

UPS CampusShip: View/Print Label

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2. **Fold the printed label at the solid line below.** Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.
3. **GETTING YOUR SHIPMENT TO UPS**
Customers with a Daily Pickup
Your driver will pickup your shipment(s) as usual.

Customers without a Daily Pickup

Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations.

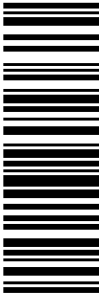
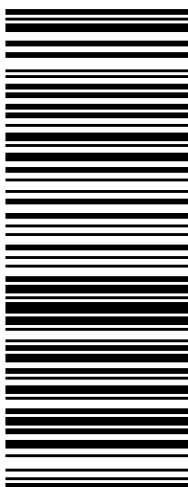

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450 E CENTER ST
WEST BRIDGEWATER ,MA 02379

FOLD HERE

<p>1 LBS</p> <p>1 OF 1</p> <p>PATRICIA NOWAK 508-265-5599 CENTERLINE COMMUNICATIONS, LLC 750 WEST CENTER STREET WEST BRIDGEWATER MA 02379</p> <p>SHIP TO: MELANIE A. BACHMAN 18608272935 CONNECTICUT SITING COUNCIL EXECUTIVE DIRECTOR TEN FRANKLIN SQUARE NEW BRITAIN CT 06051-2655</p>	<p>CT 067 9-06</p> 	<p>UPS GROUND</p> <p>TRACKING #: 1Z 9Y4 503 03 1018 2601</p> 	<p>BILLING: P/P</p> <p>Reference # 1: CT2175 - CSC</p> <p>CS 22.0.13. WNTNV50 28.0A 07/2021*</p> 
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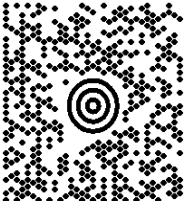
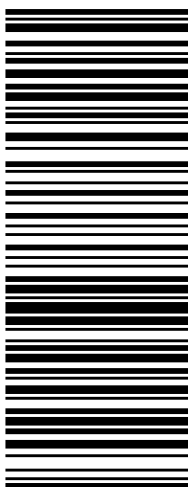

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1 LBS 1 OF 1 PATRICIA NOWAK 508-265-5599 CENTERLINE COMMUNICATIONS, LLC 750 WEST CENTER STREET WEST BRIDGEWATER MA 02379	SHIP TO: JAMES COSGROVE TOWN OF BRANFORD FIRST SELECTMAN'S OFFICE 1019 MAIN STREET BRANFORD CT 06405-3731	CT 065 2-01  	UPS GROUND TRACKING #: 1Z 9Y4 503 03 0670 5616 	BILLING: P/P Reference # 1: CT2175 - Selectman CS 22.0.13. WNTNV50 28.0A 07/2021* 
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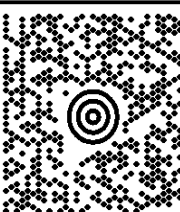
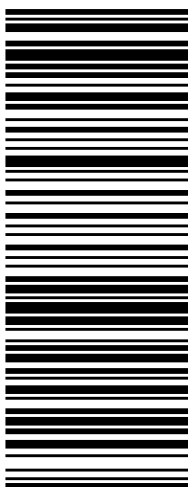
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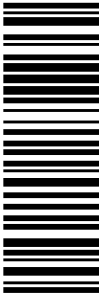
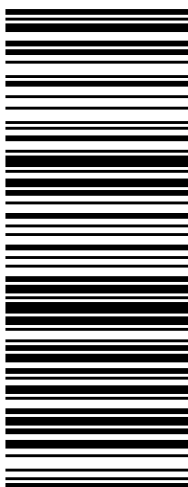

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July 8, 2021

Melanie A. Bachman
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Regarding: Notice of Exempt Modification – AT&T Site CT2175
Address: 4 Beaver Road, Branford, Connecticut 06405

Dear Ms. Bachman:

New Cingular Wireless, PCS, LLC (hereinafter “AT&T”) currently maintains a wireless telecommunications facility on an existing 125’ self-support tower (the “Tower”) at the above-referenced address, latitude 41.280200, longitude -72.841700. Said Tower is owned by American Tower Corporation.

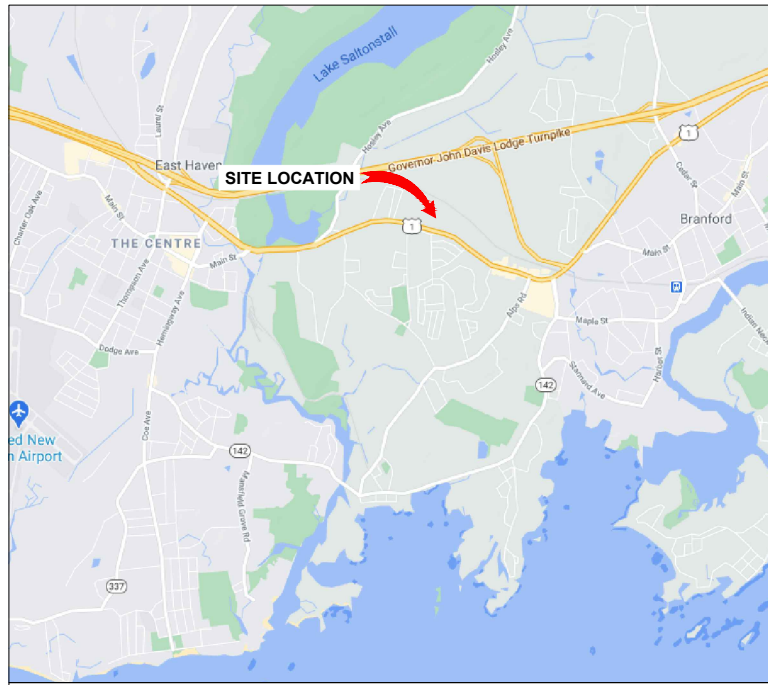
AT&T desires to modify its facility at the Tower by adding (3) remote radio units and other related modifications as more particularly detailed and described in the enclosed Construction Drawings prepared by Infinigy Engineering, PLLC dated February 12, 2021 and last revised May 27, 2021. Please note this modification includes B2, B5, and B12 hardware that is both 4G (LTE) and 5GNR capable through remote software configuration and either or both services may be turned on or off at various times. Enclosed please also find an Antennas Mount Analysis Report prepared by American Tower Corporation dated February 4, 2021. The centerline height of the antennas will be at 113 feet.

The most recent AT&T Exempt Modification acknowledgement by the Connecticut Siting Council was issued on April 1, 2019 under EM-AT&T-014-190211 and building permit number B-19-00517 was issued by the Town of Branford on May 20, 2019 for the modification. Enclosed please also find a copy of the above referenced acknowledgment and building permit.

Please accept this letter as notification pursuant to R.C.S.A §16-50j-73 for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to the following individuals: The Honorable James Cosgrove, First Selectman, Town of Branford, CT; Harry Smith, Town Planner, Town of Branford, CT; American Tower Corporation, as Tower Owner; and Joyce Tipping, Trustee, as the property owner at the above referenced address. Enclosed please find a property card and a GIS map for the above-referenced address.

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2). Specifically:

EXHIBIT 1



VICINITY MAP

CURRENT PROJECTS:
LTE 6C - PACE #: MRCTB049213



AMERICAN TOWER®

ATC SITE NAME: CHERRY HILL-BRANFORD
 ATC SITE NUMBER: 302536
 AT&T PACE NUMBERS: MRCTB049213
 AT&T SITE ID: CTL02175
 AT&T FA CODE: 10035093
 AT&T SITE NAME: BRANFORD WEST
 SITE ADDRESS: 4 BEAVER ROAD
 BRANFORD, CT 06405



LOCATION MAP

**AT&T MOBILITY
ANTENNA AMENDMENT PLAN**

COMPLIANCE CODE	PROJECT SUMMARY	PROJECT DESCRIPTION	SHEET INDEX				
ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES. 1. 2018 INTERNATIONAL BUILDING CODE (IBC) 2. 2017 NATIONAL ELECTRIC CODE (NEC) 3. LOCAL BUILDING CODE 4. CITY/COUNTY ORDINANCES	<u>SITE ADDRESS:</u> 4 BEAVER ROAD BRANFORD, CT 06405 COUNTY: NEW HAVEN <u>GEOGRAPHIC COORDINATES:</u> LATITUDE: 41.28015 LONGITUDE: -72.84173333 GROUND ELEVATION: 90' AMSL <u>ZONING INFORMATION:</u> JURISDICTION: NEW HAVEN COUNTY PARCEL #: B07-000 006-00043	THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW: <u>TOWER WORK:</u> INSTALL (3) RRHS EXISTING (12) ANTENNAS, (9) RRHS, (3) TMAS (3) SQUIDS, (6) DC TRUNKS, (6) COAX CABLES AND (2) FIBER TRUNKS TO REMAIN REMOVE (6) COAX CABLES <u>GROUND WORK:</u> INSTALL (1) IDLE, (3) VERTIV UP CONVERTERS AND (1) XMU EXISTING (1) RBS 6601 AND (2) BB 6630 TO REMAIN	SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
	<u>PROJECT TEAM</u> <u>TOWER OWNER:</u> AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 01801 <u>ENGINEER:</u> INFINIGY ENGINEERING, PLLC 1033 WATERVLIIET SHAKER RD ALBANY, NY 12205 <u>PROPERTY OWNER:</u> JOYCE TIPPING 4 BEAVER ROAD - BRANFORD - CT - 06405	<u>PROJECT NOTES</u> 1. THE FACILITY IS UNMANNED. 2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE. 3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE. 4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED. 5. HANDICAP ACCESS IS NOT REQUIRED.	G-001	TITLE SHEET	0	05/27/21	AUD
<u>UTILITY COMPANIES</u> POWER COMPANY: EVERSOURCE PHONE: (877) 659-6326 TELEPHONE COMPANY: N/A PHONE: N/A		<u>PROJECT LOCATION DIRECTIONS</u> FROM NEW LONDON CT - I 95 SOUTH TO EXIT 53. TAKE OFF RAMP AND THEN TAKE RIGHT ONTO RT 1 AND THEN FOLLOW TO BEAVER RD.	G-002	GENERAL NOTES	0	05/27/21	AUD
			C-001	OVERALL SITE PLAN	0	05/27/21	AUD
			C-101	DETAILED SITE PLAN	0	05/27/21	AUD
			C-102	DETAILED EQUIPMENT LAYOUT	0	05/27/21	AUD
			C-201	TOWER ELEVATION	0	05/27/21	AUD
			C-401	RF SCHEDULE AND ANTENNA INSTALLATION	0	05/27/21	AUD
			C-501	CONSTRUCTION DETAILS	0	05/27/21	AUD
			C-502	EQUIPMENT SPECIFICATIONS	0	05/27/21	AUD
			E-501	GROUNDING DETAILS	0	05/27/21	AUD
			R-601	SUPPLEMENTAL	0	05/27/21	AUD
			R-602	SUPPLEMENTAL	0	05/27/21	AUD
			R-603	SUPPLEMENTAL	0	05/27/21	AUD
			R-604	SUPPLEMENTAL	0	05/27/21	AUD
			R-605	SUPPLEMENTAL	0	05/27/21	AUD

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC

INFINIGY®
ENGINEERING, PLLC
1033 WATERVLIIET SHAKER RD
ALBANY, NY 12205

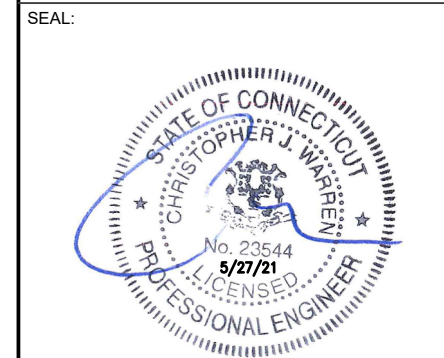
REV.	DESCRIPTION	BY	DATE
A	PRELIM	MN	02/12/21
B	PRELIM	SP	02/18/21
C	PRELIM	SP	05/18/21
D	FOR CONSTRUCTION	AUD	05/27/21

ATC SITE NUMBER:
302536

 ATC SITE NAME:
CHERRY HILL-BRANFORD

 AT&T MOBILITY SITE NAME:
BRANFORD WEST

 SITE ADDRESS:
4 BEAVER ROAD
BRANFORD, CT 06405



DATE DRAWN: 02/12/21
 ATC JOB NO: 13334427_G3
 CUSTOMER ID: BRANFORD WEST
 CUSTOMER #: 10035093

TITLE SHEET

SHEET NUMBER:
G-001
 REVISION:
0

GENERAL CONSTRUCTION NOTES:

1. OWNER FURNISHED MATERIALS, AT&T MOBILITY "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL
 - A. BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/CO-LOCATE ONLY)
 - B. AC/TELCO INTERFACE BOX (PPC)
 - C. ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)
 - D. TOWERS, MONOPOLES
 - E. TOWER LIGHTING
 - F. GENERATORS & LIQUID PROPANE TANK
 - G. ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING
 - H. ANTENNAS (INSTALLED BY OTHERS)
 - I. TRANSMISSION LINE
 - J. TRANSMISSION LINE JUMPERS
 - K. TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS
 - L. TRANSMISSION LINE GROUND KITS
 - M. HANGERS
 - N. HOISTING GRIPS
 - O. BTS EQUIPMENT
2. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OTHER MATERIALS FOR THE COMPLETE INSTALLATION OF THE SITE INCLUDING, BUT NOT LIMITED TO, SUCH MATERIALS AS FENCING, STRUCTURAL STEEL SUPPORTING SUB-FRAME FOR PLATFORM, ROOFING LABOR AND MATERIALS, GROUNDING RINGS, GROUNDING WIRES, COPPER-CLAD OR XIT CHEMICAL GROUND ROD(S), BUSS BARS, TRANSFORMERS AND DISCONNECT SWITCHES WHERE APPLICABLE, TEMPORARY ELECTRICAL POWER, CONDUIT, LANDSCAPING COMPOUND STONE, CRANES, CORE DRILLING, SLEEPERS AND RUBBER MATTING, REBAR, CONCRETE CAISSONS, PADS AND/OR AUGER MOUNTS, MISCELLANEOUS FASTENERS, CABLE TRAYS, NON-STANDARD ANTENNA FRAMES AND ALL OTHER MATERIAL AND LABOR REQUIRED TO COMPLETE THE JOB ACCORDING TO THE DRAWINGS AND SPECIFICATIONS. IT IS THE POSITION OF AT&T MOBILITY TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
3. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
4. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
6. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
7. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
8. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
9. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
11. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
12. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE AT&T MOBILITY REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE AT&T MOBILITY REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE AT&T MOBILITY REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
14. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE AT&T MOBILITY CONSTRUCTION MANAGER.
15. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
16. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE AT&T MOBILITY REP AND ENGINEER OF RECORD IMMEDIATELY.
17. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
18. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
19. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH AMERICAN TOWER CORPORATION (ATC) AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
20. CONTRACTOR SHALL FURNISH AT&T MOBILITY AND AMERICAN TOWER CORPORATION (ATC) WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH AT&T MOBILITY REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL

- ALL ITEMS PROVIDED.
22. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH AT&T MOBILITY REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY AT&T MOBILITY MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
 23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH AT&T MOBILITY SPECIFICATIONS AND REQUIREMENTS.
 24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO AT&T MOBILITY FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
 25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO AT&T MOBILITY SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
 26. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
 27. CONTRACTOR SHALL NOTIFY AT&T MOBILITY REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
 28. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
 29. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
 30. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE AT&T MOBILITY REP. ANY WORK FOUND BY THE AT&T MOBILITY REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
 31. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.
 32. AT&T MOBILITY FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE AT&T MOBILITY WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNGRATED, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING IT UP.
 33. AT&T MOBILITY OR HIS ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH, IN HIS OWN OPINION ARE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, EITHER BEFORE OR AFTER INSTALLATION AND THE EQUIPMENT SHALL BE REPLACED WITH EQUIPMENT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE CONTRACTOR AT NO COST TO AT&T MOBILITY OR THEIR ARCHITECT/ENGINEER.

SPECIAL CONSTRUCTION

ANTENNA INSTALLATION NOTES:

1. WORK INCLUDED:
 - A. ANTENNA AND COAXIAL CABLES ARE FURNISHED BY AT&T MOBILITY UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION CONTRACTOR IN TERMS OF COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PERSONNEL AND
 - B. INSTALL ANTENNA AS INDICATED ON DRAWINGS AND AT&T MOBILITY SPECIFICATIONS.
 - C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS
 - D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE.
 - E. CONTRACTOR SHALL PROVIDE FOUR (4) SETS OF SWEEP TESTS USING ANRITZU-PACKARD 8713B RF SCALAR NETWORK ANALYZER. SUBMIT FREQUENCY DOMAIN REFLECTOMETER(FDR) TESTS RESULTS TO THE PROJECT MANAGER. SWEEP TESTS SHALL BE AS PER ATTACHED RFS "MINIMUM FIELD TESTING RECOMMENDED FOR ANTENNA AND HELIAX COAXIAL CABLE SYSTEMS" DATED 10/5/93. TESTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING SERVICE AND BE BOUND AND SUBMITTED WITHIN ONE WEEK OF WORK COMPLETION.
 - F. INSTALL COAXIAL CABLES AND TERMINATING BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTIONS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.
 - G. ANTENNA AND COAXIAL CABLE GROUNDING:
2. ALL EXTERIOR #6 GREEN GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPLICE WEATHERPROOFING KIT #221213 OR

EQUAL.
 3. ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS)

ALL DISCREPANCIES FROM WHAT IS SHOWN ON THESE CONSTRUCTION DRAWINGS SHALL BE COMMUNICATED TO ATC ENGINEERING IMMEDIATELY FOR CORRECTION OR RE-DESIGN. FAILURE TO COMMUNICATE DIRECTLY WITH ATC ENGINEERING OR ANY CHANGES FROM THE DESIGN CONDUCTED WITHOUT PRIOR APPROVAL FROM ATC ENGINEERING SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR.



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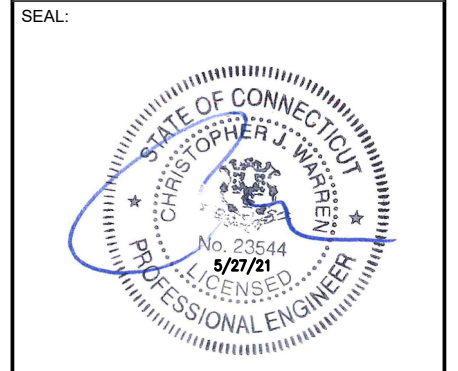
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A	PRELIM	MN	02/12/21
B	PRELIM	SP	02/18/21
C	PRELIM	SP	05/18/21
D	FOR CONSTRUCTION	AUD	05/27/21
E			

ATC SITE NUMBER:
302536

 ATC SITE NAME:
CHERRY HILL-BRANFORD

 AT&T MOBILITY SITE NAME:
BRANFORD WEST

 SITE ADDRESS:
 4 BEAVER ROAD
 BRANFORD, CT 06405



DATE DRAWN:	02/12/21
ATC JOB NO:	13334427_G3
CUSTOMER ID:	BRANFORD WEST
CUSTOMER #:	10035093

GENERAL NOTES

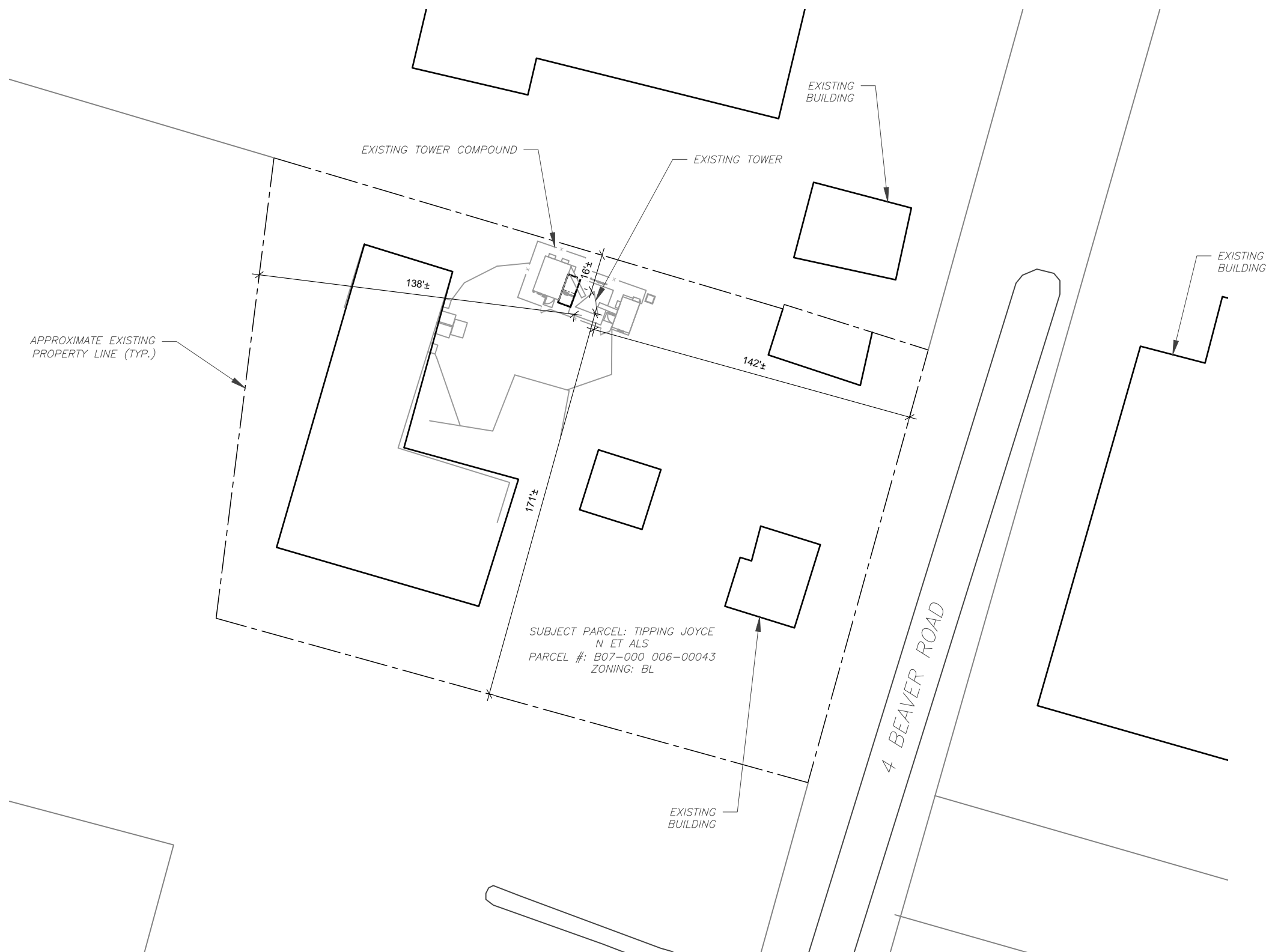
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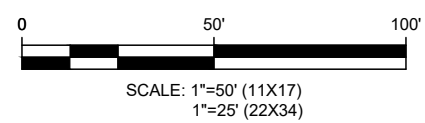
NOTES:

- BOUNDARY LINES OBTAINED FROM NEW HAVEN COUNTY ONLINE GIS.
- ZONING INFORMATION OBTAINED FROM NEW HAVEN COUNTY

INFORMATION CONTAINED WITHIN THESE DRAWINGS IS BASED ON PROVIDED INFORMATION. CONTRACTOR TO VERIFY PRIOR TO CONSTRUCTION.



1 OVERALL SITE PLAN



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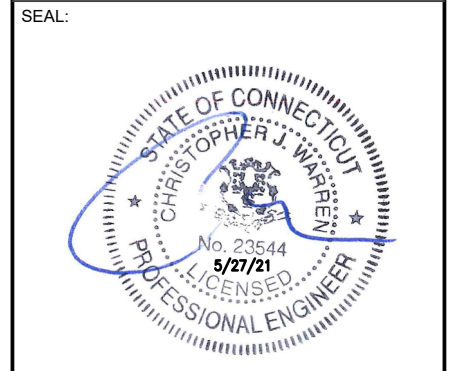
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BRANFORD, CT 06405



DATE DRAWN:	02/12/21
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CUSTOMER ID:	BRANFORD WEST
CUSTOMER #:	10035093

OVERALL SITE PLAN

SHEET NUMBER:	REVISION:
C-001	0

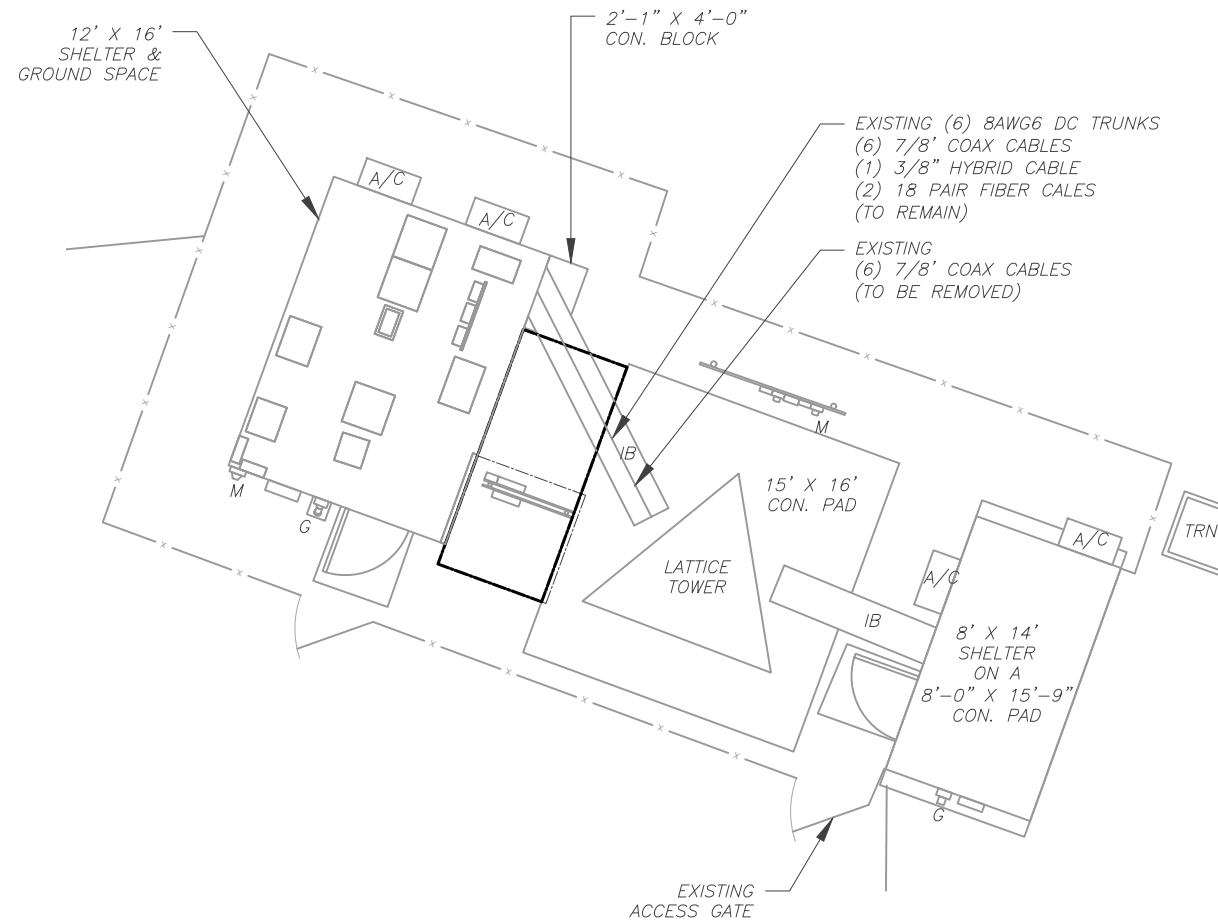
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SITE PLAN NOTES:

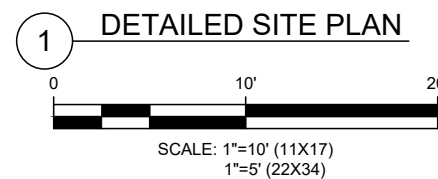
1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.
2. ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.
3. NO ELECTRICAL SCOPE IS INCLUDED IN THIS PROJECT.

INFORMATION CONTAINED WITHIN THESE DRAWINGS IS BASED ON PROVIDED INFORMATION. CONTRACTOR TO VERIFY PRIOR TO CONSTRUCTION.

LEGEND	
⊗	GROUNDING TEST WELL
ATS	AUTOMATIC TRANSFER SWITCH
B	BOLLARD
CSC	CELL SITE CABINET
D	DISCONNECT
E	ELECTRICAL
F	FIBER
GEN	GENERATOR
G	GENERATOR RECEPTACLE
HH, V	HAND HOLE, VAULT
IB	ICE BRIDGE
K	KENTROX BOX
LC	LIGHTING CONTROL
M	METER
PB	PULL BOX
PP	POWER POLE
T	TELCO
TRN	TRANSFORMER
— x —	CHAINLINK FENCE



- PROPOSED CABLE LENGTH:**
1. ESTIMATED LENGTH OF PROPOSED CABLE IS **145'**. ESTIMATED LENGTH OF CABLE WAS PROVIDED BY CUSTOMER OR CALCULATED BY ADDING THE RAD CENTER AND THE DISTANCE FROM THE SHELTER ENTRY PLATE TO THE TOWER (ALONG THE ICE BRIDGE) AND A SAFETY FACTOR MEASUREMENT OF 15% (OF THE TWO PREVIOUS VALUES). CDS DEFER TO GREATEST CABLE LENGTH.
 2. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. WHERE POSSIBLE UTILIZE EXISTING CABLE SUPPORT STRUCTURES AS PROVIDED FOR CARRIER TO ADEQUATELY SECURE CABLES, USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER. OTHERWISE, ATTACH CABLES TO HORIZONTAL OR DIAGONAL TOWER MEMBERS USING PROPOSED STAINLESS STEEL ADAPTERS (DO NOT ATTACH TO TOWER LEG).



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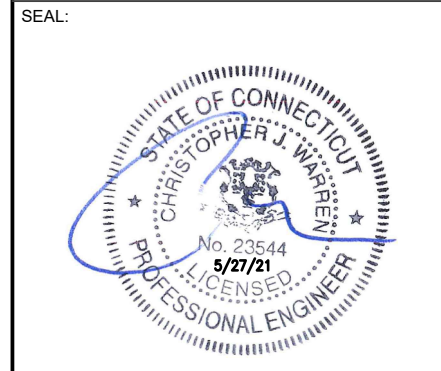
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C	PRELIM	SP	05/18/21
D	FOR CONSTRUCTION	AUD	05/27/21

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302536

ATC SITE NAME:
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AT&T MOBILITY SITE NAME:
BRANFORD WEST

SITE ADDRESS:
4 BEAVER ROAD
BRANFORD, CT 06405



DATE DRAWN:	02/12/21
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CUSTOMER ID:	BRANFORD WEST
CUSTOMER #:	10035093

DETAILED SITE PLAN

SHEET NUMBER: C-101	REVISION: 0
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302536

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AT&T MOBILITY SITE NAME:
BRANFORD WEST

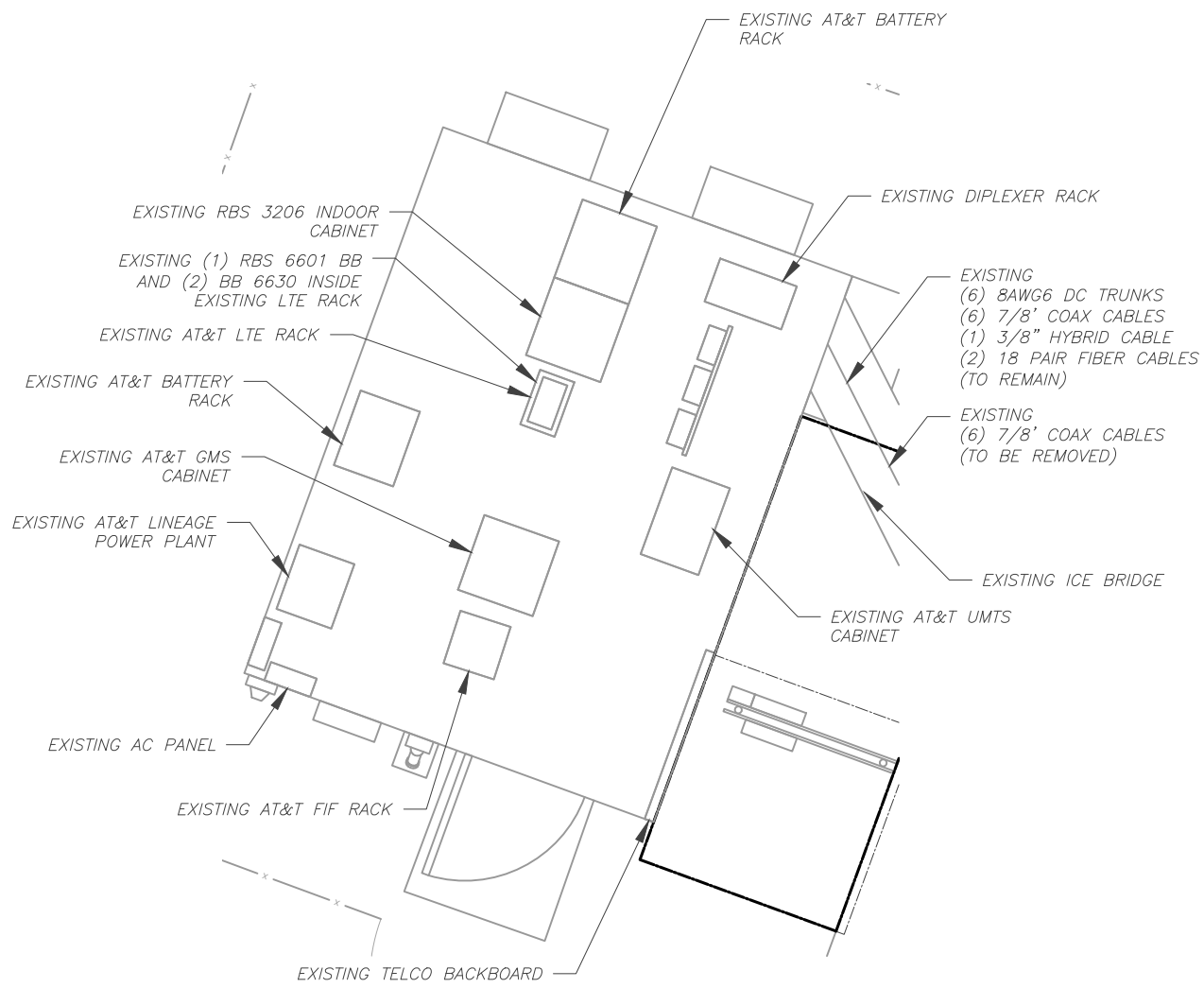
SITE ADDRESS:
4 BEAVER ROAD
BRANFORD, CT 06405



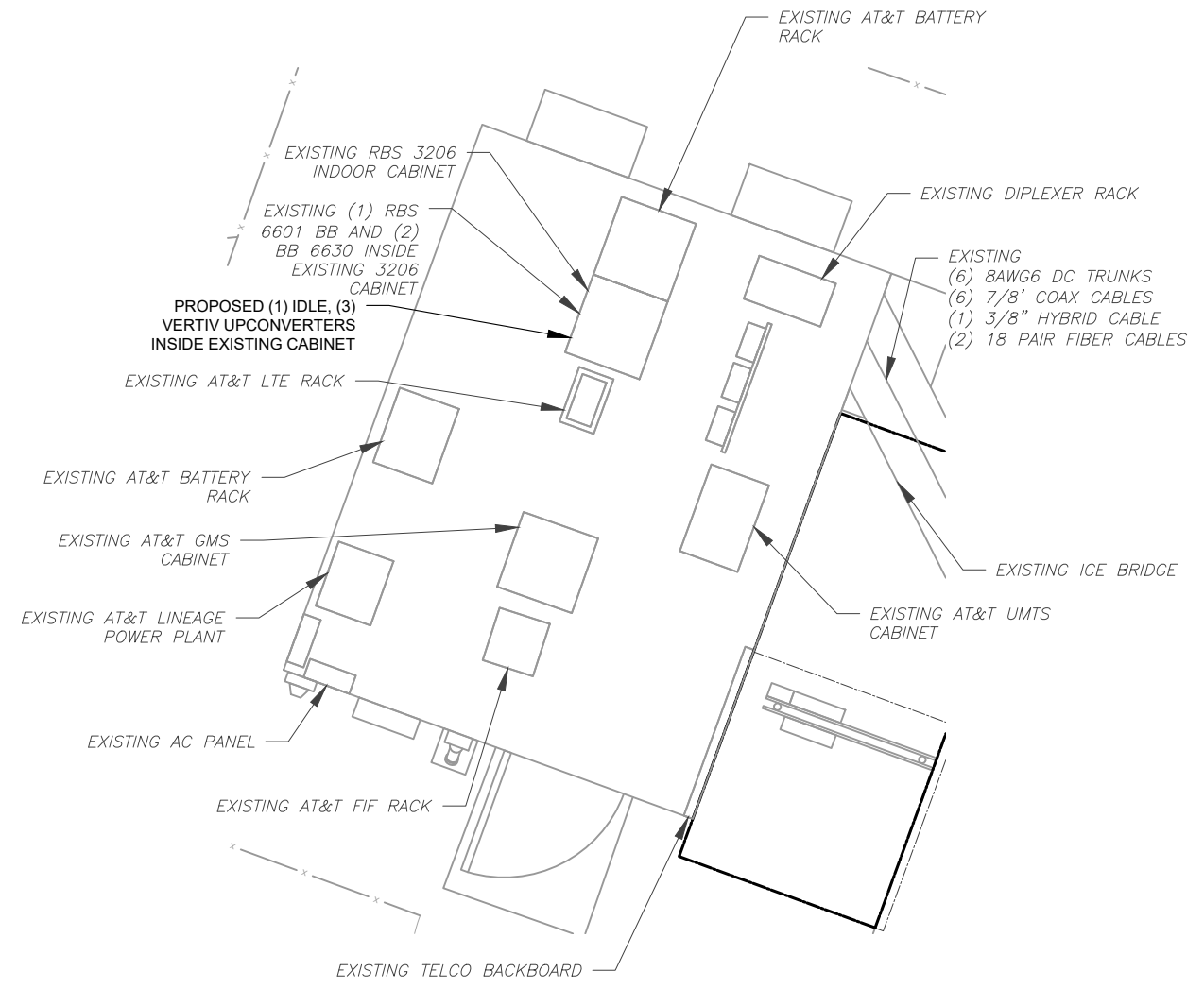
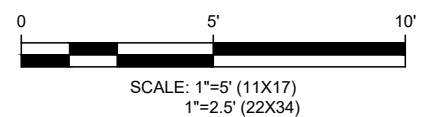
DATE DRAWN:	02/12/21
ATC JOB NO:	13334427_G3
CUSTOMER ID:	BRANFORD WEST
CUSTOMER #:	10035093

DETAILED EQUIPMENT LAYOUT

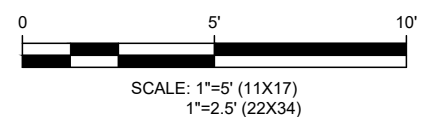
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1 EXISTING GROUND EQUIPMENT LAYOUT



2 PROPOSED GROUND EQUIPMENT LAYOUT

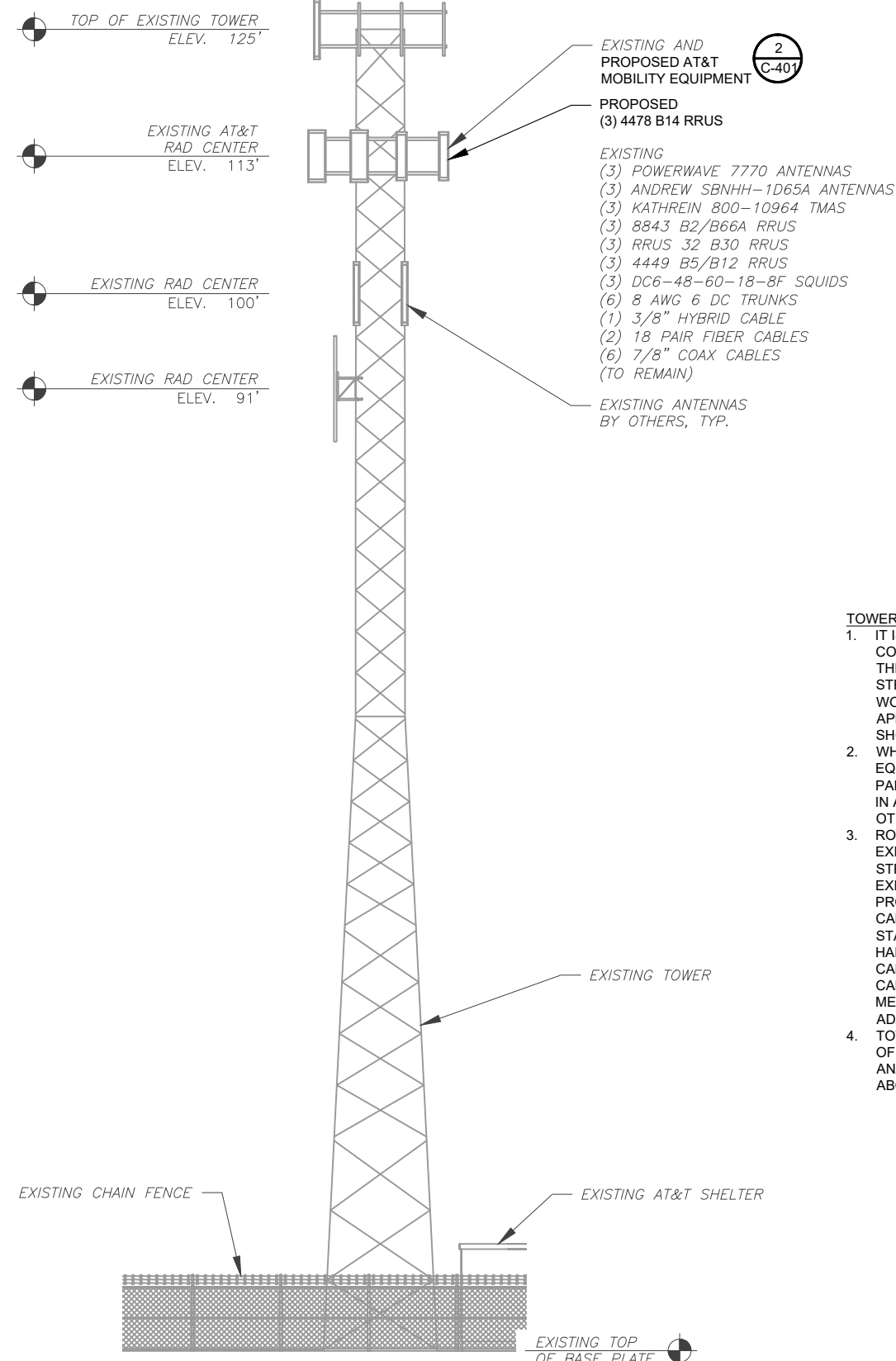
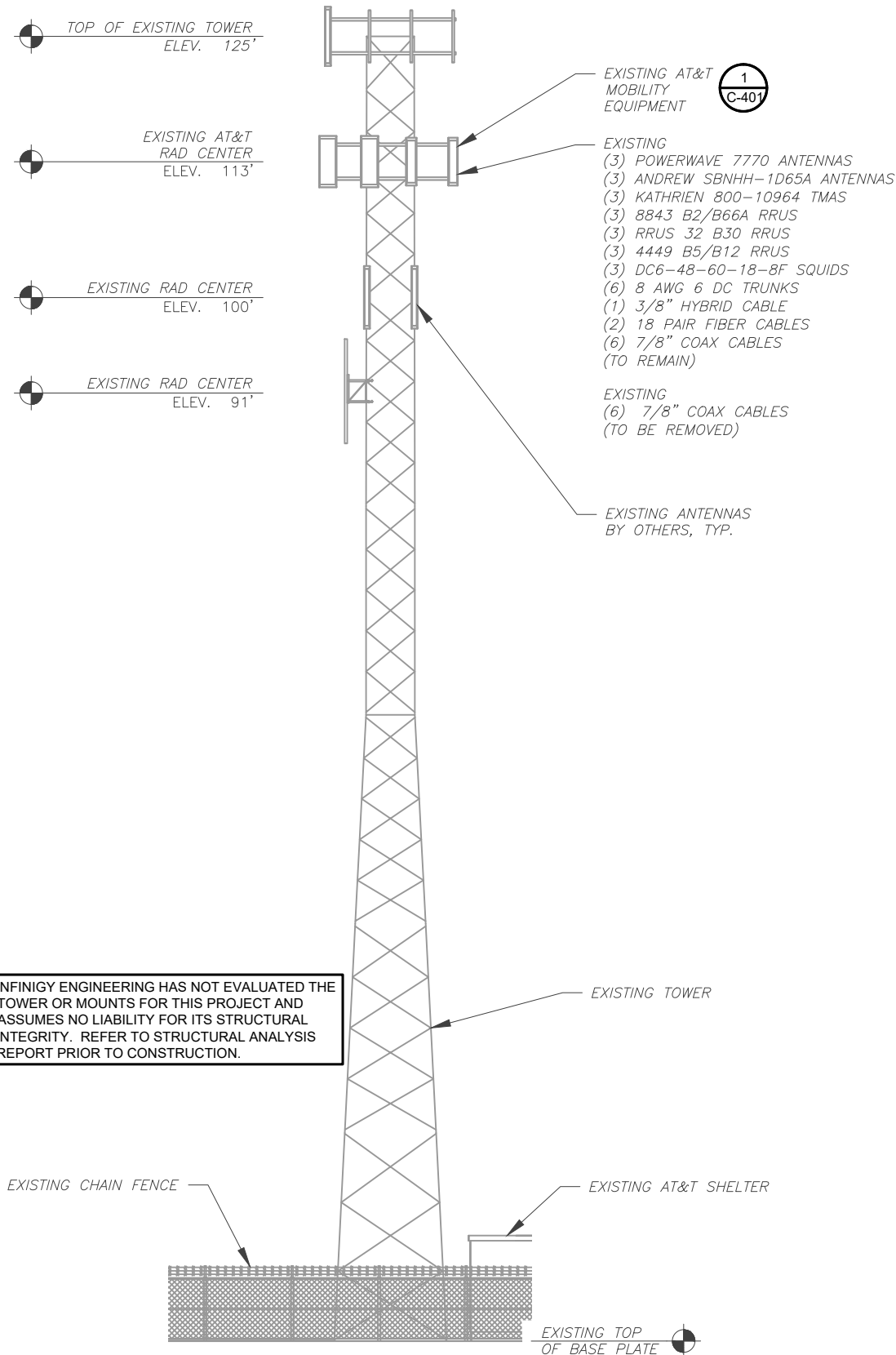


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EXISTING CONFIGURATION IS BASED ON RFDS.
CONTRACTOR TO VERIFY EXISTING CONDITIONS.

PER MOUNT ANALYSIS COMPLETED BY ATC,
DATED 02/04/21, THE EXISTING MOUNT CAN
ADEQUATELY SUPPORT THE PROPOSED LOADING

PER STRUCTURAL ANALYSIS COMPLETED BY ATC,
DATED 01/27/21, THE EXISTING TOWER CAN
ADEQUATELY SUPPORT THE PROPOSED LOADING



INFINIGY ENGINEERING HAS NOT EVALUATED THE
TOWER OR MOUNTS FOR THIS PROJECT AND
ASSUMES NO LIABILITY FOR ITS STRUCTURAL
INTEGRITY. REFER TO STRUCTURAL ANALYSIS
REPORT PRIOR TO CONSTRUCTION.

- TOWER NOTE:**
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE PROJECT MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS.
 - WHERE APPLICABLE, ALL NEW ANTENNAS, EQUIPMENT, MOUNTS, CABLING, ETC. SHALL BE PAINTED/SOCKED TO MATCH EXISTING EQUIPMENT IN ACCORDANCE WITH FAA, JURISDICTION, AND/OR OTHER LOCAL REQUIREMENTS.
 - ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. WHERE POSSIBLE UTILIZE EXISTING CABLE SUPPORT STRUCTURES AS PROVIDED FOR CARRIER TO ADEQUATELY SECURE CABLES, USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER. OTHERWISE, ATTACH CABLES TO HORIZONTAL OR DIAGONAL TOWER MEMBERS USING PROPOSED STAINLESS STEEL ADAPTERS (DO NOT ATTACH TO TOWER LEG).
 - TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.)

1 EXISTING TOWER ELEVATION
SCALE: N.T.S.

2 PROPOSED TOWER ELEVATION
SCALE: N.T.S.



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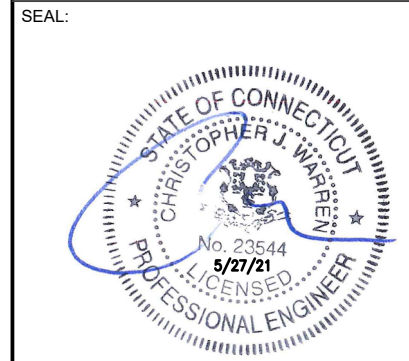
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ATC SITE NUMBER:
302536

ATC SITE NAME:
CHERRY HILL-BRANFORD

AT&T MOBILITY SITE NAME:
BRANFORD WEST

SITE ADDRESS:
4 BEAVER ROAD
BRANFORD, CT 06405



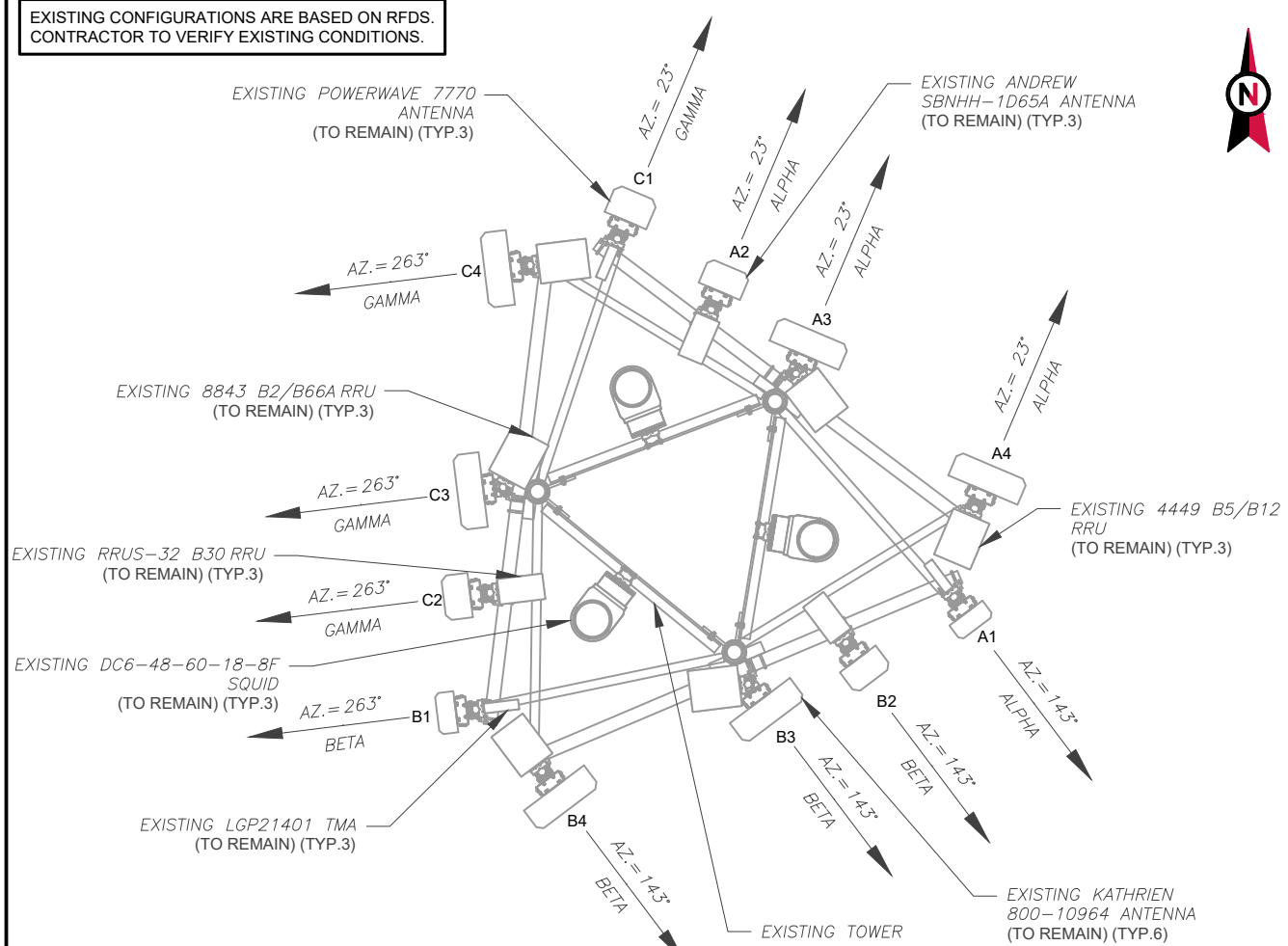
DATE DRAWN:	02/12/21
ATC JOB NO:	13334427_G3
CUSTOMER ID:	BRANFORD WEST
CUSTOMER #:	10035093

TOWER ELEVATION

SHEET NUMBER:	REVISION:
C-201	0

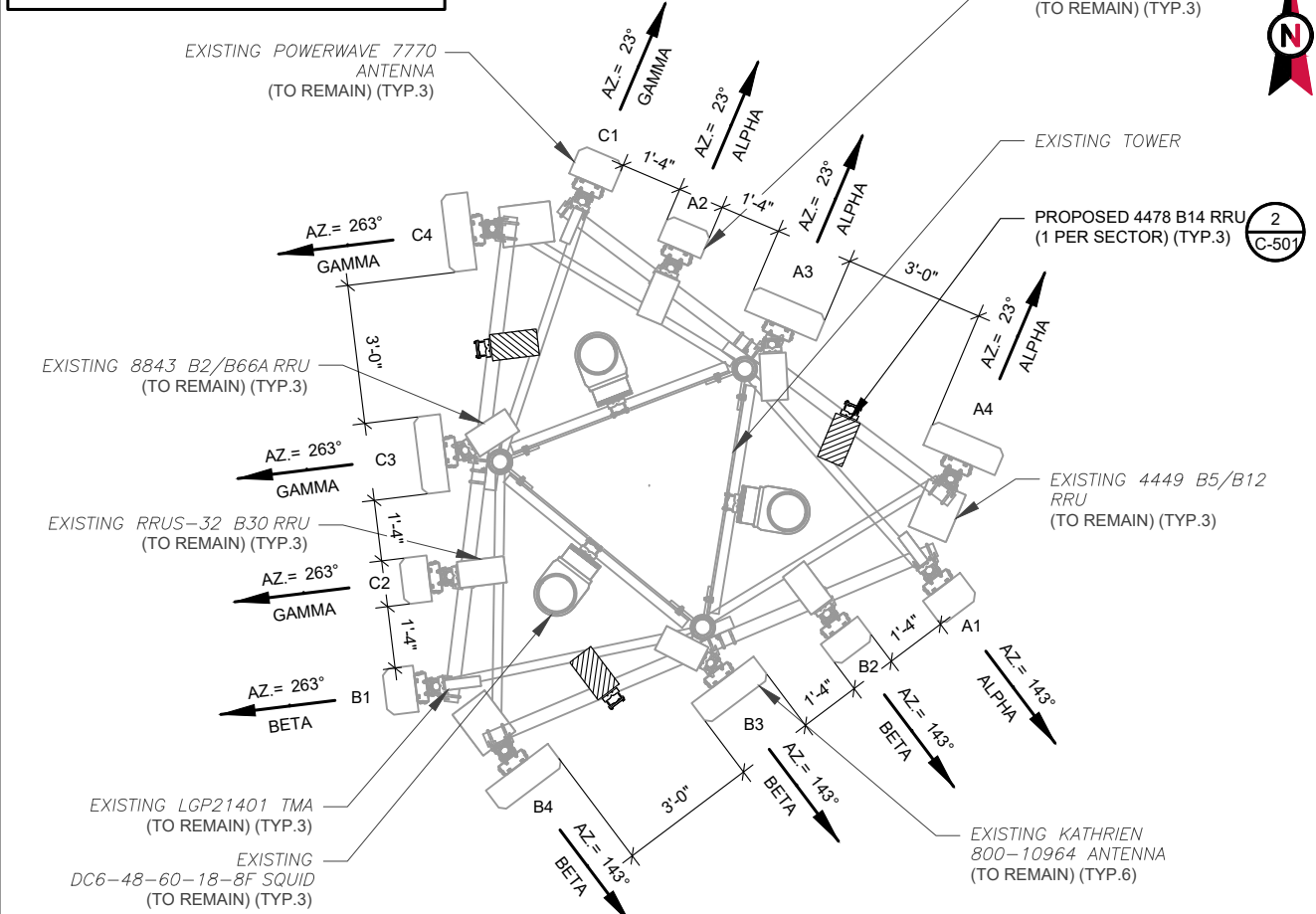
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EXISTING CONFIGURATIONS ARE BASED ON RFDS. CONTRACTOR TO VERIFY EXISTING CONDITIONS.



1 CURRENT ANTENNA PLAN
SCALE: N.T.S.

PER MOUNT ANALYSIS COMPLETED BY ATC, DATED 02/04/21, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING



2 FINAL ANTENNA PLAN
SCALE: N.T.S.

PROPOSED RRUs MUST BE INSTALLED A MINIMUM OF 12" AWAY FROM ALL ANTENNAS

PER STRUCTURAL ANALYSIS COMPLETED BY ATC, DATED 01/27/21, THE EXISTING TOWER CAN ADEQUATELY SUPPORT THE PROPOSED LOADING

EXISTING ANTENNA SCHEDULE								
LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	113'	143°	A1	POWERWAVE 7770	UMTS 850	RMN	LGP21401 TMA	RMN
			A2	ANDREW SBNHH-1D65A	LTE WCS	RMN	RRUS-32 B30	RMN
		23°	A3	KATHRIEN 800-10964	LTE 1900	RMN	8843 B2/B66A	RMN
			A4	KATHRIEN 800-10964	LTE 700/ LTE 850 LTE AWS/5G 850	RMN	4449 B5/B12	RMN
BETA	113'	263°	B1	POWERWAVE 7770	UMTS 850	RMN	LGP21401 TMA	RMN
			B2	ANDREW SBNHH-1D65A	LTE WCS	RMN	RRUS-32 B30	RMN
		143°	B3	KATHRIEN 800-10964	LTE 1900	RMN	8843 B2/B66A	RMN
			B4	KATHRIEN 800-10964	LTE 700/ LTE 850 LTE AWS/5G 850	RMN	4449 B5/B12	RMN
GAMMA	113'	23°	C1	POWERWAVE 7770	UMTS 850	RMN	LGP21401 TMA	RMN
			C2	ANDREW SBNHH-1D65A	LTE WCS	RMN	RRUS-32 B30	RMN
		263°	C3	KATHRIEN 800-10964	LTE 1900	RMN	8843 B2/B66A	RMN
			C4	KATHRIEN 800-10964	LTE 700/ LTE 850 LTE AWS/5G 850	RMN	4449 B5/B12	RMN

NOTES

- CONFIRM WITH AT&T MOBILITY REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.
- CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.
- THE ANTENNA ORIENTATION PLAN IS A SCHEMATIC. ATC DID NOT CONFIRM EXISTING SITE CONDITIONS INCLUDING, BUT NOT LIMITED TO, ANTENNA AZIMUTHS, MOUNT CONFIGURATIONS AND TOWER ORIENTATION. SCALES SHOWN ARE FOR REFERENCE ONLY AND EXISTING DIMENSIONS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO INSTALLATION AND NOTIFY ATC OF ANY DISCREPANCIES.
- CONTRACTOR TO ENSURE PROPER SEPARATION IN ACCORDANCE WITH AT&T'S FIRSTNET REQUIREMENTS (SEE SHEET R-602)

FINAL ANTENNA SCHEDULE								
LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	113'	143°	A1	POWERWAVE 7770	UMTS 850	RMN	LGP21401 TMA	RMN
			A2	ANDREW SBNHH-1D65A	LTE WCS	RMN	RRUS-32 B30	RMN
		23°	A3	KATHRIEN 800-10964	LTE 700/LTE 1900	RMN	4478 B14 8843 B2/B66A	ADD RMN
			A4	KATHRIEN 800-10964	LTE 700/ LTE 850 LTE AWS/5G 850	RMN	4449 B5/B12	RMN
BETA	113'	236°	B1	POWERWAVE 7770	UMTS 850	RMN	LGP21401 TMA	RMN
			B2	ANDREW SBNHH-1D65A	LTE WCS	RMN	RRUS-32 B30	RMN
		143°	B3	KATHRIEN 800-10964	LTE 700/LTE 1900	RMN	4478 B14 8843 B2/B66A	ADD RMN
			B4	KATHRIEN 800-10964	LTE 700/ LTE 850 LTE AWS/5G 850	RMN	4449 B5/B12	RMN
GAMMA	113'	23°	C1	POWERWAVE 7770	UMTS 850	RMN	LGP21401 TMA	RMN
			C2	ANDREW SBNHH-1D65A	LTE WCS	RMN	RRUS-32 B30	RMN
		263°	C3	KATHRIEN 800-10964	LTE 700/LTE 1900	RMN	4478 B14 8843 B2/B66A	ADD RMN
			C4	KATHRIEN 800-10964	LTE 700/ LTE 850 LTE AWS/5G 850	RMN	4449 B5/B12	RMN

EXISTING FIBER DISTRIBUTION/SQUID		EXISTING CABLING SUMMARY			
MODEL NUMBER	STATUS	COAX	DC	FIBER	STATUS
(3) DC6-48-60-18-8F	RMN	(6) 7/8"	(6) 8 AWG 6	(2) 18 PAIR	RMN
-	-	-	(2) 8 AWG 7	-	RMN
-	-	-	(1) 3/8"	-	RMN
-	-	(6) 7/8"	-	-	RMV

STATUS ABBREVIATIONS
 RMV: TO BE REMOVED
 RMN: TO REMAIN
 REL: TO BE RELOCATED
 ADD: TO BE ADDED

CABLE LENGTHS FOR JUMPERS
 JUNCTION BOX TO RRU: 15'
 RRU TO ANTENNA: 10'

3 EQUIPMENT SCHEDULES

FINAL FIBER DISTRIBUTION/SQUID		FINAL CABLING SUMMARY			
MODEL NUMBER	STATUS	COAX	DC	FIBER	STATUS
(3) DC6-48-60-18-8F	RMN	(6) 7/8"	(6) 8 AWG 6	(2) 18 PAIR	RMN
-	-	-	(2) 8 AWG 7	-	RMN
-	-	-	(1) 3/8"	-	RMN



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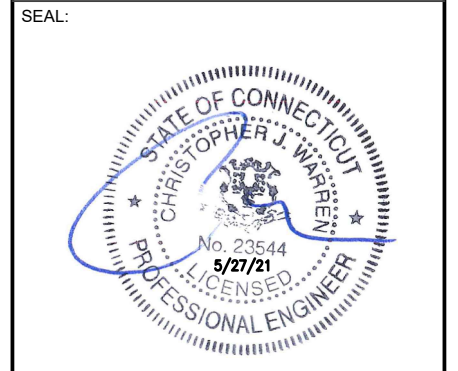
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DATE DRAWN: 02/12/21
 ATC JOB NO: 13334427_G3
 CUSTOMER ID: BRANFORD WEST
 CUSTOMER #: 10035093

RF SCHEDULE AND ANTENNA INSTALLATION

SHEET NUMBER:
C-401

REVISION:
0

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REV.	DESCRIPTION	BY	DATE
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B	PRELIM	SP	02/18/21
C	PRELIM	SP	05/18/21
0	FOR CONSTRUCTION	AUD	05/27/21

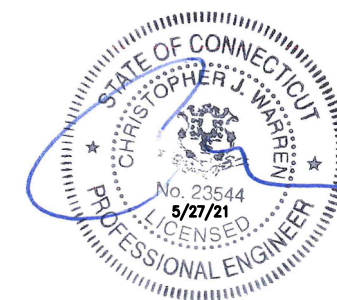
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302536

ATC SITE NAME:
CHERRY HILL-BRANFORD

AT&T MOBILITY SITE NAME:
BRANFORD WEST

SITE ADDRESS:
4 BEAVER ROAD
BRANFORD, CT 06405

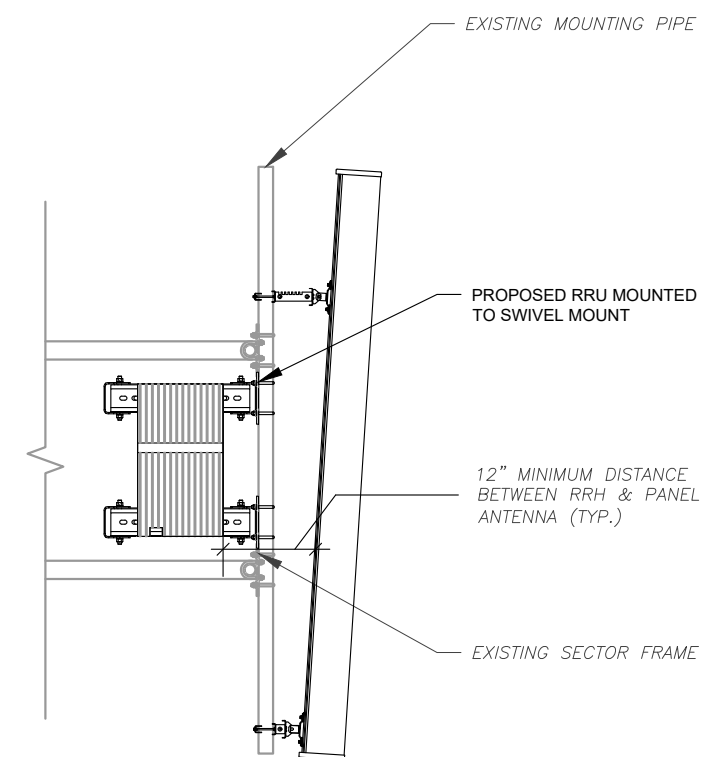
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DATE DRAWN:	02/12/21
ATC JOB NO:	13334427_G3
CUSTOMER ID:	BRANFORD WEST
CUSTOMER #:	10035093

**CONSTRUCTION
DETAILS**

SHEET NUMBER:	REVISION:
C-501	0



1 RRU DETAIL
SCALE: N.T.S.

REV.	DESCRIPTION	BY	DATE
A	PRELIM	MN	02/12/21
B	PRELIM	SP	02/18/21
C	PRELIM	SP	05/18/21
D	FOR CONSTRUCTION	AUD	05/27/21

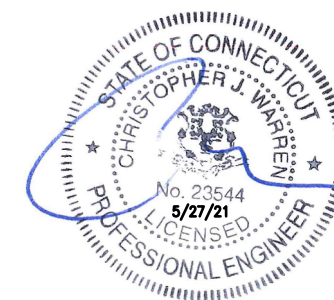
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BRANFORD WEST

SITE ADDRESS:
4 BEAVER ROAD
BRANFORD, CT 06405

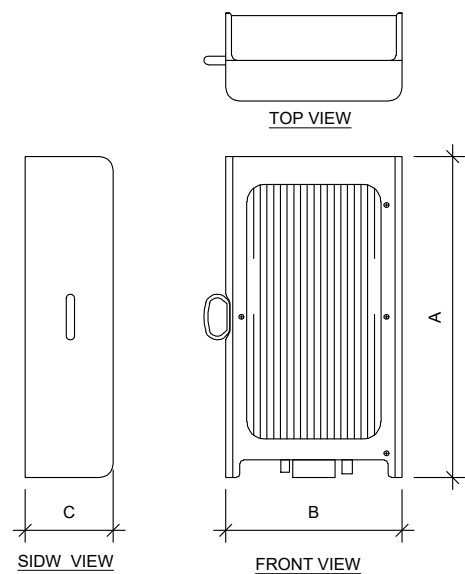
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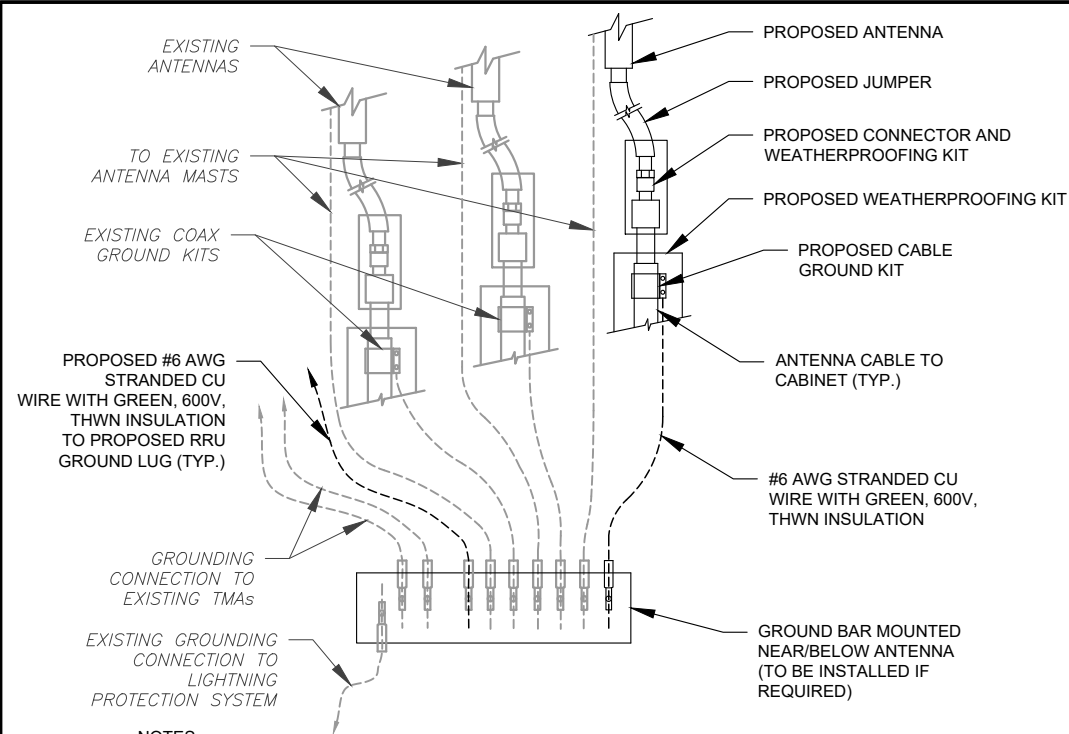
DATE DRAWN:	02/12/21
ATC JOB NO:	13334427_G3
CUSTOMER ID:	BRANFORD WEST
CUSTOMER #:	10035093

EQUIPMENT SPECIFICATIONS

SHEET NUMBER:	REVISION:
C-502	0



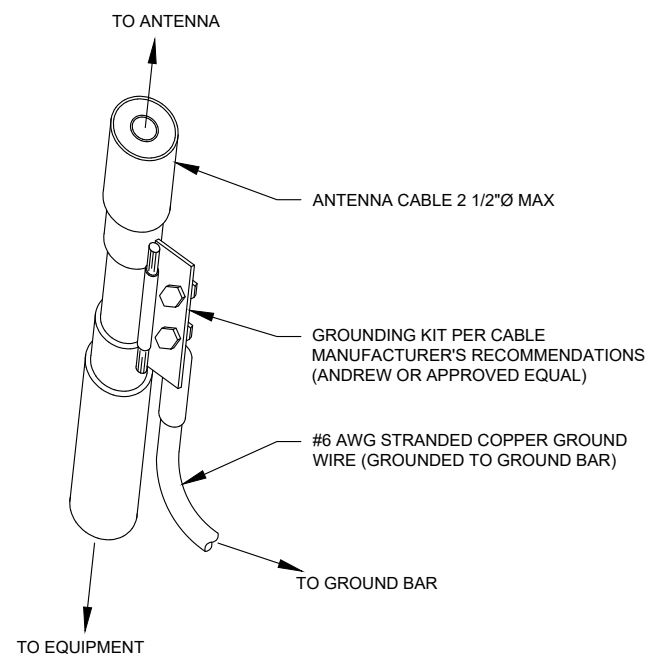
RRU SPECIFICATIONS				
RRU MODEL	A	B	C	WEIGHT (LBS)
4478 B14	18.1"	13.4"	8.3"	59.4



NOTES:

1. THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE CONSTRUCTION MANAGER OF ANY CONFLICTS.
2. SITE GROUNDING SHALL COMPLY WITH AT&T MOBILITY GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH AT&T MOBILITY GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT THEY SHALL GOVERN.

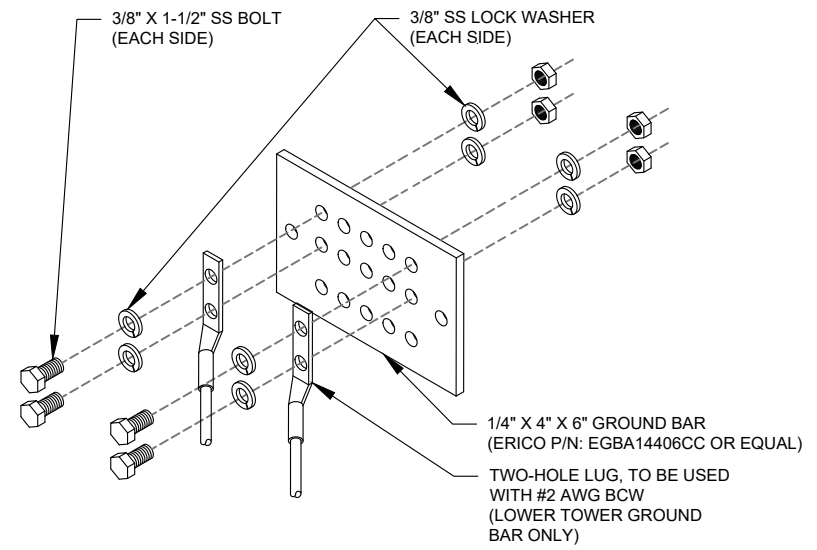
1 TYPICAL ANTENNA GROUNDING DIAGRAM
SCALE: N.T.S.



GROUND KIT NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. CONTRACTOR SHALL PROVIDE WEATHERPROOFING KIT (ANDREW PART NUMBER 221213) AND INSTALL/TAPE PER MANUFACTURER'S SPECIFICATIONS.

2 CABLE GROUND KIT CONNECTION DETAIL
SCALE: N.T.S.



GROUND BAR NOTES:

1. GROUND BAR KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
2. GROUND BAR TO BE BONDED DIRECTLY TO TOWER.

3 TOWER GROUND BAR DETAIL
SCALE: N.T.S.

ELECTRICAL NOTES:

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE T-MOBILE REPRESENTATIVE AND LOCAL UTILITY COMPANY FOR THE INSTALLATION OF CONDUITS, CONDUCTORS, BREAKERS, DISCONNECTS, OR ANY OTHER EQUIPMENT REQUIRED FOR ELECTRICAL SERVICE. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE STATE AND NATIONAL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THIS PROJECT.
2. ATC HAS NOT VERIFIED ANY EXISTING T-MOBILE GROUND EQUIPMENT OR ELECTRICAL LOADING. PROPOSED WORK BASED ON INSTALLATION CONFIGURATION PROVIDED BY T-MOBILE. CONTRACTOR TO VERIFY EXISTING T-MOBILE PANEL HAS SUFFICIENT SPACE FOR PROPOSED BREAKER. PROPOSED CABLE AND CONDUIT SHALL BE MINIMUM SIZE PER BELOW:

OCPD SIZE	WIRE SIZE	GROUND SIZE	CONDUIT SIZE
80A/2P	2#3 AWG	#8 AWG	1-1/4"
100/2P	2#2 AWG	#8 AWG	1-1/4"
125A/2P	2#1 AWG	#8 AWG	1-1/2"
150A/2P	2#1/0 AWG	#8 AWG	1-1/2"



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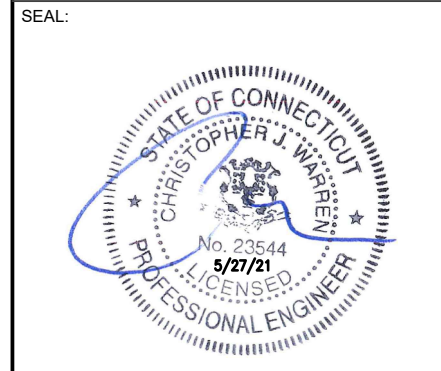
REV.	DESCRIPTION	BY	DATE
A	PRELIM	MN	02/12/21
B	PRELIM	SP	02/18/21
C	PRELIM	SP	05/18/21
D	FOR CONSTRUCTION	AUD	05/27/21

ATC SITE NUMBER:
302536

ATC SITE NAME:
CHERRY HILL-BRANFORD

AT&T MOBILITY SITE NAME:
BRANFORD WEST

SITE ADDRESS:
4 BEAVER ROAD
BRANFORD, CT 06405

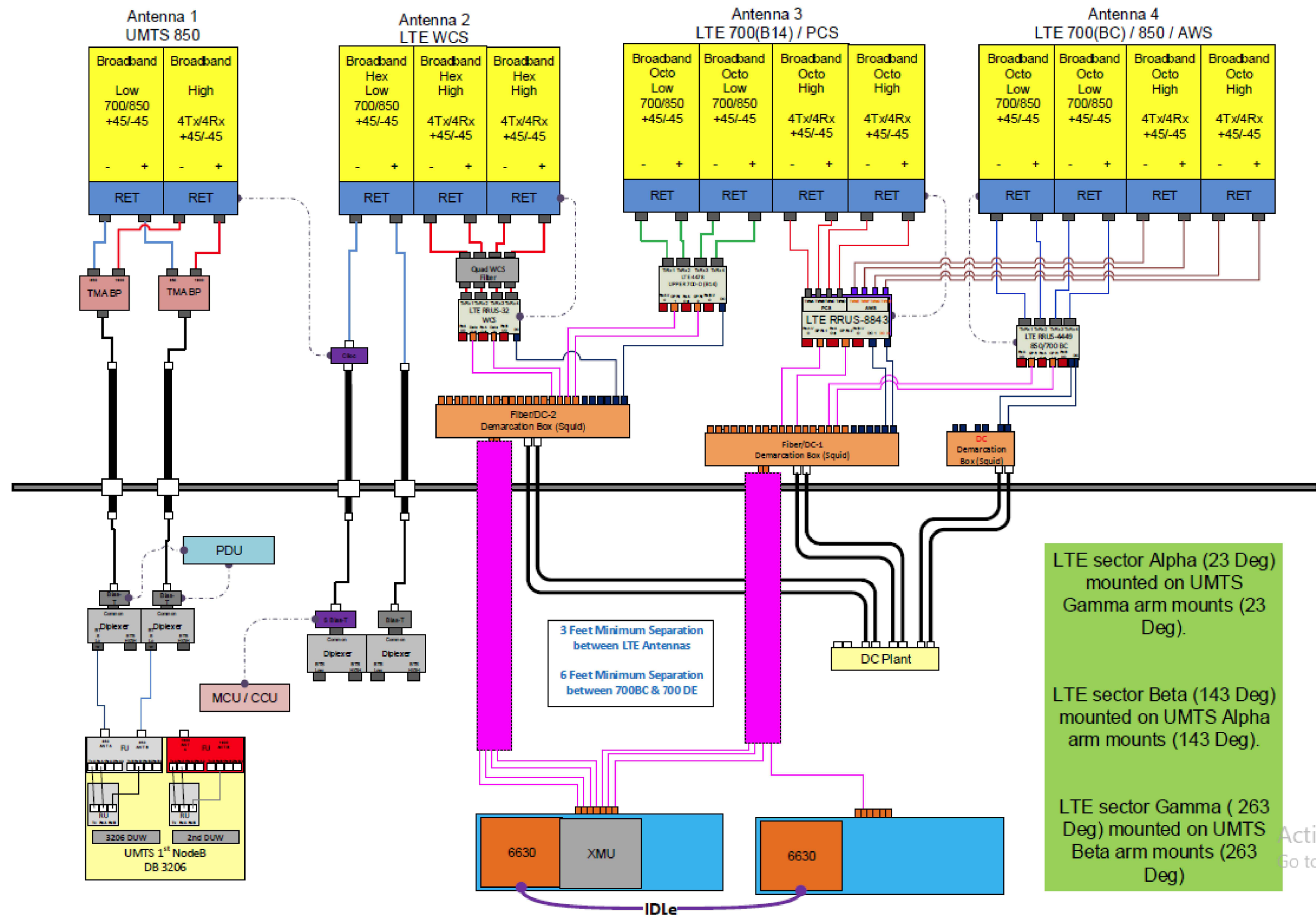


DATE DRAWN:	02/12/21
ATC JOB NO:	13334427_G3
CUSTOMER ID:	BRANFORD WEST
CUSTOMER #:	10035093

GROUNDING DETAILS

SHEET NUMBER: E-501	REVISION: 0
-------------------------------	-----------------------

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1 MOUNT ANALYSIS

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT. PLEASE REFERENCE THE MOUNT ANALYSIS REPORT FOR COMPLETE MOUNT ANALYSIS CALCULATIONS AND DETAILS. SUPPLEMENTAL PAGES INCLUDED IN THE CONSTRUCTION DRAWINGS ARE FOR REFERENCE ONLY. GENERAL CONTRACTOR IS TO VERIFY THEY HAVE THE MOST RECENT MOUNT ANALYSIS PRIOR TO CONSTRUCTION.



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A	PRELIM	MN	02/12/21
B	PRELIM	SP	02/18/21
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D	FOR CONSTRUCTION	AUD	05/27/21

ATC SITE NUMBER:
 302536
 ATC SITE NAME:
 CHERRY HILL-BRANFORD
 AT&T MOBILITY SITE NAME:
 BRANFORD WEST
 SITE ADDRESS:
 4 BEAVER ROAD
 BRANFORD, CT 06405

FOR REFERENCE ONLY

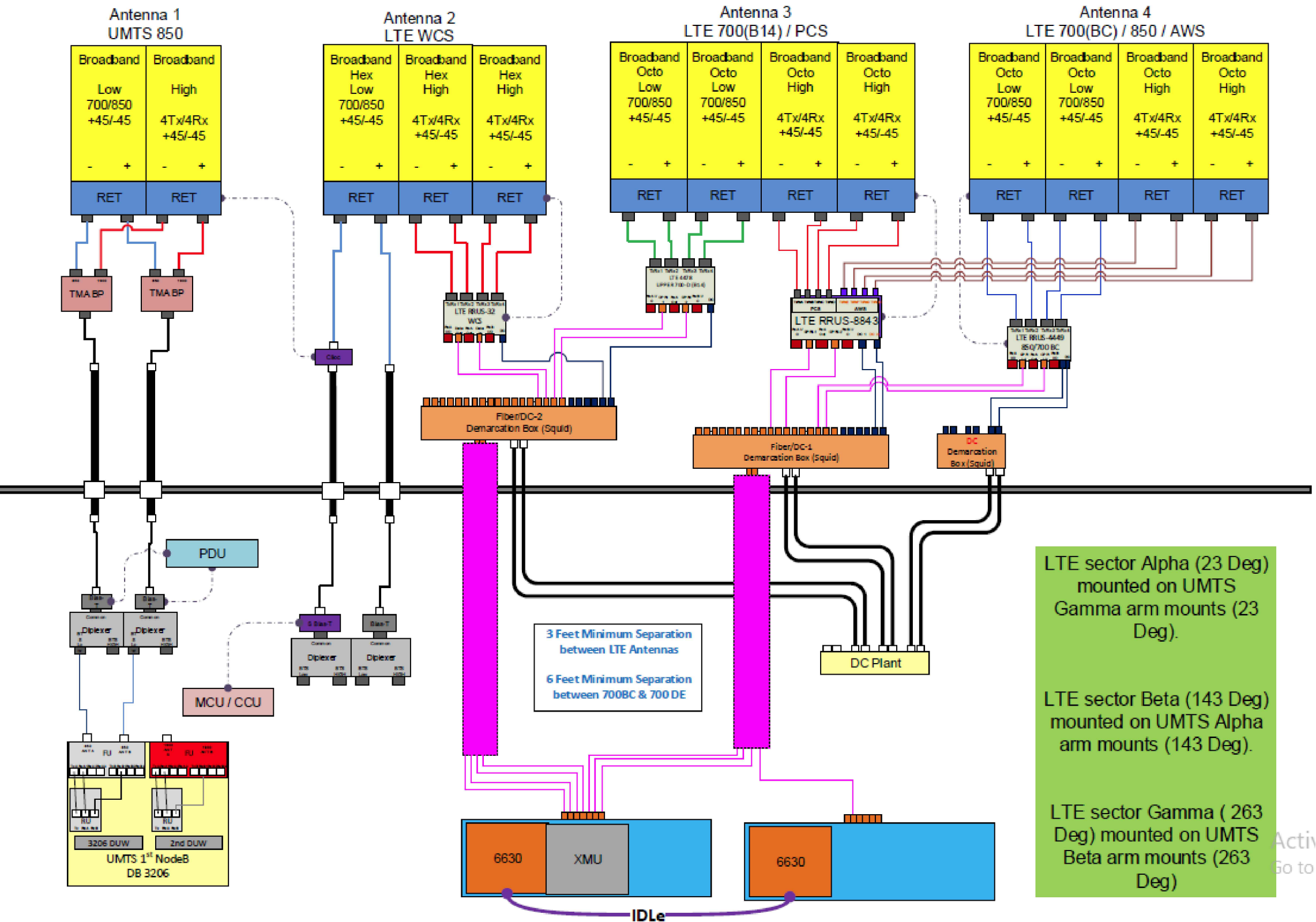


DATE DRAWN:	02/12/21
ATC JOB NO:	13334427_G3
CUSTOMER ID:	BRANFORD WEST
CUSTOMER #:	10035093

SUPPLEMENTAL

SHEET NUMBER: R-601	REVISION: C
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1 MOUNT ANALYSIS

LTE sector Alpha (23 Deg) mounted on UMTS Gamma arm mounts (23 Deg).
 LTE sector Beta (143 Deg) mounted on UMTS Alpha arm mounts (143 Deg).
 LTE sector Gamma (263 Deg) mounted on UMTS Beta arm mounts (263 Deg).

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△	PRELIM	SP	05/18/21
△	FOR CONSTRUCTION	AUD	05/27/21

ATC SITE NUMBER:
 302536
 ATC SITE NAME:
 CHERRY HILL-BRANFORD
 AT&T MOBILITY SITE NAME:
 BRANFORD WEST
 SITE ADDRESS:
 4 BEAVER ROAD
 BRANFORD, CT 06405

FOR REFERENCE ONLY



DATE DRAWN:	02/12/21
ATC JOB NO:	13334427_G3
CUSTOMER ID:	BRANFORD WEST
CUSTOMER #:	10035093

SUPPLEMENTAL

SHEET NUMBER: R-602	REVISION: C
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Eng. Number 13334427_C8_01
February 4, 2021
Page 1

Antenna Mount Analysis Report

ATC Site Name : Cherry Hill-branford, CT
 ATC Site Number : 302536
 Engineering Number : 13334427_C8_01
 Mount Elevation : 112 ft
 Carrier : AT&T Mobility
 Carrier Site Name : MRCTB049213
 Carrier Site Number : CTL02175
 Site Location : 4 Beaver Road
 Branford, CT 06405-3403
 41.28015, -72.84173333
 County : New Haven
 Date : February 4, 2021
 Max Usage : 85%
 Result : Pass

Prepared By:
Kyle MacPetrie
Structural Engineer I

Reviewed By:



Authorized by "EOR"
04 Feb 2021 10:03:21 cosign

COA: PEC.0001553

A.T. Engineering Service, PLLC - 3500 Regency Parkway, Suite 100 - Cary, NC 27518 - 919.468.0112 Office - 919.466.5414 Fax - www.americantower.com

Introduction

The purpose of this report is to summarize results of the antenna mount analysis performed for AT&T Mobility at 112 ft.

Supporting Documents

Radio Frequency Data Sheet	RFDS ID #CTL02175, dated September 29, 2020
Reference Photos	Site photos from 2018
Other Document	Infinigy Job #499-006, dated January 21, 2019

Analysis

This antenna mount was analyzed using American Tower Corporation's Mount Analysis Program and RISA-3D

Basic Wind Speed:	121 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 1" radial ice concurrent
Codes:	ANSI/TIA-222-H
Exposure Category:	B
Risk Category:	II
Topographic Factor Procedure:	Method 2
Feature:	Flat
Crest Height (H):	0 ft
Crest Length (L):	0 ft
Spectral Response:	Ss = 0.201, S1 = 0.053
Site Class:	D - Stiff Soil
Live Loads:	Lm = 500 lbs, Lv = 250 lbs

Conclusion

Based on the analysis results, the antenna mount meets the requirements per the applicable codes listed above. The mount can support the equipment as described in this report.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

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△	PRELIM	SP	02/18/21
△	PRELIM	SP	05/18/21
△	FOR CONSTRUCTION	AUD	05/27/21
△			

ATC SITE NUMBER:
302536
 ATC SITE NAME:
CHERRY HILL-BRANFORD
 AT&T MOBILITY SITE NAME:
BRANFORD WEST
 SITE ADDRESS:
4 BEAVER ROAD
BRANFORD, CT 06405

**FOR
REFERENCE
ONLY**



DATE DRAWN:	02/12/21
ATC JOB NO:	13334427_G3
CUSTOMER ID:	BRANFORD WEST
CUSTOMER #:	10035093

SUPPLEMENTAL

SHEET NUMBER:
R-603
 REVISION:
C

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Eng. Number 13334427_C8_01
February 4, 2021
Page 2

Application Loading

Mount Centerline (ft)	Antenna Centerline (ft)	Qty	Antenna Model
112.0	113.0	6	Kathrein Scala 80010964
		3	Powerwave Allgon 7770
		3	Andrew SBNHH-1D65A (33.5 lbs)
		6	Powerwave Allgon LGP21401
		1	Raycap DC6-48-60-18-8F ("Squid")
		1	Raycap DC6-48-60-18-8F
		1	Raycap DC6-48-60-0-8F
		3	Ericsson RRUS 32 (50.8 lbs)
		3	Ericsson RRUS 4478 B14
		3	Ericsson RRUS 4449 B5, B12
		3	Ericsson RRUS 8843 B2, B66A
		1	Commscope WCS-IMFQ-AMT

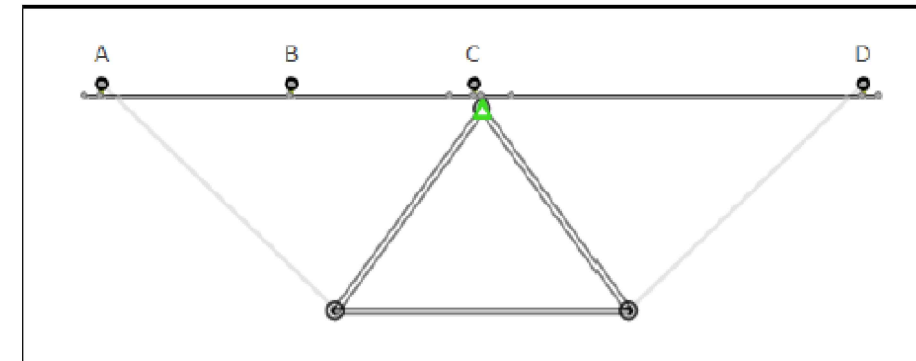
Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Horizontals	85%	Pass
Diagonals	10%	Pass
Tie-Backs	3%	Pass
Mount Pipes	33%	Pass



Eng. Number 13334427_C8_01
February 4, 2021
Page 3

Mount Layout



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ALBANY, NY 12205

REV.	DESCRIPTION	BY	DATE
A	PRELIM	MN	02/12/21
B	PRELIM	SP	02/18/21
C	PRELIM	SP	05/18/21
D	FOR CONSTRUCTION	AUD	05/27/21

ATC SITE NUMBER:
302536

ATC SITE NAME:
CHERRY HILL-BRANFORD

AT&T MOBILITY SITE NAME:
BRANFORD WEST

SITE ADDRESS:
4 BEAVER ROAD
BRANFORD, CT 06405

**FOR
REFERENCE
ONLY**



DATE DRAWN:	02/12/21
ATC JOB NO:	13334427_G3
CUSTOMER ID:	BRANFORD WEST
CUSTOMER #:	10035093

SUPPLEMENTAL

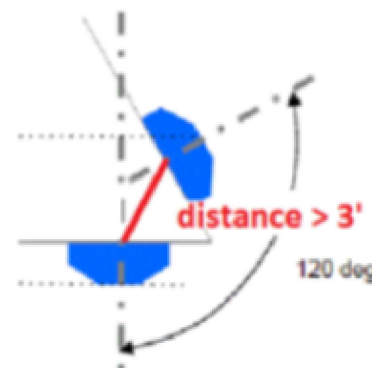
SHEET NUMBER: R-604	REVISION: C
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1 MOUNT ANALYSIS

NOTE: THIS SHEET CREATED BY OTHERS AND PROVIDED BY REQUEST OF CUSTOMER WITHOUT EDIT.

RF REQUIREMENTS FOR 700 B14 FIRSTNET, 700 B12, 700D B29 ANTENNA SEPARATION

- Horizontal separation (side to side of antenna): $\geq 3'$
- Vertical separation (between the tips of the antennas): $> 3'$
- Inter-sector separation: $> 3'$ between the center of the antenna backplanes.



- Please note additional horizontal separation may be required if B14 antennas azimuth are different from others or antennas are severely angled with respect to the mount.
- Typical 3' horizontal separation can tolerate skew angle up to 6° .



NOTE: THIS SHEET CREATED BY OTHERS AND PROVIDED BY REQUEST OF CUSTOMER WITHOUT EDIT.



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REV.	DESCRIPTION	BY	DATE
A	PRELIM	MN	02/12/21
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D	FOR CONSTRUCTION	AUD	05/27/21

ATC SITE NUMBER:
302536

ATC SITE NAME:
CHERRY HILL-BRANFORD

AT&T MOBILITY SITE NAME:
BRANFORD WEST

SITE ADDRESS:
4 BEAVER ROAD
BRANFORD, CT 06405

FOR
REFERENCE
ONLY



DATE DRAWN:	02/12/21
ATC JOB NO:	13334427_G3
CUSTOMER ID:	BRANFORD WEST
CUSTOMER #:	10035093

SUPPLEMENTAL

SHEET NUMBER:
R-605

REVISION:
C

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EXHIBIT 2



AMERICAN TOWER®
CORPORATION

Antenna Mount Analysis Report

ATC Site Name : Cherry Hill-branford, CT
ATC Site Number : 302536
Engineering Number : 13334427_C8_01
Mount Elevation : 112 ft
Carrier : AT&T Mobility
Carrier Site Name : MRCTB049213
Carrier Site Number : CTL02175
Site Location : 4 Beaver Road
Branford, CT 06405-3403
41.28015, -72.84173333
County : New Haven
Date : February 4, 2021
Max Usage : 85%
Result : Pass

Prepared By:
Kyle MacPetrie
Structural Engineer I

Reviewed By:



COA: PEC.0001553



Table of Contents

Introduction 1

Supporting Documents 1

Analysis 1

Conclusion 1

Antenna Loading..... 2

Structure Usages..... 2

Mount Layout 3

Equipment Layout 4

Standard Conditions..... 5

Calculations Attached



Introduction

The purpose of this report is to summarize results of the antenna mount analysis performed for AT&T Mobility at 112 ft.

Supporting Documents

Radio Frequency Data Sheet	RFDS ID #CTL02175, dated September 29, 2020
Reference Photos	Site photos from 2018
Other Document	Infinigy Job #499-006, dated January 21, 2019

Analysis

This antenna mount was analyzed using American Tower Corporation's Mount Analysis Program and RISA-3D

Basic Wind Speed:	121 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 1" radial ice concurrent
Codes:	ANSI/TIA-222-H
Exposure Category:	B
Risk Category:	II
Topographic Factor Procedure:	Method 2
Feature:	Flat
Crest Height (H):	0 ft
Crest Length (L):	0 ft
Spectral Response:	Ss = 0.201, S1 = 0.053
Site Class:	D - Stiff Soil
Live Loads:	Lm = 500 lbs, Lv = 250 lbs

Conclusion

Based on the analysis results, the antenna mount meets the requirements per the applicable codes listed above. The mount can support the equipment as described in this report.

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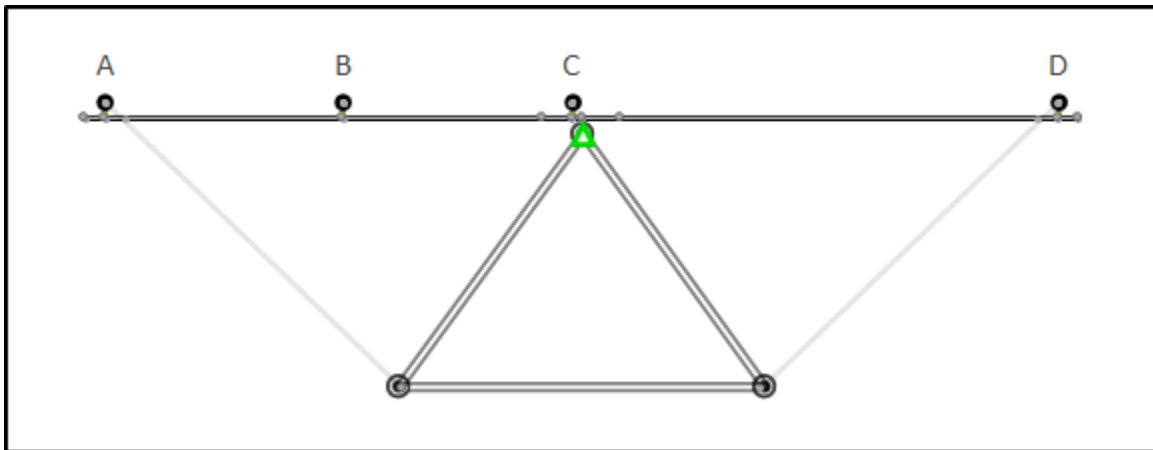
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112.0	113.0	6	Kathrein Scala 80010964
		3	Powerwave Allgon 7770
		3	Andrew SBNHH-1D65A (33.5 lbs)
		6	Powerwave Allgon LGP21401
		1	Raycap DC6-48-60-18-8F ("Squid")
		1	Raycap DC6-48-60-18-8F
		1	Raycap DC6-48-60-0-8F
		3	Ericsson RRUS 32 (50.8 lbs)
		3	Ericsson RRUS 4478 B14
		3	Ericsson RRUS 4449 B5, B12
		3	Ericsson RRUS 8843 B2, B66A
		1	Commscope WCS-IMFQ-AMT

Structure Usages

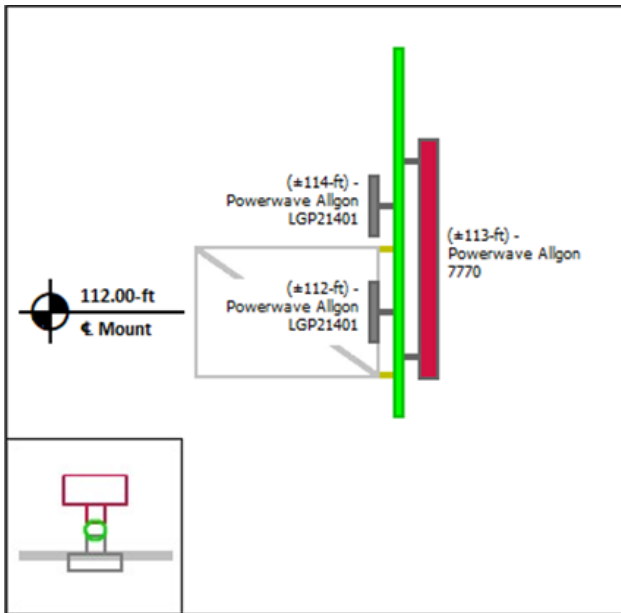
Structural Component	Controlling Usage	Pass/Fail
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Diagonals	10%	Pass
Tie-Backs	3%	Pass
Mount Pipes	33%	Pass

Mount Layout

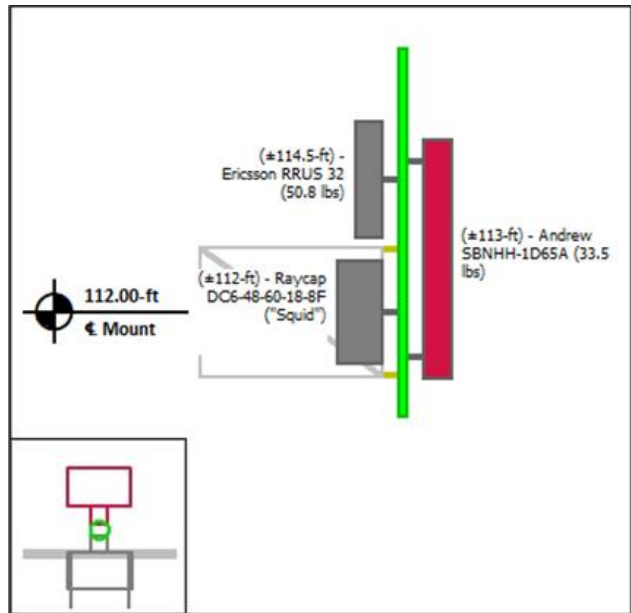


Equipment Layout

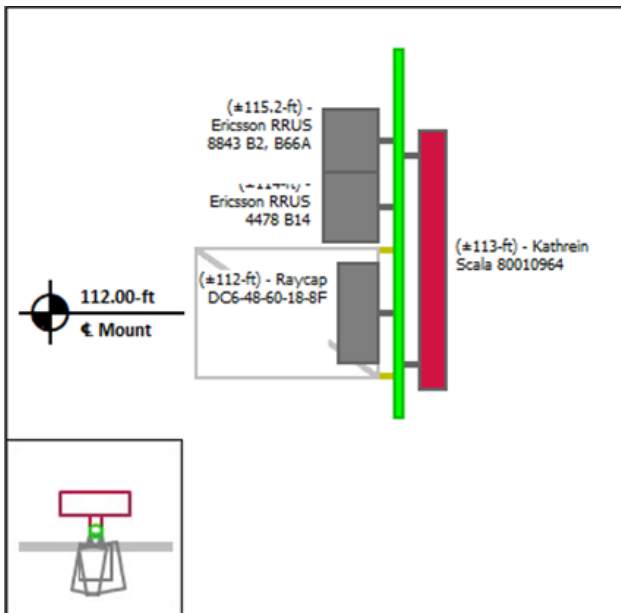
Mount Pipe A



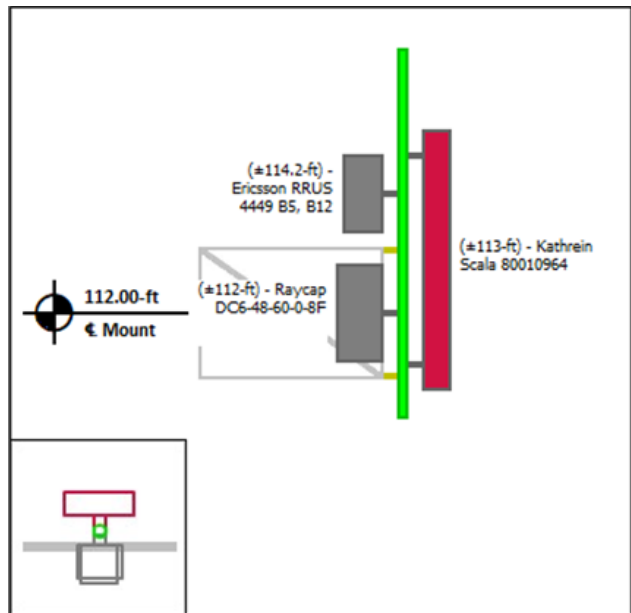
Mount Pipe B



Mount Pipe C



Mount Pipe D





Standard Conditions

All engineering services performed by A.T. Engineering Service, PLLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete.

American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

All connections are to be verified for condition and tightness by the installation contractor preceding any changes to the appurtenance mounting system and/or equipment attached to it.

Unless explicitly agreed by both the client and A.T. Engineering Service, PLLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Service, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.



Site Number: 302536
Project Number: 13334427_C8_01
Carrier: AT&T Mobility
Mount Elevation: 112 ft
Date: 2/4/2021

Mount Analysis Force Calculations

Wind & Ice Load Calculations			
Velocity Pressure Coefficient	K_z	1.02	
Topographic Factor	K_{zt}	1.00	
Rooftop Wind Speed-up Factor	K_s	1.00	
Shielding Factor	K_a	0.90	
Ground Elevation Factor	K_e	1.00	
Wind Direction Probability Factor	K_d	0.95	
Basic Wind Speed	V	121	mph
Velocity Pressure	q_z	36.2	psf
Height Escalation Factor	K_{iz}	1.13	
Thickness of Radial Glaze Ice	T_{iz}	1.13	in

Seismic Load Calculations			
Short Period DSRAP	S_{Ds}	0.214	
1 Second DSRAP	S_{D1}	0.085	
Importance Factor	I	1.0	
Response Modification Coefficient	R	2.0	
Seismic Response Coefficient	C_s	0.107	
Amplification Factor	A	1.0	
Total Weight	W	887.6	lbs
Total Shear Force	V_s	95.1	lbs
Horizontal Seismic Load	E_h	95.1	lbs
Vertical Seismic Load	E_v	38.1	lbs

Antenna Calculations (Elevations per Application/RFDS)*								
Equipment	Height	Width	Depth	Weight	EPA_N	EPA_T	EPA_{Ni}	EPA_{Ti}
Model #	in	in	in	lbs	sqft	sqft	sqft	sqft
Kathrein Scala 80010964	59.0	20.0	6.9	81.6	10.00	1.78	11.55	2.46
Powerwave Allgon 7770	55.0	11.0	5.0	35.0	5.51	1.45	6.91	2.20
Andrew SBNHH-1D65A (33.5 lbs)	55.0	11.9	7.1	33.5	5.88	1.68	7.29	2.31
Powerwave Allgon LGP21401	14.4	9.2	2.6	14.1	1.10	0.20	1.59	0.43
Raycap DC6-48-60-18-8F ("Squid")	24.0	11.0	11.0	31.8	2.20	2.20	2.90	2.90
Raycap DC6-48-60-18-8F	23.5	9.7	9.7	20.0	1.90	1.90	2.57	2.57
Raycap DC6-48-60-0-8F	22.3	11.0	11.0	32.8	2.04	2.04	2.71	2.71
Ericsson RRUS 32 (50.8 lbs)	26.7	12.1	6.7	50.8	2.69	1.57	3.47	2.28
Ericsson RRUS 4478 B14	16.5	13.4	7.7	59.9	1.84	1.06	2.45	1.56
Ericsson RRUS 4449 B5, B12	17.9	13.2	9.4	71.0	1.97	1.40	2.60	1.96
Ericsson RRUS 8843 B2, B66A	14.9	13.2	10.9	72.0	1.64	1.35	2.21	1.88
Commscope WCS-IMFQ-AMT	11.2	10.6	6.9	29.5	N/A	N/A	N/A	N/A

* Equipment with EPA values N/A were not considered in the mount analysis

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F	R^ a^ o^ s^ a^ ^	S^ O^ E^ t^	O^ a^ &^ c^ a^ }	T^ a^ e^ } a^ a^ z^ a^ l^ a^ e^ c^ a^
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F	T UEEJ	Y	E I E	H I E
G	T UEEJ	Y	E I E	I J E
H	T UEEJ	Y	E I E	G E
I	T UEEJ	Y	E I E	I J E
Í	T UEFG	Y	E I E Í	G E
Ī	T UEFG	Y	E I E Ī	I J E
İ	T UEFG	Y	E ĩ E	G E
J	T UeFı	Y	E E	G H İ
F€	T UeFı	Y	E E	I E İ
FF	T UeFı	Y	E E	I J E
FG	T UeFı	Y	E J E	H I E
FH	T UeFı	Y	E G	G E G
FI	T UeFı	Y	E E	G H İ
FÍ	T UeFı	Y	E E Í	I E İ
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Fİ	T UeFı	Y	E E İ	H G G

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F	T^ { a^ l^ a^ a^ ^	O^ a^ &^ c^ a^ }	T^ a^ e^ } a^ a^ z^ a^ l^ a^ e^ c^ a^	S^ { a^ a^ } z^ a^ l^ a^ e^ c^ a^
F	T UEEJ	Y	E I E G J	H I E
G	T UEEJ	Y	E I E G J	I J E
H	T UEEJ	Y	E E I I	G E
I	T UEEJ	Y	E E I I	I J E
Í	T UEFG	Y	E I E G F	G E
Ī	T UEFG	Y	E I E G F	I J E
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İ	T UEFG	Y	E E Ī Ī	G E
J	T UeFı	Y	E E H	G H İ
F€	T UeFı	Y	E E H	I E İ
FF	T UeFı	Y	E I E E	I J E
FG	T UeFı	Y	E U E J I	H I E
FH	T UeFı	Y	E H E F G	G E G
FI	T UeFı	Y	E E H	G H İ
FÍ	T UeFı	Y	E E H	I E İ
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F	T UEEJ	Z	E F I E E I	H I E E
G	T UEEJ	Z	E F I E E I	I J E E
H	T UEEJ	Z	E E E H	G E E
I	T UEEJ	Z	E E E H	I J E E
Í	T UeFG	Z	E I E I G	G E E
î	T UeFG	Z	E I E I G	I J E E
ï	T UeFG	Z	E H E I G	I J E E
Ï	T UeFG	Z	E I E E I	G E E
J	T UeFi	Z	E I H E F I	G H E I
F€	T UeFi	Z	E I H E F I	I E E I
FF	T UeFi	Z	E H F E I F	I J E E
FG	T UeFi	Z	E G G I	H I E E
FH	T UeFi	Z	E G I	G E E
FI	T UeFi	Z	E I H E F I	G H E I
FÍ	T UeFi	Z	E I H E F I	I E E I
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	T^ { a^ / A e a^ }	O a^ & a }	T a e } a a^ z a f a e - c a	S } e a a } z a a a
F	T UEEJ	Z	E F I E I I	H I E E
G	T UEEJ	Y	E F I E E	H I E E
H	T UEEJ	Z	E F I E I I	I J E E
I	T UEEJ	Y	E F I E E	I J E E
Í	T UEEJ	Z	E I E G G	G E E
î	T UEEJ	Z	E I E G G	I J E E
ï	T UEEJ	Y	E I E H G	G E E
Ï	T UEEJ	Y	E I E H G	I J E E
J	T UeFG	Z	E I E G J	G E E
F€	T UeFG	Z	E I E G J	I J E E
FF	T UeFG	Y	E I E F I	G E E
FG	T UeFG	Y	E I E F I	I J E E
FH	T UeFG	Z	E G E I G	I J E E
FI	T UeFG	Y	E J E G	I J E E
FÍ	T UeFG	Z	E I E H I	G E E
Fî	T UeFG	Y	E E I I	G E E
FÏ	T UeFi	Z	E H E I I	G H E I
FJ	T UeFi	Z	E H E I I	I E E I
F€	T UeFi	Y	E I E F	G H E I
F€	T UeFi	Y	E I E F	I E E I
GF	T UeFi	Z	E H E H	I J E E
GG	T UeFi	Y	E G E F I	I J E E
GH	T UeFi	Z	E G E I	H I E E
G	T UeFi	Y	E H E F I	H I E E
G	T UeFi	Z	E G E H	G E E
G	T UeFi	Y	E G E I G	G E E
G	T UeFi	Z	E H E I I	G H E I
G	T UeFi	Z	E H E I I	I E E I
GJ	T UeFi	Y	E I E F	G H E I
H€	T UeFi	Y	E I E F	I E E I
HF	T UeFi	Z	E H E G J	I J E E

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	T ^ { a^ \ A a a^ }	O a^ & a }	T a e } a a^ Z a f a e - c a	S t & a a } Z a E a a
J	T U e F i	Y	E U E F i	G H i
F€	T U e F i	Y	E U E F i	i e i
FF	T U e F i	Y	E G E G	i J e g
FG	T U e F i	Y	E i E H F	H i e g
FH	T U e F i	Y	E e i G	G e g
FI	T U e F i	Y	E U E F i	G H i
Fí	T U e F i	Y	E U E F i	i e i
Fî	T U e F i	Y	E i E G	i J e g
Fï	T U e F i	Y	E i E i	H e g

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	T ^ { a^ \ A a a^ }	O a^ & a }	T a e } a a^ Z a f a e - c a	S t & a a } Z a E a a
F	T U e e j	Z	i E G	H i e g
G	T U e e j	Y	E e e G F	H i e g
H	T U e e j	Z	i E G	i J e g
I	T U e e j	Y	E e e G F	i J e g
Í	T U e e j	Z	H e e e H	G e g
Î	T U e e j	Z	H e e e H	i J e g
İ	T U e e j	Y	E i E F i	G e g
ï	T U e e j	Y	E i E F i	i J e g
J	T U e F G	Z	H i E j	G e g
F€	T U e F G	Z	H i E j	i J e g
FF	T U e F G	Y	E G e i	G e g
FG	T U e F G	Y	E G e i	i J e g
FH	T U e F G	Z	G e e i G	i J e g
FI	T U e F G	Y	E i E e i	i J e g
Fí	T U e F G	Z	G e e H i	G e g
Fî	T U e F G	Y	E i E e H	G e g
Fï	T U e F i	Z	i H e i H	G H i
Fì	T U e F i	Z	i H e i H	i e i
FJ	T U e F i	Y	E e e J i	G H i
GE	T U e F i	Y	E e e J i	i e i
GF	T U e F i	Z	G e e e i	i J e g
GG	T U e F i	Y	E H e i i	i J e g
GH	T U e F i	Z	F i E e i	H i e g
G	T U e F i	Y	E i J e g	H i e g
Gí	T U e F i	Z	F i E e F	G e g
Gî	T U e F i	Y	E i E e F	G e g
Gï	T U e F i	Z	i H e i H	G H i
Gì	T U e F i	Z	i H e i H	i e i
GJ	T U e F i	Y	E e e J i	G H i
H€	T U e F i	Y	E e e J i	i e i
HF	T U e F i	Z	G e e G H	i J e g
HG	T U e F i	Y	E J e e i	i J e g
HH	T U e F i	Z	F i E e F	H e g
HI	T U e F i	Y	E G e G	H e g

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	T ^ { a^ \ A a a^ }	O a^ & a }	T a e } a a^ Z a f a e - c a	S t & a a } Z a E a a
F	T U e e j	Z	F i E j i	H i e g
G	T U e e j	Y	E i e g	H i e g

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H	T UEEJ	Z	FI EJ I	I JEG
I	T UEEJ	Y	FI EG	I JEG
Í	T UEEJ	Z	I I EG	G EG
Î	T UEEJ	Z	I I EG	I JEG
İ	T UEEJ	Y	E I EH G	G EG
Î	T UEEJ	Y	E I EH G	I JEG
J	T UFG	Z	I I EGJ	G EG
F€	T UFG	Z	I I EGJ	I JEG
FF	T UFG	Y	E I E F I	G EG
FG	T UFG	Y	E I E F I	I JEG
FH	T UFG	Z	I G I G	I JEG
FI	T UFG	Y	E J E G	I JEG
FÍ	T UFG	Z	I I E H I	G EG
FÎ	T UFG	Y	E E I I	G EG
Fİ	T UeF	Z	FH E I I	G E I
FÌ	T UeF	Z	FH E I I	I E I
FJ	T UeF	Y	E I E F	G E I
G€	T UeF	Y	E I E F	I E I
GF	T UeF	Z	H I E H	I JEG
GG	T UeF	Y	E G E F I	I JEG
GH	T UeF	Z	G E E	H I EG
G	T UeF	Y	E G E I I	H I EG
G	T UeF	Z	G E J	G EG
G	T UeF	Y	E H E I J	G EG
G	T UeF	Z	FH E I I	G E I
G	T UeF	Z	FH E I I	I E I
GJ	T UeF	Y	E I E F	G E I
H€	T UeF	Y	E I E F	I E I
HF	T UeF	Z	H E GJ	I JEG
HG	T UeF	Y	E I E I I	I JEG
HH	T UeF	Z	H I E H	H G EG
HI	T UeF	Y	E U E H	H G EG

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G	T UEEJ	Z	FI E I I	I JEG
H	T UEEJ	Z	J E H	G EG
I	T UEEJ	Z	J E H	I JEG
Í	T UFG	Z	J I E I G	G EG
Î	T UFG	Z	J I E I G	I JEG
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Î	T UFG	Z	I I E E	G EG
J	T UeF	Z	F I H E F I	G E I
F€	T UeF	Z	F I H E F I	I E I
FF	T UeF	Z	H F E F	I JEG
FG	T UeF	Z	G E G I	H I EG
FH	T UeF	Z	G E I	G EG
FI	T UeF	Z	F I H E F I	G E I
FÍ	T UeF	Z	F I H E F I	I E I
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FI	T U eFG	Y	E E H	I J E E
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FÎ	T U eFG	Y	E E F	G E E
Fİ	T U eFİ	Z	E E İ	G H İ
FÎ	T U eFİ	Z	E E İ	I E İ
FJ	T U eFİ	Y	E F E İ	G H İ
G E	T U eFİ	Y	E F E İ	I E İ
G F	T U eFİ	Z	E E F G	I J E E
G G	T U eFİ	Y	E E J	I J E E
G H	T U eFİ	Z	E E E	H I E E
G	T U eFİ	Y	E E H	H I E E
G	T U eFİ	Z	E E İ	G E E
G	T U eFİ	Y	E E G	G E E
G	T U eFİ	Z	E E İ	G H İ
G	T U eFİ	Z	E E İ	I E İ
GJ	T U eFİ	Y	E F E İ	G H İ
H E	T U eFİ	Y	E F E İ	I E İ
H F	T U eFİ	Z	E E İ	I J E E
H G	T U eFİ	Y	E E J F	I J E E
H H	T U eFİ	Z	E E E	H G E E
H I	T U eFİ	Y	E E J G	H G E E

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I	T U e E J	Y	E E İ İ	I J E E
Í	T U e E J	Z	E E F İ	G E E
Î	T U e E J	Z	E E F İ	I J E E
İ	T U e E J	Y	E F E H	G E E
İ	T U e E J	Y	E F E H	I J E E
J	T U eFG	Z	E E E G	G E E
F E	T U eFG	Z	E E E G	I J E E
FF	T U eFG	Y	E F G G J	G E E
FG	T U eFG	Y	E F G G J	I J E E
FH	T U eFG	Z	E E İ İ	I J E E
FI	T U eFG	Y	E F E E İ	I J E E
FÍ	T U eFG	Z	E E İ İ	G E E
FÎ	T U eFG	Y	E F E İ	G E E
Fİ	T U eFİ	Z	E E eH	G H İ
FÎ	T U eFİ	Z	E E eH	I E İ
FJ	T U eFİ	Y	E F E F G	G H İ
G E	T U eFİ	Y	E F E F G	I E İ
G F	T U eFİ	Z	E E U İ	I J E E
G G	T U eFİ	Y	E F E G	I J E E
G H	T U eFİ	Z	E E İ	H I E E
G	T U eFİ	Y	E F G G İ	H I E E
G	T U eFİ	Z	E E H	G E E
G	T U eFİ	Y	E G E H	G E E

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	T^ { a^ A^ a^ ^}	O a ^ & a }	T a e } a a ^ a l a e c a	S t & a a } a E a a
GF	T U e F i	Z	I E U I	I J E G
GG	T U e F i	Y	E F I E G G	I J E G
GH	T U e F i	Z	H E E	H I E G
G	T U e F i	Y	E F G I I	H I E G
G	T U e F i	Z	H E F	G E G
G	T U e F i	Y	E F E F G	G E G
G	T U e F i	Z	J E E H	G H E I
G	T U e F i	Z	J E E H	I E I
GJ	T U e F i	Y	E F I E F G	G H E I
HE	T U e F i	Y	E F I E F G	I E I
HF	T U e F i	Z	I E I I	I J E G
HG	T U e F i	Y	E F I E J H	I J E G
HH	T U e F i	Z	H E I H	H G E G
HI	T U e F i	Y	E F H E E G	H G E G

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	T^ { a^ A^ a^ ^}	O a ^ & a }	T a e } a a ^ a l a e c a	S t & a a } a E a a
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G	T U E E J	Y	E E J I	H I E G
H	T U E E J	Z	H E I J	I J E G
I	T U E E J	Y	E E J I	I J E G
I	T U E E J	Z	F I E H J	G E G
I	T U E E J	Z	F I E H J	I J E G
I	T U E E J	Y	E E I J	G E G
I	T U E E J	Y	E E I J	I J E G
J	T U E F G	Z	F I E E	G E G
F€	T U E F G	Z	F I E E	I J E G
FF	T U E F G	Y	E E H I	G E G
FG	T U E F G	Y	E E H I	I J E G
FH	T U E F G	Z	I E E H	I J E G
FI	T U E F G	Y	E E H	I J E G
Fí	T U E F G	Z	I E J	G E G
Fî	T U E F G	Y	E E H F	G E G
Fï	T U e F i	Z	G E H I	G H E I
Fì	T U e F i	Z	G E H I	I E I
Fj	T U e F i	Y	E F I E I	G H E I
Ge	T U e F i	Y	E F I E I	I E I
Gf	T U e F i	Z	I E F G	I J E G
Gg	T U e F i	Y	E E J	I J E G
Gh	T U e F i	Z	I E J H	H I E G
G	T U e F i	Y	E E I I	H I E G
G	T U e F i	Z	I E F H	G E G
G	T U e F i	Y	E E I I	G E G
G	T U e F i	Z	G E H I	G H E I
G	T U e F i	Z	G E H I	I E I
GJ	T U e F i	Y	E F I E I	G H E I
HE	T U e F i	Y	E F I E I	I E I
HF	T U e F i	Z	I E I I	I J E G
HG	T U e F i	Y	E E J F	I J E G
HH	T U e F i	Z	I E E	H G E G
HI	T U e F i	Y	E E J G	H G E G

Ô[{] a ^ K Q E A [a a A [, A / Ô [] E
 Ô ^ a } A K S ^ P E a a ^ d a
 R a A ^ { a ^ K F H H I G ' Ô i ' E
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o v a A E O E F
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	T ^ { a ^ / A a ^ }	O a ^ & a }	T a e } a a ^ z a f a e - c a	Š & a a } z a E a á
F	T ÚEEJ	Z	HÈIÌ	HÍ ÈÈ
G	T ÚEEJ	Z	HÈIÌ	Í JÈÈ
H	T ÚEEJ	Z	FÍ ÈÈG	G ÈÈ
I	T ÚEEJ	Z	FÍ ÈÈG	Í JÈÈ
Í	T ÚEFG	Z	FÍ ÈÈ I	G ÈÈ
Î	T ÚEFG	Z	FÍ ÈÈ I	Í JÈÈ
Ï	T ÚEFG	Z	Ì ÈÈ H	Í JÈÈ
Ì	T ÚEFG	Z	Ì ÈÈ I	G ÈÈ
J	T ÚEfi	Z	G ÈÈ I H	G ÈÈ Í
F€	T ÚEfi	Z	G ÈÈ I H	Í ÈÈ Í
FF	T ÚEfi	Z	Ì ÈÈ H	Í JÈÈ
FG	T ÚEfi	Z	I ÈÈ E	HÍ ÈÈ
FH	T ÚEfi	Z	Ì ÈÈ E	G ÈÈ G
FI	T ÚEfi	Z	G ÈÈ I H	G ÈÈ Í
FÍ	T ÚEfi	Z	G ÈÈ I H	Í ÈÈ Í
FÎ	T ÚEfi	Z	Ì ÈÈ E G	Í JÈÈ
FÌ	T ÚEfi	Z	Ì ÈÈ F	H ÈÈ G

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	T ^ { a ^ / A a ^ }	O a ^ & a }	T a e } a a ^ z a f a e - c a	Š & a a } z a E a á
F	T ÚEEJ	Z	HÈ Í J	HÍ ÈÈ
G	T ÚEEJ	Y	HÈ J Í	HÍ ÈÈ
H	T ÚEEJ	Z	HÈ Í J	Í JÈÈ
I	T ÚEEJ	Y	HÈ J Í	Í JÈÈ
Í	T ÚEEJ	Z	FÍ ÈÈ J	G ÈÈ
Î	T ÚEEJ	Z	FÍ ÈÈ J	Í JÈÈ
Ï	T ÚEEJ	Y	Ì ÈÈ J	G ÈÈ
Ì	T ÚEEJ	Y	Ì ÈÈ J	Í JÈÈ
J	T ÚEFG	Z	FÍ ÈÈ	G ÈÈ
F€	T ÚEFG	Z	FÍ ÈÈ	Í JÈÈ
FF	T ÚEFG	Y	J ÈÈ Í	G ÈÈ
FG	T ÚEFG	Y	J ÈÈ Í	Í JÈÈ
FH	T ÚEFG	Z	Ì ÈÈ H	Í JÈÈ
FI	T ÚEFG	Y	J ÈÈ H	Í JÈÈ
FÍ	T ÚEFG	Z	Ì ÈÈ J	G ÈÈ
FÎ	T ÚEFG	Y	F ÈÈ I F	G ÈÈ
FÌ	T ÚEfi	Z	G ÈÈ I	G ÈÈ Í
FÍ	T ÚEfi	Z	G ÈÈ I	Í ÈÈ Í
FJ	T ÚEfi	Y	FÍ ÈÈ Í	G ÈÈ Í
F€	T ÚEfi	Y	FÍ ÈÈ Í	Í ÈÈ Í
GF	T ÚEfi	Z	Ì ÈÈ FG	Í JÈÈ
GG	T ÚEfi	Y	Ì ÈÈ J	Í JÈÈ
GH	T ÚEfi	Z	Ì ÈÈ E	HÍ ÈÈ
G	T ÚEfi	Y	Ì ÈÈ H	HÍ ÈÈ
G	T ÚEfi	Z	Ì ÈÈ I	G ÈÈ G
G	T ÚEfi	Y	Ì ÈÈ G	G ÈÈ G
G	T ÚEfi	Z	G ÈÈ I	G ÈÈ Í
G	T ÚEfi	Z	G ÈÈ I	Í ÈÈ Í
GJ	T ÚEfi	Y	FÍ ÈÈ Í	G ÈÈ Í
H€	T ÚEfi	Y	FÍ ÈÈ Í	Í ÈÈ Í
HF	T ÚEfi	Z	Ì ÈÈ I	Í JÈÈ

0[{] a ^ K Q E A [a a A [, A / A [] E
 O ^ a } A K S ^ P E a a ^ d a
 F a A ^ { a ^ K F H H I G ' O I ' E
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o ^ a A E G E F
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	T ^ { a ^ A a ^ }	O a ^ & a }	T a e } a a ^ Z a f a E a	S ' & a } Z a E a
J	T U e F I	Y	I E I I	G H I
F€	T U e F I	Y	I E I I	I E I
FF	T U e F I	Y	F G I I	I J E G
FG	T U e F I	Y	F H I F	H I E G
FH	T U e F I	Y	F G I G	G E G
FI	T U e F I	Y	I E I I	G H I
FÍ	T U e F I	Y	I E I I	I E I
FĪ	T U e F I	Y	F H I e	I J E G
Fİ	T U e F I	Y	J E F J	H G G

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	T ^ { a ^ A a ^ }	O a ^ & a }	T a e } a a ^ Z a f a E a	S ' & a } Z a E a
F	T U e E J	Z	E E I I	H I E G
G	T U e E J	Y	I E I I	H I E G
H	T U e E J	Z	E E I I	I J E G
I	T U e E J	Y	I E I I	I J E G
Í	T U e E J	Z	E E F I	G E G
Ī	T U e E J	Z	E E F I	I J E G
İ	T U e E J	Y	F F I H	G E G
İ	T U e E J	Y	F F I H	I J E G
J	T U e F G	Z	E E I G	G E G
F€	T U e F G	Z	E E I G	I J E G
FF	T U e F G	Y	F G G J	G E G
FG	T U e F G	Y	F G G J	I J E G
FH	T U e F G	Z	E E I I	I J E G
FI	T U e F G	Y	F I E I	I J E G
FÍ	T U e F G	Z	E E I I	G E G
FĪ	T U e F G	Y	F I E J	G E G
Fİ	T U e F I	Z	E E e H	G H I
Fİ	T U e F I	Z	E E e H	I E I
FJ	T U e F I	Y	F I E I G	G H I
G€	T U e F I	Y	F I E I G	I E I
GF	T U e F I	Z	E E U I	I J E G
GG	T U e F I	Y	F I E G	I J E G
GH	T U e F I	Z	E E e	H I E G
G	T U e F I	Y	F G I I	H I E G
G	T U e F I	Z	E E F	G E G
G	T U e F I	Y	F F I F G	G E G
G	T U e F I	Z	E E e H	G H I
G	T U e F I	Z	E E e H	I E I
GJ	T U e F I	Y	F I E I G	G H I
H€	T U e F I	Y	F I E I G	I E I
HF	T U e F I	Z	E E I I	I J E G
HG	T U e F I	Y	F I E J H	I J E G
HH	T U e F I	Z	E E I H	H G G
HI	T U e F I	Y	F H E G	H G G

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	T ^ { a ^ A a ^ }	O a ^ & a }	T a e } a a ^ Z a f a E a	S ' & a } Z a E a
F	T U e E J	Z	E E I J	H I E G
G	T U e E J	Y	H E J I	H I E G

Ô{ } a^ ^ K Q̄ s̄ ā A[, s̄ /Ô{ } É
 Ô• a} s̄ K S̄ p̄ Ē ā d̄ ā
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	T^ { a^ /Ā ā ^}	Öä^&ç}	T æ} ǣ a^ žā f̄ ā Ē çá	Š̄ &œā } ž̄ Ě á
H	T ÚEĚJ	Z	ĚĚ Í J	Í JĚĚ
I	T ÚEĚJ	Y	HĚ JÍ	Í JĚĚ
Í	T ÚEĚJ	Z	ĚÍ ĚÍ J	G ĚĚ
Ī	T ÚEĚJ	Z	ĚÍ ĚÍ J	Ī JĚĚ
İ	T ÚEĚJ	Y	İ ĚÍ J	G ĚĚ
Ĭ	T ÚEĚJ	Y	Ĭ ĚÍ J	Ĭ JĚĚ
J	T ÚEFG	Z	ĚÍ ĚĚ	G ĚĚ
F€	T ÚEFG	Z	ĚÍ ĚĚ	Ī JĚĚ
FF	T ÚEFG	Y	JĚH Í	G ĚĚ
FG	T ÚEFG	Y	JĚH Í	Ī JĚĚ
FH	T ÚEFG	Z	Ě Ě ĚH	Ī JĚĚ
FI	T ÚEFG	Y	JĚH	Ī JĚĚ
FÍ	T ÚEFG	Z	Ě Ě J	G ĚĚ
FĪ	T ÚEFG	Y	FĚH F	G ĚĚ
Fİ	T ÚEfi	Z	ĚĚ ĚÍ	G ĚĚ
FĬ	T ÚEfi	Z	ĚĚ ĚÍ	Ī ĚĚ
FJ	T ÚEfi	Y	FI ĚĚ Í	G ĚĚ
G€	T ÚEfi	Y	FI ĚĚ Í	Ī ĚĚ
GF	T ÚEfi	Z	Ě Ě FG	Ī JĚĚ
GG	T ÚEfi	Y	İ Ě J	Ī JĚĚ
GH	T ÚEfi	Z	Ě Ě JH	H ĚĚ
G	T ÚEfi	Y	Ī Ě Ī	H ĚĚ
GÍ	T ÚEfi	Z	Ě Ě FH	G ĚĚ
Gİ	T ÚEfi	Y	Ī Ě Ī	G ĚĚ
GĬ	T ÚEfi	Z	ĚĚ ĚÍ	G ĚĚ
G	T ÚEfi	Z	ĚĚ ĚÍ	Ī ĚĚ
GJ	T ÚEfi	Y	FI ĚĚ Í	G ĚĚ
H€	T ÚEfi	Y	FI ĚĚ Í	Ī ĚĚ
HF	T ÚEfi	Z	Ě Ě Ī	Ī JĚĚ
HG	T ÚEfi	Y	JĚGF	Ī JĚĚ
HH	T ÚEfi	Z	Ě ĚĚ	H ĚĚ
HI	T ÚEfi	Y	İ Ě JG	H ĚĚ

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	T^ { a^ /Ā ā ^}	Öä^&ç}	T æ} ǣ a^ žā f̄ ā Ē çá	Š̄ &œā } ž̄ Ě á
F	T ÚEĚJ	Z	ĚJÍ	H ĚĚ
G	T ÚEĚJ	Z	ĚJÍ	Ī JĚĚ
H	T ÚEĚJ	Z	Ě Ě Ī	G ĚĚ
I	T ÚEĚJ	Z	Ě Ě Ī	Ī JĚĚ
Í	T ÚEFG	Z	Ě Ě Ě	G ĚĚ
Ī	T ÚEFG	Z	Ě Ě Ě	Ī JĚĚ
İ	T ÚEFG	Z	Ě Ě Ī	Ī JĚĚ
Ĭ	T ÚEFG	Z	ĚĚ Ě	G ĚĚ
J	T ÚEfi	Z	Ě Ě fi	G ĚĚ
F€	T ÚEfi	Z	Ě Ě fi	Ī ĚĚ
FF	T ÚEfi	Z	Ě Ě FH	Ī JĚĚ
FG	T ÚEfi	Z	Ě Ě GJ	H ĚĚ
FH	T ÚEfi	Z	Ě Ě Í J	G ĚĚ
FI	T ÚEfi	Z	Ě Ě fi	G ĚĚ
FÍ	T ÚEfi	Z	Ě Ě fi	Ī ĚĚ
FĪ	T ÚEfi	Z	Ě Ě Ī	Ī JĚĚ

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	T^ { a ^ / A e a ^ }	O a ^ & c a }	T a e } a ^ a ^ Z a f a E c a	S } & e a } Z a E a
FF	T U e F G	Y	E E H	G E
FG	T U e F G	Y	E E H	I J E
FH	T U e F G	Z	E E I	I J E
FI	T U e F G	Y	E E J	I J E
FÍ	T U e F G	Z	E E G	G E
FÌ	T U e F G	Y	E E F	G E
Fİ	T U e F	Z	E E I	G E I
Fì	T U e F	Z	E E I	I E I
FJ	T U e F	Y	E E U	G E I
G€	T U e F	Y	E E U	I E I
GF	T U e F	Z	E E I	I J E
GG	T U e F	Y	E E I	I J E
GH	T U e F	Z	E E I	H I E
G	T U e F	Y	E E	H I E
G	T U e F	Z	E E J	G E G
G	T U e F	Y	E E G	G E G
G	T U e F	Z	E E I	G E I
G	T U e F	Z	E E I	I E I
GJ	T U e F	Y	E E U	G E I
H€	T U e F	Y	E E U	I E I
HF	T U e F	Z	E E J	I J E
HG	T U e F	Y	E E I G	I J E
HH	T U e F	Z	E E J G	H G G
HI	T U e F	Y	E E H	H G G

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	T^ { a ^ / A e a ^ }	O a ^ & c a }	T a e } a ^ a ^ Z a f a E c a	S } & e a } Z a E a
F	T U e U	Y	E E I	H I E
G	T U e U	Y	E E I	I J E
H	T U e U	Y	E E F F	G E
I	T U e U	Y	E E F F	I J E
Í	T U e F G	Y	E E F	G E
Ì	T U e F G	Y	E E F	I J E
İ	T U e F G	Y	E E I J	I J E
ì	T U e F G	Y	E E H	G E
J	T U e F	Y	E E e	G E I
F€	T U e F	Y	E E e	I E I
FF	T U e F	Y	E E G	I J E
FG	T U e F	Y	E E e	H I E
FH	T U e F	Y	E E H	G E G
FI	T U e F	Y	E E e	G E I
FÍ	T U e F	Y	E E e	I E I
FÌ	T U e F	Y	E E I	I J E
Fİ	T U e F	Y	E E G	H G G

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	T^ { a ^ / A e a ^ }	O a ^ & c a }	T a e } a ^ a ^ Z a f a E c a	S } & e a } Z a E a
F	T U e U	Z	E G	H I E
G	T U e U	Y	E E H G	H I E
H	T U e U	Z	E G	I J E
I	T U e U	Y	E E H G	I J E

Ó[{] a ^ K Q E ^ i a a A [, ^ / Ó [] E
Ô ^ a } s K S ^ p E a d a
Ŕ a A ^ { a ^ K F H H I G ^ Ó i ^ e
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o a A E G E F
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	T ^ { a ^ / A a ^ }	O a ^ & a }	T a e } a ^ a Z a f a e - c a	Š & a a } a E a á
Í	T UEEJ	Z	F E F	G E G
Î	T UEEJ	Z	F E F	I J E G
Ï	T UEEJ	Y	E E H	G E G
Ï	T UEEJ	Y	E E H	I J E G
J	T U EFG	Z	F B I I	G E G
F€	T U EFG	Z	F B I I	I J E G
FF	T U EFG	Y	E E H	G E G
FG	T U EFG	Y	E E H	I J E G
FH	T U EFG	Z	F E H I	I J E G
FI	T U EFG	Y	E E J I	I J E G
FÍ	T U EFG	Z	F E G F	G E G
FÏ	T U EFG	Y	E E G F	G E G
Fİ	T U efi	Z	G E I	G E I
Fİ	T U efi	Z	G E I	I E I
FJ	T U efi	Y	E E E J	G E I
G€	T U efi	Y	E E E J	I E I
GF	T U efi	Z	F E I	I J E G
GG	T U efi	Y	E E I	I J E G
GH	T U efi	Z	E I H	H I E G
G	T U efi	Y	E E G I	H I E G
G	T U efi	Z	E E H	G E G
G	T U efi	Y	E E E J	G E G
G	T U efi	Z	G E I	G E I
G	T U efi	Z	G E I	I E I
GJ	T U efi	Y	E E E J	G E I
H€	T U efi	Y	E E E J	I E I
HF	T U efi	Z	F E G J	I J E G
HG	T U efi	Y	E E E G	I J E G
HH	T U efi	Z	E J G	H G E G
HI	T U efi	Y	E E H	H G E G

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	T ^ { a ^ / A a ^ }	O a ^ & a }	T a e } a ^ a Z a f a e - c a	Š & a a } a E a á
F	T UEEJ	Z	E G	H I E G
G	T UEEJ	Y	E J G	H I E G
H	T UEEJ	Z	E G	I J E G
I	T UEEJ	Y	E J G	I J E G
Í	T UEEJ	Z	I E J I	G E G
Î	T UEEJ	Z	I E J I	I J E G
Ï	T UEEJ	Y	E E I J	G E G
Ï	T UEEJ	Y	E E I J	I J E G
J	T U EFG	Z	I E H	G E G
F€	T U EFG	Z	I E H	I J E G
FF	T U EFG	Y	E E I I	G E G
FG	T U EFG	Y	E E I I	I J E G
FH	T U EFG	Z	G E H I	I J E G
FI	T U EFG	Y	E E F F	I J E G
FÍ	T U EFG	Z	G E H	G E G
FÏ	T U EFG	Y	E E F G	G E G
Fİ	T U efi	Z	I E I I	G E I
Fİ	T U efi	Z	I E I I	I E I

Ô[(] a^ K Oe A[a a A[, A[A[] E
 Ô^ a} A K S^ P E a a A d a
 R a A^ { a^ K F H H I G ' O I ' E
 T [a^ A a^ A K H E G H E O @ H A P a l a a f l a

o^ a A E O E F
 I F E A U T
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	T^ { a^ / A a^ }	O a^ & a }	T a e } a a^ Z a f a E c a	Š & a a } Ž a Ě a
FH	T ÚEFG	Z	GÈH I	Í JĚĚ
FI	T ÚEFG	Y	GÈ FF	Í JĚĚ
FÍ	T ÚEFG	Z	GÈ H	GĚĚ
FĪ	T ÚEFG	Y	GÈ FG	GĚĚ
FĪ	T ÚEĚ	Z	Ī Ě Ī Ī	GĚ Ī
FĪ	T ÚEĚ	Z	Ī Ě Ī Ī	Ī Ě Ī
FJ	T ÚEĚ	Y	Ī Ě Ě	GĚ Ī
Œ	T ÚEĚ	Y	Ī Ě Ě	Ī Ě Ī
GF	T ÚEĚ	Z	GĚĚ	Í JĚĚ
GG	T ÚEĚ	Y	GĚH	Í JĚĚ
GH	T ÚEĚ	Z	FĚ Ī J	HĪ ĚĚ
G	T ÚEĚ	Y	FĚ	HĪ ĚĚ
G	T ÚEĚ	Z	FĚ HF	GĚĚ
G	T ÚEĚ	Y	FĚ Ī H	GĚĚ
G	T ÚEĚ	Z	Ī Ě Ī Ī	GĚ Ī
G	T ÚEĚ	Z	Ī Ě Ī Ī	Ī Ě Ī
GJ	T ÚEĚ	Y	Ī Ě Ě	GĚ Ī
HĚ	T ÚEĚ	Y	Ī Ě Ě	Ī Ě Ī
HF	T ÚEĚ	Z	GĚ Ī F	Í JĚĚ
HG	T ÚEĚ	Y	GĚ Ī J	Í JĚĚ
HH	T ÚEĚ	Z	FĚ Ī J	HĚĚ
HI	T ÚEĚ	Y	GĚ Ī	HĚĚ

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	T^ { a^ / A a^ }	O a^ & a }	T a e } a a^ Z a f a E c a	Š & a a } Ž a Ě a
F	T ÚEĚ	Z	ĚĚ	HĪ ĚĚ
G	T ÚEĚ	Y	FĚ ĚĚ	HĪ ĚĚ
H	T ÚEĚ	Z	ĚĚ	Í JĚĚ
I	T ÚEĚ	Y	FĚ ĚĚ	Í JĚĚ
Ī	T ÚEĚ	Z	FĚ F	GĚ ĚĚ
Ī	T ÚEĚ	Z	FĚ F	Ī JĚĚ
Ī	T ÚEĚ	Y	HĚ Ě	GĚ ĚĚ
Ī	T ÚEĚ	Y	HĚ Ě	Ī JĚĚ
J	T ÚEFG	Z	FĚ Ī Ī	GĚ ĚĚ
FĚ	T ÚEFG	Z	FĚ Ī Ī	Ī JĚĚ
FF	T ÚEFG	Y	HĚ Ě	GĚ ĚĚ
FG	T ÚEFG	Y	HĚ Ě	Ī JĚĚ
FH	T ÚEFG	Z	FĚ Ī Ī	Í JĚĚ
FI	T ÚEFG	Y	Ī Ě Ī Ī	Í JĚĚ
FÍ	T ÚEFG	Z	FĚĚ	GĚĚ
FĪ	T ÚEFG	Y	Ī ĚĚ	GĚĚ
FĪ	T ÚEĚ	Z	GĚ Ī	GĚ Ī
FĪ	T ÚEĚ	Z	GĚ Ī	Ī Ě Ī
FJ	T ÚEĚ	Y	Ī Ě Ě	GĚ Ī
Œ	T ÚEĚ	Y	Ī Ě Ě	Ī Ě Ī
GF	T ÚEĚ	Z	FĚ Ī	Í JĚĚ
GG	T ÚEĚ	Y	Ī Ě Ī Ī	Í JĚĚ
GH	T ÚEĚ	Z	Ě Ī Ī	HĪ ĚĚ
G	T ÚEĚ	Y	HĚĚ	HĪ ĚĚ
G	T ÚEĚ	Z	Ě Ī J	GĚĚ
G	T ÚEĚ	Y	HĚĚ	GĚĚ

Ô[(] a^ K OË A[a a A[, A[A[] E
 Ô^ a} A K S^ p E a d a
 R a A^ { a^ K F H H I G ' Ô I ' E
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o^ a A E O E F
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	T^ (a^ A a^)	Oã^&ca}	T a e} a a^ a a l a e ca	Š &ca} a a á
GF	T UeFí	Z	E E I	I J E G
GG	T UeFí	Y	I E I	I J E G
GH	T UeFí	Z	E J H	H I E G
G	T UeFí	Y	H E I	H I E G
G	T UeFí	Z	E J H	O E G
G	T UeFí	Y	H E G	O E G
G	T UeFí	Z	E J I	G H I
G	T UeFí	Z	E J I	I E I
GJ	T UeFí	Y	I E J	G H I
H E	T UeFí	Y	I E J	I E I
H F	T UeFí	Z	E E J	I J E G
H G	T UeFí	Y	I E I G	I J E G
H H	T UeFí	Z	E J G	H G G
H I	T UeFí	Y	H E H	H G G

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	T^ (a^ A a^)	Oã^&ca}	T a e} a a^ a a l a e ca	Š &ca} a a á
F	T UeEJ	Z	E E G	H I E G
G	T UeEJ	Y	E I G	H I E G
H	T UeEJ	Z	E E G	I J E G
I	T UeEJ	Y	E I G	I J E G
I	T UeEJ	Z	E E J I	G I E G
I	T UeEJ	Z	E E J I	I J E G
I	T UeEJ	Y	G E I J	G I E G
I	T UeEJ	Y	G E I J	I J E G
J	T UeFG	Z	E E H	G I E G
F E	T UeFG	Z	E E H	I J E G
FF	T UeFG	Y	G E I I	G I E G
FG	T UeFG	Y	G E I I	I J E G
FH	T UeFG	Z	E E H I	I J E G
FI	T UeFG	Y	G E F F	I J E G
F I	T UeFG	Z	E E H	G I E G
F I	T UeFG	Y	G E F G	G I E G
F I	T UeFí	Z	E E I I	G H I
F I	T UeFí	Z	E E I I	I E I
F J	T UeFí	Y	I E H	G H I
G E	T UeFí	Y	I E H	I E I
G F	T UeFí	Z	E E G	I J E G
G G	T UeFí	Y	G E H	I J E G
G H	T UeFí	Z	E E J	H I E G
G	T UeFí	Y	F E I I	H I E G
G	T UeFí	Z	E E H H	O E G
G	T UeFí	Y	F E I I	O E G
G	T UeFí	Z	E E I I	G H I
G	T UeFí	Z	E E I I	I E I
GJ	T UeFí	Y	I E H	G H I
H E	T UeFí	Y	I E H	I E I
H F	T UeFí	Z	E E F F	I J E G
H G	T UeFí	Y	G E F J	I J E G
H H	T UeFí	Z	E E I J	H G G
H I	T UeFí	Y	G E I	H G G

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I	P È È	Ÿ	È È È	È È È	€	À F È È
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Î	Ō È È	Ÿ	È È È	È È È	€	À F È È
İ	Ō È È	Z	È È È G	È È È G	€	À F È È
Ï	Ō È È	Ÿ	È È È	È È È	€	À F È È
J	W È È	Z	È È È	È È È	€	À F È È
F È	W È È	Ÿ	È È È	È È È	€	À F È È
FF	W È È	Z	È È È	È È È	€	À F È È
FG	W È È	Ÿ	È È È	È È È	€	À F È È
FH	T Ū È È	Z	È È È	È È È	€	G È È
FI	T Ū È È	Z	È È È	È È È	İ È È	À F È È
FÍ	T Ū È È	Ÿ	È È È G	È È È G	€	À F È È
FÎ	W F È	Z	È È È	È È È	€	À F È È
Fİ	W F È	Ÿ	È È È	È È È	€	À F È È
FÏ	W F F	Z	È È È	È È È	€	À F È È
FJ	W F F	Ÿ	È È È	È È È	€	À F È È
G È	T Ū È F G	Z	È È È	È È È	€	G È È
GF	T Ū È F G	Z	È È È	È È È	İ È È	À F È È
GG	T Ū È F G	Ÿ	È È È G	È È È G	€	À F È È
GH	W F H	Z	È È È	È È È	€	À F È È
G	W F H	Ÿ	È È È	È È È	€	À F È È
GÍ	W F I	Z	È È È	È È È	€	À F È È
GÎ	W F I	Ÿ	È È È	È È È	€	À F È È
GÏ	T Ū È F I	Z	È È È	È È È	€	F I È
Gİ	T Ū È F I	Z	È È È	È È È	İ È È	À F È È
GJ	T Ū È F I	Ÿ	È È È G	È È È G	€	À F È È
H È	W F Î	Z	È È È	È È È	€	À F È È
HF	W F Î	Ÿ	È È È	È È È	€	À F È È
HG	W F Î	Z	È È È	È È È	€	À F È È
HH	W F Î	Ÿ	È È È	È È È	€	À F È È
HI	T Ū È F I	Z	È È È	È È È	€	F I È
HÍ	T Ū È F I	Z	È È È	È È È	İ È È	À F È È
HÎ	T Ū È F I	Ÿ	È È È G	È È È G	€	À F È È
HÏ	V Ō È F J	Z	È È È H	È È È H	€	À F È È
Hİ	V Ō È F J	Ÿ	È È È H	È È È H	€	À F È È
HJ	V Ō È G È	Z	È È È I	È È È I	€	À F È È
I È	V Ō È G È	Ÿ	È È È G	È È È G	€	À F È È

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F	P È È G	Z	È È È I	È È È I	€	À F È È
G	P È È G	Ÿ	È È È	È È È	€	À F È È
H	P È È	Z	È È È I	È È È I	€	À F È È
I	P È È	Ÿ	È È È	È È È	€	À F È È
Í	Ō È È	Z	È È È F I	È È È F I	€	À F È È
Î	Ō È È	Ÿ	È È È	È È È	€	À F È È
İ	Ō È È	Z	È È È F I	È È È F I	€	À F È È
Ï	Ō È È	Ÿ	È È È	È È È	€	À F È È
J	W È È	Z	È È È	È È È	€	À F È È
F È	W È È	Ÿ	È È È H	È È È H	€	À F È È
FF	W È È	Z	È È È	È È È	€	À F È È

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FG	WEEI	Y	EEEGH	EEEGH	€	AE€	
FH	TUEEJ	Z	EEIIG	EEIIG	€	GEI	
FI	TUEEJ	Z	EEIIG	EEIIG	IIIE	AE€	
FI	TUEEJ	Y	EEIIG	EEIIG	€	AE€	
FI	WEFE	Z	EEIIG	EEIIG	€	AE€	
FI	WEFE	Y	EEEGH	EEEGH	€	AE€	
FI	WEFF	Z	EEIIG	EEIIG	€	AE€	
FJ	WEFF	Y	EEEGH	EEEGH	€	AE€	
GE	TUEFG	Z	EEIIG	EEIIG	€	GEI	
GF	TUEFG	Z	EEIIG	EEIIG	IIIE	AE€	
GG	TUEFG	Y	EEIIG	EEIIG	€	AE€	
GH	WEFH	Z	EEIIG	EEIIG	€	AE€	
GI	WEFH	Y	EEEGH	EEEGH	€	AE€	
GI	WEFI	Z	EEIIG	EEIIG	€	AE€	
GI	WEFI	Y	EEEGH	EEEGH	€	AE€	
GI	TUEFI	Z	EEIIG	EEIIG	€	FIIE	
GI	TUEFI	Z	EEIIG	EEIIG	IIIE	AE€	
GJ	TUEFI	Y	EEIIG	EEIIG	€	AE€	
HE	WEFI	Z	EEIIG	EEIIG	€	AE€	
HF	WEFI	Y	EEEGH	EEEGH	€	AE€	
HG	WEFI	Z	EEIIG	EEIIG	€	AE€	
HH	WEFI	Y	EEEGH	EEEGH	€	AE€	
HI	TUEFI	Z	EEIIG	EEIIG	€	FIIE	
HI	TUEFI	Z	EEIIG	EEIIG	IIIE	AE€	
HI	TUEFI	Y	EEIIG	EEIIG	€	AE€	
HI	VOEFJ	Z	EEIIF	EEIIF	€	AE€	
HI	VOEFJ	Y	EEIIF	EEIIF	€	AE€	
HJ	VOEGE	Z	EEIIG	EEIIG	€	AE€	
I€	VOEGE	Y	EEIIG	EEIIG	€	AE€	

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F	PEEG	Y	€	€	€	AE€	
G	PEEI	Y	€	€	€	AE€	
H	OEI	Y	EEIIF	EEIIF	€	AE€	
I	OEI	Y	EEIIF	EEIIF	€	AE€	
I	WEI	Y	EEIIF	EEIIF	€	AE€	
I	WEI	Y	EEIIF	EEIIF	€	AE€	
I	TUEEJ	Y	EEIIF	EEIIF	€	AE€	
I	WEFE	Y	EEIIF	EEIIF	€	AE€	
J	WEFF	Y	EEIIF	EEIIF	€	AE€	
FE	TUEFG	Y	EEIIF	EEIIF	€	AE€	
FF	WEFH	Y	EEIIF	EEIIF	€	AE€	
FG	WEFI	Y	EEIIF	EEIIF	€	AE€	
FH	TUEFI	Y	EEIIF	EEIIF	€	AE€	
FI	WEFI	Y	EEIIF	EEIIF	€	AE€	
FI	WEFI	Y	EEIIF	EEIIF	€	AE€	
FI	TUEFI	Y	EEIIF	EEIIF	€	AE€	
FI	VOEFJ	Y	EEIIF	EEIIF	€	AE€	
FI	VOEGE	Y	EEIIF	EEIIF	€	AE€	

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F	P E E G	Z	I E I	I E I	€	A F E E
G	P E E G	Y	E E E	E E E	€	A F E E
H	P E E I	Z	I E I	I E I	€	A F E E
I	P E E I	Y	E E E	E E E	€	A F E E
Í	Ö e e I	Z	G E F I	G E F I	€	A F E E
Ī	Ö e e I	Y	E E E	E E E	€	A F E E
İ	Ö e e I	Z	G E F I	G E F I	€	A F E E
İ	Ö e e I	Y	E E E	E E E	€	A F E E
J	w e e I	Z	E E E	E E E	€	A F E E
F€	w e e I	Y	E E E G H	E E E G H	€	A F E E
FF	w e e I	Z	E E E	E E E	€	A F E E
FG	w e e I	Y	E E E G H	E E E G H	€	A F E E
FH	T U e e J	Z	H E I G	H E I G	€	G E I
FI	T U e e J	Z	H E I G	H E I G	İ İ E	A F E E
FÍ	T U e e J	Y	E E E	E E E	€	A F E E
FĪ	w F E	Z	E E E	E E E	€	A F E E
FĪ	w F E	Y	E E E G H	E E E G H	€	A F E E
Fİ	w F F	Z	E E E	E E E	€	A F E E
FJ	w F F	Y	E E E G H	E E E G H	€	A F E E
G€	T U e F G	Z	H E I G	H E I G	€	G E I
GF	T U e F G	Z	H E I G	H E I G	İ İ E	A F E E
GG	T U e F G	Y	E E E	E E E	€	A F E E
GH	w F H	Z	E E E	E E E	€	A F E E
G	w F H	Y	E E E G H	E E E G H	€	A F E E
G	w F I	Z	E E E	E E E	€	A F E E
G	w F I	Y	E E E G H	E E E G H	€	A F E E
G	T U e F I	Z	H E I G	H E I G	€	F I E
G	T U e F I	Z	H E I G	H E I G	İ İ E	A F E E
GJ	T U e F I	Y	E E E	E E E	€	A F E E
H€	w F I	Z	E E E	E E E	€	A F E E
HF	w F I	Y	E E E G H	E E E G H	€	A F E E
HG	w F I	Z	E E E	E E E	€	A F E E
HH	w F I	Y	E E E G H	E E E G H	€	A F E E
HI	T U e F I	Z	H E I G	H E I G	€	F I E
HÍ	T U e F I	Z	H E I G	H E I G	İ İ E	A F E E
HĪ	T U e F I	Y	E E E	E E E	€	A F E E
Hİ	V O e F J	Z	F E I G	F E I G	€	A F E E
Hİ	V O e F J	Y	E E E G I	E E E G I	€	A F E E
HJ	V O e G E	Z	H E F I	H E F I	€	A F E E
I€	V O e G E	Y	E E E	E E E	€	A F E E

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	T^ { a^ / A^ a^ }	O a^ & a }	U c a o A a } a^ a^ Z a D a (H E) a A a } a^ a^ Z a D a (H E) U c a o A a } a^ a^ }	Z a E a a }	O) a A a } a^ a^ }	Z a E a a }
F	P E E G	Z	F G E G J	F G E G J	€	A F E E
G	P E E G	Y	E E E	E E E	€	A F E E
H	P E E I	Z	F G E G J	F G E G J	€	A F E E
I	P E E I	Y	E E E	E E E	€	A F E E
Í	Ö e e I	Z	I E I G	I E I G	€	A F E E
Ī	Ö e e I	Y	E E E	E E E	€	A F E E
İ	Ö e e I	Z	I E I G	I E I G	€	A F E E
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J	WEEI	Z	È È	È È	€	Ä FEE		
FE	WEEI	Y	Ë È	Ë È	€	Ä FEE		
FF	WEEI	Z	È È	È È	€	Ä FEE		
FG	WEEI	Y	Ë È	Ë È	€	Ä FEE		
FH	T ÜEEJ	Z	Î È È	Î È È	€	GÈI		
FI	T ÜEEJ	Z	Î È È	Î È È	Ï Î È	Ä FEE		
FÍ	T ÜEEJ	Y	Ë È È G	Ë È È G	€	Ä FEE		
FÏ	WFF€	Z	È È	È È	€	Ä FEE		
FÏ	WFF€	Y	Ë È	Ë È	€	Ä FEE		
FÌ	WFFF	Z	È È	È È	€	Ä FEE		
FJ	WFFF	Y	Ë È	Ë È	€	Ä FEE		
G€	T ÜEFG	Z	Î È È	Î È È	€	GÈI		
GF	T ÜEFG	Z	Î È È	Î È È	Ï Î È	Ä FEE		
GG	T ÜEFG	Y	Ë È È G	Ë È È G	€	Ä FEE		
GH	WFFH	Z	È È	È È	€	Ä FEE		
G	WFFH	Y	Ë È	Ë È	€	Ä FEE		
G	WFFI	Z	È È	È È	€	Ä FEE		
G	WFFI	Y	Ë È	Ë È	€	Ä FEE		
G	T ÜEFÍ	Z	Î È È	Î È È	€	FÌ È		
G	T ÜEFÍ	Z	Î È È	Î È È	Ï Î È	Ä FEE		
GJ	T ÜEFÍ	Y	Ë È È G	Ë È È G	€	Ä FEE		
H€	WFFÍ	Z	È È	È È	€	Ä FEE		
HF	WFFÍ	Y	Ë È	Ë È	€	Ä FEE		
HG	WFFÍ	Z	È È	È È	€	Ä FEE		
HH	WFFÍ	Y	Ë È	Ë È	€	Ä FEE		
HI	T ÜEFÌ	Z	Î È È	Î È È	€	FÌ È		
HÍ	T ÜEFÌ	Z	Î È È	Î È È	Ï Î È	Ä FEE		
HÏ	T ÜEFÌ	Y	Ë È È G	Ë È È G	€	Ä FEE		
HÌ	VÓEFJ	Z	FÈ Í Í	FÈ Í Í	€	Ä FEE		
H	VÓEFJ	Y	Ë È G	Ë È G	€	Ä FEE		
HJ	VÓE€€	Z	Î È È H	Î È È H	€	Ä FEE		
I €	VÓE€€	Y	Ë È È HJ	Ë È È HJ	€	Ä FEE		

A Ya Vyf'8]gfh]Vi hyX' @ UXg'f6 @' - : K % \$ L

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F	P E€G	Z	FÌ È È È	FÌ È È È	€	Ä FEE		
G	P E€I	Z	FÌ È È È	FÌ È È È	€	Ä FEE		
H	Ö E€I	Z	FÈ Í Í	FÈ Í Í	€	Ä FEE		
I	Ö E€I	Z	FÈ Í Í	FÈ Í Í	€	Ä FEE		
Í	WEEI	Z	€	€	€	Ä FEE		
Î	WEEI	Z	€	€	€	Ä FEE		
Ï	T ÜEEJ	Z	Î È È Í	Î È È Í	€	GÈI		
Ì	T ÜEEJ	Z	Î È È Í	Î È È Í	Ï Î È	Ä FEE		
J	WFF€	Z	€	€	€	Ä FEE		
FE	WFFF	Z	€	€	€	Ä FEE		
FF	T ÜEFG	Z	Î È È Í	Î È È Í	€	GÈI		
FG	T ÜEFG	Z	Î È È Í	Î È È Í	Ï Î È	Ä FEE		
FH	WFFH	Z	€	€	€	Ä FEE		
FI	WFFI	Z	€	€	€	Ä FEE		
FÍ	T ÜEFÍ	Z	Î È È Í	Î È È Í	€	FÌ È		
FÏ	T ÜEFÍ	Z	Î È È Í	Î È È Í	Ï Î È	Ä FEE		

0[{] ə ^ K 0x ^ 1 3a ə A [, ^ 1 0 [] É
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A Ya Vyf'8 jgfh]Vi hYX' @ UXg'f6 @ '%. 'K '& \$L

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F	P E E G	Z	I É I	I É I	€	À F E E
G	P E E G	Y	I É I	I É I	€	À F E E
H	P E E I	Z	I É I	I É I	€	À F E E
I	P E E I	Y	I É I	I É I	€	À F E E
Í	Ö E E I	Z	G É F I	G É F I	€	À F E E
Ī	Ö E E I	Y	I É É	I É É	€	À F E E
İ	Ö E E I	Z	G É F I	G É F I	€	À F E E
İ	Ö E E I	Y	I É É	I É É	€	À F E E
J	W E E I	Z	É É	É É	€	À F E E
F€	W E E I	Y	F E G H	F E G H	€	À F E E
FF	W E E I	Z	É É	É É	€	À F E E
FG	W E E I	Y	F E G H	F E G H	€	À F E E
FH	T Ú E E J	Z	H É I G	H É I G	€	G É I
FI	T Ú E E J	Z	H É I G	H É I G	İ İ É	À F E E
FÍ	T Ú E E J	Y	İ É É	İ É É	€	À F E E
FĪ	W F E É	Z	É É	É É	€	À F E E
FĪ	W F E É	Y	F E G H	F E G H	€	À F E E
Fİ	W F F F	Z	É É	É É	€	À F E E
FJ	W F F F	Y	F E G H	F E G H	€	À F E E
G€	T Ú E F G	Z	H É I G	H É I G	€	G É I
GF	T Ú E F G	Z	H É I G	H É I G	İ İ É	À F E E
GG	T Ú E F G	Y	İ É É	İ É É	€	À F E E
GH	W F H	Z	É É	É É	€	À F E E
G	W F H	Y	F E G H	F E G H	€	À F E E
G	W F I	Z	É É	É É	€	À F E E
G	W F I	Y	F E G H	F E G H	€	À F E E
G	T Ú E F I	Z	H É I G	H É I G	€	F İ É
G	T Ú E F I	Z	H É I G	H É I G	İ İ É	À F E E
GJ	T Ú E F I	Y	İ É É	İ É É	€	À F E E
H€	W F I	Z	É É	É É	€	À F E E
HF	W F I	Y	F E G H	F E G H	€	À F E E
HG	W F I	Z	É É	É É	€	À F E E
HH	W F I	Y	F E G H	F E G H	€	À F E E
HI	T Ú E F I	Z	H É I G	H É I G	€	F İ É
HÍ	T Ú E F I	Z	H É I G	H É I G	İ İ É	À F E E
HĪ	T Ú E F I	Y	İ É É	İ É É	€	À F E E
Hİ	V Ó E F J	Z	H É F I	H É F I	€	À F E E
Hİ	V Ó E F J	Y	İ É É	İ É É	€	À F E E
HJ	V Ó E G E	Z	F E I G	F E I G	€	À F E E
I€	V Ó E G E	Y	G E J I	G E J I	€	À F E E

A Ya Vyf'8 jgfh]Vi hYX' @ UXg'f6 @ '%. 'K '& \$L

	T ^ { a ^ / 3 a ^ }	Ö a ^ & a }	Ù c a A a } a ^ a ^ 3 a D (H) a A a } a ^ a ^ 3 a D (H) Ù c a A a } a ^ a ^ 3 a D (H)	Ù c a A a } a ^ a ^ 3 a D (H) a A a } a ^ a ^ 3 a D (H) Ù c a A a } a ^ a ^ 3 a D (H)	Ù c a A a } a ^ a ^ 3 a D (H) a A a } a ^ a ^ 3 a D (H) Ù c a A a } a ^ a ^ 3 a D (H)	Ù c a A a } a ^ a ^ 3 a D (H) a A a } a ^ a ^ 3 a D (H) Ù c a A a } a ^ a ^ 3 a D (H)
F	P E E G	Y	€	€	€	À F E E
G	P E E I	Y	€	€	€	À F E E
H	Ö E E I	Y	I É I H	I É I H	€	À F E E
I	Ö E E I	Y	I É I H	I É I H	€	À F E E
Í	W E E I	Y	F É H	F É H	€	À F E E
Ī	W E E I	Y	F É H	F É H	€	À F E E
İ	T Ú E E J	Y	İ É I I	İ É I I	€	À F E E
İ	W F E É	Y	F É H	F É H	€	À F E E

0[(] a) ^ K 0E A[00 A[1 A[0[] E
 0^ a) s K S ^ E a d a
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0^ A E 0 E G F
 I K E A U T
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A Ya VYf'8 Jgh'Vi hYX' @ UXg'f6 @ '%: 'K' &+ \$L'f7 cb'jbi YXL

	T { a ^ / A a a ^ }	O a ^ & a }	U c a o A a e } a ^ a ^ Z a D a H E O } a A a e } a ^ a ^ Z a D a H E U c a o A a e } a a }	Z a E a a	O) a A a } Z a E a a }	Z a E a a
J	WFF	Y	F E H	F E H	€	A FEE
FE	T U EFG	Y	I E I	I E I	€	A FEE
FF	WFH	Y	F E H	F E H	€	A FEE
FG	WFI	Y	F E H	F E H	€	A FEE
FH	T U e f i	Y	I E I	I E I	€	A FEE
FI	W f i	Y	F E H	F E H	€	A FEE
f i	W f i	Y	F E H	F E H	€	A FEE
F I	T U e f i	Y	I E I	I E I	€	A FEE
f i	V O e f j	Y	I B H	I B H	€	A FEE
f i	V O e e	Y	I B H	I B H	€	A FEE

A Ya VYf'8 Jgh'Vi hYX' @ UXg'f6 @ '% : 'K' ' \$ \$ L

	T { a ^ / A a a ^ }	O a ^ & a }	U c a o A a e } a ^ a ^ Z a D a H E O } a A a e } a ^ a ^ Z a D a H E U c a o A a e } a a }	Z a E a a	O) a A a } Z a E a a }	Z a E a a
F	P E G	Z	E E I	E E I	€	A FEE
G	P E G	Y	I E I	I E I	€	A FEE
H	P E I	Z	E E I	E E I	€	A FEE
I	P E I	Y	I E I	I E I	€	A FEE
í	O e e i	Z	E E I	E E I	€	A FEE
î	O e e i	Y	I E I	I E I	€	A FEE
ï	O e e i	Z	E E I	E E I	€	A FEE
ì	O e e i	Y	I E I	I E I	€	A FEE
J	w e e i	Z	E E I	E E I	€	A FEE
FE	w e e i	Y	F E G H	F E G H	€	A FEE
FF	w e e i	Z	E E I	E E I	€	A FEE
FG	w e e i	Y	F E G H	F E G H	€	A FEE
FH	T U e e j	Z	E E I G	E E I G	€	G E I
FI	T U e e j	Z	E E I G	E E I G	I I E	A FEE
f i	T U e e j	Y	I E I	I E I	€	A FEE
f i	w f e	Z	E E I	E E I	€	A FEE
f i	w f e	Y	F E G H	F E G H	€	A FEE
f i	w f f	Z	E E I	E E I	€	A FEE
FJ	w f f	Y	F E G H	F E G H	€	A FEE
GE	T U e f g	Z	E E I G	E E I G	€	G E I
GF	T U e f g	Z	E E I G	E E I G	I I E	A FEE
GG	T U e f g	Y	I E I	I E I	€	A FEE
GH	w f h	Z	E E I	E E I	€	A FEE
G	w f h	Y	F E G H	F E G H	€	A FEE
G	w f i	Z	E E I	E E I	€	A FEE
G	w f i	Y	F E G H	F E G H	€	A FEE
G	T U e f i	Z	E E I G	E E I G	€	f i E
G	T U e f i	Z	E E I G	E E I G	I I E	A FEE
GJ	T U e f i	Y	I E I	I E I	€	A FEE
HE	w f i	Z	E E I	E E I	€	A FEE
HF	w f i	Y	F E G H	F E G H	€	A FEE
HG	w f i	Z	E E I	E E I	€	A FEE
HH	w f i	Y	F E G H	F E G H	€	A FEE
HI	T U e f i	Z	E E I G	E E I G	€	f i E
H	T U e f i	Z	E E I G	E E I G	I I E	A FEE
H	T U e f i	Y	I E I	I E I	€	A FEE
H	V O e f j	Z	E E I G	E E I G	€	A FEE
H	V O e f j	Y	G G J I	G G J I	€	A FEE

Ö{ } }ä ^ K Q E ^{ }ä ä Ä[, ^{ }Ä{ }] È
Ö • ä } ^ K S ^{ }E ä d ä
R ä Ä ^{ } ä ^ K F H H I G ^{ } Ö i ^ E F
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Ø ò Ä È Ö E F
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A Ya Vyf 8 Jgf JVi hYX' @ UXg f6 @ '% : 'K]' \$L f7 cbf Jbi YXL

	T { } ^ { } Ä ä ^	Ö ä ^ & ä }	Ü c ä ö Ä ä } ä ä ^ ä ä ö () ä Ä ä } ä ä ^ ä ä ö () Ü c ä ö ä } & ä }		Ö) ä Ä ä } & ä }	ä ä ä
I	Ö e e i	Z	È È i G	È È i G	€	Ä F e e
Í	w e e i	Z	€	€	€	Ä F e e
Î	w e e i	Z	€	€	€	Ä F e e
İ	T Ü e e J	Z	È È i F	È È i F	€	G e i
ì	T Ü e e J	Z	È È i F	È È i F	İ İ È	Ä F e e
J	w F e	Z	€	€	€	Ä F e e
F€	w F F	Z	€	€	€	Ä F e e
FF	T Ü e F G	Z	È È i F	È È i F	€	G e i
FG	T Ü e F G	Z	È È i F	È È i F	İ İ È	Ä F e e
FH	w F H	Z	€	€	€	Ä F e e
FI	w F I	Z	€	€	€	Ä F e e
FÍ	T Ü e F i	Z	È È i F	È È i F	€	F İ È
fí	T Ü e F i	Z	È È i F	È È i F	İ İ È	Ä F e e
fİ	w F İ	Z	€	€	€	Ä F e e
fì	w F ì	Z	€	€	€	Ä F e e
FJ	T Ü e F J	Z	È È i F	È È i F	€	F İ È
G€	T Ü e F J	Z	È È i F	È È i F	İ İ È	Ä F e e
GF	V Ö e F J	Z	È È i J	È È i J	€	Ä F e e
GG	V Ö e G E	Z	È È i J	È È i J	€	Ä F e e

A Ya Vyf 8 Jgf JVi hYX' @ UXg f6 @ '% : 'K]' \$L

	T { } ^ { } Ä ä ^	Ö ä ^ & ä }	Ü c ä ö Ä ä } ä ä ^ ä ä ö () ä Ä ä } ä ä ^ ä ä ö () Ü c ä ö ä } & ä }		Ö) ä Ä ä } & ä }	ä ä ä
F	p e e G	Z	È È J i	È È J i	€	Ä F e e
G	p e e G	Y	È È J J	È È J J	€	Ä F e e
H	p e e i	Z	È È J i	È È J i	€	Ä F e e
I	p e e i	Y	È È J J	È È J J	€	Ä F e e
Í	Ö e e i	Z	È È i	È È i	€	Ä F e e
Î	Ö e e i	Y	È È e ö	È È e ö	€	Ä F e e
İ	Ö e e i	Z	È È i	È È i	€	Ä F e e
ì	Ö e e i	Y	È È e ö	È È e ö	€	Ä F e e
J	w e e i	Z	È È i i	È È i i	€	Ä F e e
F€	w e e i	Y	È È i	È È i	€	Ä F e e
FF	w e e i	Z	È È i i	È È i i	€	Ä F e e
FG	w e e i	Y	È È i	È È i	€	Ä F e e
FH	T Ü e e J	Z	È È G H	È È G H	€	G e i
FI	T Ü e e J	Z	È È G H	È È G H	İ İ È	Ä F e e
FÍ	T Ü e e J	Y	È È G F	È È G F	€	Ä F e e
fí	w F e	Z	È È i i	È È i i	€	Ä F e e
fİ	w F e	Y	È È i	È È i	€	Ä F e e
fì	w F F	Z	È È i i	È È i i	€	Ä F e e
FJ	w F F	Y	È È i	È È i	€	Ä F e e
G€	T Ü e F G	Z	È È G H	È È G H	€	G e i
GF	T Ü e F G	Z	È È G H	È È G H	İ İ È	Ä F e e
GG	T Ü e F G	Y	È È G F	È È G F	€	Ä F e e
GH	w F H	Z	È È i i	È È i i	€	Ä F e e
G	w F H	Y	È È i	È È i	€	Ä F e e
G	w F I	Z	È È i i	È È i i	€	Ä F e e
G	w F I	Y	È È i	È È i	€	Ä F e e
G	T Ü e F i	Z	È È G H	È È G H	€	F İ È
G	T Ü e F i	Z	È È G H	È È G H	İ İ È	Ä F e e
GJ	T Ü e F i	Y	È È G F	È È G F	€	Ä F e e

O[{ } a } ^ K O e ^ i a a ^ A [, ^ i / O [] E
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A Ya Vyf'8 jgh|Vi hyX' @ UXg'f6 @ '% : 'K|J' \$L'f7 cbljbi YXL

	T ^ { a ^ i / S e a ^ }	O ä ^ & c a }	Ù c e o A e } a r a ^ z a D e i i i O) a A T e s } a r a ^ z a D e i i i Ò c e o S (& e e i) z a E A a	Ò) a A S (& e e i) z a E A a
HE	wEfi	Z	ÛÛÛÛ	ÛÛÛÛ
HF	wEfi	Y	ÛÛÛÛ	ÛÛÛÛ
HG	wEfi	Z	ÛÛÛÛ	ÛÛÛÛ
HH	wEfi	Y	ÛÛÛÛ	ÛÛÛÛ
HI	T Úefi	Z	ËËËË	ËËËË
Hí	T Úefi	Z	ËËËË	ÏÏÏÏ
Hï	T Úefi	Y	ËËËË	ËËËË
Hï	VÓEFJ	Z	ËËËË	ËËËË
Hï	VÓEFJ	Y	ËËËË	ËËËË
HJ	VÓEGE	Z	ÛÛÛÛ	ÛÛÛÛ
l€	VÓEGE	Y	ÛÛÛÛ	ÛÛÛÛ

A Ya Vyf'8 jgh|Vi hyX' @ UXg'f6 @ '% : 'K|J' * \$L

	T ^ { a ^ i / S e a ^ }	O ä ^ & c a }	Ù c e o A e } a r a ^ z a D e i i i O) a A T e s } a r a ^ z a D e i i i Ò c e o S (& e e i) z a E A a	Ò) a A S (& e e i) z a E A a
F	P EEG	Z	ÛÛÛÛ	ÛÛÛÛ
G	P EEG	Y	ËËËË	ËËËË
H	P EEI	Z	ÛÛÛÛ	ÛÛÛÛ
I	P EEI	Y	ËËËË	ËËËË
í	Öeeí	Z	ÛÛÛÛ	ÛÛÛÛ
ï	Öeeí	Y	ËËËË	ËËËË
ï	Öeeí	Z	ÛÛÛÛ	ÛÛÛÛ
ï	Öeeí	Y	ËËËË	ËËËË
J	wEEi	Z	ÛÛÛÛ	ÛÛÛÛ
F€	wEEi	Y	ËËËË	ËËËË
FF	wEEi	Z	ÛÛÛÛ	ÛÛÛÛ
FG	wEEi	Y	ËËËË	ËËËË
FH	T ÚEeJ	Z	ËËËË	ËËËË
Fi	T ÚEeJ	Z	ËËËË	ÏÏÏÏ
Fí	T ÚEeJ	Y	ËËËË	ËËËË
Fï	wE€	Z	ÛÛÛÛ	ÛÛÛÛ
Fï	wE€	Y	ËËËË	ËËËË
Fï	wEFF	Z	ÛÛÛÛ	ÛÛÛÛ
FJ	wEFF	Y	ËËËË	ËËËË
G€	T ÚEFG	Z	ËËËË	ËËËË
Gf	T ÚEFG	Z	ËËËË	ÏÏÏÏ
Gg	T ÚEFG	Y	ËËËË	ËËËË
Gh	wEFH	Z	ÛÛÛÛ	ÛÛÛÛ
G	wEFH	Y	ËËËË	ËËËË
G	wEfi	Z	ÛÛÛÛ	ÛÛÛÛ
G	wEfi	Y	ËËËË	ËËËË
G	T ÚEfí	Z	ËËËË	ËËËË
G	T ÚEfí	Z	ËËËË	ÏÏÏÏ
GJ	T ÚEfí	Y	ËËËË	ËËËË
H€	wEfi	Z	ÛÛÛÛ	ÛÛÛÛ
HF	wEfi	Y	ËËËË	ËËËË
HG	wEfi	Z	ÛÛÛÛ	ÛÛÛÛ
HH	wEfi	Y	ËËËË	ËËËË
HI	T ÚEfí	Z	ËËËË	ËËËË
Hí	T ÚEfí	Z	ËËËË	ÏÏÏÏ
Hï	T ÚEfí	Y	ËËËË	ËËËË
Hï	VÓEFJ	Z	ËËËË	ËËËË

Ö{ }ä^ K ÖÄ Ä [, ^/Ö{ }É
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 İ KÉÄT
 Ö@&^äÖ^ KÉ

A Ya Vyf'8 jgffjvi hyx' @ UXg'f6 @ '% : 'KJ' * \$L'f7 cbjibi YXL

	T^{ ä^/Ää^}	Öä^&ä}	ÜcäÖÄ ä} ä ä^ ZäDä(Ö) äÄ ä} ä ä^ ZäDä(Ö) ÜcäÖÄ &ä} Zä Ä á	Ö) äÄ &ä} Zä Ä á		
Hİ	VÖEFJ	Y	EGEG	EGEG	€	Ä FEE
HJ	VÖEGE	Z	HIG	HIG	€	Ä FEE
I€	VÖEGE	Y	HII	HII	€	Ä FEE

A Ya Vyf'8 jgffjvi hyx' @ UXg'f6 @ '% : 'KJ' - \$L

	T^{ ä^/Ää^}	Öä^&ä}	ÜcäÖÄ ä} ä ä^ ZäDä(Ö) äÄ ä} ä ä^ ZäDä(Ö) ÜcäÖÄ &ä} Zä Ä á	Ö) äÄ &ä} Zä Ä á		
F	PEEG	Y	€	€	€	Ä FEE
G	PEEI	Y	€	€	€	Ä FEE
H	ÖEEI	Y	EEEG	EEEG	€	Ä FEE
I	ÖEEI	Y	EEEG	EEEG	€	Ä FEE
İ	WEEI	Y	EEH	EEH	€	Ä FEE
Î	WEEI	Y	EEH	EEH	€	Ä FEE
Ï	TÜEEJ	Y	EEIG	EEIG	€	Ä FEE
İ	WFE€	Y	EEH	EEH	€	Ä FEE
J	WFFF	Y	EEH	EEH	€	Ä FEE
F€	TÜEFG	Y	EEIG	EEIG	€	Ä FEE
FF	WFH	Y	EEH	EEH	€	Ä FEE
FG	WFI	Y	EEH	EEH	€	Ä FEE
FH	TÜEFİ	Y	EEIG	EEIG	€	Ä FEE
FI	WFI	Y	EEH	EEH	€	Ä FEE
Fİ	WFI	Y	EEH	EEH	€	Ä FEE
FÎ	TÜEFİ	Y	EEIG	EEIG	€	Ä FEE
FÏ	VÖEFJ	Y	EEII	EEII	€	Ä FEE
Fİ	VÖEGE	Y	EEII	EEII	€	Ä FEE

A Ya Vyf'8 jgffjvi hyx' @ UXg'f6 @ '% : 'KJ' %&\$L

	T^{ ä^/Ää^}	Öä^&ä}	ÜcäÖÄ ä} ä ä^ ZäDä(Ö) äÄ ä} ä ä^ ZäDä(Ö) ÜcäÖÄ &ä} Zä Ä á	Ö) äÄ &ä} Zä Ä á		
F	PEEG	Z	EEH	EEH	€	Ä FEE
G	PEEG	Y	EEGJ	EEGJ	€	Ä FEE
H	PEEI	Z	EEH	EEH	€	Ä FEE
I	PEEI	Y	EEGJ	EEGJ	€	Ä FEE
İ	ÖEEI	Z	EEJH	EEJH	€	Ä FEE
Î	ÖEEI	Y	EEEG	EEEG	€	Ä FEE
Ï	ÖEEI	Z	EEJH	EEJH	€	Ä FEE
İ	ÖEEI	Y	EEEG	EEEG	€	Ä FEE
J	WEEI	Z	EEI	EEI	€	Ä FEE
F€	WEEI	Y	EEIH	EEIH	€	Ä FEE
FF	WEEI	Z	EEI	EEI	€	Ä FEE
FG	WEEI	Y	EEIH	EEIH	€	Ä FEE
FH	TÜEEJ	Z	FEJF	FEJF	€	GEI
FI	TÜEEJ	Z	FEJF	FEJF	İİİ	Ä FEE
Fİ	TÜEEJ	Y	EEGİ	EEGİ	€	Ä FEE
FÎ	WFE€	Z	EEI	EEI	€	Ä FEE
FÏ	WFE€	Y	EEIH	EEIH	€	Ä FEE
Fİ	WFFF	Z	EEI	EEI	€	Ä FEE
FJ	WFFF	Y	EEIH	EEIH	€	Ä FEE
GE	TÜEFG	Z	FEJF	FEJF	€	GEI
GF	TÜEFG	Z	FEJF	FEJF	İİİ	Ä FEE
GG	TÜEFG	Y	EEGİ	EEGİ	€	Ä FEE
GH	WFH	Z	EEI	EEI	€	Ä FEE
G	WFH	Y	EEIH	EEIH	€	Ä FEE

0[{] a^ K Q^ A[a^ A[, A[A[] E
 O^ a} A K S^ P^ E a} ^ d a
 P a A^ { a^ K F H H I G ' O i ' E
 T [a^ A^ a^ K H E G H E O @ H ^ P a l a a t l a

o^ a A E O E F
 i K E A U T
 O @ & ^ a A O K E

A Ya Vyf 8 jghjVi hYX' @ UXg'f6 @ '% : 'K]' % & \$ L' f7 cbhji YXL

	T^ { a^ / A^ a^ }	O a^ & a }	U c a o A a } a^ a^ Z a D a H H O) a A a } a^ a^ Z a D a H H E U c a o A a } a^ a^ }	Z a E a a }	O) a A a } a^ a^ }	Z a E a a }
G	W F I	Z	E I I	E I I	€	A F E E
G	W F I	Y	E E I H	E E I H	€	A F E E
G	T U E F I	Z	F E G J F	F E G J F	€	F I E E
G	T U E F I	Z	F E G J F	F E G J F	i i E E	A F E E
GJ	T U E F I	Y	E G H I	E G H I	€	A F E E
H E	W F I	Z	E I I	E I I	€	A F E E
H F	W F I	Y	E E I H	E E I H	€	A F E E
H G	W F I	Z	E I I	E I I	€	A F E E
H H	W F I	Y	E E I H	E E I H	€	A F E E
H I	T U E F I	Z	F E G J F	F E G J F	€	F I E E
H I	T U E F I	Z	F E G J F	F E G J F	i i E E	A F E E
H I	T U E F I	Y	E G H I	E G H I	€	A F E E
H I	V O E F J	Z	E I G	E I G	€	A F E E
H I	V O E F J	Y	E I I	E I I	€	A F E E
H U	V O E G E	Z	F E G F	F E G F	€	A F E E
I E	V O E G E	Y	E G E G	E G E G	€	A F E E

A Ya Vyf 8 jghjVi hYX' @ UXg'f6 @ '&\$: 'K]' % \$ L

	T^ { a^ / A^ a^ }	O a^ & a }	U c a o A a } a^ a^ Z a D a H H O) a A a } a^ a^ Z a D a H H E U c a o A a } a^ a^ }	Z a E a a }	O) a A a } a^ a^ }	Z a E a a }
F	P E E G	Z	G E J I	G E J I	€	A F E E
G	P E E G	Y	E E G J	E E G J	€	A F E E
H	P E E I	Z	G E J I	G E J I	€	A F E E
I	P E E I	Y	E E G J	E E G J	€	A F E E
I	O E E I	Z	F E I	F E I	€	A F E E
I	O E E I	Y	E E E G	E E E G	€	A F E E
I	O E E I	Z	F E I	F E I	€	A F E E
I	O E E I	Y	E E E G	E E E G	€	A F E E
J	W E E I	Z	E I I	E I I	€	A F E E
F E	W E E I	Y	E H I	E H I	€	A F E E
F F	W E E I	Z	E I I	E I I	€	A F E E
F G	W E E I	Y	E H I	E H I	€	A F E E
F H	T U E E J	Z	G E H I	G E H I	€	G E I
F I	T U E E J	Z	G E H I	G E H I	i i E E	A F E E
F I	T U E E J	Y	E E G J F	E E G J F	€	A F E E
F I	W F E	Z	E I I	E I I	€	A F E E
F I	W F E	Y	E H I	E H I	€	A F E E
F I	W F F	Z	E I I	E I I	€	A F E E
F J	W F F	Y	E H I	E H I	€	A F E E
G E	T U E F G	Z	G E H I	G E H I	€	G E I
G F	T U E F G	Z	G E H I	G E H I	i i E E	A F E E
G G	T U E F G	Y	E E G J F	E E G J F	€	A F E E
G H	W F H	Z	E I I	E I I	€	A F E E
G	W F H	Y	E H I	E H I	€	A F E E
G	W F I	Z	E I I	E I I	€	A F E E
G	W F I	Y	E H I	E H I	€	A F E E
G	T U E F I	Z	G E H I	G E H I	€	F I E E
G	T U E F I	Z	G E H I	G E H I	i i E E	A F E E
GJ	T U E F I	Y	E E G J F	E E G J F	€	A F E E
H E	W F I	Z	E I I	E I I	€	A F E E
H F	W F I	Y	E H I	E H I	€	A F E E
H G	W F I	Z	E I I	E I I	€	A F E E

Ō[{] ə ˆ K OX ʌ ɔə ʌ [ɔ ʌ / ɔ] É
 Ó ˆ ɔ } ʌ K S ʌ p ɛ ə ʌ d ə ʌ
 ŕ ʌ ʌ ʌ ˆ { ʌ ʌ K F H H I I G ʌ ʌ Ó ʌ ʌ ʌ F
 T [ʌ ʌ / p ə ʌ ʌ K H E G H I É Ō @ : : ʌ ʌ P ʌ ʌ ʌ ʌ ʌ ʌ ʌ ʌ

ʌ ʌ ʌ É Ō E G F
 İ H E ʌ Ű T
 Ó @ & ʌ ʌ ʌ Ó ʌ H E

A Ya VYf 8]gfh]Vi hYX' @ UXg'f6 @ ' && : 'K]& \$ L'f7 cbh]bi YXL

	T ^ { ʌ ʌ / ʌ ʌ ʌ ʌ }	Ō ʌ ʌ ʌ ʌ }	Ű ʌ ʌ ʌ ʌ ʌ } ʌ ʌ ʌ ʌ ʌ ʌ ʌ ʌ ʌ } ʌ ʌ ʌ ʌ ʌ ʌ ʌ ʌ ʌ }	ʌ ʌ ʌ ʌ ʌ ʌ } ʌ ʌ ʌ ʌ ʌ ʌ ʌ ʌ ʌ }	ʌ ʌ ʌ ʌ ʌ ʌ ʌ ʌ ʌ }	ʌ ʌ ʌ ʌ ʌ ʌ ʌ ʌ ʌ }
Fİ	WəFə	Z	Ėİİ	Ėİİ	€	Ă FEE
Fİ	WəFə	Y	ĖH I	ĖH I	€	Ă FEE
Fİ	WəFF	Z	Ėİİ	Ėİİ	€	Ă FEE
FJ	WəFF	Y	ĖH I	ĖH I	€	Ă FEE
GĖ	T Ű ʌ ʌ F G	Z	GĖH	GĖH	€	GĖİ
GF	T Ű ʌ ʌ F G	Z	GĖH	GĖH	İ İ Ė	Ă FEE
GG	T Ű ʌ ʌ F G	Y	FĖG J F	FĖG J F	€	Ă FEE
GH	WəFH	Z	Ėİİ	Ėİİ	€	Ă FEE
G	WəFH	Y	ĖH I	ĖH I	€	Ă FEE
Ĝ	WəFİ	Z	Ėİİ	Ėİİ	€	Ă FEE
Ĝ	WəFİ	Y	ĖH I	ĖH I	€	Ă FEE
Ĝ	T Ű ʌ ʌ F İ	Z	GĖH	GĖH	€	F İ Ė
Ĝ	T Ű ʌ ʌ F İ	Z	GĖH	GĖH	İ İ Ė	Ă FEE
GJ	T Ű ʌ ʌ F İ	Y	FĖG J F	FĖG J F	€	Ă FEE
HĖ	WəFİ	Z	Ėİİ	Ėİİ	€	Ă FEE
HF	WəFİ	Y	ĖH I	ĖH I	€	Ă FEE
HG	WəFİ	Z	Ėİİ	Ėİİ	€	Ă FEE
HH	WəFİ	Y	ĖH I	ĖH I	€	Ă FEE
H	T Ű ʌ ʌ F İ	Z	GĖH	GĖH	€	F İ Ė
H	T Ű ʌ ʌ F İ	Z	GĖH	GĖH	İ İ Ė	Ă FEE
H	T Ű ʌ ʌ F İ	Y	FĖG J F	FĖG J F	€	Ă FEE
H	VŌ ʌ ʌ F J	Z	GĖF	GĖF	€	Ă FEE
H	VŌ ʌ ʌ F J	Y	FĖG F H	FĖG F H	€	Ă FEE
HJ	VŌ ʌ ʌ G Ė	Z	ĖH I	ĖH I	€	Ă FEE
I ʌ	VŌ ʌ ʌ G Ė	Y	ĖG	ĖG	€	Ă FEE

A Ya VYf 8]gfh]Vi hYX' @ UXg'f6 @ ' & : 'K]& \$ L

	T ^ { ʌ ʌ / ʌ ʌ ʌ ʌ }	Ō ʌ ʌ ʌ ʌ }	Ű ʌ ʌ ʌ ʌ ʌ } ʌ ʌ ʌ ʌ ʌ ʌ ʌ ʌ ʌ }	ʌ ʌ ʌ ʌ ʌ ʌ } ʌ ʌ ʌ ʌ ʌ ʌ ʌ ʌ ʌ }	ʌ ʌ ʌ ʌ ʌ ʌ ʌ ʌ ʌ }	ʌ ʌ ʌ ʌ ʌ ʌ ʌ ʌ ʌ }
F	PĖEG	Z	ĖH H	ĖH H	€	Ă FEE
G	PĖEG	Y	FĖG J	FĖG J	€	Ă FEE
H	PĖE I	Z	ĖH H	ĖH H	€	Ă FEE
I	PĖE I	Y	FĖG J	FĖG J	€	Ă FEE
İ	Ō ʌ ʌ Ė İ	Z	Ė J H	Ė J H	€	Ă FEE
İ	Ō ʌ ʌ Ė İ	Y	FĖG	FĖG	€	Ă FEE
İ	Ō ʌ ʌ Ė İ	Z	Ė J H	Ė J H	€	Ă FEE
İ	Ō ʌ ʌ Ė İ	Y	FĖG	FĖG	€	Ă FEE
J	WĖ ʌ ʌ Ė İ	Z	Ė İ İ	Ė İ İ	€	Ă FEE
FĖ	WĖ ʌ ʌ Ė İ	Y	FĖ Ė İ H	FĖ Ė İ H	€	Ă FEE
FF	WĖ ʌ ʌ Ė İ	Z	Ė İ İ	Ė İ İ	€	Ă FEE
FG	WĖ ʌ ʌ Ė İ	Y	FĖ Ė İ H	FĖ Ė İ H	€	Ă FEE
FH	T Ű ʌ ʌ Ė J	Z	FĖG J F	FĖG J F	€	GĖİ
FI	T Ű ʌ ʌ Ė J	Z	FĖG J F	FĖG J F	İ İ Ė	Ă FEE
Fİ	T Ű ʌ ʌ Ė J	Y	GĖH	GĖH	€	Ă FEE
Fİ	WəFə	Z	Ėİİ	Ėİİ	€	Ă FEE
Fİ	WəFə	Y	FĖ Ė İ H	FĖ Ė İ H	€	Ă FEE
Fİ	WəFF	Z	Ėİİ	Ėİİ	€	Ă FEE
FJ	WəFF	Y	FĖ Ė İ H	FĖ Ė İ H	€	Ă FEE
GĖ	T Ű ʌ ʌ F G	Z	FĖG J F	FĖG J F	€	GĖİ
GF	T Ű ʌ ʌ F G	Z	FĖG J F	FĖG J F	İ İ Ė	Ă FEE
GG	T Ű ʌ ʌ F G	Y	GĖH	GĖH	€	Ă FEE
GH	WəFH	Z	Ėİİ	Ėİİ	€	Ă FEE

0[{] a } ^ K O E A [, ^ / O [] E
 O a } s K S ^ P E a d a
 P a } ^ a K F H H I G ' O i ' e
 T [a } P a } ^ K H E G H E O @ : : ^ P a l a } t l a

o v a A E O E F
 i K e A U T
 O @ & ^ a O k E

A Ya Vyf '8 jghjVi hYX' @ UXg'f6 @ ' & ' : ' K J' ' \$ L' T' cbhji YXL

	T ^ { a ^ / A e a ^ }	O a ^ & a }	U c a o A e } a ^ a ^ Z a D e () a A e } a ^ a ^ Z a D e U c a o S } & a }	Z a E a a }	O) a S } & a }	Z a E a a }
FJ	W E F F	Y	E H I	E H I	€	A F E E
GE	T U E F G	Z	E G H	E G H	€	G E H
GF	T U E F G	Z	E G H	E G H	i i E	A F E E
GG	T U E F G	Y	F E G J F	F E G J F	€	A F E E
GH	W E F H	Z	E H I	E H I	€	A F E E
G	W E F H	Y	E H I	E H I	€	A F E E
G	W E F I	Z	E H I	E H I	€	A F E E
G	W E F I	Y	E H I	E H I	€	A F E E
G	T U E F I	Z	E G H	E G H	€	F I E
G	T U E F I	Z	E G H	E G H	i i E	A F E E
GJ	T U E F I	Y	F E G J F	F E G J F	€	A F E E
HE	W E F I	Z	E H I	E H I	€	A F E E
HF	W E F I	Y	E H I	E H I	€	A F E E
HG	W E F I	Z	E H I	E H I	€	A F E E
HH	W E F I	Y	E H I	E H I	€	A F E E
HI	T U E F I	Z	E G H	E G H	€	F I E
H	T U E F I	Z	E G H	E G H	i i E	A F E E
H	T U E F I	Y	F E G J F	F E G J F	€	A F E E
H	V O E F J	Z	E H I	E H I	€	A F E E
H	V O E F J	Y	E G	E G	€	A F E E
HJ	V O E G E	Z	E G E F	E G E F	€	A F E E
I €	V O E G E	Y	F E G H	F E G H	€	A F E E

A Ya Vyf '8 jghjVi hYX' @ UXg'f6 @ ' & ' : ' K g ' \$ L

	T ^ { a ^ / A e a ^ }	O a ^ & a }	U c a o A e } a ^ a ^ Z a D e () a A e } a ^ a ^ Z a D e U c a o S } & a }	Z a E a a }	O) a S } & a }	Z a E a a }
F	P E E G	Z	E E E G	E E E G	€	A F E E
G	P E E I	Z	E E E G	E E E G	€	A F E E
H	O E E I	Z	E H I	E H I	€	A F E E
I	O E E I	Z	E H I	E H I	€	A F E E
I	W E E I	Z	€	€	€	A F E E
I	W E E I	Z	€	€	€	A F E E
I	T U E E J	Z	E H I	E H I	€	G E H
I	T U E E J	Z	E H I	E H I	i i E	A F E E
J	W E F E	Z	€	€	€	A F E E
FE	W E F F	Z	€	€	€	A F E E
FF	T U E F G	Z	E H I	E H I	€	G E H
FG	T U E F G	Z	E H I	E H I	i i E	A F E E
FH	W E F H	Z	€	€	€	A F E E
FI	W E F I	Z	€	€	€	A F E E
F	T U E F I	Z	E H I	E H I	€	F I E
F	T U E F I	Z	E H I	E H I	i i E	A F E E
F	W E F I	Z	€	€	€	A F E E
F	W E F I	Z	€	€	€	A F E E
FJ	T U E F I	Z	E H I	E H I	€	F I E
GE	T U E F I	Z	E H I	E H I	i i E	A F E E
GF	V O E F J	Z	E H I	E H I	€	A F E E
GG	V O E G E	Z	E H I	E H I	€	A F E E

A Ya Vyf '8 jghjVi hYX' @ UXg'f6 @ ' & ' : ' K g ' \$ L

	T ^ { a ^ / A e a ^ }	O a ^ & a }	U c a o A e } a ^ a ^ Z a D e () a A e } a ^ a ^ Z a D e U c a o S } & a }	Z a E a a }	O) a S } & a }	Z a E a a }
F	P E E G	Z	E I G	E I G	€	A F E E

U O O H O A ^ . a } A I E E M M M O K a l a l a J U O E V B V A U O S Q Y A A H G H E O @ : : ^ P a l a } t l a G E H E O E F I A E G ' U T E H

0[(] a) ^ K Q a ^ a a A [, ^ A O [] E
 O ^ a } ^ K S ^ P E a d a
 P a A ^ { a ^ K F H H I G ^ O i ^ F
 T [a ^ P a ^ K H E G H E O @ H ^ P a l a a t l a

o a A E O E F
 i K E A U T
 O @ & ^ a A O K E

A Ya Vyf'8]gh]Vi hYX' @ UXg'f6 @ ' & : ' Kg * \$L'f' cb]jbi YXL

	T ^ { a ^ / A a ^ }	O a ^ & a }	U c a O A a } a ^ a ^ Z a D (H) a A a } a ^ a ^ Z a D (H) U c a O A a } a ^ a ^ Z a D (H) a A a }	O) a A a } a ^ a ^ Z a D (H) a A a }	O) a A a } a ^ a ^ Z a D (H) a A a }	O) a A a } a ^ a ^ Z a D (H) a A a }
FE	WEEI	Y	EH I	EH I	€	A FEE
FF	WEEI	Z	EH H	EH H	€	A FEE
FG	WEEI	Y	EH I	EH I	€	A FEE
FH	T UEU	Z	EHI	EHI	€	GEI
FI	T UEU	Z	EHI	EHI	I I E	A FEE
FI	T UEU	Y	EH FG	EH FG	€	A FEE
FI	WEFE	Z	EH H	EH H	€	A FEE
FI	WEFE	Y	EH I	EH I	€	A FEE
FI	WEFF	Z	EH H	EH H	€	A FEE
FJ	WEFF	Y	EH I	EH I	€	A FEE
GE	T UEFG	Z	EHI	EHI	€	GEI
GF	T UEFG	Z	EHI	EHI	I I E	A FEE
GG	T UEFG	Y	EH FG	EH FG	€	A FEE
GH	WEFH	Z	EH H	EH H	€	A FEE
G	WEFH	Y	EH I	EH I	€	A FEE
G	WEFI	Z	EH H	EH H	€	A FEE
G	WEFI	Y	EH I	EH I	€	A FEE
G	T UEFI	Z	EHI	EHI	€	FI E
G	T UEFI	Z	EHI	EHI	I I E	A FEE
GJ	T UEFI	Y	EH FG	EH FG	€	A FEE
HE	WEFI	Z	EH H	EH H	€	A FEE
HF	WEFI	Y	EH I	EH I	€	A FEE
HG	WEFI	Z	EH H	EH H	€	A FEE
HH	WEFI	Y	EH I	EH I	€	A FEE
HI	T UEFI	Z	EHI	EHI	€	FI E
HI	T UEFI	Z	EHI	EHI	I I E	A FEE
HI	T UEFI	Y	EH FG	EH FG	€	A FEE
HI	VOEFJ	Z	EHI	EHI	€	A FEE
HI	VOEFJ	Y	EH I	EH I	€	A FEE
HJ	VOEGE	Z	EH F	EH F	€	A FEE
I €	VOEGE	Y	EH F	EH F	€	A FEE

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EXHIBIT 3



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

www.ct.gov/csc

April 1, 2019

Kristina Cottone
Real Estate Specialist
Smartlink, LLC
85 Rangeway Road
Building 3, Suite 102
North Billerica, MA 01862

RE: **EM-AT&T-014-190211** – AT&T Mobility, LLC notice of intent to modify an existing telecommunications facility located at 4 Beaver Road, Branford, Connecticut.

Dear Ms. Cottone:

The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies with the following conditions:

1. Prior to AT&T's antenna installation, the antenna mount modifications shall be installed in accordance with the Post-Modification Mount Analysis Report prepared by Infinigy, dated January 31, 2019, and stamped and signed by Joseph R. Johnston;
2. Within 45 days following completion of equipment installation, AT&T shall provide documentation that its installation complied with the recommendations of the Post-Modification Mount Analysis Report;
3. Any deviation from the proposed modification as specified in this notice and supporting materials with the Council shall render this acknowledgement invalid;
4. Any material changes to this modification as proposed shall require the filing of a new notice with the Council;
5. Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
6. Any nonfunctioning antenna and associated antenna mounting equipment on this facility owned and operated by AT&T shall be removed within 60 days of the date the antenna ceased to function;
7. The validity of this action shall expire one year from the date of this letter; and
8. The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration.

The proposed modifications including the placement of all necessary equipment and shelters within the tower compound are to be implemented as specified here and in your notice dated January 31, 2019, and additional information received February 18, 2019 and March 21, 2019. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site by any

dimension, increase noise levels at the tower site boundary by six decibels or more, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standards adopted by the Federal Communications Commission pursuant to Section 704 of the Telecommunications Act of 1996 and by the state Department of Energy and Environmental Protection pursuant to Connecticut General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below state and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Thank you for your attention and cooperation.

Sincerely,



Melanie A. Bachman
Executive Director

MAB/IN/emr

- c: The Honorable James B. Cosgrove, First Selectman, Town of Branford
Harry Smith, Town Planner, Town of Branford
American Tower Corporation, Tower Operator
Joyce Tipping (c/o Trustees), Property Owner



Permit # B-19-00517
M/B/L B07-000-006-00043
Date Issued 05/20/2019

**Town of Branford
BUILDING PERMIT**

1019 MAIN STREET . PO BOX 150 . BRANFORD CT . 06045 . PHONE 203 315-0674 . FAX 203 315-2188

Owner TIPPING JOYCE N ET ALS (CO TRUSTEES) C/O JOYCE TIPPING **Phone:**
Address 36 GOODSSELL POINT RD
BRANFORD, CT 06405
Contractor Ironbo Inc
197 Firenze Street
Northvale, NJ 07647
Phone (860) 670-9068

Applicant Ironbo Inc **Phone:**(860) 670-9068
Address 197 Firenze Street
Tax ID No. 601
Type/Group: E170 TELECOMMUNICATIONS- ANTENNA
Location: 4-8 BEAVER RD

Approx Total Sq. Ft

The undersigned hereby applies for permission to construct the Project in compliance with the laws and building codes and regulations of the State of Connecticut, and the Town of Branford as set forth in the accompanying drawings and specifications in so far as the same do not conflict with the aforesaid State and Town laws and building regulations.

Additional Conditions:

Work on existing cell tower, removing 3 existing antennas, removing 6 existing remote radio units, add 6 new antennas, add 6 new remote radio units and add 1 dc squid.

Estimated Cost \$ 25,000.00

Payments		
05/15/2019	B-Plans Scan/Microfilm (Documents)	\$2.00
05/15/2019	B-State Education	\$6.50
05/15/2019	B-Electrical	\$306.00
05/15/2019	B-Plans Scan/Microfilm (Drawings)	\$22.00
	TOTAL	\$336.50

APPROVED

**Anthony B Cinicola
Building Official**

Signature of Applicant

Name(print)

NOTE: All inspections must be scheduled with Building Department personnel. No inspection requests will be accepted by voice mail.

Permit numbers will be required when requesting any inspections either in person or by telephone with Building Department personnel.

EXHIBIT 4

4-8 BEAVER RD

Location 4-8 BEAVER RD

Mblu B07/000 006/ 00043/ /

Acct# 008882

Owner TIPPING JOYCE N ET ALS (CO TRUSTEES)

Assessment \$537,570

Appraisal \$767,580

PID 601

Building Count 6

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2019	\$299,970	\$467,610	\$767,580
Assessment			
Valuation Year	Improvements	Land	Total
2019	\$210,210	\$327,360	\$537,570

Owner of Record

Owner TIPPING JOYCE N ET ALS (CO TRUSTEES)
Co-Owner C/O JOYCE TIPPING
Address 36 GOODSSELL POINT RD
 BRANFORD, CT 06405

Sale Price \$0
Certificate
Book & Page 1149/0822
Sale Date 12/26/2013
Instrument 25

Ownership History

Ownership History					
Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
TIPPING JOYCE N ET ALS (CO TRUSTEES)	\$0		1149/0822	25	12/26/2013
TIPPING JOYCE N ET ALS (CO TRSTES)	\$0		1127/0558	25	03/05/2013
TIPPING JOYCE N ET ALS (CO TRSTES)	\$0		1012/0883	29	05/22/2008
TIPPING LEROY G REV TRST + VERA	\$0		0554/0406		08/10/1993
TIPPING LEROY G + VERA R	\$0		0147/0186		

Building Information

Building 1 : Section 1

Building Photo

Year Built: 1950
Living Area: 7,700
Replacement Cost: \$380,493
Building Percent Good: 30
Replacement Cost Less Depreciation: \$114,100

Building Attributes

Field	Description
STYLE	Lt. Industrial
MODEL	Ind/Comm
Grade	C -
Stories:	1
Occupancy	4
Exterior Wall 1	Concr/Cinder
Exterior Wall 2	Vinyl Siding
Roof Structure	Flat
Roof Cover	T&G/Rubber
Interior Wall 1	Minim/Masonry
Interior Wall 2	
Interior Floor 1	Minimum/Plywd
Interior Floor 2	Concr-Finished
Heating Fuel	Gas
Heating Type	Forced Air-Duc
AC Type	None
Bldg Use	MFRG MDL96
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	0400
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEILING ONLY
Rooms/Prtns	AVERAGE
Wall Height	14
% Comn Wall	0

Building 2 : Section 1

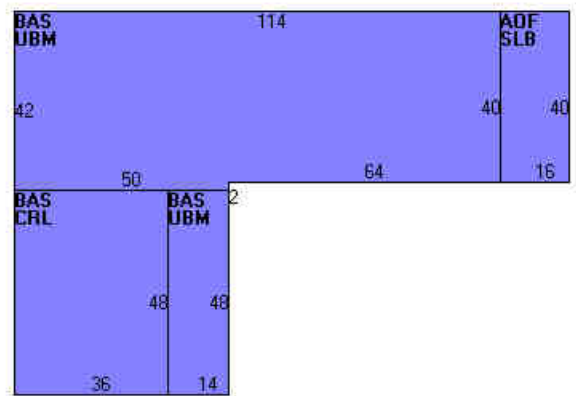
Year Built: 1997
Living Area: 192
Replacement Cost: \$13,925
Building Percent Good: 83
Replacement Cost Less Depreciation: \$11,600

Building Photo



(<http://images.vgsi.com/photos/BranfordCTPhotos/\A00\02\94\33.jpg>)

Building Layout



(http://images.vgsi.com/photos/BranfordCTPhotos//Sketches/601_601.jpg)

Building Sub-Areas (sq ft)			<u>Legend</u>
Code	Description	Gross Area	Living Area
BAS	First Floor	7,060	7,060
AOF	Office	640	640
CRL	Crawl Space	1,728	0
SLB	Slab	640	0
UBM	Basement, Unfinished	5,332	0
		15,400	7,700

Building Attributes : Bldg 2 of 6

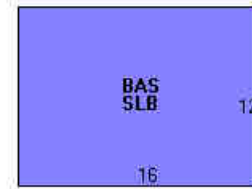
Field	Description
STYLE	Warehouse
MODEL	Ind/Comm
Grade	B
Stories:	1
Occupancy	1
Exterior Wall 1	Pre-cast Concr
Exterior Wall 2	
Roof Structure	Gable/Hip
Roof Cover	Concrete Tile
Interior Wall 1	Minim/Masonry
Interior Wall 2	
Interior Floor 1	Concr-Finished
Interior Floor 2	
Heating Fuel	Electric
Heating Type	Hot Air-no Duc
AC Type	Heat Pump
Bldg Use	MFRG MDL96
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	0400
Heat/AC	HEAT/AC PKGS
Frame Type	LT STEEL
Baths/Plumbing	NONE
Ceiling/Wall	CEILING ONLY
Rooms/Prtns	AVERAGE
Wall Height	10
% Comn Wall	0

Building Photo



(<http://images.vgsi.com/photos/BranfordCTPhotos/\00\01\58\46.jpg>)

Building Layout



(http://images.vgsi.com/photos/BranfordCTPhotos//Sketches/601_13622.jp)

Building Sub-Areas (sq ft)			<u>Legend</u>
Code	Description	Gross Area	Living Area
BAS	First Floor	192	192
SLB	Slab	192	0
		384	192

Building 3 : Section 1

Year Built: 1997
Living Area: 112
Replacement Cost: \$7,560
Building Percent Good: 83
Replacement Cost
Less Depreciation: \$6,300

Building Attributes : Bldg 3 of 6

Field	Description
STYLE	Warehouse
MODEL	Ind/Comm

Grade	B
Stories:	1
Occupancy	1
Exterior Wall 1	Precast Panel
Exterior Wall 2	
Roof Structure	Gable/Hip
Roof Cover	T&G/Rubber
Interior Wall 1	Minim/Masonry
Interior Wall 2	
Interior Floor 1	Concr-Finished
Interior Floor 2	
Heating Fuel	Electric
Heating Type	Hot Air-no Duc
AC Type	Heat Pump
Bldg Use	MFRG MDL96
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	0400
Heat/AC	HEAT/AC PKGS
Frame Type	LT STEEL
Baths/Plumbing	NONE
Ceiling/Wall	CEILING ONLY
Rooms/Prtns	AVERAGE
Wall Height	9
% Comn Wall	0

Building Photo



(<http://images.vgsi.com/photos/BranfordCTPhotos/\00\01\58\47.jpg>)

Building Layout



(http://images.vgsi.com/photos/BranfordCTPhotos//Sketches/601_13623.jp)

Building Sub-Areas (sq ft)			<u>Legend</u>
Code	Description	Gross Area	Living Area
BAS	First Floor	112	112
SLB	Slab	112	0
		224	112

Building 4 : Section 1

Year Built: 1974
Living Area: 552
Replacement Cost: \$24,250
Building Percent Good: 40
Replacement Cost Less Depreciation: \$9,700

Building Attributes : Bldg 4 of 6	
Field	Description
Style	Mobile Home
Model	Residential
Grade:	C

Stories:	1 Story
Occupancy	1
Exterior Wall 1	Pre-finish Metl
Exterior Wall 2	
Roof Structure:	Flat
Roof Cover	Metal/Tin
Interior Wall 1	Drywall
Interior Wall 2	Plywood Panel
Interior Flr 1	Carpet
Interior Flr 2	
Heat Fuel	Oil
Heat Type:	Forced Air-Duc
AC Type:	None
Total Bedrooms:	1 Bedroom
Total Bthrms:	1
Total Half Baths:	0
Total Xtra Fixtrs:	
Total Rooms:	3 Rooms
Bath Style:	Average
Kitchen Style:	Average
Cottage Cmplx	
Cottage Adj	

Building Photo



(<http://images.vgsi.com/photos/BranfordCTPhotos/\00\02\94\34.jpg>)

Building Layout



(http://images.vgsi.com/photos/BranfordCTPhotos//Sketches/601_13624.jp)

Building Sub-Areas (sq ft)			<u>Legend</u>
Code	Description	Gross Area	Living Area
BAS	First Floor	552	552
FOP	Porch, Open	225	0
		777	552

Building 5 : Section 1

Year Built: 1960
Living Area: 1,124
Replacement Cost: \$141,094
Building Percent Good: 58
Replacement Cost Less Depreciation: \$81,800

Building Attributes : Bldg 5 of 6	
Field	Description
Style	Ranch
Model	Residential
Grade:	C

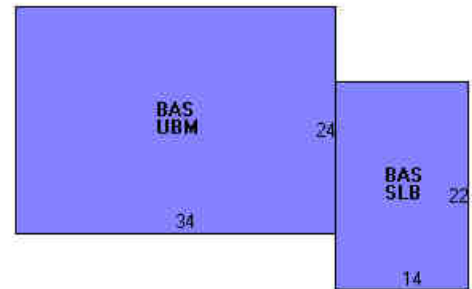
Stories:	1 Story
Occupancy	1
Exterior Wall 1	Vinyl Siding
Exterior Wall 2	
Roof Structure:	Gable/Hip
Roof Cover	Asphalt
Interior Wall 1	Drywall
Interior Wall 2	
Interior Flr 1	Carpet
Interior Flr 2	
Heat Fuel	Gas
Heat Type:	Hot Water
AC Type:	None
Total Bedrooms:	3 Bedrooms
Total Bthrms:	1
Total Half Baths:	0
Total Xtra Fixtrs:	
Total Rooms:	6 Rooms
Bath Style:	Average
Kitchen Style:	Average
Cottage Cmplx	
Cottage Adj	

Building Photo



(<http://images.vgsi.com/photos/BranfordCTPhotos/\00\02\94\35.jpg>)

Building Layout



(http://images.vgsi.com/photos/BranfordCTPhotos//Sketches/601_13625.jp)

Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	1,124	1,124
SLB	Slab	308	0
UBM	Basement, Unfinished	816	0
		2,248	1,124

Building 6 : Section 1

Year Built: 1953
Living Area: 576
Replacement Cost: \$96,765
Building Percent Good: 45
Replacement Cost Less Depreciation: \$43,500

Building Attributes : Bldg 6 of 6	
Field	Description
Style	Old Style
Model	Residential

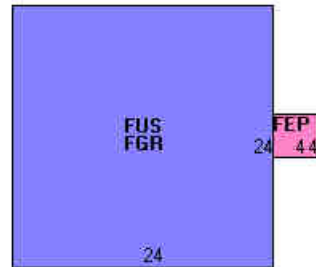
Grade:	C -
Stories:	2 Stories
Occupancy	1
Exterior Wall 1	Pre-Fab Wood
Exterior Wall 2	
Roof Structure:	Gable/Hip
Roof Cover	Asphalt
Interior Wall 1	Drywall
Interior Wall 2	
Interior Flr 1	Carpet
Interior Flr 2	
Heat Fuel	Electric
Heat Type:	Electr Basebrd
AC Type:	None
Total Bedrooms:	1 Bedroom
Total Bthrms:	1
Total Half Baths:	0
Total Xtra Fixtrs:	
Total Rooms:	3 Rooms
Bath Style:	Average
Kitchen Style:	Average
Cottage Cmplx	
Cottage Adj	

Building Photo



(<http://images.vgsi.com/photos/BranfordCTPhotos/\00\02\94\36.jpg>)

Building Layout



(http://images.vgsi.com/photos/BranfordCTPhotos//Sketches/601_13626.jp)

Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
FUS	Upper Story, Finished	576	576
FEP	Porch, Enclosed	16	0
FGR	Garage	576	0
		1,168	576

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code 0400

Land Line Valuation

Size (Acres) 1.28

Description MFRG MDL96
Zone BL
Neighborhood 350
Alt Land Appr No
Category

Frontage
Depth
Assessed Value \$327,360
Appraised Value \$467,610

Outbuildings

Outbuildings						<u>Legend</u>
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
PAV1	PAVING-ASPHALT			8000 S.F.	\$4,000	1
PAV2	PAVING-CONC			225 S.F.	\$400	1
SHD1	SHED FRAME			80 S.F.	\$500	1
FN4	FENCE-8' CHAIN			140 L.F.	\$800	1

Valuation History

Appraisal			
Valuation Year	Improvements	Land	Total
2020	\$299,970	\$467,610	\$767,580
2019	\$272,700	\$425,100	\$697,800
2018	\$321,640	\$453,970	\$775,610

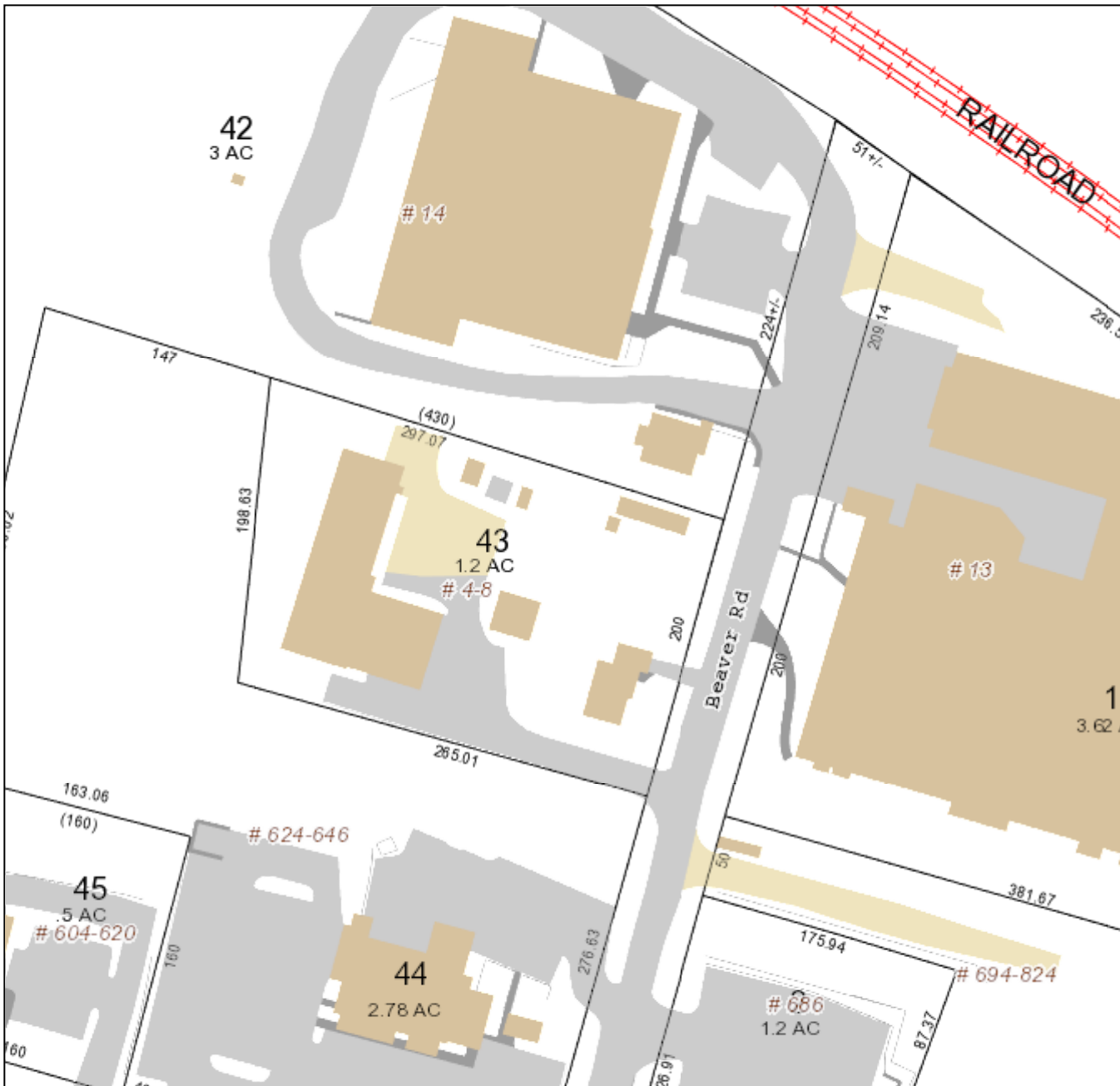
Assessment			
Valuation Year	Improvements	Land	Total
2020	\$210,210	\$327,360	\$537,570
2019	\$191,100	\$297,600	\$488,700
2018	\$225,390	\$317,790	\$543,180

Town of Branford

Geographic Information System (GIS)



Date Printed: 6/10/2021



MAP DISCLAIMER - NOTICE OF LIABILITY

This map is for assessment purposes only. It is not for legal description or conveyances. All information is subject to verification by any user. The Town of Branford and its mapping contractors assume no legal responsibility for the information contained herein.

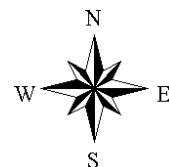


EXHIBIT 5



NIER Study Report

SITE NAME:

302536 Cherry Hill-branford

LOCATION:

Branford, Connecticut

COMPANY:

**American Tower
Woburn, Massachusetts**

July 4th, 2021



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APPENDIX 3 FCC OET-65 MPE LIMIT STUDY.....	7
APPENDIX 4 TOWER RADIATION PATTERNS.....	8
APPENDIX 5 CHANNEL TABLE.....	9
APPENDIX 6 INFORMATION PERTAINING TO MPE STUDIES.....	10
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TOWER ENGINEERING PROFESSIONALS
KINSTON, NORTH CAROLINA



NIER STUDY REPORT

302536 Cherry Hill-branford

Branford, CT

INTRODUCTION

Tower Engineering Professionals (TEP) has been retained by American Tower (ATC) of Woburn, Massachusetts to evaluate the RF emissions of an existing tower at this location.

SITE AND FACILITY CONSIDERATIONS

Site Cherry Hill-branford is located at 4 Beaver Rd in Branford, CT at coordinates 41.280150, -72.841733. The support structure is a 126' self-support tower. The installation consists of two antenna levels with radiation centers of 130, & 113' above ground level. All antennae will have a radiation center as described above. All data used in this study was provided by one or more of the following sources:

1. ATC furnished data
2. Compiled from carrier and manufacturer standard configurations
3. Empirical data collected by TEP

A topographic map of the study area is located in Appendix 1. A satellite view of the study area is located in Appendix 2.



POWER DENSITY CALCULATIONS

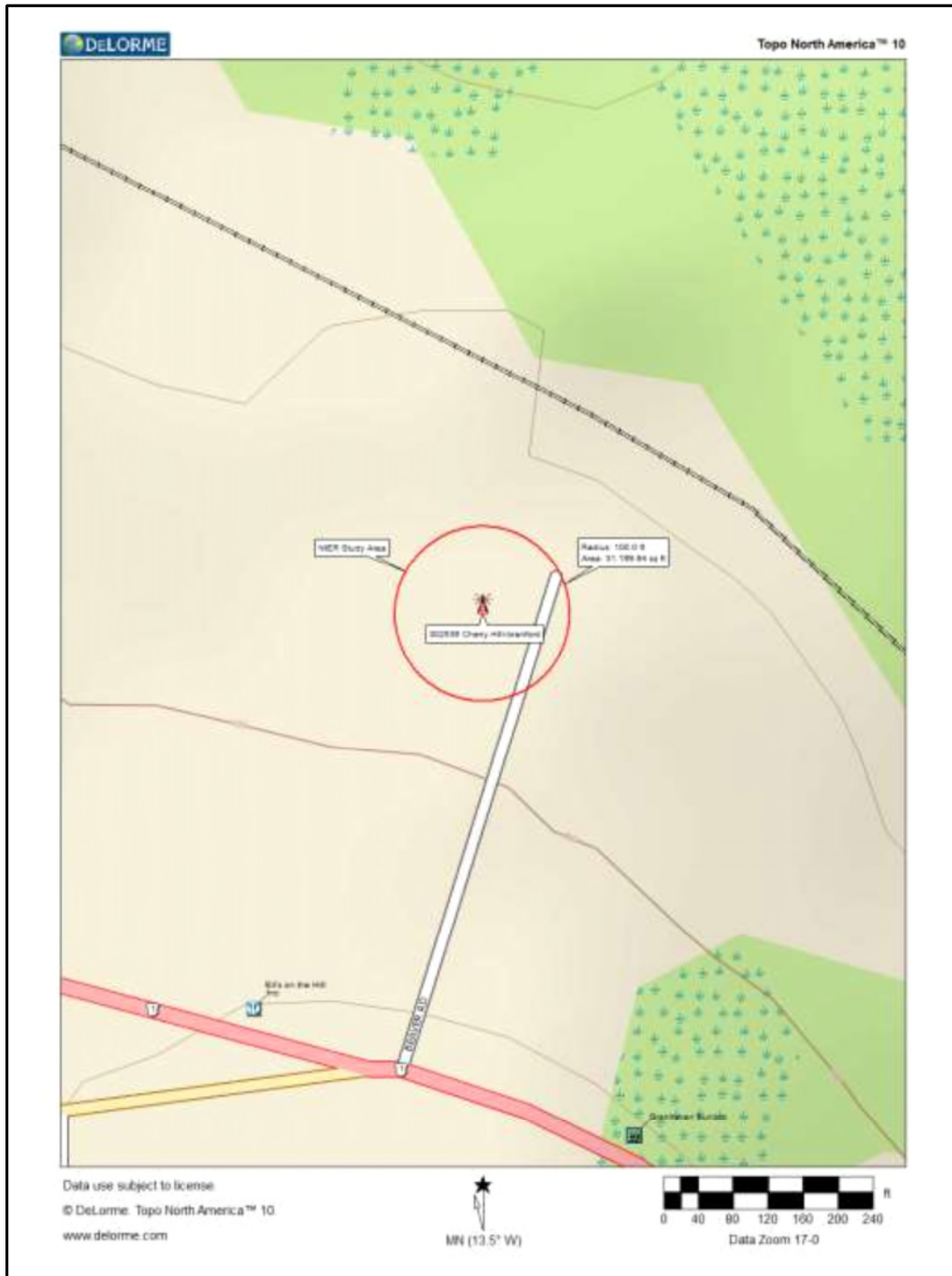
Graphs of the power density at different distances from the transmitter, compared to FCC MPE general population and occupational limits, may be seen in Appendix 3. These limits are based upon the Information Relating to MPE Standards found in Appendix 6. Study methodology may be seen in Appendix 7, which describes the Non-Ionizing Radiation Prediction Models. Approximate radiation patterns may be found in Appendix 4. A table of channels used at this site is located in Appendix 5. This site **IS** in compliance with FCC OET-65 MPE limits.

July 4th, 2021

Michael W. Hayden NCE CPBE CBNT AMD CPI
Director, RF Design & Services
Tower Engineering Professionals



APPENDIX 1 Topographic Map



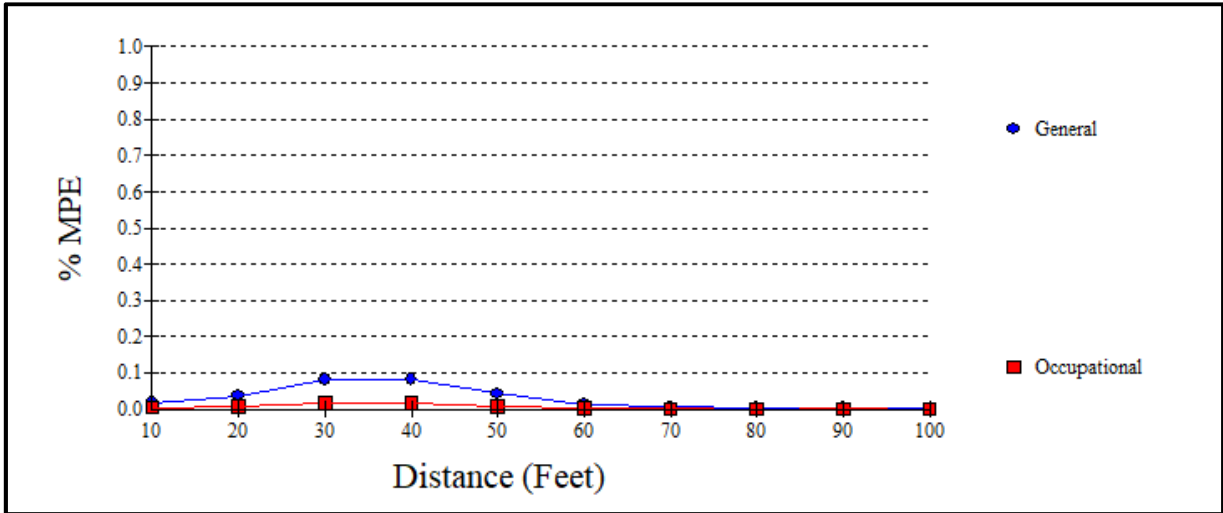


APPENDIX 2 Satellite Photo





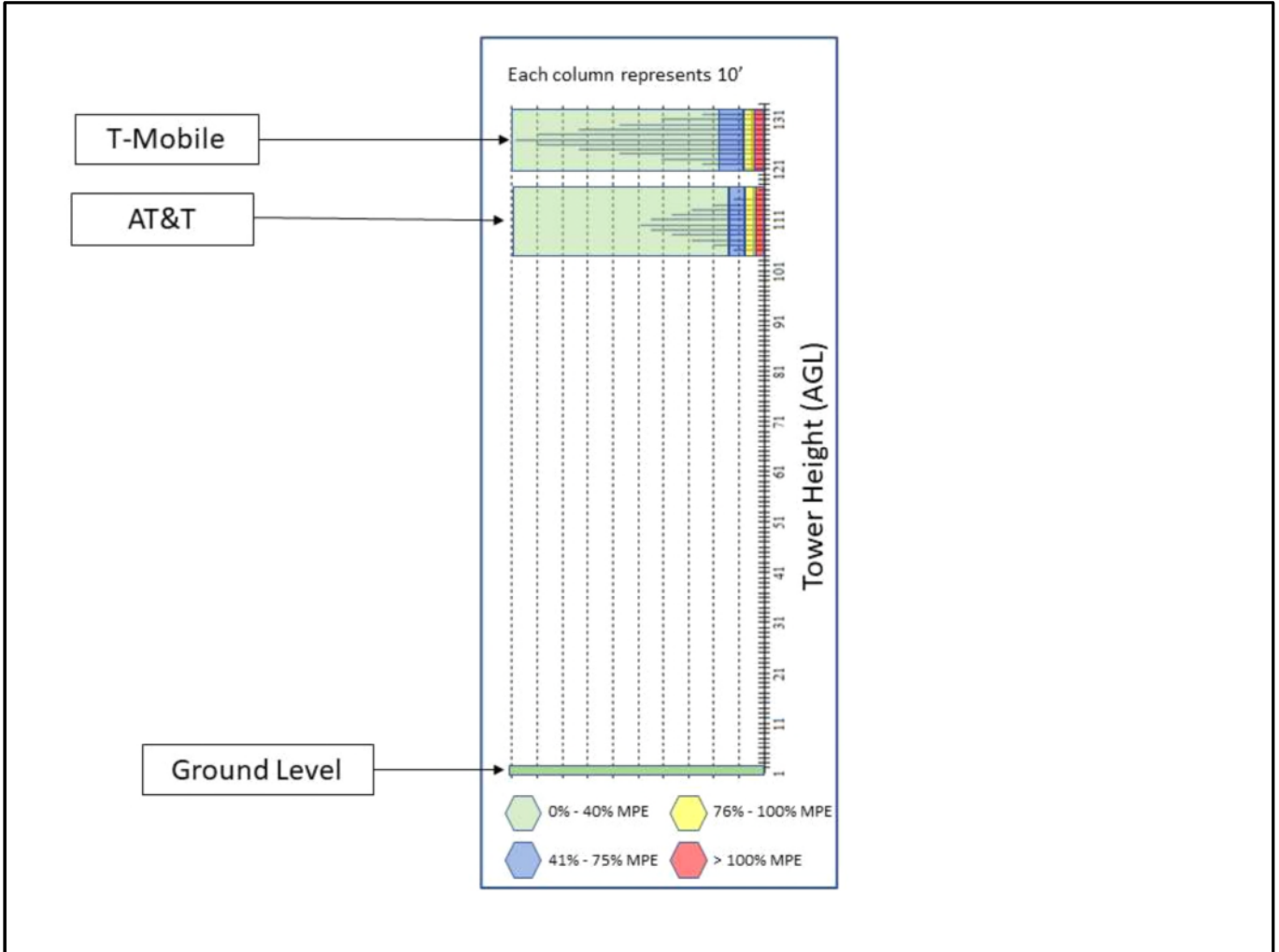
APPENDIX 3 FCC OET-65 MPE Limit Study



Maximum Power Density (@40'):	0.0008 mW/cm ²
General Population MPE (@40'):	0.0810%
Occupational MPE (@40'):	0.0162%



APPENDIX 4 Tower Radiation Patterns





APPENDIX 5 Channel Table

EUTRA OPERATING BAND	EARFCNDL	EARFCNUL	Download Channel Bandwidth (MHz)	Upload Channel Bandwidth (MHz)
PCS MHz A3+A4 (10MHz) E-UTRA Band 2	650	18650	10	10
PCS MHz E (5Mhz) E-UTRA Band 2	975	18975	5	5
PCS MHz C5 (5Mhz) E-UTRA Band 2	1175	19175	5	5
850 MHz B-2586 (5MHz) E-UTRA Band 5	2586	20586	5	5
700 MHz OFFSET LOWER_B+C (10 MHz) E-UTRA BAND 17	5780	23780	10	10
WCS MHz A+B (10 MHz) E-UTRA Band 30	9820	27710	10	10
AWS-3 MHz J (10 MHz) E-UTRA Band 66	67086	132622	10	10
700 MHz UPPER D (10 MHz) E-UTRA BAND 14	5330	23330	10	10
850 MHz B-2586 (5MHz) E-UTRA Band 5 (UMTS)	4413	4188	5	5



APPENDIX 6 Information Pertaining to MPE Studies

In 1985, the FCC first adopted guidelines to be used for evaluating human exposure to RF emissions. The FCC revised and updated these guidelines on August 1, 1996, as a result of a rule-making proceeding initiated in 1993. The new guidelines incorporate limits for Maximum Permissible Exposure (MPE) in terms of electric and magnetic field strength and power density for transmitters operating at frequencies between 300 kHz and 100 GHz.

The FCC's MPE limits are based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP) and, over a wide range of frequencies, the exposure limits were developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI) to replace the 1982 ANSI guidelines. Limits for localized absorption are based on recommendations of both ANSI/IEEE and NCRP.

The FCC's limits, and the NCRP and ANSI/IEEE limits on which they are based, are derived from exposure criteria quantified in terms of specific absorption rate (SAR). The basis for these limits is a whole-body averaged SAR threshold level of 4 watts per kilogram (4 W/kg), as averaged over the entire mass of the body, above which expert organizations have determined that potentially hazardous exposures may occur. The MPE limits are derived by incorporating safety factors that lead, in some cases, to limits that are more conservative than the limits originally adopted by the FCC in 1985. Where more conservative limits exist, they do not arise from a fundamental change in the RF safety criteria for whole-body averaged SAR, but from a precautionary desire to protect subgroups of the general population who, potentially, may be more at risk.

The FCC exposure limits are also based on data showing that the human body absorbs RF energy at some frequencies more efficiently than at others. The most restrictive limits occur in the frequency range of 30-300 MHz where whole-body absorption of RF energy by human beings is most efficient. At other frequencies, whole-body absorption is less efficient, and consequently, the MPE limits are less restrictive.



MPE limits are defined in terms of power density (units of milliwatts per centimeter squared: mW/cm^2), electric field strength (units of volts per meter: V/m) and magnetic field strength (units of amperes per meter: A/m). The far-field of a transmitting antenna is where the electric field vector (E), the magnetic field vector (H), and the direction of propagation can be considered to be all mutually orthogonal ("plane-wave" conditions).

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

General population/uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment-related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area. Additional details can be found in FCC OET 65.



APPENDIX 7 MPE Standards Methodology

This study predicts RF field strength and power density levels that emanate from communications system antennae. It considers all transmitter power levels (less filter and line losses) delivered to each active transmitting antenna at the communications site. Calculations are performed to determine power density and MPE levels for each antenna as well as composite levels from all antennas. The calculated levels are based on where a human (Observer) would be standing at various locations at the site. The point of interest where the MPE level is predicted is based on the height of the Observer.

Compliance with the FCC limits on RF emissions are determined by spatially averaging a person's exposure over the projected area of an adult human body, that is approximately six-feet or two-meters, as defined in the ANSI/IEEE C95.1 standard. The MPE limits are specified as time-averaged exposure limits. This means that exposure is averaged over an identifiable time interval. It is 30 minutes for the general population/uncontrolled RF environment and 6 minutes for the occupational/controlled RF environment. However, in the case of the general public, time averaging should not be applied because the general public is typically not aware of RF exposure and they do not have control of their exposure time. Therefore, it should be assumed that any RF exposure to the general public will be continuous.

The FCC's limits for exposure at different frequencies are shown in the following Tables.

Limits for Occupational/Controlled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3 - 3.0	614	1.63	100*	6
3.0 - 30	1842/f	4.89/f	900/F ²	6
30 - 300	61.4	0.163	1.0	6
300 - 1500	--	--	f/300	6
1500 - 100,000	--	--	5	6

f = frequency

* = Plane-wave equivalent power density



Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3 - 1.34	614	1.63	100*	30
1.34 - 30	824/f	2.19/f	180/F ²	30
30 -300	27.5	0.073	0.2	30
300 -1500	--	--	f/1500	30
1500 -100,000	--	--	1.0	30

f = frequency

* = Plane-wave equivalent power density

General population/uncontrolled exposures apply in situations in which the general public may be exposed or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

It is important to understand that these limits apply cumulatively to all sources of RF emissions affecting a given area. For example, if several different communications system antennas occupy a shared facility such as a tower or rooftop, then the total exposure from all systems at the facility must be within compliance of the FCC guidelines.

The field strength emanating from an antenna can be estimated based on the characteristics of an antenna radiating in free space. There are basically two field areas associated with a radiating antenna. When close to the antenna, the region is known as the Near Field. Within this region, the characteristics of the RF fields are very complex and the wave front is extremely curved. As you move further from the antenna, the wave front has less curvature and becomes planar. The wave front still has a curvature but it appears to occupy a flat plane in space (plane-wave radiation). This region is known as the Far Field.



Two models are utilized to predict Near and Far field power densities. They are based on the formulae in FCC OET 65. As this study is concerned only with Near Field calculations, we will only describe the model used for this study. For additional details, refer to FCC OET Bulletin 65.

Cylindrical Model (Near Field Predictions)

Spatially averaged plane-wave equivalent power densities parallel to the antenna may be estimated by dividing the antenna input power by the surface area of an imaginary cylinder surrounding the length of the radiating antenna. While the actual power density will vary along the height of the antenna, the average value along its length will closely follow the relation given by the following equation:

$$S = P \div 2\pi RL$$

Where:

S = Power Density

P = Total Power into antenna

R = Distance from the antenna

L = Antenna aperture length

For directional-type antennas, power densities can be estimated by dividing the input power by that portion of a cylindrical surface area corresponding to the angular beam width of the antenna. For example, for the case of a 120-degree azimuthal beam width, the surface area should correspond to 1/3 that of a full cylinder. This would increase the power density near the antenna by a factor of three over that for a purely omni-directional antenna. Mathematically, this can be represented by the following formula:

$$S = (180 / \theta_{BW}) P \div \pi RL$$

Where:

S = Power Density

θ_{BW} = Beam width of antenna in degrees (3 dB half-power point)

P = Total Power into antenna

R = Distance from the antenna

L = Antenna aperture length

If the antenna is a 360-degree omni-directional antenna, this formula would be equivalent to the previous formula.



Spherical Model (Far Field Predictions)

Spatially averaged plane-wave power densities in the Far Field of an antenna may be estimated by considering the additional factors of antenna gain and reflective waves that would contribute to exposure.

The radiation pattern of an antenna has developed in the Far Field region and the power gain needs to be considered in exposure predictions. Also, if the vertical radiation pattern of the antenna is considered, the exposure predictions would most likely be reduced significantly at ground level, resulting in a more realistic estimate of the actual exposure levels.

Additionally, to model a truly "worst case" prediction of exposure levels at or near a surface, such as at ground-level or on a rooftop, reflection off the surface of antenna radiation power can be assumed, resulting in a potential four-fold increase in power density.

These additional factors are considered and the Far Field prediction model is determined by the following equation:

$$S = EIRP \times Rc \div 4\pi R^2$$

Where:

S = Power Density

EIRP = Effective Radiated Power from antenna

Rc = Reflection Coefficient (2.56)

R = Distance from the antenna

The EIRP includes the antenna gain. If the antenna pattern is considered, the antenna gain is relative based on the horizontal and vertical pattern gain values at that particular location in space, on a rooftop or on the ground. However, it is recommended that the antenna radiation pattern characteristics not be considered to provide a conservative "worst case" prediction. This is the equation is utilized for the Far Field exposure predictions herein.

EXHIBIT 6



AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure : 125 ft Self Supported Tower
ATC Site Name : Cherry Hill-branford, CT
ATC Asset Number : 302536
Engineering Number : 13334427_C3_02
Proposed Carrier : AT&T Mobility
Carrier Site Name : MRCTB049213
Carrier Site Number : CTL02175
Site Location : 4 Beaver Road
Branford, CT 06405-3403
41.280200,-72.841700
County : New Haven
Date : January 27, 2021
Max Usage : 84%
Result : Pass

Prepared By:
Peter Giordano
Structural Engineer II

Reviewed By:



COA: PEC.0001553



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Structure Usages	3
Foundations	3
Deflection, Twist, and Sway.....	3
Standard Conditions	4
Calculations	Attached



Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 125 ft self supported tower to reflect the change in loading by AT&T Mobility.

Supporting Documents

Tower Drawings	Rohn Eng. File # 30329PM, dated November 22, 1993
Foundation Drawing	Rohn Eng. File # 30329PM, dated November 11, 1993
Geotechnical Report	French & Parrello Job # 93N019C, dated June 4, 1993

Analysis

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	101 mph (3-Second Gust, Vasd) / 130 mph (3-Second Gust, Vult)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 3/4" radial ice concurrent
Code:	ANSI/TIA-222-G / 2015 IBC / 2018 Connecticut State Building Code
Structure Class:	II
Exposure Category:	B
Topographic Category:	1
Crest Height:	0 ft
Spectral Response:	$S_s = 0.18, S_1 = 0.06$
Site Class:	D - Stiff Soil

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.



Existing and Reserved Equipment

Elev. ¹ (ft)	Qty	Antenna	Mount Type	Lines	Carrier
125.0	12	Decibel DB844H90E-XY	Sector Frames	(12) 7/8" Coax	SPRINT NEXTEL
113.0	6	Powerwave Allgon LGP21401	Sector Frames	(2) 0.39" (10mm) Fiber Trunk (2) 0.74" (18.7mm) 8 AWG 7 (4) 0.78" (19.7mm) 8 AWG 6 (1) 3/8" (0.38"- 9.5mm) RET Control Cable	AT&T MOBILITY
	1	Raycap DC6-48-60-18-8F			
	1	Raycap DC6-48-60-18-8F ("Squid")			
	3	Ericsson RRUS 8843 B2, B66A			
	1	Commscope WCS-IMFQ-AMT			
	3	Ericsson RRUS 4449 B5, B12			
	6	Kathrein Scala 80010964			
	3	Ericsson RRUS 32 (50.8 lbs)			
	3	Powerwave Allgon 7770.00			
3	Andrew SBNHH-1D65A (33.5 lbs)				
100.0	3	RFS APXV18-206517S-C	Leg	(6) 1 5/8" Coax	METRO PCS INC
91.0	1	Generic 10' Omni	Side Arm	(1) 7/8" Coax	OTHER

Equipment to be Removed

Elev. ¹ (ft)	Qty	Antenna	Mount Type	Lines	Carrier
113.0	1	Raycap DC6-48-60-18	-	(2) 0.78" (19.7mm) 8 AWG 6 (2) 3" conduit (12) 7/8" Coax	AT&T MOBILITY

Proposed Equipment

Elev. ¹ (ft)	Qty	Antenna	Mount Type	Lines	Carrier
113.0	1	Raycap DC6-48-60-0-8F	Sector Frames	(2) 2" conduit	AT&T MOBILITY
	3	Ericsson RRUS 4478 B14			

¹ Contracted elevations are shown for appurtenances within contracted installation tolerances. Appurtenances outside of contract limits are shown at installed elevations.

Install proposed lines in the place of the existing AT&T MOBILITY lines.



Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Legs	72%	Pass
Diagonals	84%	Pass
Horizontals	11%	Pass
Anchor Bolts	65%	Pass
Leg Bolts	69%	Pass

Foundations

Reaction Component	Original Design Reactions	Factored Design Reactions*	Analysis Reactions	% of Design
Uplift (Kips)	154.8	209.0	139.0	67%
Axial (Kips)	169.1	228.3	155.8	68%
Total Shear (Kips)	18.3	24.7	17.5	71%

* The design reactions are factored by 1.35 per ANSI/TIA-222-G, Sec. 15.5.1

The structure base reactions resulting from this analysis are acceptable when compared to those shown on the original structure drawings, therefore no modification or reinforcement of the foundation will be required.

Deflection, Twist and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Twist (°)	Sway (Rotation) (°)
113.0	Ericsson RRUS 4478 B14	AT&T MOBILITY	0.286	0.005	0.297
	Raycap DC6-48-60-0-8F				

*Deflection, Twist and Sway was evaluated considering a design wind speed of 60 mph (3-Second Gust) per ANSI/TIA-222-G



Standard Conditions

All engineering services performed by A.T. Engineering Service, PLLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete.

All assets of American Tower Corporation, its affiliates and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

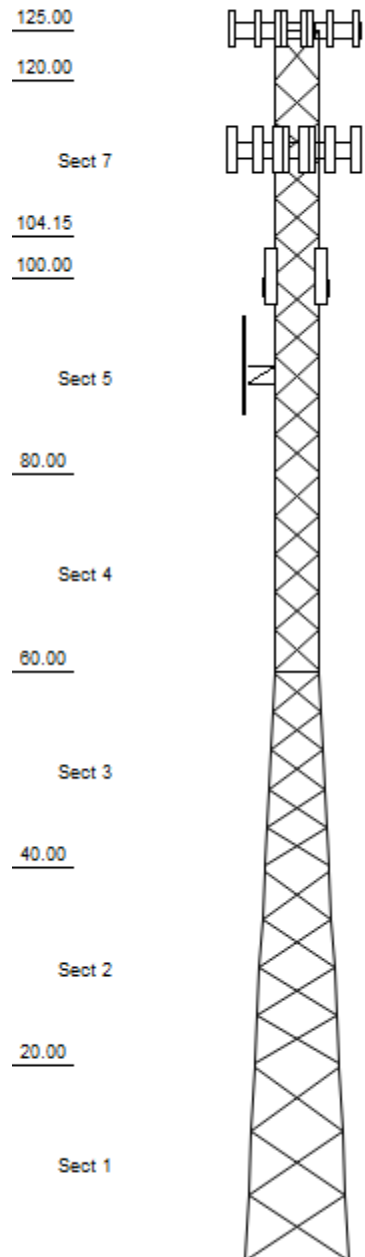
Unless explicitly agreed by both the client and A.T. Engineering Service, PLLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Service, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.

Quadrant 1

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Loads: 101 mph no ice
 50 mph w/ 3/4" radial ice
 Site Class: D Ss: 0.18 S1: 0.06
 60 mph Serviceability



125.00

120.00

Sect 7

104.15

100.00

Sect 5

80.00

Sect 4

80.00

Sect 3

40.00

Sect 2

20.00

Sect 1

Job Information

Client : AT&T MOBILITY

Tower : 302536

Location : Cherry Hill-

Base Width : 10.75 ft

Code : ANSI/TIA-222-G

Top Width : 4.56 ft

Tower Ht : 125.00 ft

Shape : Triangle

Sections Properties

Section	Leg Members	Diagonal Members	Horizontal Members
1	PSP 50 ksi ROHN 5 EH	SAE 36 ksi 1.75X1.75X0.125	
2	PSP 50 ksi ROHN 5 EH	SAE 36 ksi 1.5X1.5X0.1875	
3	PX 50 ksi 4" DIA PIPE	SAE 36 ksi 1.5X1.5X0.1875	SAE 36 ksi 1.5X1.5X0.125
4	PX 50 ksi 4" DIA PIPE	SAE 36 ksi 2X2X0.25	
5	PX 50 ksi 3" DIA PIPE	SAE 36 ksi 1.5X1.5X0.1875	
6 - 7	PST 50 ksi 2-1/2" DIA PIPE	SAE 36 ksi 1.5X1.5X0.1875	
8	PST 50 ksi 2-1/2" DIA PIPE	SAE 36 ksi 1.5X1.5X0.125	SAE 36 ksi 1.5X1.5X0.125

Discrete Appurtenance

Elev (ft)	Type	Qty	Description
125.00	Mounting Frame	3	Flat Light Sector Frame
125.00	Panel	12	Decibel DB844H90E-XY
113.00	Mounting Frame	3	Flat Light Sector Frame with F
113.00	Panel	6	Kathrein Scala 80010964
113.00	Panel	3	Andrew SBNHH-1D65A (33.5 lbs)
113.00	Panel	3	Powerwave Allgon 7770.00
113.00		3	Ericsson RRUS 32 (50.8 lbs)
113.00		3	Ericsson RRUS 4449 B5, B12
113.00		3	Ericsson RRUS 4478 B14
113.00		3	Ericsson RRUS 8843 B2, B66A
113.00		1	Raycap DC6-48-60-18-8F ("Squid)
113.00		1	Raycap DC6-48-60-0-8F
113.00		1	Raycap DC6-48-60-18-8F
113.00		6	Powerwave Allgon LGP21401
113.00		1	Commscope WCS-IMFQ-AMT
100.00	Panel	3	RFS APXV18-206517S-C
91.00	Straight Arm	1	Side Arm
91.00	Whip	1	Generic 10' Omni

Linear Appurtenance

Elev (ft)		Qty	Description
From	To		
10.00	125.00	1	Wave Guide
10.00	125.00	12	7/8" Coax
10.00	113.00	1	Wave Guide
10.00	113.00	1	3/8" (0.38"- 9.5mm)
10.00	113.00	4	0.78" (19.7mm) 8 AWG
10.00	113.00	2	0.74" (18.7mm) 8 AWG
10.00	113.00	2	0.39" (10mm) Fiber T
0.00	113.00	2	2" conduit
10.00	100.00	1	Wave Guide
10.00	100.00	6	1 5/8" Coax
10.00	91.00	1	7/8" Coax

Global Base Foundation Design Loads

Load Case	Moment (k-ft)	Vertical (kip)	Horizontal (kip)
DL + WL	1,389.84	19.43	17.51
DL + WL + IL	437.37	55.20	5.66

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Job Information		
Client : AT&T MOBILITY		
Tower : 302536	Location : Cherry Hill-	Base Width : 10.75 ft
Code : ANSI/TIA-222-G		Top Width : 4.56 ft
		Tower Ht : 125.00 ft
		Shape : Triangle

Individual Base Foundation Design Loads		
Vertical (kip)	Uplift (kip)	Horizontal (kip)
155.77	138.98	11.62

Analysis Parameters

Location:	New Haven County, CT	Height (ft):	125
Code:	ANSI/TIA-222-G	Base Elevation (ft):	0.00
Shape:	Triangle	Bottom Face Width (ft):	10.75
Tower Manufacturer:	Rohn	Top Face Width (ft):	4.56
Tower Type:	Self Support	Anchor Bolt Detail Type	c
Kd:			
Ke:			

Ice & Wind Parameters

Structure Class:	II	Design Windspeed Without Ice:	101 mph
Exposure Category:	B	Design Windspeed With Ice:	50 mph
Topographic Category:	1	Operational Windspeed:	60 mph
Crest Height:	0 ft	Design Ice Thickness:	0.75 in

Seismic Parameters

Analysis Method:	Equivalent Modal Analysis & Equivalent Lateral Force Methods		
Site Class:	D - Stiff Soil		
Period Based on Rayleigh Method (sec):	1.08		
T _L (sec):	6	p:	1.3
S _S :	0.181	S ₁ :	0.061
F _a :	1.600	F _V :	2.400
S _{ds} :	0.193	S _{d1} :	0.098
		C _S :	0.030
		C _S , Max:	0.030
		C _S , Min:	0.030

Load Cases

1.2D + 1.6W Normal - Pat 1	101 mph Normal with No Ice - Pattern 1
1.2D + 1.6W Normal - Pat 2	101 mph Normal with No Ice - Pattern 2
1.2D + 1.6W Normal - Pat 3	101 mph Normal with No Ice - Pattern 3
1.2D + 1.6W 60 deg - Pat 1	101 mph 60 degree with No Ice - Pattern 1
1.2D + 1.6W 60 deg - Pat 2	101 mph 60 degree with No Ice - Pattern 2
1.2D + 1.6W 60 deg - Pat 3	101 mph 60 degree with No Ice - Pattern 3
1.2D + 1.6W 90 deg - Pat 1	101 mph 90 degree with No Ice - Pattern 1
1.2D + 1.6W 90 deg - Pat 2	101 mph 90 degree with No Ice - Pattern 2
1.2D + 1.6W 90 deg - Pat 3	101 mph 90 degree with No Ice - Pattern 3
1.2D + 1.6W 120 deg - Pat 1	101 mph 120 degree with No Ice - Pattern 1
1.2D + 1.6W 120 deg - Pat 2	101 mph 120 degree with No Ice - Pattern 2
1.2D + 1.6W 120 deg - Pat 3	101 mph 120 degree with No Ice - Pattern 3
1.2D + 1.6W 180 deg - Pat 1	101 mph 180 degree with No Ice - Pattern 1
1.2D + 1.6W 180 deg - Pat 2	101 mph 180 degree with No Ice - Pattern 2
1.2D + 1.6W 180 deg - Pat 3	101 mph 180 degree with No Ice - Pattern 3
1.2D + 1.6W 210 deg - Pat 1	101 mph 210 degree with No Ice - Pattern 1
1.2D + 1.6W 210 deg - Pat 2	101 mph 210 degree with No Ice - Pattern 2
1.2D + 1.6W 210 deg - Pat 3	101 mph 210 degree with No Ice - Pattern 3
1.2D + 1.6W 240 deg - Pat 1	101 mph 240 degree with No Ice - Pattern 1

Analysis Parameters

1.2D + 1.6W 240 deg - Pat 2	101 mph 240 degree with No Ice - Pattern 2
1.2D + 1.6W 240 deg - Pat 3	101 mph 240 degree with No Ice - Pattern 3
1.2D + 1.6W 300 deg - Pat 1	101 mph 300 degree with No Ice - Pattern 1
1.2D + 1.6W 300 deg - Pat 2	101 mph 300 degree with No Ice - Pattern 2
1.2D + 1.6W 300 deg - Pat 3	101 mph 300 degree with No Ice - Pattern 3
1.2D + 1.6W 330 deg - Pat 1	101 mph 330 degree with No Ice - Pattern 1
1.2D + 1.6W 330 deg - Pat 2	101 mph 330 degree with No Ice - Pattern 2
1.2D + 1.6W 330 deg - Pat 3	101 mph 330 degree with No Ice - Pattern 3
0.9D + 1.6W Normal	101 mph Normal with No Ice (Reduced DL)
0.9D + 1.6W 60 deg	101 mph 60 deg with No Ice (Reduced DL)
0.9D + 1.6W 90 deg	101 mph 90 deg with No Ice (Reduced DL)
0.9D + 1.6W 120 deg	101 mph 120 deg with No Ice (Reduced DL)
0.9D + 1.6W 180 deg	101 mph 180 deg with No Ice (Reduced DL)
0.9D + 1.6W 210 deg	101 mph 210 deg with No Ice (Reduced DL)
0.9D + 1.6W 240 deg	101 mph 240 deg with No Ice (Reduced DL)
0.9D + 1.6W 300 deg	101 mph 300 deg with No Ice (Reduced DL)
0.9D + 1.6W 330 deg	101 mph 330 deg with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi Normal	50 mph Normal with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 60 deg	50 mph 60 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 90 deg	50 mph 90 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 120 deg	50 mph 120 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 180 deg	50 mph 180 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 210 deg	50 mph 210 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 240 deg	50 mph 240 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 300 deg	50 mph 300 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 330 deg	50 mph 330 deg with 0.75 in Radial Ice
(1.2 + 0.2Sds) * DL + E Normal	Seismic Normal
(1.2 + 0.2Sds) * DL + E 60 deg	Seismic 60 deg
(1.2 + 0.2Sds) * DL + E 90 deg	Seismic 90 deg
(1.2 + 0.2Sds) * DL + E 120 deg	Seismic 120 deg
(1.2 + 0.2Sds) * DL + E 180 deg	Seismic 180 deg
(1.2 + 0.2Sds) * DL + E 210 deg	Seismic 210 deg
(1.2 + 0.2Sds) * DL + E 240 deg	Seismic 240 deg
(1.2 + 0.2Sds) * DL + E 300 deg	Seismic 300 deg
(1.2 + 0.2Sds) * DL + E 330 deg	Seismic 330 deg
(0.9 - 0.2Sds) * DL + E Normal	Seismic (Reduced DL) Normal
(0.9 - 0.2Sds) * DL + E 60 deg	Seismic (Reduced DL) 60 deg
(0.9 - 0.2Sds) * DL + E 90 deg	Seismic (Reduced DL) 90 deg
(0.9 - 0.2Sds) * DL + E 120 deg	Seismic (Reduced DL) 120 deg
(0.9 - 0.2Sds) * DL + E 180 deg	Seismic (Reduced DL) 180 deg
(0.9 - 0.2Sds) * DL + E 210 deg	Seismic (Reduced DL) 210 deg
(0.9 - 0.2Sds) * DL + E 240 deg	Seismic (Reduced DL) 240 deg
(0.9 - 0.2Sds) * DL + E 300 deg	Seismic (Reduced DL) 300 deg
(0.9 - 0.2Sds) * DL + E 330 deg	Seismic (Reduced DL) 330 deg
1.0D + 1.0W Service Normal	Serviceability - 60 mph Wind Normal
1.0D + 1.0W Service 60 deg	Serviceability - 60 mph Wind 60 deg

Site Number: 302536

Code:

ANSI/TIA-222-G

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Site Name: Cherry Hill-branford, CT

Engineering Number: 13334427_C3_02

1/27/2021 10:07:38 AM

Customer: AT&T MOBILITY

Analysis Parameters

1.0D + 1.0W Service 90 deg	Serviceability - 60 mph Wind 90 deg
1.0D + 1.0W Service 120 deg	Serviceability - 60 mph Wind 120 deg
1.0D + 1.0W Service 180 deg	Serviceability - 60 mph Wind 180 deg
1.0D + 1.0W Service 210 deg	Serviceability - 60 mph Wind 210 deg
1.0D + 1.0W Service 240 deg	Serviceability - 60 mph Wind 240 deg
1.0D + 1.0W Service 300 deg	Serviceability - 60 mph Wind 300 deg
1.0D + 1.0W Service 330 deg	Serviceability - 60 mph Wind 330 deg

Tower Loading

Discrete Appurtenance Properties 1.2D + 1.6W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)		
125.0	Decibel DB844H90E-	12	14	3.6	4.0	6.5	8.0	0.80	0.73	0.0	0.0	23.38	806	202		
125.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	23.38	960	1440		
113.0	Andrew SBNHH-	3	34	5.9	4.6	11.9	7.1	0.80	0.69	0.0	0.0	22.72	301	121		
113.0	Commscope WCS-	1	30	1.0	0.9	10.6	6.9	0.80	1.00	0.0	0.0	22.72	24	35		
113.0	Ericsson RRUS 32	3	51	2.7	2.2	12.1	6.7	0.80	0.50	0.0	0.0	22.72	100	183		
113.0	Ericsson RRUS 4449	3	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.0	22.72	73	256		
113.0	Ericsson RRUS 4478	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.0	22.72	68	216		
113.0	Ericsson RRUS 8843	3	72	1.6	1.2	13.2	10.9	0.80	0.50	0.0	0.0	22.72	61	259		
113.0	Flat Light Sector	3	400	13.6	0.0	0.0	0.0	0.75	0.67	0.0	0.0	22.72	633	1440		
113.0	Kathrein Scala	6	82	10.0	4.9	20.0	6.9	0.80	0.62	0.0	0.0	22.72	919	588		
113.0	Powerwave Allgon	3	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	22.72	265	126		
113.0	Powerwave Allgon	6	14	1.1	1.2	9.2	2.6	0.80	0.50	0.0	0.0	22.72	82	102		
113.0	Raycap DC6-48-60-0-	1	33	1.4	1.9	11.0	11.0	0.80	1.00	0.0	0.0	22.72	34	39		
113.0	Raycap DC6-48-60-	1	20	1.3	2.0	9.7	9.7	0.80	1.00	0.0	0.0	22.72	31	24		
113.0	Raycap DC6-48-60-	1	32	1.5	2.0	11.0	11.0	0.80	1.00	0.0	0.0	22.72	36	38		
100.0	RFS APXV18-	3	26	5.2	6.0	6.8	3.2	1.00	0.68	0.0	0.0	21.94	314	95		
91.00	Generic 10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.0	21.35	87	30		
91.00	Side Arm	1	150	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	21.35	87	180		
Totals		57	4477	289.6											4882	5373

Discrete Appurtenance Properties 1.2D + 1.6W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)		
125.0	Decibel DB844H90E-	12	14	3.6	4.0	6.5	8.0	0.80	0.73	0.0	0.0	23.38	806	202		
125.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	23.38	960	1440		
113.0	Andrew SBNHH-	3	34	5.9	4.6	11.9	7.1	0.80	0.69	0.0	0.0	22.72	301	121		
113.0	Commscope WCS-	1	30	1.0	0.9	10.6	6.9	0.80	1.00	0.0	0.0	22.72	24	35		
113.0	Ericsson RRUS 32	3	51	2.7	2.2	12.1	6.7	0.80	0.50	0.0	0.0	22.72	100	183		
113.0	Ericsson RRUS 4449	3	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.0	22.72	73	256		
113.0	Ericsson RRUS 4478	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.0	22.72	68	216		
113.0	Ericsson RRUS 8843	3	72	1.6	1.2	13.2	10.9	0.80	0.50	0.0	0.0	22.72	61	259		
113.0	Flat Light Sector	3	400	13.6	0.0	0.0	0.0	0.75	0.67	0.0	0.0	22.72	633	1440		
113.0	Kathrein Scala	6	82	10.0	4.9	20.0	6.9	0.80	0.62	0.0	0.0	22.72	919	588		
113.0	Powerwave Allgon	3	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	22.72	265	126		
113.0	Powerwave Allgon	6	14	1.1	1.2	9.2	2.6	0.80	0.50	0.0	0.0	22.72	82	102		
113.0	Raycap DC6-48-60-0-	1	33	1.4	1.9	11.0	11.0	0.80	1.00	0.0	0.0	22.72	34	39		
113.0	Raycap DC6-48-60-	1	20	1.3	2.0	9.7	9.7	0.80	1.00	0.0	0.0	22.72	31	24		
113.0	Raycap DC6-48-60-	1	32	1.5	2.0	11.0	11.0	0.80	1.00	0.0	0.0	22.72	36	38		
100.0	RFS APXV18-	3	26	5.2	6.0	6.8	3.2	1.00	0.68	0.0	0.0	21.94	314	95		
91.00	Generic 10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.0	21.35	87	30		
91.00	Side Arm	1	150	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	21.35	87	180		
Totals		57	4477	289.6											4882	5373

Discrete Appurtenance Properties 1.2D + 1.6W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)
125.0	Decibel DB844H90E-	12	14	3.6	4.0	6.5	8.0	0.80	0.73	0.0	0.0	23.38	806	202
125.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	23.38	960	1440

Site Number: 302536

Code:

ANSI/TIA-222-G

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Site Name: Cherry Hill-branford, CT

Engineering Number: 13334427_C3_02

1/27/2021 10:07:38 AM

Customer: AT&T MOBILITY

Tower Loading

113.0	Andrew SBNHH-	3	34	5.9	4.6	11.9	7.1	0.80	0.69	0.0	0.0	22.72	301	121
113.0	Commscope WCS-	1	30	1.0	0.9	10.6	6.9	0.80	1.00	0.0	0.0	22.72	24	35
113.0	Ericsson RRUS 32	3	51	2.7	2.2	12.1	6.7	0.80	0.50	0.0	0.0	22.72	100	183
113.0	Ericsson RRUS 4449	3	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.0	22.72	73	256
113.0	Ericsson RRUS 4478	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.0	22.72	68	216
113.0	Ericsson RRUS 8843	3	72	1.6	1.2	13.2	10.9	0.80	0.50	0.0	0.0	22.72	61	259
113.0	Flat Light Sector	3	400	13.6	0.0	0.0	0.0	0.75	0.67	0.0	0.0	22.72	633	1440
113.0	Kathrein Scala	6	82	10.0	4.9	20.0	6.9	0.80	0.62	0.0	0.0	22.72	919	588
113.0	Powerwave Allgon	3	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	22.72	265	126
113.0	Powerwave Allgon	6	14	1.1	1.2	9.2	2.6	0.80	0.50	0.0	0.0	22.72	82	102
113.0	Raycap DC6-48-60-0-	1	33	1.4	1.9	11.0	11.0	0.80	1.00	0.0	0.0	22.72	34	39
113.0	Raycap DC6-48-60-	1	20	1.3	2.0	9.7	9.7	0.80	1.00	0.0	0.0	22.72	31	24
113.0	Raycap DC6-48-60-	1	32	1.5	2.0	11.0	11.0	0.80	1.00	0.0	0.0	22.72	36	38
100.0	RFS APXV18-	3	26	5.2	6.0	6.8	3.2	1.00	0.68	0.0	0.0	21.94	314	95
91.00	Generic 10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.0	21.35	87	30
91.00	Side Arm	1	150	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	21.35	87	180
Totals		57	4477	289.6									4882	5373

Discrete Appurtenance Properties 0.9D + 1.6W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)
125.0	Decibel DB844H90E-	12	14	3.6	4.0	6.5	8.0	0.80	0.73	0.0	0.0	23.38	806	151
125.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	23.38	960	1080
113.0	Andrew SBNHH-	3	34	5.9	4.6	11.9	7.1	0.80	0.69	0.0	0.0	22.72	301	90
113.0	Commscope WCS-	1	30	1.0	0.9	10.6	6.9	0.80	1.00	0.0	0.0	22.72	24	27
113.0	Ericsson RRUS 32	3	51	2.7	2.2	12.1	6.7	0.80	0.50	0.0	0.0	22.72	100	137
113.0	Ericsson RRUS 4449	3	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.0	22.72	73	192
113.0	Ericsson RRUS 4478	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.0	22.72	68	162
113.0	Ericsson RRUS 8843	3	72	1.6	1.2	13.2	10.9	0.80	0.50	0.0	0.0	22.72	61	194
113.0	Flat Light Sector	3	400	13.6	0.0	0.0	0.0	0.75	0.67	0.0	0.0	22.72	633	1080
113.0	Kathrein Scala	6	82	10.0	4.9	20.0	6.9	0.80	0.62	0.0	0.0	22.72	919	441
113.0	Powerwave Allgon	3	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	22.72	265	95
113.0	Powerwave Allgon	6	14	1.1	1.2	9.2	2.6	0.80	0.50	0.0	0.0	22.72	82	76
113.0	Raycap DC6-48-60-0-	1	33	1.4	1.9	11.0	11.0	0.80	1.00	0.0	0.0	22.72	34	30
113.0	Raycap DC6-48-60-	1	20	1.3	2.0	9.7	9.7	0.80	1.00	0.0	0.0	22.72	31	18
113.0	Raycap DC6-48-60-	1	32	1.5	2.0	11.0	11.0	0.80	1.00	0.0	0.0	22.72	36	29
100.0	RFS APXV18-	3	26	5.2	6.0	6.8	3.2	1.00	0.68	0.0	0.0	21.94	314	71
91.00	Generic 10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.0	21.35	87	23
91.00	Side Arm	1	150	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	21.35	87	135
Totals		57	4477	289.6									4882	4029

Discrete Appurtenance Properties 1.2D + 1.0Di + 1.0Wi

Elevation (ft)	Description	Qty	Ice Wt (lb)	Ice EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)
125.0	Decibel DB844H90E-	12	122	3.9	4.0	6.5	8.0	0.80	0.73	0.0	0.0	5.73	133	1496
125.0	Flat Light Sector	3	696	32.7	0.0	0.0	0.0	0.75	0.75	0.0	0.0	5.73	269	2327
113.0	Andrew SBNHH-	3	165	8.0	4.6	11.9	7.1	0.80	0.69	0.0	0.0	5.57	62	516
113.0	Commscope WCS-	1	62	1.6	0.9	10.6	6.9	0.80	1.00	0.0	0.0	5.57	6	68
113.0	Ericsson RRUS 32	3	120	3.8	2.2	12.1	6.7	0.80	0.50	0.0	0.0	5.57	22	392
113.0	Ericsson RRUS 4449	3	134	2.9	1.5	13.2	9.4	0.80	0.50	0.0	0.0	5.57	16	444
113.0	Ericsson RRUS 4478	3	114	2.7	1.4	13.4	7.7	0.80	0.50	0.0	0.0	5.57	15	377
113.0	Ericsson RRUS 8843	3	132	2.5	1.2	13.2	10.9	0.80	0.50	0.0	0.0	5.57	14	438

Site Number: 302536

Code: ANSI/TIA-222-G

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Site Name: Cherry Hill-branford, CT

Engineering Number: 13334427_C3_02

1/27/2021 10:07:38 AM

Customer: AT&T MOBILITY

Tower Loading

113.0 Flat Light Sector	3	693	24.8	0.0	0.0	0.0	0.75	0.67	0.0	0.0	5.57	177	2319
113.0 Kathrein Scala	6	281	12.3	4.9	20.0	6.9	0.80	0.62	0.0	0.0	5.57	173	1782
113.0 Powerwave Allgon	3	165	6.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	5.57	48	517
113.0 Powerwave Allgon	6	38	1.8	1.2	9.2	2.6	0.80	0.50	0.0	0.0	5.57	20	247
113.0 Raycap DC6-48-60-0-	1	89	2.0	1.9	11.0	11.0	0.80	1.00	0.0	0.0	5.57	8	96
113.0 Raycap DC6-48-60-	1	71	1.9	2.0	9.7	9.7	0.80	1.00	0.0	0.0	5.57	7	75
113.0 Raycap DC6-48-60-	1	92	2.1	2.0	11.0	11.0	0.80	1.00	0.0	0.0	5.57	8	98
100.0 RFS APXV18-	3	115	7.4	6.0	6.8	3.2	1.00	0.68	0.0	0.0	5.38	69	360
91.00 Generic 10' Omni	1	97	6.4	10.0	3.0	3.0	1.00	1.00	0.0	0.0	5.23	29	102
91.00 Side Arm	1	220	4.5	0.0	0.0	0.0	1.00	1.00	0.0	0.0	5.23	20	250
Totals	57	11009	423.7									1097	11904

Discrete Appurtenance Properties 1.0D + 1.0W Service

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)
125.0	Decibel DB844H90E-	12	14	3.6	4.0	6.5	8.0	0.80	0.73	0.0	0.0	8.25	178	168
125.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	8.25	212	1200
113.0	Andrew SBNHH-	3	34	5.9	4.6	11.9	7.1	0.80	0.69	0.0	0.0	8.02	66	101
113.0	Commscope WCS-	1	30	1.0	0.9	10.6	6.9	0.80	1.00	0.0	0.0	8.02	5	30
113.0	Ericsson RRUS 32	3	51	2.7	2.2	12.1	6.7	0.80	0.50	0.0	0.0	8.02	22	152
113.0	Ericsson RRUS 4449	3	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.0	8.02	16	213
113.0	Ericsson RRUS 4478	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.0	8.02	15	180
113.0	Ericsson RRUS 8843	3	72	1.6	1.2	13.2	10.9	0.80	0.50	0.0	0.0	8.02	13	216
113.0	Flat Light Sector	3	400	13.6	0.0	0.0	0.0	0.75	0.67	0.0	0.0	8.02	140	1200
113.0	Kathrein Scala	6	82	10.0	4.9	20.0	6.9	0.80	0.62	0.0	0.0	8.02	203	490
113.0	Powerwave Allgon	3	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	8.02	59	105
113.0	Powerwave Allgon	6	14	1.1	1.2	9.2	2.6	0.80	0.50	0.0	0.0	8.02	18	85
113.0	Raycap DC6-48-60-0-	1	33	1.4	1.9	11.0	11.0	0.80	1.00	0.0	0.0	8.02	7	33
113.0	Raycap DC6-48-60-	1	20	1.3	2.0	9.7	9.7	0.80	1.00	0.0	0.0	8.02	7	20
113.0	Raycap DC6-48-60-	1	32	1.5	2.0	11.0	11.0	0.80	1.00	0.0	0.0	8.02	8	32
100.0	RFS APXV18-	3	26	5.2	6.0	6.8	3.2	1.00	0.68	0.0	0.0	7.74	69	79
91.00	Generic 10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.0	7.54	19	25
91.00	Side Arm	1	150	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	7.54	19	150
Totals		57	4477	289.6									1077	4477

Site Number: 302536

Code:

ANSI/TIA-222-G

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Site Name: Cherry Hill-branford, CT

Engineering Number: 13334427_C3_02

1/27/2021 10:07:39 AM

Customer: AT&T MOBILITY

Tower Loading

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Block	Spread On Faces	Bundling Arrangement	Cluster Dia (in)	Out Of Zone	Spacing (in)	Orientation Factor	Ka Override
10.00	125.0	7/8" Coax	12	1.09	0.33	100	1	Individual	0.00	N	1.00	1.00	0.00
10.00	125.0	Wave Guide	1	1.50	6.00	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	113.0	2" conduit	2	2.38	3.65	100	None	Individual	0.00	N	1.00	1.00	0.00
10.00	113.0	0.39" (10mm) Fiber	2	0.39	0.06	100	2	Individual	0.00	N	1.00	1.00	0.01
10.00	113.0	0.74" (18.7mm) 8	2	0.74	0.49	100	2	Individual	0.00	N	1.00	1.00	0.01
10.00	113.0	0.78" (19.7mm) 8	4	0.78	0.59	50	2	Block	0.00	N	1.00	1.00	0.01
10.00	113.0	3/8" (0.38"-	1	0.38	0.23	100	2	Individual	0.00	N	1.00	1.00	0.00
10.00	113.0	Wave Guide	1	1.50	6.00	100	2	Individual	0.00	N	1.00	1.00	0.00
10.00	100.0	1 5/8" Coax	6	1.98	0.82	100	3	Individual	0.00	N	1.00	1.00	0.00
10.00	100.0	Wave Guide	1	1.50	6.00	100	3	Individual	0.00	N	1.00	1.00	0.00
10.00	91.00	7/8" Coax	1	1.09	0.33	100	3	Individual	0.00	N	1.00	1.00	0.00

Section Forces

LoadCase 1.2D + 1.6W Normal - Pat 1

101 mph Normal with No Ice - Pattern 1

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	23.25	2.173	2.396	0.000	0.190	2.63	1.00	1.00	0.0	3.55	9.32	0.00	244	0	295	138	433
7	112.08	22.66	5.776	7.595	0.000	0.175	2.68	1.00	1.00	0.0	10.11	27.11	0.00	1012	0	835	537	1373
6	102.08	22.07	1.448	1.989	0.000	0.171	2.70	1.00	1.00	0.0	2.58	6.96	0.00	299	0	209	159	368
5	90.00	21.29	7.213	11.667	0.000	0.191	2.63	1.00	1.00	0.0	13.90	36.48	0.00	2044	0	1056	1226	2282
4	70.00	19.81	9.525	15.000	0.000	0.243	2.46	1.00	1.00	0.0	18.07	44.46	0.00	2695	0	1198	1157	2355
3	50.00	17.99	8.727	15.027	0.000	0.195	2.61	1.00	1.00	0.0	17.22	44.98	0.00	2467	0	1101	1051	2152
2	30.00	15.55	8.703	18.364	0.000	0.165	2.72	1.00	1.00	0.0	18.60	50.55	0.00	2890	0	1069	908	1977
1	10.00	15.54	9.898	18.364	0.000	0.138	2.81	1.00	1.00	0.0	19.71	55.47	0.00	2411	0	1172	514	1686
														14062	0			12625

LoadCase 1.2D + 1.6W Normal - Pat 2

101 mph Normal with No Ice - Pattern 2

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
0 8	122.50	12.79	2.173	2.396	0.000	0.190	2.63	1.00	1.00	0.0	3.55	9.32	0.00	244	0	162	76	238
0 7	112.08	12.46	5.776	7.595	0.000	0.175	2.68	1.00	1.00	0.0	10.11	27.11	0.00	1012	0	459	296	755
0 6	102.08	12.14	1.448	1.989	0.000	0.171	2.70	1.00	1.00	0.0	2.58	6.96	0.00	299	0	115	88	202
0 5	90.00	11.71	7.213	11.667	0.000	0.191	2.63	1.00	1.00	0.0	13.90	36.48	0.00	2044	0	581	674	1255
0 4	70.00	10.90	9.525	15.000	0.000	0.243	2.46	1.00	1.00	0.0	18.07	44.46	0.00	2695	0	659	636	1295
0 3	50.00	9.90	8.727	15.027	0.000	0.195	2.61	1.00	1.00	0.0	17.22	44.98	0.00	2467	0	605	578	1183
0 2	30.00	8.55	8.703	18.364	0.000	0.165	2.72	1.00	1.00	0.0	18.60	50.55	0.00	2890	0	588	499	1088
0 1	10.00	8.55	9.898	18.364	0.000	0.138	2.81	1.00	1.00	0.0	19.71	55.47	0.00	2411	0	645	283	927
														14062	0			6944

LoadCase 1.2D + 1.6W Normal - Pat 3

101 mph Normal with No Ice - Pattern 3

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	23.25	2.173	2.396	0.000	0.190	2.63	1.00	1.00	0.0	3.55	9.32	0.00	244	0	295	138	433
7	112.08	22.66	5.776	7.595	0.000	0.175	2.68	1.00	1.00	0.0	10.11	27.11	0.00	1012	0	835	537	1373
6	102.08	22.07	1.448	1.989	0.000	0.171	2.70	1.00	1.00	0.0	2.58	6.96	0.00	299	0	209	159	368
5	90.00	21.29	7.213	11.667	0.000	0.191	2.63	1.00	1.00	0.0	13.90	36.48	0.00	2044	0	1056	1226	2282
4	70.00	19.81	9.525	15.000	0.000	0.243	2.46	1.00	1.00	0.0	18.07	44.46	0.00	2695	0	1198	1157	2355
3	50.00	17.99	8.727	15.027	0.000	0.195	2.61	1.00	1.00	0.0	17.22	44.98	0.00	2467	0	1101	1051	2152
2	30.00	15.55	8.703	18.364	0.000	0.165	2.72	1.00	1.00	0.0	18.60	50.55	0.00	2890	0	1069	908	1977
1	10.00	15.54	9.898	18.364	0.000	0.138	2.81	1.00	1.00	0.0	19.71	55.47	0.00	2411	0	1172	514	1686
														14062	0			12625

Section Forces

LoadCase 1.2D + 1.6W 60 deg - Pat 1

101 mph 60 degree with No Ice - Pattern 1

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	23.25	2.173	2.396	0.000	0.190	2.63	0.80	1.00	0.0	3.11	8.18	0.00	244	0	259	138	397
7	112.08	22.66	5.776	7.595	0.000	0.175	2.68	0.80	1.00	0.0	8.95	24.01	0.00	1012	0	740	537	1277
6	102.08	22.07	1.448	1.989	0.000	0.171	2.70	0.80	1.00	0.0	2.29	6.18	0.00	299	0	185	159	345
5	90.00	21.29	7.213	11.667	0.000	0.191	2.63	0.80	1.00	0.0	12.46	32.70	0.00	2044	0	947	1226	2172
4	70.00	19.81	9.525	15.000	0.000	0.243	2.46	0.80	1.00	0.0	16.17	39.77	0.00	2695	0	1072	1157	2228
3	50.00	17.99	8.727	15.027	0.000	0.195	2.61	0.80	1.00	0.0	15.47	40.42	0.00	2467	0	989	1051	2040
2	30.00	15.55	8.703	18.364	0.000	0.165	2.72	0.80	1.00	0.0	16.86	45.82	0.00	2890	0	969	908	1877
1	10.00	15.54	9.898	18.364	0.000	0.138	2.81	0.80	1.00	0.0	17.73	49.89	0.00	2411	0	1054	514	1568
														14062	0			11905

LoadCase 1.2D + 1.6W 60 deg - Pat 2

101 mph 60 degree with No Ice - Pattern 2

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
0 8	122.50	12.79	2.173	2.396	0.000	0.190	2.63	0.80	1.00	0.0	3.11	8.18	0.00	244	0	142	76	218
0 7	112.08	12.46	5.776	7.595	0.000	0.175	2.68	0.80	1.00	0.0	8.95	24.01	0.00	1012	0	407	296	703
0 6	102.08	12.14	1.448	1.989	0.000	0.171	2.70	0.80	1.00	0.0	2.29	6.18	0.00	299	0	102	88	190
0 5	90.00	11.71	7.213	11.667	0.000	0.191	2.63	0.80	1.00	0.0	12.46	32.70	0.00	2044	0	521	674	1195
0 4	70.00	10.90	9.525	15.000	0.000	0.243	2.46	0.80	1.00	0.0	16.17	39.77	0.00	2695	0	589	636	1226
0 3	50.00	9.90	8.727	15.027	0.000	0.195	2.61	0.80	1.00	0.0	15.47	40.42	0.00	2467	0	544	578	1122
0 2	30.00	8.55	8.703	18.364	0.000	0.165	2.72	0.80	1.00	0.0	16.86	45.82	0.00	2890	0	533	499	1032
0 1	10.00	8.55	9.898	18.364	0.000	0.138	2.81	0.80	1.00	0.0	17.73	49.89	0.00	2411	0	580	283	863
														14062	0			6548

LoadCase 1.2D + 1.6W 60 deg - Pat 3

101 mph 60 degree with No Ice - Pattern 3

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	23.25	2.173	2.396	0.000	0.190	2.63	0.80	1.00	0.0	3.11	8.18	0.00	244	0	259	138	397
7	112.08	22.66	5.776	7.595	0.000	0.175	2.68	0.80	1.00	0.0	8.95	24.01	0.00	1012	0	740	537	1277
6	102.08	22.07	1.448	1.989	0.000	0.171	2.70	0.80	1.00	0.0	2.29	6.18	0.00	299	0	185	159	345
5	90.00	21.29	7.213	11.667	0.000	0.191	2.63	0.80	1.00	0.0	12.46	32.70	0.00	2044	0	947	1226	2172
4	70.00	19.81	9.525	15.000	0.000	0.243	2.46	0.80	1.00	0.0	16.17	39.77	0.00	2695	0	1072	1157	2228
3	50.00	17.99	8.727	15.027	0.000	0.195	2.61	0.80	1.00	0.0	15.47	40.42	0.00	2467	0	989	1051	2040
2	30.00	15.55	8.703	18.364	0.000	0.165	2.72	0.80	1.00	0.0	16.86	45.82	0.00	2890	0	969	908	1877
1	10.00	15.54	9.898	18.364	0.000	0.138	2.81	0.80	1.00	0.0	17.73	49.89	0.00	2411	0	1054	514	1568
														14062	0			11905

Section Forces

LoadCase 1.2D + 1.6W 90 deg - Pat 1

101 mph 90 degree with No Ice - Pattern 1

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	23.25	2.173	2.396	0.000	0.190	2.63	0.85	1.00	0.0	3.22	8.46	0.00	244	0	268	138	406
7	112.08	22.66	5.776	7.595	0.000	0.175	2.68	0.85	1.00	0.0	9.24	24.78	0.00	1012	0	764	537	1301
6	102.08	22.07	1.448	1.989	0.000	0.171	2.70	0.85	1.00	0.0	2.36	6.37	0.00	299	0	191	159	350
5	90.00	21.29	7.213	11.667	0.000	0.191	2.63	0.85	1.00	0.0	12.82	33.64	0.00	2044	0	974	1226	2200
4	70.00	19.81	9.525	15.000	0.000	0.243	2.46	0.85	1.00	0.0	16.65	40.94	0.00	2695	0	1103	1157	2260
3	50.00	17.99	8.727	15.027	0.000	0.195	2.61	0.85	1.00	0.0	15.91	41.56	0.00	2467	0	1017	1051	2068
2	30.00	15.55	8.703	18.364	0.000	0.165	2.72	0.85	1.00	0.0	17.30	47.01	0.00	2890	0	994	908	1902
1	10.00	15.54	9.898	18.364	0.000	0.138	2.81	0.85	1.00	0.0	18.22	51.29	0.00	2411	0	1084	514	1598
														14062	0			12085

LoadCase 1.2D + 1.6W 90 deg - Pat 2

101 mph 90 degree with No Ice - Pattern 2

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
0 8	122.50	12.79	2.173	2.396	0.000	0.190	2.63	0.85	1.00	0.0	3.22	8.46	0.00	244	0	147	76	223
0 7	112.08	12.46	5.776	7.595	0.000	0.175	2.68	0.85	1.00	0.0	9.24	24.78	0.00	1012	0	420	296	716
0 6	102.08	12.14	1.448	1.989	0.000	0.171	2.70	0.85	1.00	0.0	2.36	6.37	0.00	299	0	105	88	193
0 5	90.00	11.71	7.213	11.667	0.000	0.191	2.63	0.85	1.00	0.0	12.82	33.64	0.00	2044	0	536	674	1210
0 4	70.00	10.90	9.525	15.000	0.000	0.243	2.46	0.85	1.00	0.0	16.65	40.94	0.00	2695	0	607	636	1243
0 3	50.00	9.90	8.727	15.027	0.000	0.195	2.61	0.85	1.00	0.0	15.91	41.56	0.00	2467	0	559	578	1137
0 2	30.00	8.55	8.703	18.364	0.000	0.165	2.72	0.85	1.00	0.0	17.30	47.01	0.00	2890	0	547	499	1046
0 1	10.00	8.55	9.898	18.364	0.000	0.138	2.81	0.85	1.00	0.0	18.22	51.29	0.00	2411	0	596	283	879
														14062	0			6647

LoadCase 1.2D + 1.6W 90 deg - Pat 3

101 mph 90 degree with No Ice - Pattern 3

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	23.25	2.173	2.396	0.000	0.190	2.63	0.85	1.00	0.0	3.22	8.46	0.00	244	0	268	138	406
7	112.08	22.66	5.776	7.595	0.000	0.175	2.68	0.85	1.00	0.0	9.24	24.78	0.00	1012	0	764	537	1301
6	102.08	22.07	1.448	1.989	0.000	0.171	2.70	0.85	1.00	0.0	2.36	6.37	0.00	299	0	191	159	350
5	90.00	21.29	7.213	11.667	0.000	0.191	2.63	0.85	1.00	0.0	12.82	33.64	0.00	2044	0	974	1226	2200
4	70.00	19.81	9.525	15.000	0.000	0.243	2.46	0.85	1.00	0.0	16.65	40.94	0.00	2695	0	1103	1157	2260
3	50.00	17.99	8.727	15.027	0.000	0.195	2.61	0.85	1.00	0.0	15.91	41.56	0.00	2467	0	1017	1051	2068
2	30.00	15.55	8.703	18.364	0.000	0.165	2.72	0.85	1.00	0.0	17.30	47.01	0.00	2890	0	994	908	1902
1	10.00	15.54	9.898	18.364	0.000	0.138	2.81	0.85	1.00	0.0	18.22	51.29	0.00	2411	0	1084	514	1598
														14062	0			12085

Section Forces

LoadCase 1.2D + 1.6W 120 deg - Pat 1

101 mph 120 degree with No Ice - Pattern 1

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	23.25	2.173	2.396	0.000	0.190	2.63	1.00	1.00	0.0	3.55	9.32	0.00	244	0	295	138	433
7	112.08	22.66	5.776	7.595	0.000	0.175	2.68	1.00	1.00	0.0	10.11	27.11	0.00	1012	0	835	537	1373
6	102.08	22.07	1.448	1.989	0.000	0.171	2.70	1.00	1.00	0.0	2.58	6.96	0.00	299	0	209	159	368
5	90.00	21.29	7.213	11.667	0.000	0.191	2.63	1.00	1.00	0.0	13.90	36.48	0.00	2044	0	1056	1226	2282
4	70.00	19.81	9.525	15.000	0.000	0.243	2.46	1.00	1.00	0.0	18.07	44.46	0.00	2695	0	1198	1157	2355
3	50.00	17.99	8.727	15.027	0.000	0.195	2.61	1.00	1.00	0.0	17.22	44.98	0.00	2467	0	1101	1051	2152
2	30.00	15.55	8.703	18.364	0.000	0.165	2.72	1.00	1.00	0.0	18.60	50.55	0.00	2890	0	1069	908	1977
1	10.00	15.54	9.898	18.364	0.000	0.138	2.81	1.00	1.00	0.0	19.71	55.47	0.00	2411	0	1172	514	1686
														14062	0			12625

LoadCase 1.2D + 1.6W 120 deg - Pat 2

101 mph 120 degree with No Ice - Pattern 2

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
0 8	122.50	12.79	2.173	2.396	0.000	0.190	2.63	1.00	1.00	0.0	3.55	9.32	0.00	244	0	162	76	238
0 7	112.08	12.46	5.776	7.595	0.000	0.175	2.68	1.00	1.00	0.0	10.11	27.11	0.00	1012	0	459	296	755
0 6	102.08	12.14	1.448	1.989	0.000	0.171	2.70	1.00	1.00	0.0	2.58	6.96	0.00	299	0	115	88	202
0 5	90.00	11.71	7.213	11.667	0.000	0.191	2.63	1.00	1.00	0.0	13.90	36.48	0.00	2044	0	581	674	1255
0 4	70.00	10.90	9.525	15.000	0.000	0.243	2.46	1.00	1.00	0.0	18.07	44.46	0.00	2695	0	659	636	1295
0 3	50.00	9.90	8.727	15.027	0.000	0.195	2.61	1.00	1.00	0.0	17.22	44.98	0.00	2467	0	605	578	1183
0 2	30.00	8.55	8.703	18.364	0.000	0.165	2.72	1.00	1.00	0.0	18.60	50.55	0.00	2890	0	588	499	1088
0 1	10.00	8.55	9.898	18.364	0.000	0.138	2.81	1.00	1.00	0.0	19.71	55.47	0.00	2411	0	645	283	927
														14062	0			6944

LoadCase 1.2D + 1.6W 120 deg - Pat 3

101 mph 120 degree with No Ice - Pattern 3

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	23.25	2.173	2.396	0.000	0.190	2.63	1.00	1.00	0.0	3.55	9.32	0.00	244	0	295	138	433
7	112.08	22.66	5.776	7.595	0.000	0.175	2.68	1.00	1.00	0.0	10.11	27.11	0.00	1012	0	835	537	1373
6	102.08	22.07	1.448	1.989	0.000	0.171	2.70	1.00	1.00	0.0	2.58	6.96	0.00	299	0	209	159	368
5	90.00	21.29	7.213	11.667	0.000	0.191	2.63	1.00	1.00	0.0	13.90	36.48	0.00	2044	0	1056	1226	2282
4	70.00	19.81	9.525	15.000	0.000	0.243	2.46	1.00	1.00	0.0	18.07	44.46	0.00	2695	0	1198	1157	2355
3	50.00	17.99	8.727	15.027	0.000	0.195	2.61	1.00	1.00	0.0	17.22	44.98	0.00	2467	0	1101	1051	2152
2	30.00	15.55	8.703	18.364	0.000	0.165	2.72	1.00	1.00	0.0	18.60	50.55	0.00	2890	0	1069	908	1977
1	10.00	15.54	9.898	18.364	0.000	0.138	2.81	1.00	1.00	0.0	19.71	55.47	0.00	2411	0	1172	514	1686
														14062	0			12625

Section Forces

LoadCase 1.2D + 1.6W 180 deg - Pat 1

101 mph 180 degree with No Ice - Pattern 1

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	23.25	2.173	2.396	0.000	0.190	2.63	0.80	1.00	0.0	3.11	8.18	0.00	244	0	259	138	397
7	112.08	22.66	5.776	7.595	0.000	0.175	2.68	0.80	1.00	0.0	8.95	24.01	0.00	1012	0	740	537	1277
6	102.08	22.07	1.448	1.989	0.000	0.171	2.70	0.80	1.00	0.0	2.29	6.18	0.00	299	0	185	159	345
5	90.00	21.29	7.213	11.667	0.000	0.191	2.63	0.80	1.00	0.0	12.46	32.70	0.00	2044	0	947	1226	2172
4	70.00	19.81	9.525	15.000	0.000	0.243	2.46	0.80	1.00	0.0	16.17	39.77	0.00	2695	0	1072	1157	2228
3	50.00	17.99	8.727	15.027	0.000	0.195	2.61	0.80	1.00	0.0	15.47	40.42	0.00	2467	0	989	1051	2040
2	30.00	15.55	8.703	18.364	0.000	0.165	2.72	0.80	1.00	0.0	16.86	45.82	0.00	2890	0	969	908	1877
1	10.00	15.54	9.898	18.364	0.000	0.138	2.81	0.80	1.00	0.0	17.73	49.89	0.00	2411	0	1054	514	1568
														14062	0			11905

LoadCase 1.2D + 1.6W 180 deg - Pat 2

101 mph 180 degree with No Ice - Pattern 2

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
0 8	122.50	12.79	2.173	2.396	0.000	0.190	2.63	0.80	1.00	0.0	3.11	8.18	0.00	244	0	142	76	218
0 7	112.08	12.46	5.776	7.595	0.000	0.175	2.68	0.80	1.00	0.0	8.95	24.01	0.00	1012	0	407	296	703
0 6	102.08	12.14	1.448	1.989	0.000	0.171	2.70	0.80	1.00	0.0	2.29	6.18	0.00	299	0	102	88	190
0 5	90.00	11.71	7.213	11.667	0.000	0.191	2.63	0.80	1.00	0.0	12.46	32.70	0.00	2044	0	521	674	1195
0 4	70.00	10.90	9.525	15.000	0.000	0.243	2.46	0.80	1.00	0.0	16.17	39.77	0.00	2695	0	589	636	1226
0 3	50.00	9.90	8.727	15.027	0.000	0.195	2.61	0.80	1.00	0.0	15.47	40.42	0.00	2467	0	544	578	1122
0 2	30.00	8.55	8.703	18.364	0.000	0.165	2.72	0.80	1.00	0.0	16.86	45.82	0.00	2890	0	533	499	1032
0 1	10.00	8.55	9.898	18.364	0.000	0.138	2.81	0.80	1.00	0.0	17.73	49.89	0.00	2411	0	580	283	863
														14062	0			6548

LoadCase 1.2D + 1.6W 180 deg - Pat 3

101 mph 180 degree with No Ice - Pattern 3

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	23.25	2.173	2.396	0.000	0.190	2.63	0.80	1.00	0.0	3.11	8.18	0.00	244	0	259	138	397
7	112.08	22.66	5.776	7.595	0.000	0.175	2.68	0.80	1.00	0.0	8.95	24.01	0.00	1012	0	740	537	1277
6	102.08	22.07	1.448	1.989	0.000	0.171	2.70	0.80	1.00	0.0	2.29	6.18	0.00	299	0	185	159	345
5	90.00	21.29	7.213	11.667	0.000	0.191	2.63	0.80	1.00	0.0	12.46	32.70	0.00	2044	0	947	1226	2172
4	70.00	19.81	9.525	15.000	0.000	0.243	2.46	0.80	1.00	0.0	16.17	39.77	0.00	2695	0	1072	1157	2228
3	50.00	17.99	8.727	15.027	0.000	0.195	2.61	0.80	1.00	0.0	15.47	40.42	0.00	2467	0	989	1051	2040
2	30.00	15.55	8.703	18.364	0.000	0.165	2.72	0.80	1.00	0.0	16.86	45.82	0.00	2890	0	969	908	1877
1	10.00	15.54	9.898	18.364	0.000	0.138	2.81	0.80	1.00	0.0	17.73	49.89	0.00	2411	0	1054	514	1568
														14062	0			11905

Section Forces

LoadCase 1.2D + 1.6W 210 deg - Pat 1

101 mph 210 degree with No Ice - Pattern 1

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	23.25	2.173	2.396	0.000	0.190	2.63	0.85	1.00	0.0	3.22	8.46	0.00	244	0	268	138	406
7	112.08	22.66	5.776	7.595	0.000	0.175	2.68	0.85	1.00	0.0	9.24	24.78	0.00	1012	0	764	537	1301
6	102.08	22.07	1.448	1.989	0.000	0.171	2.70	0.85	1.00	0.0	2.36	6.37	0.00	299	0	191	159	350
5	90.00	21.29	7.213	11.667	0.000	0.191	2.63	0.85	1.00	0.0	12.82	33.64	0.00	2044	0	974	1226	2200
4	70.00	19.81	9.525	15.000	0.000	0.243	2.46	0.85	1.00	0.0	16.65	40.94	0.00	2695	0	1103	1157	2260
3	50.00	17.99	8.727	15.027	0.000	0.195	2.61	0.85	1.00	0.0	15.91	41.56	0.00	2467	0	1017	1051	2068
2	30.00	15.55	8.703	18.364	0.000	0.165	2.72	0.85	1.00	0.0	17.30	47.01	0.00	2890	0	994	908	1902
1	10.00	15.54	9.898	18.364	0.000	0.138	2.81	0.85	1.00	0.0	18.22	51.29	0.00	2411	0	1084	514	1598
														14062	0			12085

LoadCase 1.2D + 1.6W 210 deg - Pat 2

101 mph 210 degree with No Ice - Pattern 2

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
0 8	122.50	12.79	2.173	2.396	0.000	0.190	2.63	0.85	1.00	0.0	3.22	8.46	0.00	244	0	147	76	223
0 7	112.08	12.46	5.776	7.595	0.000	0.175	2.68	0.85	1.00	0.0	9.24	24.78	0.00	1012	0	420	296	716
0 6	102.08	12.14	1.448	1.989	0.000	0.171	2.70	0.85	1.00	0.0	2.36	6.37	0.00	299	0	105	88	193
0 5	90.00	11.71	7.213	11.667	0.000	0.191	2.63	0.85	1.00	0.0	12.82	33.64	0.00	2044	0	536	674	1210
0 4	70.00	10.90	9.525	15.000	0.000	0.243	2.46	0.85	1.00	0.0	16.65	40.94	0.00	2695	0	607	636	1243
0 3	50.00	9.90	8.727	15.027	0.000	0.195	2.61	0.85	1.00	0.0	15.91	41.56	0.00	2467	0	559	578	1137
0 2	30.00	8.55	8.703	18.364	0.000	0.165	2.72	0.85	1.00	0.0	17.30	47.01	0.00	2890	0	547	499	1046
0 1	10.00	8.55	9.898	18.364	0.000	0.138	2.81	0.85	1.00	0.0	18.22	51.29	0.00	2411	0	596	283	879
														14062	0			6647

LoadCase 1.2D + 1.6W 210 deg - Pat 3

101 mph 210 degree with No Ice - Pattern 3

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	23.25	2.173	2.396	0.000	0.190	2.63	0.85	1.00	0.0	3.22	8.46	0.00	244	0	268	138	406
7	112.08	22.66	5.776	7.595	0.000	0.175	2.68	0.85	1.00	0.0	9.24	24.78	0.00	1012	0	764	537	1301
6	102.08	22.07	1.448	1.989	0.000	0.171	2.70	0.85	1.00	0.0	2.36	6.37	0.00	299	0	191	159	350
5	90.00	21.29	7.213	11.667	0.000	0.191	2.63	0.85	1.00	0.0	12.82	33.64	0.00	2044	0	974	1226	2200
4	70.00	19.81	9.525	15.000	0.000	0.243	2.46	0.85	1.00	0.0	16.65	40.94	0.00	2695	0	1103	1157	2260
3	50.00	17.99	8.727	15.027	0.000	0.195	2.61	0.85	1.00	0.0	15.91	41.56	0.00	2467	0	1017	1051	2068
2	30.00	15.55	8.703	18.364	0.000	0.165	2.72	0.85	1.00	0.0	17.30	47.01	0.00	2890	0	994	908	1902
1	10.00	15.54	9.898	18.364	0.000	0.138	2.81	0.85	1.00	0.0	18.22	51.29	0.00	2411	0	1084	514	1598
														14062	0			12085

Section Forces

LoadCase 1.2D + 1.6W 240 deg - Pat 1

101 mph 240 degree with No Ice - Pattern 1

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	23.25	2.173	2.396	0.000	0.190	2.63	1.00	1.00	0.0	3.55	9.32	0.00	244	0	295	138	433
7	112.08	22.66	5.776	7.595	0.000	0.175	2.68	1.00	1.00	0.0	10.11	27.11	0.00	1012	0	835	537	1373
6	102.08	22.07	1.448	1.989	0.000	0.171	2.70	1.00	1.00	0.0	2.58	6.96	0.00	299	0	209	159	368
5	90.00	21.29	7.213	11.667	0.000	0.191	2.63	1.00	1.00	0.0	13.90	36.48	0.00	2044	0	1056	1226	2282
4	70.00	19.81	9.525	15.000	0.000	0.243	2.46	1.00	1.00	0.0	18.07	44.46	0.00	2695	0	1198	1157	2355
3	50.00	17.99	8.727	15.027	0.000	0.195	2.61	1.00	1.00	0.0	17.22	44.98	0.00	2467	0	1101	1051	2152
2	30.00	15.55	8.703	18.364	0.000	0.165	2.72	1.00	1.00	0.0	18.60	50.55	0.00	2890	0	1069	908	1977
1	10.00	15.54	9.898	18.364	0.000	0.138	2.81	1.00	1.00	0.0	19.71	55.47	0.00	2411	0	1172	514	1686
														14062	0			12625

LoadCase 1.2D + 1.6W 240 deg - Pat 2

101 mph 240 degree with No Ice - Pattern 2

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
0 8	122.50	12.79	2.173	2.396	0.000	0.190	2.63	1.00	1.00	0.0	3.55	9.32	0.00	244	0	162	76	238
0 7	112.08	12.46	5.776	7.595	0.000	0.175	2.68	1.00	1.00	0.0	10.11	27.11	0.00	1012	0	459	296	755
0 6	102.08	12.14	1.448	1.989	0.000	0.171	2.70	1.00	1.00	0.0	2.58	6.96	0.00	299	0	115	88	202
0 5	90.00	11.71	7.213	11.667	0.000	0.191	2.63	1.00	1.00	0.0	13.90	36.48	0.00	2044	0	581	674	1255
0 4	70.00	10.90	9.525	15.000	0.000	0.243	2.46	1.00	1.00	0.0	18.07	44.46	0.00	2695	0	659	636	1295
0 3	50.00	9.90	8.727	15.027	0.000	0.195	2.61	1.00	1.00	0.0	17.22	44.98	0.00	2467	0	605	578	1183
0 2	30.00	8.55	8.703	18.364	0.000	0.165	2.72	1.00	1.00	0.0	18.60	50.55	0.00	2890	0	588	499	1088
0 1	10.00	8.55	9.898	18.364	0.000	0.138	2.81	1.00	1.00	0.0	19.71	55.47	0.00	2411	0	645	283	927
														14062	0			6944

LoadCase 1.2D + 1.6W 240 deg - Pat 3

101 mph 240 degree with No Ice - Pattern 3

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	23.25	2.173	2.396	0.000	0.190	2.63	1.00	1.00	0.0	3.55	9.32	0.00	244	0	295	138	433
7	112.08	22.66	5.776	7.595	0.000	0.175	2.68	1.00	1.00	0.0	10.11	27.11	0.00	1012	0	835	537	1373
6	102.08	22.07	1.448	1.989	0.000	0.171	2.70	1.00	1.00	0.0	2.58	6.96	0.00	299	0	209	159	368
5	90.00	21.29	7.213	11.667	0.000	0.191	2.63	1.00	1.00	0.0	13.90	36.48	0.00	2044	0	1056	1226	2282
4	70.00	19.81	9.525	15.000	0.000	0.243	2.46	1.00	1.00	0.0	18.07	44.46	0.00	2695	0	1198	1157	2355
3	50.00	17.99	8.727	15.027	0.000	0.195	2.61	1.00	1.00	0.0	17.22	44.98	0.00	2467	0	1101	1051	2152
2	30.00	15.55	8.703	18.364	0.000	0.165	2.72	1.00	1.00	0.0	18.60	50.55	0.00	2890	0	1069	908	1977
1	10.00	15.54	9.898	18.364	0.000	0.138	2.81	1.00	1.00	0.0	19.71	55.47	0.00	2411	0	1172	514	1686
														14062	0			12625

Section Forces

LoadCase 1.2D + 1.6W 300 deg - Pat 1

101 mph 300 degree with No Ice - Pattern 1

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	23.25	2.173	2.396	0.000	0.190	2.63	0.80	1.00	0.0	3.11	8.18	0.00	244	0	259	138	397
7	112.08	22.66	5.776	7.595	0.000	0.175	2.68	0.80	1.00	0.0	8.95	24.01	0.00	1012	0	740	537	1277
6	102.08	22.07	1.448	1.989	0.000	0.171	2.70	0.80	1.00	0.0	2.29	6.18	0.00	299	0	185	159	345
5	90.00	21.29	7.213	11.667	0.000	0.191	2.63	0.80	1.00	0.0	12.46	32.70	0.00	2044	0	947	1226	2172
4	70.00	19.81	9.525	15.000	0.000	0.243	2.46	0.80	1.00	0.0	16.17	39.77	0.00	2695	0	1072	1157	2228
3	50.00	17.99	8.727	15.027	0.000	0.195	2.61	0.80	1.00	0.0	15.47	40.42	0.00	2467	0	989	1051	2040
2	30.00	15.55	8.703	18.364	0.000	0.165	2.72	0.80	1.00	0.0	16.86	45.82	0.00	2890	0	969	908	1877
1	10.00	15.54	9.898	18.364	0.000	0.138	2.81	0.80	1.00	0.0	17.73	49.89	0.00	2411	0	1054	514	1568
														14062	0			11905

LoadCase 1.2D + 1.6W 300 deg - Pat 2

101 mph 300 degree with No Ice - Pattern 2

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
0 8	122.50	12.79	2.173	2.396	0.000	0.190	2.63	0.80	1.00	0.0	3.11	8.18	0.00	244	0	142	76	218
0 7	112.08	12.46	5.776	7.595	0.000	0.175	2.68	0.80	1.00	0.0	8.95	24.01	0.00	1012	0	407	296	703
0 6	102.08	12.14	1.448	1.989	0.000	0.171	2.70	0.80	1.00	0.0	2.29	6.18	0.00	299	0	102	88	190
0 5	90.00	11.71	7.213	11.667	0.000	0.191	2.63	0.80	1.00	0.0	12.46	32.70	0.00	2044	0	521	674	1195
0 4	70.00	10.90	9.525	15.000	0.000	0.243	2.46	0.80	1.00	0.0	16.17	39.77	0.00	2695	0	589	636	1226
0 3	50.00	9.90	8.727	15.027	0.000	0.195	2.61	0.80	1.00	0.0	15.47	40.42	0.00	2467	0	544	578	1122
0 2	30.00	8.55	8.703	18.364	0.000	0.165	2.72	0.80	1.00	0.0	16.86	45.82	0.00	2890	0	533	499	1032
0 1	10.00	8.55	9.898	18.364	0.000	0.138	2.81	0.80	1.00	0.0	17.73	49.89	0.00	2411	0	580	283	863
														14062	0			6548

LoadCase 1.2D + 1.6W 300 deg - Pat 3

101 mph 300 degree with No Ice - Pattern 3

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	23.25	2.173	2.396	0.000	0.190	2.63	0.80	1.00	0.0	3.11	8.18	0.00	244	0	259	138	397
7	112.08	22.66	5.776	7.595	0.000	0.175	2.68	0.80	1.00	0.0	8.95	24.01	0.00	1012	0	740	537	1277
6	102.08	22.07	1.448	1.989	0.000	0.171	2.70	0.80	1.00	0.0	2.29	6.18	0.00	299	0	185	159	345
5	90.00	21.29	7.213	11.667	0.000	0.191	2.63	0.80	1.00	0.0	12.46	32.70	0.00	2044	0	947	1226	2172
4	70.00	19.81	9.525	15.000	0.000	0.243	2.46	0.80	1.00	0.0	16.17	39.77	0.00	2695	0	1072	1157	2228
3	50.00	17.99	8.727	15.027	0.000	0.195	2.61	0.80	1.00	0.0	15.47	40.42	0.00	2467	0	989	1051	2040
2	30.00	15.55	8.703	18.364	0.000	0.165	2.72	0.80	1.00	0.0	16.86	45.82	0.00	2890	0	969	908	1877
1	10.00	15.54	9.898	18.364	0.000	0.138	2.81	0.80	1.00	0.0	17.73	49.89	0.00	2411	0	1054	514	1568
														14062	0			11905

Section Forces

LoadCase 1.2D + 1.6W 330 deg - Pat 1

101 mph 330 degree with No Ice - Pattern 1

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	23.25	2.173	2.396	0.000	0.190	2.63	0.85	1.00	0.0	3.22	8.46	0.00	244	0	268	138	406
7	112.08	22.66	5.776	7.595	0.000	0.175	2.68	0.85	1.00	0.0	9.24	24.78	0.00	1012	0	764	537	1301
6	102.08	22.07	1.448	1.989	0.000	0.171	2.70	0.85	1.00	0.0	2.36	6.37	0.00	299	0	191	159	350
5	90.00	21.29	7.213	11.667	0.000	0.191	2.63	0.85	1.00	0.0	12.82	33.64	0.00	2044	0	974	1226	2200
4	70.00	19.81	9.525	15.000	0.000	0.243	2.46	0.85	1.00	0.0	16.65	40.94	0.00	2695	0	1103	1157	2260
3	50.00	17.99	8.727	15.027	0.000	0.195	2.61	0.85	1.00	0.0	15.91	41.56	0.00	2467	0	1017	1051	2068
2	30.00	15.55	8.703	18.364	0.000	0.165	2.72	0.85	1.00	0.0	17.30	47.01	0.00	2890	0	994	908	1902
1	10.00	15.54	9.898	18.364	0.000	0.138	2.81	0.85	1.00	0.0	18.22	51.29	0.00	2411	0	1084	514	1598
														14062	0			12085

LoadCase 1.2D + 1.6W 330 deg - Pat 2

101 mph 330 degree with No Ice - Pattern 2

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
0 8	122.50	12.79	2.173	2.396	0.000	0.190	2.63	0.85	1.00	0.0	3.22	8.46	0.00	244	0	147	76	223
0 7	112.08	12.46	5.776	7.595	0.000	0.175	2.68	0.85	1.00	0.0	9.24	24.78	0.00	1012	0	420	296	716
0 6	102.08	12.14	1.448	1.989	0.000	0.171	2.70	0.85	1.00	0.0	2.36	6.37	0.00	299	0	105	88	193
0 5	90.00	11.71	7.213	11.667	0.000	0.191	2.63	0.85	1.00	0.0	12.82	33.64	0.00	2044	0	536	674	1210
0 4	70.00	10.90	9.525	15.000	0.000	0.243	2.46	0.85	1.00	0.0	16.65	40.94	0.00	2695	0	607	636	1243
0 3	50.00	9.90	8.727	15.027	0.000	0.195	2.61	0.85	1.00	0.0	15.91	41.56	0.00	2467	0	559	578	1137
0 2	30.00	8.55	8.703	18.364	0.000	0.165	2.72	0.85	1.00	0.0	17.30	47.01	0.00	2890	0	547	499	1046
0 1	10.00	8.55	9.898	18.364	0.000	0.138	2.81	0.85	1.00	0.0	18.22	51.29	0.00	2411	0	596	283	879
														14062	0			6647

LoadCase 1.2D + 1.6W 330 deg - Pat 3

101 mph 330 degree with No Ice - Pattern 3

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	23.25	2.173	2.396	0.000	0.190	2.63	0.85	1.00	0.0	3.22	8.46	0.00	244	0	268	138	406
7	112.08	22.66	5.776	7.595	0.000	0.175	2.68	0.85	1.00	0.0	9.24	24.78	0.00	1012	0	764	537	1301
6	102.08	22.07	1.448	1.989	0.000	0.171	2.70	0.85	1.00	0.0	2.36	6.37	0.00	299	0	191	159	350
5	90.00	21.29	7.213	11.667	0.000	0.191	2.63	0.85	1.00	0.0	12.82	33.64	0.00	2044	0	974	1226	2200
4	70.00	19.81	9.525	15.000	0.000	0.243	2.46	0.85	1.00	0.0	16.65	40.94	0.00	2695	0	1103	1157	2260
3	50.00	17.99	8.727	15.027	0.000	0.195	2.61	0.85	1.00	0.0	15.91	41.56	0.00	2467	0	1017	1051	2068
2	30.00	15.55	8.703	18.364	0.000	0.165	2.72	0.85	1.00	0.0	17.30	47.01	0.00	2890	0	994	908	1902
1	10.00	15.54	9.898	18.364	0.000	0.138	2.81	0.85	1.00	0.0	18.22	51.29	0.00	2411	0	1084	514	1598
														14062	0			12085

Section Forces

LoadCase 0.9D + 1.6W Normal

101 mph Normal with No Ice (Reduced DL)

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	23.25	2.173	2.396	0.000	0.190	2.63	1.00	1.00	0.0	3.55	9.32	0.00	183	0	295	138	433
7	112.08	22.66	5.776	7.595	0.000	0.175	2.68	1.00	1.00	0.0	10.11	27.11	0.00	759	0	835	537	1373
6	102.08	22.07	1.448	1.989	0.000	0.171	2.70	1.00	1.00	0.0	2.58	6.96	0.00	224	0	209	159	368
5	90.00	21.29	7.213	11.667	0.000	0.191	2.63	1.00	1.00	0.0	13.90	36.48	0.00	1533	0	1056	1226	2282
4	70.00	19.81	9.525	15.000	0.000	0.243	2.46	1.00	1.00	0.0	18.07	44.46	0.00	2021	0	1198	1157	2355
3	50.00	17.99	8.727	15.027	0.000	0.195	2.61	1.00	1.00	0.0	17.22	44.98	0.00	1850	0	1101	1051	2152
2	30.00	15.55	8.703	18.364	0.000	0.165	2.72	1.00	1.00	0.0	18.60	50.55	0.00	2168	0	1069	908	1977
1	10.00	15.54	9.898	18.364	0.000	0.138	2.81	1.00	1.00	0.0	19.71	55.47	0.00	1808	0	1172	514	1686
														10546	0			12625

LoadCase 0.9D + 1.6W 60 deg

101 mph 60 deg with No Ice (Reduced DL)

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	23.25	2.173	2.396	0.000	0.190	2.63	0.80	1.00	0.0	3.11	8.18	0.00	183	0	259	138	397
7	112.08	22.66	5.776	7.595	0.000	0.175	2.68	0.80	1.00	0.0	8.95	24.01	0.00	759	0	740	537	1277
6	102.08	22.07	1.448	1.989	0.000	0.171	2.70	0.80	1.00	0.0	2.29	6.18	0.00	224	0	185	159	345
5	90.00	21.29	7.213	11.667	0.000	0.191	2.63	0.80	1.00	0.0	12.46	32.70	0.00	1533	0	947	1226	2172
4	70.00	19.81	9.525	15.000	0.000	0.243	2.46	0.80	1.00	0.0	16.17	39.77	0.00	2021	0	1072	1157	2228
3	50.00	17.99	8.727	15.027	0.000	0.195	2.61	0.80	1.00	0.0	15.47	40.42	0.00	1850	0	989	1051	2040
2	30.00	15.55	8.703	18.364	0.000	0.165	2.72	0.80	1.00	0.0	16.86	45.82	0.00	2168	0	969	908	1877
1	10.00	15.54	9.898	18.364	0.000	0.138	2.81	0.80	1.00	0.0	17.73	49.89	0.00	1808	0	1054	514	1568
														10546	0			11905

LoadCase 0.9D + 1.6W 90 deg

101 mph 90 deg with No Ice (Reduced DL)

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	23.25	2.173	2.396	0.000	0.190	2.63	0.85	1.00	0.0	3.22	8.46	0.00	183	0	268	138	406
7	112.08	22.66	5.776	7.595	0.000	0.175	2.68	0.85	1.00	0.0	9.24	24.78	0.00	759	0	764	537	1301
6	102.08	22.07	1.448	1.989	0.000	0.171	2.70	0.85	1.00	0.0	2.36	6.37	0.00	224	0	191	159	350
5	90.00	21.29	7.213	11.667	0.000	0.191	2.63	0.85	1.00	0.0	12.82	33.64	0.00	1533	0	974	1226	2200
4	70.00	19.81	9.525	15.000	0.000	0.243	2.46	0.85	1.00	0.0	16.65	40.94	0.00	2021	0	1103	1157	2260
3	50.00	17.99	8.727	15.027	0.000	0.195	2.61	0.85	1.00	0.0	15.91	41.56	0.00	1850	0	1017	1051	2068
2	30.00	15.55	8.703	18.364	0.000	0.165	2.72	0.85	1.00	0.0	17.30	47.01	0.00	2168	0	994	908	1902
1	10.00	15.54	9.898	18.364	0.000	0.138	2.81	0.85	1.00	0.0	18.22	51.29	0.00	1808	0	1084	514	1598
														10546	0			12085

Section Forces

LoadCase 0.9D + 1.6W 120 deg

101 mph 120 deg with No Ice (Reduced DL)

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	23.25	2.173	2.396	0.000	0.190	2.63	1.00	1.00	0.0	3.55	9.32	0.00	183	0	295	138	433
7	112.08	22.66	5.776	7.595	0.000	0.175	2.68	1.00	1.00	0.0	10.11	27.11	0.00	759	0	835	537	1373
6	102.08	22.07	1.448	1.989	0.000	0.171	2.70	1.00	1.00	0.0	2.58	6.96	0.00	224	0	209	159	368
5	90.00	21.29	7.213	11.667	0.000	0.191	2.63	1.00	1.00	0.0	13.90	36.48	0.00	1533	0	1056	1226	2282
4	70.00	19.81	9.525	15.000	0.000	0.243	2.46	1.00	1.00	0.0	18.07	44.46	0.00	2021	0	1198	1157	2355
3	50.00	17.99	8.727	15.027	0.000	0.195	2.61	1.00	1.00	0.0	17.22	44.98	0.00	1850	0	1101	1051	2152
2	30.00	15.55	8.703	18.364	0.000	0.165	2.72	1.00	1.00	0.0	18.60	50.55	0.00	2168	0	1069	908	1977
1	10.00	15.54	9.898	18.364	0.000	0.138	2.81	1.00	1.00	0.0	19.71	55.47	0.00	1808	0	1172	514	1686
														10546	0			12625

LoadCase 0.9D + 1.6W 180 deg

101 mph 180 deg with No Ice (Reduced DL)

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	23.25	2.173	2.396	0.000	0.190	2.63	0.80	1.00	0.0	3.11	8.18	0.00	183	0	259	138	397
7	112.08	22.66	5.776	7.595	0.000	0.175	2.68	0.80	1.00	0.0	8.95	24.01	0.00	759	0	740	537	1277
6	102.08	22.07	1.448	1.989	0.000	0.171	2.70	0.80	1.00	0.0	2.29	6.18	0.00	224	0	185	159	345
5	90.00	21.29	7.213	11.667	0.000	0.191	2.63	0.80	1.00	0.0	12.46	32.70	0.00	1533	0	947	1226	2172
4	70.00	19.81	9.525	15.000	0.000	0.243	2.46	0.80	1.00	0.0	16.17	39.77	0.00	2021	0	1072	1157	2228
3	50.00	17.99	8.727	15.027	0.000	0.195	2.61	0.80	1.00	0.0	15.47	40.42	0.00	1850	0	989	1051	2040
2	30.00	15.55	8.703	18.364	0.000	0.165	2.72	0.80	1.00	0.0	16.86	45.82	0.00	2168	0	969	908	1877
1	10.00	15.54	9.898	18.364	0.000	0.138	2.81	0.80	1.00	0.0	17.73	49.89	0.00	1808	0	1054	514	1568
														10546	0			11905

LoadCase 0.9D + 1.6W 210 deg

101 mph 210 deg with No Ice (Reduced DL)

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	23.25	2.173	2.396	0.000	0.190	2.63	0.85	1.00	0.0	3.22	8.46	0.00	183	0	268	138	406
7	112.08	22.66	5.776	7.595	0.000	0.175	2.68	0.85	1.00	0.0	9.24	24.78	0.00	759	0	764	537	1301
6	102.08	22.07	1.448	1.989	0.000	0.171	2.70	0.85	1.00	0.0	2.36	6.37	0.00	224	0	191	159	350
5	90.00	21.29	7.213	11.667	0.000	0.191	2.63	0.85	1.00	0.0	12.82	33.64	0.00	1533	0	974	1226	2200
4	70.00	19.81	9.525	15.000	0.000	0.243	2.46	0.85	1.00	0.0	16.65	40.94	0.00	2021	0	1103	1157	2260
3	50.00	17.99	8.727	15.027	0.000	0.195	2.61	0.85	1.00	0.0	15.91	41.56	0.00	1850	0	1017	1051	2068
2	30.00	15.55	8.703	18.364	0.000	0.165	2.72	0.85	1.00	0.0	17.30	47.01	0.00	2168	0	994	908	1902
1	10.00	15.54	9.898	18.364	0.000	0.138	2.81	0.85	1.00	0.0	18.22	51.29	0.00	1808	0	1084	514	1598
														10546	0			12085

Section Forces

LoadCase 0.9D + 1.6W 240 deg

101 mph 240 deg with No Ice (Reduced DL)

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	23.25	2.173	2.396	0.000	0.190	2.63	1.00	1.00	0.0	3.55	9.32	0.00	183	0	295	138	433
7	112.08	22.66	5.776	7.595	0.000	0.175	2.68	1.00	1.00	0.0	10.11	27.11	0.00	759	0	835	537	1373
6	102.08	22.07	1.448	1.989	0.000	0.171	2.70	1.00	1.00	0.0	2.58	6.96	0.00	224	0	209	159	368
5	90.00	21.29	7.213	11.667	0.000	0.191	2.63	1.00	1.00	0.0	13.90	36.48	0.00	1533	0	1056	1226	2282
4	70.00	19.81	9.525	15.000	0.000	0.243	2.46	1.00	1.00	0.0	18.07	44.46	0.00	2021	0	1198	1157	2355
3	50.00	17.99	8.727	15.027	0.000	0.195	2.61	1.00	1.00	0.0	17.22	44.98	0.00	1850	0	1101	1051	2152
2	30.00	15.55	8.703	18.364	0.000	0.165	2.72	1.00	1.00	0.0	18.60	50.55	0.00	2168	0	1069	908	1977
1	10.00	15.54	9.898	18.364	0.000	0.138	2.81	1.00	1.00	0.0	19.71	55.47	0.00	1808	0	1172	514	1686
														10546	0			12625

LoadCase 0.9D + 1.6W 300 deg

101 mph 300 deg with No Ice (Reduced DL)

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	23.25	2.173	2.396	0.000	0.190	2.63	0.80	1.00	0.0	3.11	8.18	0.00	183	0	259	138	397
7	112.08	22.66	5.776	7.595	0.000	0.175	2.68	0.80	1.00	0.0	8.95	24.01	0.00	759	0	740	537	1277
6	102.08	22.07	1.448	1.989	0.000	0.171	2.70	0.80	1.00	0.0	2.29	6.18	0.00	224	0	185	159	345
5	90.00	21.29	7.213	11.667	0.000	0.191	2.63	0.80	1.00	0.0	12.46	32.70	0.00	1533	0	947	1226	2172
4	70.00	19.81	9.525	15.000	0.000	0.243	2.46	0.80	1.00	0.0	16.17	39.77	0.00	2021	0	1072	1157	2228
3	50.00	17.99	8.727	15.027	0.000	0.195	2.61	0.80	1.00	0.0	15.47	40.42	0.00	1850	0	989	1051	2040
2	30.00	15.55	8.703	18.364	0.000	0.165	2.72	0.80	1.00	0.0	16.86	45.82	0.00	2168	0	969	908	1877
1	10.00	15.54	9.898	18.364	0.000	0.138	2.81	0.80	1.00	0.0	17.73	49.89	0.00	1808	0	1054	514	1568
														10546	0			11905

LoadCase 0.9D + 1.6W 330 deg

101 mph 330 deg with No Ice (Reduced DL)

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	23.25	2.173	2.396	0.000	0.190	2.63	0.85	1.00	0.0	3.22	8.46	0.00	183	0	268	138	406
7	112.08	22.66	5.776	7.595	0.000	0.175	2.68	0.85	1.00	0.0	9.24	24.78	0.00	759	0	764	537	1301
6	102.08	22.07	1.448	1.989	0.000	0.171	2.70	0.85	1.00	0.0	2.36	6.37	0.00	224	0	191	159	350
5	90.00	21.29	7.213	11.667	0.000	0.191	2.63	0.85	1.00	0.0	12.82	33.64	0.00	1533	0	974	1226	2200
4	70.00	19.81	9.525	15.000	0.000	0.243	2.46	0.85	1.00	0.0	16.65	40.94	0.00	2021	0	1103	1157	2260
3	50.00	17.99	8.727	15.027	0.000	0.195	2.61	0.85	1.00	0.0	15.91	41.56	0.00	1850	0	1017	1051	2068
2	30.00	15.55	8.703	18.364	0.000	0.165	2.72	0.85	1.00	0.0	17.30	47.01	0.00	2168	0	994	908	1902
1	10.00	15.54	9.898	18.364	0.000	0.138	2.81	0.85	1.00	0.0	18.22	51.29	0.00	1808	0	1084	514	1598
														10546	0			12085

Section Forces

LoadCase 1.2D + 1.0Di + 1.0Wi Normal

50 mph Normal with 0.75 in Radial Ice

Gust Response Factor (Gh): 0.85 Ice Dead Load Factor :1.00 Ice Importance Factor :1.00
 Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	5.70	2.173	10.406	8.010	0.494	1.91	1.00	1.00	1.7	9.27	17.68	8.01	1113	869	86	72	158
7	112.08	5.55	5.776	30.145	22.55	0.444	1.98	1.00	1.00	1.7	25.57	50.70	22.55	4064	3052	239	292	531
6	102.08	5.41	1.448	7.687	5.699	0.430	2.01	1.00	1.00	1.7	6.44	12.93	5.70	1180	882	59	86	145
5	90.00	5.22	7.213	39.476	27.81	0.448	1.98	1.00	1.00	1.7	33.20	65.63	27.81	7408	5364	291	573	864
4	70.00	4.86	9.525	42.195	27.19	0.486	1.92	1.00	1.00	1.6	38.11	73.13	27.19	8265	5570	302	496	798
3	50.00	4.41	8.727	44.739	29.71	0.421	2.02	1.00	1.00	1.6	37.61	76.12	29.71	7769	5302	285	496	781
2	30.00	3.81	8.703	46.435	28.07	0.326	2.23	1.00	1.00	1.5	36.91	82.27	28.07	7914	5024	267	482	748
1	10.00	3.81	9.898	42.921	24.55	0.253	2.43	1.00	1.00	1.3	35.04	85.08	24.56	5582	3172	275	272	548
														43295	29234			4573

LoadCase 1.2D + 1.0Di + 1.0Wi 60 deg

50 mph 60 deg with 0.75 in Radial Ice

Gust Response Factor (Gh): 0.85 Ice Dead Load Factor :1.00 Ice Importance Factor :1.00
 Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	5.70	2.173	10.406	8.010	0.494	1.91	0.80	1.00	1.7	8.84	16.85	8.01	1113	869	82	72	154
7	112.08	5.55	5.776	30.145	22.55	0.444	1.98	0.80	1.00	1.7	24.41	48.41	22.55	4064	3052	229	292	520
6	102.08	5.41	1.448	7.687	5.699	0.430	2.01	0.80	1.00	1.7	6.15	12.35	5.70	1180	882	57	86	142
5	90.00	5.22	7.213	39.476	27.81	0.448	1.98	0.80	1.00	1.7	31.76	62.78	27.81	7408	5364	278	573	851
4	70.00	4.86	9.525	42.195	27.19	0.486	1.92	0.80	1.00	1.6	36.21	69.48	27.19	8265	5570	287	496	783
3	50.00	4.41	8.727	44.739	29.71	0.421	2.02	0.80	1.00	1.6	35.86	72.58	29.71	7769	5302	272	496	768
2	30.00	3.81	8.703	46.435	28.07	0.326	2.23	0.80	1.00	1.5	35.17	78.39	28.07	7914	5024	254	482	736
1	10.00	3.81	9.898	42.921	24.55	0.253	2.43	0.80	1.00	1.3	33.06	80.27	24.56	5582	3172	260	272	532
														43295	29234			4486

LoadCase 1.2D + 1.0Di + 1.0Wi 90 deg

50 mph 90 deg with 0.75 in Radial Ice

Gust Response Factor (Gh): 0.85 Ice Dead Load Factor :1.00 Ice Importance Factor :1.00
 Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	5.70	2.173	10.406	8.010	0.494	1.91	0.85	1.00	1.7	8.94	17.06	8.01	1113	869	83	72	155
7	112.08	5.55	5.776	30.145	22.55	0.444	1.98	0.85	1.00	1.7	24.70	48.98	22.55	4064	3052	231	292	523
6	102.08	5.41	1.448	7.687	5.699	0.430	2.01	0.85	1.00	1.7	6.23	12.50	5.70	1180	882	57	86	143
5	90.00	5.22	7.213	39.476	27.81	0.448	1.98	0.85	1.00	1.7	32.12	63.49	27.81	7408	5364	282	573	854
4	70.00	4.86	9.525	42.195	27.19	0.486	1.92	0.85	1.00	1.6	36.68	70.39	27.19	8265	5570	291	496	787
3	50.00	4.41	8.727	44.739	29.71	0.421	2.02	0.85	1.00	1.6	36.30	73.47	29.71	7769	5302	275	496	771
2	30.00	3.81	8.703	46.435	28.07	0.326	2.23	0.85	1.00	1.5	35.60	79.36	28.07	7914	5024	257	482	739
1	10.00	3.81	9.898	42.921	24.55	0.253	2.43	0.85	1.00	1.3	33.56	81.47	24.56	5582	3172	264	272	536
														43295	29234			4508

Section Forces

LoadCase 1.2D + 1.0Di + 1.0Wi 120 deg

50 mph 120 deg with 0.75 in Radial Ice

Gust Response Factor (Gh): 0.85

Ice Dead Load Factor :1.00

Ice Importance Factor :1.00

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	5.70	2.173	10.406	8.010	0.494	1.91	1.00	1.00	1.7	9.27	17.68	8.01	1113	869	86	72	158
7	112.08	5.55	5.776	30.145	22.55	0.444	1.98	1.00	1.00	1.7	25.57	50.70	22.55	4064	3052	239	292	531
6	102.08	5.41	1.448	7.687	5.699	0.430	2.01	1.00	1.00	1.7	6.44	12.93	5.70	1180	882	59	86	145
5	90.00	5.22	7.213	39.476	27.81	0.448	1.98	1.00	1.00	1.7	33.20	65.63	27.81	7408	5364	291	573	864
4	70.00	4.86	9.525	42.195	27.19	0.486	1.92	1.00	1.00	1.6	38.11	73.13	27.19	8265	5570	302	496	798
3	50.00	4.41	8.727	44.739	29.71	0.421	2.02	1.00	1.00	1.6	37.61	76.12	29.71	7769	5302	285	496	781
2	30.00	3.81	8.703	46.435	28.07	0.326	2.23	1.00	1.00	1.5	36.91	82.27	28.07	7914	5024	267	482	748
1	10.00	3.81	9.898	42.921	24.55	0.253	2.43	1.00	1.00	1.3	35.04	85.08	24.56	5582	3172	275	272	548
														43295	29234			4573

LoadCase 1.2D + 1.0Di + 1.0Wi 180 deg

50 mph 180 deg with 0.75 in Radial Ice

Gust Response Factor (Gh): 0.85

Ice Dead Load Factor :1.00

Ice Importance Factor :1.00

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	5.70	2.173	10.406	8.010	0.494	1.91	0.80	1.00	1.7	8.84	16.85	8.01	1113	869	82	72	154
7	112.08	5.55	5.776	30.145	22.55	0.444	1.98	0.80	1.00	1.7	24.41	48.41	22.55	4064	3052	229	292	520
6	102.08	5.41	1.448	7.687	5.699	0.430	2.01	0.80	1.00	1.7	6.15	12.35	5.70	1180	882	57	86	142
5	90.00	5.22	7.213	39.476	27.81	0.448	1.98	0.80	1.00	1.7	31.76	62.78	27.81	7408	5364	278	573	851
4	70.00	4.86	9.525	42.195	27.19	0.486	1.92	0.80	1.00	1.6	36.21	69.48	27.19	8265	5570	287	496	783
3	50.00	4.41	8.727	44.739	29.71	0.421	2.02	0.80	1.00	1.6	35.86	72.58	29.71	7769	5302	272	496	768
2	30.00	3.81	8.703	46.435	28.07	0.326	2.23	0.80	1.00	1.5	35.17	78.39	28.07	7914	5024	254	482	736
1	10.00	3.81	9.898	42.921	24.55	0.253	2.43	0.80	1.00	1.3	33.06	80.27	24.56	5582	3172	260	272	532
														43295	29234			4486

LoadCase 1.2D + 1.0Di + 1.0Wi 210 deg

50 mph 210 deg with 0.75 in Radial Ice

Gust Response Factor (Gh): 0.85

Ice Dead Load Factor :1.00

Ice Importance Factor :1.00

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	5.70	2.173	10.406	8.010	0.494	1.91	0.85	1.00	1.7	8.94	17.06	8.01	1113	869	83	72	155
7	112.08	5.55	5.776	30.145	22.55	0.444	1.98	0.85	1.00	1.7	24.70	48.98	22.55	4064	3052	231	292	523
6	102.08	5.41	1.448	7.687	5.699	0.430	2.01	0.85	1.00	1.7	6.23	12.50	5.70	1180	882	57	86	143
5	90.00	5.22	7.213	39.476	27.81	0.448	1.98	0.85	1.00	1.7	32.12	63.49	27.81	7408	5364	282	573	854
4	70.00	4.86	9.525	42.195	27.19	0.486	1.92	0.85	1.00	1.6	36.68	70.39	27.19	8265	5570	291	496	787
3	50.00	4.41	8.727	44.739	29.71	0.421	2.02	0.85	1.00	1.6	36.30	73.47	29.71	7769	5302	275	496	771
2	30.00	3.81	8.703	46.435	28.07	0.326	2.23	0.85	1.00	1.5	35.60	79.36	28.07	7914	5024	257	482	739
1	10.00	3.81	9.898	42.921	24.55	0.253	2.43	0.85	1.00	1.3	33.56	81.47	24.56	5582	3172	264	272	536
														43295	29234			4508

Section Forces

LoadCase 1.2D + 1.0Di + 1.0Wi 240 deg

50 mph 240 deg with 0.75 in Radial Ice

Gust Response Factor (Gh): 0.85

Ice Dead Load Factor :1.00

Ice Importance Factor :1.00

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	5.70	2.173	10.406	8.010	0.494	1.91	1.00	1.00	1.7	9.27	17.68	8.01	1113	869	86	72	158
7	112.08	5.55	5.776	30.145	22.55	0.444	1.98	1.00	1.00	1.7	25.57	50.70	22.55	4064	3052	239	292	531
6	102.08	5.41	1.448	7.687	5.699	0.430	2.01	1.00	1.00	1.7	6.44	12.93	5.70	1180	882	59	86	145
5	90.00	5.22	7.213	39.476	27.81	0.448	1.98	1.00	1.00	1.7	33.20	65.63	27.81	7408	5364	291	573	864
4	70.00	4.86	9.525	42.195	27.19	0.486	1.92	1.00	1.00	1.6	38.11	73.13	27.19	8265	5570	302	496	798
3	50.00	4.41	8.727	44.739	29.71	0.421	2.02	1.00	1.00	1.6	37.61	76.12	29.71	7769	5302	285	496	781
2	30.00	3.81	8.703	46.435	28.07	0.326	2.23	1.00	1.00	1.5	36.91	82.27	28.07	7914	5024	267	482	748
1	10.00	3.81	9.898	42.921	24.55	0.253	2.43	1.00	1.00	1.3	35.04	85.08	24.56	5582	3172	275	272	548
														43295	29234			4573

LoadCase 1.2D + 1.0Di + 1.0Wi 300 deg

50 mph 300 deg with 0.75 in Radial Ice

Gust Response Factor (Gh): 0.85

Ice Dead Load Factor :1.00

Ice Importance Factor :1.00

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	5.70	2.173	10.406	8.010	0.494	1.91	0.80	1.00	1.7	8.84	16.85	8.01	1113	869	82	72	154
7	112.08	5.55	5.776	30.145	22.55	0.444	1.98	0.80	1.00	1.7	24.41	48.41	22.55	4064	3052	229	292	520
6	102.08	5.41	1.448	7.687	5.699	0.430	2.01	0.80	1.00	1.7	6.15	12.35	5.70	1180	882	57	86	142
5	90.00	5.22	7.213	39.476	27.81	0.448	1.98	0.80	1.00	1.7	31.76	62.78	27.81	7408	5364	278	573	851
4	70.00	4.86	9.525	42.195	27.19	0.486	1.92	0.80	1.00	1.6	36.21	69.48	27.19	8265	5570	287	496	783
3	50.00	4.41	8.727	44.739	29.71	0.421	2.02	0.80	1.00	1.6	35.86	72.58	29.71	7769	5302	272	496	768
2	30.00	3.81	8.703	46.435	28.07	0.326	2.23	0.80	1.00	1.5	35.17	78.39	28.07	7914	5024	254	482	736
1	10.00	3.81	9.898	42.921	24.55	0.253	2.43	0.80	1.00	1.3	33.06	80.27	24.56	5582	3172	260	272	532
														43295	29234			4486

LoadCase 1.2D + 1.0Di + 1.0Wi 330 deg

50 mph 330 deg with 0.75 in Radial Ice

Gust Response Factor (Gh): 0.85

Ice Dead Load Factor :1.00

Ice Importance Factor :1.00

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	5.70	2.173	10.406	8.010	0.494	1.91	0.85	1.00	1.7	8.94	17.06	8.01	1113	869	83	72	155
7	112.08	5.55	5.776	30.145	22.55	0.444	1.98	0.85	1.00	1.7	24.70	48.98	22.55	4064	3052	231	292	523
6	102.08	5.41	1.448	7.687	5.699	0.430	2.01	0.85	1.00	1.7	6.23	12.50	5.70	1180	882	57	86	143
5	90.00	5.22	7.213	39.476	27.81	0.448	1.98	0.85	1.00	1.7	32.12	63.49	27.81	7408	5364	282	573	854
4	70.00	4.86	9.525	42.195	27.19	0.486	1.92	0.85	1.00	1.6	36.68	70.39	27.19	8265	5570	291	496	787
3	50.00	4.41	8.727	44.739	29.71	0.421	2.02	0.85	1.00	1.6	36.30	73.47	29.71	7769	5302	275	496	771
2	30.00	3.81	8.703	46.435	28.07	0.326	2.23	0.85	1.00	1.5	35.60	79.36	28.07	7914	5024	257	482	739
1	10.00	3.81	9.898	42.921	24.55	0.253	2.43	0.85	1.00	1.3	33.56	81.47	24.56	5582	3172	264	272	536
														43295	29234			4508

Section Forces

LoadCase 1.0D + 1.0W Service Normal

Serviceability - 60 mph Wind Normal

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	8.20	2.173	2.396	0.000	0.190	2.63	1.00	1.00	0.0	3.55	9.32	0.00	203	0	65	30	95
7	112.08	8.00	5.776	7.595	0.000	0.175	2.68	1.00	1.00	0.0	10.11	27.11	0.00	843	0	184	119	303
6	102.08	7.79	1.448	1.989	0.000	0.171	2.70	1.00	1.00	0.0	2.58	6.96	0.00	249	0	46	35	81
5	90.00	7.51	7.213	11.667	0.000	0.191	2.63	1.00	1.00	0.0	13.90	36.48	0.00	1703	0	233	270	503
4	70.00	6.99	9.525	15.000	0.000	0.243	2.46	1.00	1.00	0.0	18.27	44.94	0.00	2246	0	267	255	522
3	50.00	6.35	8.727	15.027	0.000	0.195	2.61	1.00	1.00	0.0	17.35	45.32	0.00	2056	0	245	232	476
2	30.00	5.49	8.703	18.364	0.000	0.165	2.72	1.00	1.00	0.0	19.16	52.06	0.00	2409	0	243	200	443
1	10.00	5.48	9.898	18.364	0.000	0.138	2.81	1.00	1.00	0.0	20.30	57.14	0.00	2009	0	266	113	380
														11718	0			2804

LoadCase 1.0D + 1.0W Service 60 deg

Serviceability - 60 mph Wind 60 deg

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	8.20	2.173	2.396	0.000	0.190	2.63	0.80	1.00	0.0	3.11	8.18	0.00	203	0	57	30	88
7	112.08	8.00	5.776	7.595	0.000	0.175	2.68	0.80	1.00	0.0	8.95	24.01	0.00	843	0	163	119	282
6	102.08	7.79	1.448	1.989	0.000	0.171	2.70	0.80	1.00	0.0	2.29	6.18	0.00	249	0	41	35	76
5	90.00	7.51	7.213	11.667	0.000	0.191	2.63	0.80	1.00	0.0	12.46	32.70	0.00	1703	0	209	270	479
4	70.00	6.99	9.525	15.000	0.000	0.243	2.46	0.80	1.00	0.0	16.37	40.26	0.00	2246	0	239	255	494
3	50.00	6.35	8.727	15.027	0.000	0.195	2.61	0.80	1.00	0.0	15.60	40.76	0.00	2056	0	220	232	452
2	30.00	5.49	8.703	18.364	0.000	0.165	2.72	0.80	1.00	0.0	17.42	47.33	0.00	2409	0	221	200	421
1	10.00	5.48	9.898	18.364	0.000	0.138	2.81	0.80	1.00	0.0	18.32	51.56	0.00	2009	0	240	113	354
														11718	0			2645

LoadCase 1.0D + 1.0W Service 90 deg

Serviceability - 60 mph Wind 90 deg

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	8.20	2.173	2.396	0.000	0.190	2.63	0.85	1.00	0.0	3.22	8.46	0.00	203	0	59	30	90
7	112.08	8.00	5.776	7.595	0.000	0.175	2.68	0.85	1.00	0.0	9.24	24.78	0.00	843	0	168	119	287
6	102.08	7.79	1.448	1.989	0.000	0.171	2.70	0.85	1.00	0.0	2.36	6.37	0.00	249	0	42	35	77
5	90.00	7.51	7.213	11.667	0.000	0.191	2.63	0.85	1.00	0.0	12.82	33.64	0.00	1703	0	215	270	485
4	70.00	6.99	9.525	15.000	0.000	0.243	2.46	0.85	1.00	0.0	16.84	41.43	0.00	2246	0	246	255	501
3	50.00	6.35	8.727	15.027	0.000	0.195	2.61	0.85	1.00	0.0	16.04	41.90	0.00	2056	0	226	232	458
2	30.00	5.49	8.703	18.364	0.000	0.165	2.72	0.85	1.00	0.0	17.85	48.51	0.00	2409	0	226	200	427
1	10.00	5.48	9.898	18.364	0.000	0.138	2.81	0.85	1.00	0.0	18.82	52.96	0.00	2009	0	247	113	360
														11718	0			2685

Section Forces

LoadCase 1.0D + 1.0W Service 120 deg

Serviceability - 60 mph Wind 120 deg

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	8.20	2.173	2.396	0.000	0.190	2.63	1.00	1.00	0.0	3.55	9.32	0.00	203	0	65	30	95
7	112.08	8.00	5.776	7.595	0.000	0.175	2.68	1.00	1.00	0.0	10.11	27.11	0.00	843	0	184	119	303
6	102.08	7.79	1.448	1.989	0.000	0.171	2.70	1.00	1.00	0.0	2.58	6.96	0.00	249	0	46	35	81
5	90.00	7.51	7.213	11.667	0.000	0.191	2.63	1.00	1.00	0.0	13.90	36.48	0.00	1703	0	233	270	503
4	70.00	6.99	9.525	15.000	0.000	0.243	2.46	1.00	1.00	0.0	18.27	44.94	0.00	2246	0	267	255	522
3	50.00	6.35	8.727	15.027	0.000	0.195	2.61	1.00	1.00	0.0	17.35	45.32	0.00	2056	0	245	232	476
2	30.00	5.49	8.703	18.364	0.000	0.165	2.72	1.00	1.00	0.0	19.16	52.06	0.00	2409	0	243	200	443
1	10.00	5.48	9.898	18.364	0.000	0.138	2.81	1.00	1.00	0.0	20.30	57.14	0.00	2009	0	266	113	380
														11718	0			2804

LoadCase 1.0D + 1.0W Service 180 deg

Serviceability - 60 mph Wind 180 deg

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	8.20	2.173	2.396	0.000	0.190	2.63	0.80	1.00	0.0	3.11	8.18	0.00	203	0	57	30	88
7	112.08	8.00	5.776	7.595	0.000	0.175	2.68	0.80	1.00	0.0	8.95	24.01	0.00	843	0	163	119	282
6	102.08	7.79	1.448	1.989	0.000	0.171	2.70	0.80	1.00	0.0	2.29	6.18	0.00	249	0	41	35	76
5	90.00	7.51	7.213	11.667	0.000	0.191	2.63	0.80	1.00	0.0	12.46	32.70	0.00	1703	0	209	270	479
4	70.00	6.99	9.525	15.000	0.000	0.243	2.46	0.80	1.00	0.0	16.37	40.26	0.00	2246	0	239	255	494
3	50.00	6.35	8.727	15.027	0.000	0.195	2.61	0.80	1.00	0.0	15.60	40.76	0.00	2056	0	220	232	452
2	30.00	5.49	8.703	18.364	0.000	0.165	2.72	0.80	1.00	0.0	17.42	47.33	0.00	2409	0	221	200	421
1	10.00	5.48	9.898	18.364	0.000	0.138	2.81	0.80	1.00	0.0	18.32	51.56	0.00	2009	0	240	113	354
														11718	0			2645

LoadCase 1.0D + 1.0W Service 210 deg

Serviceability - 60 mph Wind 210 deg

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	8.20	2.173	2.396	0.000	0.190	2.63	0.85	1.00	0.0	3.22	8.46	0.00	203	0	59	30	90
7	112.08	8.00	5.776	7.595	0.000	0.175	2.68	0.85	1.00	0.0	9.24	24.78	0.00	843	0	168	119	287
6	102.08	7.79	1.448	1.989	0.000	0.171	2.70	0.85	1.00	0.0	2.36	6.37	0.00	249	0	42	35	77
5	90.00	7.51	7.213	11.667	0.000	0.191	2.63	0.85	1.00	0.0	12.82	33.64	0.00	1703	0	215	270	485
4	70.00	6.99	9.525	15.000	0.000	0.243	2.46	0.85	1.00	0.0	16.84	41.43	0.00	2246	0	246	255	501
3	50.00	6.35	8.727	15.027	0.000	0.195	2.61	0.85	1.00	0.0	16.04	41.90	0.00	2056	0	226	232	458
2	30.00	5.49	8.703	18.364	0.000	0.165	2.72	0.85	1.00	0.0	17.85	48.51	0.00	2409	0	226	200	427
1	10.00	5.48	9.898	18.364	0.000	0.138	2.81	0.85	1.00	0.0	18.82	52.96	0.00	2009	0	247	113	360
														11718	0			2685

Section Forces

LoadCase 1.0D + 1.0W Service 240 deg

Serviceability - 60 mph Wind 240 deg

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	8.20	2.173	2.396	0.000	0.190	2.63	1.00	1.00	0.0	3.55	9.32	0.00	203	0	65	30	95
7	112.08	8.00	5.776	7.595	0.000	0.175	2.68	1.00	1.00	0.0	10.11	27.11	0.00	843	0	184	119	303
6	102.08	7.79	1.448	1.989	0.000	0.171	2.70	1.00	1.00	0.0	2.58	6.96	0.00	249	0	46	35	81
5	90.00	7.51	7.213	11.667	0.000	0.191	2.63	1.00	1.00	0.0	13.90	36.48	0.00	1703	0	233	270	503
4	70.00	6.99	9.525	15.000	0.000	0.243	2.46	1.00	1.00	0.0	18.27	44.94	0.00	2246	0	267	255	522
3	50.00	6.35	8.727	15.027	0.000	0.195	2.61	1.00	1.00	0.0	17.35	45.32	0.00	2056	0	245	232	476
2	30.00	5.49	8.703	18.364	0.000	0.165	2.72	1.00	1.00	0.0	19.16	52.06	0.00	2409	0	243	200	443
1	10.00	5.48	9.898	18.364	0.000	0.138	2.81	1.00	1.00	0.0	20.30	57.14	0.00	2009	0	266	113	380
														11718	0			2804

LoadCase 1.0D + 1.0W Service 300 deg

Serviceability - 60 mph Wind 300 deg

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	8.20	2.173	2.396	0.000	0.190	2.63	0.80	1.00	0.0	3.11	8.18	0.00	203	0	57	30	88
7	112.08	8.00	5.776	7.595	0.000	0.175	2.68	0.80	1.00	0.0	8.95	24.01	0.00	843	0	163	119	282
6	102.08	7.79	1.448	1.989	0.000	0.171	2.70	0.80	1.00	0.0	2.29	6.18	0.00	249	0	41	35	76
5	90.00	7.51	7.213	11.667	0.000	0.191	2.63	0.80	1.00	0.0	12.46	32.70	0.00	1703	0	209	270	479
4	70.00	6.99	9.525	15.000	0.000	0.243	2.46	0.80	1.00	0.0	16.37	40.26	0.00	2246	0	239	255	494
3	50.00	6.35	8.727	15.027	0.000	0.195	2.61	0.80	1.00	0.0	15.60	40.76	0.00	2056	0	220	232	452
2	30.00	5.49	8.703	18.364	0.000	0.165	2.72	0.80	1.00	0.0	17.42	47.33	0.00	2409	0	221	200	421
1	10.00	5.48	9.898	18.364	0.000	0.138	2.81	0.80	1.00	0.0	18.32	51.56	0.00	2009	0	240	113	354
														11718	0			2645

LoadCase 1.0D + 1.0W Service 330 deg

Serviceability - 60 mph Wind 330 deg

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q _z (psf)	A _f (sf)	A _r (sf)	Ice A _r (sf)	e	C _f	D _f	D _r	T _{iz} (in)	A _e (sf)	EPA _a (sf)	EPA _{ai} (sf)	Wt. (lb)	Ice Wt. (lb)	F _{st} (lb)	F _a (lb)	Force (lb)
8	122.50	8.20	2.173	2.396	0.000	0.190	2.63	0.85	1.00	0.0	3.22	8.46	0.00	203	0	59	30	90
7	112.08	8.00	5.776	7.595	0.000	0.175	2.68	0.85	1.00	0.0	9.24	24.78	0.00	843	0	168	119	287
6	102.08	7.79	1.448	1.989	0.000	0.171	2.70	0.85	1.00	0.0	2.36	6.37	0.00	249	0	42	35	77
5	90.00	7.51	7.213	11.667	0.000	0.191	2.63	0.85	1.00	0.0	12.82	33.64	0.00	1703	0	215	270	485
4	70.00	6.99	9.525	15.000	0.000	0.243	2.46	0.85	1.00	0.0	16.84	41.43	0.00	2246	0	246	255	501
3	50.00	6.35	8.727	15.027	0.000	0.195	2.61	0.85	1.00	0.0	16.04	41.90	0.00	2056	0	226	232	458
2	30.00	5.49	8.703	18.364	0.000	0.165	2.72	0.85	1.00	0.0	17.85	48.51	0.00	2409	0	226	200	427
1	10.00	5.48	9.898	18.364	0.000	0.138	2.81	0.85	1.00	0.0	18.82	52.96	0.00	2009	0	247	113	360
														11718	0			2685

Site Number: 302536

Code: ANSI/TIA-222-G

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Site Name: Cherry Hill-branford, CT

Engineering Number: 13334427_C3_02

1/27/2021 10:07:39 AM

Customer: AT&T MOBILITY

Equivalent Lateral Force Method

(Based on ASCE7-10 Chapters 11, 12 & 15)

Spectral Response Acceleration for Short Period (S_s):	0.18
Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.06
Long-Period Transition Period (T_L - Seconds):	6
Importance Factor (I_p):	1.00
Site Coefficient F_a :	1.60
Site Coefficient F_v :	2.40
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.19
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Seismic Response Coefficient (C_s):	0.03
Upper Limit C_s :	0.03
Lower Limit C_s :	0.03
Period based on Rayleigh Method (sec):	1.08
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	1.29
Total Unfactored Dead Load:	16.20 k
Seismic Base Shear (E):	0.64 k

LoadCase (1.2 + 0.2Sds) * DL + E

Seismic

Section	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
8	122.50	203	100,066	0.023	15	252
7	112.08	843	369,901	0.087	55	1,045
6	102.07	249	96,835	0.023	14	308
5	90.00	1,703	563,062	0.132	84	2,110
4	70.00	2,246	536,881	0.126	80	2,781
3	50.00	2,056	318,513	0.075	47	2,546
2	30.00	2,409	193,177	0.045	29	2,983
1	10.00	2,009	39,092	0.009	6	2,488
Decibel DB844H90E-XY	125.00	168	84,815	0.020	13	208
Flat Light Sector Frame	125.00	1,200	605,819	0.142	90	1,486
Andrew SBNHH-1D65A (33.5 lbs)	113.00	101	44,548	0.010	7	124
Commscope WCS-IMFQ-AMT	113.00	30	13,076	0.003	2	37
Ericsson RRUS 32 (50.8 lbs)	113.00	152	67,553	0.016	10	189
Ericsson RRUS 4449 B5, B12	113.00	213	94,414	0.022	14	264
Ericsson RRUS 4478 B14	113.00	180	79,654	0.019	12	223
Ericsson RRUS 8843 B2, B66A	113.00	216	95,744	0.022	14	268
Flat Light Sector Frame with Face	113.00	1,200	531,911	0.125	79	1,486
Kathrein Scala 80010964	113.00	490	217,019	0.051	32	606
Powerwave Allgon 7770.00	113.00	105	46,542	0.011	7	130
Powerwave Allgon LGP21401	113.00	85	37,500	0.009	6	105
Raycap DC6-48-60-0-8F	113.00	33	14,539	0.003	2	41
Raycap DC6-48-60-18-8F	113.00	20	8,865	0.002	1	25

Site Number: 302536

Code: ANSI/TIA-222-G

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Site Name: Cherry Hill-branford, CT

Engineering Number: 13334427_C3_02

1/27/2021 10:07:40 AM

Customer: AT&T MOBILITY

Equivalent Lateral Force Method

Raycap DC6-48-60-18-8F ("Squid")	113.00	32	14,096	0.003	2	39
RFS APXV18-206517S-C	100.00	79	29,989	0.007	4	98
Generic 10' Omni	91.00	25	8,382	0.002	1	31
Side Arm	91.00	150	50,295	0.012	7	186
		16,195	4,262,286	1.000	635	20,060

LoadCase (0.9 - 0.2Sds) * DL + E

Seismic (Reduced DL)

Section	Height Above Base (ft)	Weight (lb)	W _z (lb-ft)	C _{vx}	Horizontal Force (lb)	Vertical Force (lb)
8	122.50	203	100,066	0.023	15	175
7	112.08	843	369,901	0.087	55	726
6	102.07	249	96,835	0.023	14	215
5	90.00	1,703	563,062	0.132	84	1,467
4	70.00	2,246	536,881	0.126	80	1,934
3	50.00	2,056	318,513	0.075	47	1,771
2	30.00	2,409	193,177	0.045	29	2,075
1	10.00	2,009	39,092	0.009	6	1,730
Decibel DB844H90E-XY	125.00	168	84,815	0.020	13	145
Flat Light Sector Frame	125.00	1,200	605,819	0.142	90	1,034
Andrew SBNHH-1D65A (33.5 lbs)	113.00	101	44,548	0.010	7	87
Commscope WCS-IMFQ-AMT	113.00	30	13,076	0.003	2	25
Ericsson RRUS 32 (50.8 lbs)	113.00	152	67,553	0.016	10	131
Ericsson RRUS 4449 B5, B12	113.00	213	94,414	0.022	14	183
Ericsson RRUS 4478 B14	113.00	180	79,654	0.019	12	155
Ericsson RRUS 8843 B2, B66A	113.00	216	95,744	0.022	14	186
Flat Light Sector Frame with Face	113.00	1,200	531,911	0.125	79	1,034
Kathrein Scala 80010964	113.00	490	217,019	0.051	32	422
Powerwave Allgon 7770.00	113.00	105	46,542	0.011	7	90
Powerwave Allgon LGP21401	113.00	85	37,500	0.009	6	73
Raycap DC6-48-60-0-8F	113.00	33	14,539	0.003	2	28
Raycap DC6-48-60-18-8F	113.00	20	8,865	0.002	1	17
Raycap DC6-48-60-18-8F ("Squid")	113.00	32	14,096	0.003	2	27
RFS APXV18-206517S-C	100.00	79	29,989	0.007	4	68
Generic 10' Omni	91.00	25	8,382	0.002	1	22
Side Arm	91.00	150	50,295	0.012	7	129
		16,195	4,262,286	1.000	635	13,950

Equivalent Modal Analysis Method

(Based on ASCE7-10 Chapters 11, 12 & 15 and ANSI/TIA-G, section 2.7)

Spectral Response Acceleration for Short Period (S_{ps}):	0.18
Spectral Response Acceleration at 1.0 Second Period (S_{p1}):	0.06
Importance Factor (I_p):	1.00
Site Coefficient F_a :	1.60
Site Coefficient F_v :	2.40
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.19
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Period Based on Rayleigh Method (sec):	1.08
Redundancy Factor (ρ):	1.30

LoadCase (1.2 + 0.2Sds) * DL + E

Seismic

Section	Height Above Base (ft)	Weight (lb)	a	b	c	S_{az}	Horizontal Force (lb)	Vertical Force (lb)
8	122.50	203	1.815	1.608	1.004	0.350	31	252
7	112.08	843	1.519	0.550	0.566	0.192	70	1,045
6	102.07	249	1.260	0.069	0.302	0.093	10	308
5	90.00	1,703	0.980	-0.114	0.122	0.033	25	2,110
4	70.00	2,246	0.593	-0.050	0.014	0.032	31	2,781
3	50.00	2,056	0.302	0.045	0.012	0.045	40	2,546
2	30.00	2,409	0.109	0.071	0.036	0.036	38	2,983
1	10.00	2,009	0.012	0.058	0.034	0.023	20	2,488
Decibel DB844H90E-XY	125.00	168	1.890	1.980	1.140	0.397	29	208
Flat Light Sector Frame	125.00	1,200	1.890	1.980	1.140	0.397	206	1,486
Andrew SBNHH-1D65A (33.5 lbs)	113.00	101	1.545	0.617	0.597	0.204	9	124
Commscope WCS-IMFQ-AMT	113.00	30	1.545	0.617	0.597	0.204	3	37
Ericsson RRUS 32 (50.8 lbs)	113.00	152	1.545	0.617	0.597	0.204	13	189
Ericsson RRUS 4449 B5, B12	113.00	213	1.545	0.617	0.597	0.204	19	264
Ericsson RRUS 4478 B14	113.00	180	1.545	0.617	0.597	0.204	16	223
Ericsson RRUS 8843 B2, B66A	113.00	216	1.545	0.617	0.597	0.204	19	268
Flat Light Sector Frame with	113.00	1,200	1.545	0.617	0.597	0.204	106	1,486
Kathrein Scala 80010964	113.00	490	1.545	0.617	0.597	0.204	43	606
Powerwave Allgon 7770.00	113.00	105	1.545	0.617	0.597	0.204	9	130
Powerwave Allgon LGP21401	113.00	85	1.545	0.617	0.597	0.204	7	105
Raycap DC6-48-60-0-8F	113.00	33	1.545	0.617	0.597	0.204	3	41
Raycap DC6-48-60-18-8F	113.00	20	1.545	0.617	0.597	0.204	2	25
Raycap DC6-48-60-18-8F ("Squid")	113.00	32	1.545	0.617	0.597	0.204	3	39
RFS APXV18-206517S-C	100.00	79	1.210	0.014	0.262	0.078	3	98
Generic 10' Omni	91.00	25	1.002	-0.109	0.132	0.036	0	31
Side Arm	91.00	150	1.002	-0.109	0.132	0.036	2	186
		16,195	33.663	14.009	12.661	4.403	758	20,060

LoadCase (0.9 - 0.2Sds) * DL + E

Seismic (Reduced DL)

Section	Height Above Base (ft)	Weight (lb)	a	b	c	S_{az}	Horizontal Force (lb)	Vertical Force (lb)
8	122.50	203	1.815	1.608	1.004	0.350	31	175
7	112.08	843	1.519	0.550	0.566	0.192	70	726

Site Number: 302536

Code:

ANSI/TIA-222-G

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Site Name: Cherry Hill-branford, CT

Engineering Number: 13334427_C3_02

1/27/2021 10:07:40 AM

Customer: AT&T MOBILITY

Equivalent Modal Analysis Method

6	102.07	249	1.260	0.069	0.302	0.093	10	215
5	90.00	1,703	0.980	-0.114	0.122	0.033	25	1,467
4	70.00	2,246	0.593	-0.050	0.014	0.032	31	1,934
3	50.00	2,056	0.302	0.045	0.012	0.045	40	1,771
2	30.00	2,409	0.109	0.071	0.036	0.036	38	2,075
1	10.00	2,009	0.012	0.058	0.034	0.023	20	1,730
Decibel DB844H90E-XY	125.00	168	1.890	1.980	1.140	0.397	29	145
Flat Light Sector Frame	125.00	1,200	1.890	1.980	1.140	0.397	206	1,034
Andrew SBNHH-1D65A (33.5 lbs)	113.00	101	1.545	0.617	0.597	0.204	9	87
Commscope WCS-IMFQ-AMT	113.00	30	1.545	0.617	0.597	0.204	3	25
Ericsson RRUS 32 (50.8 lbs)	113.00	152	1.545	0.617	0.597	0.204	13	131
Ericsson RRUS 4449 B5, B12	113.00	213	1.545	0.617	0.597	0.204	19	183
Ericsson RRUS 4478 B14	113.00	180	1.545	0.617	0.597	0.204	16	155
Ericsson RRUS 8843 B2, B66A	113.00	216	1.545	0.617	0.597	0.204	19	186
Flat Light Sector Frame with	113.00	1,200	1.545	0.617	0.597	0.204	106	1,034
Kathrein Scala 80010964	113.00	490	1.545	0.617	0.597	0.204	43	422
Powerwave Allgon 7770.00	113.00	105	1.545	0.617	0.597	0.204	9	90
Powerwave Allgon LGP21401	113.00	85	1.545	0.617	0.597	0.204	7	73
Raycap DC6-48-60-0-8F	113.00	33	1.545	0.617	0.597	0.204	3	28
Raycap DC6-48-60-18-8F	113.00	20	1.545	0.617	0.597	0.204	2	17
Raycap DC6-48-60-18-8F ("Squid")	113.00	32	1.545	0.617	0.597	0.204	3	27
RFS APXV18-206517S-C	100.00	79	1.210	0.014	0.262	0.078	3	68
Generic 10' Omni	91.00	25	1.002	-0.109	0.132	0.036	0	22
Side Arm	91.00	150	1.002	-0.109	0.132	0.036	2	129
		16,195	33.663	14.009	12.661	4.403	758	13,950

Force/Stress Summary

Section: 1		9N39		Bot Elev (ft): 0.00				Height (ft): 20.000							
		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
Max Compression Member															
LEG	PSP - ROHN 5 EH	-153.93	1.2D + 1.6W Normal	6.59	100	100	100	43.0	50.0	240.17	0	0	0.00	0.00	64 Member X
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SAE - 1.75X1.75X0.12	-1.73	1.2D + 1.6W 120	12.31	48	48	48	204.5	36.0	2.27	1	1	7.95	6.96	76 Member Z
Max Tension Member															
LEG	PSP - ROHN 5 EH	138.22	1.2D + 1.6W 60 deg -	50	65	274.95	0	0	0.00	0.00	0	0	0.00	0.00	50 Member
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0	0	0.00	0.00	0
DIAG	SAE - 1.75X1.75X0.12	1.61	1.2D + 1.6W 210	36	58	11.15	1	1	7.95	4.13	1	1	3.81	42	Blk Shear
Max Splice Forces															
		Pu (kip)	Load Case		phiRnt (kip)	Use %	Num Bolts	Bolt Type							
	Top Tension	130.56	0.9D + 1.6W 60 deg		0.00	0	0								
	Top Compression	145.64	1.2D + 1.6W Normal -		0.00	0									
	Bot Tension	139.45	0.9D + 1.6W 60 deg		242.30	65	4	1" A354-BC							
	Bot Compression	156.04	1.2D + 1.6W Normal -		0.00	0									

Section: 2		8N199		Bot Elev (ft): 20.00				Height (ft): 20.000								
		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phiT Pn (kip)	Use %	Controls
Max Compression Member																
LEG	PSP - ROHN 5 EH	-143.94	1.2D + 1.6W Normal	4.88	100	100	100	31.8	50.0	255.30	0	0	0.00	0.00	56 Member X	
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG	SAE - 1.5X1.5X0.1875	-1.47	1.2D + 1.6W 210	9.784	50	50	50	200.3	36.0	2.98	1	1	7.95	10.44	49 Member Z	
Max Tension Member																
LEG	PSP - ROHN 5 EH	129.66	1.2D + 1.6W 60 deg -	50	65	274.95	0	0	0.00	0.00	0	0	0.00	0.00	47 Member	
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0	0	0.00	0.00	0	
DIAG	SAE - 1.5X1.5X0.1875	1.38	1.2D + 1.6W 210	36	58	13.47	1	1	7.95	6.20	1	1	4.69	29	Blk Shear	
Max Splice Forces																
		Pu (kip)	Load Case		phiRnt (kip)	Use %	Num Bolts	Bolt Type								
	Top Tension	121.55	0.9D + 1.6W 60 deg		0.00	0	0									
	Top Compression	134.43	1.2D + 1.6W Normal -		0.00	0										
	Bot Tension	130.56	0.9D + 1.6W 60 deg		218.07	60	4	1 A325								
	Bot Compression	0.00			0.00	0										

Force/Stress Summary

Section: 3		7N344		Bot Elev (ft): 40.00				Height (ft): 20.000							
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PX - 4" DIA PIPE	-133.27	1.2D + 1.6W Normal	3.91	100	100	100	31.7	50.0	184.41	0	0	0.00	0.00	72 Member X
HORIZ	SAE - 1.5X1.5X0.125	-0.25	1.2D + 1.6W Normal	4.677	100	100	100	189.6	36.0	2.26	1	1	7.95	6.96	11 Member Z
DIAG	SAE - 1.5X1.5X0.1875	-1.41	1.2D + 1.6W 90 deg -	6.268	50	50	50	128.3	36.0	7.21	1	1	7.95	10.44	19 Member Z

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	PX - 4" DIA PIPE	121.67	0.9D + 1.6W 60 deg	50	65	198.45	0	0	0.00	0.00		61	Member
HORIZ	SAE - 1.5X1.5X0.125	0.19	0.9D + 1.6W 60 deg	36	58	9.20	1	1	7.95	4.13	3.13	6	Blk Shear
DIAG	SAE - 1.5X1.5X0.1875	1.32	0.9D + 1.6W 90 deg	36	58	13.47	1	1	7.95	6.20	4.69	28	Blk Shear

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		115.08	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression		125.98	1.2D + 1.6W Normal -	0.00	0		
Bot Tension		121.55	0.9D + 1.6W 60 deg	218.07	56	4	1 A325
Bot Compression		0.00		0.00	0		

Section: 4		6N166		Bot Elev (ft): 60.00				Height (ft): 20.000							
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PX - 4" DIA PIPE	-118.67	1.2D + 1.6W Normal	3.90	100	100	100	31.6	50.0	184.46	0	0	0.00	0.00	64 Member X
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SAE - 2X2X0.25	-5.37	1.2D + 1.6W Normal	6.090	50	50	50	100.1	36.0	17.97	1	1	7.95	13.92	67 Bolt Shear

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	PX - 4" DIA PIPE	114.59	1.2D + 1.6W 60 deg -	50	65	198.45	0	0	0.00	0.00		57	Member
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG	SAE - 2X2X0.25	5.01	1.2D + 1.6W 210	36	58	25.57	1	1	7.95	8.27	8.97	63	Bolt Shear

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		64.26	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression		71.67	1.2D + 1.6W Normal -	0.00	0		
Bot Tension		115.08	0.9D + 1.6W 60 deg	166.22	69	4	0.875" A325
Bot Compression		0.00		0.00	0		

Force/Stress Summary

Section: 5		6N309		Bot Elev (ft): 80.00				Height (ft): 20.000							
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PX - 3" DIA PIPE	-66.89	1.2D + 1.6W Normal	3.90	100	100	100	41.1	50.0	120.14	0	0	0.00	0.00	55 Member X
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SAE - 1.5X1.5X0.1875	-4.02	1.2D + 1.6W 210	6.084	50	50	50	124.6	36.0	7.59	1	1	7.95	10.44	53 Member Z

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	PX - 3" DIA PIPE	63.97	1.2D + 1.6W 60 deg -	50	65	135.90	0	0	0.00	0.00			47 Member
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0.00		0
DIAG	SAE - 1.5X1.5X0.1875	3.95	1.2D + 1.6W 210	36	58	13.47	1	1	7.95	6.20	4.69		84 Blk Shear

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		25.02	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression		29.75	1.2D + 1.6W 120 deg	0.00	0		
Bot Tension		64.26	0.9D + 1.6W 60 deg	166.22	39	4	0.875" A325
Bot Compression		0.00		0.00	0		

Section: 6		6N30		Bot Elev (ft): 100.0				Height (ft): 4.150							
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PST - 2-1/2" DIA PIP	-26.13	1.2D + 1.6W Normal	3.90	100	100	100	49.4	50.0	64.14	0	0	0.00	0.00	40 Member X
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SAE - 1.5X1.5X0.1875	-2.93	1.2D + 1.6W 90 deg -	6.031	50	50	50	123.5	36.0	7.69	1	1	7.95	10.44	38 Member Z

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	PST - 2-1/2" DIA PIP	24.71	1.2D + 1.6W 60 deg -	50	65	76.68	0	0	0.00	0.00			32 Member
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0.00		0
DIAG	SAE - 1.5X1.5X0.1875	2.91	1.2D + 1.6W 90 deg -	36	58	13.47	1	1	7.95	6.20	4.69		62 Blk Shear

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		18.66	0.9D + 1.6W 180 deg	0.00	0	0	
Top Compression		22.91	1.2D + 1.6W Normal -	0.00	0		
Bot Tension		25.02	0.9D + 1.6W 60 deg	120.41	21	4	0.75" A325
Bot Compression		0.00		0.00	0		

Force/Stress Summary

Section: 7		6N30		Bot Elev (ft): 104.1				Height (ft): 15.850							
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PST - 2-1/2" DIA PIP	-19.92	1.2D + 1.6W Normal	3.90	100	100	100	49.4	50.0	64.14	0	0	0.00	0.00	31 Member X
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SAE - 1.5X1.5X0.1875	-2.69	1.2D + 1.6W 90 deg -	6.024	50	50	50	123.4	36.0	7.71	1	1	7.95	10.44	34 Member Z

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	PST - 2-1/2" DIA PIP	15.41	1.2D + 1.6W 60 deg -	50	65	76.68	0	0	0.00	0.00			20 Member
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0.00		0
DIAG	SAE - 1.5X1.5X0.1875	2.69	1.2D + 1.6W 90 deg -	36	58	13.47	1	1	7.95	6.20	4.69		57 Blk Shear

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		2.34	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression		3.58	1.2D + 1.6W Normal -	0.00	0		
Bot Tension		18.66	0.9D + 1.6W 180 deg	0.00	0		
Bot Compression		0.00		0.00	0		

Section: 8		6N285		Bot Elev (ft): 120.0				Height (ft): 5.000							
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PST - 2-1/2" DIA PIP	-1.89	1.2D + 1.6W Normal	5.00	100	100	100	63.4	50.0	57.18	0	0	0.00	0.00	3 Member X
HORIZ	SAE - 1.5X1.5X0.125	-0.28	1.2D + 1.6W 60 deg -	4.563	100	100	100	185.0	36.0	2.38	1	1	7.95	6.96	11 Member Z
DIAG	SAE - 1.5X1.5X0.125	-1.13	1.2D + 1.6W 90 deg -	6.769	50	50	50	137.2	36.0	4.32	1	1	7.95	6.96	26 Member Z

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	PST - 2-1/2" DIA PIP	0.82	0.9D + 1.6W 60 deg	50	65	76.68	0	0	0.00	0.00			1 Member
HORIZ	SAE - 1.5X1.5X0.125	0.30	1.2D + 1.6W Normal	36	58	9.20	1	1	7.95	4.13	3.13		9 Blk Shear
DIAG	SAE - 1.5X1.5X0.125	1.12	1.2D + 1.6W 90 deg -	36	58	9.20	1	1	7.95	4.13	3.13		35 Blk Shear

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		0.00		0.00	0	0	
Top Compression		1.64	1.2D + 1.0Di + 1.0Wi	0.00	0		
Bot Tension		2.34	0.9D + 1.6W 60 deg	81.36	3	4	5/8 A325
Bot Compression		0.00		0.00	0		

Detailed Reactions

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	FX (kip)	FY (kip)	FZ (kip)	(-) = Uplift (+) = Down
1.2D + 1.6W Normal - Pat 1	6.21	00.00	0	1	0.00	155.77	-11.62	
	6.21	00.00	120	1a	4.35	-68.17	-2.94	
	6.21	00.00	240	1b	-4.35	-68.17	-2.94	
1.2D + 1.6W Normal - Pat 2	6.21	00.00	0	1	0.00	116.11	-8.18	
	6.21	00.00	120	1a	2.97	-48.34	-1.82	
	6.21	00.00	240	1b	-2.97	-48.34	-1.82	
1.2D + 1.6W Normal - Pat 3	6.21	00.00	0	1	0.00	155.77	-11.62	
	6.21	00.00	120	1a	4.35	-68.17	-2.94	
	6.21	00.00	240	1b	-4.35	-68.17	-2.94	
1.2D + 1.6W 60 deg - Pat 1	6.21	00.00	0	1	-0.32	78.62	-5.80	
	6.21	00.00	120	1a	-5.17	78.54	2.65	
	6.21	00.00	240	1b	-9.05	-137.72	-5.24	
1.2D + 1.6W 60 deg - Pat 2	6.21	00.00	0	1	-0.07	59.93	-4.18	
	6.21	00.00	120	1a	-3.64	59.85	2.05	
	6.21	00.00	240	1b	-6.19	-100.34	-3.58	
1.2D + 1.6W 60 deg - Pat 3	6.21	00.00	0	1	-0.32	78.62	-5.80	
	6.21	00.00	120	1a	-5.17	78.54	2.65	
	6.21	00.00	240	1b	-9.05	-137.72	-5.24	
1.2D + 1.6W 90 deg - Pat 1	6.21	00.00	0	1	-0.39	6.54	-0.40	
	6.21	00.00	120	1a	-8.60	132.40	4.78	
	6.21	00.00	240	1b	-7.97	-119.50	-4.38	
1.2D + 1.6W 90 deg - Pat 2	6.21	00.00	0	1	-0.09	6.53	-0.41	
	6.21	00.00	120	1a	-6.06	99.54	3.47	
	6.21	00.00	240	1b	-5.38	-86.64	-3.06	
1.2D + 1.6W 90 deg - Pat 3	6.21	00.00	0	1	-0.39	6.54	-0.40	
	6.21	00.00	120	1a	-8.60	132.40	4.78	
	6.21	00.00	240	1b	-7.97	-119.50	-4.38	
1.2D + 1.6W 120 deg - Pat 1	6.21	00.00	0	1	-0.39	-68.09	5.24	
	6.21	00.00	120	1a	-10.06	155.69	5.82	
	6.21	00.00	240	1b	-4.72	-68.17	-2.31	
1.2D + 1.6W 120 deg - Pat 2	6.21	00.00	0	1	-0.10	-48.26	3.49	
	6.21	00.00	120	1a	-7.08	116.03	4.10	
	6.21	00.00	240	1b	-3.06	-48.34	-1.67	
1.2D + 1.6W 120 deg - Pat 3	6.21	00.00	0	1	-0.39	-68.09	5.24	
	6.21	00.00	120	1a	-10.06	155.69	5.82	
	6.21	00.00	240	1b	-4.72	-68.17	-2.31	
1.2D + 1.6W 180 deg - Pat 1	6.21	00.00	0	1	0.00	-137.64	10.46	
	6.21	00.00	120	1a	-4.87	78.54	3.17	
	6.21	00.00	240	1b	4.87	78.54	3.17	
1.2D + 1.6W 180 deg - Pat 2	6.21	00.00	0	1	0.00	-100.26	7.15	
	6.21	00.00	120	1a	-3.59	59.85	2.14	
	6.21	00.00	240	1b	3.59	59.85	2.14	
1.2D + 1.6W 180 deg - Pat 3	6.21	00.00	0	1	0.00	-137.64	10.46	
	6.21	00.00	120	1a	-4.87	78.54	3.17	

Site Number: 302536

Code:

ANSI/TIA-222-G

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Site Name: Cherry Hill-branford, CT

Engineering Number: 13334427_C3_02

1/27/2021 10:07:40 AM

Customer: AT&T MOBILITY

	6.21	00.00	240	1b	4.87	78.54	3.17
1.2D + 1.6W 210 deg - Pat 1	6.21	00.00	0	1	0.21	-119.42	9.09
	6.21	00.00	120	1a	-0.16	6.46	0.53
	6.21	00.00	240	1b	8.43	132.40	5.08
1.2D + 1.6W 210 deg - Pat 2	6.21	00.00	0	1	0.05	-86.56	6.19
	6.21	00.00	120	1a	-0.32	6.45	0.27
	6.21	00.00	240	1b	6.03	99.54	3.53
1.2D + 1.6W 210 deg - Pat 3	6.21	00.00	0	1	0.21	-119.42	9.09
	6.21	00.00	120	1a	-0.16	6.46	0.53
	6.21	00.00	240	1b	8.43	132.40	5.08
1.2D + 1.6W 240 deg - Pat 1	6.21	00.00	0	1	0.39	-68.09	5.24
	6.21	00.00	120	1a	4.72	-68.17	-2.31
	6.21	00.00	240	1b	10.06	155.69	5.82
1.2D + 1.6W 240 deg - Pat 2	6.21	00.00	0	1	0.10	-48.26	3.49
	6.21	00.00	120	1a	3.06	-48.34	-1.67
	6.21	00.00	240	1b	7.08	116.03	4.10
1.2D + 1.6W 240 deg - Pat 3	6.21	00.00	0	1	0.39	-68.09	5.24
	6.21	00.00	120	1a	4.72	-68.17	-2.31
	6.21	00.00	240	1b	10.06	155.69	5.82
1.2D + 1.6W 300 deg - Pat 1	6.21	00.00	0	1	0.32	78.62	-5.80
	6.21	00.00	120	1a	9.05	-137.72	-5.24
	6.21	00.00	240	1b	5.17	78.54	2.65
1.2D + 1.6W 300 deg - Pat 2	6.21	00.00	0	1	0.07	59.93	-4.18
	6.21	00.00	120	1a	6.19	-100.34	-3.58
	6.21	00.00	240	1b	3.64	59.85	2.05
1.2D + 1.6W 300 deg - Pat 3	6.21	00.00	0	1	0.32	78.62	-5.80
	6.21	00.00	120	1a	9.05	-137.72	-5.24
	6.21	00.00	240	1b	5.17	78.54	2.65
1.2D + 1.6W 330 deg - Pat 1	6.21	00.00	0	1	0.18	132.48	-9.84
	6.21	00.00	120	1a	7.77	-119.50	-4.73
	6.21	00.00	240	1b	0.53	6.46	-0.12
1.2D + 1.6W 330 deg - Pat 2	6.21	00.00	0	1	0.04	99.62	-6.99
	6.21	00.00	120	1a	5.33	-86.64	-3.14
	6.21	00.00	240	1b	0.39	6.45	0.14
1.2D + 1.6W 330 deg - Pat 3	6.21	00.00	0	1	0.18	132.48	-9.84
	6.21	00.00	120	1a	7.77	-119.50	-4.73
	6.21	00.00	240	1b	0.53	6.46	-0.12
0.9D + 1.6W Normal	6.21	00.00	0	1	0.00	153.77	-11.51
	6.21	00.00	120	1a	4.44	-69.60	-3.00
	6.21	00.00	240	1b	-4.44	-69.60	-3.00
0.9D + 1.6W 60 deg	6.21	00.00	0	1	-0.32	76.81	-5.69
	6.21	00.00	120	1a	-5.08	76.75	2.59
	6.21	00.00	240	1b	-9.14	-138.98	-5.29
0.9D + 1.6W 90 deg	6.21	00.00	0	1	-0.40	4.90	-0.30
	6.21	00.00	120	1a	-8.51	130.48	4.72
	6.21	00.00	240	1b	-8.06	-120.81	-4.43
0.9D + 1.6W 120 deg	6.21	00.00	0	1	-0.39	-69.54	5.34
	6.21	00.00	120	1a	-9.96	153.71	5.76
	6.21	00.00	240	1b	-4.81	-69.60	-2.35

Site Number: 302536

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Site Name: Cherry Hill-branford, CT

Engineering Number: 13334427_C3_02

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0.9D + 1.6W 180 deg	6.21	00.00	0	1	0.00	-138.92	10.56
	6.21	00.00	120	1a	-4.78	76.75	3.12
	6.21	00.00	240	1b	4.78	76.75	3.12
0.9D + 1.6W 210 deg	6.21	00.00	0	1	0.22	-120.75	9.19
	6.21	00.00	120	1a	-0.07	4.84	0.48
	6.21	00.00	240	1b	8.33	130.48	5.02
0.9D + 1.6W 240 deg	6.21	00.00	0	1	0.39	-69.54	5.34
	6.21	00.00	120	1a	4.81	-69.60	-2.35
	6.21	00.00	240	1b	9.96	153.71	5.76
0.9D + 1.6W 300 deg	6.21	00.00	0	1	0.32	76.81	-5.69
	6.21	00.00	120	1a	9.14	-138.98	-5.29
	6.21	00.00	240	1b	5.08	76.75	2.59
0.9D + 1.6W 330 deg	6.21	00.00	0	1	0.18	130.54	-9.73
	6.21	00.00	120	1a	7.85	-120.80	-4.78
	6.21	00.00	240	1b	0.45	4.84	-0.18
1.2D + 1.0Di + 1.0Wi Normal	6.21	00.00	0	1	0.00	65.38	-4.04
	6.21	00.00	120	1a	1.13	-5.09	-0.81
	6.21	00.00	240	1b	-1.13	-5.09	-0.81
1.2D + 1.0Di + 1.0Wi 60 deg	6.21	00.00	0	1	-0.13	41.63	-2.21
	6.21	00.00	120	1a	-1.97	41.51	0.99
	6.21	00.00	240	1b	-2.72	-27.94	-1.57
1.2D + 1.0Di + 1.0Wi 90 deg	6.21	00.00	0	1	-0.15	18.48	-0.42
	6.21	00.00	120	1a	-3.08	58.65	1.70
	6.21	00.00	240	1b	-2.36	-21.92	-1.28
1.2D + 1.0Di + 1.0Wi 120 deg	6.21	00.00	0	1	-0.14	-4.98	1.39
	6.21	00.00	120	1a	-3.49	65.27	2.02
	6.21	00.00	240	1b	-1.27	-5.09	-0.58
1.2D + 1.0Di + 1.0Wi 180 deg	6.21	00.00	0	1	0.00	-27.83	3.15
	6.21	00.00	120	1a	-1.84	41.51	1.21
	6.21	00.00	240	1b	1.84	41.51	1.21
1.2D + 1.0Di + 1.0Wi 210 deg	6.21	00.00	0	1	0.08	-21.76	2.68
	6.21	00.00	120	1a	-0.29	18.36	0.34
	6.21	00.00	240	1b	3.01	58.59	1.82
1.2D + 1.0Di + 1.0Wi 240 deg	6.21	00.00	0	1	0.14	-4.98	1.39
	6.21	00.00	120	1a	1.27	-5.09	-0.58
	6.21	00.00	240	1b	3.49	65.27	2.02
1.2D + 1.0Di + 1.0Wi 300 deg	6.21	00.00	0	1	0.13	41.63	-2.21
	6.21	00.00	120	1a	2.72	-27.94	-1.57
	6.21	00.00	240	1b	1.97	41.51	0.99
1.2D + 1.0Di + 1.0Wi 330 deg	6.21	00.00	0	1	0.07	58.71	-3.52
	6.21	00.00	120	1a	2.28	-21.87	-1.41
	6.21	00.00	240	1b	0.44	18.36	0.08
(1.2 + 0.2Sds) * DL + E Normal M1	6.21	00.00	0	1	0.00	12.99	-0.85
	6.21	00.00	120	1a	-0.19	3.33	0.12
	6.21	00.00	240	1b	0.19	3.33	0.12
(1.2 + 0.2Sds) * DL + E Normal M2	6.21	00.00	0	1	0.00	14.96	-0.95
	6.21	00.00	120	1a	-0.14	2.34	0.11
	6.21	00.00	240	1b	0.14	2.34	0.11

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Engineering Number: 13334427_C3_02

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(1.2 + 0.2Sds) * DL + E 60 deg M1	6.21	00.00	0	1	0.01	9.77	-0.64
	6.21	00.00	120	1a	-0.55	9.77	0.33
	6.21	00.00	240	1b	0.02	0.10	0.01
(1.2 + 0.2Sds) * DL + E 60 deg M2	6.21	00.00	0	1	0.02	10.67	-0.69
	6.21	00.00	120	1a	-0.58	10.67	0.36
	6.21	00.00	240	1b	-0.06	-1.69	-0.03
(1.2 + 0.2Sds) * DL + E 90 deg M1	6.21	00.00	0	1	0.01	6.55	-0.43
	6.21	00.00	120	1a	-0.68	12.13	0.40
	6.21	00.00	240	1b	0.07	0.97	0.03
(1.2 + 0.2Sds) * DL + E 90 deg M2	6.21	00.00	0	1	0.03	6.55	-0.43
	6.21	00.00	120	1a	-0.75	13.83	0.45
	6.21	00.00	240	1b	0.00	-0.73	-0.02
(1.2 + 0.2Sds) * DL + E 120 deg M1	6.21	00.00	0	1	0.01	3.33	-0.23
	6.21	00.00	120	1a	-0.74	12.99	0.43
	6.21	00.00	240	1b	0.20	3.33	0.10
(1.2 + 0.2Sds) * DL + E 120 deg M2	6.21	00.00	0	1	0.02	2.43	-0.18
	6.21	00.00	120	1a	-0.81	14.79	0.47
	6.21	00.00	240	1b	0.17	2.43	0.07
(1.2 + 0.2Sds) * DL + E 180 deg M1	6.21	00.00	0	1	0.00	0.10	-0.02
	6.21	00.00	120	1a	-0.56	9.77	0.31
	6.21	00.00	240	1b	0.56	9.77	0.31
(1.2 + 0.2Sds) * DL + E 180 deg M2	6.21	00.00	0	1	0.00	-1.86	0.08
	6.21	00.00	120	1a	-0.61	10.75	0.32
	6.21	00.00	240	1b	0.61	10.75	0.32
(1.2 + 0.2Sds) * DL + E 210 deg M1	6.21	00.00	0	1	-0.01	0.97	-0.07
	6.21	00.00	120	1a	-0.38	6.55	0.21
	6.21	00.00	240	1b	0.69	12.13	0.39
(1.2 + 0.2Sds) * DL + E 210 deg M2	6.21	00.00	0	1	-0.01	-0.59	0.00
	6.21	00.00	120	1a	-0.39	6.55	0.19
	6.21	00.00	240	1b	0.76	13.69	0.42
(1.2 + 0.2Sds) * DL + E 240 deg M1	6.21	00.00	0	1	-0.01	3.33	-0.23
	6.21	00.00	120	1a	-0.20	3.33	0.10
	6.21	00.00	240	1b	0.74	12.99	0.43
(1.2 + 0.2Sds) * DL + E 240 deg M2	6.21	00.00	0	1	-0.02	2.43	-0.18
	6.21	00.00	120	1a	-0.17	2.43	0.07
	6.21	00.00	240	1b	0.81	14.79	0.47
(1.2 + 0.2Sds) * DL + E 300 deg M1	6.21	00.00	0	1	-0.01	9.77	-0.64
	6.21	00.00	120	1a	-0.02	0.10	0.01
	6.21	00.00	240	1b	0.55	9.77	0.33
(1.2 + 0.2Sds) * DL + E 300 deg M2	6.21	00.00	0	1	-0.02	10.67	-0.69
	6.21	00.00	120	1a	0.06	-1.69	-0.03
	6.21	00.00	240	1b	0.58	10.67	0.36
(1.2 + 0.2Sds) * DL + E 330 deg M1	6.21	00.00	0	1	-0.01	12.13	-0.79
	6.21	00.00	120	1a	-0.06	0.97	0.04
	6.21	00.00	240	1b	0.37	6.55	0.23
(1.2 + 0.2Sds) * DL + E 330 deg M2	6.21	00.00	0	1	-0.01	13.69	-0.87
	6.21	00.00	120	1a	0.01	-0.59	0.01
	6.21	00.00	240	1b	0.36	6.55	0.24
(0.9 - 0.2Sds) * DL + E Normal M1	6.21	00.00	0	1	0.00	10.98	-0.72

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	6.21	00.00	120	1a	-0.08	1.34	0.06
	6.21	00.00	240	1b	0.08	1.34	0.06
(0.9 - 0.2Sds) * DL + E Normal M2	6.21	00.00	0	1	0.00	12.94	-0.82
	6.21	00.00	120	1a	-0.03	0.36	0.04
	6.21	00.00	240	1b	0.03	0.36	0.04
(0.9 - 0.2Sds) * DL + E 60 deg M1	6.21	00.00	0	1	0.01	7.68	-0.50
	6.21	00.00	120	1a	-0.43	7.68	0.26
	6.21	00.00	240	1b	-0.09	-1.70	-0.05
(0.9 - 0.2Sds) * DL + E 60 deg M2	6.21	00.00	0	1	0.02	8.66	-0.55
	6.21	00.00	120	1a	-0.47	8.66	0.30
	6.21	00.00	240	1b	-0.17	-3.66	-0.10
(0.9 - 0.2Sds) * DL + E 90 deg M1	6.21	00.00	0	1	0.01	4.55	-0.30
	6.21	00.00	120	1a	-0.57	10.12	0.34
	6.21	00.00	240	1b	-0.05	-1.01	-0.03
(0.9 - 0.2Sds) * DL + E 90 deg M2	6.21	00.00	0	1	0.03	4.55	-0.30
	6.21	00.00	120	1a	-0.64	11.81	0.39
	6.21	00.00	240	1b	-0.12	-2.70	-0.08
(0.9 - 0.2Sds) * DL + E 120 deg M1	6.21	00.00	0	1	0.01	1.34	-0.09
	6.21	00.00	120	1a	-0.62	10.98	0.36
	6.21	00.00	240	1b	0.09	1.34	0.04
(0.9 - 0.2Sds) * DL + E 120 deg M2	6.21	00.00	0	1	0.02	0.44	-0.05
	6.21	00.00	120	1a	-0.70	12.77	0.40
	6.21	00.00	240	1b	0.06	0.44	0.00
(0.9 - 0.2Sds) * DL + E 180 deg M1	6.21	00.00	0	1	0.00	-1.87	0.11
	6.21	00.00	120	1a	-0.45	7.77	0.25
	6.21	00.00	240	1b	0.45	7.77	0.25
(0.9 - 0.2Sds) * DL + E 180 deg M2	6.21	00.00	0	1	0.00	-3.83	0.21
	6.21	00.00	120	1a	-0.50	8.74	0.26
	6.21	00.00	240	1b	0.50	8.74	0.26
(0.9 - 0.2Sds) * DL + E 210 deg M1	6.21	00.00	0	1	-0.01	-1.01	0.06
	6.21	00.00	120	1a	-0.27	4.55	0.14
	6.21	00.00	240	1b	0.58	10.12	0.33
(0.9 - 0.2Sds) * DL + E 210 deg M2	6.21	00.00	0	1	-0.01	-2.56	0.13
	6.21	00.00	120	1a	-0.28	4.55	0.13
	6.21	00.00	240	1b	0.65	11.67	0.36
(0.9 - 0.2Sds) * DL + E 240 deg M1	6.21	00.00	0	1	-0.01	1.34	-0.09
	6.21	00.00	120	1a	-0.09	1.34	0.04
	6.21	00.00	240	1b	0.62	10.98	0.36
(0.9 - 0.2Sds) * DL + E 240 deg M2	6.21	00.00	0	1	-0.02	0.44	-0.05
	6.21	00.00	120	1a	-0.06	0.44	0.00
	6.21	00.00	240	1b	0.70	12.77	0.40
(0.9 - 0.2Sds) * DL + E 300 deg M1	6.21	00.00	0	1	-0.01	7.68	-0.50
	6.21	00.00	120	1a	0.09	-1.70	-0.05
	6.21	00.00	240	1b	0.43	7.68	0.26
(0.9 - 0.2Sds) * DL + E 300 deg M2	6.21	00.00	0	1	-0.02	8.66	-0.55
	6.21	00.00	120	1a	0.17	-3.66	-0.10
	6.21	00.00	240	1b	0.47	8.66	0.30
(0.9 - 0.2Sds) * DL + E 330 deg M1	6.21	00.00	0	1	-0.01	9.97	-0.65
	6.21	00.00	120	1a	0.05	-0.87	-0.02

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	6.21	00.00	240	1b	0.26	4.55	0.16
(0.9 - 0.2Sds) * DL + E 330 deg M2	6.21	00.00	0	1	-0.01	11.67	-0.74
	6.21	00.00	120	1a	0.12	-2.56	-0.05
	6.21	00.00	240	1b	0.25	4.55	0.17
1.0D + 1.0W Service Normal	6.21	00.00	0	1	0.00	38.09	-2.82
	6.21	00.00	120	1a	0.73	-10.95	-0.52
	6.21	00.00	240	1b	-0.73	-10.95	-0.52
1.0D + 1.0W Service 60 deg	6.21	00.00	0	1	-0.08	21.21	-1.54
	6.21	00.00	120	1a	-1.37	21.15	0.71
	6.21	00.00	240	1b	-1.76	-26.16	-1.02
1.0D + 1.0W Service 90 deg	6.21	00.00	0	1	-0.09	5.44	-0.35
	6.21	00.00	120	1a	-2.12	32.93	1.18
	6.21	00.00	240	1b	-1.52	-22.18	-0.83
1.0D + 1.0W Service 120 deg	6.21	00.00	0	1	-0.09	-10.88	0.89
	6.21	00.00	120	1a	-2.44	38.03	1.41
	6.21	00.00	240	1b	-0.81	-10.95	-0.37
1.0D + 1.0W Service 180 deg	6.21	00.00	0	1	0.00	-26.10	2.03
	6.21	00.00	120	1a	-1.29	21.15	0.83
	6.21	00.00	240	1b	1.29	21.15	0.83
1.0D + 1.0W Service 210 deg	6.21	00.00	0	1	0.05	-22.11	1.73
	6.21	00.00	120	1a	-0.26	5.38	0.25
	6.21	00.00	240	1b	2.08	32.93	1.25
1.0D + 1.0W Service 240 deg	6.21	00.00	0	1	0.09	-10.88	0.89
	6.21	00.00	120	1a	0.81	-10.95	-0.37
	6.21	00.00	240	1b	2.44	38.03	1.41
1.0D + 1.0W Service 300 deg	6.21	00.00	0	1	0.08	21.21	-1.54
	6.21	00.00	120	1a	1.76	-26.16	-1.02
	6.21	00.00	240	1b	1.37	21.15	0.71
1.0D + 1.0W Service 330 deg	6.21	00.00	0	1	0.04	33.00	-2.43
	6.21	00.00	120	1a	1.48	-22.18	-0.91
	6.21	00.00	240	1b	0.35	5.38	0.10

Max Uplift:	138.98 (kip)	Moment Ice:	437.37 (kip-ft)	Moment:	1,389.84 (kip-ft)	1.2D + 1.6W Normal - Pat 1
Max Down:	155.77 (kip)	Total Down Ice:	55.20 (kip)	Total Down:	19.43 (kip)	
Max Shear:	11.62 (kip)	Total Shear Ice:	5.66 (kip)	Total Shear:	17.51 (kip)	

Deflections and Rotations

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
101 mph Normal with No Ice - Pattern 1	91.95	0.858	0.0280	1.2079	1.2079
101 mph Normal with No Ice - Pattern 1	100.00	1.033	0.0275	1.3847	1.3847
101 mph Normal with No Ice - Pattern 1	111.95	1.309	0.0283	1.3555	1.3558
101 mph Normal with No Ice - Pattern 1	125.00	1.620	0.0285	1.3629	1.3632
101 mph Normal with No Ice - Pattern 2	91.95	0.661	0.0199	0.9581	0.9581
101 mph Normal with No Ice - Pattern 2	100.00	0.800	0.0196	1.1093	1.1093
101 mph Normal with No Ice - Pattern 2	111.95	1.021	0.0201	1.0868	1.0870
101 mph Normal with No Ice - Pattern 2	125.00	1.271	0.0202	1.0941	1.0943
101 mph Normal with No Ice - Pattern 3	91.95	0.858	0.0280	1.2079	1.2079
101 mph Normal with No Ice - Pattern 3	100.00	1.033	0.0275	1.3847	1.3847
101 mph Normal with No Ice - Pattern 3	111.95	1.309	0.0283	1.3555	1.3558
101 mph Normal with No Ice - Pattern 3	125.00	1.620	0.0285	1.3629	1.3632
101 mph 60 degree with No Ice - Pattern 1	91.95	0.834	-0.0296	1.1746	1.1746
101 mph 60 degree with No Ice - Pattern 1	100.00	1.003	-0.0304	1.3429	1.3429
101 mph 60 degree with No Ice - Pattern 1	111.95	1.272	-0.0298	1.3192	1.3192
101 mph 60 degree with No Ice - Pattern 1	125.00	1.575	-0.0299	1.3248	1.3251
101 mph 60 degree with No Ice - Pattern 2	91.95	0.648	-0.0210	0.9397	0.9397
101 mph 60 degree with No Ice - Pattern 2	100.00	0.784	-0.0215	1.0849	1.0849
101 mph 60 degree with No Ice - Pattern 2	111.95	1.001	-0.0211	1.0665	1.0665
101 mph 60 degree with No Ice - Pattern 2	125.00	1.245	-0.0212	1.0723	1.0725
101 mph 60 degree with No Ice - Pattern 3	91.95	0.834	-0.0296	1.1746	1.1746
101 mph 60 degree with No Ice - Pattern 3	100.00	1.003	-0.0304	1.3429	1.3429
101 mph 60 degree with No Ice - Pattern 3	111.95	1.272	-0.0298	1.3192	1.3192
101 mph 60 degree with No Ice - Pattern 3	125.00	1.575	-0.0299	1.3248	1.3251
101 mph 90 degree with No Ice - Pattern 1	91.95	0.839	-0.0330	1.1809	1.1810
101 mph 90 degree with No Ice - Pattern 1	100.00	1.010	-0.0331	1.3384	1.3385
101 mph 90 degree with No Ice - Pattern 1	111.95	1.280	-0.0333	1.3271	1.3272
101 mph 90 degree with No Ice - Pattern 1	125.00	1.585	-0.0334	1.3358	1.3362
101 mph 90 degree with No Ice - Pattern 2	91.95	0.650	-0.0236	0.9425	0.9426
101 mph 90 degree with No Ice - Pattern 2	100.00	0.787	-0.0237	1.0781	1.0781
101 mph 90 degree with No Ice - Pattern 2	111.95	1.005	-0.0238	1.0706	1.0706
101 mph 90 degree with No Ice - Pattern 2	125.00	1.251	-0.0239	1.0791	1.0794
101 mph 90 degree with No Ice - Pattern 3	91.95	0.839	-0.0330	1.1809	1.1810
101 mph 90 degree with No Ice - Pattern 3	100.00	1.010	-0.0331	1.3384	1.3385
101 mph 90 degree with No Ice - Pattern 3	111.95	1.280	-0.0333	1.3271	1.3272
101 mph 90 degree with No Ice - Pattern 3	125.00	1.585	-0.0334	1.3358	1.3362
101 mph 120 degree with No Ice - Pattern 1	91.95	0.858	0.0280	1.2061	1.2061
101 mph 120 degree with No Ice - Pattern 1	100.00	1.032	0.0275	1.3826	1.3826
101 mph 120 degree with No Ice - Pattern 1	111.95	1.308	0.0283	1.3536	1.3538
101 mph 120 degree with No Ice - Pattern 1	125.00	1.619	0.0284	1.3611	1.3614
101 mph 120 degree with No Ice - Pattern 2	91.95	0.661	0.0199	0.9563	0.9563
101 mph 120 degree with No Ice - Pattern 2	100.00	0.799	0.0196	1.1072	1.1072
101 mph 120 degree with No Ice - Pattern 2	111.95	1.020	0.0202	1.0849	1.0851
101 mph 120 degree with No Ice - Pattern 2	125.00	1.269	0.0203	1.0923	1.0925
101 mph 120 degree with No Ice - Pattern 3	91.95	0.858	0.0280	1.2061	1.2061
101 mph 120 degree with No Ice - Pattern 3	100.00	1.032	0.0275	1.3826	1.3826
101 mph 120 degree with No Ice - Pattern 3	111.95	1.308	0.0283	1.3536	1.3538
101 mph 120 degree with No Ice - Pattern 3	125.00	1.619	0.0284	1.3611	1.3614
101 mph 180 degree with No Ice - Pattern 1	91.95	0.833	0.0296	1.1728	1.1728
101 mph 180 degree with No Ice - Pattern 1	100.00	1.002	0.0303	1.3414	1.3414
101 mph 180 degree with No Ice - Pattern 1	111.95	1.270	0.0298	1.3173	1.3173
101 mph 180 degree with No Ice - Pattern 1	125.00	1.573	0.0299	1.3230	1.3234
101 mph 180 degree with No Ice - Pattern 2	91.95	0.647	0.0210	0.9379	0.9379
101 mph 180 degree with No Ice - Pattern 2	100.00	0.783	0.0215	1.0833	1.0833
101 mph 180 degree with No Ice - Pattern 2	111.95	0.999	0.0211	1.0646	1.0646

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101 mph 180 degree with No Ice - Pattern 2	125.00	1.244	0.0212	1.0705	1.0707
101 mph 180 degree with No Ice - Pattern 3	91.95	0.833	0.0296	1.1728	1.1728
101 mph 180 degree with No Ice - Pattern 3	100.00	1.002	0.0303	1.3414	1.3414
101 mph 180 degree with No Ice - Pattern 3	111.95	1.270	0.0298	1.3173	1.3173
101 mph 180 degree with No Ice - Pattern 3	125.00	1.573	0.0299	1.3230	1.3234
101 mph 210 degree with No Ice - Pattern 1	91.95	0.839	0.0178	1.1800	1.1801
101 mph 210 degree with No Ice - Pattern 1	100.00	1.009	0.0185	1.3372	1.3373
101 mph 210 degree with No Ice - Pattern 1	111.95	1.279	0.0179	1.3260	1.3261
101 mph 210 degree with No Ice - Pattern 1	125.00	1.584	0.0179	1.3347	1.3351
101 mph 210 degree with No Ice - Pattern 2	91.95	0.650	0.0125	0.9417	0.9418
101 mph 210 degree with No Ice - Pattern 2	100.00	0.787	0.0130	1.0768	1.0769
101 mph 210 degree with No Ice - Pattern 2	111.95	1.004	0.0126	1.0695	1.0696
101 mph 210 degree with No Ice - Pattern 2	125.00	1.250	0.0126	1.0780	1.0783
101 mph 210 degree with No Ice - Pattern 3	91.95	0.839	0.0178	1.1800	1.1801
101 mph 210 degree with No Ice - Pattern 3	100.00	1.009	0.0185	1.3372	1.3373
101 mph 210 degree with No Ice - Pattern 3	111.95	1.279	0.0179	1.3260	1.3261
101 mph 210 degree with No Ice - Pattern 3	125.00	1.584	0.0179	1.3347	1.3351
101 mph 240 degree with No Ice - Pattern 1	91.95	0.858	0.0279	1.2061	1.2061
101 mph 240 degree with No Ice - Pattern 1	100.00	1.032	0.0274	1.3826	1.3826
101 mph 240 degree with No Ice - Pattern 1	111.95	1.308	0.0282	1.3536	1.3538
101 mph 240 degree with No Ice - Pattern 1	125.00	1.619	0.0284	1.3611	1.3614
101 mph 240 degree with No Ice - Pattern 2	91.95	0.661	0.0199	0.9563	0.9563
101 mph 240 degree with No Ice - Pattern 2	100.00	0.799	0.0196	1.1072	1.1072
101 mph 240 degree with No Ice - Pattern 2	111.95	1.020	0.0201	1.0849	1.0851
101 mph 240 degree with No Ice - Pattern 2	125.00	1.269	0.0203	1.0923	1.0925
101 mph 240 degree with No Ice - Pattern 3	91.95	0.858	0.0279	1.2061	1.2061
101 mph 240 degree with No Ice - Pattern 3	100.00	1.032	0.0274	1.3826	1.3826
101 mph 240 degree with No Ice - Pattern 3	111.95	1.308	0.0282	1.3536	1.3538
101 mph 240 degree with No Ice - Pattern 3	125.00	1.619	0.0284	1.3611	1.3614
101 mph 300 degree with No Ice - Pattern 1	91.95	0.834	0.0296	1.1746	1.1746
101 mph 300 degree with No Ice - Pattern 1	100.00	1.003	0.0304	1.3429	1.3429
101 mph 300 degree with No Ice - Pattern 1	111.95	1.272	0.0298	1.3192	1.3192
101 mph 300 degree with No Ice - Pattern 1	125.00	1.575	0.0299	1.3248	1.3251
101 mph 300 degree with No Ice - Pattern 2	91.95	0.648	0.0210	0.9397	0.9397
101 mph 300 degree with No Ice - Pattern 2	100.00	0.784	0.0215	1.0849	1.0849
101 mph 300 degree with No Ice - Pattern 2	111.95	1.001	0.0211	1.0665	1.0665
101 mph 300 degree with No Ice - Pattern 2	125.00	1.245	0.0212	1.0723	1.0725
101 mph 300 degree with No Ice - Pattern 3	91.95	0.834	0.0296	1.1746	1.1746
101 mph 300 degree with No Ice - Pattern 3	100.00	1.003	0.0304	1.3429	1.3429
101 mph 300 degree with No Ice - Pattern 3	111.95	1.272	0.0298	1.3192	1.3192
101 mph 300 degree with No Ice - Pattern 3	125.00	1.575	0.0299	1.3248	1.3251
101 mph 330 degree with No Ice - Pattern 1	91.95	0.840	0.0178	1.1821	1.1822
101 mph 330 degree with No Ice - Pattern 1	100.00	1.011	0.0185	1.3396	1.3398
101 mph 330 degree with No Ice - Pattern 1	111.95	1.281	0.0180	1.3282	1.3283
101 mph 330 degree with No Ice - Pattern 1	125.00	1.586	0.0180	1.3368	1.3372
101 mph 330 degree with No Ice - Pattern 2	91.95	0.651	0.0126	0.9438	0.9439
101 mph 330 degree with No Ice - Pattern 2	100.00	0.788	0.0131	1.0793	1.0794
101 mph 330 degree with No Ice - Pattern 2	111.95	1.006	0.0126	1.0717	1.0717
101 mph 330 degree with No Ice - Pattern 2	125.00	1.252	0.0126	1.0801	1.0804
101 mph 330 degree with No Ice - Pattern 3	91.95	0.840	0.0178	1.1821	1.1822
101 mph 330 degree with No Ice - Pattern 3	100.00	1.011	0.0185	1.3396	1.3398
101 mph 330 degree with No Ice - Pattern 3	111.95	1.281	0.0180	1.3282	1.3283
101 mph 330 degree with No Ice - Pattern 3	125.00	1.586	0.0180	1.3368	1.3372
101 mph Normal with No Ice (Reduced DL)	91.95	0.855	0.0279	1.2024	1.2024
101 mph Normal with No Ice (Reduced DL)	100.00	1.029	0.0274	1.3780	1.3780
101 mph Normal with No Ice (Reduced DL)	111.95	1.304	0.0282	1.3491	1.3494
101 mph Normal with No Ice (Reduced DL)	125.00	1.614	0.0284	1.3565	1.3567
101 mph 60 deg with No Ice (Reduced DL)	91.95	0.830	-0.0294	1.1694	1.1694
101 mph 60 deg with No Ice (Reduced DL)	100.00	0.999	-0.0302	1.3370	1.3370
101 mph 60 deg with No Ice (Reduced DL)	111.95	1.267	-0.0296	1.3129	1.3129
101 mph 60 deg with No Ice (Reduced DL)	125.00	1.568	-0.0297	1.3190	1.3194
101 mph 90 deg with No Ice (Reduced DL)	91.95	0.836	-0.0329	1.1758	1.1760

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101 mph 90 deg with No Ice (Reduced DL)	100.00	1.006	-0.0330	1.3323	1.3324
101 mph 90 deg with No Ice (Reduced DL)	111.95	1.275	-0.0332	1.3211	1.3212
101 mph 90 deg with No Ice (Reduced DL)	125.00	1.578	-0.0333	1.3299	1.3303
101 mph 120 deg with No Ice (Reduced DL)	91.95	0.855	0.0279	1.2011	1.2011
101 mph 120 deg with No Ice (Reduced DL)	100.00	1.028	0.0274	1.3764	1.3764
101 mph 120 deg with No Ice (Reduced DL)	111.95	1.303	0.0282	1.3476	1.3479
101 mph 120 deg with No Ice (Reduced DL)	125.00	1.612	0.0283	1.3551	1.3554
101 mph 180 deg with No Ice (Reduced DL)	91.95	0.830	0.0295	1.1681	1.1681
101 mph 180 deg with No Ice (Reduced DL)	100.00	0.999	0.0302	1.3359	1.3359
101 mph 180 deg with No Ice (Reduced DL)	111.95	1.265	0.0297	1.3116	1.3116
101 mph 180 deg with No Ice (Reduced DL)	125.00	1.567	0.0298	1.3177	1.3180
101 mph 210 deg with No Ice (Reduced DL)	91.95	0.836	0.0177	1.1752	1.1754
101 mph 210 deg with No Ice (Reduced DL)	100.00	1.006	0.0184	1.3313	1.3314
101 mph 210 deg with No Ice (Reduced DL)	111.95	1.275	0.0178	1.3202	1.3204
101 mph 210 deg with No Ice (Reduced DL)	125.00	1.578	0.0179	1.3291	1.3295
101 mph 240 deg with No Ice (Reduced DL)	91.95	0.855	0.0279	1.2011	1.2011
101 mph 240 deg with No Ice (Reduced DL)	100.00	1.028	0.0274	1.3764	1.3764
101 mph 240 deg with No Ice (Reduced DL)	111.95	1.303	0.0282	1.3476	1.3479
101 mph 240 deg with No Ice (Reduced DL)	125.00	1.612	0.0283	1.3551	1.3554
101 mph 300 deg with No Ice (Reduced DL)	91.95	0.830	0.0294	1.1694	1.1694
101 mph 300 deg with No Ice (Reduced DL)	100.00	0.999	0.0302	1.3370	1.3370
101 mph 300 deg with No Ice (Reduced DL)	111.95	1.267	0.0296	1.3129	1.3129
101 mph 300 deg with No Ice (Reduced DL)	125.00	1.568	0.0297	1.3190	1.3194
101 mph 330 deg with No Ice (Reduced DL)	91.95	0.837	0.0178	1.1767	1.1769
101 mph 330 deg with No Ice (Reduced DL)	100.00	1.007	0.0185	1.3332	1.3334
101 mph 330 deg with No Ice (Reduced DL)	111.95	1.276	0.0179	1.3219	1.3220
101 mph 330 deg with No Ice (Reduced DL)	125.00	1.579	0.0179	1.3306	1.3310
50 mph Normal with 0.75 in Radial Ice	91.95	0.264	0.0085	0.3660	0.3660
50 mph Normal with 0.75 in Radial Ice	100.00	0.317	0.0083	0.4180	0.4180
50 mph Normal with 0.75 in Radial Ice	111.95	0.400	0.0081	0.4084	0.4085
50 mph Normal with 0.75 in Radial Ice	125.00	0.494	0.0080	0.4111	0.4111
50 mph 60 deg with 0.75 in Radial Ice	91.95	0.261	-0.0086	0.3617	0.3617
50 mph 60 deg with 0.75 in Radial Ice	100.00	0.313	-0.0085	0.4088	0.4088
50 mph 60 deg with 0.75 in Radial Ice	111.95	0.395	-0.0082	0.4044	0.4044
50 mph 60 deg with 0.75 in Radial Ice	125.00	0.488	-0.0080	0.4063	0.4063
50 mph 90 deg with 0.75 in Radial Ice	91.95	0.262	-0.0101	0.3620	0.3621
50 mph 90 deg with 0.75 in Radial Ice	100.00	0.314	-0.0100	0.4084	0.4085
50 mph 90 deg with 0.75 in Radial Ice	111.95	0.396	-0.0098	0.4049	0.4049
50 mph 90 deg with 0.75 in Radial Ice	125.00	0.489	-0.0097	0.4071	0.4071
50 mph 120 deg with 0.75 in Radial Ice	91.95	0.263	-0.0085	0.3635	0.3635
50 mph 120 deg with 0.75 in Radial Ice	100.00	0.316	-0.0083	0.4153	0.4153
50 mph 120 deg with 0.75 in Radial Ice	111.95	0.398	-0.0081	0.4058	0.4059
50 mph 120 deg with 0.75 in Radial Ice	125.00	0.491	0.0080	0.4085	0.4085
50 mph 180 deg with 0.75 in Radial Ice	91.95	0.260	0.0086	0.3592	0.3592
50 mph 180 deg with 0.75 in Radial Ice	100.00	0.312	0.0085	0.4063	0.4063
50 mph 180 deg with 0.75 in Radial Ice	111.95	0.393	0.0082	0.4018	0.4018
50 mph 180 deg with 0.75 in Radial Ice	125.00	0.485	0.0080	0.4037	0.4037
50 mph 210 deg with 0.75 in Radial Ice	91.95	0.261	0.0050	0.3601	0.3601
50 mph 210 deg with 0.75 in Radial Ice	100.00	0.313	0.0050	0.4063	0.4064
50 mph 210 deg with 0.75 in Radial Ice	111.95	0.394	0.0048	0.4027	0.4028
50 mph 210 deg with 0.75 in Radial Ice	125.00	0.487	0.0047	0.4050	0.4050
50 mph 240 deg with 0.75 in Radial Ice	91.95	0.263	0.0085	0.3635	0.3635
50 mph 240 deg with 0.75 in Radial Ice	100.00	0.316	0.0083	0.4153	0.4153
50 mph 240 deg with 0.75 in Radial Ice	111.95	0.398	0.0081	0.4058	0.4059
50 mph 240 deg with 0.75 in Radial Ice	125.00	0.491	0.0080	0.4085	0.4085
50 mph 300 deg with 0.75 in Radial Ice	91.95	0.261	0.0086	0.3617	0.3617
50 mph 300 deg with 0.75 in Radial Ice	100.00	0.313	0.0085	0.4088	0.4088
50 mph 300 deg with 0.75 in Radial Ice	111.95	0.395	0.0082	0.4044	0.4044
50 mph 300 deg with 0.75 in Radial Ice	125.00	0.488	0.0080	0.4063	0.4063
50 mph 330 deg with 0.75 in Radial Ice	91.95	0.262	0.0050	0.3630	0.3631
50 mph 330 deg with 0.75 in Radial Ice	100.00	0.315	0.0050	0.4094	0.4095
50 mph 330 deg with 0.75 in Radial Ice	111.95	0.397	0.0048	0.4058	0.4058

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50 mph 330 deg with 0.75 in Radial Ice	125.00	0.490	0.0047	0.4080	0.4080
Seismic Normal M1	91.95	0.041	0.0008	0.0601	0.0601
Seismic Normal M1	100.00	0.049	0.0008	0.0703	0.0703
Seismic Normal M1	111.95	0.063	0.0007	0.0694	0.0694
Seismic Normal M1	125.00	0.079	0.0006	0.0703	0.0703
Seismic Normal M2	91.95	0.057	0.0011	0.0877	0.0877
Seismic Normal M2	100.00	0.069	0.0010	0.1043	0.1043
Seismic Normal M2	111.95	0.090	0.0009	0.1046	0.1046
Seismic Normal M2	125.00	0.115	0.0008	0.1066	0.1066
Seismic 60 deg M1	91.95	0.041	0.0008	0.0601	0.0601
Seismic 60 deg M1	100.00	0.049	0.0008	0.0691	0.0691
Seismic 60 deg M1	111.95	0.063	0.0007	0.0696	0.0696
Seismic 60 deg M1	125.00	0.079	0.0006	0.0705	0.0705
Seismic 60 deg M2	91.95	0.056	0.0010	0.0863	0.0863
Seismic 60 deg M2	100.00	0.068	0.0009	0.1015	0.1015
Seismic 60 deg M2	111.95	0.089	0.0008	0.1032	0.1032
Seismic 60 deg M2	125.00	0.113	0.0007	0.1044	0.1044
Seismic 90 deg M1	91.95	0.041	-0.0010	0.0601	0.0601
Seismic 90 deg M1	100.00	0.049	-0.0009	0.0693	0.0693
Seismic 90 deg M1	111.95	0.063	-0.0008	0.0695	0.0695
Seismic 90 deg M1	125.00	0.079	-0.0007	0.0705	0.0705
Seismic 90 deg M2	91.95	0.057	-0.0012	0.0877	0.0877
Seismic 90 deg M2	100.00	0.069	-0.0012	0.1028	0.1028
Seismic 90 deg M2	111.95	0.090	-0.0010	0.1047	0.1047
Seismic 90 deg M2	125.00	0.115	-0.0010	0.1064	0.1064
Seismic 120 deg M1	91.95	0.041	0.0008	0.0601	0.0601
Seismic 120 deg M1	100.00	0.049	0.0008	0.0703	0.0703
Seismic 120 deg M1	111.95	0.063	0.0007	0.0694	0.0694
Seismic 120 deg M1	125.00	0.079	0.0006	0.0703	0.0703
Seismic 120 deg M2	91.95	0.056	0.0010	0.0863	0.0863
Seismic 120 deg M2	100.00	0.068	0.0009	0.1026	0.1026
Seismic 120 deg M2	111.95	0.089	0.0008	0.1030	0.1030
Seismic 120 deg M2	125.00	0.113	0.0007	0.1050	0.1050
Seismic 180 deg M1	91.95	0.041	0.0008	0.0601	0.0601
Seismic 180 deg M1	100.00	0.049	0.0008	0.0691	0.0691
Seismic 180 deg M1	111.95	0.063	0.0007	0.0695	0.0695
Seismic 180 deg M1	125.00	0.079	0.0006	0.0705	0.0705
Seismic 180 deg M2	91.95	0.057	0.0011	0.0878	0.0878
Seismic 180 deg M2	100.00	0.069	0.0010	0.1031	0.1031
Seismic 180 deg M2	111.95	0.090	0.0009	0.1048	0.1048
Seismic 180 deg M2	125.00	0.115	0.0009	0.1060	0.1060
Seismic 210 deg M1	91.95	0.041	0.0005	0.0601	0.0601
Seismic 210 deg M1	100.00	0.049	0.0005	0.0693	0.0693
Seismic 210 deg M1	111.95	0.063	0.0004	0.0695	0.0695
Seismic 210 deg M1	125.00	0.079	0.0004	0.0705	0.0705
Seismic 210 deg M2	91.95	0.056	0.0006	0.0863	0.0863
Seismic 210 deg M2	100.00	0.068	0.0005	0.1011	0.1011
Seismic 210 deg M2	111.95	0.089	0.0005	0.1031	0.1031
Seismic 210 deg M2	125.00	0.113	0.0004	0.1048	0.1048
Seismic 240 deg M1	91.95	0.041	0.0008	0.0601	0.0601
Seismic 240 deg M1	100.00	0.049	0.0008	0.0703	0.0703
Seismic 240 deg M1	111.95	0.063	0.0007	0.0694	0.0694
Seismic 240 deg M1	125.00	0.079	0.0006	0.0703	0.0703
Seismic 240 deg M2	91.95	0.056	0.0010	0.0863	0.0863
Seismic 240 deg M2	100.00	0.068	0.0009	0.1026	0.1026
Seismic 240 deg M2	111.95	0.089	0.0008	0.1030	0.1030
Seismic 240 deg M2	125.00	0.113	0.0007	0.1050	0.1050
Seismic 300 deg M1	91.95	0.041	0.0008	0.0601	0.0601
Seismic 300 deg M1	100.00	0.049	0.0008	0.0691	0.0691
Seismic 300 deg M1	111.95	0.063	0.0007	0.0696	0.0696
Seismic 300 deg M1	125.00	0.079	0.0006	0.0705	0.0705
Seismic 300 deg M2	91.95	0.056	0.0010	0.0863	0.0863

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Seismic 300 deg M2	100.00	0.068	0.0009	0.1015	0.1015
Seismic 300 deg M2	111.95	0.089	0.0008	0.1032	0.1032
Seismic 300 deg M2	125.00	0.113	0.0007	0.1044	0.1044
Seismic 330 deg M1	91.95	0.041	0.0005	0.0601	0.0601
Seismic 330 deg M1	100.00	0.049	0.0005	0.0693	0.0693
Seismic 330 deg M1	111.95	0.063	0.0004	0.0695	0.0695
Seismic 330 deg M1	125.00	0.079	0.0004	0.0705	0.0705
Seismic 330 deg M2	91.95	0.056	0.0006	0.0863	0.0863
Seismic 330 deg M2	100.00	0.068	0.0005	0.1011	0.1011
Seismic 330 deg M2	111.95	0.089	0.0005	0.1031	0.1031
Seismic 330 deg M2	125.00	0.113	0.0004	0.1048	0.1048
Seismic (Reduced DL) Normal M1	91.95	0.041	0.0008	0.0598	0.0598
Seismic (Reduced DL) Normal M1	100.00	0.049	0.0008	0.0698	0.0698
Seismic (Reduced DL) Normal M1	111.95	0.063	0.0007	0.0690	0.0690
Seismic (Reduced DL) Normal M1	125.00	0.079	0.0006	0.0698	0.0698
Seismic (Reduced DL) Normal M2	91.95	0.056	0.0010	0.0873	0.0873
Seismic (Reduced DL) Normal M2	100.00	0.069	0.0010	0.1036	0.1036
Seismic (Reduced DL) Normal M2	111.95	0.090	0.0009	0.1040	0.1040
Seismic (Reduced DL) Normal M2	125.00	0.114	0.0008	0.1059	0.1059
Seismic (Reduced DL) 60 deg M1	91.95	0.039	0.0008	0.0584	0.0584
Seismic (Reduced DL) 60 deg M1	100.00	0.048	0.0007	0.0673	0.0673
Seismic (Reduced DL) 60 deg M1	111.95	0.062	0.0006	0.0675	0.0675
Seismic (Reduced DL) 60 deg M1	125.00	0.077	0.0005	0.0682	0.0682
Seismic (Reduced DL) 60 deg M2	91.95	0.055	0.0010	0.0859	0.0859
Seismic (Reduced DL) 60 deg M2	100.00	0.068	0.0009	0.1011	0.1011
Seismic (Reduced DL) 60 deg M2	111.95	0.088	0.0008	0.1026	0.1026
Seismic (Reduced DL) 60 deg M2	125.00	0.112	0.0007	0.1035	0.1035
Seismic (Reduced DL) 90 deg M1	91.95	0.041	-0.0010	0.0598	0.0598
Seismic (Reduced DL) 90 deg M1	100.00	0.049	-0.0009	0.0688	0.0688
Seismic (Reduced DL) 90 deg M1	111.95	0.063	-0.0008	0.0691	0.0691
Seismic (Reduced DL) 90 deg M1	125.00	0.079	-0.0007	0.0698	0.0698
Seismic (Reduced DL) 90 deg M2	91.95	0.056	-0.0012	0.0872	0.0872
Seismic (Reduced DL) 90 deg M2	100.00	0.069	-0.0012	0.1021	0.1021
Seismic (Reduced DL) 90 deg M2	111.95	0.090	-0.0010	0.1041	0.1041
Seismic (Reduced DL) 90 deg M2	125.00	0.114	-0.0010	0.1059	0.1059
Seismic (Reduced DL) 120 deg M1	91.95	0.041	0.0008	0.0598	0.0598
Seismic (Reduced DL) 120 deg M1	100.00	0.049	0.0008	0.0698	0.0698
Seismic (Reduced DL) 120 deg M1	111.95	0.063	0.0007	0.0690	0.0690
Seismic (Reduced DL) 120 deg M1	125.00	0.079	0.0006	0.0698	0.0698
Seismic (Reduced DL) 120 deg M2	91.95	0.055	0.0010	0.0858	0.0858
Seismic (Reduced DL) 120 deg M2	100.00	0.068	0.0009	0.1020	0.1020
Seismic (Reduced DL) 120 deg M2	111.95	0.088	0.0008	0.1025	0.1025
Seismic (Reduced DL) 120 deg M2	125.00	0.112	0.0007	0.1043	0.1043
Seismic (Reduced DL) 180 deg M1	91.95	0.041	0.0008	0.0598	0.0598
Seismic (Reduced DL) 180 deg M1	100.00	0.049	0.0008	0.0690	0.0690
Seismic (Reduced DL) 180 deg M1	111.95	0.063	0.0007	0.0691	0.0691
Seismic (Reduced DL) 180 deg M1	125.00	0.079	0.0006	0.0698	0.0698
Seismic (Reduced DL) 180 deg M2	91.95	0.056	0.0011	0.0873	0.0873
Seismic (Reduced DL) 180 deg M2	100.00	0.069	0.0010	0.1028	0.1028
Seismic (Reduced DL) 180 deg M2	111.95	0.090	0.0009	0.1042	0.1042
Seismic (Reduced DL) 180 deg M2	125.00	0.114	0.0008	0.1050	0.1050
Seismic (Reduced DL) 210 deg M1	91.95	0.041	0.0005	0.0598	0.0598
Seismic (Reduced DL) 210 deg M1	100.00	0.049	0.0005	0.0688	0.0688
Seismic (Reduced DL) 210 deg M1	111.95	0.063	0.0004	0.0691	0.0691
Seismic (Reduced DL) 210 deg M1	125.00	0.079	0.0004	0.0698	0.0698
Seismic (Reduced DL) 210 deg M2	91.95	0.055	0.0006	0.0858	0.0858
Seismic (Reduced DL) 210 deg M2	100.00	0.068	0.0005	0.1005	0.1005
Seismic (Reduced DL) 210 deg M2	111.95	0.088	0.0004	0.1026	0.1026
Seismic (Reduced DL) 210 deg M2	125.00	0.112	0.0004	0.1043	0.1043
Seismic (Reduced DL) 240 deg M1	91.95	0.041	0.0008	0.0598	0.0598
Seismic (Reduced DL) 240 deg M1	100.00	0.049	0.0008	0.0698	0.0698
Seismic (Reduced DL) 240 deg M1	111.95	0.063	0.0007	0.0690	0.0690

Site Number: 302536

Code:

ANSI/TIA-222-G

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Site Name: Cherry Hill-branford, CT

Engineering Number: 13334427_C3_02

1/27/2021 10:07:40 AM

Customer: AT&T MOBILITY

Seismic (Reduced DL) 240 deg M1	125.00	0.079	0.0006	0.0698	0.0698
Seismic (Reduced DL) 240 deg M2	91.95	0.055	0.0010	0.0858	0.0858
Seismic (Reduced DL) 240 deg M2	100.00	0.068	0.0009	0.1020	0.1020
Seismic (Reduced DL) 240 deg M2	111.95	0.088	0.0008	0.1025	0.1025
Seismic (Reduced DL) 240 deg M2	125.00	0.112	0.0007	0.1043	0.1043
Seismic (Reduced DL) 300 deg M1	91.95	0.039	0.0008	0.0584	0.0584
Seismic (Reduced DL) 300 deg M1	100.00	0.048	0.0007	0.0673	0.0673
Seismic (Reduced DL) 300 deg M1	111.95	0.062	0.0006	0.0675	0.0675
Seismic (Reduced DL) 300 deg M1	125.00	0.077	0.0005	0.0682	0.0682
Seismic (Reduced DL) 300 deg M2	91.95	0.055	0.0010	0.0859	0.0859
Seismic (Reduced DL) 300 deg M2	100.00	0.068	0.0009	0.1011	0.1011
Seismic (Reduced DL) 300 deg M2	111.95	0.088	0.0008	0.1026	0.1026
Seismic (Reduced DL) 300 deg M2	125.00	0.112	0.0007	0.1035	0.1035
Seismic (Reduced DL) 330 deg M1	91.95	0.040	0.0004	0.0583	0.0583
Seismic (Reduced DL) 330 deg M1	100.00	0.048	0.0004	0.0672	0.0672
Seismic (Reduced DL) 330 deg M1	111.95	0.062	0.0003	0.0675	0.0675
Seismic (Reduced DL) 330 deg M1	125.00	0.077	0.0003	0.0682	0.0682
Seismic (Reduced DL) 330 deg M2	91.95	0.055	0.0006	0.0858	0.0858
Seismic (Reduced DL) 330 deg M2	100.00	0.068	0.0005	0.1005	0.1005
Seismic (Reduced DL) 330 deg M2	111.95	0.088	0.0004	0.1026	0.1026
Seismic (Reduced DL) 330 deg M2	125.00	0.112	0.0004	0.1043	0.1043
Serviceability - 60 mph Wind Normal	91.95	0.188	0.0053	0.2642	0.2642
Serviceability - 60 mph Wind Normal	100.00	0.226	0.0052	0.3030	0.3030
Serviceability - 60 mph Wind Normal	111.95	0.286	0.0048	0.2968	0.2968
Serviceability - 60 mph Wind Normal	125.00	0.354	0.0047	0.2986	0.2986
Serviceability - 60 mph Wind 60 deg	91.95	0.182	-0.0052	0.2565	0.2565
Serviceability - 60 mph Wind 60 deg	100.00	0.219	-0.0051	0.2928	0.2928
Serviceability - 60 mph Wind 60 deg	111.95	0.278	-0.0047	0.2885	0.2885
Serviceability - 60 mph Wind 60 deg	125.00	0.344	-0.0046	0.2893	0.2893
Serviceability - 60 mph Wind 90 deg	91.95	0.183	-0.0060	0.2576	0.2576
Serviceability - 60 mph Wind 90 deg	100.00	0.220	-0.0059	0.2921	0.2921
Serviceability - 60 mph Wind 90 deg	111.95	0.279	-0.0055	0.2899	0.2899
Serviceability - 60 mph Wind 90 deg	125.00	0.346	-0.0053	0.2913	0.2914
Serviceability - 60 mph Wind 120 deg	91.95	0.187	0.0053	0.2627	0.2627
Serviceability - 60 mph Wind 120 deg	100.00	0.225	0.0052	0.3014	0.3014
Serviceability - 60 mph Wind 120 deg	111.95	0.285	0.0048	0.2952	0.2953
Serviceability - 60 mph Wind 120 deg	125.00	0.353	0.0047	0.2971	0.2971
Serviceability - 60 mph Wind 180 deg	91.95	0.181	0.0052	0.2550	0.2550
Serviceability - 60 mph Wind 180 deg	100.00	0.218	0.0051	0.2913	0.2913
Serviceability - 60 mph Wind 180 deg	111.95	0.276	0.0047	0.2870	0.2870
Serviceability - 60 mph Wind 180 deg	125.00	0.342	0.0046	0.2878	0.2878
Serviceability - 60 mph Wind 210 deg	91.95	0.183	0.0031	0.2568	0.2568
Serviceability - 60 mph Wind 210 deg	100.00	0.220	0.0030	0.2912	0.2912
Serviceability - 60 mph Wind 210 deg	111.95	0.279	0.0028	0.2890	0.2891
Serviceability - 60 mph Wind 210 deg	125.00	0.345	0.0027	0.2904	0.2905
Serviceability - 60 mph Wind 240 deg	91.95	0.187	0.0053	0.2627	0.2627
Serviceability - 60 mph Wind 240 deg	100.00	0.225	0.0052	0.3014	0.3014
Serviceability - 60 mph Wind 240 deg	111.95	0.285	0.0048	0.2952	0.2953
Serviceability - 60 mph Wind 240 deg	125.00	0.353	0.0047	0.2971	0.2971
Serviceability - 60 mph Wind 300 deg	91.95	0.182	0.0052	0.2565	0.2565
Serviceability - 60 mph Wind 300 deg	100.00	0.219	0.0051	0.2928	0.2928
Serviceability - 60 mph Wind 300 deg	111.95	0.278	0.0047	0.2885	0.2885
Serviceability - 60 mph Wind 300 deg	125.00	0.344	0.0046	0.2893	0.2893
Serviceability - 60 mph Wind 330 deg	91.95	0.184	0.0031	0.2585	0.2585
Serviceability - 60 mph Wind 330 deg	100.00	0.221	0.0030	0.2930	0.2930
Serviceability - 60 mph Wind 330 deg	111.95	0.280	0.0028	0.2908	0.2908
Serviceability - 60 mph Wind 330 deg	125.00	0.347	0.0027	0.2922	0.2922

Site Number: 302536

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Site Name: Cherry Hill-branford, CT

Engineering Number: 13334427_C3_02

1/27/2021 10:07:40 AM

Customer: AT&T MOBILITY

Maximum Reactions Summary

Anchor Group	Vertical (kip)				Horizontal (kip)		Moment (kip-ft)	
	DL+WL	DL+WL+IL	UpLift	Shear	DL+WL	DL+WL+IL	DL+WL	DL+WL+IL
Base	19.43	55.20	155.77	11.62	17.51	5.66	1389.84	437.37