



STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@ct.gov

Web Site: www.ct.gov/csc

VIA ELECTRONIC MAIL

September 21, 2020

Nicole Caplan-Mason
Site Acquisition Supervisor
Empire Telecom USA, LLC
16 Esquire Road
Billerica, MA 01862

RE: **EM-AT&T-089-200811** – AT&T Wireless notice of intent to modify an existing telecommunications facility located at 1 Hartford Square, New Britain, Connecticut.

Dear Ms. Caplan-Mason:

The Connecticut Siting Council (Council) is in receipt of your correspondence of September 17, 2020 submitted in response to the Council's August 20, 2020 notification of an incomplete request for exempt modification with regard to the above-referenced matter.

The submission renders the request for exempt modification complete and the Council will process the request in accordance with the Federal Communications Commission 60-day timeframe.

Thank you for your attention and cooperation.

Sincerely,

s/ Melanie A. Bachman

Melanie A. Bachman
Executive Director

MAB/IN/emr

From: Nicole Caplan <ncaplan@qualtekwireless.com>
Sent: Thursday, September 17, 2020 3:52 PM
To: Robidoux, Evan <Evan.Robidoux@ct.gov>
Cc: CSC-DL Siting Council <Siting.Council@ct.gov>
Subject: RE: Council Incomplete Letter for EM-AT&T-089-200811 (Hartford Square, New Britain)

Hello,

Attached please find the additional information requested for EM-AT&T-089-200811.

Thanks,

Nicole Caplan-Mason / Site Acquisition Supervisor / 978.284.3906 / ncaplan@qualtekwireless.com
16 Esquire Road, Billerica, MA 01862



 Please consider the environment before printing this e-mail.

Disclaimer: This E-Mail is intended only for the use of the individual or entity to which it is addressed, and may contain information that is privileged, confidential and exempt from disclosure under applicable law. If you have received this communication in error, please do not distribute it and delete the original message. Unless expressly stated in this e-mail, nothing in this message or any attachment should be construed as a digital or electronic signature.



City of New Britain
Building Department

Date Issued 11/7/03

**BUILDING PERMIT —
CERTIFICATE OF OCCUPANCY**

Date 8/14/00 Permit No. B1414

Applicant SBA Address 80 Eastern Blvd, Glastonbury, CT

Permit To ACCESSORY (Type of Improvement) () Story Tower (Proposed Use) No. of Dwelling Units _____

At (Location) ONE HARTFORD SQUARE (No.) (Street) Zoning District 12

Subdivision _____ Lot _____ Block _____ Lot Size _____

Building is to be _____ Ft. wide by _____ Ft. long by _____ Ft. in height and shall conform in construction

To Type _____ Use Group _____ Basement Walls or Foundation _____ (Type)

Remarks: Construct 175' lattice type communication tower per plans and specifications.

Area or Volume _____ (Cubic/Square Feet)

Owner Dixwell Associates Address 1 Hartford Sq, NB, CT

[Handwritten Signature]
(Building Inspector)

To be posted on premises — See reverse side for conditions of certificate.

LOCATION 1 HARTFORD SQUARE DATE AUG 1, 2000 ZONE 12 CODE YR 99 APPLICATION BUILDING/ZONING
NEW BRITAIN, CT # CK# 80378
CK# 80378
B 1414 COST \$ 84,000 FEE 1290.00 CO. FEE 15.00
1. OWNER Dixwell Associates ADDRESS 1 HARTFORD SQ. NB CT.
2. APPLICANT SBA ADDRESS 80 EASTERN BLVD GLASTONBURY
3. ARCHITECT THOMAS W. SCHEPKE P.E. ADDRESS 6718 W. PLANK RD, PEORIA, ILL.

REMODELING ACCESSORY DEMOLITION SIGNAGE SITE PLAN REVIEW OTHER
NEW CONTST NO. BEDROOMS _____ NO. BATHS _____ NO. GARAGES _____ FLOOD ZONE Y/N/NA _____

CONSTRUCT 175' LATTICE TYPE COMMUNICATION TOWER PER PLANS/SPECS.

C/O 11/7/03

DIMENSIONS	NO. OF STORIES	HEIGHT	TOTAL SQ. FT. FLR AREA
LOT SIZE	TOTAL LAND AREA SQ. FT.	BUILDING TYPE	USE GROUP

I hereby agree to conform to all of the requirements of the Laws of the State of Connecticut and the Ordinance of the City of New Britain and to notify the Building Commission of any alteration in the plans or specifications of the Building for which this permit is asked.

Applicant [Signature] (signature) EDWARD G. DUBOIS (print) 860 652-9101 (telephone no.)
Owner _____ (signature) _____ (print) _____ (telephone no.)

Structural Mount Analysis Report



T-FRAME SECTOR MOUNT

AT&T | New Britain West Site | CT5254 - FA 1071149
New Britain, Connecticut

September 16, 2020

MEI PROJECT ID: CT06145S-20V1



17950 PRESTON ROAD, SUITE 720 ■ DALLAS, TEXAS 75252 ■ TEL. 972-783-2578 FAX 972-783-2583

www.maloufengineering.com





September 16, 2020

Mr. Miguel Nobre
Vertical Resources Group
 Auburn, MA 01501

STRUCTURAL MOUNT ANALYSIS

Mount/Make/Model:	14.5ft Mount – V-Frame	Commscope / #SFG22HDX14-4-H10	
Client/Site Name/#:	Vertical Resources Group AT&T	New Britain West Site CT5254 - FA 1071149	
MEI Project ID:	CT06145S-20V1		
Location:	1 Hartford Square New Britain, CT 06052	Hartford County FCC #N/A	
	LAT 41-39-59.01 N	LON	72-48-46.07 W

EXECUTIVE SUMMARY:

Malouf Engineering Int'l (MEI), as requested, has performed a structural mount analysis of the referenced mount to assess the impact of the appurtenances configuration as noted in Table 1.

Based on the stress analysis performed, the mount **is in conformance** with the Int'l Building Code (IBC) / ANSI/TIA-**222-G** Standard for the loading considered under the criteria listed and referenced in the report sections.

	Max. Stress Ratio CSR	Findings
Proposed New Mount (replace existing)	70.3 %	Pass

The subject mount is structurally acceptable to support the appurtenances configuration as noted in Table 1. Refer to the Recommendations section for details.

MEI appreciates the opportunity of providing our continuing professional services to you. If you have any questions or need further assistance on this or other projects, please contact us.

Respectfully submitted,

MALOUF ENGINEERING INT'L, INC.

Analysis performed by:

Reviewed & Approved by:

Krishna Manda, PE
 Sr. Project Engineer


 E. Mark Malouf, PE
 Connecticut #17715
 972-783-2578 ext. 106
 mmalouf@maloufengineering.com



9/16/2020

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1. INTRODUCTION & SCOPE

A mount structural analysis was performed by Malouf Engineering Int'l (MEI), as requested and authorized by Mr. Miguel Nobre, Vertical Resources Group, on behalf of AT&T, to determine whether the subject support mount will be in compliance with the referenced code/standard(s) when supporting the proposed appurtenances configuration loading. The different report sections detail the applicable information used in this analysis, relating to the mount data, the appurtenances configuration and the loading considered.

The different report sections detail the applicable information used in this evaluation, relating to the mount data, the appurtenances configuration and the wind and ice loading considered.

2. SOURCE OF DATA

The following information has been used in this evaluation as source data that accurately represent the mount and the related appurtenances:

	Source	Information	Reference
STRUCTURE			
Mount Information	Vertical Resources Group Miguel Nobre	Commscope Mount Drawings & Additional data from MEI Records	Received 09/14/2020
Tower Information	-	No info provided	-
Material Grade	As per manufacturer provided typical mount details – Refer to Appendix.		
APPURTENANCES CONFIGURATION			
	Vertical Resources Group Miguel Nobre	AT&T RF Data Sheet Email Instruction	Dated 07/10/2020 Dated 07/23/2020 & Dated 07/31/2020
PRIOR MOUNT STRUCTURAL MODIFICATIONS	None		

3. ANALYSIS CRITERIA

The structural analysis performed used the following criteria:

CODE / STANDARD	2015 Int'l Building Code (2018 CSBC) / ANSI/TIA-222-G-4 Standard	
LOADING CASES	<i>Full Wind:</i>	125 Mph ultimate gust* [equiv. 96.8 Mph (3-sec gust)] w/No Radial Ice**
	<i>Iced Case:</i>	50 Mph + 0.75" Radial Ice
	<i>Service:</i>	60 Mph
	<i>Seismic:</i>	$S_s = 0.183$ / $S_1 = 0.064$ / Site Class: D – Default Soil
STRUCTURE CRITERIA	<i>Risk Category (Structural Class):</i> Class II	
	<i>Exposure Category:</i> 'C' – <i>Topographic Category:</i> 1	

Appurtenances Configuration

The following appurtenances configuration is denoted by Table 1:

Table 1: Appurtenances Configuration Considered

Elev. (ft) C.L.	Sector	Position	Ant Qty.	Appurtenance Model	Behind Panel / Location
166.00	Typical All Sectors			14.5 ft. V-Frame Mount (Commscope #SFG22HDX14-4-H10)	
166.00		1	1	QS66512-2 Panel Antenna	
166.00		1	2	TPX-070821 Triplexer Boxes	Yes
166.00		1	1	RRUS-32 B30 Box	Yes
166.00		1	1	CBC23SR-43 Diplexer Box	Yes
166.00		1	1	ION M23 SDARS Radio Unit Box	Yes
166.00		3	1	OPA65R-BU6D Panel Antenna	
166.00		3	1	RRUS-4478 B14 Box	Yes
166.00		3	1	RRUS-8843 B2/B66A Box	Yes
166.00		4	1	DMP65R-BU6D Panel Antenna	
166.00		4	1	RRUS-4449 B5/B12 Box	Yes

Notes:

1. Pipe Mount Positions above are labeled from right to left when looking from the front of the antennas.
2. Please refer to Appendix 2 for layout details provided.
3. *Ultimate gust speed as per structural design parameters table in 2018 Connecticut State Building Code (Appendix N).
4. **As per 2015 IBC for ultimate 3-sec gust wind speed converted to nominal 3-sec gust wind speed as per Sect. 1609.3.1 as required to be used in ANSI/TIA-222-G Standard per exception 5 of Sect. 1609.1.1.
5. All elevations are measured from tower base.
6. The above appurtenances represent MEI's understanding of the appurtenances configuration. If different than above, the analysis is invalid. Please contact MEI if any discrepancies are found.



4. ANALYSIS PROCEDURE

The subject mount is analyzed for feasibility of the installation of the appurtenances configuration previously noted. The data records furnished were reviewed and a computer stress analysis was performed in accordance with the TIA-222 Standard provisions and with the agreed scope of work terms and the results of this analysis are reported.

Analysis Program

The computer program used to model the structure is STAADPro FEA Program (Connect ver. 22), a commercially available general purpose structural finite element program by Bentley Systems, Carlsbad, CA.

Assumptions

This engineering study is based on the theoretical capacity of the structural members and the available connections data and is not a condition assessment. This analysis is based on information available or obtained, and therefore, its results are based on and as accurate as that data.

- This mount is assumed to have been properly maintained and to be in good condition with no structural defects and with no deterioration to its member capacities.
- The member sizes and configuration are considered accurate as supplied. The material grade is as per data supplied and/or as assumed and as stated.
- The appurtenances configuration is as supplied and/or as stated in the report.
- All welds and connections are assumed to develop at least the member capacity, unless determined otherwise and explicitly stated in this report.
- Ring clamps and localized pole shaft or tower legs, as applicable, are not included in this scope.

If any of the above assumptions are not valid or have been made in error, this analysis results may be invalidated, MEI should be contacted to review any contradictory information to determine its effect.

5. ANALYSIS RESULTS

The results of the structural stress analysis based on data available and with the previous listed criteria, indicated the following: [Note: The Wind loading controls over the Seismic loading].

Table 2: Stress Analysis Results

Support Description	Member Type	Max. Stress Ratio	Pass/Fail	Comments
SIDE SUPPORT / OUTRIGGER FRAME	HORIZONTALS	70.3%	Pass	
	BRACING	38.3%	Pass	Vertical brace
MAIN SUPPORT FRAME (FACE)	HORIZONTALS	57.1%	Pass	Top horizontal
	BRACINGS	-	N/A	
	PIPE SUPPORTS	35.5%	Pass	

Table 3: Mount Service Wind Deflection

	Maximum Value (in)	Comment
MAX. DEFLECTION	0.505	

Notes:

1. The Maximum Stress Ratio is the percentage that the maximum load in the member is relative to the allowable load as determined by Code requirements.
2. Refer to the Appendix 1 for more details on the member loads.
3. A maximum stress ratio between 100% and 105% may be considered as *Acceptable* according to industry standard practice.

6. FINDINGS & RECOMMENDATIONS

- Based on the stress analysis performed, the mount **is in conformance** with the Int'l Building Code / ANSI/TIA **222-G** Standard for the loading considered under the criteria listed and referenced in the report sections.
- ***The subject mount is structurally acceptable to support the appurtenances configuration as noted in Table 1.***
- Install proposed new mounts as per the manufacturer instructions.
- *Install proposed new mounts as per the manufacturer instructions and locate the antenna support pipe mounts and tie-backs as per the VRG Construction Drawings Ref. #CT5254-5C6C5GBWE Dated 07/31/2020. We recommend that all bolted connections should be tightened as required.*

Rigging and temporary supports required for the erection/modification shall be determined, documented, furnished and installed by the erector/contractor accounting for the loads imposed on the structure due to the proposed construction method.

7. REPORT DISCLAIMER

The engineering services rendered by Malouf Engineering International, Inc. ('MEI') in connection with this Structural Analysis are limited to a computer analysis of the structural component. MEI does not analyze the fabrication, including welding and connection capacities, except as included in this Report.

The analysis performed, and the conclusions contained herein are based on the assumption listed.

Furthermore, the information and conclusions contained in this Report were determined by application of the current "state-of-the-art" engineering and analysis procedures and formulae. MALOUF ENGINEERING INTERNATIONAL, INC. assumes no obligation to revise any of the information or conclusions contained in this Report in the event that such engineering and analysis procedures and formulae are hereafter modified or revised. In addition, under no circumstances will MALOUF ENGINEERING INTERNATIONAL, INC. have any obligation or responsibility whatsoever for or on account of consequential or incidental damages sustained by any person, firm or organization as a result of any information or conclusions contained in the Report, and the maximum liability of MALOUF ENGINEERING INTERNATIONAL, INC., if any, pursuant to this Report shall be limited to the total funds actually received by MALOUF ENGINEERING INTERNATIONAL, INC. for preparation of this Report.

Customer has requested MALOUF ENGINEERING INTERNATIONAL, INC. to prepare and submit to Customer an engineering analysis with respect to the subject structural component and has further requested MALOUF ENGINEERING INTERNATIONAL, INC. to make appropriate recommendations regarding suggested structural modifications and changes. In making such request of MALOUF ENGINEERING INTERNATIONAL, INC., Customer has informed MALOUF ENGINEERING INTERNATIONAL, INC. that Customer will make a determination as to whether or not to implement any of the changes or modifications which may be suggested by MALOUF ENGINEERING INTERNATIONAL, INC. and that Customer will have any such changes or modifications made by riggers, erectors and other subcontractors of Customer's choice. MALOUF ENGINEERING INTERNATIONAL, INC. shall have the right to rely upon the accuracy of the information supplied by the customer and shall not be held responsible for the Customer's misrepresentation or omission of relevant fact whether intentional or otherwise.

Customer hereby agrees and acknowledges that MALOUF ENGINEERING INTERNATIONAL, INC. shall have no liability whatsoever to Customer or to others for any work or services performed by any persons other than MALOUF ENGINEERING INTERNATIONAL, INC. in connection with the implementation of services including but not limited to any services rendered for Customer or for others by riggers, erectors or other subcontractors. Customer acknowledges and agrees that any riggers, erectors or subcontractors retained or employed by Customer shall be solely responsible to Customer and to others for the quality of work performed by them and that MALOUF ENGINEERING INTERNATIONAL, INC. shall have no liability or responsibility whatsoever as a result of any negligence or breach of contract by any such rigger, erector or subcontractor and that Customer and rigger, erector, or subcontractor will provide MALOUF ENGINEERING INTERNATIONAL, INC. with a Certificate of Insurance naming MALOUF ENGINEERING INTERNATIONAL, INC. as additional insured.



APPENDIX 1 – FEM ANALYSIS PRINTOUT





Malouf Engineering International Inc.
17950 Preston Rd, Suite 720
Dallas, Texas 75252 / p (972) 783-2575
maloufengineering.com

Job No
CT06145S-20V

Sheet No

1

Rev

Software licensed to MEI IT
CONNECTED User: Krishna Manda

Part

Job Title 14.5ft V-Frame Mount(SFG22HDX14-4-H10)/NEW BRITAIN WEST SITE
CT5254

Ref Ant, CL 166 ft.

By KM

Date 16-Sep-20

Chd MDG

Client AT&T

File CT06145S-20V1_14.5ft_\

Date/Time 16-Sep-2020 16:44

Job Information

	Engineer	Checked	Approved
Name:	KM	MDG	MM
Date:	16-Sep-20	16-Sep-20	16-Sep-20

Project ID	
Project Name	

Comments

NEW BRITAIN WEST SITE CT5254 - FA 1071149
REPLACE EXISTING MOUNT
WITH NEW 4.5ft V-FRAME MOUNT (COMMSCOPE #SFG22HDX14-4-H10)
Checked Per 2018 CT SBC / 2015 IBC / TIA-222-G
125 Mph Ult. / 50 Mph + 3/4" Ice / 60 Mph Service Wind
CLASS 2 / EXP. "C" / TOPO 1

Structure Type SPACE FRAME

Number of Nodes	52	Highest Node	116
Number of Elements	61	Highest Beam	402

Number of Basic Load Cases	-2
Number of Combination Load Cases	55

Included in this printout are data for:

All The Whole Structure

Included in this printout are results for load cases:

Type	L/C	Name
Primary	1	MOUNT DEAD WT.
Primary	2	MOUNT ICED WT.
Primary	3	ANTENNA DEAD LOADS
Primary	4	ANTENNA ICE WEIGHT LOADS
Primary	5	FRONT WIND LOADS
Primary	6	BACK WIND LOADS
Primary	7	SIDE WIND LOADS
Primary	8	FRONT ICED WIND LOADS
Primary	9	BACK ICED WIND LOADS
Primary	10	SIDE ICED WIND LOADS
Primary	11	MAN LOAD 1
Primary	12	MAN LOAD 2
Primary	13	MAN LV LOAD 1
Primary	14	MAN LV LOAD 2
Combination	15	GENERATED COMBO 1) 0 DEG(1.2D + 1.
Combination	16	GENERATED COMBO 1) 30 DEG(1.2D + 1.
Combination	17	GENERATED COMBO 1) 60 DEG(1.2D + 1.
Combination	18	GENERATED COMBO 1) 90 DEG(1.2D + 1.



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CONNECTED User: Krishna Manda

Job No
CT06145S-20V

Sheet No

2

Rev

Part

Job Title **14.5ft V-Frame Mount(SFG22HDX14-4-H10)/NEW BRITAIN WEST SITE CT5254**

Ref Ant. CL 166 ft.

By **KM**

Date **16-Sep-20**

Chd **MDG**

Client **AT&T**

File **CT06145S-20V1_14.5ft_**

Date/Time **16-Sep-2020 16:44**

Job Information Cont...

Type	L/C	Name
Combination	22	GENERATED COMBO 1) 210 DEG(1.2D +
Combination	23	GENERATED COMBO 1) 240 DEG(1.2D +
Combination	24	GENERATED COMBO 1) 270 DEG(1.2D +
Combination	25	GENERATED COMBO 1) 300 DEG(1.2D +
Combination	26	GENERATED COMBO 1) 330 DEG(1.2D +
Combination	27	GENERATED COMBO 2) 0 DEG(0.9D + 1.
Combination	28	GENERATED COMBO 2) 30 DEG(0.9D +
Combination	29	GENERATED COMBO 2) 60 DEG(0.9D +
Combination	30	GENERATED COMBO 2) 90 DEG(0.9D +
Combination	31	GENERATED COMBO 2) 120 DEG(0.9D +
Combination	32	GENERATED COMBO 2) 150 DEG(0.9D +
Combination	33	GENERATED COMBO 2) 180 DEG(0.9D +
Combination	34	GENERATED COMBO 2) 210 DEG(0.9D +
Combination	35	GENERATED COMBO 2) 240 DEG(0.9D +
Combination	36	GENERATED COMBO 2) 270 DEG(0.9D +
Combination	37	GENERATED COMBO 2) 300 DEG(0.9D +
Combination	38	GENERATED COMBO 2) 330 DEG(0.9D +
Combination	39	GENERATED COMBO 3) 0 DEG(1.2D + 1.
Combination	40	GENERATED COMBO 3) 30 DEG(1.2D +
Combination	41	GENERATED COMBO 3) 60 DEG(1.2D +
Combination	42	GENERATED COMBO 3) 90 DEG(1.2D +
Combination	43	GENERATED COMBO 3) 120 DEG(1.2D +
Combination	44	GENERATED COMBO 3) 150 DEG(1.2D +
Combination	45	GENERATED COMBO 3) 180 DEG(1.2D +
Combination	46	GENERATED COMBO 3) 210 DEG(1.2D +
Combination	47	GENERATED COMBO 3) 240 DEG(1.2D +
Combination	48	GENERATED COMBO 3) 270 DEG(1.2D +
Combination	49	GENERATED COMBO 3) 300 DEG(1.2D +
Combination	50	GENERATED COMBO 3) 330 DEG(1.2D +
Combination	51	MAINTENANCE DEAD LOAD CASE
Combination	52	MAINTENANCE LOAD LM CASE 1 (0 DE
Combination	53	MAINTENANCE LOAD LM CASE 1 (180 D
Combination	54	MAINTENANCE LOAD LM CASE 2 (0 DE
Combination	55	MAINTENANCE LOAD LM CASE 2 (180 D
Combination	56	GENERATED COMBO 6) 1.0 MAN 1
Combination	57	GENERATED COMBO 6) 1.0 MAN 2
Combination	58	SERVICE COMBO 7) 0 DEG(1.0D + 1.0 W
Combination	59	SERVICE COMBO 7) 30 DEG(1.0D + 1.0 \
Combination	60	SERVICE COMBO 7) 60 DEG(1.0D + 1.0 \
Combination	61	SERVICE COMBO 7) 90 DEG(1.0D + 1.0 \
Combination	62	SERVICE COMBO 7) 120 DEG(1.0D + 1.0
Combination	63	SERVICE COMBO 7) 150 DEG(1.0D + 1.0
Combination	64	SERVICE COMBO 7) 180 DEG(1.0D + 1.0
Combination	65	SERVICE COMBO 7) 210 DEG(1.0D + 1.0
Combination	66	SERVICE COMBO 7) 240 DEG(1.0D + 1.0

 <p>Malouf Engineering Intl. Inc. 17950 Preston Rd, Suite 720 Dallas, Texas 75252 / p (972) 783-2575 maloufengineering.com</p> <p>Software licensed to MEI IT CONNECTED User: Krishna Manda</p>	<p>Job No CT06145S-20V</p>	<p>Sheet No 3</p>	<p>Rev</p>
	<p>Part</p>		
<p>Job Title 14.5ft V-Frame Mount(SFG22HDX14-4-H10)/NEW BRITAIN WEST SITE CT5254</p>	<p>Ref Ant. CL 166 ft.</p>		
<p>Client AT&T</p>	<p>By KM</p>	<p>Date 16-Sep-20</p>	<p>Chd MDG</p>
<p>File CT06145S-20V1_14.5ft_\</p>		<p>Date/Time 16-Sep-2020 16:44</p>	

Job Information Cont...

Type	L/C	Name
Combination	67	SERVICE COMBO 7) 270 DEG(1.0D + 1.0
Combination	68	SERVICE COMBO 7) 300 DEG(1.0D + 1.0
Combination	69	SERVICE COMBO 7) 330 DEG(1.0D + 1.0

Section Properties

Prop	Section	Area (in ²)	I _{yy} (in ⁴)	I _{zz} (in ⁴)	J (in ⁴)	Material
1	PIPE	1.274	1.822	1.822	3.644	STEEL
2	FB-0.5X6-IN	3.000	0.063	9.000	0.250	STEEL
3	FB-0.5X4-IN	2.000	0.042	2.667	0.167	STEEL
4	FB-0.5X5-IN	2.500	0.052	5.208	0.208	STEEL
5	PIPE	0.850	0.542	0.542	1.084	STEEL
6	PIPE	0.442	0.016	0.016	0.031	STEEL
7	PIPE	0.442	0.016	0.016	0.031	STEEL
8	PIPS25	1.610	1.450	1.450	2.907	STEEL
9	PIPE	1.039	0.987	0.987	1.975	STEEL
10	PIPE	1.039	0.987	0.987	1.975	STEEL

Materials

Mat	Name	E (kip/in ²)	v	Density (kip/in ³)	α (/°F)
1	STEEL	29E+3	0.300	0.000	6E-6
2	STAINLESSSTEEL	28E+3	0.300	0.000	10E-6
3	ALUMINUM	10E+3	0.330	0.000	13E-6
4	CONCRETE	3.15E+3	0.170	0.000	5E-6

Node Displacement Summary

	Node	L/C	X (in)	Y (in)	Z (in)	Resultant (in)	rX (rad)	rY (rad)	rZ (rad)
Max X	95	21:GENERATE	0.280	-0.031	0.110	0.302	0.003	-0.015	-0.001
Min X	92	52:MAINTENAI	-0.389	-0.542	0.148	0.684	-0.002	-0.000	-0.006
Max Y	41	13:MAN LV LO.	-0.069	0.113	-0.089	0.159	0.002	-0.001	-0.002
Min Y	48	53:MAINTENAI	-0.103	-0.564	0.216	0.613	-0.002	-0.003	-0.006
Max Z	96	21:GENERATE	0.276	-0.090	1.981	2.002	0.017	-0.032	-0.001
Min Z	96	27:GENERATE	-0.174	-0.155	-1.957	1.971	-0.016	0.031	-0.001
Max rX	96	21:GENERATE	0.276	-0.090	1.981	2.002	0.017	-0.032	-0.001
Min rX	96	27:GENERATE	-0.174	-0.155	-1.957	1.971	-0.016	0.031	-0.001
Max rY	75	27:GENERATE	0.000	-0.006	-0.328	0.328	0.000	0.056	-0.001
Min rY	75	21:GENERATE	-0.000	-0.011	0.329	0.329	0.000	-0.056	-0.002
Max rZ	103	42:GENERATE	0.002	-0.040	-0.022	0.046	0.001	0.001	0.005



Malouf Engineering International Inc.
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Job No
CT06145S-20V

Sheet No

4

Rev

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CONNECTED User: Krishna Manda

Part

Job Title 14.5ft V-Frame Mount(SFG22HDX14-4-H10)/NEW BRITAIN WEST SITE
CT5254

Ref Ant. CL 166 ft.

By KM

Date 16-Sep-20

Chd MDG

Client AT&T

File CT06145S-20V1_14.5ft_\

Date/Time 16-Sep-2020 16:44

Node Displacement Summary Cont...

	Node	L/C	X (in)	Y (in)	Z (in)	Resultant (in)	rX (rad)	rY (rad)	rZ (rad)
Min rZ	112	52:MAINTENAI	-0.010	-0.181	-0.007	0.182	-0.002	0.000	-0.008
Max Rst	96	21:GENERATE	0.276	-0.090	1.981	2.002	0.017	-0.032	-0.001

Reaction Summary

	Node	L/C	Horizontal	Vertical	Horizontal	Moment		
			FX (lb)	FY (lb)	FZ (lb)	MX (kip'in)	MY (kip'in)	MZ (kip'in)
Max FX	57	52:MAINTENAI	1.76E+3	-132.619	1.87E+3	0.000	0.000	0.000
Min FX	80	53:MAINTENAI	-1.75E+3	2.15E+3	-1.99E+3	0.000	0.000	0.000
Max FY	80	39:GENERATE	-52.937	3.65E+3	-2.45E+3	0.000	0.000	0.000
Min FY	57	39:GENERATE	156.888	-198.747	3.3E+3	0.000	0.000	0.000
Max FZ	57	39:GENERATE	156.888	-198.747	3.3E+3	0.000	0.000	0.000
Min FZ	80	42:GENERATE	-80.694	3.64E+3	-3.65E+3	0.000	0.000	0.000
Max MX	113	27:GENERATE	-342.138	8.842	371.239	0.077	0.163	-0.107
Min MX	114	53:MAINTENAI	0.728	17.254	-3.818	-0.140	-0.008	0.079
Max MY	113	27:GENERATE	-342.138	8.842	371.239	0.077	0.163	-0.107
Min MY	113	21:GENERATE	340.792	11.609	-369.932	-0.085	-0.164	0.058
Max MZ	114	53:MAINTENAI	0.728	17.254	-3.818	-0.140	-0.008	0.079
Min MZ	113	15:GENERATE	-342.331	11.763	371.426	0.076	0.163	-0.114

Utilization Ratio

Beam	Analysis Property	Design Property	Actual Allowable		Ratio (Act./Allow.)	Clause	L/C	Ax (in ²)	Iz (in ⁴)	Iy (in ⁴)	Ix (in ⁴)
			Ratio	Ratio							
1	PIPE	PIPE	0.000	1.000	0.000	SHEAR-Z	15	1.274	1.822	1.822	3.644
2	PIPE	PIPE	0.093	1.000	0.093	LRFD-H1-1B-	53	1.274	1.822	1.822	3.644
3	PIPE	PIPE	0.000	1.000	0.000	SHEAR-Z	15	1.274	1.822	1.822	3.644
4	FB-0.5X6-IN	FB-0.5X6-IN	0.001	1.000	0.001	SHEAR-Z	39	3.000	9.000	0.063	0.250
5	FB-0.5X6-IN	FB-0.5X6-IN	0.073	1.000	0.073	LRFD-H1-1B-	42	3.000	9.000	0.063	0.250
6	FB-0.5X6-IN	FB-0.5X6-IN	0.069	1.000	0.069	LRFD-H1-1B-	53	3.000	9.000	0.063	0.250
7	FB-0.5X6-IN	FB-0.5X6-IN	0.001	1.000	0.001	SHEAR-Z	39	3.000	9.000	0.063	0.250
8	FB-0.5X6-IN	FB-0.5X6-IN	0.001	1.000	0.001	SHEAR-Z	39	3.000	9.000	0.063	0.250
9	FB-0.5X6-IN	FB-0.5X6-IN	0.520	1.000	0.520	LRFD-H1-1B-	42	3.000	9.000	0.063	0.250
10	FB-0.5X6-IN	FB-0.5X6-IN	0.540	1.000	0.540	LRFD-H1-1B-	53	3.000	9.000	0.063	0.250
11	FB-0.5X6-IN	FB-0.5X6-IN	0.001	1.000	0.001	SHEAR-Z	39	3.000	9.000	0.063	0.250
12	FB-0.5X4-IN	FB-0.5X4-IN	0.058	1.000	0.058	LRFD-H1-1B-	45	2.000	2.667	0.042	0.167
13	PIPE	PIPE	0.207	1.000	0.207	LRFD-H1-1B-	45	0.850	0.542	0.542	1.084
14	FB-0.5X5-IN	FB-0.5X5-IN	0.263	1.000	0.263	LRFD-H1-1B-	21	2.500	5.208	0.052	0.208
15	FB-0.5X4-IN	FB-0.5X4-IN	0.067	1.000	0.067	LRFD-H1-1B-	52	2.000	2.667	0.042	0.167
16	PIPE	PIPE	0.328	1.000	0.328	LRFD-H1-1B-	15	0.850	0.542	0.542	1.084
17	FB-0.5X5-IN	FB-0.5X5-IN	0.247	1.000	0.247	LRFD-H1-1B-	21	2.500	5.208	0.052	0.208
18	FB-0.5X4-IN	FB-0.5X4-IN	0.689	1.000	0.689	LRFD-H1-1B-	42	2.000	2.667	0.042	0.167
19	PIPE	PIPE	0.219	1.000	0.219	LRFD-H1-1B-	42	0.850	0.542	0.542	1.084



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Part

Job Title 14.5ft V-Frame Mount(SFG22HDX14-4-H10)/NEW BRITAIN WEST SITE
CT5254

Ref Ant, CL 166 ft.

By KM

Date 16-Sep-20

Chd MDG

Client AT&T

File CT06145S-20V1_14.5ft_\

Date/Time 16-Sep-2020 16:44

Utilization Ratio Cont...

Beam	Analysis Property	Design Property	Actual Allowable		Ratio (Act./Allow.)	Clause	L/C	Ax (in ²)	Iz (in ⁴)	Iy (in ⁴)	Ix (in ⁴)
			Ratio	Ratio							
20	FB-0.5X5-IN	FB-0.5X5-IN	0.319	1.000	0.319	LRFD-H1-1B-	39	2.500	5.208	0.052	0.208
21	FB-0.5X4-IN	FB-0.5X4-IN	0.703	1.000	0.703	LRFD-H1-1B-	53	2.000	2.667	0.042	0.167
22	PIPE	PIPE	0.391	1.000	0.391	LRFD-H1-1B-	15	0.850	0.542	0.542	1.084
23	FB-0.5X5-IN	FB-0.5X5-IN	0.331	1.000	0.331	LRFD-H1-1B-	39	2.500	5.208	0.052	0.208
24	PIPE	PIPE	0.196	1.000	0.196	LRFD-H1-1B-	48	0.442	0.016	0.016	0.031
25	PIPE	PIPE	0.196	1.000	0.196	LRFD-H1-1B-	42	0.442	0.016	0.016	0.031
26	PIPE	PIPE	0.383	1.000	0.383	LRFD-H1-1A-	52	0.442	0.016	0.016	0.031
27	PIPE	PIPE	0.376	1.000	0.376	LRFD-H1-1A-	39	0.442	0.016	0.016	0.031
28	PIPS25	PIPS25	0.000	1.000	0.000	SHEAR-Y	39	1.610	1.450	1.450	2.900
29	PIPS25	PIPS25	0.336	1.000	0.336	LRFD-H1-1B-	15	1.610	1.450	1.450	2.900
30	PIPS25	PIPS25	0.297	1.000	0.297	LRFD-H1-1B-	15	1.610	1.450	1.450	2.900
31	PIPS25	PIPS25	0.302	1.000	0.302	LRFD-H1-1B-	21	1.610	1.450	1.450	2.900
32	PIPS25	PIPS25	0.290	1.000	0.290	LRFD-H1-1B-	21	1.610	1.450	1.450	2.900
33	PIPS25	PIPS25	0.443	1.000	0.443	LRFD-H1-1B-	15	1.610	1.450	1.450	2.900
34	PIPS25	PIPS25	0.419	1.000	0.419	LRFD-H1-1B-	15	1.610	1.450	1.450	2.900
35	PIPS25	PIPS25	0.000	1.000	0.000	SHEAR-Y	39	1.610	1.450	1.450	2.900
36	PIPS25	PIPS25	0.000	1.000	0.000	SHEAR-Y	39	1.610	1.450	1.450	2.900
37	PIPS25	PIPS25	0.353	1.000	0.353	LRFD-H1-1B-	15	1.610	1.450	1.450	2.900
38	PIPS25	PIPS25	0.412	1.000	0.412	LRFD-H1-1B-	15	1.610	1.450	1.450	2.900
39	PIPS25	PIPS25	0.371	1.000	0.371	LRFD-H1-1B-	15	1.610	1.450	1.450	2.900
40	PIPS25	PIPS25	0.372	1.000	0.372	LRFD-H1-1B-	21	1.610	1.450	1.450	2.900
41	PIPS25	PIPS25	0.404	1.000	0.404	LRFD-H1-1B-	21	1.610	1.450	1.450	2.900
42	PIPS25	PIPS25	0.571	1.000	0.571	LRFD-H1-1B-	21	1.610	1.450	1.450	2.900
43	PIPS25	PIPS25	0.559	1.000	0.559	LRFD-H1-1B-	21	1.610	1.450	1.450	2.900
44	PIPS25	PIPS25	0.449	1.000	0.449	LRFD-H1-1B-	21	1.610	1.450	1.450	2.900
45	PIPS25	PIPS25	0.000	1.000	0.000	SHEAR-Y	39	1.610	1.450	1.450	2.900
46	PIPE	PIPE	0.029	1.000	0.029	LRFD-H1-1B-	18	1.039	0.987	0.987	1.975
47	PIPE	PIPE	0.052	1.000	0.052	LRFD-H1-1B-	18	1.039	0.987	0.987	1.975
48	PIPE	PIPE	0.224	1.000	0.224	LRFD-H1-1B-	45	0.850	0.542	0.542	1.084
49	PIPE	PIPE	0.318	1.000	0.318	LRFD-H1-1B-	15	0.850	0.542	0.542	1.084
100	PIPE	PIPE	0.119	1.000	0.119	LRFD-H1-1B-	15	1.039	0.987	0.987	1.975
101	PIPE	PIPE	0.355	1.000	0.355	LRFD-H1-1B-	53	1.039	0.987	0.987	1.975
102	PIPE	PIPE	0.354	1.000	0.354	LRFD-H1-1B-	15	1.039	0.987	0.987	1.975
200	PIPE	PIPE	0.023	1.000	0.023	LRFD-H1-1B-	15	1.039	0.987	0.987	1.975
201	PIPE	PIPE	0.275	1.000	0.275	LRFD-H1-1B-	42	1.039	0.987	0.987	1.975
202	PIPE	PIPE	0.023	1.000	0.023	LRFD-H1-1B-	15	1.039	0.987	0.987	1.975
300	PIPE	PIPE	0.114	1.000	0.114	LRFD-H1-1B-	15	1.039	0.987	0.987	1.975
301	PIPE	PIPE	0.315	1.000	0.315	LRFD-H1-1B-	21	1.039	0.987	0.987	1.975
302	PIPE	PIPE	0.323	1.000	0.323	LRFD-H1-1B-	15	1.039	0.987	0.987	1.975
400	PIPE	PIPE	0.113	1.000	0.113	LRFD-H1-1B-	15	1.039	0.987	0.987	1.975
401	PIPE	PIPE	0.309	1.000	0.309	LRFD-H1-1B-	48	1.039	0.987	0.987	1.975
402	PIPE	PIPE	0.286	1.000	0.286	LRFD-H1-1B-	15	1.039	0.987	0.987	1.975



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Part

Job Title 14.5ft V-Frame Mount(SFG22HDX14-4-H10)/NEW BRITAIN WEST SITE
CT5254

Ref Ant, CL 166 ft.

By KM

Date 16-Sep-20

Chd MDG

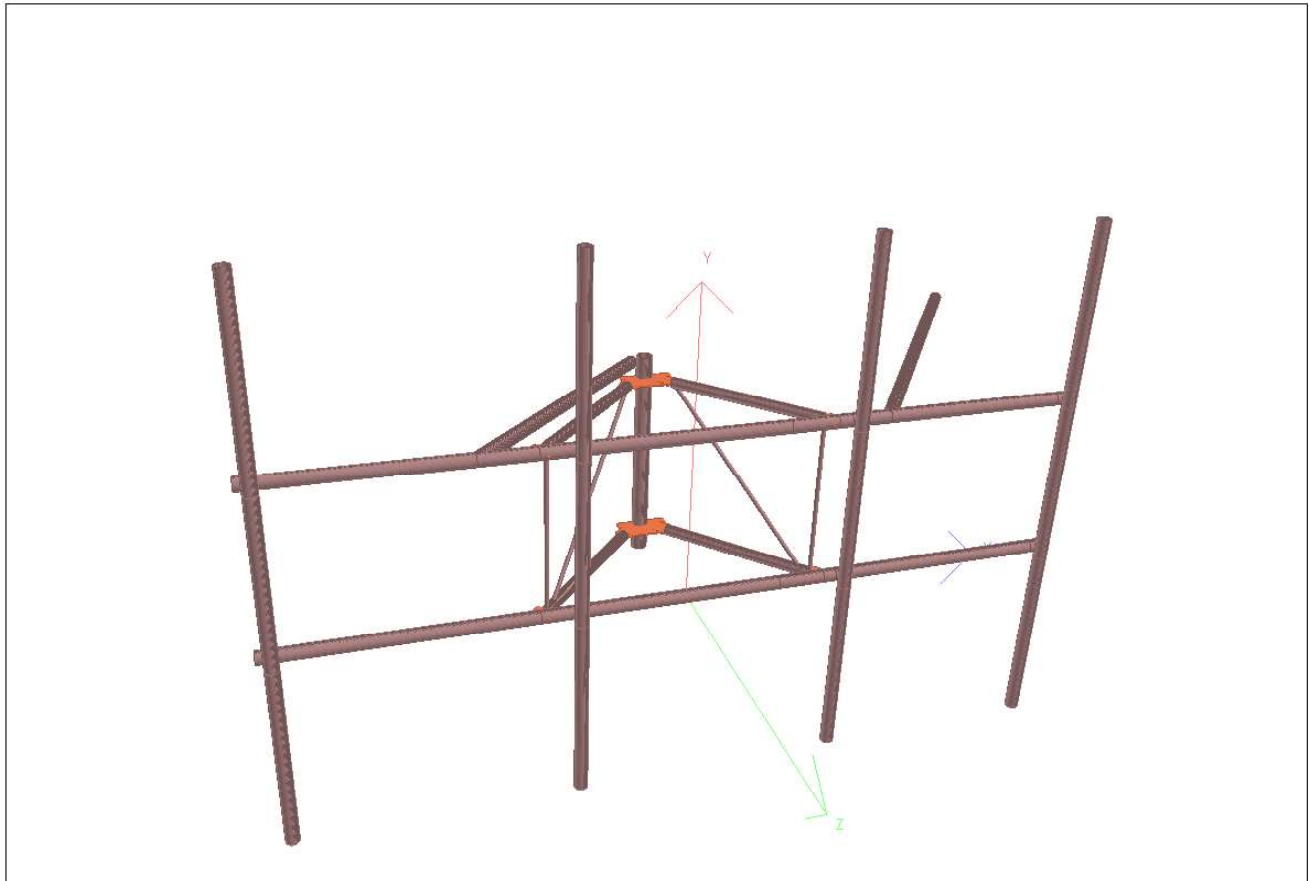
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File CT06145S-20V1_14.5ft_\

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Failed Members

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3D Rendered View



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CT5254**

Ref Ant, CL 166 ft.

By **KM**

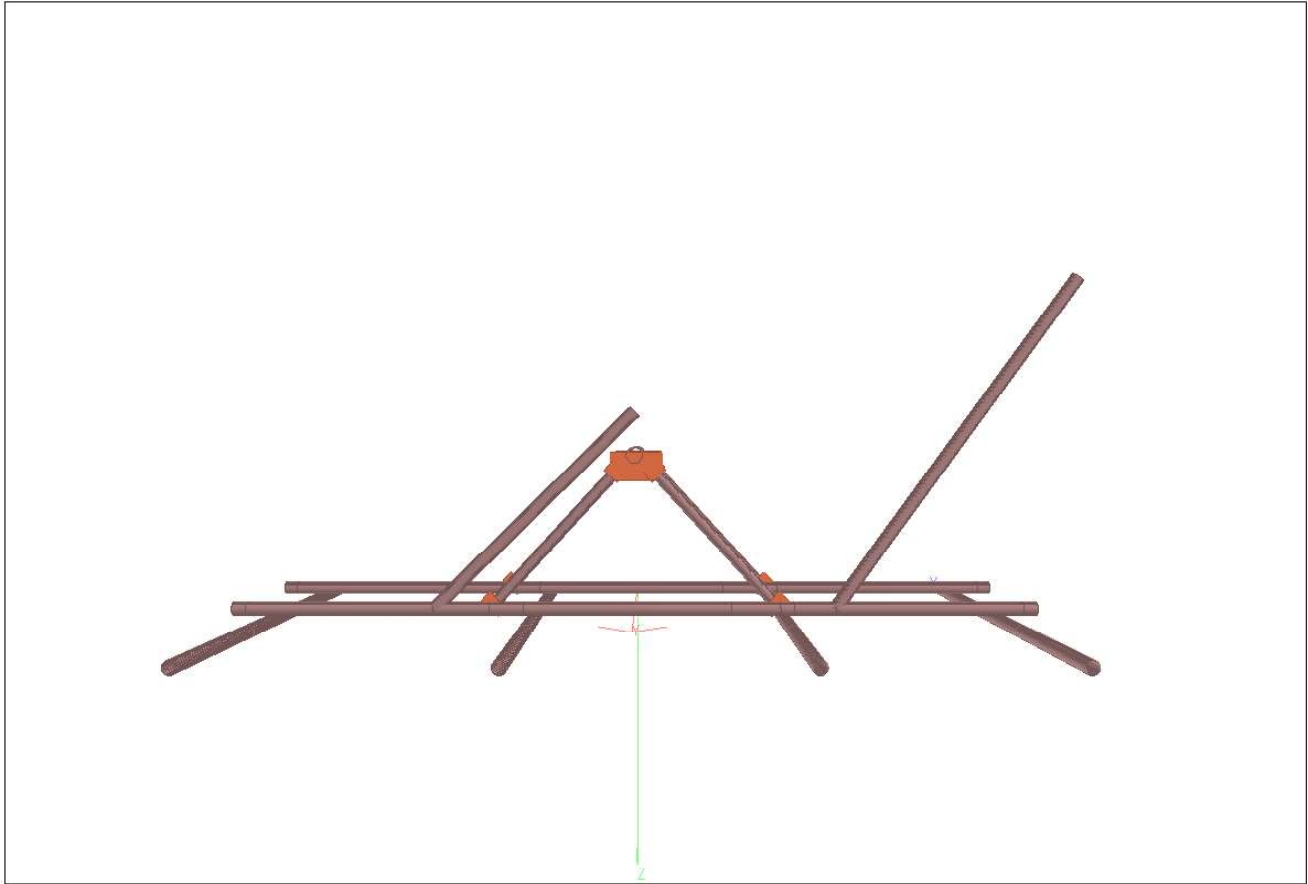
Date **16-Sep-20**

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3D Rendered Plan View



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 CT5254**

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By **KM**

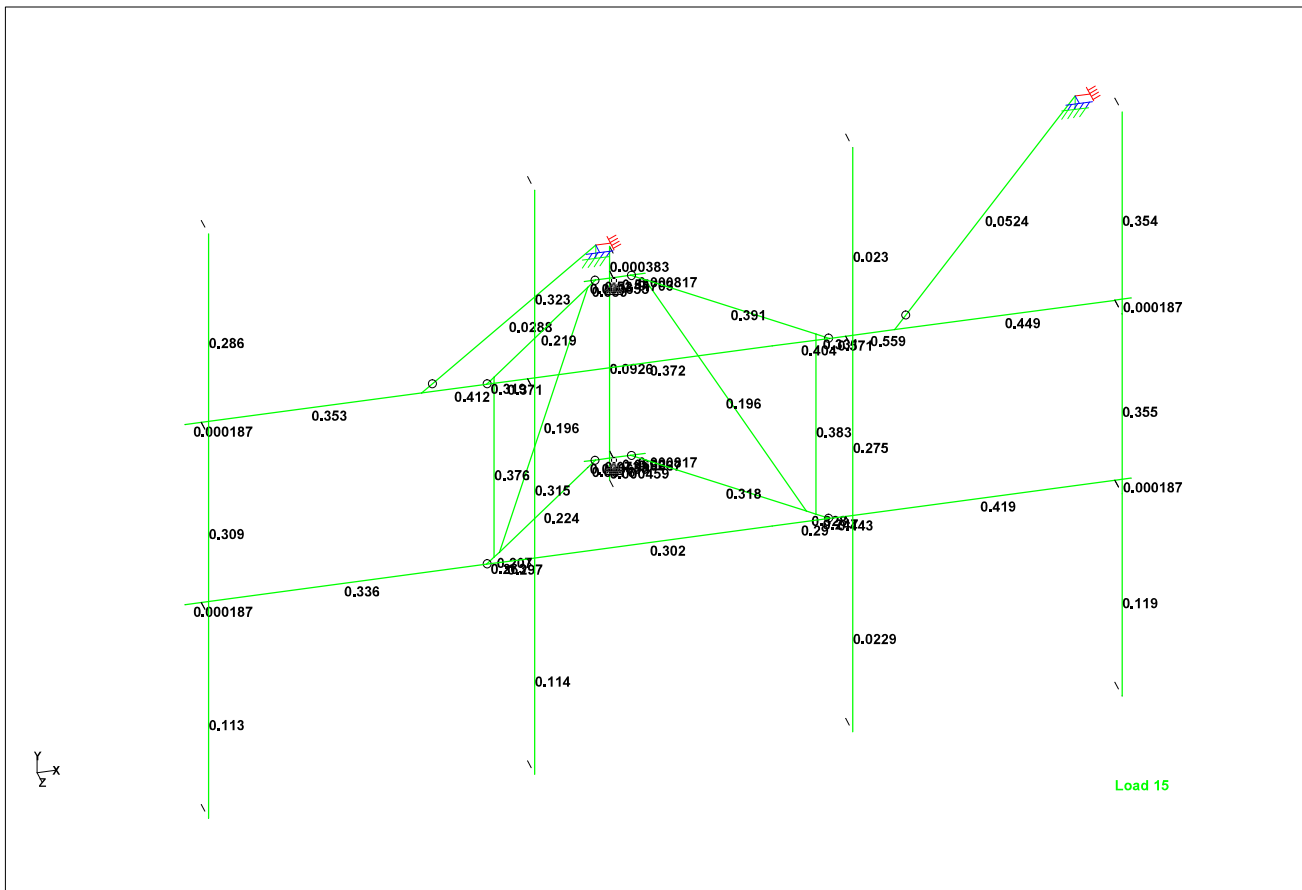
Date **16-Sep-20**

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Combined Stress Ratios (Unity Check < 1.05 OK!)



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 CT5254**

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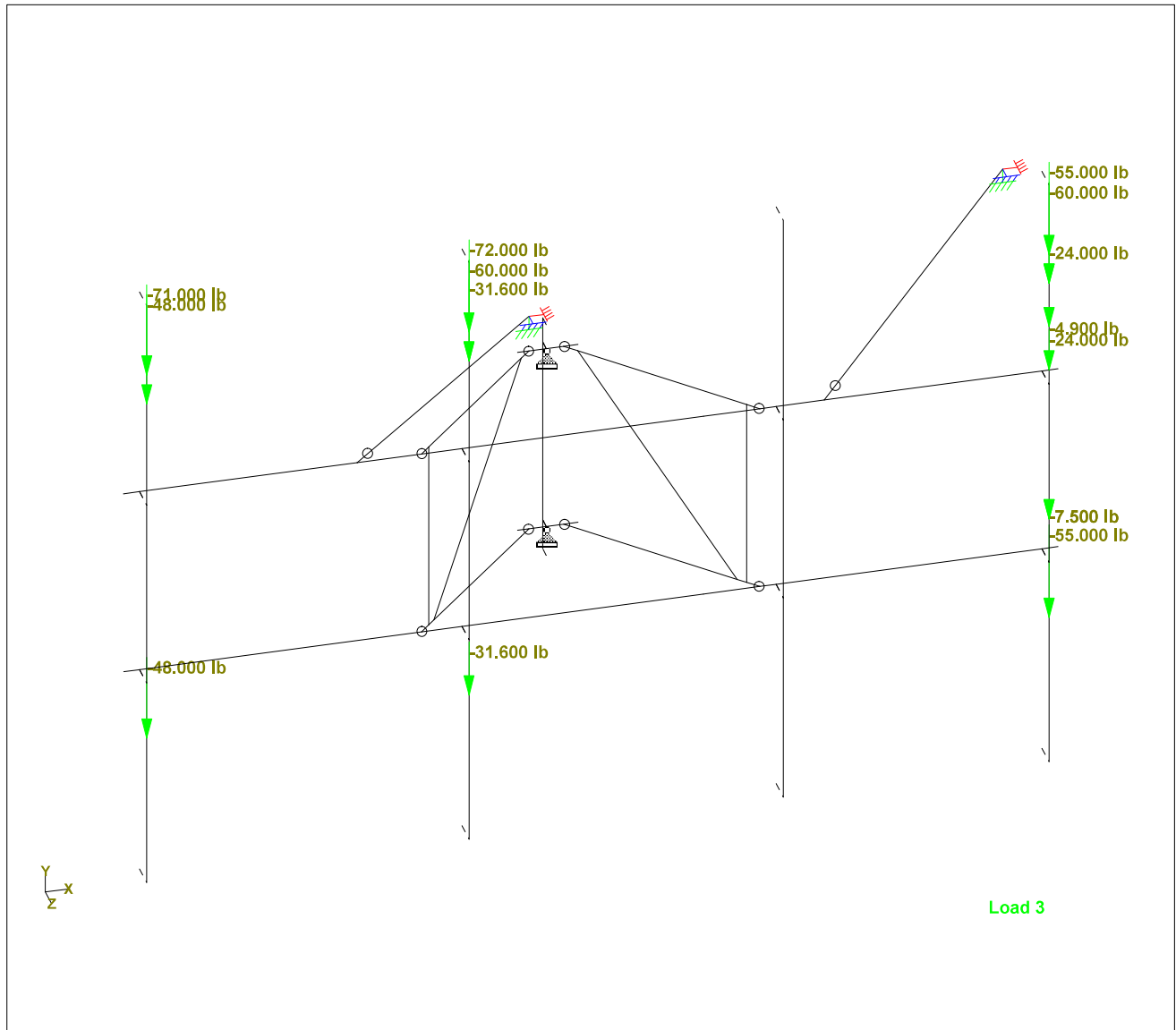
Date **16-Sep-20**

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Whole Structure Loads 34.2712lb:1ft 3 ANTENNA DEAD LOADS



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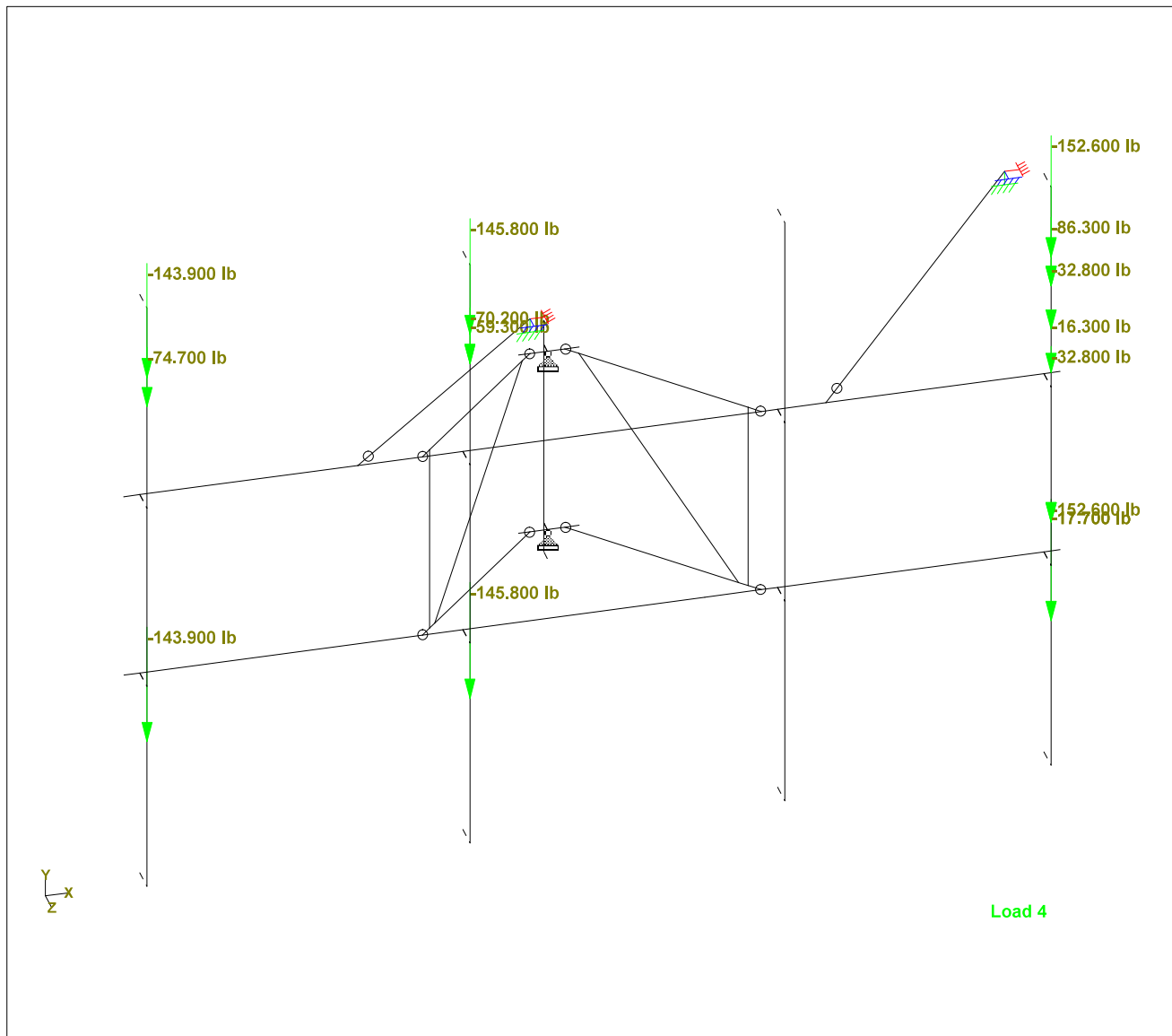
Job Title **14.5ft V-Frame Mount(SFG22HDX14-4-H10)/NEW BRITAIN WEST SITE
 CT5254**

Ref Ant. CL 166 ft.

By **KM** Date **16-Sep-20** Chd **MDG**

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Whole Structure Loads 72.6359lb:1ft 4 ANTENNA ICE WEIGHT LOADS



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By **KM**

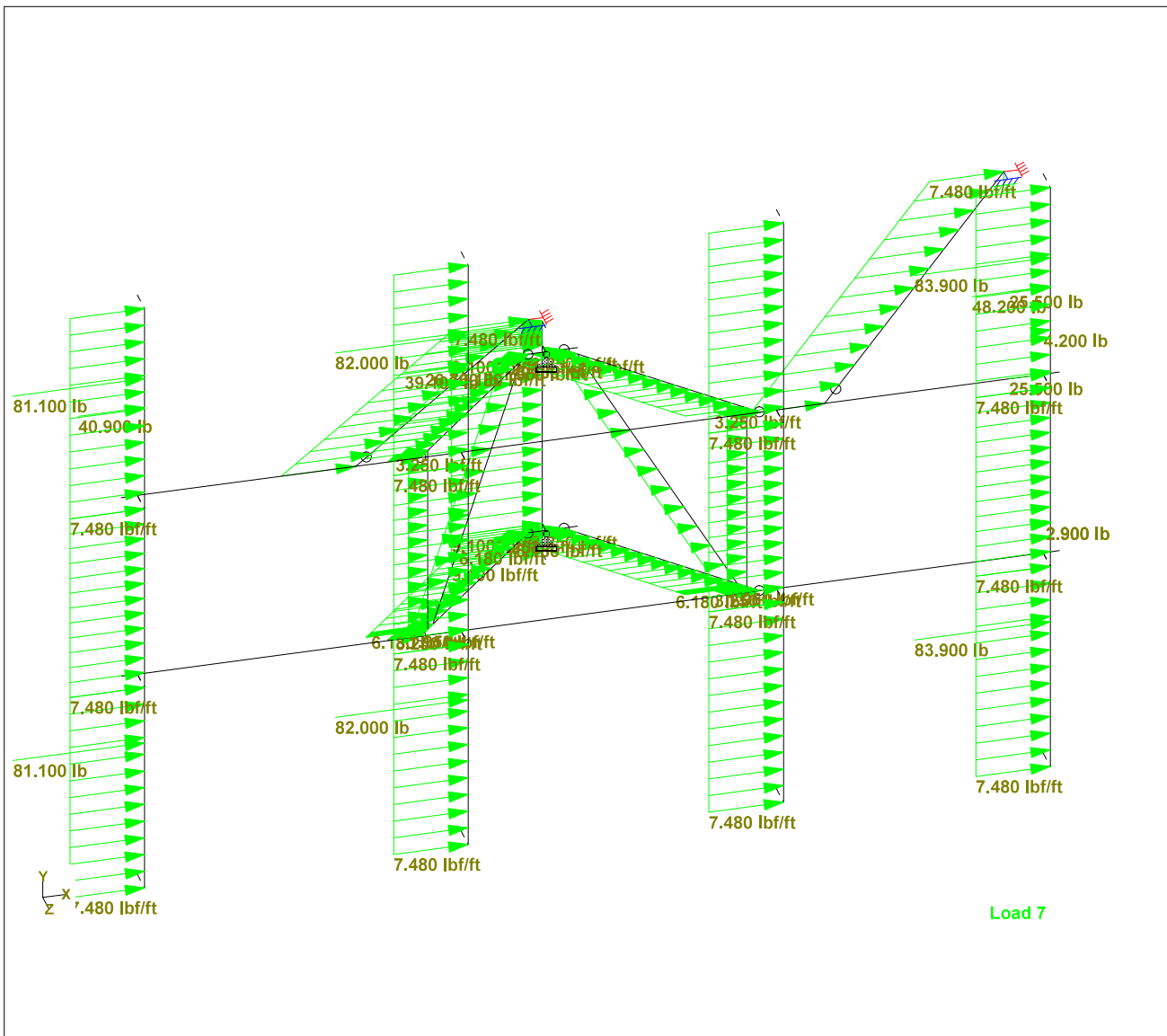
Date **16-Sep-20**

Chd **MDG**

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Date/Time **16-Sep-2020 16:44**



Whole Structure Loads 39.9355lb:1ft 7 SIDE WIND LOADS



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 CT5254**

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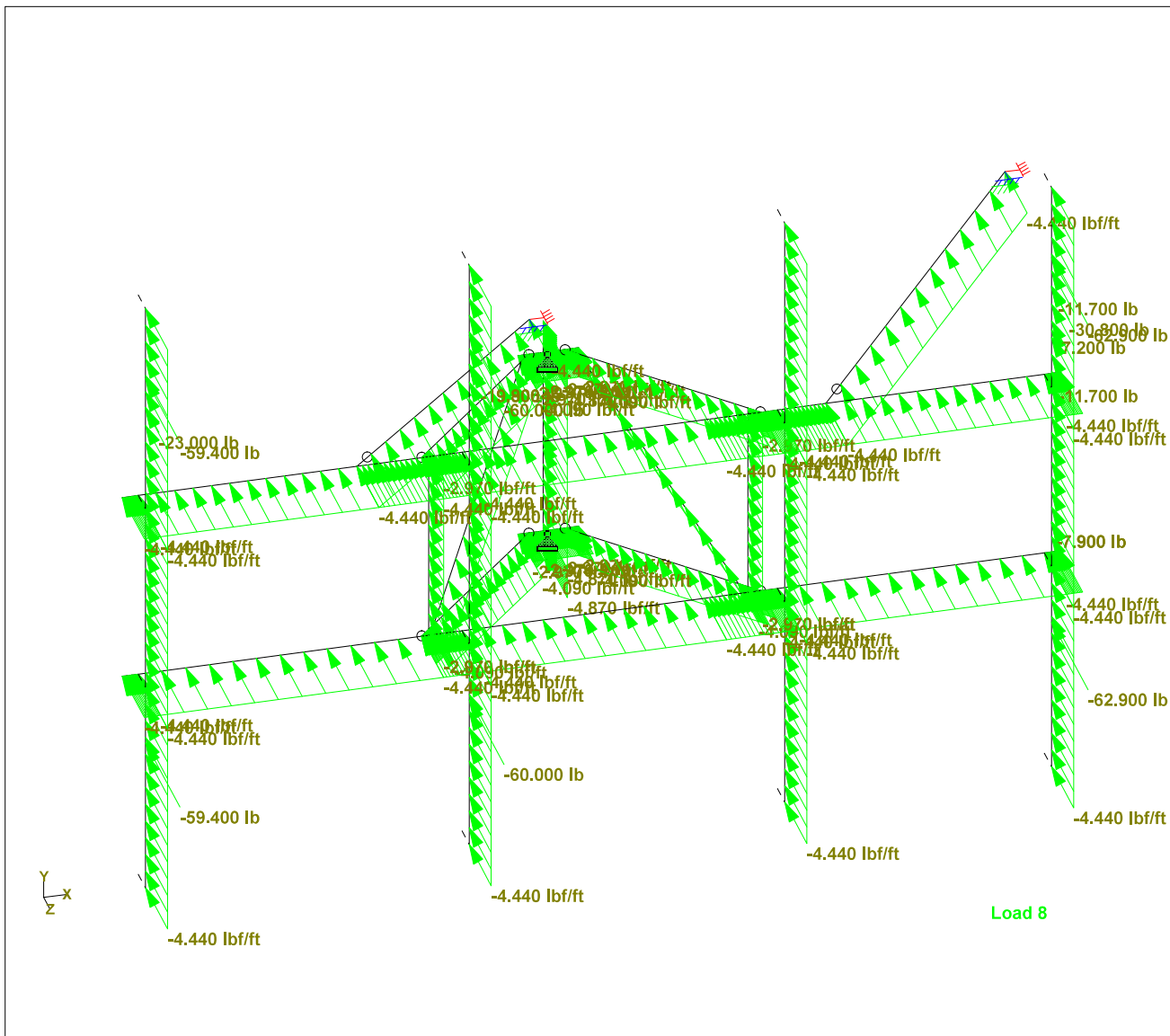
Date **16-Sep-20**

Chd **MDG**

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Whole Structure Loads 29.9397lb:1ft 8 FRONT ICED WIND LOADS



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Job Title **14.5ft V-Frame Mount(SFG22HDX14-4-H10)/NEW BRITAIN WEST SITE
 CT5254**

Ref Ant. CL 166 ft.

By **KM**

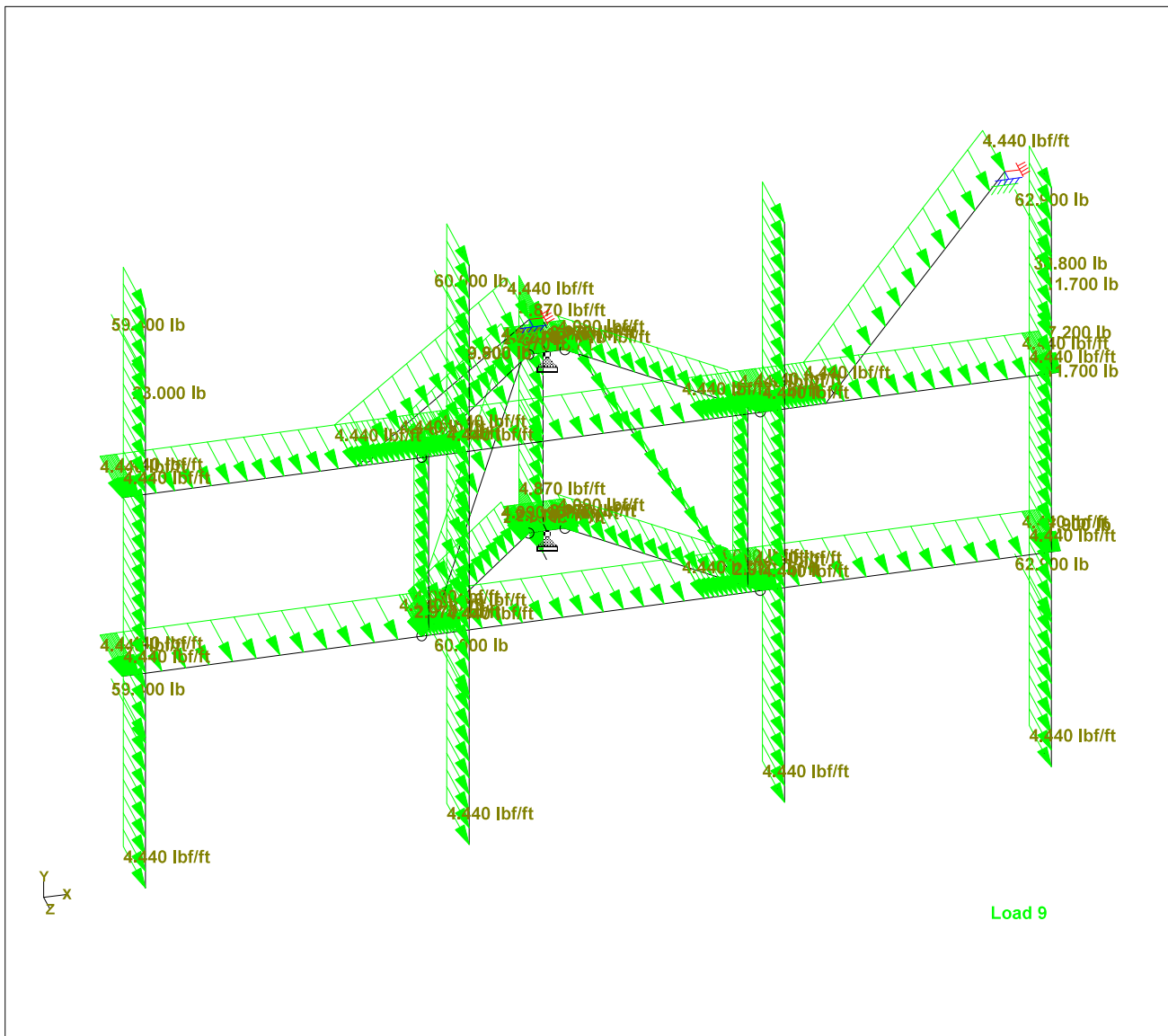
Date **16-Sep-20**

Chd **MDG**

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Whole Structure Loads 29.9397lb:1ft 9 BACK ICED WIND LOADS



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Job Title **14.5ft V-Frame Mount(SFG22HDX14-4-H10)/NEW BRITAIN WEST SITE
CT5254**

Ref Ant, CL 166 ft.

By **KM**

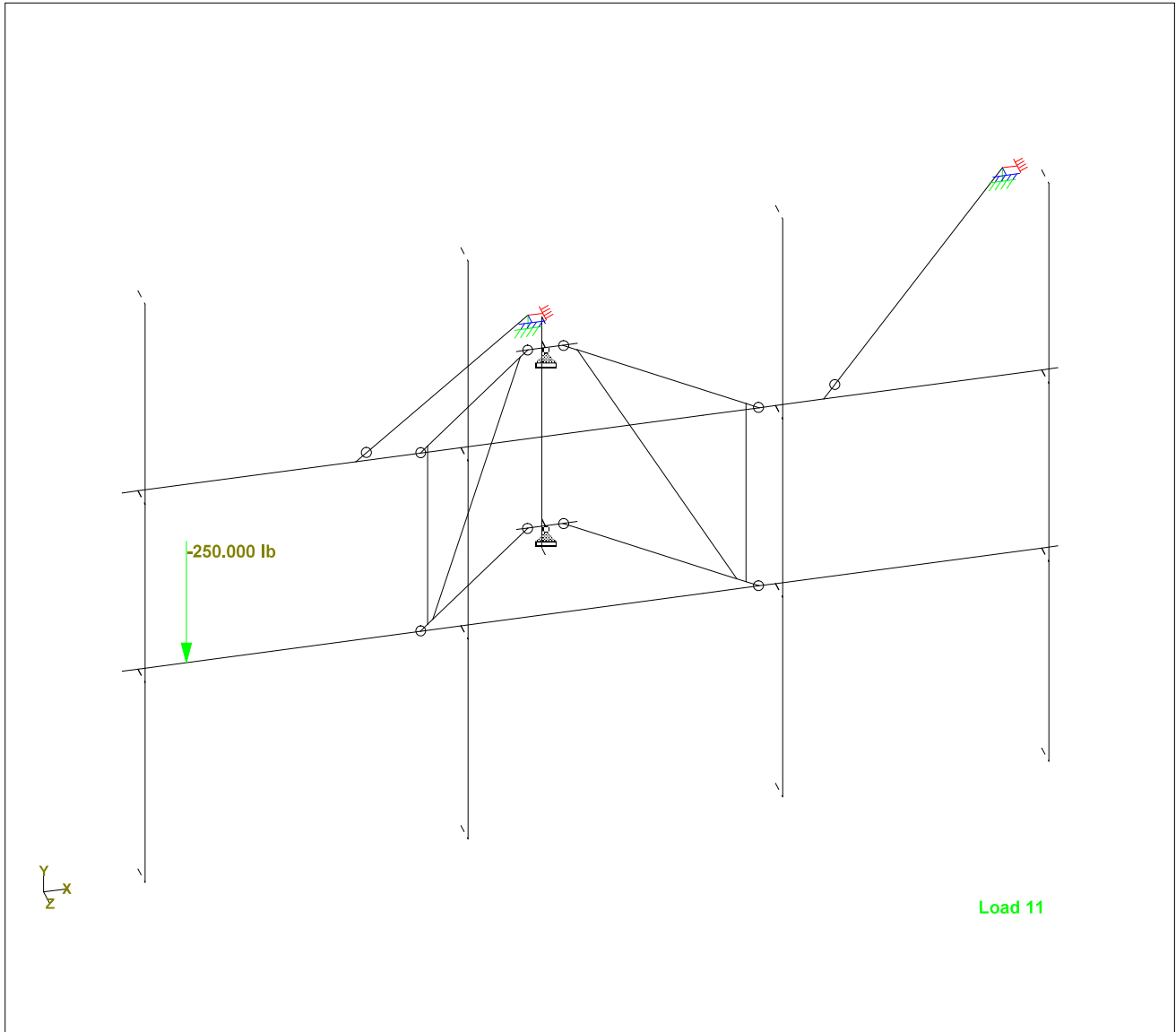
Date **16-Sep-20**

Chd **MDG**

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Whole Structure Loads 118.997lb:1ft 11 MAN LOAD 1



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Job Title **14.5ft V-Frame Mount(SFG22HDX14-4-H10)/NEW BRITAIN WEST SITE
CT5254**

Ref Ant, CL 166 ft.

By **KM**

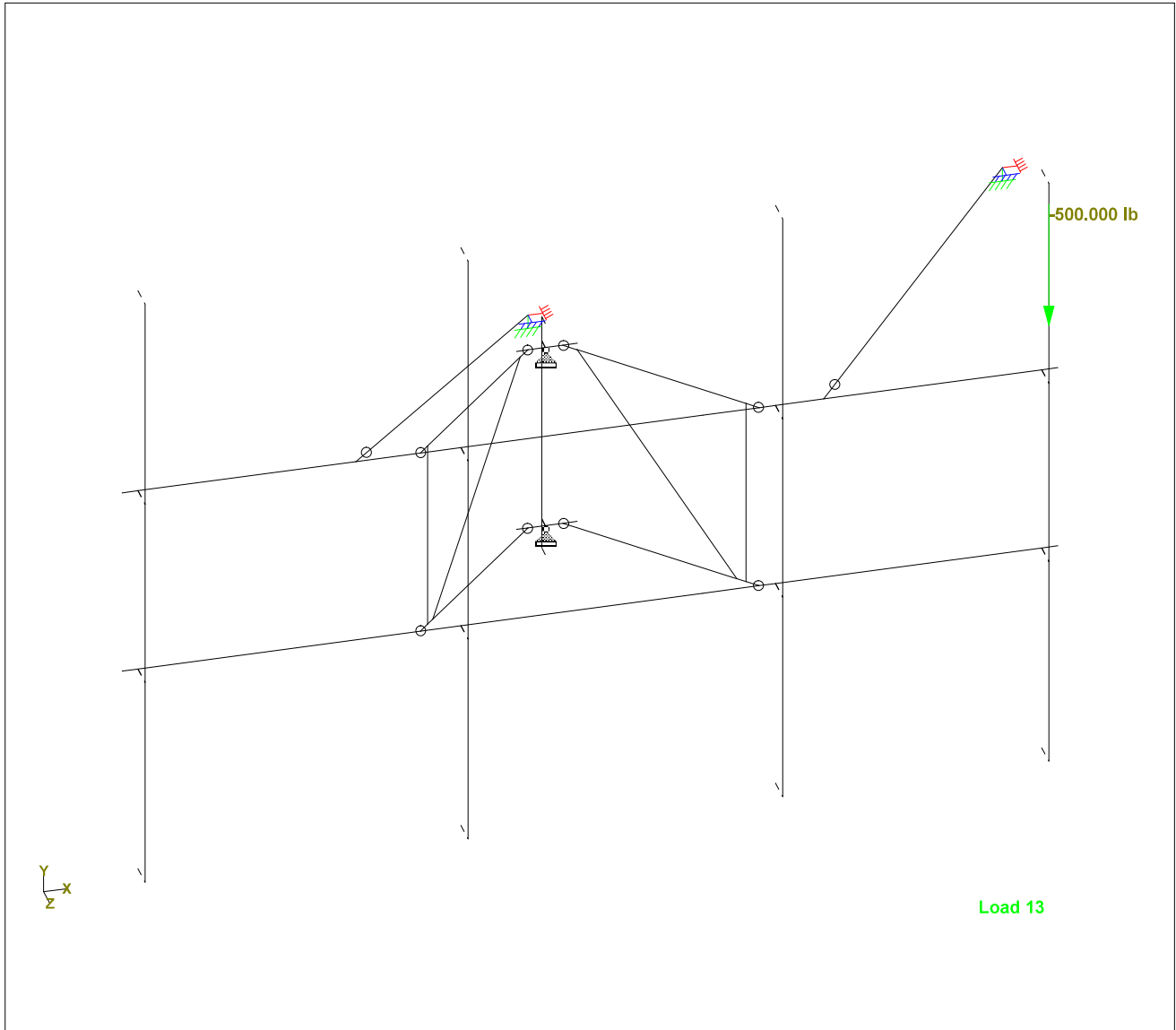
Date **16-Sep-20**

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File **CT06145S-20V1_14.5ft_**

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Whole Structure Loads 237.995lb:1ft 13 MAN LV LOAD 1

APPENDIX 2 – SOURCE / REFERENCE DOCUMENTS

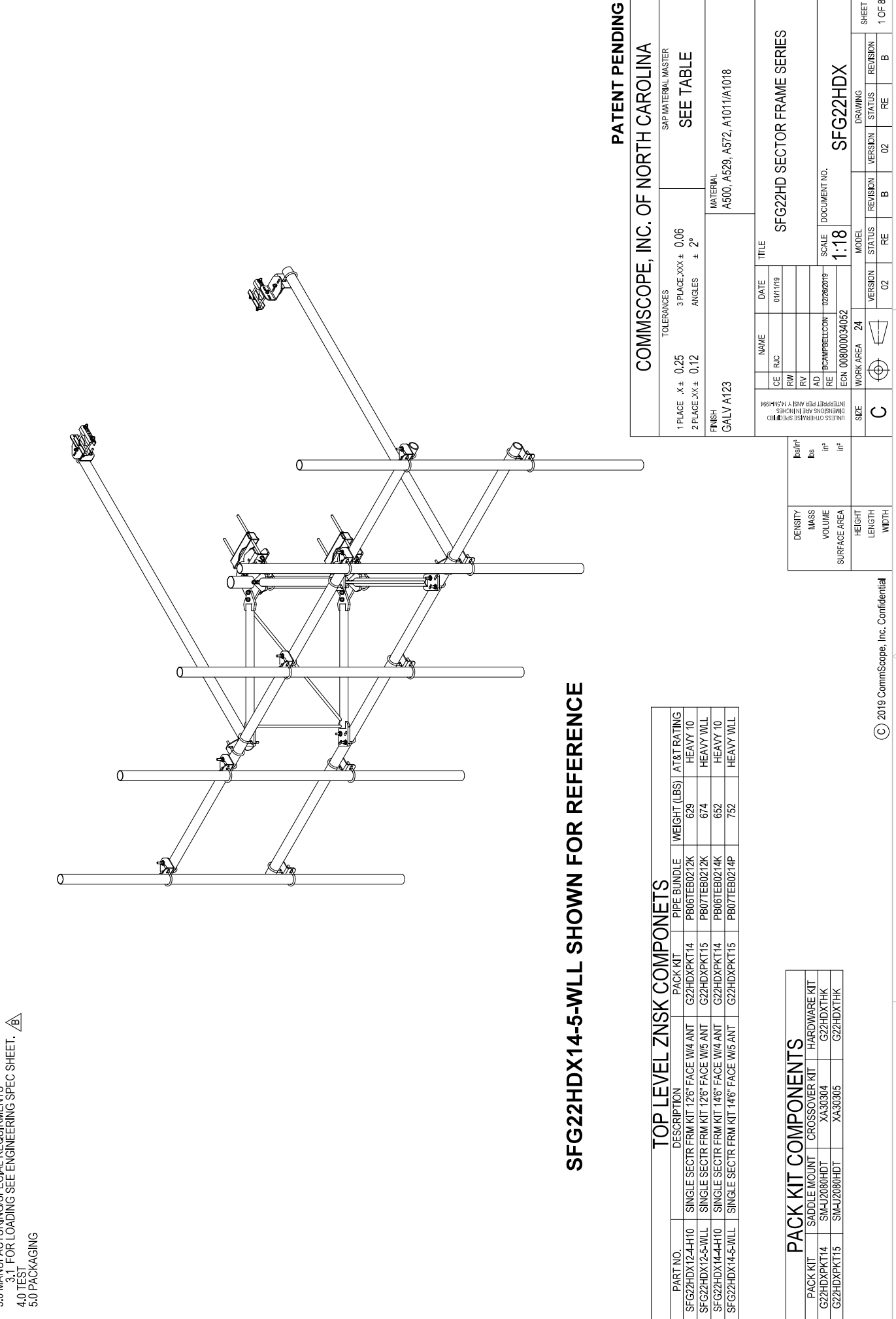


REV.	ECN	DESCRIPTION	BY	DATE
A	800003016	INITIAL RELEASE	R/C	01/11/19
B	8000034032	SFG2283 W/AS SFG2239; ADDED NOTE	R/C	02/22/19

REV.	ECN	DESCRIPTION	BY	DATE
A	800003016	INITIAL RELEASE	R/C	01/11/19
B	8000034032	SFG2283 W/AS SFG2239; ADDED NOTE	R/C	02/22/19

REV.	ECN	DESCRIPTION	BY	DATE
A	800003016	INITIAL RELEASE	R/C	01/11/19
B	8000034032	SFG2283 W/AS SFG2239; ADDED NOTE	R/C	02/22/19

NOTES:
 1.0 GENERAL
 1.1 ALL METRIC DIMENSIONS ARE IN BRACKETS
 1.2 FOR PATENT INFO: <https://www.commscope.com/product/patent/product/patent.aspx>
 2.0 DESIGN NOTES
 2.1 ANY HAZARDS OR OBSTRUCTIONS TO THE CLIMBING FACILITY AND SAFETY CLIMB MUST BE IDENTIFIED PRIOR TO INSTALLING THE APPURTENANCE. ADDITIONAL PRODUCTS MAY BE REQUIRED TO MAINTAIN THE INTEGRITY OF THE SAFETY CLIMB. DURING INSTALLATION, TEMPORARY AND/OR PERMANENT PRECAUTIONARY MEASURES SHOULD BE TAKEN TO PRESERVE THE CLIMBING FACILITY AND/OR SAFETY CLIMB
 3.0 MANUFACTURING/SPECIAL REQUIREMENTS
 3.1 FOR LOADING SEE ENGINEERING SPEC SHEET. Δ
 4.0 TEST
 5.0 PACKAGING



SFG22HDX14-5-WLL SHOWN FOR REFERENCE

PART NO.	DESCRIPTION	PACK KIT	PIPE BUNDLE	WEIGHT (LBS)	AT&T RATING
SFG22HDX12-4-H10	SINGLE SECTR FRM KIT 126" FACE W/4 ANT	G22HDXPKT14	PB06TEB0212K	629	HEAVY 10
SFG22HDX12-5-WLL	SINGLE SECTR FRM KIT 126" FACE W/5 ANT	G22HDXPKT15	PB07TEB0212K	674	HEAVY WLL
SFG22HDX14-4-H10	SINGLE SECTR FRM KIT 146" FACE W/4 ANT	G22HDXPKT14	PB06TEB0214K	662	HEAVY 10
SFG22HDX14-5-WLL	SINGLE SECTR FRM KIT 146" FACE W/5 ANT	G22HDXPKT15	PB07TEB0214P	752	HEAVY WLL

TOP LEVEL ZNSK COMPONENTS		
PART NO.	DESCRIPTION	PACK KIT
SFG22HDX12-4-H10	SINGLE SECTR FRM KIT 126" FACE W/4 ANT	G22HDXPKT14
SFG22HDX12-5-WLL	SINGLE SECTR FRM KIT 126" FACE W/5 ANT	G22HDXPKT15
SFG22HDX14-4-H10	SINGLE SECTR FRM KIT 146" FACE W/4 ANT	G22HDXPKT14
SFG22HDX14-5-WLL	SINGLE SECTR FRM KIT 146" FACE W/5 ANT	G22HDXPKT15

PACK KIT COMPONENTS		
PART NO.	DESCRIPTION	PACK KIT
SFG22HDX12-4-H10	SINGLE SECTR FRM KIT 126" FACE W/4 ANT	G22HDXPKT14
SFG22HDX12-5-WLL	SINGLE SECTR FRM KIT 126" FACE W/5 ANT	G22HDXPKT15
SFG22HDX14-4-H10	SINGLE SECTR FRM KIT 146" FACE W/4 ANT	G22HDXPKT14
SFG22HDX14-5-WLL	SINGLE SECTR FRM KIT 146" FACE W/5 ANT	G22HDXPKT15

PACK KIT COMPONENTS		
PART NO.	DESCRIPTION	PACK KIT
SFG22HDX12-4-H10	SINGLE SECTR FRM KIT 126" FACE W/4 ANT	G22HDXPKT14
SFG22HDX12-5-WLL	SINGLE SECTR FRM KIT 126" FACE W/5 ANT	G22HDXPKT15
SFG22HDX14-4-H10	SINGLE SECTR FRM KIT 146" FACE W/4 ANT	G22HDXPKT14
SFG22HDX14-5-WLL	SINGLE SECTR FRM KIT 146" FACE W/5 ANT	G22HDXPKT15

PACK KIT COMPONENTS		
PART NO.	DESCRIPTION	PACK KIT
SFG22HDX12-4-H10	SINGLE SECTR FRM KIT 126" FACE W/4 ANT	G22HDXPKT14
SFG22HDX12-5-WLL	SINGLE SECTR FRM KIT 126" FACE W/5 ANT	G22HDXPKT15
SFG22HDX14-4-H10	SINGLE SECTR FRM KIT 146" FACE W/4 ANT	G22HDXPKT14
SFG22HDX14-5-WLL	SINGLE SECTR FRM KIT 146" FACE W/5 ANT	G22HDXPKT15

PACK KIT COMPONENTS		
PART NO.	DESCRIPTION	PACK KIT
SFG22HDX12-4-H10	SINGLE SECTR FRM KIT 126" FACE W/4 ANT	G22HDXPKT14
SFG22HDX12-5-WLL	SINGLE SECTR FRM KIT 126" FACE W/5 ANT	G22HDXPKT15
SFG22HDX14-4-H10	SINGLE SECTR FRM KIT 146" FACE W/4 ANT	G22HDXPKT14
SFG22HDX14-5-WLL	SINGLE SECTR FRM KIT 146" FACE W/5 ANT	G22HDXPKT15

PACK KIT COMPONENTS		
PART NO.	DESCRIPTION	PACK KIT
SFG22HDX12-4-H10	SINGLE SECTR FRM KIT 126" FACE W/4 ANT	G22HDXPKT14
SFG22HDX12-5-WLL	SINGLE SECTR FRM KIT 126" FACE W/5 ANT	G22HDXPKT15
SFG22HDX14-4-H10	SINGLE SECTR FRM KIT 146" FACE W/4 ANT	G22HDXPKT14
SFG22HDX14-5-WLL	SINGLE SECTR FRM KIT 146" FACE W/5 ANT	G22HDXPKT15

PATENT PENDING

COMMSCOPE, INC. OF NORTH CAROLINA

TOLERANCES
 1 PLACE .X ± 0.25
 2 PLACE .XX ± 0.12
 3 PLACE .XXX ± 0.06
 ANGLES ± 2°

FINISH
 GALV A123
 MATERIAL
 A500, A572, A1011/A1018

NAME	DATE	TITLE
CE R/C	01/11/19	
FW		
RV		
AD		
RE	02/28/2019	
ECN	00800034032	

SCALE	DOCUMENT NO.
1:18	SFG22HDX

SIZE	VERSION	MODEL
C	02	

DENSITY	MASS	VOLUME	SURFACE AREA
lbs/in ³	lbs	in ³	in ²

HEIGHT	LENGTH	WIDTH
in	in	in

REVISION	STATUS
B	RE
02	RE

REVISION	STATUS
B	RE
02	RE

SHEET 1 OF 8

SECTION 6/7 - BBU INFORMATION - existing

BBU 1	BBU 2	BBU 3	BBU 4	BBU 5
BBU RBS ID: 20457	20457	56732	36608	
TECHNOLOGY: UMS	UMS	LTE	LTE	
BBU NAME: CTU524	CTU524	CTU04254R	CTU0524	
CELL ID / BCF: CTU524	CTU524	CTU04254R	CTU0524	
BT/ATID: 184V	184V	184L	184L	
4-9 DIGIT SITE ID: 5254	5254	4254	5254	
COW OR TOT?: No	No	No	No	
CELL SITE TYPE: SECTORIZED	SECTORIZED	SECTORIZED	SECTORIZED	
SITE TYPE: MACRO-CONVENTIONAL	MACRO-CONVENTIONAL	MACRO-CONVENTIONAL	MACRO-CONVENTIONAL	
BTS LOCATION ID: INTERNAL	INTERNAL	INTERNAL	INTERNAL	
BASE STATION TYPE: OVERLAY	BASE	BASE	BASE	
EQUIPMENT NAME: NEW BRITIAN WEST	NEW BRITIAN WEST	NEW BRITIAN WEST	NEW BRITIAN WEST	
EQUIPMENT VENDOR: ERICSSON	ERICSSON	ERICSSON	ERICSSON	
DISASTER PRIORITY: 1	1	3	3	
EQUIPMENT TYPE (Model): 3206 INDOOR	3206 INDOOR	8607 INDOOR MJ	8607 INDOOR MJ	
BASEBAND CONFIGURATION:				
MARKET STATE CODE:		CT	CT	
NODE B NUMBER: 0	0	4254	5254	
SIDEHAUL SWITCH VENDOR:				
SIDEHAUL SWITCH MODEL:				
SIDEHAUL SWITCH NAME:				
GSS - CTS COMMON ID: CTU524	CTU524	CTU04254R	CTU0524	
GSS - SECONDARY FUNCTION ID:				

SECTION 6/7 - BBU INFORMATION - final

BBU 1	BBU 2	BBU 3	BBU 4	BBU 5
BBU RBS ID: 20457	20457	56732	36608	781584
TECHNOLOGY: UMS	UMS	LTE	LTE	9G
BBU NAME: CTU524	CTU524	CTU04254R	CTU0524	CTCN00524
CELL ID / BCF: CTU524	CTU524	CTU04254R	CTU0524	CTCN00524
BT/ATID: 184V	184V	184L	184L	184L
4-9 DIGIT SITE ID: 5254	5254	54254	5254	1400524
COW OR TOT?: No	No	No	No	No
CELL SITE TYPE: SECTORIZED	SECTORIZED	SECTORIZED	SECTORIZED	SECTORIZED
SITE TYPE: MACRO-CONVENTIONAL	MACRO-CONVENTIONAL	MACRO-CONVENTIONAL	MACRO-CONVENTIONAL	MACRO-CONVENTIONAL
BTS LOCATION ID: INTERNAL	INTERNAL	INTERNAL	INTERNAL	INTERNAL
BASE STATION TYPE: OVERLAY	BASE	BASE	BASE	BASE
EQUIPMENT NAME: NEW BRITIAN WEST	NEW BRITIAN WEST	NEW BRITIAN WEST	NEW BRITIAN WEST	NEW BRITIAN WEST
EQUIPMENT VENDOR: ERICSSON	ERICSSON	ERICSSON	ERICSSON	ERICSSON
DISASTER PRIORITY: 1	1	3	3	3
EQUIPMENT TYPE (Model): 3206 INDOOR	3206 INDOOR	BASEBAND 8630	BASEBAND 8630	BASEBAND 8630
BASEBAND CONFIGURATION:		1x6801 / 1x0630 / 1xMMU03	1x6801 / 1x0630 / 1xMMU03	xxxxx / 1x6830 / xxxxxx + IDL6
MARKET STATE CODE:		CT	CT	CTC
NODE B NUMBER: 0	0	4254	5254	5254
SIDEHAUL SWITCH VENDOR:				
SIDEHAUL SWITCH MODEL:				
SIDEHAUL SWITCH NAME:				
GSS - CTS COMMON ID: CTU524	CTU524	CTU04254R	CTU0524	CTCN00524
GSS - SECONDARY FUNCTION ID:				

Section 15A - CURRENT TOWER CONFIGURATION - SECTOR A (OR OMNI)

ANTENNA POSITION IS LEFT TO RIGHT FROM BACK OF ANTENNA (unless otherwise specified)	ANTENNA POSITION 1	ANTENNA POSITION 2	ANTENNA POSITION 3	ANTENNA POSITION 4	ANTENNA POSITION 5	ANTENNA POSITION 6	ANTENNA POSITION 7
ANTENNA MAKE / MODEL	800-10121	OS68512-2		HFA-68R-BUJUH6			
ANTENNA VENDOR	Osborn	Osborn		CCI Products			
ANTENNA SIZE (H x W x D)	54.5x10.3x5.9	72x12x3.6		72x14.8x9			
ANTENNA WEIGHT	44.1	111		51			
AZIMUTH	40	40		40			
MAGNETIC DECLINATION							
RADIATION CENTER (feet)	166	166		166			
ANTENNA TIP HEIGHT	168	169		169			
MECHANICAL DOWNTILT	0	0		0			
FEEDER AMOUNT	2	Fiber + 2 Coax					
VERTICAL SEPARATION FROM ANTENNA ABOVE (TP to TIP)							
VERTICAL SEPARATION FROM ANTENNA BELOW (TP to TIP)							
HORIZONTAL SEPARATION FROM CLOSEST ANTENNA TO LEFT (CENTERLINE to CENTERLINE)							
HORIZONTAL SEPARATION FROM CLOSEST ANTENNA TO RIGHT (CENTERLINE to CENTERLINE)							
HORIZONTAL SEPARATION FROM ANOTHER ANTENNA (which antenna # / # of inches)							
Antenna RET Mode (QTY/MODEL)	2	Kathrein 860-10025		Ball-in			
SURGE ARRESTOR (QTY/MODEL)				DC/Fiber Squid			
DIPLEXER (QTY/MODEL)	2	Kathrein 792-10260		DC/Fiber Squid			
DIPLEXER (QTY/MODEL)	1	KATHREIN 860-10006					
DC BLOCK (QTY/MODEL)							
TMA/IMA (QTY/MODEL)	2	Powerline (LGP 21401 Dual Band - 850 Bypass)					
CURRENT INJECTORS FOR TMA (QTY/MODEL)	2	LGP 12104 (1910 AND 850 Bypass TMA)					
POU FOR TMA'S (QTY/MODEL)	1						
FILTER (QTY/MODEL)							
SQUID (QTY/MODEL)							
FIBER TRUNK (QTY/MODEL)							
DC TRUNK (QTY/MODEL)							
REPEATER (QTY/MODEL)	1	SDARS remote					
RRH - 700 band (QTY/MODEL)							
RRH - 850 band (QTY/MODEL)	1	RRUS-11 B5					
RRH - 1900 band (QTY/MODEL)	1	RRUS-32 B2					
RRH - AWS band (QTY/MODEL)	1	RRUS-32 B30					
RRH - WCS band (QTY/MODEL)							
Additional RRH #1 - any band (QTY/MODEL)							
Additional RRH #2 - any band (QTY/MODEL)							
Additional Component 1 (QTY/MODEL)							
Additional Component 2 (QTY/MODEL)							
Additional Component 3 (QTY/MODEL)							
Local Market Note 1							
Local Market Note 2							
Local Market Note 3							

PORT SPECIFIC FIELDS	PORT NUMBER	USED (CSSng)	USED (Abill)	ATOLL TMD	ATOLL CELL ID	TARX TECHNOLOGY/FREQUENCY	ANTENNA ATOLL	ANTENNA GAIN	ELECTRICAL AZIMUTH	ELECTRICAL TILT	RRH LOCATION (Top/Bottom/Intermediate)	FEEDERS TYPE	FEEDER LENGTH (feet)	RX/IT KIT MODULE?	HATCH/PLATE POWER (Watts)	ERP (Watts)	Antenna RET Name	CABLE NUMBER	CABLE ID (CSSNG)
ANTENNA POSITION 1	PORT 1		15210.A.850.3G.1	CTV62541	CTV62541	UMTS 850	800110121@850_Xcp_10d	13.4	40	10	None	Andrew 1-5/8	165.04			255.27		1	
ANTENNA POSITION 2	PORT 2		15210.A.850.4G.1	CTL02554_BA_1	CTL02554_BA_1	LTE 850	OS68512-	13.5	40	3	Bottom	Andrew 1-5/8	165.04			1000		3	

PORT 3	15210.A.1900.4G.1	CTL0254_9A_1	CTL0254_9A_1	LTE 1900	2_500MHz_03DT	15.9	40	3	TOP	FIBER	0						2421.029	12.58	2421.029	4
	15210.A.WCS.4G.1	CTL0254_3A_1	CTL0254_3A_1	LTE WCS	OS86612- 2_193MHz_03DT	16.7	40	3	TOP	FIBER	0						1285.2586		1285.2586	4
	15210.A.1900.4G.2	CTL0254_9A_2	CTL0254_9A_2	LTE 1900	OS86612- 2_193MHz_03DT	15.9	40	3	TOP	FIBER	0						2421.029	12.58	2421.029	4
PORT 1	15210.A.700.4G.1	CTL0254_7A_1	CTL0254_7A_1	LTE 700	HPA-66R-BU1- HG_719MHz_03DT	14.22	40	3	TOP	FIBER	0						1475.7085		1475.7085	7
	15210.A.AWS.4G.1	CTL0254_2A_2	CTL0254_2A_2	LTE AWS	HPA-66R-BU1- HG_2133MHz_03DT	17.22	40	3	TOP	FIBER	0						2535.1288		2535.1288	8
ANTENNA POSITION 4																				

Section 15B - CURRENT TOWER CONFIGURATION - SECTOR B

ANTENNA POSITION IS LEFT TO RIGHT FROM BACK OF ANTENNA (unless otherwise specified)	ANTENNA POSITION 1	ANTENNA POSITION 2	ANTENNA POSITION 3	ANTENNA POSITION 4	ANTENNA POSITION 5	ANTENNA POSITION 6	ANTENNA POSITION 7
ANTENNA MAKE - MODEL	800-10121	QS66512-2		HFA-66R-BUJH-6			
ANTENNA VENDOR	Qoreen	Qoreen		CCI Products			
ANTENNA SIZE (H x W x D)	54.5x10.3x5.9	72x12x9.6		72x14.8x9			
ANTENNA WEIGHT	44.1	111		51			
AZIMUTH	150	150		150			
MAGNETIC DECLINATION							
RADIATION CENTER (feet)	166	166		166			
ANTENNA TIP HEIGHT	168	168		168			
MECHANICAL DOWNTILT	0	0		0			
FEEDER AMOUNT	2	Feeder + 2 Coax					
VERTICAL SEPARATION FROM ANTENNA ABOVE (TP to TIP)							
VERTICAL SEPARATION FROM ANTENNA BELOW (TP to TIP)							
HORIZONTAL SEPARATION FROM CLOSEST ANTENNA TO LEFT (CENTERLINE to CENTERLINE)							
HORIZONTAL SEPARATION FROM CLOSEST ANTENNA TO RIGHT (CENTERLINE to CENTERLINE)							
HORIZONTAL SEPARATION FROM ANOTHER ANTENNA (which antenna # / # of inches)							
Antenna RET Mode (QTY/MODEL)	2	Kathrein 860-10025		Ball-in			
SURGE ARRESTOR (QTY/MODEL)			4	Polyphase 1000860 + APTDCC-BPDM4DB (2)			
DIPLEXER (QTY/MODEL)	2	KATHREIN 792-10250	5	CCI Triplexer -TPX-07082 (4)*CBL23SR-43(1)			
DUPLEXER (QTY/MODEL)				LTE RRH			
Antenna RET CONTROL UNIT (QTY/MODEL)							
DC BLOCK (QTY/MODEL)							
TMA/LMA (QTY/MODEL)	2	Powersys LGP 2401 Dual Band - 800 Duplex					
CURRENT INJECTORS FOR TMA (QTY/MODEL)	2	Polyphase 1000860					
POU FOR TMAs (QTY/MODEL)							
FILTER (QTY/MODEL)							
SQUID (QTY/MODEL)							
FIBER TRUNK (QTY/MODEL)							
DC TRUNK (QTY/MODEL)							
REPEATER (QTY/MODEL)			1	SDARS remote			
RRH - 700 band (QTY/MODEL)							
RRH - 850 band (QTY/MODEL)			1	RRUS-11 B5			
RRH - 1900 band (QTY/MODEL)			1	RRUS-32 B2			
RRH - AWS band (QTY/MODEL)							
RRH - WCS band (QTY/MODEL)			1	RRUS-32 B30			
Additional RRH #1 - any band (QTY/MODEL)							
Additional RRH #2 - any band (QTY/MODEL)							
Additional Component 1 (QTY/MODEL)							
Additional Component 2 (QTY/MODEL)							
Additional Component 3 (QTY/MODEL)							
Local Market Note 1							
Local Market Note 2							
Local Market Note 3							

PORT SPECIFIC FIELDS	PORT NUMBER	USED (Aol)	USED (CSSng)	ATOLL TMD	ATOLL CELLID	TX/RX TECHNOLOGY/FREQ UENCY	ANTENNA ATOLL	ANTENNA GAIN	ELECTRICAL AZIMUTH	ELECTRICAL TILT	RRH LOCATION (Top/Bottom/None)	FEEDERS TYPE	FEEDER LENGTH (feet)	RX/IT KIT MODULE?	TRIPLEXER or LLC (QTY)	TRIPLEXER or LLC (MODEL)	SCPA/MCPA MODULE?	HATCHPLAT E POWER (Watts)	ERP (Watts)	Antenna RET Name	CABLE NUMBER	CABLE ID (CSSNG)
ANTENNA POSITION 1	PORT 1	15210.B.850.1G.1		CT102542	CT102542	LTE 850	800-10121 @850_Xport_Set1	13.41	150	8	None	Andrew 1-516	165.04					255.86	255.86		9	
ANTENNA POSITION 2	PORT 2	15210.B.850.1G.1		CT10254_9B_1	CT10254_9B_1	LTE 850	OS66512-2_850MHz_07DT	13.5	150	7	Bottom	Andrew 1-516	165.04					1000	1000		11	
ANTENNA POSITION 2	PORT 3	15210.A.1900.4G.1		CT10254_9B_1	CT10254_9B_1	LTE 1900	OS66512-2_1900MHz_02DT	16	150	2	TOP	FIBER	0					2421.029	2421.029		12	

ANTENNA POSITION 4	PORT 4	15210.B.WCS-4G.1	CTL05254_3B_1	CTL05254_3B_1	LTE WCS	QSC68512- 2_2355MHz_03DT	16.7	150	3	TOP	FIBER	0				1285.2866	12
	PORT 7	15210.B.1900-4G.2	CTL05254_9B_2	CTL05254_9B_2	LTE 1900	QSC68512- 2_193MHz_02DT	16	150	2	TOP	FIBER	0	12.98			2421.029	12
ANTENNA POSITION 4	PORT 1	15210.B.700-4G.1	CTL05254_7B_1	CTL05254_7B_1	LTE 700	HPA-68R-BUL- HG.718MHz_07DT	14.03	150	7	TOP	FIBER	0				1475.7065	15
	PORT 3	15210.B.ANS-4G.1	CTL05254_2B_2	CTL05254_2B_2	LTE ANS	HPA-68R-BUL- HG.2133MHz_02DT	17.25	160	2	TOP	FIBER	0				2335.1286	16

Section 15C - CURRENT TOWER CONFIGURATION - SECTOR C

ANTENNA POSITION IS LEFT TO RIGHT FROM BACK OF ANTENNA (unless otherwise specified)	ANTENNA POSITION 1	ANTENNA POSITION 2	ANTENNA POSITION 3	ANTENNA POSITION 4	ANTENNA POSITION 5	ANTENNA POSITION 6	ANTENNA POSITION 7
ANTENNA MAKE - MODEL	800-10121	QS66512-2		HFA-66R-BUJH-H6			
ANTENNA VENDOR	Schren	Quintel		CCI Products			
ANTENNA SIZE (H x W x D)	54.5x10.3x5.9	72x12x0.6					
ANTENNA WEIGHT	44.1	111					
AZIMUTH	270	270					
MAGNETIC DECLINATION		166					
RADIATION CENTER (feet)	168	169					
ANTENNA TIP HEIGHT	0	0					
MECHANICAL DOWNTILT		Feeder + 2 Coax					
FEEDER AMOUNT	2						
VERTICAL SEPARATION FROM ANTENNA ABOVE (TP to TIP)							
VERTICAL SEPARATION FROM ANTENNA BELOW (TP to TIP)							
HORIZONTAL SEPARATION FROM CLOSEST ANTENNA TO LEFT (CENTERLINE to CENTERLINE)							
HORIZONTAL SEPARATION FROM CLOSEST ANTENNA TO RIGHT (CENTERLINE to CENTERLINE)							
HORIZONTAL SEPARATION FROM ANOTHER ANTENNA (which antenna # / # of inches)							
Antenna RET Mode (QTY/MODEL)	2	Kathrein 860-10025					
SURGE ARRESTOR (QTY/MODEL)	4	Bulk-in		Bulk-in			
DIPLEXER (QTY/MODEL)	2	Polyphase 1000860 + APDCC-BDPDMDB (2)					
DUPLEXER (QTY/MODEL)		KATHREIN 782-10250					
Antenna RET CONTROL UNIT (QTY/MODEL)							
DC BLOCK (QTY/MODEL)	2	Powersys LGP 2401 Dual Band - 820 Duplex					
TMA/LMA (QTY/MODEL)	2	Polyphase 1000860					
CURRENT INJECTORS FOR TMA (QTY/MODEL)	2						
POU FOR TMAs (QTY/MODEL)							
FILTER (QTY/MODEL)							
SQUID (QTY/MODEL)							
FIBER TRUNK (QTY/MODEL)							
DC TRUNK (QTY/MODEL)							
REPEATER (QTY/MODEL)	1	SDARS remote					
RRH - 700 band (QTY/MODEL)							
RRH - 850 band (QTY/MODEL)	1	RRUS-11 B5					
RRH - 1900 band (QTY/MODEL)	1	RRUS-32 B2					
RRH - AWS band (QTY/MODEL)							
RRH - WCS band (QTY/MODEL)	1	RRUS-32 B30					
Additional RRH #1 - any band (QTY/MODEL)							
Additional RRH #2 - any band (QTY/MODEL)							
Additional Component 1 (QTY/MODEL)							
Additional Component 2 (QTY/MODEL)							
Additional Component 3 (QTY/MODEL)							
Local Market Note 1							
Local Market Note 2							
Local Market Note 3							

PORT SPECIFIC FIELDS	PORT NUMBER	USED (MHz)	USED (Aol)	ATOLL TMD	ATOLL CELLID	TX/RX TECHNOLOGY/FREQ	ANTENNA ATOLL	ANTENNA GAIN	ELECTRICAL AZIMUTH	ELECTRICAL TILT	RRH LOCATION (Top/Bottom/None)	FEEDERS TYPE	FEEDER LENGTH (feet)	RX/IT KIT MODULE?	TRIPLEXER or LLC (QTY)	TRIPLEXER or LLC (MODEL)	SCPA/MCPA MODULE?	HATCHPLAT E POWER (Watts)	ERP (Watts)	Antenna RET Name	CABLE NUMBER	CABLE ID (CSNG)
ANTENNA POSITION 1	PORT 1		15210.C.850.3G_1	CT102543	CT102543	UMTS 850	800-10121 @850_Xpol_Sel	13.41	270	8	None	Andrew 1-516	165.04					255.86	255.86		17	
ANTENNA POSITION 2	PORT 2		15210.C.850.4G_1	CT102543_SC_1	CT102543_SC_1	LTE 850	QS66512-2_850MHz_10DT	13.5	270	10	Bottom	Andrew 1-516	165.04					1000	1000		19	
ANTENNA POSITION 2	PORT 3		15210.A.1900.4G_1	CT102543_SC_1	CT102543_SC_1	LTE 1900	QS66512-2_1900MHz_07DT	15.9	270	7	TOP	FIBER	0					2421.029	2421.029		20	

ANTENNA POSITION 4	PORT 4	15210.C.WCS4G.1	CTL06254_3C_1	CTL06254_3C_1	LTE WCS	QS68652- 2.2355MHz_03DT	16.7	270	3	TOP	FIBER	0				1285.2866	20
	PORT 7	15210.C.1900.4G.2	CTL06254_9C_2	CTL06254_9C_2	LTE 1900	QS68652- 2.193MHz_07DT	15.9	270	7	TOP	FIBER	0	12.58			2421.029	20
ANTENNA POSITION 4	PORT 1	15210.C.700.4G.1	CTL06254_7C_1	CTL06254_7C_1	LTE 700	HPA-66R-BUU- HG.718MHz_10DT	13.9	270	10	TOP	FIBER	0				1475.7065	23
	PORT 3	15210.C.ANS4G.1	CTL06254_2C_2	CTL06254_2C_2	LTE ANS	HPA-66R-BUU- HG.2153MHz_07DT	17.04	270	7	TOP	FIBER	0				2355.1286	24

ANTENNA POSITION 1	PORT 2	15210.A.700.4G.4	CTL0254_7A_2_E	CTL0254_7A_2_E	LTE 700	Q568512- 2_722MHz_03DT	13.5	40	3	Bottom	Andrew 1-518	165.04					1475.7065	
ANTENNA POSITION 3	PORT 1	15210.A.700.4G.5	CTL0254_7A_3_F	CTL0254_7A_3_F	LTE 700	CPA65R- BU6DA_770MHz_03D T	13.6	40	3	TOP	FIBER	0					2951.413	
	PORT 3	15210.A.1900.4G.1	CTL04254_9A_3	CTL04254_9A_3	LTE 1900	CPA65R- BU6DA_1930MHz_03 DT	16.9	40	3	TOP	FIBER	0					4842.058	
ANTENNA POSITION 4	PORT 3	15210.A.AWS.4G.4	CTL04254_2A_2	CTL04254_2A_2	LTE AWS	DMP66R- BU6D_2170MHz_03D T	0	40	3	TOP	FIBER	0					5070.2572	
	PORT 5	15210.A.850.4G.1	CTCN00254_N005A _1	CTCN00254_N006A _1	5G 850	DMP66R- BU6D_850MHz_03DT	13.1	40	3	TOP	FIBER	0					1000	

ANTENNA POSITION 1	PORT 2	15210.B.700.4G.4	CTL0254_7B_2_E	CTL0254_7B_2_E	CTL0254_7B_2_E	LTE 700	Q568512-2_722MHz_03DT	13.5	150	3	Bottom	Andrew 1-518	165.04					1475.7065	
ANTENNA POSITION 3	PORT 1	15210.B.700.4G.5	CTL0254_7B_3_F	CTL0254_7B_3_F	CTL0254_7B_3_F	LTE 700	CPA65R-BUADA_770MHz_07D	19.2	150	7	TOP	FIBER	0					2951.413	
	PORT 3	15210.B.1900.4G.1	CTL04254_9B_3	CTL04254_9B_3	CTL04254_9B_3	LTE 1900	CPA65R-BUADA_1930MHz_07DT	17.1	150	7	TOP	FIBER	0					4842.058	
ANTENNA POSITION 4	PORT 3	15210.B.AWS.4G.4	CTL04254_2B_2	CTL04254_2B_2	CTL04254_2B_2	LTE AWS	DMP65R-BUAD_2170MHz_03D	17.6	150	3	TOP	FIBER	0					5070.2572	
	PORT 5	15210.B.850.4G.1	CTCN005254_N005B_1	CTCN005254_N005B_1	CTCN005254_N005B_1	5G 850	DMP65R-BUAD_850MHz_07DT	13.3	150	7	TOP	FIBER	0					1000	

ANTENNA POSITION 1	PORT 2		15210.C.700.4G.4	CTL0254_7C_2_E	CTL0254_7C_2_E	LTE 700	QS68512- 2_722MHz_03DT	13.5	270	3	Bottom	Andrew 1-518	165.04				1475.7065	
ANTENNA POSITION 3	PORT 1		15210.C.700.4G.5	CTL0254_7C_3_F	CTL0254_7C_3_F	LTE 700	CPA65R- BU6DA_770MHz_10D T	13.1	270	10	TOP	FIBER	0				2951.413	
	PORT 3		15210.C.1900.4G.1	CTL04254_9C_3	CTL04254_9C_3	LTE 1900	CPA65R- BU6DA_1930MHz_07 DT	17.1	270	7	TOP	FIBER	0				4842.058	
ANTENNA POSITION 4	PORT 3		15210.C.AWS.4G.4	CTL04254_2C_2	CTL04254_2C_2	LTE AWS	DMP65R- BU6D_2170MHz_03D T	0	270	3	TOP	FIBER	0				5070.2572	
	PORT 5		15210.C.850.5G.1	CTCN00254_N005C _1	CTCN00254_N005C _1	5G 850	DMP65R- BU6D_850MHz_10DT	13.3	270	10	TOP	FIBER	0				1000	

Section 17A - FINAL TOWER CONFIGURATION - SECTOR A (OR OMNI)

ANTENNA POSITION IS LEFT TO RIGHT from BACK OF ANTENNA (unless otherwise specified)	ANTENNA POSITION 1	ANTENNA POSITION 2	ANTENNA POSITION 3	ANTENNA POSITION 4	ANTENNA POSITION 5	ANTENNA POSITION 6	ANTENNA POSITION 7
ANTENNA MAKE - MODEL	QS685 12-2	QF68R-ELUDA	DMP68R-BURDA				
ANTENNA VENDOR	Durabel	CCI	CCI				
ANTENNA SIZE (H x W x D)	72X12X8.6	71.2X21X7.8	71.2X20.7X7.7				
ANTENNA WEIGHT	111	60.2	79.4				
AZIMUTH	40	40	40				
MAGNETIC DECLINATION							
RADIATION CENTER (feet)	166	166	166				
ANTENNA TIP HEIGHT	169	169	169				
MECHANICAL DOWNTILT	0	0	0				
FEEDER AMOUNT	Fiber + 2 Coax						
VERTICAL SEPARATION from ANTENNA ABOVE (TP to TIP)							
VERTICAL SEPARATION from ANTENNA BELOW (TP to TIP)							
HORIZONTAL SEPARATION from CLOSEST ANTENNA to LEFT (CENTERLINE to CENTERLINE)							
HORIZONTAL SEPARATION from CLOSEST ANTENNA to RIGHT (CENTERLINE to CENTERLINE)							
HORIZONTAL SEPARATION from ANOTHER ANTENNA (which antenna # / # of inches)							
Antenna RET Mode (QTY/MODEL)	Bulk-In	Bulk-In	Bulk-In	Bulk-In	Bulk-In	Bulk-In	Bulk-In
SURGE ARRESTOR (QTY/MODEL)	6 DC/Fiber Squid (1) + DC Squid(1)+ Polyphaser 1000860 (2) + AP/DC-BDFDM-D8 (2)	1 DC/Fiber Squid	1 DC/Fiber Squid	1 DC/Fiber Squid			
DIPLEXER (QTY/MODEL)	4 TPX-070821						
DUPLEXER (QTY/MODEL)							
Antenna RET CONTROL UNIT (QTY/MODEL)							
DC BLOCK (QTY/MODEL)							
THALIA (QTY/MODEL)							
CURRENT INJECTORS FOR TMA (QTY/MODEL)							
POU FOR TMA'S (QTY/MODEL)							
FILTER (QTY/MODEL)							
SQUID (QTY/MODEL)							
FIBER TRUNK (QTY/MODEL)							
DC TRUNK (QTY/MODEL)							
REPEATER (QTY/MODEL)	1 SDARS remote						
RRH - 700 band (QTY/MODEL)	1 RRUS-E2 B20	1 4478 B14	1 4478 B14	1 4449 B5/B12			
RRH - 850 band (QTY/MODEL)							
RRH - 1900 band (QTY/MODEL)							
RRH - AWS band (QTY/MODEL)							
RRH - WCS band (QTY/MODEL)	1 RRUS-32 B30						
Additional RRH #1 - any band (QTY/MODEL)							
Additional RRH #2 - any band (QTY/MODEL)							
Additional Component 1 (QTY/MODEL)	1 ION M23 Main Unit w3 OTRX.						
Additional Component 2 (QTY/MODEL)	1 CBC236R-43						
Additional Component 3 (QTY/MODEL)							
Local Market Note 1	(/LTE 6G700 UPPER DL, LTE 7(G700 D-E), 4174RFX Software Retrol(700 B-C), 5G NR Upgrade(850 B-U)), BWE Tower Top RRH Adj(1900 E & C) (/Add New OCTO port Antenna. (/Combine UMTS 850 with LTE, and remove UMTS line equipments. (/Swap Hex.port Antenna with a Oct. port Antenna. (/Add LTE B14 radio. (/Swap LTE 700B/C and 850 Radio with Dual band radio shared with LTE 850. (/Swap LTE PCS radio with Dual band radio shared with LTE AWS. (/Add LTE 700 DE radio with SA at bottom. (/Add 1 DC/Fiber Squid. (/Swap both DUS with 2 6630r's, Swap DL2 with DL4 (REMOVE 1 XMU)						
Local Market Note 2							
Local Market Note 3	1x6801 / 2x6630 / 1x XMU03 + IDLs (shared)						

PORT SPECIFIC FIELDS	PORT NUMBER	USED (CSS#)	USED (AioI)	ATOLL TXID	ATOLL CELLID	TX/RX TECHNOLOGY/FREQUENCY	ANTENNA ATOLL	ANTENNA GAIN	ELECTRICAL AZMUTH	ELECTRICAL TILT	RRH LOCATION (Top/Bottom/Integrated)	FEDERS TYPE	FEDER LENGTH (feet)	RX/IT KIT MODULE?	TRIPLEXER or LLC (QTY)	TRIPLEXER or LLC (MODEL)	SCPA/MCPA MODULE?	HATCHPLATE POWER (Watts)	ERP (Watts)	Antenna RET Name	CABLE NUMBER	CABLE ID (CSS#)	
ANTENNA POSITION 1	PORT 1	15210.A.850.4G.1	15210.A.850.4G.1	CTV62541	CTV62541	UMTS 850	OS86512-2_850MHz_10DT	13.4	40	10	None	Andrew 1-5/8	165.04					255.27	1				
	PORT 2	15210.A.700.4G.4	15210.A.700.4G.4	CTL04254_7A_2_E	CTL04254_7A_2_E	LTE 700	OS86512-2_720MHz_03DT	13.5	40	3	Bottom	Andrew 1-5/8	165.04					1475.7085	1				
	PORT 4	15210.A.WCS.4G.1	15210.A.WCS.4G.1	CTL04254_3A_1	CTL04254_3A_1	LTE WCS	OS86512-2_2355MHz_03DT	16.7	40	3	TOP	FIBER	0					1285.2866	2				
ANTENNA POSITION 3	PORT 1	15210.A.700.4G.5	15210.A.700.4G.5	CTL04254_7A_3_F	CTL04254_7A_3_F	LTE 700	OPA68R-BUJDA_770MHz_03DT	13.6	40	3	TOP	FIBER	0						2951.413	5			
	PORT 3	15210.A.1900.4G.1	15210.A.1900.4G.1	CTL04254_9A_3	CTL04254_9A_3	LTE 1900	OPA68R-BUJDA_1930MHz_03DT	16.9	40	3	TOP	FIBER	0						4842.058	6			
	PORT 7	15210.A.1900.4G.2	15210.A.1900.4G.2	CTL04254_9A_1	CTL04254_9A_1	LTE 1900	OPA68R-BUJDA_1930MHz_03DT	15.9	40	3	TOP	FIBER	0						4842.058	6			
ANTENNA POSITION 4	PORT 8	15210.A.1900.4G.5	15210.A.1900.4G.5	CTL04254_9A_2	CTL04254_9A_2	LTE 1900	OPA68R-BUJDA_1930MHz_03DT	15.9	40	3	TOP	FIBER	0						4842.058	6			
	PORT 1	15210.A.700.4G.1	15210.A.700.4G.1	CTL04254_7A_1	CTL04254_7A_1	LTE 700	DWP68R-BUJDA_725MHz_03DT	13.1	40	3	TOP	FIBER	0						1475.7085	7			
	PORT 2	15210.A.850.4G.1	15210.A.850.4G.1	CTL04254_8A_1	CTL04254_8A_1	LTE 850	DWP68R-BUJDA_850MHz_03DT	13.1	40	3	TOP	FIBER	0						1000	7			
ANTENNA POSITION 4	PORT 3	15210.A.WVS.4G.5	15210.A.WVS.4G.5	CTL04254_2A_2	CTL04254_2A_2	LTE WVS	DWP68R-BUJDA_2170MHz_03DT	0	40	3	TOP	FIBER	0						5072.2572	8			
	PORT 5	15210.A.850.4G.1	15210.A.850.4G.1	CTCN005254_N005A_1	CTCN005254_N005A_1	5G 850	DWP68R-BUJDA_850MHz_03DT	13.1	40	3	TOP	FIBER	0						1000	7			

Section 17B - FINAL TOWER CONFIGURATION - SECTOR B

ANTENNA POSITION IS LEFT TO RIGHT FROM BACK OF ANTENNA (unless otherwise specified)	ANTENNA POSITION 1	ANTENNA POSITION 2	ANTENNA POSITION 3	ANTENNA POSITION 4	ANTENNA POSITION 5	ANTENNA POSITION 6	ANTENNA POSITION 7														
ANTENNA MAKE - MODEL	QS665 12-2		OPAGER-ELUDA	DMP66R-BURDA																	
ANTENNA VENDOR	Durabel		CCI	CCI																	
ANTENNA SIZE (H x W x D)	72x12x6.6		71.2x21x7.8	71.2x20.7x7.7																	
ANTENNA WEIGHT	111		60.2	79.4																	
AZIMUTH	160		160	160																	
MAGNETIC DECLINATION																					
RADIATION CENTER (feet)	166		166	166																	
ANTENNA TIP HEIGHT	169		169	169																	
MECHANICAL DOWNTILT	0		0	0																	
FEEDER AMOUNT	Fiber * 2 Coax																				
VERTICAL SEPARATION FROM ANTENNA ABOVE (TP to TIP)																					
VERTICAL SEPARATION FROM ANTENNA BELOW (TP to TIP)																					
HORIZONTAL SEPARATION FROM CLOSEST ANTENNA TO LEFT (CENTERLINE to CENTERLINE)																					
HORIZONTAL SEPARATION FROM CLOSEST ANTENNA TO RIGHT (CENTERLINE to CENTERLINE)																					
HORIZONTAL SEPARATION FROM ANOTHER ANTENNA (which antenna # / # of inches)																					
Antenna RET Mode (QTY/MODEL)	Bulk-In		Bulk-In	Bulk-In																	
SURGE ARRESTOR (QTY/MODEL)	4 Polyphaser 100660 + APTDC-BDFDM-BB (2) TPX-070821																				
DUPLEXER (QTY/MODEL)	4																				
ANTENNA RET CONTROL UNIT (QTY/MODEL)	LTE RRH		LTE RRH	LTE RRH																	
DC BLOCK (QTY/MODEL)																					
TRIAL/IMA (QTY/MODEL)																					
PRU FOR IMAS (QTY/MODEL)																					
FILTER (QTY/MODEL)																					
SQUID (QTY/MODEL)																					
FIBER TRUNK (QTY/MODEL)																					
DC TRUNK (QTY/MODEL)																					
REPEATER (QTY/MODEL)	1 SDARS remote																				
RRH - 700 band (QTY/MODEL)	1 RRUS-E2 B29		1 4478 B14	1 4449 B5/B12																	
RRH - 850 band (QTY/MODEL)																					
RRH - 1900 band (QTY/MODEL)																					
RRH - AWS band (QTY/MODEL)			1 8648 B2/B66A																		
RRH - WCS band (QTY/MODEL)	1 RRUS-32 B30																				
Additional RRH #1 - any band (QTY/MODEL)																					
Additional RRH #2 - any band (QTY/MODEL)																					
Additional Component 1 (QTY/MODEL)	1 CB22SR-43																				
Additional Component 2 (QTY/MODEL)																					
Additional Component 3 (QTY/MODEL)																					
Local Market Note 1	/A LTE 65700 LPRER D1, LTE 70700 DEJ, 4TX4RX Software Reconfig(700 B-C), 50 NR Upgrade(850 B/U), BWE Tower Top RRH Auf(1800 E & G) /A45 No. OCTO port Ant. /Combine IMTS 850 with LTE and remove IMTS line equipments. /Swap Hex port Antenna with a Oct port Antenna. /Add LTE B14 radio. /Swap LTE 700B/C and 850 Radio with Dual band radio shared with LTE 850. /Swap LTE PCS radio with Dual band radio shared with LTE AWS. /Add LTE 700 DE radio with SA at bottom. /Add 1 DC/Fiber Squid. /Swap both DUS with 2 660% Swap IDL2 with IDLe (REMOVE LXMU)																				
Local Market Note 2																					
Local Market Note 3	1x6801 / 2x6630 / 1xXUL03 + IDLe (shared)																				
PORT SPECIFIC FIELDS	USED (CSSng)	USED (Aiol)	ATOLL TXID	ATOLL CELL ID	TX/RX TECHNOLOGY/FREQUENCY	ANTENNA ATOLL	ANTENNA GAIN	ELECTRICAL AZIMUTH	ELECTRICAL TILT	RRH LOCATION (Top/Bottom/integrating)	FEDERS TYPE	FEEDER LENGTH (feet)	RVKIT MODULE?	TRIPLEXER or LLC (QTY)	TRIPLEXER or LLC (MODEL)	SCPA/MCPA MODULE?	HATCHPLATE POWER (Watts)	ERP (Watts)	Antenna RET Name	CABLE NUMBER	CABLE ID (CSSNG)
ANTENNA POSITION 1	15210.B.850.3G.1	15210.B.850.3G.1	CTV62542	CTV62542	UMTS 850	QS66512-	13.41	150	8	None	Andrew 1-5/8	165.04					255.86			9	

PORT 2 15210.B.700.4G.4	15210.B.700.4G.4	CTLO6254_7B_2_E	CTLO6254_7B_2_E	CTLO6254_7B_2_E	LTE 700	2_850MHz_08DT	13.5	150	3	Bottom	Andrew 1.5/8	165.04	1475.7085	9
	15210.B.WCS.4G.1	CTLO6254_3B_1	CTLO6254_3B_1	CTLO6254_3B_1	LTE WCS	GS66612-2_728MHz_08DT	16.7	150	3	TOP	FIBER	0	1285.2886	10
PORT 1 15210.B.700.4G.5	15210.B.700.4G.5	CTLO6254_7B_3_F	CTLO6254_7B_3_F	CTLO6254_7B_3_F	LTE 700	OPA68R-BUJDA_770MHz_07DT	13.2	150	7	TOP	FIBER	0	2851.413	13
	15210.B.1900.4G.7	CTLO4254_9B_3	CTLO4254_9B_3	CTLO4254_9B_3	LTE 1900	OPA68R-BUJDA_1930MHz_07DT	17.1	150	7	TOP	FIBER	0	4842.058	14
PORT 7 15210.B.1900.4G.2	15210.B.1900.4G.1	CTLO4254_9B_1	CTLO4254_9B_1	CTLO4254_9B_1	LTE 1900	OPA68R-BUJDA_1930MHz_07DT	15.9	150	7	TOP	FIBER	0	4842.058	14
	15210.B.1900.4G.6	CTLO4254_9B_2	CTLO4254_9B_2	CTLO4254_9B_2	LTE 1900	OPA68R-BUJDA_1930MHz_07DT	15.9	150	7	TOP	FIBER	0	4842.058	14
PORT 1 15210.B.700.4G.1	15210.B.700.4G.1	CTLO6254_7B_1	CTLO6254_7B_1	CTLO6254_7B_1	LTE 700	DWP66R-BUJBD_725MHz_07DT	12.8	150	7	TOP	FIBER	0	1475.7085	15
	15210.B.850.4G.1	CTLO6254_8B_1	CTLO6254_8B_1	CTLO6254_8B_1	LTE 850	DWP66R-BUJBD_850MHz_07DT	13.3	150	7	TOP	FIBER	0	1000	15
PORT 3 15210.B.ANS.4G.5	15210.B.ANS.4G.5	CTLO4254_2B_2	CTLO4254_2B_2	CTLO4254_2B_2	LTE ANS	DWP66R-BUJBD_2170MHz_03DT	17.6	150	3	TOP	FIBER	0	5070.2572	16
	15210.B.850.5G.1	CTCN06254_1N009B	CTCN06254_1N009B	CTCN06254_1N009B	5G 850	DWP66R-BUJBD_850MHz_07DT	13.3	150	7	TOP	FIBER	0	1000	15

Section 17c - FINAL TOWER CONFIGURATION - SECTOR C

ANTENNA POSITION IS LEFT TO RIGHT FROM BACK OF ANTENNA (unless otherwise specified)	ANTENNA POSITION 1	ANTENNA POSITION 2	ANTENNA POSITION 3	ANTENNA POSITION 4	ANTENNA POSITION 5	ANTENNA POSITION 6	ANTENNA POSITION 7														
ANTENNA MAKE - MODEL	QS685 12-2		OPAGER-ELUDA	DMP66R-BURDA																	
ANTENNA VENDOR	Durabel		CCI	CCI																	
ANTENNA SIZE (H x W x D)	71.2x21x7.8		71.2x21x7.8	71.2x20.7x7.7																	
ANTENNA WEIGHT	111		60.2	79.4																	
AZIMUTH	270		270	270																	
MAGNETIC DECLINATION																					
RADIATION CENTER (feet)	166		166	166																	
ANTENNA TIP HEIGHT	169		169	169																	
MECHANICAL DOWNTILT	0		0	0																	
FEEDER AMOUNT	Fiber + 2 Coax																				
VERTICAL SEPARATION FROM ANTENNA ABOVE (TP to TIP)																					
VERTICAL SEPARATION FROM ANTENNA BELOW (TP to TIP)																					
HORIZONTAL SEPARATION FROM CLOSEST ANTENNA TO LEFT (CENTERLINE to CENTERLINE)																					
HORIZONTAL SEPARATION FROM CLOSEST ANTENNA TO RIGHT (CENTERLINE to CENTERLINE)																					
HORIZONTAL SEPARATION FROM ANOTHER ANTENNA (which antenna # / # of inches)																					
Antenna RET Mode (QTY/MODEL)	Bulk-In		Bulk-In	Bulk-In																	
SURGE ARRESTOR (QTY/MODEL)	4 Polyphaser 100680 + APTDC-BDFDM-BB (2) TPX-070821																				
DUPLEXER (QTY/MODEL)	4																				
Antenna RET CONTROL UNIT (QTY/MODEL)	LTE RRH		LTE RRH	LTE RRH																	
DC BLOCK (QTY/MODEL)																					
TRIAL/IMA (QTY/MODEL)																					
PRU FOR IMAS (QTY/MODEL)																					
FILTER (QTY/MODEL)																					
SQUID (QTY/MODEL)																					
FIBER TRUNK (QTY/MODEL)																					
DC TRUNK (QTY/MODEL)																					
REPEATER (QTY/MODEL)	1 SDARS remote																				
RRH - 700 band (QTY/MODEL)	1 RRUS-E2 B29		1 4478 B14	1 4449 B5/B12																	
RRH - 850 band (QTY/MODEL)																					
RRH - 1900 band (QTY/MODEL)																					
RRH - AWS band (QTY/MODEL)			1 8648 B2/B66A																		
RRH - WCS band (QTY/MODEL)	1 RRUS-32 B30																				
Additional RRH #1 - any band (QTY/MODEL)																					
Additional RRH #2 - any band (QTY/MODEL)																					
Additional Component 1 (QTY/MODEL)	1 CB223SR-43																				
Additional Component 2 (QTY/MODEL)																					
Additional Component 3 (QTY/MODEL)																					
Local Market Note 1	/A LTE 65700 LPRER D1, LTE 70700 DEJ, 4TX4RX Software Reconfig(700 B-C), 50 NR Upgrade(850 B/U), BWE Tower Top RRH Auf(1800 E & G) /A45 No. OCTO port Ant. /Combine IMTS 850 with LTE and remove IMTS line equipments. /Swap Hex port Antenna with a Oct port Antenna. /Add LTE B14 radio. /Swap LTE 700B/C and 850 Radio with Dual band radio shared with LTE 850. /Swap LTE PCS radio with Dual band radio shared with LTE AWS. /Add LTE 700 DE radio with SA at bottom. /Add 1 DC/Fiber Squid. /Swap both DUS with 2 6830% Swap IDL2 with IDLe (REMOVE LXMU)																				
Local Market Note 2																					
Local Market Note 3	1x6801 / 2x6630 / 1xXUL03 + IDLe (shared)																				
PORT SPECIFIC FIELDS	USED (CSSng)	USED (Aiol)	ATOLL TXID	ATOLL CELL ID	TX/RX TECHNOLOGY/FREQUENCY	ANTENNA ATOLL	ANTENNA GAIN	ELECTRICAL TILT	ELECTRICAL AZIMUTH	RRH LOCATION (Top/Bottom/integrating)	FEDERS TYPE	FEEDER LENGTH (feet)	RVKIT MODULE?	TRIPLEXER or LLC (QTY)	TRIPLEXER or LLC (MODEL)	SCPA/MCPA MODULE?	HATCHPLATE POWER (Watts)	ERP (Watts)	Antenna RET Name	CABLE NUMBER	CABLE ID (CSSNG)
ANTENNA POSITION 1	15210.C.850.3G.1	15210.C.850.3G.1	CTV62543	CTV62543	UMTS 850	800-10121	13.41	270	8	None	Andrew 1-5/8	165.04					255.86			17	

ANTENNA POSITION 3	PORT 2	15210.C.700.4G.4	15210.C.700.4G.4	CTLO6254_7C_2_E	CTLO6254_7C_2_E	LTE 700	@850_Xoai_881	13.5	270	3	Bottom	Andrew 1.5/8	165.04	1475.7085	17
	PORT 4	15210.C.WCS.4G.1	15210.C.WCS.4G.1	CTLO6254_3C_1	CTLO6254_3C_1	LTE WCS	GS86612-2_728MHz_0DDT	16.7	270	3	TOP	FIBER	0	1285.2886	18
ANTENNA POSITION 3	PORT 1	15210.C.700.4G.5	15210.C.700.4G.5	CTLO6254_7C_3_F	CTLO6254_7C_3_F	LTE 700	OPA68R-BUJDA_770MHz_10D	13.1	270	10	TOP	FIBER	0	2851.413	21
	PORT 3	15210.C.1900.4G.6	15210.C.1900.4G.1	CTLO4254_9C_3	CTLO4254_9C_3	LTE 1900	OPA68R-BUJDA_1930MHz_07	17.1	270	7	TOP	FIBER	0	4842.058	22
	PORT 7	15210.C.1900.4G.2	15210.C.1900.4G.1	CTLO4254_9C_1	CTLO4254_9C_1	LTE 1900	OPA68R-BUJDA_1930MHz_07	15.9	270	7	TOP	FIBER	0	4842.058	22
	PORT 8	15210.C.1900.4G.5	15210.C.1900.4G.1	CTLO4254_9C_2	CTLO4254_9C_2	LTE 1900	OPA68R-BUJDA_1930MHz_07	15.9	270	7	TOP	FIBER	0	4842.058	22
ANTENNA POSITION 4	PORT 1	15210.C.700.4G.1	15210.C.700.4G.1	CTLO6254_7C_1	CTLO6254_7C_1	LTE 700	DWP66R-BUJBD_725MHz_11DT	12.7	270	11	TOP	FIBER	0	1475.7085	23
	PORT 2	15210.C.850.4G.1	15210.C.850.4G.1	CTLO6254_9C_1	CTLO6254_9C_1	LTE 850	DWP66R-BUJBD_850MHz_10DT	13.3	270	10	TOP	FIBER	0	1000	23
	PORT 3	15210.C.ANS.4G.5	15210.C.ANS.4G.4	CTLO4254_3C_2	CTLO4254_3C_2	LTE ANS	DWP66R-BUJBD_2170MHz_00D	0	270	3	TOP	FIBER	0	5070.2572	24
	PORT 5	15210.C.850.5G.1	15210.C.850.5G.1	CTCN06254_N009C_1	CTCN06254_N009C_1	5G 850	DWP66R-BUJBD_850MHz_10DT	13.3	270	10	TOP	FIBER	0	1000	23

