPM 777 380(3/8")	40.00 - 60.00	0.6000	0.6000
T17	66	FB-L98B-034-XXX(3/8)	40.00 - 60.00	0.6000	0.6000
T17	67	WR-VG86ST-BRD (3/4)	40.00 - 60.00	0.6000	0.6000
T17	68	WR-VG66ST-BRD_CCIV3(7/8)	40.00 - 60.00	0.6000	0.6000
T18	6	LDF7-50A(1-5/8)	20.00 - 40.00	0.6000	0.6000
T18	7	LDF7-50A(1-5/8)	20.00 - 40.00	0.6000	0.6000
T18	8	MLC HYBRID 6X12 LI(1-1/2)	20.00 - 40.00	0.6000	0.6000
T18	9	HFT2406-48SV3-XXX(2)	20.00 - 40.00	0.6000	0.6000
T18	10	Waveguide Brackets	20.00 - 40.00	0.6000	0.6000
T18	12	Thin Flat Climbing Ladder	20.00 - 40.00	0.6000	0.6000
T18	13	Safety Line 3/8	20.00 - 40.00	0.6000	0.6000
T18	15	TSZ 999	20.00 - 40.00	0.6000	0.6000
T18	16	067/xxxM-8AWG(1-3/16) FIBER ONLY CABLE 48(7/8")	20.00 - 40.00	0.6000	0.6000
T18	26	CR 50 1070(7/8)	20.00 - 40.00	0.6000	0.6000
T18	27	CR 50 1070(7/8)	20.00 - 40.00	0.6000	0.6000
T18	34	LDF4-50A(1/2")	20.00 - 40.00	0.6000	0.6000
T18	37	Waveguide Brackets	20.00 - 40.00	0.6000	0.6000
T18	40	LDF7-50A(1-5/8")	20.00 - 40.00	0.6000	0.6000
T18	42	CR 50 1070(7/8)	20.00 - 40.00	0.6000	0.6000
T18	45	FXL-1873(1-5/8")	20.00 - 40.00	0.6000	0.6000
T18	47	ATCB-B01-001(5/16)	20.00 - 40.00	0.6000	0.6000
T18	56	LMR-400(3/8")	20.00 - 40.00	0.6000	0.6000
T18	57	EC5-50(7/8")	20.00 - 40.00	0.6000	0.6000
T18	59	Waveguide Brackets	20.00 - 40.00	0.6000	0.6000
T18	61	RPM 777 380(3/8")	20.00 - 40.00	0.6000	0.6000
T18	66	FB-L98B-034-XXX(3/8)	20.00 - 40.00	0.6000	0.6000
T18	67	WR-VG86ST-BRD (3/4)	20.00 - 40.00	0.6000	0.6000

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	26 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

<i>Tower Section</i>	<i>Feed Line Record No.</i>	<i>Description</i>	<i>Feed Line Segment Elev.</i>	<i>K_a No Ice</i>	<i>K_a Ice</i>
T18	68	WR-VG66ST-BRD_CCIV3(7/8)	20.00 - 40.00	0.6000	0.6000
T19	6	LDF7-50A(1-5/8)	8.05 - 20.00	0.6000	0.6000
T19	7	LDF7-50A(1-5/8)	8.05 - 20.00	0.6000	0.6000
T19	8	MLC HYBRID 6X12 LI(1-1/2)	8.05 - 20.00	0.6000	0.6000
T19	9	HFT2406-48SV3-XXX(2)	8.05 - 20.00	0.6000	0.6000
T19	10	Waveguide Brackets	8.05 - 20.00	0.6000	0.6000
T19	12	Thin Flat Climbing Ladder	8.05 - 20.00	0.6000	0.6000
T19	13	Safety Line 3/8	8.05 - 20.00	0.6000	0.6000
T19	15	TSZ 999	8.05 - 20.00	0.6000	0.6000
T19	16	067/xxxM-8AWG(1-3/16) FIBER ONLY CABLE	8.05 - 20.00	0.6000	0.6000
T19	23	48(7/8") RG-8(3/64")	8.05 - 11.00	0.6000	0.6000
T19	26	CR 50 1070(7/8)	8.05 - 20.00	0.6000	0.6000
T19	27	CR 50 1070(7/8)	8.05 - 20.00	0.6000	0.6000
T19	34	LDF4-50A(1/2")	8.05 - 20.00	0.6000	0.6000
T19	37	Waveguide Brackets	8.05 - 20.00	0.6000	0.6000
T19	40	LDF7-50A(1-5/8")	8.05 - 20.00	0.6000	0.6000
T19	42	CR 50 1070(7/8)	8.05 - 20.00	0.6000	0.6000
T19	45	FXL-1873(1-5/8")	8.05 - 20.00	0.6000	0.6000
T19	47	ATCB-B01-001(5/16)	8.05 - 20.00	0.6000	0.6000
T19	56	LMR-400(3/8")	8.05 - 20.00	0.6000	0.6000
T19	57	EC5-50(7/8")	8.05 - 20.00	0.6000	0.6000
T19	59	Waveguide Brackets	8.05 - 20.00	0.6000	0.6000
T19	61	RPM 777 380(3/8")	8.05 - 20.00	0.6000	0.6000
T19	66	FB-L98B-034-XXX(3/8)	8.05 - 20.00	0.6000	0.6000
T19	67	WR-VG86ST-BRD (3/4)	8.05 - 20.00	0.6000	0.6000
T19	68	WR-VG66ST-BRD_CCIV3(7/8)	8.05 - 20.00	0.6000	0.6000
T20	6	LDF7-50A(1-5/8)	6.00 - 8.05	0.6000	0.6000
T20	7	LDF7-50A(1-5/8)	6.00 - 8.05	0.6000	0.6000
T20	8	MLC HYBRID 6X12 LI(1-1/2)	6.00 - 8.05	0.6000	0.6000
T20	9	HFT2406-48SV3-XXX(2)	6.00 - 8.05	0.6000	0.6000
T20	10	Waveguide Brackets	6.00 - 8.05	0.6000	0.6000
T20	12	Thin Flat Climbing Ladder	6.00 - 8.05	0.6000	0.6000
T20	13	Safety Line 3/8	6.00 - 8.05	0.6000	0.6000
T20	15	TSZ 999	6.00 - 8.05	0.6000	0.6000
T20	16	067/xxxM-8AWG(1-3/16) FIBER ONLY CABLE	6.00 - 8.05	0.6000	0.6000
T20	23	48(7/8") RG-8(3/64")	6.00 - 8.05	0.6000	0.6000
T20	26	CR 50 1070(7/8)	6.00 - 8.05	0.6000	0.6000
T20	27	CR 50 1070(7/8)	6.00 - 8.05	0.6000	0.6000
T20	34	LDF4-50A(1/2")	6.00 - 8.05	0.6000	0.6000
T20	37	Waveguide Brackets	6.00 - 8.05	0.6000	0.6000
T20	40	LDF7-50A(1-5/8")	6.00 - 8.05	0.6000	0.6000
T20	42	CR 50 1070(7/8)	6.00 - 8.05	0.6000	0.6000
T20	45	FXL-1873(1-5/8")	6.00 - 8.05	0.6000	0.6000
T20	47	ATCB-B01-001(5/16)	6.00 - 8.05	0.6000	0.6000
T20	56	LMR-400(3/8")	6.00 - 8.05	0.6000	0.6000
T20	57	EC5-50(7/8")	6.00 - 8.05	0.6000	0.6000
T20	59	Waveguide Brackets	6.00 - 8.05	0.6000	0.6000
T20	61	RPM 777 380(3/8")	6.00 - 8.05	0.6000	0.6000
T20	66	FB-L98B-034-XXX(3/8)	6.00 - 8.05	0.6000	0.6000
T20	67	WR-VG86ST-BRD (3/4)	6.00 - 8.05	0.6000	0.6000
T20	68	WR-VG66ST-BRD_CCIV3(7/8)	6.00 - 8.05	0.6000	0.6000
T21	6	LDF7-50A(1-5/8)	2.67 - 6.00	0.5723	0.5723
T21	7	LDF7-50A(1-5/8)	2.67 - 6.00	0.5723	0.5723

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job Lake City (SR 47 & US 41) (BU 870081)	Page 27 of 63
	Project TEP No. 145283.791998	Date 16:40:56 12/01/22
	Client Crown Castle	Designed by SPT

<i>Tower Section</i>	<i>Feed Line Record No.</i>	<i>Description</i>	<i>Feed Line Segment Elev.</i>	<i>K_a No Ice</i>	<i>K_a Ice</i>
T21	8	MLC HYBRID 6X12 LI(1-1/2)	2.67 - 6.00	0.5723	0.5723
T21	9	HFT2406-48SV3-XXX(2)	2.67 - 6.00	0.5723	0.5723
T21	10	Waveguide Brackets	2.67 - 6.00	0.5723	0.5723
T21	12	Thin Flat Climbing Ladder	2.67 - 6.00	0.5723	0.5723
T21	13	Safety Line 3/8	2.67 - 6.00	0.5723	0.5723
T21	15	TSZ 999 067/xxxM-8AWG(1-3/16)	2.67 - 6.00	0.5723	0.5723
T21	16	FIBER ONLY CABLE 48(7/8")	2.67 - 6.00	0.5723	0.5723
T21	23	RG-8(3/64")	2.67 - 6.00	0.5723	0.5723
T21	26	CR 50 1070(7/8)	2.67 - 6.00	0.5723	0.5723
T21	27	CR 50 1070(7/8)	2.67 - 6.00	0.5723	0.5723
T21	34	LDF4-50A(1/2")	2.67 - 6.00	0.5723	0.5723
T21	37	Waveguide Brackets	2.67 - 6.00	0.5723	0.5723
T21	40	LDF7-50A(1-5/8")	2.67 - 6.00	0.5723	0.5723
T21	42	CR 50 1070(7/8)	2.67 - 6.00	0.5723	0.5723
T21	45	FXL-1873(1-5/8")	2.67 - 6.00	0.5723	0.5723
T21	47	ATCB-B01-001(5/16)	2.67 - 6.00	0.5723	0.5723
T21	56	LMR-400(3/8")	2.67 - 6.00	0.5723	0.5723
T21	57	EC5-50(7/8")	2.67 - 6.00	0.5723	0.5723
T21	59	Waveguide Brackets	2.67 - 6.00	0.5723	0.5723
T21	61	RPM 777 380(3/8")	2.67 - 6.00	0.5723	0.5723
T21	66	FB-L98B-034-XXX(3/8)	2.67 - 6.00	0.5723	0.5723
T21	67	WR-VG86ST-BRD (3/4)	2.67 - 6.00	0.5723	0.5723
T21	68	WR-VG66ST-BRD_CCIV3(7/8)	2.67 - 6.00	0.5723	0.5723
T22	6	LDF7-50A(1-5/8)	0.00 - 2.67	0.3803	0.3803
T22	7	LDF7-50A(1-5/8)	0.00 - 2.67	0.3803	0.3803
T22	8	MLC HYBRID 6X12 LI(1-1/2)	0.00 - 2.67	0.3803	0.3803
T22	9	HFT2406-48SV3-XXX(2)	0.00 - 2.67	0.3803	0.3803
T22	10	Waveguide Brackets	0.00 - 2.67	0.3803	0.3803
T22	12	Thin Flat Climbing Ladder	0.00 - 2.67	0.3803	0.3803
T22	13	Safety Line 3/8	0.00 - 2.67	0.3803	0.3803
T22	15	TSZ 999 067/xxxM-8AWG(1-3/16)	0.00 - 2.67	0.3803	0.3803
T22	16	FIBER ONLY CABLE 48(7/8")	0.00 - 2.67	0.3803	0.3803
T22	23	RG-8(3/64")	0.00 - 2.67	0.3803	0.3803
T22	26	CR 50 1070(7/8)	0.00 - 2.67	0.3803	0.3803
T22	27	CR 50 1070(7/8)	0.00 - 2.67	0.3803	0.3803
T22	34	LDF4-50A(1/2")	0.00 - 2.67	0.3803	0.3803
T22	37	Waveguide Brackets	0.00 - 2.67	0.3803	0.3803
T22	40	LDF7-50A(1-5/8")	0.00 - 2.67	0.3803	0.3803
T22	42	CR 50 1070(7/8)	0.00 - 2.67	0.3803	0.3803
T22	45	FXL-1873(1-5/8")	0.00 - 2.67	0.3803	0.3803
T22	47	ATCB-B01-001(5/16)	0.00 - 2.67	0.3803	0.3803
T22	56	LMR-400(3/8")	0.00 - 2.67	0.3803	0.3803
T22	57	EC5-50(7/8")	0.00 - 2.67	0.3803	0.3803
T22	59	Waveguide Brackets	0.00 - 2.67	0.3803	0.3803
T22	61	RPM 777 380(3/8")	0.00 - 2.67	0.3803	0.3803
T22	66	FB-L98B-034-XXX(3/8)	0.00 - 2.67	0.3803	0.3803
T22	67	WR-VG86ST-BRD (3/4)	0.00 - 2.67	0.3803	0.3803
T22	68	WR-VG66ST-BRD_CCIV3(7/8)	0.00 - 2.67	0.3803	0.3803

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	28 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

Discrete Tower Loads

<i>Description</i>	<i>Face or Leg</i>	<i>Offset Type</i>	<i>Offsets: Horz Lateral Vert ft ft ft</i>	<i>Azimuth Adjustment °</i>	<i>Placement ft</i>		<i>C_{AA} Front ft²</i>	<i>C_{AA} Side ft²</i>	<i>Weight K</i>
12" x 24" Beacon	C	From Leg	0.00 0' 3'	0.0000	350'	No Ice	1.00	1.00	0.03
2.4" Dia x 2.5-ft Mount Pipe	C	From Leg	0.00 0' 1'	0.0000	350'	No Ice	0.46	0.46	0.01
5/8"x6-ft LRod	A	From Leg	0.00 0' 3'	0.0000	350'	No Ice	0.38	0.38	0.01
8"x15" Dia. Beacon	A	From Leg	0.50 0' 0'	0.0000	210'	No Ice	0.42	0.42	0.05
8"x15" Dia. Beacon	C	From Leg	0.50 0' 0'	0.0000	210'	No Ice	0.42	0.42	0.05
345 DB228-B	A	From Leg	1.00 0' -1'	0.0000	345'	No Ice	7.30	7.30	0.07
DB420D-D	B	From Leg	6.00 0' 10'	0.0000	345'	No Ice	3.33	3.33	0.03
DB420D-D	B	From Leg	6.00 0' -11'	0.0000	345'	No Ice	3.33	3.33	0.03
(2) 2.4" Dia x 6-ft Pipe	A	From Leg	6.00 0' 0'	0.0000	345'	No Ice	1.43	1.43	0.02
(2) 2.4" Dia x 6-ft Pipe	B	From Leg	6.00 0' 0'	0.0000	345'	No Ice	1.43	1.43	0.02
(2) 2.4" Dia x 6-ft Pipe	C	From Leg	6.00 0' 0'	0.0000	345'	No Ice	1.43	1.43	0.02
(2) Side Arm Mount [SO 602-3] ***324***	C	None		0.0000	345'	No Ice	16.09	16.09	0.44
SRL-224NM-4	A	From Leg	6.00 0' 9'	0.0000	324'	No Ice	2.60	2.60	0.04
SD214	A	From Leg	6.00 0' 12'	0.0000	324'	No Ice	6.56	6.56	0.05
(2) SRL-224NM-4	B	From Leg	6.00 0' 9'	0.0000	324'	No Ice	2.60	2.60	0.04
SRL-224NM-4	C	From Leg	6.00 0' 9'	0.0000	324'	No Ice	2.60	2.60	0.04
(2) 2.4" Dia x 6-ft Pipe	A	From Leg	6.00 0' 0'	0.0000	324'	No Ice	1.43	1.43	0.02

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	29 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

<i>Description</i>	<i>Face or Leg</i>	<i>Offset Type</i>	<i>Offsets: Horz Lateral Vert ft ft ft</i>	<i>Azimuth Adjustment °</i>	<i>Placement ft</i>		<i>C_{AA} Front ft²</i>	<i>C_{AA} Side ft²</i>	<i>Weight K</i>
(2) 2.4" Dia x 6-ft Pipe	B	From Leg	6.00 0' 0'	0.0000	324'	No Ice	1.43	1.43	0.02
(2) 2.4" Dia x 6-ft Pipe	C	From Leg	6.00 0' 0'	0.0000	324'	No Ice	1.43	1.43	0.02
(2) Side Arm Mount [SO 602-3] ***270***	C	None		0.0000	324'	No Ice	16.09	16.09	0.44
(2) SRL-224NM-4	B	From Leg	6.00 0' 8'	0.0000	270'	No Ice	2.60	2.60	0.04
(2) SRL-224NM-4	C	From Leg	6.00 0' 8'	0.0000	270'	No Ice	2.60	2.60	0.04
(2) 2.4" Dia x 6-ft Pipe	B	From Leg	6.00 0' 0'	0.0000	270'	No Ice	1.43	1.43	0.02
(2) 2.4" Dia x 6-ft Pipe	C	From Leg	6.00 0' 0'	0.0000	270'	No Ice	1.43	1.43	0.02
(2) Side Arm Mount [SO 602-1]	B	From Leg	3.00 0' 0'	0.0000	270'	No Ice	2.58	10.83	0.15
(2) Side Arm Mount [SO 602-1] ***255***	C	From Leg	3.00 0' 0'	0.0000	270'	No Ice	2.58	10.83	0.15
PD322-2	B	From Leg	3.00 0' 16'	0.0000	255'	No Ice	2.25	2.25	0.03
2.4" Dia x 2.5-ft Mount Pipe	B	From Leg	3.00 0' 0'	0.0000	255'	No Ice	0.46	0.46	0.01
Side Arm Mount [SO 305-1] ***250***	B	From Leg	1.50 0' 0'	0.0000	255'	No Ice	0.53	1.52	0.03
(2) X7CQAP-665-VR0 w/ Mount Pipe	A	From Leg	4.00 0' 0'	0.0000	250'	No Ice	8.88	6.44	0.09
(3) X7CQAP-665-VR0 w/ Mount Pipe	B	From Leg	4.00 0' 0'	0.0000	250'	No Ice	8.88	6.44	0.09
X7CQAP-665-VR0 w/ Mount Pipe	C	From Leg	4.00 0' 0'	0.0000	250'	No Ice	8.88	6.44	0.09
AIR 6449 w/ Mount Pipe	A	From Leg	4.00 0' 0'	0.0000	250'	No Ice	5.18	2.72	0.12
AIR 6449 w/ Mount Pipe	B	From Leg	4.00 0' 0'	0.0000	250'	No Ice	5.18	2.72	0.12
AIR 6449 w/ Mount Pipe	C	From Leg	4.00 0' 0'	0.0000	250'	No Ice	5.18	2.72	0.12
X7CQAP-FRO-645-V w/	C	From Leg	4.00	0.0000	250'	No Ice	12.64	8.29	0.09

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	30 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

<i>Description</i>	<i>Face or Leg</i>	<i>Offset Type</i>	<i>Offsets: Horz Lateral Vert ft ft ft</i>	<i>Azimuth Adjustment °</i>	<i>Placement ft</i>		<i>C_{AA} Front ft²</i>	<i>C_{AA} Side ft²</i>	<i>Weight K</i>
Mount Pipe			0'						
(2) RDC-4276-PF-48	A	From Leg	0'						
			4.00	0.0000	250'	No Ice	5.09	2.32	0.03
			0'						
(3) RRUS 32	A	From Leg	0'						
			4.00	0.0000	250'	No Ice	2.86	1.78	0.06
			0'						
(2) RRUS 32	B	From Leg	0'						
			4.00	0.0000	250'	No Ice	2.86	1.78	0.06
			0'						
(3) RRUS 32	C	From Leg	0'						
			4.00	0.0000	250'	No Ice	2.86	1.78	0.06
			0'						
TD-850B-LTE78-43	A	From Leg	0'						
			4.00	0.0000	250'	No Ice	1.98	0.83	0.05
			0'						
TD-850B-LTE78-43	B	From Leg	0'						
			4.00	0.0000	250'	No Ice	1.98	0.83	0.05
			0'						
TD-850B-LTE78-43	C	From Leg	0'						
			4.00	0.0000	250'	No Ice	1.98	0.83	0.05
			0'						
RCMDC-6627-PF-48	A	From Leg	0'						
			4.00	0.0000	250'	No Ice	4.06	3.10	0.03
			0'						
(2) 4449	B	From Leg	0'						
			4.00	0.0000	250'	No Ice	1.97	1.40	0.07
			0'						
(2) 4449	C	From Leg	0'						
			4.00	0.0000	250'	No Ice	1.97	1.40	0.07
			0'						
DBC-AP	C	From Leg	0'						
			4.00	0.0000	250'	No Ice	0.32	0.13	0.01
			0'						
2.4" Dia. x 10.5' Mount Pipe	A	From Leg	0'						
			4.00	0.0000	250'	No Ice	2.49	2.49	0.04
			0'						
2.4" Dia. x 10.5' Mount Pipe	C	From Leg	0'						
			4.00	0.0000	250'	No Ice	2.49	2.49	0.04
			0'						
(2) L2 1/2x2 1/2x1/4 x 8-ft	A	From Leg	0'						
			2.00	0.0000	250'	No Ice	3.33	3.33	0.03
			5'						
(2) L2 1/2x2 1/2x1/4 x 8-ft	B	From Leg	0'						
			2.00	0.0000	250'	No Ice	3.33	3.33	0.03
			5'						
(2) L2 1/2x2 1/2x1/4 x 8-ft	C	From Leg	0'						
			2.00	0.0000	250'	No Ice	3.33	3.33	0.03
			5'						
2.9" Dia. x 12' Pipe	A	From Leg	0'						
			4.00	0.0000	250'	No Ice	3.46	3.46	0.07
			5'						
2.9" Dia. x 12' Pipe	B	From Leg	0'						
			4.00	0.0000	250'	No Ice	3.46	3.46	0.07
			5'						
2.9" Dia. x 12' Pipe	C	From Leg	0'						
			4.00	0.0000	250'	No Ice	3.46	3.46	0.07

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	31 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

<i>Description</i>	<i>Face or Leg</i>	<i>Offset Type</i>	<i>Offsets: Horz Lateral Vert ft ft ft</i>	<i>Azimuth Adjustment °</i>	<i>Placement ft</i>		<i>C_{AA} Front ft²</i>	<i>C_{AA} Side ft²</i>	<i>Weight K</i>
(2) 2.4" Dia. x 10-ft Mount Pipe	A	From Leg	0' 5' 2.00 0' 2'6"	0.0000	250'	No Ice	2.38	2.38	0.04
(2) 2.4" Dia. x 10-ft Mount Pipe	B	From Leg	2.00 0' 2'6"	0.0000	250'	No Ice	2.38	2.38	0.04
(2) 2.4" Dia. x 10-ft Mount Pipe	C	From Leg	2.00 0' 2'6"	0.0000	250'	No Ice	2.38	2.38	0.04
Pipe Mount [PM 601-3]	C	None		0.0000	250'	No Ice	3.17	3.17	0.20
Sector Mount [SM 503-3]	C	None		0.0000	250'	No Ice	30.43	30.43	1.69
229									
AIR6449 B41_T-MOBILE w/ Mount Pipe	A	From Leg	4.00 0' 2'	0.0000	229'	No Ice	5.19	2.71	0.13
AIR6449 B41_T-MOBILE w/ Mount Pipe	B	From Leg	4.00 0' 2'	0.0000	229'	No Ice	5.19	2.71	0.13
AIR6449 B41_T-MOBILE w/ Mount Pipe	C	From Leg	4.00 0' 2'	0.0000	229'	No Ice	5.19	2.71	0.13
FFVV-65C-R3-V1_TMO w/ Mount Pipe	A	From Leg	4.00 0' 2'	0.0000	229'	No Ice	12.97	6.20	0.16
FFVV-65C-R3-V1_TMO w/ Mount Pipe	B	From Leg	4.00 0' 2'	0.0000	229'	No Ice	12.97	6.20	0.16
FFVV-65C-R3-V1_TMO w/ Mount Pipe	C	From Leg	4.00 0' 2'	0.0000	229'	No Ice	12.97	6.20	0.16
RADIO 4460 B2/B25 B66_TMO	A	From Leg	4.00 0' 2'	0.0000	229'	No Ice	2.14	1.69	0.11
RADIO 4460 B2/B25 B66_TMO	B	From Leg	4.00 0' 2'	0.0000	229'	No Ice	2.14	1.69	0.11
RADIO 4460 B2/B25 B66_TMO	C	From Leg	4.00 0' 2'	0.0000	229'	No Ice	2.14	1.69	0.11
Radio 4480_TMOV2	A	From Leg	4.00 0' 2'	0.0000	229'	No Ice	2.88	1.40	0.08
Radio 4480_TMOV2	B	From Leg	4.00 0' 2'	0.0000	229'	No Ice	2.88	1.40	0.08
Radio 4480_TMOV2	C	From Leg	4.00 0' 2'	0.0000	229'	No Ice	2.88	1.40	0.08
(2) 2.4" Dia. x 10-ft Mount Pipe	A	From Leg	4.00 0' 0'	0.0000	229'	No Ice	2.38	2.38	0.04
(2) 2.4" Dia. x 10-ft Mount Pipe	B	From Leg	4.00 0' 0'	0.0000	229'	No Ice	2.38	2.38	0.04
(2) 2.4" Dia. x 10-ft Mount	C	From Leg	4.00 0' 0'	0.0000	229'	No Ice	2.38	2.38	0.04

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	32 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

<i>Description</i>	<i>Face or Leg</i>	<i>Offset Type</i>	<i>Offsets: Horz Lateral Vert ft ft ft</i>	<i>Azimuth Adjustment °</i>	<i>Placement ft</i>		<i>C_{AA} Front ft²</i>	<i>C_{AA} Side ft²</i>	<i>Weight K</i>
Pipe			0'						
(2) 2.4" Dia x 6-ft Pipe	A	From Leg	0'	0.0000	229'	No Ice	1.43	1.43	0.02
(2) 2.4" Dia x 6-ft Pipe	B	From Leg	0'	0.0000	229'	No Ice	1.43	1.43	0.02
(2) 2.4" Dia x 6-ft Pipe	C	From Leg	0'	0.0000	229'	No Ice	1.43	1.43	0.02
Sector Mount [SM 504-3]	C	None	0'	0.0000	229'	No Ice	31.05	31.05	1.71
Pipe Mount [PM 601-3]	C	None	0'	0.0000	229'	No Ice	3.17	3.17	0.20
222									
DT465B-2XR w/ Mount Pipe	A	From Leg	4.00	0.0000	222'	No Ice	5.50	4.38	0.09
DT465B-2XR w/ Mount Pipe	B	From Leg	0'	0.0000	222'	No Ice	5.50	4.38	0.09
APXVSPP18-C w/ Mount Pipe	A	From Leg	-2'	0.0000	222'	No Ice	4.60	4.01	0.09
APXVSPP18-C w/ Mount Pipe	B	From Leg	0'	0.0000	222'	No Ice	4.60	4.01	0.09
APXVSPP18-C w/ Mount Pipe	C	From Leg	-2'	0.0000	222'	No Ice	4.60	4.01	0.09
RRUS 82 W/SOLAR SHIELD	A	From Leg	0'	0.0000	222'	No Ice	2.98	1.43	0.06
RRUS 82 W/SOLAR SHIELD	B	From Leg	-2'	0.0000	222'	No Ice	2.98	1.43	0.06
RRUS 82 W/SOLAR SHIELD	C	From Leg	0'	0.0000	222'	No Ice	2.98	1.43	0.06
(2) RRUS-11 800MHZ	A	From Leg	-2'	0.0000	222'	No Ice	2.52	1.30	0.05
(2) RRUS-11 800MHZ	B	From Leg	0'	0.0000	222'	No Ice	2.52	1.30	0.05
(2) RRUS-11 800MHZ	C	From Leg	-2'	0.0000	222'	No Ice	2.52	1.30	0.05
RRUS 31 B25	A	From Leg	0'	0.0000	222'	No Ice	1.62	1.28	0.06
RRUS 31 B25	B	From Leg	-2'	0.0000	222'	No Ice	1.62	1.28	0.06
RRUS 31 B25	C	From Leg	0'	0.0000	222'	No Ice	1.62	1.28	0.06
800MHZ SMR FILTER	A	From Leg	-2'	0.0000	222'	No Ice	0.65	0.22	0.01

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job Lake City (SR 47 & US 41) (BU 870081)	Page 33 of 63
	Project TEP No. 145283.791998	Date 16:40:56 12/01/22
	Client Crown Castle	Designed by SPT

<i>Description</i>	<i>Face or Leg</i>	<i>Offset Type</i>	<i>Offsets: Horz Lateral Vert ft ft ft</i>	<i>Azimuth Adjustment °</i>	<i>Placement ft</i>		<i>C_{AA} Front ft²</i>	<i>C_{AA} Side ft²</i>	<i>Weight K</i>
800MHZ SMR FILTER	B	From Leg	0' -2' 4.00	0.0000	222'	No Ice	0.65	0.22	0.01
800MHZ SMR FILTER	C	From Leg	0' -2' 4.00	0.0000	222'	No Ice	0.65	0.22	0.01
(3) ACU-A20-N	A	From Leg	0' -2' 4.00	0.0000	222'	No Ice	0.07	0.12	0.00
(3) ACU-A20-N	B	From Leg	0' -2' 4.00	0.0000	222'	No Ice	0.07	0.12	0.00
(3) ACU-A20-N	C	From Leg	0' -2' 4.00	0.0000	222'	No Ice	0.07	0.12	0.00
(2) 2.4" Dia x 8-ft Mount Pipe	A	From Leg	0' -2' 4.00	0.0000	222'	No Ice	1.90	1.90	0.03
(2) 2.4" Dia x 8-ft Mount Pipe	B	From Leg	0' -2' 4.00	0.0000	222'	No Ice	1.90	1.90	0.03
(3) 2.4" Dia x 8-ft Mount Pipe	C	From Leg	0' -2' 4.00	0.0000	222'	No Ice	1.90	1.90	0.03
Sector Mount [SM 502-3] ***215***	C	None	0'	0.0000	222'	No Ice	29.82	29.82	1.67
DB567R90-CR	C	From Leg	0' 10' 6.00	0.0000	215'	No Ice	7.00	7.00	0.07
2.4" Dia x 6-ft Pipe	C	From Leg	0' 10' 6.00	0.0000	215'	No Ice	1.43	1.43	0.02
Side Arm Mount [SO 602-1]	C	From Leg	0' 3.00	0.0000	215'	No Ice	2.58	10.83	0.15
201			0'						
(2) SBNHH-1D85B w/ Mount Pipe	A	From Leg	0' 2' 4.00	0.0000	201'	No Ice	4.09	3.30	0.07
(2) SBNHH-1D85B w/ Mount Pipe	B	From Leg	0' 2' 4.00	0.0000	201'	No Ice	4.09	3.30	0.07
(2) SBNHH-1D85B w/ Mount Pipe	C	From Leg	0' 2' 4.00	0.0000	201'	No Ice	4.09	3.30	0.07
AIR 6449 B77D_CCIV3 w/ Mount Pipe	A	From Leg	0' 2' 4.00	0.0000	201'	No Ice	3.65	2.72	0.11
AIR 6449 B77D_CCIV3 w/ Mount Pipe	B	From Leg	0' 4' 4.00	0.0000	201'	No Ice	3.65	2.72	0.11
AIR 6449 B77D_CCIV3 w/ Mount Pipe	C	From Leg	0' 4' 4.00	0.0000	201'	No Ice	3.65	2.72	0.11
AIR 6419 B77G_CCIV3 w/	A	From Leg	0' 4' 4.00	0.0000	201'	No Ice	3.79	2.15	0.07

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	34 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

<i>Description</i>	<i>Face or Leg</i>	<i>Offset Type</i>	<i>Offsets: Horz Lateral Vert ft ft ft</i>	<i>Azimuth Adjustment °</i>	<i>Placement ft</i>		<i>C_{AA} Front ft²</i>	<i>C_{AA} Side ft²</i>	<i>Weight K</i>
Mount Pipe			0'						
AIR 6419 B77G_CCIV3 w/ Mount Pipe	B	From Leg	0'	0.0000	201'	No Ice	3.79	2.15	0.07
AIR 6419 B77G_CCIV3 w/ Mount Pipe	C	From Leg	0'	0.0000	201'	No Ice	3.79	2.15	0.07
NNHH-65B-R4 w/ Mount Pipe	A	From Leg	0'	0.0000	201'	No Ice	7.55	4.23	0.11
NNHH-65B-R4 w/ Mount Pipe	B	From Leg	2'	0.0000	201'	No Ice	7.55	4.23	0.11
NNHH-65B-R4 w/ Mount Pipe	C	From Leg	2'	0.0000	201'	No Ice	7.55	4.23	0.11
(3) RRUS 4478 B14	A	From Leg	2'	0.0000	201'	No Ice	1.84	1.06	0.06
RRUS 8843 B2/B66A_CCIV2	A	From Leg	2'	0.0000	201'	No Ice	1.98	1.70	0.08
RRUS 8843 B2/B66A_CCIV2	B	From Leg	2'	0.0000	201'	No Ice	1.98	1.70	0.08
RRUS 8843 B2/B66A_CCIV2	C	From Leg	2'	0.0000	201'	No Ice	1.98	1.70	0.08
RRUS 32 B30	A	From Leg	2'	0.0000	201'	No Ice	2.73	1.67	0.05
RRUS 32 B30	B	From Leg	2'	0.0000	201'	No Ice	2.73	1.67	0.05
RRUS 32 B30	C	From Leg	2'	0.0000	201'	No Ice	2.73	1.67	0.05
RRUS 4449 B5/B12	B	From Leg	2'	0.0000	201'	No Ice	1.97	1.41	0.07
(2) RRUS 4449 B5/B12	C	From Leg	2'	0.0000	201'	No Ice	1.97	1.41	0.07
DC6-48-60-18-8F	A	From Leg	2'	0.0000	201'	No Ice	1.21	1.21	0.03
DC9-48-60-24-8C-EV_CCIV 3	A	From Leg	2'	0.0000	201'	No Ice	1.56	1.56	0.02
DC9-48-60-24-8C-EV_CCIV 3	B	From Leg	2'	0.0000	201'	No Ice	1.56	1.56	0.02
2.4" Dia. x 3-ft Stabilizer	A	From Leg	2'	0.0000	201'	No Ice	0.99	0.99	0.01
2.4" Dia. x 3-ft Stabilizer	B	From Leg	2'	0.0000	201'	No Ice	0.99	0.99	0.01

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job Lake City (SR 47 & US 41) (BU 870081)	Page 36 of 63
	Project TEP No. 145283.791998	Date 16:40:56 12/01/22
	Client Crown Castle	Designed by SPT

Dishes

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 ft²	Weight K	
HPX6-59-P3A/K	C	Paraboloid w/Shroud (HP)	From Leg	1.00 0' 0'	0.0000		164'	6.46	No Ice	32.76	0.32
*											
HPLPD2-11	A	Paraboloid w/Shroud (HP)	From Leg	1.00 0' 2'	-60.0000		164'	2.04	No Ice	3.27	0.03
HPD4-11	B	Paraboloid w/Shroud (HP)	From Leg	1.00 0' 1'	-30.0000		164'	4.17	No Ice	13.64	0.09
*											
1.2M	B	Paraboloid w/o Radome	From Leg	2.00 0' 0'	30.0000		11'	4.00	No Ice	12.17	0.17

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice+1.0 Guy
3	1.2 Dead+1.0 Wind 30 deg - No Ice+1.0 Guy
4	1.2 Dead+1.0 Wind 60 deg - No Ice+1.0 Guy
5	1.2 Dead+1.0 Wind 90 deg - No Ice+1.0 Guy
6	1.2 Dead+1.0 Wind 120 deg - No Ice+1.0 Guy
7	1.2 Dead+1.0 Wind 150 deg - No Ice+1.0 Guy
8	1.2 Dead+1.0 Wind 180 deg - No Ice+1.0 Guy
9	1.2 Dead+1.0 Wind 210 deg - No Ice+1.0 Guy
10	1.2 Dead+1.0 Wind 240 deg - No Ice+1.0 Guy
11	1.2 Dead+1.0 Wind 270 deg - No Ice+1.0 Guy
12	1.2 Dead+1.0 Wind 300 deg - No Ice+1.0 Guy
13	1.2 Dead+1.0 Wind 330 deg - No Ice+1.0 Guy
14	Dead+Wind 0 deg - Service+Guy
15	Dead+Wind 30 deg - Service+Guy
16	Dead+Wind 60 deg - Service+Guy
17	Dead+Wind 90 deg - Service+Guy
18	Dead+Wind 120 deg - Service+Guy
19	Dead+Wind 150 deg - Service+Guy
20	Dead+Wind 180 deg - Service+Guy
21	Dead+Wind 210 deg - Service+Guy
22	Dead+Wind 240 deg - Service+Guy
23	Dead+Wind 270 deg - Service+Guy
24	Dead+Wind 300 deg - Service+Guy
25	Dead+Wind 330 deg - Service+Guy

Maximum Member Forces

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	37 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T1	350 - 341.945	Leg	Max Tension	12	0.05	0.12	0.09
			Max. Compression	6	-3.40	-0.15	-0.11
			Max. Mx	12	-2.10	-0.34	0.09
			Max. My	8	-2.42	0.01	0.43
			Max. Vy	6	-0.59	-0.16	-0.07
		Diagonal Horizontal	Max. Vx	2	0.74	-0.02	0.19
			Max Tension	13	2.42	0.00	0.00
			Max Tension	6	0.29	0.00	0.00
			Max. Compression	2	-1.01	0.00	0.00
			Max. Mx	12	-0.49	-0.01	0.00
		Top Girt	Max. My	9	-0.18	0.00	0.00
			Max. Vy	12	0.01	0.00	0.00
			Max. Vx	9	-0.00	0.00	0.00
			Max Tension	3	0.02	0.00	0.00
			Max. Compression	2	-0.08	0.00	0.00
		Bottom Girt	Max. Mx	12	-0.04	-0.01	0.00
			Max. My	9	0.02	0.00	0.00
			Max. Vy	12	0.01	0.00	0.00
			Max. Vx	9	-0.00	0.00	0.00
			Max Tension	4	3.74	0.39	-0.18
T2	341.945 - 340	Leg	Max. Compression	6	-5.33	0.06	0.04
			Max. Mx	11	-4.46	-0.40	0.05
			Max. My	2	-5.16	-0.08	-0.43
			Max. Vy	10	-1.18	-0.07	0.03
			Max. Vx	2	-1.29	-0.01	-0.08
		Diagonal Top Girt	Max Tension	7	3.26	0.00	0.00
			Max Tension	6	0.02	0.00	0.00
			Max. Compression	13	-2.34	0.00	0.00
			Max. Mx	12	-0.46	-0.01	0.00
			Max. My	9	-1.19	0.00	0.00
		Bottom Girt	Max. Vy	12	0.01	0.00	0.00
			Max. Vx	9	-0.00	0.00	0.00
			Max Tension	12	0.18	0.00	0.00
			Max. Compression	8	-1.59	0.00	0.00
			Max. Mx	12	0.18	-0.01	0.00
		Leg	Max. My	9	-1.24	0.00	0.00
			Max. Vy	12	0.01	0.00	0.00
			Max. Vx	9	-0.00	0.00	0.00
			Max Tension	4	3.74	0.08	-0.04
			Max. Compression	4	-26.79	0.01	-0.00
T3	340 - 320	Leg	Max. Mx	10	-8.88	0.25	-0.12
			Max. My	2	-8.93	0.05	0.28
			Max. Vy	10	-1.18	0.25	-0.12
			Max. Vx	2	-1.30	0.05	0.28
		Diagonal Horizontal	Max Tension	13	3.58	0.00	0.00
			Max Tension	4	5.38	0.00	0.00
			Max. Compression	9	-1.60	0.00	0.00
			Max. Mx	6	-0.23	-0.01	0.00
			Max. My	8	0.08	0.00	-0.00
		Top Girt	Max. Vy	6	0.01	0.00	0.00
			Max. Vx	8	0.00	0.00	0.00
			Max Tension	10	0.23	0.00	0.00
			Max. Compression	2	-1.33	0.00	0.00
		Bottom Girt	Max. Mx	12	-0.58	-0.01	0.00
			Max. My	9	-0.45	0.00	0.00
			Max. Vy	12	0.01	0.00	0.00
			Max. Vx	9	-0.00	0.00	0.00
			Max Tension	15	0.01	0.00	0.00
		Leg	Max. Compression	13	-0.73	0.00	0.00
			Max. Mx	12	-0.27	-0.01	0.00
			Max. My	9	-0.15	0.00	0.00

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	38 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft	
T4	320 - 300	Guy A	Max. Vy	12	0.01	0.00	0.00	
			Max. Vx	9	-0.00	0.00	0.00	
			Bottom Tension	6	17.59			
			Top Tension	6	18.12			
			Top Cable Vert	6	16.37			
			Top Cable Norm	6	7.75			
			Top Cable Tan	6	0.01			
			Bot Cable Vert	6	-15.37			
		Guy B	Bot Cable Norm	6	8.55			
			Bot Cable Tan	6	0.01			
			Bottom Tension	10	17.86			
			Top Tension	10	18.38			
			Top Cable Vert	10	16.61			
			Top Cable Norm	10	7.88			
			Top Cable Tan	10	0.01			
			Bot Cable Vert	10	-15.61			
		Guy C	Bot Cable Norm	10	8.68			
			Bot Cable Tan	10	0.01			
			Bottom Tension	2	17.77			
			Top Tension	2	18.30			
			Top Cable Vert	2	16.54			
			Top Cable Norm	2	7.84			
			Top Cable Tan	2	0.01			
			Bot Cable Vert	2	-15.53			
		Leg	Bot Cable Norm	2	8.64			
			Bot Cable Tan	2	0.01			
			Max Tension	1	0.00	0.00	0.00	
			Max. Compression	6	-35.57	-0.15	-0.16	
			Max. Mx	6	-24.80	-0.23	-0.08	
			Max. My	13	-23.78	0.03	0.23	
			Max. Vy	10	-1.13	0.17	-0.13	
			Max. Vx	2	-1.35	0.03	0.21	
			Diagonal	Max Tension	13	3.70	0.00	0.00
				Max Tension	7	0.03	0.00	0.00
				Max. Compression	13	-2.46	0.00	0.00
				Max. Mx	10	-0.28	-0.01	0.00
			Horizontal	Max. My	9	-0.34	0.00	0.00
				Max. Vy	10	0.01	0.00	0.00
				Max. Vx	9	-0.00	0.00	0.00
				Max Tension	12	0.08	0.00	0.00
			Top Girt	Max. Compression	6	-0.94	0.00	0.00
				Max. Mx	12	-0.58	-0.01	0.00
				Max. My	9	0.00	0.00	0.00
				Max. Vy	12	0.01	0.00	0.00
			Bottom Girt	Max. Vx	9	-0.00	0.00	0.00
				Max Tension	13	0.04	0.00	0.00
				Max. Compression	12	-1.33	0.00	0.00
				Max. Mx	10	-0.50	-0.01	0.00
				Max. My	12	-1.33	0.00	-0.00
				Max. Vy	10	0.01	0.00	0.00
				Max. Vx	12	0.00	0.00	0.00
				Max Tension	1	0.00	0.00	0.00
T5	300 - 280	Leg	Max. Compression	9	-61.44	-0.01	-0.00	
			Max. Mx	12	-59.55	0.52	0.08	
			Max. My	2	-38.83	0.09	0.58	
			Max. Vy	12	1.85	0.52	0.08	
		Diagonal	Max. Vx	8	-1.81	0.07	-0.50	
			Max Tension	11	6.23	0.00	0.00	
			Horizontal	Max Tension	8	6.48	0.00	0.00
				Max. Compression	11	-4.40	0.00	0.00
		Max. Mx		4	-0.85	-0.01	0.00	

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	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T6	280 - 260	Top Girt	Max. My	12	-1.46	0.00	-0.00
			Max. Vy	4	-0.01	0.00	0.00
			Max. Vx	12	-0.00	0.00	0.00
			Max Tension	7	0.24	0.00	0.00
			Max. Compression	6	-1.55	0.00	0.00
			Max. Mx	10	0.06	-0.01	0.00
		Bottom Girt	Max. My	12	-1.21	0.00	-0.00
			Max. Vy	10	-0.01	0.00	0.00
			Max. Vx	12	-0.00	0.00	0.00
			Max Tension	2	0.23	0.00	0.00
			Max. Compression	6	-2.15	0.00	0.00
			Max. Mx	4	-0.93	-0.01	0.00
		Guy A	Max. My	12	-0.45	0.00	-0.00
			Max. Vy	4	-0.01	0.00	0.00
			Max. Vx	12	-0.00	0.00	0.00
			Bottom Tension	6	18.59		
			Top Tension	6	19.05		
			Top Cable Vert	6	16.71		
			Top Cable Norm	6	9.15		
			Top Cable Tan	6	0.01		
			Bot Cable Vert	6	-15.79		
			Bot Cable Norm	6	9.80		
			Bot Cable Tan	6	0.00		
		Guy B	Bottom Tension	10	18.79		
			Top Tension	10	19.26		
			Top Cable Vert	10	16.89		
			Top Cable Norm	10	9.26		
			Top Cable Tan	10	0.01		
			Bot Cable Vert	10	-15.97		
			Bot Cable Norm	10	9.90		
			Bot Cable Tan	10	0.00		
		Guy C	Bottom Tension	2	18.46		
			Top Tension	2	18.92		
			Top Cable Vert	2	16.60		
			Top Cable Norm	2	9.09		
			Top Cable Tan	2	0.00		
			Bot Cable Vert	2	-15.68		
			Bot Cable Norm	2	9.73		
			Bot Cable Tan	2	0.01		
		Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	4	-75.74	0.04	0.07
			Max. Mx	11	-25.17	-0.84	0.02
			Max. My	10	-55.14	0.02	0.96
			Max. Vy	12	1.84	0.02	-0.02
			Max. Vx	8	-1.81	0.00	-0.00
		Diagonal Horizontal	Max Tension	11	5.52	0.00	0.00
			Max Tension	17	0.07	0.00	0.00
			Max. Compression	11	-3.66	0.00	0.00
			Max. Mx	12	-1.51	-0.01	0.00
			Max. My	6	-0.77	0.00	0.00
			Max. Vy	12	-0.01	0.00	0.00
		Top Girt	Max. Vx	6	0.00	0.00	0.00
			Max Tension	11	0.32	0.00	0.00
			Max. Compression	12	-2.18	0.00	0.00
			Max. Mx	4	-0.05	-0.01	0.00
			Max. My	12	-0.79	0.00	-0.00
			Max. Vy	4	-0.01	0.00	0.00
		Bottom Girt	Max. Vx	12	-0.00	0.00	0.00
			Max Tension	19	0.01	0.00	0.00
			Max. Compression	4	-0.63	0.00	0.00
			Max. Mx	12	-0.41	-0.01	0.00

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	41 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T9	220 - 200	Guy B	Bottom Tension	10	27.20		
			Top Tension	10	27.70		
			Top Cable Vert	10	22.64		
			Top Cable Norm	10	15.96		
			Top Cable Tan	10	0.00		
			Bot Cable Vert	10	-21.67		
			Bot Cable Norm	10	16.45		
			Bot Cable Tan	10	0.00		
		Guy C	Bottom Tension	2	27.32		
			Top Tension	2	27.81		
			Top Cable Vert	2	22.73		
			Top Cable Norm	2	16.03		
			Top Cable Tan	2	0.00		
			Bot Cable Vert	2	-21.76		
			Bot Cable Norm	2	16.52		
			Bot Cable Tan	2	0.00		
		Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	12	-116.42	0.04	-0.05
			Max. Mx	5	-55.61	1.07	0.07
			Max. My	2	-55.68	0.02	-1.10
			Max. Vy	5	2.88	-0.31	-0.07
			Max. Vx	2	-2.98	0.00	0.34
			Max Tension	5	3.59	0.00	0.00
			Max Tension	10	0.28	0.00	0.00
		Diagonal Horizontal	Max. Compression	5	-1.85	0.00	0.00
			Max. Mx	12	-0.61	-0.01	0.00
			Max. My	13	-1.46	0.00	0.00
			Max. Vy	12	-0.01	0.00	0.00
			Max. Vx	13	0.00	0.00	0.00
			Max Tension	3	0.01	0.00	0.00
			Max. Compression	13	-1.36	0.00	0.00
			Max. Mx	12	-0.50	-0.01	0.00
		Top Girt	Max. My	7	-0.33	0.00	0.00
			Max. Vy	12	-0.01	0.00	0.00
			Max. Vx	7	0.00	0.00	0.00
			Max Tension	4	0.08	0.00	0.00
			Max. Compression	11	-1.59	0.00	0.00
			Max. Mx	12	0.01	-0.01	0.00
			Max. My	13	-1.39	0.00	0.00
			Max. Vy	12	-0.01	0.00	0.00
		Bottom Girt	Max. Vx	7	0.00	0.00	0.00
			Max Tension	4	0.08	0.00	0.00
			Max. Compression	11	-1.59	0.00	0.00
			Max. Mx	12	0.01	-0.01	0.00
			Max. My	13	-1.39	0.00	0.00
			Max. Vy	12	-0.01	0.00	0.00
			Max. Vx	13	0.00	0.00	0.00
			Max Tension	1	0.00	0.00	0.00
T10	200 - 180	Leg	Max. Compression	12	-109.26	-0.32	-0.19
			Max. Mx	5	-101.55	1.42	0.10
			Max. My	8	-56.57	-0.07	1.53
			Max. Vy	5	4.49	0.19	-0.23
			Max. Vx	8	5.01	-0.02	0.16
			Max Tension	3	11.23	0.00	0.00
			Max Tension	10	0.06	0.00	0.00
			Max. Compression	3	-7.17	0.00	0.00
		Diagonal Horizontal	Max. Mx	12	-0.19	-0.01	0.00
			Max. My	13	-5.23	0.00	0.00
			Max. Vy	12	-0.01	0.00	0.00
			Max. Vx	13	0.00	0.00	0.00
			Max Tension	10	0.73	0.00	0.00
			Max. Compression	6	-2.48	0.00	0.00
			Max. Mx	12	-1.00	-0.01	0.00
			Max. My	13	-2.30	0.00	0.00
			Max. Vy	12	-0.01	0.00	0.00
			Max. Vx	13	0.00	0.00	0.00
		Top Girt	Max Tension	4	0.49	0.00	0.00
			Max. Compression	11	-1.59	0.00	0.00
			Max. Mx	12	0.01	-0.01	0.00
			Max. My	13	-1.39	0.00	0.00
			Max. Vy	12	-0.01	0.00	0.00
			Max. Vx	13	0.00	0.00	0.00
			Max Tension	4	0.08	0.00	0.00
			Max. Compression	11	-1.59	0.00	0.00
		Bottom Girt	Max. Mx	12	0.01	-0.01	0.00
			Max. My	13	-1.39	0.00	0.00
			Max. Vy	12	-0.01	0.00	0.00
			Max. Vx	13	0.00	0.00	0.00
			Max Tension	4	0.08	0.00	0.00
			Max. Compression	11	-1.59	0.00	0.00
			Max. Mx	12	0.01	-0.01	0.00
			Max. My	13	-1.39	0.00	0.00

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	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T11	180 - 160	Leg	Max. Compression	9	-4.09	0.00	0.00
			Max. Mx	12	0.43	-0.01	0.00
			Max. My	13	-3.67	0.00	0.00
			Max. Vy	12	-0.01	0.00	0.00
			Max. Vx	13	0.00	0.00	0.00
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	10	-126.19	0.01	-0.00
			Max. Mx	5	-80.90	-2.25	0.00
			Max. My	13	-95.51	1.28	2.25
			Max. Vy	5	4.50	-1.04	-0.56
		Diagonal	Max. Vx	8	5.02	0.03	-1.22
			Max Tension	3	10.28	0.00	0.00
		Horizontal	Max Tension	4	11.17	0.00	0.00
			Max. Compression	12	-5.59	0.00	0.00
		Top Girt	Max. Mx	4	-0.62	-0.01	0.00
			Max. My	13	-3.01	0.00	0.00
			Max. Vy	4	-0.01	0.00	0.00
			Max. Vx	13	0.00	0.00	0.00
			Max Tension	10	0.31	0.00	0.00
			Max. Compression	3	-3.67	0.00	0.00
			Max. Mx	4	-0.26	-0.01	0.00
			Max. My	13	-3.27	0.00	0.00
			Max. Vy	4	-0.01	0.00	0.00
			Max. Vx	13	0.00	0.00	0.00
		Bottom Girt	Max Tension	10	0.34	0.00	0.00
			Max. Compression	2	-1.82	0.00	0.00
			Max. Mx	4	-0.53	-0.01	0.00
			Max. My	13	-1.51	0.00	0.00
			Max. Vy	4	-0.01	0.00	0.00
			Max. Vx	13	0.00	0.00	0.00
		Guy A	Bottom Tension	6	21.03		
			Top Tension	6	21.31		
			Top Cable Vert	6	15.43		
			Top Cable Norm	6	14.70		
			Top Cable Tan	6	0.00		
			Bot Cable Vert	6	-14.81		
			Bot Cable Norm	6	14.93		
			Bot Cable Tan	6	0.00		
		Guy B	Bottom Tension	10	20.40		
			Top Tension	10	20.68		
			Top Cable Vert	10	14.98		
			Top Cable Norm	10	14.26		
			Top Cable Tan	10	0.00		
			Bot Cable Vert	10	-14.36		
			Bot Cable Norm	10	14.50		
			Bot Cable Tan	10	0.00		
		Guy C	Bottom Tension	2	20.98		
			Top Tension	2	21.26		
			Top Cable Vert	2	15.39		
			Top Cable Norm	2	14.66		
			Top Cable Tan	2	0.00		
			Bot Cable Vert	2	-14.77		
			Bot Cable Norm	2	14.90		
			Bot Cable Tan	2	0.00		
T12	160 - 140	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	3	-108.77	0.05	-0.07
			Max. Mx	5	-106.02	0.64	-0.20
			Max. My	2	-94.89	-0.00	-0.64
			Max. Vy	10	1.80	-0.05	0.02
			Max. Vx	2	2.16	-0.01	-0.05
		Diagonal	Max Tension	13	3.62	0.00	0.00

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	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T13	140 - 120	Horizontal	Max Tension	10	0.54	0.00	0.00
			Max. Compression	5	-1.89	0.00	0.00
			Max. Mx	4	-0.25	-0.01	0.00
			Max. My	13	-1.36	0.00	0.00
			Max. Vy	4	-0.01	0.00	0.00
		Top Girt	Max. Vx	13	0.00	0.00	0.00
			Max Tension	8	0.13	0.00	0.00
			Max. Compression	13	-1.27	0.00	0.00
			Max. Mx	4	0.03	-0.01	0.00
			Max. My	13	-1.27	0.00	0.00
		Bottom Girt	Max. Vy	4	-0.01	0.00	0.00
			Max. Vx	13	0.00	0.00	0.00
			Max Tension	4	0.18	0.00	0.00
			Max. Compression	12	-1.31	0.00	0.00
			Max. Mx	4	0.18	-0.01	0.00
		Leg	Max. My	13	-0.80	0.00	0.00
			Max. Vy	4	-0.01	0.00	0.00
			Max. Vx	13	0.00	0.00	0.00
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	10	-128.96	-0.05	0.03
		Diagonal	Max. Mx	5	-128.43	0.99	0.03
			Max. My	8	-68.74	-0.09	1.08
			Max. Vy	12	-3.19	-0.11	-0.06
			Max. Vx	8	3.46	-0.00	0.13
		Horizontal	Max Tension	3	7.74	0.00	0.00
			Max Tension	10	0.13	0.00	0.00
			Max. Compression	3	-4.84	0.00	0.00
			Max. Mx	10	0.05	-0.01	0.00
			Max. My	13	-2.06	0.00	0.00
		Top Girt	Max. Vy	10	-0.01	0.00	0.00
			Max. Vx	13	0.00	0.00	0.00
			Max Tension	10	0.29	0.00	0.00
			Max. Compression	6	-1.41	0.00	0.00
			Max. Mx	4	-0.34	-0.01	0.00
		Bottom Girt	Max. My	13	-0.88	0.00	0.00
			Max. Vy	4	-0.01	0.00	0.00
			Max. Vx	13	0.00	0.00	0.00
			Max Tension	4	0.32	0.00	0.00
			Max. Compression	12	-2.97	0.00	0.00
T14	120 - 100	Leg	Max. Mx	4	0.32	-0.01	0.00
			Max. My	13	-2.09	0.00	0.00
			Max. Vy	4	-0.01	0.00	0.00
			Max. Vx	13	0.00	0.00	0.00
			Max Tension	1	0.00	0.00	0.00
		Diagonal	Max. Compression	10	-141.65	0.01	-0.00
			Max. Mx	5	-107.93	-2.05	-0.01
			Max. My	13	-115.49	1.18	2.08
			Max. Vy	12	-3.20	0.77	0.32
			Max. Vx	8	3.47	0.09	-0.82
		Horizontal	Max Tension	3	7.00	0.00	0.00
			Max Tension	4	8.83	0.00	0.00
			Max. Compression	9	-4.60	0.00	0.00
			Max. Mx	4	8.83	-0.01	0.00
			Max. My	13	-0.87	0.00	0.00
		Top Girt	Max. Vy	4	-0.01	0.00	0.00
			Max. Vx	13	0.00	0.00	0.00
			Max Tension	10	0.27	0.00	0.00
			Max. Compression	3	-2.47	0.00	0.00
			Max. Mx	4	-0.06	-0.01	0.00
			Max. My	13	-1.79	0.00	0.00
			Max. Vy	4	-0.01	0.00	0.00

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	44 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T15	100 - 80	Bottom Girt	Max. Vx	13	0.00	0.00	0.00
			Max Tension	10	0.33	0.00	0.00
			Max. Compression	2	-2.15	0.00	0.00
			Max. Mx	4	-0.53	-0.01	0.00
			Max. My	13	-1.83	0.00	0.00
			Max. Vy	4	-0.01	0.00	0.00
		Guy A	Max. Vx	13	0.00	0.00	0.00
			Bottom Tension	6	13.99		
			Top Tension	6	14.13		
			Top Cable Vert	6	8.02		
			Top Cable Norm	6	11.63		
			Top Cable Tan	6	0.00		
			Bot Cable Vert	6	-7.67		
			Bot Cable Norm	6	11.70		
			Bot Cable Tan	6	0.00		
		Guy B	Bottom Tension	10	13.54		
			Top Tension	10	13.67		
			Top Cable Vert	10	7.77		
			Top Cable Norm	10	11.25		
			Top Cable Tan	10	0.00		
			Bot Cable Vert	10	-7.42		
			Bot Cable Norm	10	11.33		
			Bot Cable Tan	10	0.00		
		Guy C	Bottom Tension	2	14.16		
			Top Tension	2	14.29		
			Top Cable Vert	2	8.12		
			Top Cable Norm	2	11.77		
			Top Cable Tan	2	0.00		
			Bot Cable Vert	2	-7.77		
			Bot Cable Norm	2	11.84		
			Bot Cable Tan	2	0.00		
		Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-122.79	-0.12	0.09
			Max. Mx	6	-113.64	0.51	0.26
			Max. My	2	-112.13	0.03	-0.59
			Max. Vy	12	2.10	0.14	0.06
			Max. Vx	8	-2.42	0.02	-0.15
		Diagonal	Max Tension	9	4.61	0.00	0.00
			Max Tension	6	0.15	0.00	0.00
			Max. Compression	9	-2.87	0.00	0.00
			Max. Mx	10	0.14	-0.01	0.00
		Horizontal	Max. My	13	-1.37	0.00	0.00
			Max. Vy	10	0.01	0.00	0.00
			Max. Vx	13	-0.00	0.00	0.00
			Max Tension	4	0.15	0.00	0.00
			Max. Compression	8	-1.69	0.00	0.00
			Max. Mx	4	0.15	-0.01	0.00
		Top Girt	Max. My	13	-1.48	0.00	0.00
			Max. Vy	4	0.01	0.00	0.00
			Max. Vx	13	-0.00	0.00	0.00
			Max Tension	10	0.14	0.00	0.00
			Max. Compression	7	-0.57	0.00	0.00
			Max. Mx	10	0.14	-0.01	0.00
		Bottom Girt	Max. My	13	-0.57	0.00	0.00
			Max. Vy	10	0.01	0.00	0.00
			Max. Vx	13	-0.00	0.00	0.00
			Max Tension	10	0.14	0.00	0.00
Max. Compression	7		-0.57	0.00	0.00		
Max. Mx	10		0.14	-0.01	0.00		
Leg	Max. My	13	-0.57	0.00	0.00		
	Max. Vy	10	0.01	0.00	0.00		
	Max. Vx	13	-0.00	0.00	0.00		
	Max Tension	1	0.00	0.00	0.00		
	Max. Compression	8	-123.73	0.20	0.15		
	Max. Mx	11	-116.86	-0.74	-0.01		
T16	80 - 60	Max. My	8	-120.30	-0.05	0.63	
		Max. Vy	6	1.55	0.08	0.05	

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	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T17	60 - 40	Diagonal	Max. Vx	2	-1.74	-0.00	-0.10
			Max Tension	2	3.66	0.00	0.00
		Horizontal	Max Tension	11	0.05	0.00	0.00
			Max. Compression	2	-2.28	0.00	0.00
		Top Girt	Max. Mx	4	-0.43	-0.01	0.00
			Max. My	13	-0.39	0.00	0.00
			Max. Vy	4	0.01	0.00	0.00
			Max. Vx	13	-0.00	0.00	0.00
			Max Tension	3	0.05	0.00	0.00
			Max. Compression	13	-0.47	0.00	0.00
			Max. Mx	10	0.04	-0.01	0.00
			Max. My	13	-0.47	0.00	0.00
			Max. Vy	10	0.01	0.00	0.00
			Max. Vx	13	-0.00	0.00	0.00
		Bottom Girt	Max Tension	4	0.01	0.00	0.00
			Max. Compression	8	-1.33	0.00	0.00
			Max. Mx	4	0.01	-0.01	0.00
			Max. My	13	-0.72	0.00	0.00
			Max. Vy	4	0.01	0.00	0.00
			Max. Vx	13	-0.00	0.00	0.00
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-134.08	-0.01	0.05
			Max. Mx	11	-118.80	1.66	0.03
			Max. My	7	-120.82	-0.95	-1.70
		Diagonal	Max. Vy	6	1.55	-0.34	-0.12
			Max. Vx	2	-1.74	-0.07	0.37
			Max Tension	5	3.92	0.00	0.00
			Max Tension	4	4.87	0.00	0.00
			Max. Compression	5	-2.66	0.00	0.00
			Max. Mx	4	-0.38	-0.01	0.00
			Max. My	7	-1.94	0.00	0.00
			Max. Vy	4	0.01	0.00	0.00
			Max. Vx	7	-0.00	0.00	0.00
			Max Tension	4	0.09	0.00	0.00
		Top Girt	Max. Compression	2	-1.08	0.00	0.00
			Max. Mx	4	0.09	-0.01	0.00
			Max. My	13	-0.57	0.00	0.00
			Max. Vy	4	0.01	0.00	0.00
			Max. Vx	13	-0.00	0.00	0.00
		Bottom Girt	Max Tension	2	0.17	0.00	0.00
			Max. Compression	13	-0.92	0.00	0.00
			Max. Mx	4	-0.30	-0.01	0.00
			Max. My	7	-0.90	0.00	0.00
			Max. Vy	4	0.01	0.00	0.00
			Max. Vx	7	-0.00	0.00	0.00
		Guy A	Bottom Tension	6	7.35		
			Top Tension	6	7.39		
			Top Cable Vert	6	2.35		
			Top Cable Norm	6	7.01		
			Top Cable Tan	6	0.00		
			Bot Cable Vert	6	-2.20		
			Bot Cable Norm	6	7.01		
			Bot Cable Tan	6	0.00		
		Guy B	Bottom Tension	10	7.12		
			Top Tension	10	7.16		
			Top Cable Vert	10	2.28		
			Top Cable Norm	10	6.79		
			Top Cable Tan	10	0.00		
			Bot Cable Vert	10	-2.13		
			Bot Cable Norm	10	6.80		
			Bot Cable Tan	10	0.00		

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	46 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T18	40 - 20	Guy C	Bottom Tension	2	7.47		
			Top Tension	2	7.51		
			Top Cable Vert	2	2.38		
			Top Cable Norm	2	7.12		
			Top Cable Tan	2	0.00		
			Bot Cable Vert	2	-2.24		
			Bot Cable Norm	2	7.13		
			Bot Cable Tan	2	0.00		
		Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-138.83	0.22	0.17
			Max. Mx	4	-109.50	0.54	-0.49
			Max. My	7	-119.89	0.13	0.55
			Max. Vy	5	-0.95	0.09	0.02
			Max. Vx	2	1.02	0.01	-0.11
		Diagonal Horizontal	Max Tension	13	2.14	0.00	0.00
			Max Tension	6	0.16	0.00	0.00
			Max. Compression	13	-1.19	0.00	0.00
			Max. Mx	4	-0.01	-0.01	0.00
			Max. My	7	-0.89	0.00	0.00
			Max. Vy	4	0.01	0.00	0.00
			Max. Vx	7	-0.00	0.00	0.00
		Top Girt	Max Tension	12	0.08	0.00	0.00
			Max. Compression	13	-0.85	0.00	0.00
			Max. Mx	4	-0.00	-0.01	0.00
			Max. My	7	-0.83	0.00	0.00
			Max. Vy	4	0.01	0.00	0.00
			Max. Vx	7	-0.00	0.00	0.00
		Bottom Girt	Max Tension	1	0.01	0.00	0.00
			Max. Compression	2	-0.71	0.00	0.00
			Max. Mx	4	-0.04	-0.01	0.00
			Max. My	7	-0.07	0.00	0.00
			Max. Vy	4	0.01	0.00	0.00
			Max. Vx	7	-0.00	0.00	0.00
T19	20 - 8.05469	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-137.34	-0.02	0.15
			Max. Mx	11	-112.54	0.71	-0.32
			Max. My	12	-114.29	0.08	0.80
			Max. Vy	6	0.85	-0.13	-0.05
			Max. Vx	2	-0.96	-0.02	0.16
		Diagonal Horizontal	Max Tension	6	3.11	0.00	0.00
			Max Tension	1	0.03	0.00	0.00
			Max. Compression	2	-2.26	0.00	0.00
			Max. Mx	4	-0.28	-0.01	0.00
			Max. My	7	-0.84	0.00	0.00
			Max. Vy	4	0.01	0.00	0.00
			Max. Vx	7	-0.00	0.00	0.00
		Top Girt	Max Tension	10	0.04	0.00	0.00
			Max. Compression	2	-0.96	0.00	0.00
			Max. Mx	4	-0.25	-0.01	0.00
			Max. My	7	-0.29	0.00	0.00
			Max. Vy	4	0.01	0.00	0.00
			Max. Vx	7	-0.00	0.00	0.00
T20	8.05469 - 6	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-129.18	-0.15	-0.18
			Max. Mx	11	-126.49	3.57	1.68
			Max. My	8	-127.03	-0.09	-4.05
			Max. Vy	12	-12.26	3.41	2.12
			Max. Vx	8	14.15	-0.09	-4.05
		Diagonal	Max Tension	6	3.72	0.00	0.00
			Max Tension	1	0.00	0.00	0.00
		Top Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	6	-2.70	0.00	0.00

tnxTower Tower Engineering Professionals 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	47 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T21	6 - 2.66927	Bottom Girt	Max. Mx	12	-0.51	-0.01	0.00
			Max. My	7	-1.08	0.00	0.00
			Max. Vy	12	0.01	0.00	0.00
			Max. Vx	7	-0.00	0.00	0.00
			Max Tension	2	6.05	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	12	5.81	-0.01	0.00
			Max. My	7	5.78	0.00	0.00
			Max. Vy	12	0.01	0.00	0.00
			Max. Vx	7	-0.00	0.00	0.00
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-136.19	-0.36	0.14
		Leg	Max. Mx	8	-123.63	4.05	-0.09
			Max. My	7	-128.95	-0.37	0.75
			Max. Vy	3	32.72	1.00	-0.46
			Max. Vx	6	-0.90	0.92	-0.05
			Max Tension	7	0.07	0.00	0.00
			Max Tension	2	20.57	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	6	20.42	-0.02	0.00
			Max. My	7	18.84	0.00	-0.00
			Max. Vy	6	-0.02	0.00	0.00
			Max. Vx	7	0.00	0.00	0.00
T22	2.66927 - 0	Bottom Girt	Max Tension	13	0.38	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	6	0.34	-0.00	0.00
			Max. My	7	0.23	0.00	-0.00
			Max. Vy	6	0.00	0.00	0.00
			Max. Vx	7	0.00	0.00	0.00
		Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-136.57	-0.22	0.26
			Max. Mx	2	-120.10	2.11	0.14
			Max. My	7	-135.41	-0.23	1.24
			Max. Vy	2	4.86	-1.79	-0.34
			Max. Vx	7	-2.53	-1.82	1.17
		Bottom Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	3	-3.14	-2.43	-0.03
			Max. Mx	7	-3.10	-3.12	-0.05
			Max. My	7	-3.10	-3.12	-0.05
			Max. Vy	7	-7.31	-2.86	-0.04
			Max. Vx	7	-0.17	-3.12	-0.05

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Mast	Max. Vert	3	363.29	-1.06	2.87
	Max. H _x	11	362.86	2.78	0.08
	Max. H _z	2	359.29	0.18	3.36
	Max. M _x	1	0.00	-0.04	0.03
	Max. M _z	1	0.00	-0.04	0.03
	Max. Torsion	13	1.84	1.31	2.78
	Min. Vert	1	280.58	-0.04	0.03
	Min. H _x	5	363.21	-2.70	-0.27
	Min. H _z	8	360.47	-0.00	-2.92
	Min. M _x	1	0.00	-0.04	0.03

tnxTower Tower Engineering Professionals 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	48 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Guy C @ 173 ft Elev 0 ft Azimuth 180 deg	Min. M _z	1	0.00	-0.04	0.03
	Min. Torsion	7	-2.04	-1.66	-2.45
	Max. Vert	8	-19.43	-0.00	11.72
Guy B @ 173 ft Elev 0 ft Azimuth 60 deg	Max. H _x	11	-86.37	4.57	73.04
	Max. H _z	2	-152.68	0.03	134.42
	Min. Vert	2	-152.68	0.03	134.42
	Min. H _x	5	-86.76	-4.57	73.52
	Min. H _z	8	-19.43	-0.00	11.72
	Max. Vert	4	-19.11	10.06	-5.81
Guy A @ 173 ft Elev 0 ft Azimuth -60 deg	Max. H _x	10	-153.52	116.53	-67.29
	Max. H _z	4	-19.11	10.06	-5.81
	Min. Vert	10	-153.52	116.53	-67.29
	Min. H _x	4	-19.11	10.06	-5.81
	Min. H _z	10	-153.52	116.53	-67.29
	Max. Vert	12	-19.56	-10.31	-5.95
	Max. H _x	12	-19.56	-10.31	-5.95
	Max. H _z	12	-19.56	-10.31	-5.95
	Min. Vert	6	-152.44	-115.96	-67.00
	Min. H _x	6	-152.44	-115.96	-67.00
	Min. H _z	6	-152.44	-115.96	-67.00

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	280.58	0.04	-0.03	0.00	0.00	-0.01
1.2 Dead+1.0 Wind 0 deg - No Ice+1.0 Guy	359.29	-0.18	-3.36	0.00	0.00	-0.60
1.2 Dead+1.0 Wind 30 deg - No Ice+1.0 Guy	363.29	1.06	-2.87	0.00	0.00	1.18
1.2 Dead+1.0 Wind 60 deg - No Ice+1.0 Guy	361.70	2.32	-1.33	0.00	0.00	0.74
1.2 Dead+1.0 Wind 90 deg - No Ice+1.0 Guy	363.21	2.70	0.27	0.00	0.00	0.04
1.2 Dead+1.0 Wind 120 deg - No Ice+1.0 Guy	359.20	2.68	1.58	0.00	0.00	1.32
1.2 Dead+1.0 Wind 150 deg - No Ice+1.0 Guy	360.96	1.66	2.45	0.00	0.00	2.04
1.2 Dead+1.0 Wind 180 deg - No Ice+1.0 Guy	360.47	0.00	2.92	0.00	0.00	0.44
1.2 Dead+1.0 Wind 210 deg - No Ice+1.0 Guy	362.95	-1.58	2.46	0.00	0.00	-1.01
1.2 Dead+1.0 Wind 240 deg - No Ice+1.0 Guy	359.67	-2.58	1.49	0.00	0.00	-0.77
1.2 Dead+1.0 Wind 270 deg - No Ice+1.0 Guy	362.86	-2.78	-0.08	0.00	0.00	0.77
1.2 Dead+1.0 Wind 300 deg - No Ice+1.0 Guy	360.35	-2.38	-1.59	0.00	0.00	-0.52
1.2 Dead+1.0 Wind 330 deg - No Ice+1.0 Guy	360.88	-1.31	-2.78	0.00	0.00	-1.84

tnxTower Tower Engineering Professionals 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	49 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

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 0 deg - Service+Guy	283.90	-0.02	-1.00	0.00	0.00	-0.13
Dead+Wind 30 deg - Service+Guy	283.80	0.43	-0.89	0.00	0.00	0.33
Dead+Wind 60 deg - Service+Guy	283.79	0.78	-0.45	0.00	0.00	0.20
Dead+Wind 90 deg - Service+Guy	283.79	0.89	-0.01	0.00	0.00	0.01
Dead+Wind 120 deg - Service+Guy	283.90	0.81	0.44	0.00	0.00	0.34
Dead+Wind 150 deg - Service+Guy	283.80	0.48	0.80	0.00	0.00	0.43
Dead+Wind 180 deg - Service+Guy	283.81	0.01	0.93	0.00	0.00	0.05
Dead+Wind 210 deg - Service+Guy	283.78	-0.44	0.81	0.00	0.00	-0.30
Dead+Wind 240 deg - Service+Guy	283.90	-0.76	0.43	0.00	0.00	-0.24
Dead+Wind 270 deg - Service+Guy	283.79	-0.89	-0.10	0.00	0.00	0.23
Dead+Wind 300 deg - Service+Guy	283.81	-0.78	-0.51	0.00	0.00	-0.06
Dead+Wind 330 deg - Service+Guy	283.81	-0.47	-0.86	0.00	0.00	-0.36

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	0.00	-88.65	0.00	0.00	88.65	0.00	0.000%
2	0.40	-102.72	-102.95	-0.40	102.72	102.95	0.002%
3	51.58	-103.38	-89.70	-51.58	103.38	89.70	0.001%
4	87.83	-104.04	-50.87	-87.82	104.04	50.87	0.001%
5	102.20	-103.38	-0.25	-102.20	103.38	0.25	0.001%
6	88.57	-102.72	50.70	-88.57	102.72	-50.70	0.001%
7	50.19	-103.38	87.45	-50.19	103.38	-87.45	0.001%
8	-0.20	-104.04	101.33	0.20	104.04	-101.33	0.001%
9	-51.69	-103.38	89.22	51.69	103.38	-89.22	0.001%
10	-88.95	-102.72	51.51	88.95	102.72	-51.51	0.001%
11	-102.11	-103.38	-0.11	102.11	103.38	0.11	0.001%
12	-87.22	-104.04	-50.41	87.22	104.04	50.41	0.001%
13	-50.55	-103.38	-87.38	50.55	103.38	87.38	0.001%
14	0.11	-88.47	-28.06	-0.11	88.47	28.06	0.000%
15	14.06	-88.65	-24.45	-14.06	88.65	24.45	0.000%
16	23.94	-88.83	-13.86	-23.94	88.83	13.86	0.000%
17	27.85	-88.65	-0.07	-27.86	88.65	0.07	0.002%
18	24.14	-88.47	13.82	-24.14	88.47	-13.82	0.000%
19	13.68	-88.65	23.83	-13.68	88.65	-23.83	0.001%
20	-0.05	-88.83	27.62	0.05	88.83	-27.62	0.000%
21	-14.09	-88.65	24.32	14.09	88.65	-24.32	0.001%
22	-24.24	-88.47	14.04	24.24	88.47	-14.04	0.000%
23	-27.83	-88.65	-0.03	27.83	88.65	0.03	0.000%
24	-23.77	-88.83	-13.74	23.77	88.83	13.74	0.000%
25	-13.78	-88.65	-23.82	13.78	88.65	23.82	0.001%

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job Lake City (SR 47 & US 41) (BU 870081)	Page 50 of 63
	Project TEP No. 145283.791998	Date 16:40:56 12/01/22
	Client Crown Castle	Designed by SPT

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	10	0.00000001	0.00005441
2	Yes	10	0.00000001	0.00007663
3	Yes	13	0.00000001	0.00004125
4	Yes	14	0.00000001	0.00002336
5	Yes	13	0.00000001	0.00004244
6	Yes	11	0.00009499	0.00009212
7	Yes	13	0.00000001	0.00003720
8	Yes	14	0.00000001	0.00002304
9	Yes	13	0.00000001	0.00004420
10	Yes	11	0.00000001	0.00002503
11	Yes	13	0.00000001	0.00004223
12	Yes	14	0.00000001	0.00002306
13	Yes	13	0.00000001	0.00003223
14	Yes	12	0.00000001	0.00001731
15	Yes	10	0.00000001	0.00004617
16	Yes	12	0.00000001	0.00004329
17	Yes	9	0.00000001	0.00006576
18	Yes	10	0.00000001	0.00005229
19	Yes	10	0.00000001	0.00005905
20	Yes	12	0.00000001	0.00008003
21	Yes	10	0.00000001	0.00009412
22	Yes	20	0.00000001	0.00004286
23	Yes	10	0.00000001	0.00003702
24	Yes	10	0.00000001	0.00007857
25	Yes	10	0.00000001	0.00006070

Maximum Tower Deflections - Service Wind

<i>Section No.</i>	<i>Elevation ft</i>	<i>Horz. Deflection in</i>	<i>Gov. Load Comb.</i>	<i>Tilt °</i>	<i>Twist °</i>
T1	350 - 341.945	1.291	22	0.0268	0.1665
T2	341.945 - 340	1.309	22	0.0271	0.1621
T3	340 - 320	1.309	22	0.0275	0.1570
T4	320 - 300	1.392	22	0.0274	0.1299
T5	300 - 280	1.388	22	0.0318	0.0783
T6	280 - 260	1.524	22	0.0324	0.1865
T7	260 - 240	1.611	22	0.0191	0.2135
T8	240 - 220	1.535	22	0.0081	0.1625
T9	220 - 200	1.570	22	0.0143	0.2626
T10	200 - 180	1.456	22	0.0348	0.3609
T11	180 - 160	1.165	22	0.0359	0.2640
T12	160 - 140	1.114	22	0.0290	0.3598
T13	140 - 120	0.982	14	0.0332	0.3209
T14	120 - 100	0.734	14	0.0294	0.1860
T15	100 - 80	0.725	15	0.0211	0.2646
T16	80 - 60	0.762	15	0.0258	0.3416
T17	60 - 40	0.536	14	0.0324	0.1480
T18	40 - 20	0.477	15	0.0376	0.2221
T19	20 - 8.05469	0.302	21	0.0482	0.1373
T20	8.05469 - 6	0.095	14	0.0526	0.0491
T21	6 - 2.66927	0.068	21	0.0531	0.0413
T22	2.66927 - 0	0.031	21	0.0537	0.0221

tnxTower Tower Engineering Professionals 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	51 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

Critical Deflections and Radius of Curvature - Service Wind

<i>Elevation</i>	<i>Appurtenance</i>	<i>Gov. Load</i>	<i>Deflection</i>	<i>Tilt</i>	<i>Twist</i>	<i>Radius of Curvature</i>
<i>ft</i>		<i>Comb.</i>	<i>in</i>	<i>°</i>	<i>°</i>	<i>ft</i>
350'	12" x 24" Beacon	22	1.291	0.0268	0.1665	28501
345'	DB228-B	22	1.305	0.0268	0.1665	28501
335'10-3/32"	Guy	22	1.317	0.0279	0.1484	18779
324'	SRL-224NM-4	22	1.378	0.0274	0.1361	26126
295'10-3/32"	Guy	22	1.404	0.0329	0.0994	19430
270'	(2) SRL-224NM-4	22	1.590	0.0265	0.2196	24249
255'	PD322-2	22	1.597	0.0159	0.2009	24445
250'	(2) X7CQAP-665-VR0 w/ Mount Pipe	22	1.573	0.0130	0.1839	296838
235'10-3/32"	Guy	22	1.535	0.0091	0.1707	20510
229'	AIR6449 B41_T-MOBILE w/ Mount Pipe	22	1.550	0.0103	0.2011	193752
222'	DT465B-2XR w/ Mount Pipe	22	1.568	0.0130	0.2476	18985
215'	DB567R90-CR	22	1.566	0.0190	0.3011	15274
210'	8"x15" Dia. Beacon	22	1.547	0.0247	0.3352	15987
201'	(2) SBNHH-1D85B w/ Mount Pipe	22	1.469	0.0341	0.3621	14053
175'10-3/32"	Guy	22	1.136	0.0341	0.2703	12887
166'	HPLPD2-11	22	1.118	0.0301	0.3265	209617
165'	HPD4-11	22	1.118	0.0298	0.3329	80612
164'	HPX6-59-P3A/K	22	1.117	0.0296	0.3391	50037
156'	(3) DB848H105ESX w/ Mount Pipe	22	1.104	0.0293	0.3705	19756
115'10-3/32"	Guy	14	0.710	0.0274	0.1834	13533
55'10-3/32"	Guy	14	0.509	0.0334	0.1447	15675
11'	1.2M	14	0.140	0.0519	0.0647	15587

Maximum Tower Deflections - Design Wind

<i>Section No.</i>	<i>Elevation</i>	<i>Horz. Deflection</i>	<i>Gov. Load</i>	<i>Tilt</i>	<i>Twist</i>
	<i>ft</i>	<i>in</i>	<i>Comb.</i>	<i>°</i>	<i>°</i>
T1	350 - 341.945	8.407	10	0.0572	0.4627
T2	341.945 - 340	8.315	10	0.0570	0.4471
T3	340 - 320	8.277	10	0.0570	0.4287
T4	320 - 300	8.332	9	0.0547	0.3622
T5	300 - 280	8.241	9	0.0617	0.3843
T6	280 - 260	8.586	4	0.0568	0.6830
T7	260 - 240	8.760	4	0.0698	0.7497
T8	240 - 220	8.405	4	0.1017	0.7791
T9	220 - 200	8.178	4	0.1212	1.0191
T10	200 - 180	7.430	4	0.2086	1.2224
T11	180 - 160	6.148	4	0.2186	1.0837
T12	160 - 140	5.477	4	0.1925	1.2891
T13	140 - 120	4.611	3	0.1989	1.1668
T14	120 - 100	3.580	8	0.1730	0.8605
T15	100 - 80	3.186	8	0.1277	0.9730
T16	80 - 60	2.915	8	0.1308	1.0601
T17	60 - 40	2.214	8	0.1461	0.6321
T18	40 - 20	1.743	8	0.1612	0.7050
T19	20 - 8.05469	1.030	8	0.1961	0.4457
T20	8.05469 - 6	0.380	8	0.2118	0.2505
T21	6 - 2.66927	0.274	8	0.2134	0.2106
T22	2.66927 - 0	0.119	8	0.2088	0.1093

tnxTower Tower Engineering Professionals 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	52 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

Critical Deflections and Radius of Curvature - Design Wind

<i>Elevation</i>	<i>Appurtenance</i>	<i>Gov. Load Comb.</i>	<i>Deflection in</i>	<i>Tilt °</i>	<i>Twist °</i>	<i>Radius of Curvature ft</i>
<i>ft</i>			<i>in</i>			
350'	12" x 24" Beacon	10	8.407	0.0572	0.4627	7828
345'	DB228-B	10	8.361	0.0570	0.4626	7828
335'10-3/32"	Guy	10	8.222	0.0568	0.3930	6334
324'	SRL-224NM-4	9	8.311	0.0553	0.3624	12232
295'10-3/32"	Guy	9	8.266	0.0652	0.4532	7982
270'	(2) SRL-224NM-4	4	8.744	0.0424	0.7568	8372
255'	PD322-2	4	8.696	0.0815	0.7613	8757
250'	(2) X7CQAP-665-VR0 w/ Mount Pipe	4	8.601	0.0908	0.7622	28696
235'10-3/32"	Guy	4	8.352	0.1032	0.8084	10768
229'	AIR6449 B41_T-MOBILE w/ Mount Pipe	4	8.289	0.1054	0.8853	27764
222'	DT465B-2XR w/ Mount Pipe	4	8.211	0.1148	0.9876	7390
215'	DB567R90-CR	4	8.066	0.1419	1.0970	5810
210'	8"x15" Dia. Beacon	4	7.907	0.1660	1.1649	5635
201'	(2) SBNHH-1D85B w/ Mount Pipe	4	7.488	0.2053	1.2233	5006
175'10-3/32"	Guy	4	5.963	0.2127	1.1053	4994
166'	HPLPD2-11	4	5.653	0.1978	1.2261	55347
165'	HPD4-11	4	5.625	0.1966	1.2389	46408
164'	HPX6-59-P3A/K	4	5.597	0.1955	1.2510	24082
156'	(3) DB848H105ESX w/ Mount Pipe	4	5.337	0.1921	1.3043	8666
115'10-3/32"	Guy	8	3.443	0.1626	0.8480	5423
55'10-3/32"	Guy	8	2.096	0.1488	0.6149	9332
11'	1.2M	8	0.541	0.2135	0.3001	20551

Bolt Design Data

<i>Section No.</i>	<i>Elevation ft</i>	<i>Component Type</i>	<i>Bolt Grade</i>	<i>Bolt Size in</i>	<i>Number Of Bolts</i>	<i>Maximum Load per Bolt K</i>	<i>Allowable Load per Bolt K</i>	<i>Ratio Load Allowable</i>	<i>Allowable Ratio</i>	<i>Criteria</i>
T2	341.945	Leg	A325N	0.7500	3	1.25	30.10	0.041	1.05	Bolt Tension
T3	340	Leg	A325N	0.7500	3	2.83	30.10	0.094	1.05	Bolt Tension
T4	320	Leg	A325N	0.7500	3	3.95	30.10	0.131	1.05	Bolt Tension
T5	300	Leg	A325N	0.7500	3	6.83	30.10	0.227	1.05	Bolt Tension
T6	280	Leg	A325N	0.7500	3	8.35	30.10	0.278	1.05	Bolt Tension
T7	260	Leg	A325N	0.7500	3	6.23	30.10	0.207	1.05	Bolt Tension
T8	240	Leg	A325N	0.7500	3	12.68	30.10	0.421	1.05	Bolt Tension
T9	220	Leg	A325N	0.7500	3	12.12	30.10	0.403	1.05	Bolt Tension
T10	200	Leg	A325N	0.7500	3	11.82	30.10	0.393	1.05	Bolt Tension
T11	180	Leg	A325N	0.7500	3	11.62	30.10	0.386	1.05	Bolt Tension
T12	160	Leg	A325N	0.7500	3	11.40	30.10	0.379	1.05	Bolt Tension
T13	140	Leg	A325N	0.7500	3	14.33	30.10	0.476	1.05	Bolt Tension
T14	120	Leg	A325N	0.7500	3	13.03	30.10	0.433	1.05	Bolt Tension
T15	100	Leg	A325N	0.7500	3	13.64	30.10	0.453	1.05	Bolt Tension
T16	80	Leg	A325N	0.7500	3	13.20	30.10	0.438	1.05	Bolt Tension
T17	60	Leg	A325N	0.7500	3	14.90	30.10	0.495	1.05	Bolt Tension
T18	40	Leg	A325N	0.7500	3	15.24	30.10	0.506	1.05	Bolt Tension
T20	8.05469	Leg	A325N	0.7500	3	14.11	30.10	0.469	1.05	Bolt Tension

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	Project TEP No. 145283.791998	Date 16:40:56 12/01/22
	Client Crown Castle	Designed by SPT

Guy Design Data

Section No.	Elevation ft	Size	Initial Tension K	Breaking Load K	Actual T_u K	Allowable ϕT_n K	Required S.F.	Actual S.F.
T3	335'10-3/32" (A) (953)	7/8 EHS	7.97	79.70	18.12	50.21	0.952	2.640
	335'10-3/32" (A) (954)	7/8 EHS	7.97	79.70	18.10	50.21	0.952	2.642
	335'10-3/32" (B) (951)	7/8 EHS	7.97	79.70	18.38	50.21	0.952	2.601
	335'10-3/32" (B) (952)	7/8 EHS	7.97	79.70	18.24	50.21	0.952	2.622
	335'10-3/32" (C) (949)	7/8 EHS	7.97	79.70	17.99	50.21	0.952	2.658
	335'10-3/32" (C) (950)	7/8 EHS	7.97	79.70	18.30	50.21	0.952	2.613
T5	295'10-3/32" (A) (947)	7/8 EHS	7.97	79.70	18.61	50.21	0.952	2.569
	295'10-3/32" (A) (948)	7/8 EHS	7.97	79.70	19.05	50.21	0.952	2.510
	295'10-3/32" (B) (945)	7/8 EHS	7.97	79.70	19.26	50.21	0.952	2.483
	295'10-3/32" (B) (946)	7/8 EHS	7.97	79.70	18.92	50.21	0.952	2.527
	295'10-3/32" (C) (943)	7/8 EHS	7.97	79.70	18.82	50.21	0.952	2.541
	295'10-3/32" (C) (944)	7/8 EHS	7.97	79.70	18.92	50.21	0.952	2.527
T8	235'10-3/32" (A) (941)	1 EHS	10.45	104.50	26.87	65.83	0.952	2.333
	235'10-3/32" (A) (942)	1 EHS	10.45	104.50	27.96	65.83	0.952	2.243
	235'10-3/32" (B) (939)	1 EHS	10.45	104.50	27.70	65.83	0.952	2.264
	235'10-3/32" (B) (940)	1 EHS	10.45	104.50	27.46	65.83	0.952	2.283
	235'10-3/32" (C) (937)	1 EHS	10.45	104.50	27.81	65.83	0.952	2.254
	235'10-3/32" (C) (938)	1 EHS	10.45	104.50	26.88	65.83	0.952	2.332
T11	175'10-3/32" (A) (935)	7/8 EHS	7.97	79.70	20.01	50.21	0.952	2.389
	175'10-3/32" (A) (936)	7/8 EHS	7.97	79.70	21.31	50.21	0.952	2.244
	175'10-3/32" (B) (933)	7/8 EHS	7.97	79.70	20.68	50.21	0.952	2.312
	175'10-3/32" (B) (934)	7/8 EHS	7.97	79.70	20.67	50.21	0.952	2.314
	175'10-3/32" (C) (931)	7/8 EHS	7.97	79.70	21.26	50.21	0.952	2.250
	175'10-3/32" (C) (932)	7/8 EHS	7.97	79.70	19.96	50.21	0.952	2.396
T14	115'10-3/32" (A) (929)	3/4 EHS	5.83	58.30	13.00	36.73	0.952	2.692
	115'10-3/32" (A) (930)	3/4 EHS	5.83	58.30	14.13	36.73	0.952	2.476
	115'10-3/32" (B) (927)	3/4 EHS	5.83	58.30	13.67	36.73	0.952	2.558
	115'10-3/32" (B) (928)	3/4 EHS	5.83	58.30	13.43	36.73	0.952	2.604
	115'10-3/32" (C) (925)	3/4 EHS	5.83	58.30	14.29	36.73	0.952	2.447

tnxTower Tower Engineering Professionals 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	54 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

Section No.	Elevation ft	Size	Initial Tension K	Breaking Load K	Actual T_u K	Allowable ϕT_n K	Required S.F.	Actual S.F.
T17	115'10-3/32" (C) (926)	3/4 EHS	5.83	58.30	13.19	36.73	0.952	2.651
	55'10-3/32" (A) (923)	9/16 EHS	3.50	35.00	6.80	22.05	0.952	3.088
	55'10-3/32" (A) (924)	9/16 EHS	3.50	35.00	7.39	22.05	0.952	2.842
	55'10-3/32" (B) (921)	9/16 EHS	3.50	35.00	7.16	22.05	0.952	2.933
	55'10-3/32" (B) (922)	9/16 EHS	3.50	35.00	7.01	22.05	0.952	2.996
	55'10-3/32" (C) (919)	9/16 EHS	3.50	35.00	7.51	22.05	0.952	2.796
	55'10-3/32" (C) (920)	9/16 EHS	3.50	35.00	6.96	22.05	0.952	3.016

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	350 - 341.945	2 1/4	8'19/32"	3'10-11/16"	83.0 K=1.00	3.9761	-3.40	108.12	0.031 ¹
T2	341.945 - 340	2 1/4	1'11-13/32"	1'8-1/32"	35.7 K=1.00	3.9761	-5.30	163.03	0.033 ¹
T3	340 - 320	2 1/4	20'	3'10-11/16"	83.0 K=1.00	3.9761	-26.79	108.12	0.248 ¹
T4	320 - 300	2 1/4	20'	3'10-11/16"	83.0 K=1.00	3.9761	-35.54	108.12	0.329 ¹
T5	300 - 280	3	20'	3'10-11/16"	62.3 K=1.00	7.0686	-61.40	239.60	0.256 ¹
T6	280 - 260	3	20'	3'10-11/16"	62.3 K=1.00	7.0686	-75.74	239.60	0.316 ¹
T7	260 - 240	3	20'	3'10-11/16"	62.3 K=1.00	7.0686	-76.31	239.60	0.319 ¹
T8	240 - 220	3	20'	3'10-11/16"	62.3 K=1.00	7.0686	-114.04	239.60	0.476 ¹
T9	220 - 200	3	20'	3'10-11/16"	62.3 K=1.00	7.0686	-116.42	239.60	0.486 ¹
T10	200 - 180	3 1/2	20'	3'10-11/16"	53.4 K=1.00	9.6211	-109.26	351.59	0.311 ¹
T11	180 - 160	3 1/2	20'	3'10-11/16"	53.4 K=1.00	9.6211	-126.19	351.59	0.359 ¹
T12	160 - 140	3 1/2	20'	3'10-11/16"	53.4 K=1.00	9.6211	-108.77	351.59	0.309 ¹
T13	140 - 120	3 1/2	20'	3'10-11/16"	53.4 K=1.00	9.6211	-128.88	351.59	0.367 ¹
T14	120 - 100	3 1/2	20'	3'10-11/16"	53.4 K=1.00	9.6211	-141.65	351.59	0.403 ¹
T15	100 - 80	3 1/2	20'	3'10-11/16"	53.4 K=1.00	9.6211	-122.72	351.59	0.349 ¹
T16	80 - 60	3 1/2	20'	3'10-11/16"	53.4 K=1.00	9.6211	-123.73	351.59	0.352 ¹

tnxTower Tower Engineering Professionals 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	55 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

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	60 - 40	3 1/2	20'	3'10-11/16"	53.4 K=1.00	9.6211	-134.00	351.59	0.381 ¹
T18	40 - 20	3 1/2	20'	3'10-11/16"	53.4 K=1.00	9.6211	-138.83	351.59	0.395 ¹
T19	20 - 8.05469	3 1/2	11'11-13/32"	3'10-11/16"	53.4 K=1.00	9.6211	-137.34	351.59	0.391 ¹
T20	8.05469 - 6	3 1/2	2'19/32"	1'9-3/8"	24.4 K=1.00	9.6211	-129.18	414.47	0.312 ¹
T21	6 - 2.66927	3 1/2	3'6-27/32"	3'5-3/4"	47.7 K=1.00	9.6211	-136.19	366.56	0.372 ¹
T22	2.66927 - 0	3 1/2	2'10-5/16"	2'23/32"	28.2 K=1.00	9.6211	-136.57	408.48	0.334 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	350 - 341.945	L2x2x3/16	4'	3'9-23/32"	118.1 K=1.02	0.7150	-1.01	14.46	0.070 ¹
T3	340 - 320	L2x2x3/16	4'	3'9-23/32"	118.1 K=1.02	0.7150	-1.60	14.46	0.111 ¹
T4	320 - 300	L2x2x3/16	4'	3'9-23/32"	118.1 K=1.02	0.7150	-2.46	14.46	0.170 ¹
T5	300 - 280	L2x2x1/4	4'	3'9"	117.5 K=1.02	0.9375	-4.40	19.09	0.231 ¹
T6	280 - 260	L2x2x1/4	4'	3'9"	117.5 K=1.02	0.9375	-3.66	19.09	0.192 ¹
T7	260 - 240	L2 1/2x2 1/2x1/4	4'	3'9"	105.8 K=1.15	1.1900	-6.42	27.75	0.231 ¹
T8	240 - 220	L2 1/2x2 1/2x1/4	4'	3'9"	105.8 K=1.15	1.1900	-7.38	27.75	0.266 ¹
T9	220 - 200	L2x2x1/4	4'	3'9"	117.5 K=1.02	0.9375	-2.02	19.09	0.106 ¹
T10	200 - 180	L2x2x1/4	4'	3'8-17/32"	116.9 K=1.03	0.9375	-7.17	19.25	0.373 ¹
T11	180 - 160	L2x2x1/4	4'	3'8-17/32"	116.9 K=1.03	0.9375	-5.59	19.25	0.290 ¹
T12	160 - 140	L2x2x1/4	4'	3'8-17/32"	116.9 K=1.03	0.9375	-1.89	19.25	0.098 ¹
T13	140 - 120	L2x2x1/4	4'	3'8-17/32"	116.9 K=1.03	0.9375	-4.84	19.25	0.252 ¹
T14	120 - 100	L2x2x1/4	4'	3'8-17/32"	116.9 K=1.03	0.9375	-4.60	19.25	0.239 ¹
T15	100 - 80	L2x2x3/16	4'	3'8-17/32"	116.5 K=1.03	0.7150	-2.87	14.76	0.195 ¹
T16	80 - 60	L2x2x3/16	4'	3'8-17/32"	116.5 K=1.03	0.7150	-2.28	14.76	0.155 ¹
T17	60 - 40	L2x2x3/16	4'	3'8-17/32"	116.5 K=1.03	0.7150	-2.66	14.76	0.180 ¹
T18	40 - 20	L2x2x3/16	4'	3'8-17/32"	116.5 K=1.03	0.7150	-2.40	14.76	0.163 ¹
T19	20 - 8.05469	L2x2x3/16	4'	3'8-17/32"	116.5 K=1.03	0.7150	-2.38	14.76	0.161 ¹

tnxTower Tower Engineering Professionals 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	56 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

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

¹ P_u / φP_n controls

Top Girt Design Data (Compression)

Section No.	Elevation	Size	L	L _u	Kl/r	A	P _u	φP _n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in ²	K	K	
T1	350 - 341.945	L2x2x3/16	4'	3'9-23/32"	118.1 K=1.02	0.7150	-0.08	14.46	0.005 ¹
T2	341.945 - 340	L2x2x3/16	4'	3'9-23/32"	118.1 K=1.02	0.7150	-2.34	14.46	0.162 ¹
T3	340 - 320	L2x2x3/16	4'	3'9-23/32"	118.1 K=1.02	0.7150	-1.33	14.46	0.092 ¹
T4	320 - 300	L2x2x3/16	4'	3'9-23/32"	118.1 K=1.02	0.7150	-0.94	14.46	0.065 ¹
T5	300 - 280	L2x2x1/4	4'	3'9"	117.5 K=1.02	0.9375	-1.55	19.09	0.081 ¹
T6	280 - 260	L2x2x1/4	4'	3'9"	117.5 K=1.02	0.9375	-2.18	19.09	0.114 ¹
T7	260 - 240	L2 1/2x2 1/2x1/4	4'	3'9"	105.8 K=1.15	1.1900	-1.32	27.75	0.048 ¹
T8	240 - 220	L2 1/2x2 1/2x1/4	4'	3'9"	105.8 K=1.15	1.1900	-3.64	27.75	0.131 ¹
T9	220 - 200	L2x2x1/4	4'	3'9"	117.5 K=1.02	0.9375	-2.02	19.09	0.106 ¹
T10	200 - 180	L2x2x1/4	4'	3'8-17/32"	116.9 K=1.03	0.9375	-2.48	19.25	0.129 ¹
T11	180 - 160	L2x2x1/4	4'	3'8-17/32"	116.9 K=1.03	0.9375	-3.67	19.25	0.191 ¹
T12	160 - 140	L2x2x1/4	4'	3'8-17/32"	116.9 K=1.03	0.9375	-1.88	19.25	0.098 ¹
T13	140 - 120	L2x2x1/4	4'	3'8-17/32"	116.9 K=1.03	0.9375	-2.23	19.25	0.116 ¹
T14	120 - 100	L2x2x1/4	4'	3'8-17/32"	116.9 K=1.03	0.9375	-2.47	19.25	0.129 ¹
T15	100 - 80	L2x2x3/16	4'	3'8-17/32"	116.5 K=1.03	0.7150	-2.13	14.76	0.144 ¹
T16	80 - 60	L2x2x3/16	4'	3'8-17/32"	116.5 K=1.03	0.7150	-2.14	14.76	0.145 ¹
T17	60 - 40	L2x2x3/16	4'	3'8-17/32"	116.5 K=1.03	0.7150	-2.32	14.76	0.157 ¹
T18	40 - 20	L2x2x3/16	4'	3'8-17/32"	116.5 K=1.03	0.7150	-2.40	14.76	0.163 ¹
T19	20 - 8.05469	L2x2x3/16	4'	3'8-17/32"	116.5 K=1.03	0.7150	-2.38	14.76	0.161 ¹
T20	8.05469 - 6	L2x2x3/16	4'	3'8-17/32"	116.5 K=1.03	0.7150	-2.70	14.76	0.183 ¹
T21	6 - 2.66927	L3x3x3/8	3'11-9/32"	3'7-13/16"	97.3 K=1.30	2.1100	-2.48	53.33	0.047 ¹

¹ P_u / φP_n controls

tnxTower Tower Engineering Professionals 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	57 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

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 $\frac{P_u}{\phi P_n}$
T2	341.945 - 340	L2x2x3/16	4'	3'9-23/32"	118.1 K=1.02	0.7150	-1.59	14.46	0.110 ¹
T3	340 - 320	L2x2x3/16	4'	3'9-23/32"	118.1 K=1.02	0.7150	-0.73	14.46	0.051 ¹
T4	320 - 300	L2x2x3/16	4'	3'9-23/32"	118.1 K=1.02	0.7150	-1.33	14.46	0.092 ¹
T5	300 - 280	L2x2x1/4	4'	3'9"	117.5 K=1.02	0.9375	-2.15	19.09	0.112 ¹
T6	280 - 260	L2x2x1/4	4'	3'9"	117.5 K=1.02	0.9375	-1.31	19.09	0.069 ¹
T7	260 - 240	L2 1/2x2 1/2x1/4	4'	3'9"	105.8 K=1.15	1.1900	-3.61	27.75	0.130 ¹
T8	240 - 220	L2 1/2x2 1/2x1/4	4'	3'9"	105.8 K=1.15	1.1900	-2.24	27.75	0.081 ¹
T9	220 - 200	L2x2x1/4	4'	3'9"	117.5 K=1.02	0.9375	-2.02	19.09	0.106 ¹
T10	200 - 180	L2x2x1/4	4'	3'8-17/32"	116.9 K=1.03	0.9375	-4.09	19.25	0.212 ¹
T11	180 - 160	L2x2x1/4	4'	3'8-17/32"	116.9 K=1.03	0.9375	-2.19	19.25	0.114 ¹
T12	160 - 140	L2x2x1/4	4'	3'8-17/32"	116.9 K=1.03	0.9375	-1.88	19.25	0.098 ¹
T13	140 - 120	L2x2x1/4	4'	3'8-17/32"	116.9 K=1.03	0.9375	-2.97	19.25	0.154 ¹
T14	120 - 100	L2x2x1/4	4'	3'8-17/32"	116.9 K=1.03	0.9375	-2.45	19.25	0.127 ¹
T15	100 - 80	L2x2x3/16	4'	3'8-17/32"	116.5 K=1.03	0.7150	-2.13	14.76	0.144 ¹
T16	80 - 60	L2x2x3/16	4'	3'8-17/32"	116.5 K=1.03	0.7150	-2.14	14.76	0.145 ¹
T17	60 - 40	L2x2x3/16	4'	3'8-17/32"	116.5 K=1.03	0.7150	-2.32	14.76	0.157 ¹
T18	40 - 20	L2x2x3/16	4'	3'8-17/32"	116.5 K=1.03	0.7150	-2.40	14.76	0.163 ¹
T20	8.05469 - 6	L2x2x3/16	4'	3'8-17/32"	116.5 K=1.03	0.7150	-2.24	14.76	0.152 ¹
T21	6 - 2.66927	L2x2x1/4	1'9-3/8"	1'5-7/8"	82.9 K=1.81	0.9375	-2.49	26.47	0.094 ¹
T22	2.66927 - 0	18x3/8	6"	2-17/32"	23.1 K=1.00	6.7500	-3.14	212.62	0.015 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	350 - 341.945	2 1/4	8'19/32"	3'10-11/16"	83.0	3.9761	0.05	178.92	0.000 ¹

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	58 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

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	341.945 - 340	2 1/4	1'11-13/32"	3-1/4"	5.8	3.9761	3.74	178.92	0.021 ¹
T3	340 - 320	2 1/4	20'	3-1/4"	5.8	3.9761	3.74	178.92	0.021 ¹

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	350 - 341.945	3/4	5'6-31/32"	5'3-27/32"	340.4	0.4418	2.42	14.31	0.169 ¹
T2	341.945 - 340	3/4	4'4-3/32"	4'1-9/16"	264.5	0.4418	3.26	14.31	0.227 ¹
T3	340 - 320	3/4	5'6-31/32"	5'3-27/32"	340.4	0.4418	3.58	14.31	0.250 ¹
T4	320 - 300	3/4	5'6-31/32"	5'3-27/32"	340.4	0.4418	3.70	14.31	0.259 ¹
T5	300 - 280	7/8	5'6-31/32"	5'2-3/4"	287.0	0.6013	6.23	19.48	0.320 ¹
T6	280 - 260	7/8	5'6-31/32"	5'2-3/4"	287.0	0.6013	5.52	19.48	0.283 ¹
T7	260 - 240	2x1/2	5'6-31/32"	5'2-3/4"	434.9	1.0000	9.57	32.40	0.295 ¹
T8	240 - 220	2x1/2	5'6-31/32"	5'2-3/4"	434.9	1.0000	10.81	32.40	0.334 ¹
T9	220 - 200	7/8	5'6-31/32"	5'2-3/4"	287.0	0.6013	3.59	19.48	0.184 ¹
T10	200 - 180	7/8	5'6-31/32"	5'2-1/32"	283.8	0.6013	11.23	19.48	0.576 ¹
T11	180 - 160	7/8	5'6-31/32"	5'2-1/32"	283.8	0.6013	10.28	19.48	0.528 ¹
T12	160 - 140	7/8	5'6-31/32"	5'2-1/32"	283.8	0.6013	3.62	19.48	0.186 ¹
T13	140 - 120	7/8	5'6-31/32"	5'2-1/32"	283.8	0.6013	7.74	19.48	0.397 ¹
T14	120 - 100	7/8	5'6-31/32"	5'2-1/32"	283.8	0.6013	7.00	19.48	0.359 ¹
T15	100 - 80	3/4	5'6-31/32"	5'2-1/32"	331.1	0.4418	4.61	14.31	0.322 ¹
T16	80 - 60	3/4	5'6-31/32"	5'2-1/32"	331.1	0.4418	3.66	14.31	0.256 ¹
T17	60 - 40	3/4	5'6-31/32"	5'2-1/32"	331.1	0.4418	3.92	14.31	0.274 ¹
T18	40 - 20	3/4	5'6-31/32"	5'2-1/32"	331.1	0.4418	2.14	14.31	0.150 ¹
T19	20 - 8.05469	3/4	5'6-31/32"	5'2-1/32"	331.1	0.4418	3.11	14.31	0.217 ¹
T20	8.05469 - 6	3/4	4'4-9/16"	4'23/32"	259.8	0.4418	3.72	14.31	0.260 ¹
T21	6 - 2.66927	2x1/2	4'4-7/16"	3'11-9/32"	327.4	1.0000	0.07	32.40	0.002 ¹

¹ P_u / φP_n controls

tnxTower Tower Engineering Professionals 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	59 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

Horizontal Design Data (Tension)

Section No.	Elevation	Size	L	L _u	Kl/r	A	P _u	φP _n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in ²	K	K	
T1	350 - 341.945	L2x2x3/16	4'	3'9-23/32"	74.1	0.7150	0.29	23.17	0.012 ¹
T3	340 - 320	L2x2x3/16	4'	3'9-23/32"	74.1	0.7150	5.38	23.17	0.232 ¹
T4	320 - 300	L2x2x3/16	4'	3'9-23/32"	74.1	0.7150	0.62	23.17	0.027 ¹
T5	300 - 280	L2x2x1/4	4'	3'9"	73.9	0.9375	6.48	30.38	0.213 ¹
T6	280 - 260	L2x2x1/4	4'	3'9"	73.9	0.9375	1.31	30.38	0.043 ¹
T7	260 - 240	L2 1/2x2 1/2x1/4	4'	3'9"	58.5	1.1900	1.32	38.56	0.034 ¹
T8	240 - 220	L2 1/2x2 1/2x1/4	4'	3'9"	58.5	1.1900	12.37	38.56	0.321 ¹
T9	220 - 200	L2x2x1/4	4'	3'9"	73.9	0.9375	2.02	30.38	0.066 ¹
T10	200 - 180	L2x2x1/4	4'	3'8-17/32"	73.1	0.9375	1.89	30.38	0.062 ¹
T11	180 - 160	L2x2x1/4	4'	3'8-17/32"	73.1	0.9375	11.17	30.38	0.368 ¹
T12	160 - 140	L2x2x1/4	4'	3'8-17/32"	73.1	0.9375	1.88	30.38	0.062 ¹
T13	140 - 120	L2x2x1/4	4'	3'8-17/32"	73.1	0.9375	2.23	30.38	0.074 ¹
T14	120 - 100	L2x2x1/4	4'	3'8-17/32"	73.1	0.9375	8.83	30.38	0.291 ¹
T15	100 - 80	L2x2x3/16	4'	3'8-17/32"	72.1	0.7150	2.13	23.17	0.092 ¹
T16	80 - 60	L2x2x3/16	4'	3'8-17/32"	72.1	0.7150	2.14	23.17	0.093 ¹
T17	60 - 40	L2x2x3/16	4'	3'8-17/32"	72.1	0.7150	4.87	23.17	0.210 ¹
T18	40 - 20	L2x2x3/16	4'	3'8-17/32"	72.1	0.7150	2.40	23.17	0.104 ¹
T19	20 - 8.05469	L2x2x3/16	4'	3'8-17/32"	72.1	0.7150	2.38	23.17	0.103 ¹

¹ P_u / φP_n controls

Top Girt Design Data (Tension)

Section No.	Elevation	Size	L	L _u	Kl/r	A	P _u	φP _n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in ²	K	K	
T1	350 - 341.945	L2x2x3/16	4'	3'9-23/32"	74.1	0.7150	0.02	23.17	0.001 ¹
T2	341.945 - 340	L2x2x3/16	4'	3'9-23/32"	74.1	0.7150	0.09	23.17	0.004 ¹
T3	340 - 320	L2x2x3/16	4'	3'9-23/32"	74.1	0.7150	0.46	23.17	0.020 ¹
T4	320 - 300	L2x2x3/16	4'	3'9-23/32"	74.1	0.7150	0.62	23.17	0.027 ¹
T5	300 - 280	L2x2x1/4	4'	3'9"	73.9	0.9375	1.06	30.38	0.035 ¹
T6	280 - 260	L2x2x1/4	4'	3'9"	73.9	0.9375	1.31	30.38	0.043 ¹
T7	260 - 240	L2 1/2x2 1/2x1/4	4'	3'9"	58.5	1.1900	1.32	38.56	0.034 ¹
T8	240 - 220	L2 1/2x2 1/2x1/4	4'	3'9"	58.5	1.1900	1.98	38.56	0.051 ¹
T9	220 - 200	L2x2x1/4	4'	3'9"	73.9	0.9375	2.02	30.38	0.066 ¹
T10	200 - 180	L2x2x1/4	4'	3'8-17/32"	73.1	0.9375	1.89	30.38	0.062 ¹

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	60 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T11	180 - 160	L2x2x1/4	4'	2" 3'8-17/3	73.1	0.9375	2.19	30.38	0.072 ¹
T12	160 - 140	L2x2x1/4	4'	2" 3'8-17/3	73.1	0.9375	1.88	30.38	0.062 ¹
T13	140 - 120	L2x2x1/4	4'	2" 3'8-17/3	73.1	0.9375	2.23	30.38	0.074 ¹
T14	120 - 100	L2x2x1/4	4'	2" 3'8-17/3	73.1	0.9375	2.45	30.38	0.081 ¹
T15	100 - 80	L2x2x3/16	4'	2" 3'8-17/3	72.1	0.7150	2.13	23.17	0.092 ¹
T16	80 - 60	L2x2x3/16	4'	2" 3'8-17/3	72.1	0.7150	2.14	23.17	0.093 ¹
T17	60 - 40	L2x2x3/16	4'	2" 3'8-17/3	72.1	0.7150	2.32	23.17	0.100 ¹
T18	40 - 20	L2x2x3/16	4'	2" 3'8-17/3	72.1	0.7150	2.40	23.17	0.104 ¹
T19	20 - 8.05469	L2x2x3/16	4'	2" 3'8-17/3	72.1	0.7150	2.38	23.17	0.103 ¹
T20	8.05469 - 6	L2x2x3/16	4'	2" 3'8-17/3	72.1	0.7150	2.24	23.17	0.097 ¹
T21	6 - 2.66927	L3x3x3/8	3'11-9/3 2"	3'7-13/1 6"	48.0	2.1100	20.57	68.36	0.301 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 $\frac{P_u}{\phi P_n}$
T2	341.945 - 340	L2x2x3/16	4'	2" 3'9-23/3	74.1	0.7150	0.18	23.17	0.008 ¹
T3	340 - 320	L2x2x3/16	4'	2" 3'9-23/3	74.1	0.7150	0.46	23.17	0.020 ¹
T4	320 - 300	L2x2x3/16	4'	2" 3'9-23/3	74.1	0.7150	0.62	23.17	0.027 ¹
T5	300 - 280	L2x2x1/4	4'	3'9"	73.9	0.9375	1.06	30.38	0.035 ¹
T6	280 - 260	L2x2x1/4	4'	3'9"	73.9	0.9375	1.31	30.38	0.043 ¹
T7	260 - 240	L2 1/2x2 1/2x1/4	4'	3'9"	58.5	1.1900	1.32	38.56	0.034 ¹
T8	240 - 220	L2 1/2x2 1/2x1/4	4'	3'9"	58.5	1.1900	1.98	38.56	0.051 ¹
T9	220 - 200	L2x2x1/4	4'	3'9"	73.9	0.9375	2.02	30.38	0.066 ¹
T10	200 - 180	L2x2x1/4	4'	2" 3'8-17/3	73.1	0.9375	1.89	30.38	0.062 ¹
T11	180 - 160	L2x2x1/4	4'	2" 3'8-17/3	73.1	0.9375	2.19	30.38	0.072 ¹
T12	160 - 140	L2x2x1/4	4'	2" 3'8-17/3	73.1	0.9375	1.88	30.38	0.062 ¹
T13	140 - 120	L2x2x1/4	4'	2" 3'8-17/3	73.1	0.9375	2.23	30.38	0.074 ¹
T14	120 - 100	L2x2x1/4	4'	2" 3'8-17/3	73.1	0.9375	2.45	30.38	0.081 ¹
T15	100 - 80	L2x2x3/16	4'	2" 3'8-17/3	72.1	0.7150	2.13	23.17	0.092 ¹
T16	80 - 60	L2x2x3/16	4'	2" 3'8-17/3	72.1	0.7150	2.14	23.17	0.093 ¹

tnxTower Tower Engineering Professionals 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	61 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

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	60 - 40	L2x2x3/16	4'	3'8-17/32"	72.1	0.7150	2.32	23.17	0.100 ¹
T18	40 - 20	L2x2x3/16	4'	3'8-17/32"	72.1	0.7150	2.40	23.17	0.104 ¹
T20	8.05469 - 6	L2x2x3/16	4'	3'8-17/32"	72.1	0.7150	6.05	23.17	0.261 ¹
T21	6 - 2.66927	L2x2x1/4	1'9-3/8"	1'5-7/8"	29.4	0.9375	2.49	30.38	0.082 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	350 - 341.945	Leg	2 1/4	2	-3.40	113.53	3.0	Pass
T2	341.945 - 340	Leg	2 1/4	23	-5.30	171.18	3.1	Pass
T3	340 - 320	Leg	2 1/4	37	-26.79	113.53	23.6	Pass
T4	320 - 300	Leg	2 1/4	89	-35.54	113.53	31.3	Pass
T5	300 - 280	Leg	3	141	-61.40	251.58	24.4	Pass
T6	280 - 260	Leg	3	190	-75.74	251.58	30.1	Pass
T7	260 - 240	Leg	3	241	-76.31	251.58	30.3	Pass
T8	240 - 220	Leg	3	293	-114.04	251.58	45.3	Pass
T9	220 - 200	Leg	3	344	-116.42	251.58	46.3	Pass
T10	200 - 180	Leg	3 1/2	395	-109.26	369.17	29.6	Pass
T11	180 - 160	Leg	3 1/2	445	-126.19	369.17	34.2	Pass
T12	160 - 140	Leg	3 1/2	496	-108.77	369.17	29.5	Pass
T13	140 - 120	Leg	3 1/2	547	-128.88	369.17	34.9	Pass
T14	120 - 100	Leg	3 1/2	598	-141.65	369.17	38.4	Pass
T15	100 - 80	Leg	3 1/2	651	-122.72	369.17	33.2	Pass
T16	80 - 60	Leg	3 1/2	702	-123.73	369.17	33.5	Pass
T17	60 - 40	Leg	3 1/2	753	-134.00	369.17	36.3	Pass
T18	40 - 20	Leg	3 1/2	804	-138.83	369.17	37.6	Pass
T19	20 - 8.05469	Leg	3 1/2	855	-137.34	369.17	37.2	Pass
T20	8.05469 - 6	Leg	3 1/2	885	-129.18	435.19	29.7	Pass
T21	6 - 2.66927	Leg	3 1/2	900	-136.19	384.88	35.4	Pass
T22	2.66927 - 0	Leg	3 1/2	915	-136.57	428.91	31.8	Pass
T1	350 - 341.945	Diagonal	3/4	9	2.42	15.03	16.1	Pass
T2	341.945 - 340	Diagonal	3/4	34	3.26	15.03	21.7	Pass
T3	340 - 320	Diagonal	3/4	84	3.58	15.03	23.8	Pass
T4	320 - 300	Diagonal	3/4	99	3.70	15.03	24.6	Pass
T5	300 - 280	Diagonal	7/8	166	6.23	20.46	30.4	Pass
T6	280 - 260	Diagonal	7/8	235	5.52	20.46	27.0	Pass
T7	260 - 240	Diagonal	2x1/2	250	9.57	34.02	28.1	Pass
T8	240 - 220	Diagonal	2x1/2	333	10.81	34.02	31.8	Pass
T9	220 - 200	Diagonal	7/8	352	3.59	20.46	17.5	Pass
T10	200 - 180	Diagonal	7/8	408	11.23	20.46	54.9	Pass
T11	180 - 160	Diagonal	7/8	495	10.28	20.46	50.3	Pass
T12	160 - 140	Diagonal	7/8	544	3.62	20.46	17.7	Pass
T13	140 - 120	Diagonal	7/8	561	7.74	20.46	37.8	Pass
T14	120 - 100	Diagonal	7/8	648	7.00	20.46	34.2	Pass
T15	100 - 80	Diagonal	3/4	699	4.61	15.03	30.7	Pass
T16	80 - 60	Diagonal	3/4	714	3.66	15.03	24.4	Pass
T17	60 - 40	Diagonal	3/4	779	3.92	15.03	26.1	Pass
T18	40 - 20	Diagonal	3/4	850	2.14	15.03	14.3	Pass
T19	20 - 8.05469	Diagonal	3/4	859	3.11	15.03	20.7	Pass
T20	8.05469 - 6	Diagonal	3/4	892	3.72	15.03	24.8	Pass

tnxTower Tower Engineering Professionals 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	62 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

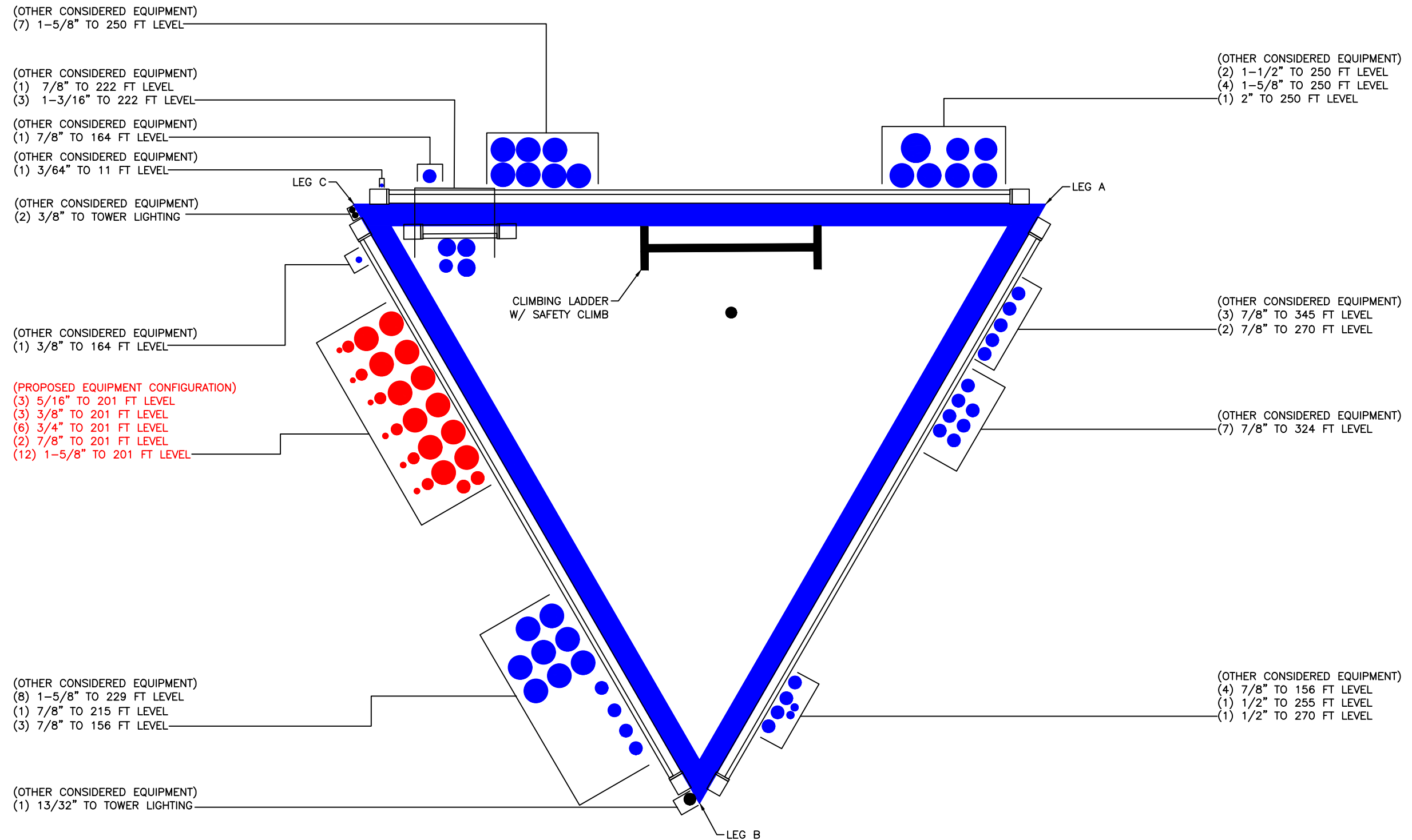
Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
T21	6 - 2.66927	Diagonal	2x1/2	907	0.07	34.02	0.2	Pass
T1	350 - 341.945	Horizontal	L2x2x3/16	14	-1.01	15.18	6.7	Pass
T3	340 - 320	Horizontal	L2x2x3/16	80	5.38	24.32	22.1	Pass
T4	320 - 300	Horizontal	L2x2x3/16	104	-2.46	15.18	16.2	Pass
T5	300 - 280	Horizontal	L2x2x1/4	172	-4.40	20.05	22.0	Pass
T6	280 - 260	Horizontal	L2x2x1/4	232	-3.66	20.05	18.3	Pass
T7	260 - 240	Horizontal	L2 1/2x2 1/2x1/4	256	-6.42	29.14	22.0	Pass
T8	240 - 220	Horizontal	L2 1/2x2 1/2x1/4	336	12.37	40.48	30.5	Pass
T9	220 - 200	Horizontal	L2x2x1/4	376	-2.02	20.05	10.1	Pass
T10	200 - 180	Horizontal	L2x2x1/4	411	-7.17	20.21	35.5	Pass
T11	180 - 160	Horizontal	L2x2x1/4	488	11.17	31.89	35.0	Pass
T12	160 - 140	Horizontal	L2x2x1/4	511	-1.89	20.21	9.4	Pass
T13	140 - 120	Horizontal	L2x2x1/4	564	-4.84	20.21	24.0	Pass
T14	120 - 100	Horizontal	L2x2x1/4	641	8.83	31.89	27.7	Pass
T15	100 - 80	Horizontal	L2x2x3/16	693	-2.87	15.50	18.5	Pass
T16	80 - 60	Horizontal	L2x2x3/16	717	-2.28	15.50	14.7	Pass
T17	60 - 40	Horizontal	L2x2x3/16	794	4.87	24.32	20.0	Pass
T18	40 - 20	Horizontal	L2x2x3/16	818	-2.40	15.50	15.5	Pass
T19	20 - 8.05469	Horizontal	L2x2x3/16	866	-2.38	15.50	15.3	Pass
T1	350 - 341.945	Top Girt	L2x2x3/16	6	-0.08	15.18	0.5	Pass
T2	341.945 - 340	Top Girt	L2x2x3/16	26	-2.34	15.18	15.4	Pass
T3	340 - 320	Top Girt	L2x2x3/16	41	-1.33	15.18	8.8	Pass
T4	320 - 300	Top Girt	L2x2x3/16	92	-0.94	15.18	6.2	Pass
T5	300 - 280	Top Girt	L2x2x1/4	143	-1.55	20.05	7.7	Pass
T6	280 - 260	Top Girt	L2x2x1/4	193	-2.18	20.05	10.9	Pass
T7	260 - 240	Top Girt	L2 1/2x2 1/2x1/4	246	-1.32	29.14	4.5	Pass
T8	240 - 220	Top Girt	L2 1/2x2 1/2x1/4	295	-3.64	29.14	12.5	Pass
T9	220 - 200	Top Girt	L2x2x1/4	346	-2.02	20.05	10.1	Pass
T10	200 - 180	Top Girt	L2x2x1/4	397	-2.48	20.21	12.3	Pass
T11	180 - 160	Top Girt	L2x2x1/4	450	-3.67	20.21	18.2	Pass
T12	160 - 140	Top Girt	L2x2x1/4	501	-1.88	20.21	9.3	Pass
T13	140 - 120	Top Girt	L2x2x1/4	552	-2.23	20.21	11.1	Pass
T14	120 - 100	Top Girt	L2x2x1/4	603	-2.47	20.21	12.2	Pass
T15	100 - 80	Top Girt	L2x2x3/16	653	-2.13	15.50	13.7	Pass
T16	80 - 60	Top Girt	L2x2x3/16	704	-2.14	15.50	13.8	Pass
T17	60 - 40	Top Girt	L2x2x3/16	755	-2.32	15.50	15.0	Pass
T18	40 - 20	Top Girt	L2x2x3/16	806	-2.40	15.50	15.5	Pass
T19	20 - 8.05469	Top Girt	L2x2x3/16	857	-2.38	15.50	15.3	Pass
T20	8.05469 - 6	Top Girt	L2x2x3/16	886	-2.70	15.50	17.4	Pass
T21	6 - 2.66927	Top Girt	L3x3x3/8	901	20.57	71.78	28.7	Pass
T2	341.945 - 340	Bottom Girt	L2x2x3/16	29	-1.59	15.18	10.5	Pass
T3	340 - 320	Bottom Girt	L2x2x3/16	44	-0.73	15.18	4.8	Pass
T4	320 - 300	Bottom Girt	L2x2x3/16	95	-1.33	15.18	8.8	Pass
T5	300 - 280	Bottom Girt	L2x2x1/4	145	-2.15	20.05	10.7	Pass
T6	280 - 260	Bottom Girt	L2x2x1/4	198	-1.31	20.05	6.5	Pass
T7	260 - 240	Bottom Girt	L2 1/2x2 1/2x1/4	247	-3.61	29.14	12.4	Pass
T8	240 - 220	Bottom Girt	L2 1/2x2 1/2x1/4	300	-2.24	29.14	7.7	Pass
T9	220 - 200	Bottom Girt	L2x2x1/4	349	-2.02	20.05	10.1	Pass
T10	200 - 180	Bottom Girt	L2x2x1/4	402	-4.09	20.21	20.2	Pass
T11	180 - 160	Bottom Girt	L2x2x1/4	453	-2.19	20.21	10.8	Pass
T12	160 - 140	Bottom Girt	L2x2x1/4	504	-1.88	20.21	9.3	Pass
T13	140 - 120	Bottom Girt	L2x2x1/4	553	-2.97	20.21	14.7	Pass
T14	120 - 100	Bottom Girt	L2x2x1/4	606	-2.45	20.21	12.1	Pass
T15	100 - 80	Bottom Girt	L2x2x3/16	656	-2.13	15.50	13.7	Pass
T16	80 - 60	Bottom Girt	L2x2x3/16	707	-2.14	15.50	13.8	Pass
T17	60 - 40	Bottom Girt	L2x2x3/16	758	-2.32	15.50	15.0	Pass
T18	40 - 20	Bottom Girt	L2x2x3/16	809	-2.40	15.50	15.5	Pass
T20	8.05469 - 6	Bottom Girt	L2x2x3/16	889	6.05	24.32	24.9	Pass
T21	6 - 2.66927	Bottom Girt	L2x2x1/4	905	-2.49	27.79	9.0	Pass
T22	2.66927 - 0	Bottom Girt	18x3/8	916	-3.14	223.25	5.3	Pass
T3	340 - 320	Guy A@335.836	7/8	953	18.12	50.21	36.1	Pass

<i>tnxTower</i> <i>Tower Engineering Professionals</i> 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job	Lake City (SR 47 & US 41) (BU 870081)	Page	63 of 63
	Project	TEP No. 145283.791998	Date	16:40:56 12/01/22
	Client	Crown Castle	Designed by	SPT

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
T5	300 - 280	Guy A@295.836	7/8	948	19.05	50.21	37.9	Pass
T8	240 - 220	Guy A@235.836	1	942	27.96	65.83	42.5	Pass
T11	180 - 160	Guy A@175.836	7/8	936	21.31	50.21	42.4	Pass
T14	120 - 100	Guy A@115.836	3/4	930	14.13	36.73	38.5	Pass
T17	60 - 40	Guy A@55.8359	9/16	924	7.39	22.05	33.5	Pass
T3	340 - 320	Guy B@335.836	7/8	951	18.38	50.21	36.6	Pass
T5	300 - 280	Guy B@295.836	7/8	945	19.26	50.21	38.4	Pass
T8	240 - 220	Guy B@235.836	1	939	27.70	65.83	42.1	Pass
T11	180 - 160	Guy B@175.836	7/8	933	20.68	50.21	41.2	Pass
T14	120 - 100	Guy B@115.836	3/4	927	13.67	36.73	37.2	Pass
T17	60 - 40	Guy B@55.8359	9/16	921	7.16	22.05	32.5	Pass
T3	340 - 320	Guy C@335.836	7/8	950	18.30	50.21	36.4	Pass
T5	300 - 280	Guy C@295.836	7/8	944	18.92	50.21	37.7	Pass
T8	240 - 220	Guy C@235.836	1	937	27.81	65.83	42.2	Pass
T11	180 - 160	Guy C@175.836	7/8	931	21.26	50.21	42.3	Pass
T14	120 - 100	Guy C@115.836	3/4	925	14.29	36.73	38.9	Pass
T17	60 - 40	Guy C@55.8359	9/16	919	7.51	22.05	34.1	Pass
Summary								
Leg (T9)							46.3	Pass
Diagonal (T10)							54.9	Pass
Horizontal (T10)							35.5	Pass
Top Girt (T21)							28.7	Pass
Bottom Girt (T20)							24.9	Pass
Guy A (T8)							42.5	Pass
Guy B (T8)							42.1	Pass
Guy C (T11)							42.3	Pass
Bolt Checks							48.2	Pass
RATING =							54.9	Pass

APPENDIX B

BASE LEVEL DRAWING



APPENDIX C

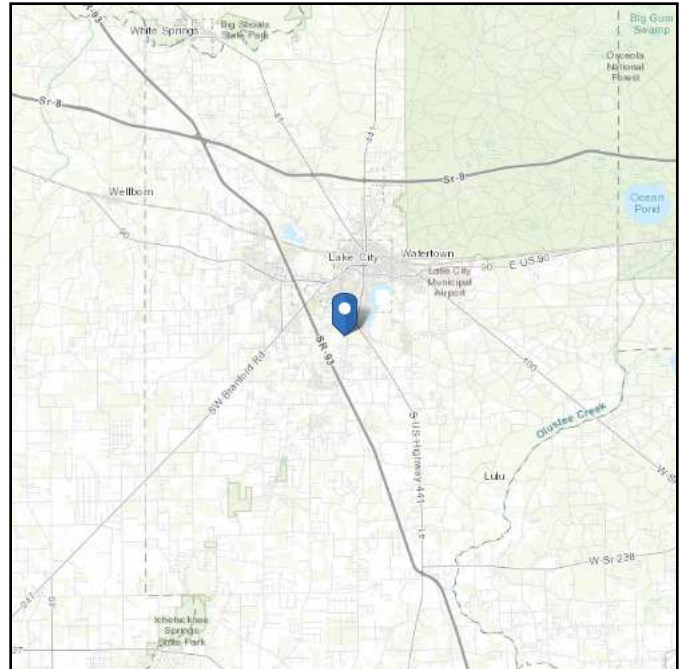
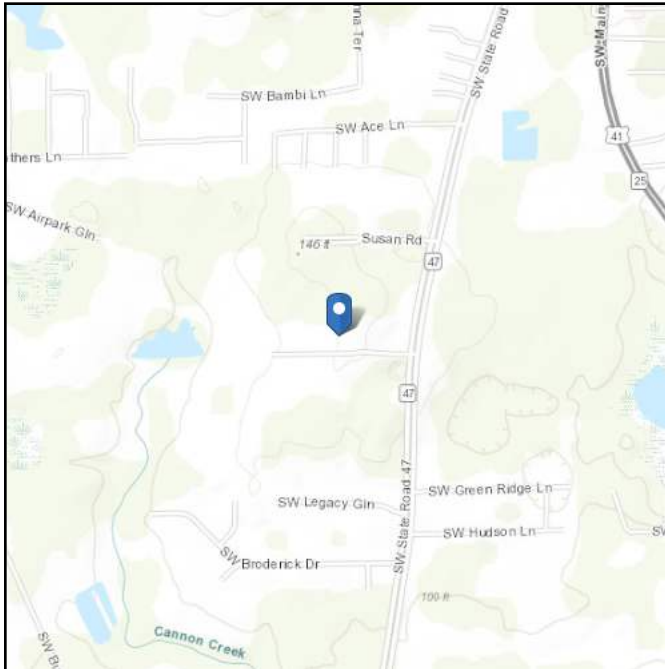
ADDITIONAL CALCULATIONS

ASCE 7 Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-16
Risk Category: II
Soil Class: D - Default (see Section 11.4.3)

Latitude: 30.145472
Longitude: -82.653028
Elevation: 140.45 ft (NAVD 88)



Wind

Results:

Wind Speed	118 Vmph
10-year MRI	75 Vmph
25-year MRI	84 Vmph
50-year MRI	90 Vmph
100-year MRI	97 Vmph

Data Source: ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2

Date Accessed: Tue Nov 29 2022

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

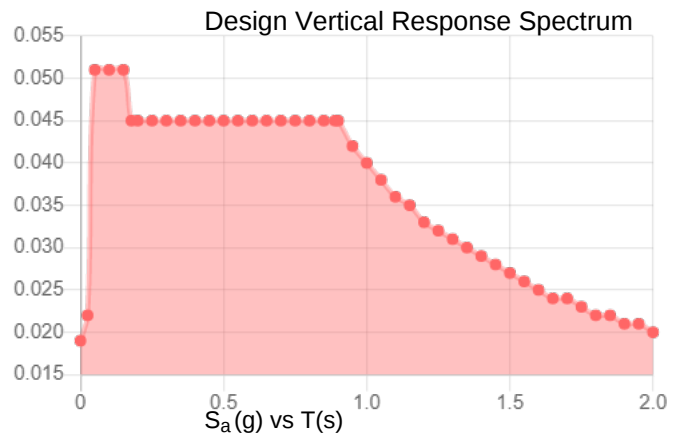
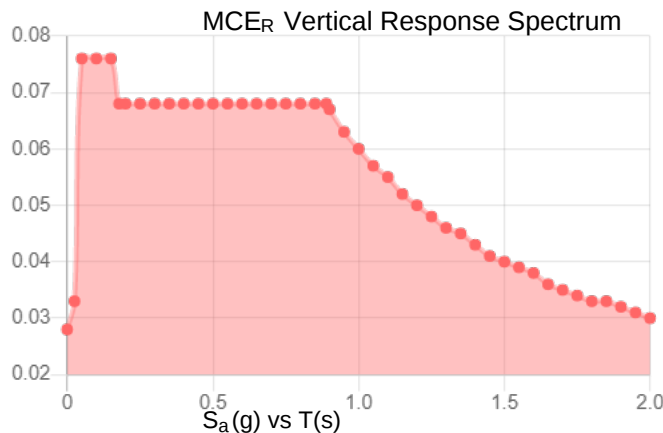
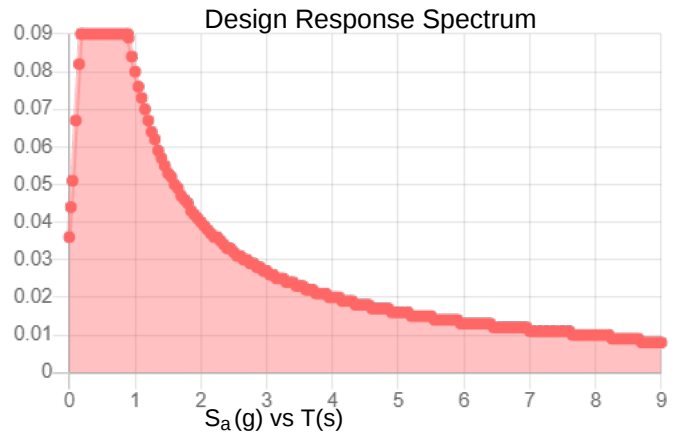
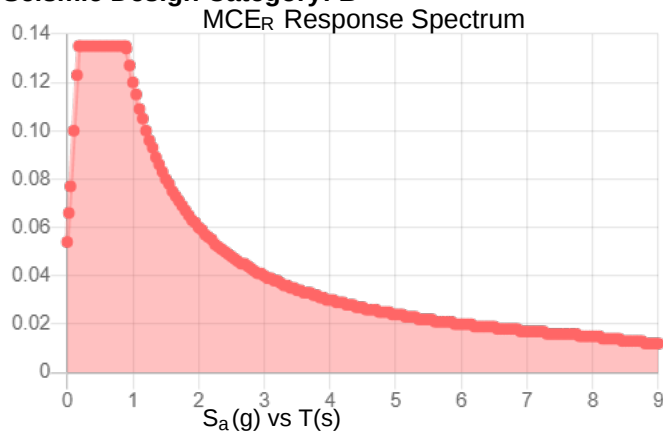
Site is in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2. Glazed openings need not be protected against wind-borne debris.

Site Soil Class:

Results:

S_S :	0.085	S_{D1} :	0.08
S_1 :	0.05	T_L :	8
F_a :	1.6	PGA :	0.04
F_v :	2.4	PGA _M :	0.064
S_{MS} :	0.135	F_{PGA} :	1.6
S_{M1} :	0.12	I_e :	1
S_{DS} :	0.09	C_v :	0.7

Seismic Design Category: B



Data Accessed:

Tue Nov 29 2022

Date Source:

USGS Seismic Design Maps based on ASCE/SEI 7-16 and ASCE/SEI 7-16 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-16 Ch. 21 are available from USGS.

Results:

Ice Thickness: 0.25 in.
Concurrent Temperature: 25 F
Gust Speed 30 mph

Data Source: Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8

Date Accessed: Tue Nov 29 2022

Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 500-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

The ASCE 7 Hazard Tool is provided for your convenience, for informational purposes only, and is provided "as is" and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE 7 standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

ASCE does not intend, nor should anyone interpret, the results provided by this Tool to replace the sound judgment of a competent professional, having knowledge and experience in the appropriate field(s) of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the contents of this Tool or the ASCE 7 standard.

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Drilled Pier Foundation

BU # :	870081
Site Name:	Lake City (SR 47 & US 41)
Order Number:	623798 Rev. 0
TIA-222 Revision:	H
Tower Type:	Guyed (Base)
Location:	Base

Applied Loads		
	Comp.	Uplift
Moment (kip-ft)		
Axial Force (kips)	363.29	
Shear Force (kips)	3.06	

Material Properties		
Concrete Strength, f'c:	4	ksi
Rebar Strength, Fy:	60	ksi
Tie Yield Strength, Fyt:	40	ksi

Pier Design Data		
Depth	55.5	ft
Ext. Above Grade	0.5	ft
Pier Section 1		
From 0.5' above grade to 55.5' below grade		
Pier Diameter	6	ft
Rebar Quantity	18	
Rebar Size	10	
Clear Cover to Ties	4	in
Tie Size	5	
Tie Spacing	16	in

[Rebar & Pier Options](#)

[Embedded Pole Inputs](#)

[Belled Pier Inputs](#)

Analysis Results		
Soil Lateral Check	Compression	Uplift
D _{v=0} (ft from TOC)	26.12	-
Soil Safety Factor	916.13	-
Max Moment (kip-ft)	49.42	-
Rating*	0.2%	-
Soil Vertical Check	Compression	Uplift
Skin Friction (kips)	898.51	-
End Bearing (kips)	488.58	-
Weight of Concrete (kips)	173.85	-
Total Capacity (kips)	1387.09	-
Axial (kips)	537.14	-
Rating*	36.9%	-
Reinforced Concrete Flexure	Compression	Uplift
Critical Depth (ft from TOC)	26.96	-
Critical Moment (kip-ft)	49.37	-
Critical Moment Capacity	3667.52	-
Rating*	1.3%	-
Reinforced Concrete Shear	Compression	Uplift
Critical Depth (ft from TOC)	43.12	-
Critical Shear (kip)	3.46	-
Critical Shear Capacity	676.33	-
Rating*	0.5%	-

Structural Foundation Rating*	1.3%
Soil Interaction Rating*	36.9%

*Rating per TIA-222-H Section 15.5



Check Limitation	
Apply TIA-222-H Section 15.5:	☒
N/A	☐
Additional Longitudinal Rebar	
Input Effective Depths (else Actual):	☐
Shear Design Options	
Check Shear along Depth of Pier:	☒
Utilize Shear-Friction Methodology:	☐
Override Critical Depth:	☐

[Go to Soil Calculations](#)

Soil Profile														
Groundwater Depth		3	# of Layers		6									
Layer	Top (ft)	Bottom (ft)	Thickness (ft)	Y _{soil} (pcf)	Y _{concrete} (pcf)	Cohesion (ksf)	Angle of Friction (degrees)	Calculated Ultimate Skin Friction Comp (ksf)	Calculated Ultimate Skin Friction Uplift (ksf)	Ultimate Skin Friction Comp Override (ksf)	Ultimate Skin Friction Uplift Override (ksf)	Ult. Gross Bearing Capacity (ksf)	SPT Blow Count	Soil Type
1	0	3	3	100	150	0	0	0.000	0.000	0.00	0.00			Cohesionless
2	3	4	1	38	87.6	0	28	0.000	0.000	0.02	0.02			Cohesionless
3	4	6	2	48	87.6	0.4	28	0.000	0.000	0.27	0.27			Cohesionless
4	6	16	10	58	87.6	2	28	0.000	0.000	1.23	1.23			Cohesionless
5	16	32	16	63	87.6	3	0	1.650	1.650	1.65	1.65			Cohesive
6	32	55.5	23.5	58	87.6	2	28	0.000	0.000	1.71	1.71	28.8		Cohesionless

Drilled Pier Foundation

BU # : 870081
Site Name: Lake City (SR 47 & US 41)
Order Number: 623798 Rev. 0
TIA-222 Revision: H
Tower Type: Guyed (Anchor)
Location: Guy A @ 173 ft (Elev 0 ft)

Applied Loads		
	Comp.	Uplift
Moment (kip-ft)		134.59
Axial Force (kips)		152.44
Shear Force (kips)		133.92

Material Properties		
Concrete Strength, f'c:	4	ksi
Rebar Strength, Fy:	60	ksi
Tie Yield Strength, Fyt:	40	ksi

Pier Design Data		
Depth	34	ft
Ext. Above Grade	0.5	ft
Pier Section 1		
From 0.5' above grade to 34' below grade		
Pier Diameter	6	ft
Rebar Quantity	24	
Rebar Size	10	
Clear Cover to Ties	4	in
Tie Size	5	
Tie Spacing	12	in

[Rebar & Pier Options](#)

[Embedded Pole Inputs](#)

[Belled Pier Inputs](#)

Analysis Results		
Soil Lateral Check		
	Compression	Uplift
D _{v=0} (ft from TOC)	-	15.30
Soil Safety Factor	-	4.18
Max Moment (kip-ft)	-	3378.59
Rating*	-	30.3%
Soil Vertical Check		
	Compression	Uplift
Skin Friction (kips)	-	527.60
End Bearing (kips)	-	-
Weight of Concrete (kips)	-	82.44
Total Capacity (kips)	-	610.04
Axial (kips)	-	152.44
Rating*	-	23.8%
Reinforced Concrete Flexure		
	Compression	Uplift
Critical Depth (ft from TOC)	-	14.97
Critical Moment (kip-ft)	-	3376.81
Critical Moment Capacity	-	3879.58
Rating*	-	82.9%
Reinforced Concrete Shear		
	Compression	Uplift
Critical Depth (ft from TOC)	-	0.00
Critical Shear (kip)	-	133.92
Critical Shear Capacity	-	395.74
Rating*	-	32.2%

Structural Foundation Rating*	82.9%
Soil Interaction Rating*	30.3%

*Rating per TIA-222-H Section 15.5



Check Limitation	
Apply TIA-222-H Section 15.5:	☒
N/A	☐
Additional Longitudinal Rebar	
Input Effective Depths (else Actual):	☐
Shear Design Options	
Check Shear along Depth of Pier:	☒
Utilize Shear-Friction Methodology:	☐
Override Critical Depth:	☐

[Go to Soil Calculations](#)

Soil Profile														
Groundwater Depth		3	# of Layers		3									
Layer	Top (ft)	Bottom (ft)	Thickness (ft)	Y _{soil} (pcf)	Y _{concrete} (pcf)	Cohesion (ksf)	Angle of Friction (degrees)	Calculated Ultimate Skin Friction Comp (ksf)	Calculated Ultimate Skin Friction Uplift (ksf)	Ultimate Skin Friction Comp Override (ksf)	Ultimate Skin Friction Uplift Override (ksf)	Ult. Gross Bearing Capacity (ksf)	SPT Blow Count	Soil Type
1	0	3	3	100	150	0	0	0.000	0.000	0.00	0.00			Cohesionless
2	3	30	27	58	87.6	1.8	28	0.000	0.000	1.20	1.20			Cohesionless
3	30	34	4	53	87.6	1.2	28	0.000	0.000	1.23	1.23			Cohesionless

Drilled Pier Foundation

BU # :	870081
Site Name:	Lake City (SR 47 & US 41)
Order Number:	623798 Rev. 0
TIA-222 Revision:	H
Tower Type:	Guyed (Anchor)
Location:	Guy B @ 173 ft (Elev 0 ft)

Applied Loads		
	Comp.	Uplift
Moment (kip-ft)		134.59
Axial Force (kips)		153.52
Shear Force (kips)		134.56

Material Properties		
Concrete Strength, f'c:	4	ksi
Rebar Strength, Fy:	60	ksi
Tie Yield Strength, Fyt:	40	ksi

Pier Design Data		
Depth	34	ft
Ext. Above Grade	0.5	ft
Pier Section 1		
From 0.5' above grade to 34' below grade		
Pier Diameter	6	ft
Rebar Quantity	24	
Rebar Size	10	
Clear Cover to Ties	4	in
Tie Size	5	
Tie Spacing	12	in

[Rebar & Pier Options](#)

[Embedded Pole Inputs](#)

[Belled Pier Inputs](#)

Analysis Results		
Soil Lateral Check		
	Compression	Uplift
D _{v=0} (ft from TOC)	-	16.56
Soil Safety Factor	-	8.65
Max Moment (kip-ft)	-	1505.64
Rating*	-	14.6%
Soil Vertical Check		
	Compression	Uplift
Skin Friction (kips)	-	513.18
End Bearing (kips)	-	-
Weight of Concrete (kips)	-	82.44
Total Capacity (kips)	-	595.62
Axial (kips)	-	153.52
Rating*	-	24.5%
Reinforced Concrete Flexure		
	Compression	Uplift
Critical Depth (ft from TOC)	-	16.27
Critical Moment (kip-ft)	-	1505.13
Critical Moment Capacity	-	3858.27
Rating*	-	37.2%
Reinforced Concrete Shear		
	Compression	Uplift
Critical Depth (ft from TOC)	-	26.38
Critical Shear (kip)	-	171.49
Critical Shear Capacity	-	420.47
Rating*	-	38.8%

Structural Foundation Rating*	38.8%
Soil Interaction Rating*	24.5%

*Rating per TIA-222-H Section 15.5



Check Limitation	
Apply TIA-222-H Section 15.5:	☒
N/A	☐
Additional Longitudinal Rebar	
Input Effective Depths (else Actual):	☐
Shear Design Options	
Check Shear along Depth of Pier:	☒
Utilize Shear-Friction Methodology:	☐
Override Critical Depth:	☐

[Go to Soil Calculations](#)

Soil Profile														
Groundwater Depth		3	# of Layers		5									
Layer	Top (ft)	Bottom (ft)	Thickness (ft)	Y _{soil} (pcf)	Y _{concrete} (pcf)	Cohesion (ksf)	Angle of Friction (degrees)	Calculated Ultimate Skin Friction Comp (ksf)	Calculated Ultimate Skin Friction Uplift (ksf)	Ultimate Skin Friction Comp Override (ksf)	Ultimate Skin Friction Uplift Override (ksf)	Ult. Gross Bearing Capacity (ksf)	SPT Blow Count	Soil Type
1	0	3	3	100	150	0	0	0.000	0.000	0.00	0.00			Cohesionless
2	3	6	3	53	87.6	0.8	28	0.000	0.000	0.48	0.48			Cohesionless
3	6	10	4	58	87.6	2	28	0.000	0.000	1.20	1.20			Cohesionless
4	10	16	6	53	87.6	0.8	28	0.000	0.000	0.60	0.60			Cohesionless
5	16	34	18	58	87.6	1.8	28	0.000	0.000	1.47	1.47			Cohesionless

BU #:	870081
Site Name:	Lake City (SR 47 & US 41)
Order Number:	623798 Rev. 0
IA-222 Revision:	H
Tower Type:	Guyed (Anchor)
Location:	Guy C @ 173 ft (Elev 0 ft)

Applied Loads		
	Comp.	Uplift
Moment (kip-ft)		134.59
Axial Force (kips)		152.68
Shear Force (kips)		134.42

Material Properties		
Concrete Strength, f_c :	4	ksi
Rebar Strength, F_y :	60	ksi
Tie Yield Strength, F_{yt} :	40	ksi

Pier Design Data		
Depth	34	ft
Ext. Above Grade	0.5	ft
Pier Section 1		
<i>From 0.5' above grade to 34' below grade</i>		
Pier Diameter	6	ft
Rebar Quantity	24	
Rebar Size	10	
Clear Cover to Ties	4	in
Tie Size	5	
Tie Spacing	12	in

Belled Pier Inputs

Soil Lateral Check	Compression	Uplift
D _{v=0} (ft from TOC)	-	14.82
Soil Safety Factor	-	9.68
Max Moment (kip-ft)	-	1466.63
Rating*	-	13.1%

Soil Vertical Check	Compression	Uplift
Skin Friction (kips)	-	559.41
End Bearing (kips)	-	-
Weight of Concrete (kips)	-	82.44
Total Capacity (kips)	-	641.85
Axial (kips)	-	152.68
Rating*	-	22.7%

Reinforced Concrete Flexure	<i>Compression</i>	<i>Uplift</i>
Critical Depth (ft from TOC)	-	14.51
Critical Moment (kip-ft)	-	1465.90
Critical Moment Capacity	-	3862.51
Rating*	-	36.1%

Reinforced Concrete Shear	Compression	Uplift
Critical Depth (ft from TOC)	-	24.03
Critical Shear (kip)	-	149.16
Critical Shear Capacity	-	418.71
Rating*	-	33.9%

Structural Foundation Rating*	36.1%
Soil Interaction Rating*	22.7%

*Rating per TIA-222-H Section 15.5

Soil Profile			
Groundwater Depth	3	# of Layers	5

Layer	Top (ft)	Bottom (ft)	Thickness (ft)	γ_{soil} (pcf)	γ_{concrete} (pcf)	Cohesion (ksf)	Angle of Friction (degrees)	Calculated Ultimate Skin Friction Comp (ksf)	Calculated Ultimate Skin Friction Uplift (ksf)	Ultimate Skin Friction Comp Override (ksf)	Ultimate Skin Friction Uplift Override (ksf)	Ult. Gross Bearing Capacity (ksf)	SPT Blow Count	Soil Type
1	0	3	3	100	150	0	0	0.000	0.000	0.00	0.00			Cohesionless
2	3	6	3	53	87.6	1	28	0.000	0.000	0.60	0.60			Cohesionless
3	6	23	17	63	87.6	2	28	0.000	0.000	1.29	1.29			Cohesionless
4	23	33	10	63	87.6	2.6	0	1.430	1.430	1.41	1.41			Cohesive
5	33	34	1	58	87.6	2	28	0.000	0.000	1.74	1.74			Cohesionless



Apply TIA-222-H Section 15.5:	☒
N/A	☐
Additional Longitudinal Rebar	
Input Effective Depths (else Actual):	☐
Shear Design Options	
Check Shear along Depth of Pier:	☒
Utilize Shear-Friction Methodology:	☐
Override Critical Depth:	☐

[Go to Soil Calculations](#)