Jennifer Iliades

From: UPS Quantum View <pkginfo@ups.com>
Sent: Friday, August 3, 2018 10:12 AM
To: Jennifer Iliades
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030721940595

Your package has been delivered.

Delivery Date: Friday, 08/03/2018
Delivery Time: 10:09 AM

At the request of Centerline Communications, LLC this notice alerts you that the status of the shipment listed below has changed.

Shipment Detail

Tracking Number:	1Z9Y45030721940595
Ship To:	Town of Colchester Art Shilosky, First Selectman 127 NORWICH AVE COLCHESTER, CT 06415 US
UPS Service:	UPS 2ND DAY AIR A.M
Number of Packages:	1
Shipment Type:	Letter
Delivery Location:	FRONT DESK DEAN
Reference Number 1:	CT2046 - CSC to First Selectman

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Help and Support Center

Jennifer Iliades

From: UPS Quantum View <pkginfo@ups.com>
Sent: Friday, August 3, 2018 10:12 AM
To: Jennifer Iliades
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030724727203

Your package has been delivered.

Delivery Date: Friday, 08/03/2018
Delivery Time: 10:09 AM

At the request of Centerline Communications, LLC this notice alerts you that the status of the shipment listed below has changed.

Shipment Detail

Tracking Number:	1Z9Y45030724727203
Ship To:	Town of Colchester Randall Benson, Town Planner 127 NORWICH AVE COLCHESTER, CT 06415 US
UPS Service:	UPS 2ND DAY AIR A.M
Number of Packages:	1
Shipment Type:	Letter
Delivery Location:	FRONT DESK DEAN
Reference Number 1:	CT2046 - CSC to Planner

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Help and Support Center

Jennifer Iliades

From: UPS Quantum View <pkginfo@ups.com>
Sent: Friday, August 3, 2018 10:12 AM
To: Jennifer Iliades
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030730106818

Your package has been delivered.

Delivery Date: Friday, 08/03/2018
Delivery Time: 10:09 AM

At the request of Centerline Communications, LLC this notice alerts you that the status of the shipment listed below has changed.

Shipment Detail

Tracking Number:	1Z9Y45030730106818
Ship To:	Town of Colchester Daphne Schaub 127 NORWICH AVE COLCHESTER, CT 06415 US
UPS Service:	UPS 2ND DAY AIR A.M
Number of Packages:	1
Shipment Type:	Letter
Delivery Location:	FRONT DESK DEAN
Reference Number 1:	CT2046 - CSC to Zoning

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Help and Support Center

Jennifer Iliades

From: UPS Quantum View <pkginfo@ups.com>
Sent: Friday, August 3, 2018 10:19 AM
To: Jennifer Iliades
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030728979425

Your package has been delivered.

Delivery Date: Friday, 08/03/2018
Delivery Time: 10:10 AM

At the request of Centerline Communications, LLC this notice alerts you that the status of the shipment listed below has changed.

Shipment Detail

Tracking Number:	1Z9Y45030728979425
Ship To:	c/o Acre Group Colchester Realty LLC 2 CENTRAL AVE FLOOR 2 NEW HARTFORD, CT 06057 US
UPS Service:	UPS 2ND DAY AIR A.M
Number of Packages:	1
Shipment Type:	Letter
Delivery Location:	OFFICE CHAREST
Reference Number 1:	CT2046 - CSC to Colchester Realty

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Help and Support Center

Jennifer Iliades

From: UPS Quantum View <pkginfo@ups.com>
Sent: Friday, August 3, 2018 10:19 AM
To: Jennifer Iliades
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030711317475

Your package has been delivered.

Delivery Date: Friday, 08/03/2018
Delivery Time: 10:12 AM

At the request of Centerline Communications, LLC this notice alerts you that the status of the shipment listed below has changed.

Shipment Detail

Tracking Number:	1Z9Y45030711317475
Ship To:	Ryan Tierney American Tower Corporation 10 PRESIDENTIAL WAY WOBURN, MA 01801 US
UPS Service:	UPS 2ND DAY AIR A.M
Number of Packages:	1
Shipment Type:	Letter
Delivery Location:	FRONT DESK LONG
Reference Number 1:	CT2046 - CSC to ATC

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Help and Support Center

July 31, 2018

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

Regarding: Notice of Exempt Modification – AT&T Site CT2046
Address: Chestnut Hill Road, Colchester, CT 06415

Dear Ms. Bachman:

New Cingular Wireless, PCS, LLC ("AT&T") currently maintains a wireless telecommunications facility on an existing 180-foot monopole at the above-referenced address, latitude 41.5689361, longitude -72.3036661. Said monopole is operated by American Tower Corporation.

AT&T desires to modify its existing telecommunications facility by swapping (3) antennas, swapping (3) diplexers and adding (3) remote radio heads. The centerline height of the existing antennas is and will remain at 185 feet.

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 Art Shilosky, First Selectman of the Town of Colchester, Randall Benson, Planner of the Town of Colchester, Daphne Schaub, Zoning Enforcement Officer of the Town of Colchester, American Tower Corporation as tower owner and Colchester Realty LLC, as property owner.

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:

1. The proposed modifications will not result in an increase in the height of the existing structure.

2. The proposed modifications will not require an extension of the site boundary.

3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.

4. The operation of the modified facility will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety

standard. *Please see the RF emissions calculation for AT&T's modified facility enclosed herewith.*

5. The proposed modifications will not cause an ineligible change or alteration in the physical or environmental characteristics of the site.

6. The existing structure and its foundation can support the proposed loading. *Please see the structural analysis dated April 25, 2018 by Hudson Design Group LLC enclosed herewith.*

For the foregoing reasons, AT&T respectfully submits that the proposed modifications to the above referenced telecommunications facility constitute an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,

Jennifer Iliades
Site Acquisition Consultant
Centerline Communications, LLC
750 West Center Street, Suite 301
West Bridgewater, MA 02379
jiliades@clinellc.com

Enclosures: Exhibit 1 – Field Card and GIS Map
Exhibit 2 – Construction Drawings
Exhibit 3 – Structural Analysis
Exhibit 4 – RF Emissions Analysis Report Evaluation
Exhibit 5 – Mount Analysis

cc: Art Shilosky, First Selectman, Town of Colchester
Randall Benson, Town Planner, Town of Colchester
Daphne Schaub, Zoning Enforcement Officer, Town of Colchester
American Tower Corporation, Tower Operator
Colchester Realty LLC, Property Owner

EXHIBIT 1

Town of Colchester, CT

Property Listing Report

Map Block Lot	4W-01/007-000/TW	Account	11AT0004	PID	105114

Property Information

Property Location	CHESTNUT HILL RD
Owner	AT&T MOBILITY
Co-Owner	ATTN PROP TAX DEPT
Mailing Address	909 CHESTNUT ST ST. LOUIS MO 63101
Land Use	4310 Tel Rel Tw
Land Class	I
Zoning Code	
Census Tract	
Sub Lot	

Neighborhood	
Acreage	0
Utilities	
Lot Setting/Desc	
Survey Map	
Additional Info	

Photo

Sketch

Primary Construction Details

Year Built		Bedrooms		Exterior Walls	
Stories		Full Bathrooms		Interior Walls	
Building Style		Half Bathrooms		Heating Type	
Building Use		Bath Style		Heating Fuel	
Building Condition		Kitchen Style		AC Type	
Floors		Roof Style		Gross Bldg Area	
Total Rooms		Roof Cover		Total Living Area	

Report Created On 7/31/2018

Town of Colchester, CT

Property Listing Report | Map Block Lot **4W-01/007-000/TW** | Account **11AT0004**

Valuation Summary

(Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings	0	0
Extras	0	0
Outbuildings	469100	328400
Land	0	0
Total	469100	328400

Outbuilding and Extra Items

Type	Description
Fence 8' Chain	256.00 L.F.
Cell Shed	312.00 S.F.
Cell Tower	2.00 SITES

Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Total Area		0

Sales History

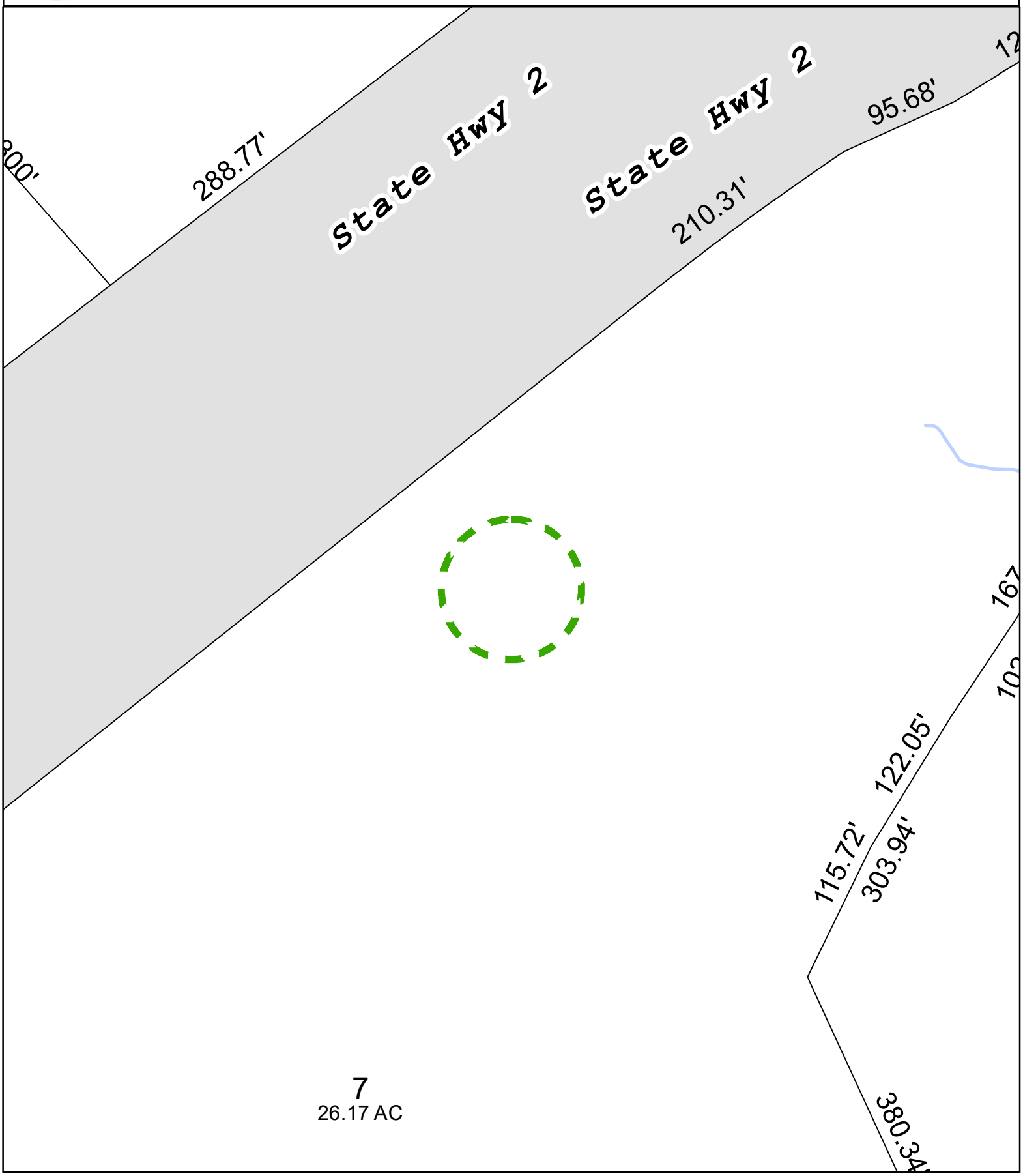
Owner of Record	Book/ Page	Sale Date	Sale Price
AT&T MOBILITY	000/ 000	10/1/2011	

Report Created On **7/31/2018**

Town of Colchester, Connecticut - Assessment Parcel Map

Parcel: 4W-01-007-000-TWR

Address: CHESTNUT HILL RD



Approximate Scale: 1 inch = 100 feet

0 50 100 150 200 Feet

Map Produced: July 2017 / Grand List: 2016

Disclaimer: This map is for informational purposes only All information is subject to verification by any user. The Town of Colchester and its mapping contractors assume no legal responsibility for the information contained herein.

EXHIBIT 2

PROJECT INFORMATION

SCOPE OF WORK:

ITEMS TO BE MOUNTED ON THE EXISTING MONOPOLE:
BIRDSITE
- NEW AT&T ANTENNAS (QS46512-2 FOR ALPHA SECTOR) & (TPA-65R-LCUUUU-H8 FOR BETA AND GAMMA SECTORS).
- NEW AT&T RRUS: (1) RRUS-32 B2 (PCS) (TYP. OF 1 PER SECTOR, TOTAL OF 3).

ITEMS TO BE MOUNTED INSIDE EXISTING SHELTER:
- NEW AT&T RRUS: (1) 4478 RADIO MOUNTED ON NEW RACK. (TOTAL OF 2).
- COAX JUMPERS (TYP. OF 4 PER SECTOR TOTAL OF 12) FROM THE RRU.
- FIBER JUMPERS (TYP. OF 2 PER SECTOR TOTAL OF 6) TO RRU. SINGLE PAIR POWER CABLE #12 SIZE FROM SQUID TO EACH RRU.
- (1) FIF RACK.
- (8) SURGE ARRESTORS (APTDC-BDFM-DB) MOUNTED IN NEW RACK
- NEW (1) 5216, (1) XMU AND (1) DC12 TO REPLACE EXISTING BBU.

ITEMS TO REMAIN:
- (6) UMTS ANTENNAS, (6) TMAS, (3) RRU'S, (12) COAX CABLES, (2) DC POWER CABLES, (1) FIBER CABLE & (1) SURGE ARRESTOR.

SITE ADDRESS:	CHESTNUT HILL ROAD COLCHESTER, CT 06415
LATITUDE:	41.568936° N 41° 34' 08.16" N
LONGITUDE:	72.303661° W 72° 18' 13.19" W
TYPE OF SITE:	MONOPOLE, INDOOR EQUIPMENT
TOWER HEIGHT:	180'± A.G.L
RAD CENTER:	183'± A.G.L
CURRENT USE:	TELECOMMUNICATIONS FACILITY
PROPOSED USE:	TELECOMMUNICATIONS FACILITY

SITE NUMBER: CT2046

SITE NAME: COLCHESTER

PROJECT: LTE 2C 3C 2018 UPGRADE

DRAWING INDEX

SHEET NO.	DESCRIPTION	REV.
T-1	TITLE SHEET	1
GN-1	GENERAL NOTES	1
A-1	COMPOUND & EQUIPMENT PLANS	1
A-2	ANTENNA PLANS & ELEVATION	1
A-3	DETAILS	1
SN-1	STRUCTURAL NOTES	1
S-1	STRUCTURAL DETAILS	1
S-2	STRUCTURAL DETAILS	1
RF-1	RF PLUMBING DIAGRAM	1
G-1	GROUNDING DETAILS	1

AMERICAN TOWER SITE #: 302496
AMERICAN TOWER SITE NAME: CLCHCOLCHESTER

VICINITY MAP

DIRECTIONS TO SITE:
DEPART ENTERPRISE DR TOWARD CAPITOL BLVD. TURN LEFT ONTO CAPITOL BLVD. TURN LEFT ONTO WEST ST. TAKE RAMP LEFT FOR I-91 N. AT EXIT 25, TAKE RAMP RIGHT FOR CT-3 NORTH TOWARD GLASTONBURY. TAKE RAMP RIGHT FOR CT-2 EAST TOWARD NORWICH. AT EXIT 21, TAKE RAMP RIGHT AND FOLLOW SIGNS FOR CHESTNUT HILL ROAD. TURN RIGHT ONTO CHESTNUT HILL RD. ARRIVE AT SITE ON THE LEFT.

GENERAL NOTES

1. THIS DOCUMENT IS THE CREATION, DESIGN, PROPERTY AND COPYRIGHTED WORK OF AT&T. ANY DUPLICATION OR USE WITHOUT EXPRESS WRITTEN CONSENT IS STRICTLY PROHIBITED. DUPLICATION AND USE BY GOVERNMENT AGENCIES FOR THE PURPOSES OF CONDUCTING THEIR LAWFULLY AUTHORIZED REGULATORY AND ADMINISTRATIVE FUNCTIONS IS SPECIFICALLY ALLOWED.
2. THE FACILITY IS AN UNMANNED PRIVATE AND SECURED EQUIPMENT INSTALLATION. IT IS ONLY ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE AND THEREFORE DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.
3. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE AT&T MOBILITY REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.
4. CONSTRUCTION DRAWINGS ARE VALID FOR SIX MONTHS AFTER ENGINEER OF RECORD'S STAMPED AND SIGNED SUBMITTAL DATE LISTED HEREIN.

72 HOURS

CALL
BEFORE YOU DIG
CALL TOLL FREE 1-800-922-4455
OR CALL 811

UNDERGROUND SERVICE ALERT

HUDSON Design Group LLC
45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

CENTERLINE COMMUNICATIONS
95 RYAN DRIVE
RAYNHAM, MA 02767

SITE NUMBER: CT2046
SITE NAME: COLCHESTER
ATC SITE NUMBER: 302496
CHESTNUT HILL ROAD
COLCHESTER, CT 06415
NEW LONDON COUNTY

at&t
500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	04/25/18	ISSUED FOR CONSTRUCTION	SF	AT	DJC
A	09/25/17	ISSUED FOR REVIEW	SB	AT	DJC

SCALE: AS SHOWN | DESIGNED BY: AT | DRAWN BY: SB

STATE OF CONNECTICUT · DEREK J. CREASEY · 26,255 · LICENSED PROFESSIONAL ENGINEER

AT&T
TITLE SHEET
(LTE 2C/3C)

SITE NUMBER	DRAWING NUMBER	REV
CT2046	T-1	1

GROUNDING NOTES

1. THE SUBCONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC (AS ADOPTED BY THE AHJ), THE SITE-SPECIFIC (UL, LPI, OR NFPA) LIGHTING PROTECTION CODE, AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.

2. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION, AND AC POWER GES'S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.

3. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR NEW GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.

4. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.

5. EACH BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, 6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS 2 AWG STRANDED COPPER FOR OUTDOOR BTS.

6. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.

7. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.

8. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO GROUND BAR.

9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.

10. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.

11. METAL CONDUIT SHALL BE MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH 6 AWS COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.

12. ALL NEW STRUCTURES WITH A FOUNDATION AND/OR FOOTING HAVING 20 FT. OR MORE OF 1/2 IN. OR GREATER ELECTRICALLY CONDUCTIVE REINFORCING STEEL MUST HAVE IT BONDED TO THE GROUND RING USING AN EXOTHERMIC WELD CONNECTION USING #2 AWG SOLID BARE TINNED COPPER GROUND WIRE, PER NEC 250.50

GENERAL NOTES

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:

   CONTRACTOR – CENTERLINE
   SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
   OWNER – AT&T MOBILITY

2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.

3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.

4. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.

5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.

6. "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR.

7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.

8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR.

9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.

10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.

11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.

12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.

13. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.

14. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL BE AIR-ENTRAINED AND SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.

15. ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 (Fy = 36 ksi) UNLESS OTHERWISE NOTED. PIPES SHALL BE ASTM A53 TYPE E (Fy = 36 ksi). ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED. TOUCHUP ALL SCRATCHES AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERECTED USING A COMPATIBLE ZINC RICH PAINT.

16. CONSTRUCTION SHALL COMPLY WITH SPECIFICATIONS AND "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF AT&T SITES."

17. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.

18. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.

19. SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.

20. APPLICABLE BUILDING CODES:
    SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.
    BUILDING CODE: IBC 2012 WITH 2016 CT BUILDING CODE AMENDMENTS
    ELECTRICAL CODE: REFER TO ELECTRICAL DRAWINGS
    LIGHTENING CODE: REFER TO ELECTRICAL DRAWINGS

    SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:

    AMERICAN CONCRETE INSTITUTE (ACI) 318; BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE;

    AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)

    MANUAL OF STEEL CONSTRUCTION, ASD, FOURTEENTH EDITION;

    TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-G, STRUCTURAL STANDARDS FOR STEEL

    EQUIPMENT AND ANTENNA SUPPORTING STRUCTURES; REFER TO ELECTRICAL DRAWINGS FOR SPECIFIC ELECTRICAL STANDARDS.

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

ABBREVIATIONS

AGL	ABOVE GRADE LEVEL	EQ	EQUAL	REQ	REQUIRED
AWG	AMERICAN WIRE GAUGE	GC	GENERAL CONTRACTOR	RF	RADIO FREQUENCY
BBU	BATTERY BACKUP UNIT	GRC	GALVANIZED RIGID CONDUIT	TBD	TO BE DETERMINED
BTCW	BARE TINNED SOLID COPPER WIRE	MGB	MASTER GROUND BAR	TBR	TO BE REMOVED
BGR	BURIED GROUND RING	MIN	MINIMUM	TBRR	TO BE REMOVED AND REPLACED
BTS	BASE TRANSCEIVER STATION	P	PROPOSED	TYP	TYPICAL
E	EXISTING	NTS	NOT TO SCALE	UG	UNDER GROUND
EGB	EQUIPMENT GROUND BAR	RAD	RADIATION CENTER LINE (ANTENNA)	VIF	VERIFY IN FIELD
EGR	EQUIPMENT GROUND RING	REF	REFERENCE		

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RAYNHAM, MA 02767

SITE NUMBER: CT2046
SITE NAME: COLCHESTER
ATC SITE NUMBER: 302496
CHESTNUT HILL ROAD
COLCHESTER, CT 06415
NEW LONDON COUNTY

at&t
500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	04/25/18	ISSUED FOR CONSTRUCTION	SF	AT	DJC
A	09/25/17	ISSUED FOR REVIEW	SB	AT	DJC

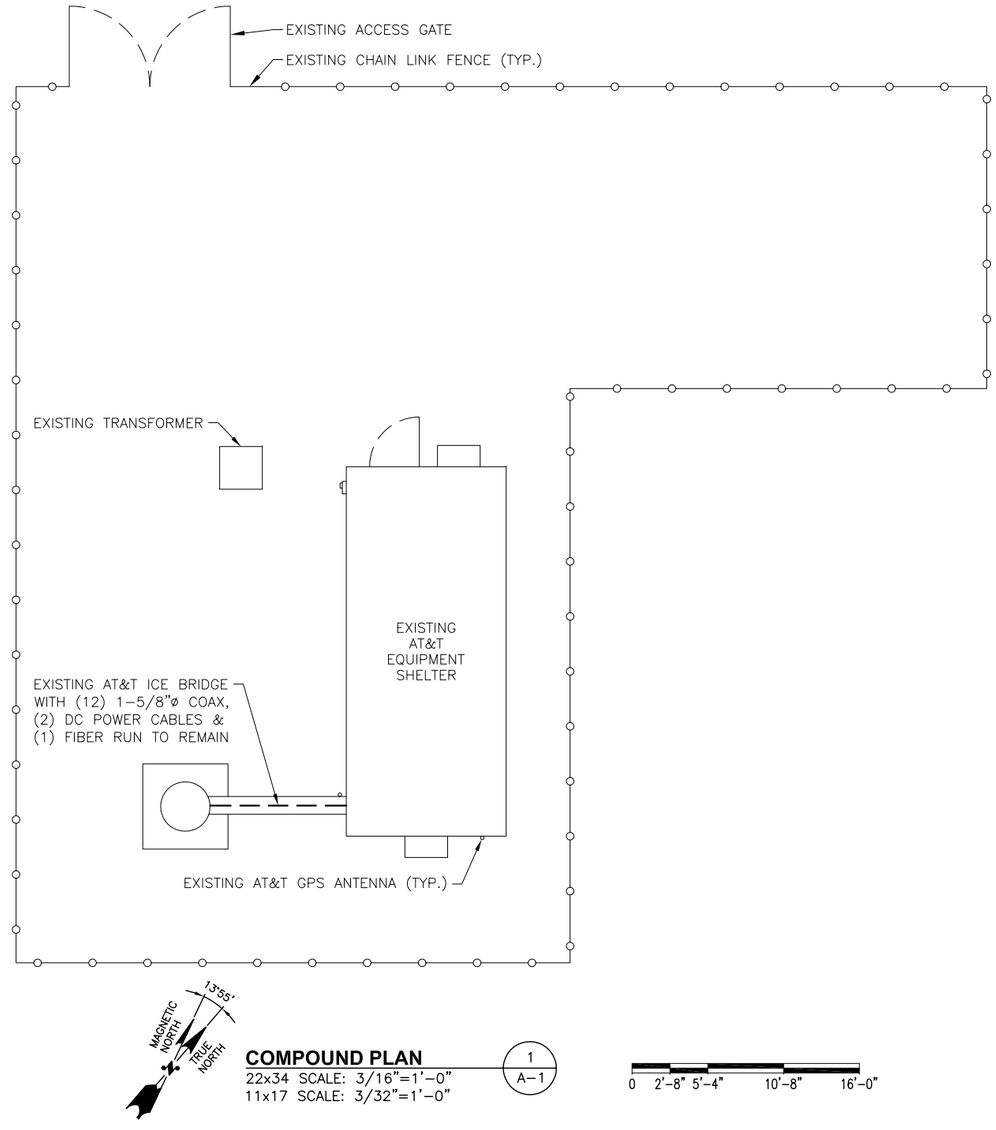
SCALE: AS SHOWN | DESIGNED BY: AT | DRAWN BY: SB

STATE OF CONNECTICUT
DEREK J. CREASEY
No. 23795
LICENSED PROFESSIONAL ENGINEER

AT&T

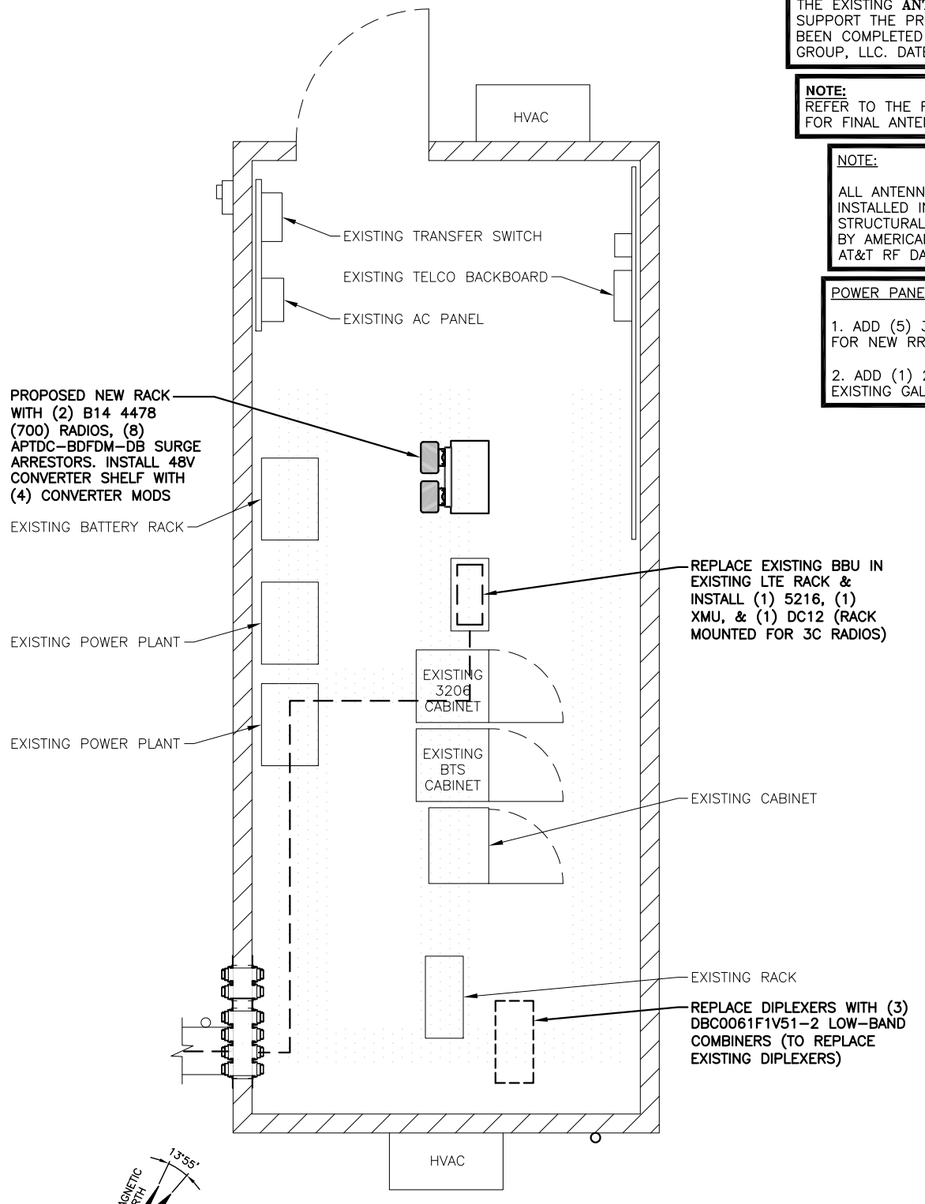
GENERAL NOTES
(LTE 2C/3C)

SITE NUMBER	DRAWING NUMBER	REV
CT2046	GN-1	1



COMPOUND PLAN (1 / A-1)
22x34 SCALE: 3/16"=1'-0"
11x17 SCALE: 3/32"=1'-0"

0 2'-8" 5'-4" 10'-8" 16'-0"



EQUIPMENT PLAN (2 / A-1)
22x34 SCALE: 1/2"=1'-0"
11x17 SCALE: 1/4"=1'-0"

0 1'-0" 2'-0" 4'-0" 6'-0"

NOTE:

AN ANALYSIS FOR THE CAPACITY OF THE EXISTING **ANTENNA MOUNT** TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY: HUDSON DESIGN GROUP, LLC. DATED: MARCH 30, 2018.

NOTE:
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

NOTE:

ALL ANTENNAS AND LINES TO BE INSTALLED IN ACCORDANCE WITH STRUCTURAL ANALYSIS PROVIDED BY AMERICAN TOWER AND FINAL AT&T RF DATA SHEET.

POWER PANEL NOTE:

1. ADD (5) 30A SP DC BREAKER FOR NEW RRU ADDS, IF NEEDED

2. ADD (1) 25A SP FOR 5216 IN EXISTING GALAXY POWER PLANT.

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SCALE: AS SHOWN | DESIGNED BY: AT | DRAWN BY: SB

STATE OF CONNECTICUT · DEREK J. CREASEY · No. 21055 · LICENSED PROFESSIONAL ENGINEER

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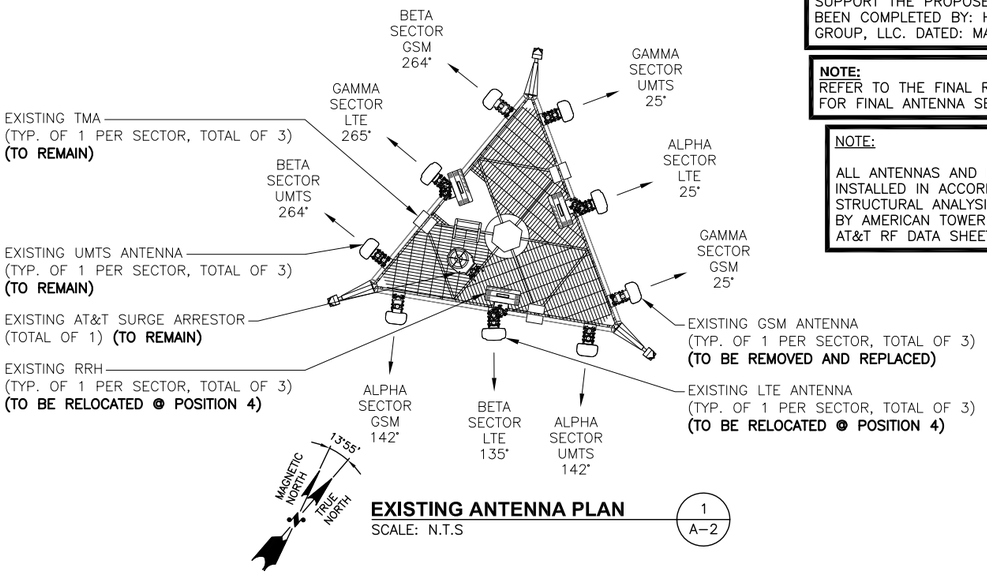
COMPOUND & EQUIPMENT PLANS (LTE 2C/3C)

SITE NUMBER	DRAWING NUMBER	REV
CT2046	A-1	1



EXISTING ANTENNA PLAN

SCALE: N.T.S

1 / A–2

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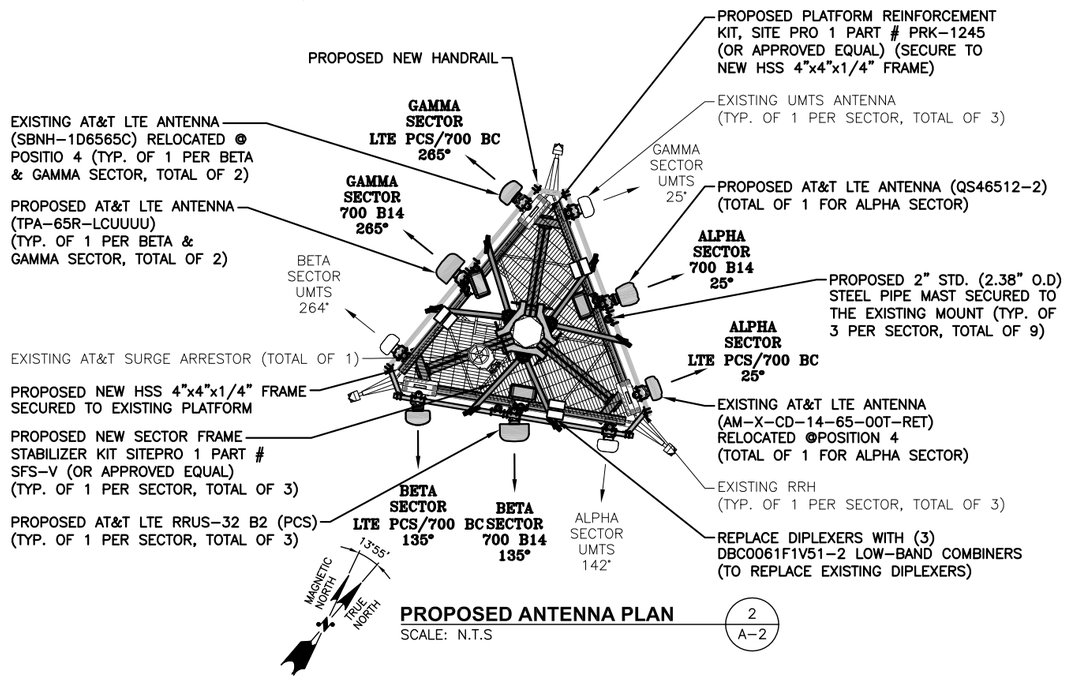
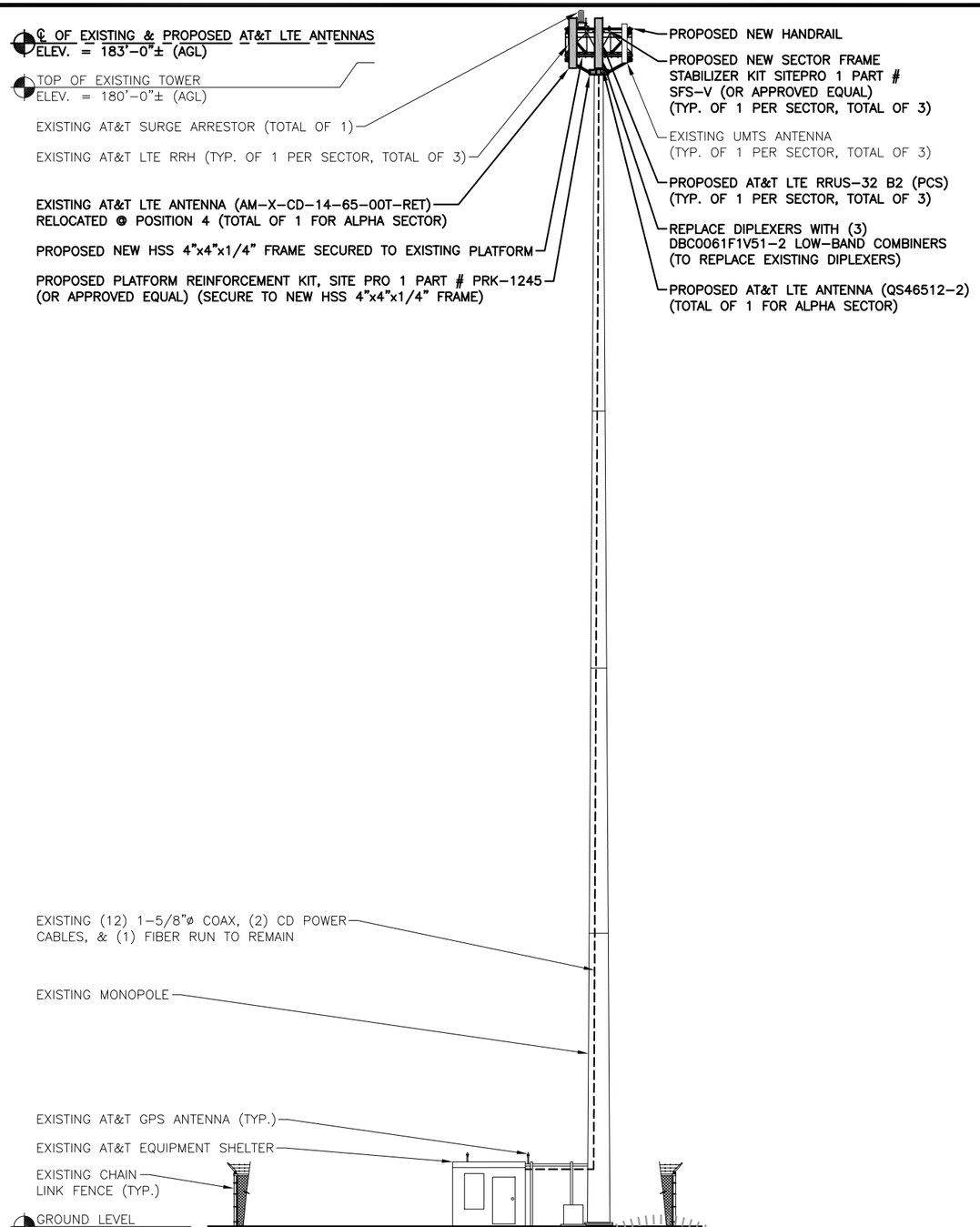


PROPOSED ANTENNA PLAN

SCALE: N.T.S

2 / A–2



ELEVATION

22x34 SCALE: 3/32"=1'–0"
11x17 SCALE: 3/64"=1'–0"

3 / A–2

0 5'–4" 10'–8" 21'–4" 32'–0"

STATE OF CONNECTICUT — LICENSED PROFESSIONAL ENGINEER — No. 25...

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ANTENNA PLANS & ELEVATION (LTE 2C/3C)

SITE NUMBER	DRAWING NUMBER	REV
CT2046	A–2	1

ANTENNA SCHEDULE

SECTOR	EXISTING/ PROPOSED	BAND	ANTENNA	SIZE (INCHES) (L x W x D)	ANTENNA ℄ HEIGHT	AZIMUTH	TMA/ DIPLEXER	RRU	SIZE (INCHES) (L x W x D)	FEEDER	RAYCAP
A1	EXISTING	850 MHZ/1900MHZ	7770	57X11X5	±183'	25°	(2) LGP17201	--	--	(2) 1-5/8 COAX	--
A2	--	--	--	--	--	--	--	--	--	--	--
A3	PROPOSED	700 MHZ/1900MHZ	QS46512-2	52X12X10.8	±183'	25°	--	(E) B14 4478 (P) RRUS-32 B2 (PCS)	15X13.2X7.4 27.2X12.1X7	(2) 1-5/8 COAX	(E) (1) RAYCAP DC6-48-60-18-8C
A4	PROPOSED	700 MHZ	AM-X-CD-14-05-00T-RET	48X11.8X5.9	±183'	25°	(2) DBC0061F1V51-2	(E) RRUS-11 (700)	19.7X17X7.2	--	
B1	EXISTING	850 MHZ/1900MHZ	7770	57X11X5	±183'	142°	(2) LGP17201	--	--	(2) 1-5/8 COAX	--
B2	--	--	--	--	--	--	--	--	--	--	--
B3	PROPOSED	700 MHZ/1900MHZ	TPA-65R-LCUUUU-H8	96X14.4X8.6	±183'	135°	--	(E) B14 4478 (P) RRUS-32 B2 (PCS)	15X13.2X7.4 27.2X12.1X7	(2) 1-5/8 COAX	(E) (1) RAYCAP DC6-48-60-18-8C
B4	PROPOSED	700 MHZ	SBNH-1D6565C	96.4X11.9X7.1	±183'	135°	(2) DBC0061F1V51-2	(E) RRUS-11 (700)	19.7X17X7.2	--	
C1	EXISTING	850 MHZ/1900MHZ	7770	57X11X5	±183'	264°	(2) LGP17201	--	--	(2) 1-5/8 COAX	--
C2	--	--	--	--	--	--	--	--	--	--	--
C3	PROPOSED	700 MHZ/1900MHZ	TPA-65R-LCUUUU-H8	96X14.4X8.6	±183'	265°	--	(E) B14 4478 (P) RRUS-32 B2 (PCS)	15X13.2X7.4 27.2X12.1X7	(2) 1-5/8 COAX	(E) (1) RAYCAP DC6-48-60-18-8C
C4	PROPOSED	700 MHZ	SBNH-1D6565C	96.4X11.9X7.1	±183'	265°	(2) DBC0061F1V51-2	(E) RRUS-11 (700)	19.7X17X7.2	--	

SHARED

SHARED

NOTE:

AN ANALYSIS FOR THE CAPACITY OF THE EXISTING **ANTENNA MOUNT** TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY: HUDSON DESIGN GROUP, LLC. DATED: MARCH 30, 2018.

NOTE:
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NOTE:

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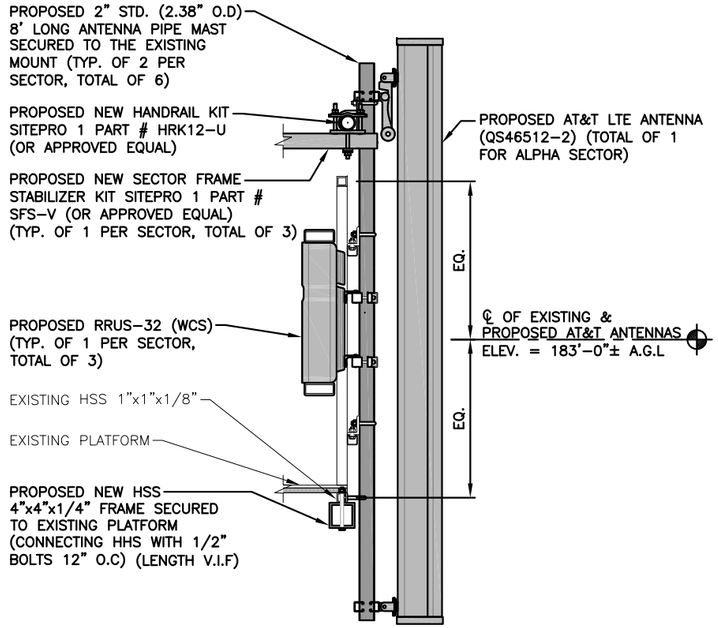
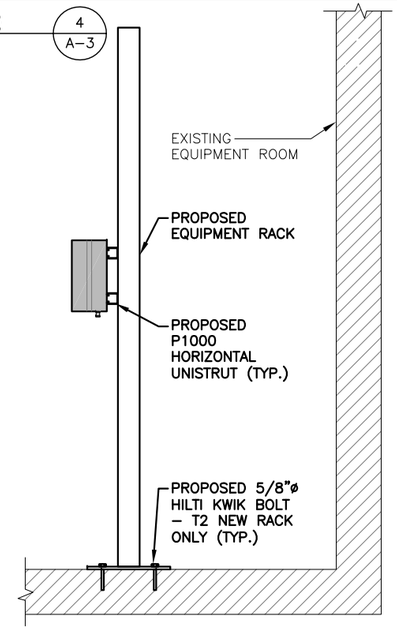
*DC JUMPER NOTE:
DC JUMPERS (2) FROM EACH RRU (TOTAL OF 10).

**FIBER JUMPER NOTE:
FIBER JUMPERS (1) FROM THE SQUID TO EACH RRU (TOTAL OF 5).



PROPOSED ANTENNA & RRH MOUNTING DETAIL (1 / A-3)
SCALE: N.T.S

FINAL ANTENNA CONFIGURATION TABLE (4 / A-3)



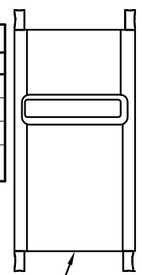
PROPOSED RRUS MOUNTING DETAIL ON NEW FIF RACK (2 / A-3)
SCALE: N.T.S

RRH CHART				
QUANTITY	MODEL	L	W	D
3 (E)	RRUS-11	19.7"	17.0"	7.2"
3 (P)	RRUS-32	27.2"	12.1"	7.0"
2 (P)	RRU-4478 B14	15.0"	13.2"	7.4"

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

NOTE:

SEE RFDS FOR RRH FREQUENCY AND MODEL NUMBER



PROPOSED RRU REFER TO THE FINAL RFDS AND CHART FOR QUANTITY, MODEL AND DIMENSIONS

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

PROPOSED RRH DETAIL (3 / A-3)
SCALE: N.T.S

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STATE OF CONNECTICUT DEREK J. PHANEUF 25,855 LICENSED PROFESSIONAL ENGINEER

AT&T

DETAILS
(LTE 2C/3C)

SITE NUMBER	DRAWING NUMBER	REV
CT2046	A-3	1

STRUCTURAL NOTES:

1. DESIGN REQUIREMENTS ARE PER STATE BUILDING CODE AND APPLICABLE SUPPLEMENTS, INTERNATIONAL BUILDING CODE, EIA/TIA-222-G STRUCTURAL STANDARDS FOR STEEL ANTENNA, TOWERS AND ANTENNA SUPPORTING STRUCTURES.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND ENGINEER OF RECORD.
3. DESIGN AND CONSTRUCTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
4. STRUCTURAL STEEL SHALL CONFORM TO ASTM A992 (Fy=50 ksi), MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A36 UNLESS OTHERWISE INDICATED.
5. STEEL PIPE SHALL CONFORM TO ASTM A500 "COLD-FORMED WELDED & SEAMLESS CARBON STEEL STRUCTURAL TUBING", GRADE B, OR ASTM A53 PIPE STEEL BLACK AND HOT-DIPPED ZINC-COATED WELDED AND SEAMLESS TYPE E OR S, GRADE B. PIPE SIZES INDICATED ARE NOMINAL. ACTUAL OUTSIDE DIAMETER IS LARGER.
6. STRUCTURAL CONNECTION BOLTS SHALL BE HIGH STRENGTH BOLTS (BEARING TYPE) AND CONFORM TO ASTM A325 TYPE-X "HIGH STRENGTH BOLTS FOR STRUCTURAL JOINTS, INCLUDING SUITABLE NUTS AND PLAIN HARDENED WASHERS". ALL BOLTS SHALL BE 3/4" DIA UON.
7. ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS OTHERWISE NOTED.
8. ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE", UNLESS OTHERWISE NOTED.
9. FIELD WELDS, DRILL HOLES, SAW CUTS AND ALL DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED WITH AN ORGANIC ZINC REPAIR PAINT COMPLYING WITH REQUIREMENTS OF ASTM A780. GALVANIZING REPAIR PAINT SHALL HAVE 65 PERCENT ZINC BY WEIGHT, ZIRP BY DUNCAN GALVANIZING, GALVA BRIGHT PREMIUM BY CROWN OR EQUAL. THICKNESS OF APPLIED GALVANIZING REPAIR PAINT SHALL BE NOT NOT LESS THAN 4 COATS (ALLOW TIME TO DRY BETWEEN COATS) WITH A RESULTING COATING THICKNESS REQUIRED BY ASTM A123 OR A153 AS APPLICABLE.
10. CONTRACTOR SHALL COMPLY WITH AWS CODE FOR PROCEDURES, APPEARANCE AND QUALITY OF WELDS, AND FOR METHODS USED IN CORRECTING WELDING. ALL WELDERS AND WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS "STANDARD QUALIFICATION PROCEDURES". ALL WELDING SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND DI.I. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "STEEL CONSTRUCTION MANUAL". 14TH EDITION.
11. INCORRECTLY FABRICATED, DAMAGED OR OTHERWISE MISFITTING OR NON-CONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE CONSTRUCTION MANAGER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE CONSTRUCTION MANAGER APPROVAL.
12. UNISTRUT SHALL BE FORMED STEEL CHANNEL STRUT FRAMING AS MANUFACTURED BY UNISTRUT CORP., WAYNE, MI OR EQUAL. STRUT MEMBERS SHALL BE 1 5/8"x1 5/8"x12GA, UNLESS OTHERWISE NOTED, AND SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
13. EPOXY ANCHOR ASSEMBLY SHALL CONSIST OF STAINLESS STEEL ANCHOR ROD WITH NUTS & WASHERS. AN INTERNALLY THREADED INSERT, A SCREEN TUBE AND A EPOXY ADHESIVE. THE ANCHORING SYSTEM SHALL BE THE HILTI-HIT HY-70 AND OR HY-200 SYSTEMS (AS SPECIFIED IN DWG.) OR ENGINEERS APPROVED EQUAL.
14. EXPANSION BOLTS SHALL CONFORM TO FEDERAL SPECIFICATION FF-S-325, GROUP II, TYPE 4, CLASS I, HILTI KWIK BOLT III OR APPROVED EQUAL. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
15. LUMBER SHALL COMPLY WITH THE REQUIREMENTS OF THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION AND THE NATIONAL FOREST PRODUCTS ASSOCIATION'S NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION. ALL LUMBER SHALL BE PRESSURE TREATED AND SHALL BE STRUCTURAL GRADE NO. 2 OR BETTER.
16. WHERE ROOF PENETRATIONS ARE REQUIRED, THE CONTRACTOR SHALL CONTACT AND COORDINATE RELATED WORK WITH THE BUILDING OWNER AND THE EXISTING ROOF INSTALLER. WORK SHALL BE PERFORMED IN SUCH A MANNER AS TO NOT VOID THE EXISTING ROOF WARRANTY. ROOF SHALL BE WATERTIGHT.
17. ALL FIBERGLASS MEMBERS USED ARE AS MANUFACTURED BY STRONGWELL COMPANY OF BRISTOL, VA 24203. ALL DESIGN CRITERIA FOR THESE MEMBERS IS BASED ON INFORMATION PROVIDED IN THE DESIGN MANUAL. ALL REQUIREMENTS PUBLISHED IN SAID MANUAL MUST BE STRICTLY ADHERED TO.
18. NO MATERIALS TO BE ORDERED AND NO WORK TO BE COMPLETED UNTIL SHOP DRAWINGS HAVE BEEN REVIEWED AND APPROVED IN WRITING.
19. SUBCONTRACTOR SHALL FIREPROOF ALL STEEL TO PRE-EXISTING CONDITIONS.

SPECIAL INSPECTIONS (REFERENCE IBC CHAPTER 17):

GENERAL: WHERE APPLICATION IS MADE FOR CONSTRUCTION, THE OWNER OR THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE ACTING AS THE OWNER'S AGENT SHALL EMPLOY ONE OR MORE APPROVED AGENCIES TO PERFORM INSPECTIONS DURING CONSTRUCTION ON THE TYPES OF WORK LISTED IN THE INSPECTION CHECKLIST ABOVE.

THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE AND ENGINEERS OF RECORD INVOLVED IN THE DESIGN OF THE PROJECT ARE PERMITTED TO ACT AS THE APPROVED AGENCY AND THEIR PERSONNEL ARE PERMITTED TO ACT AS THE SPECIAL INSPECTOR FOR THE WORK DESIGNED BY THEM, PROVIDED THOSE PERSONNEL MEET THE QUALIFICATION REQUIREMENTS.

STATEMENT OF SPECIAL INSPECTIONS: THE APPLICANT SHALL SUBMIT A STATEMENT OF SPECIAL INSPECTIONS PREPARED BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE IN ACCORDANCE WITH SECTION 107.1 AS A CONDITION FOR ISSUANCE. THIS STATEMENT SHALL BE IN ACCORDANCE WITH SECTION 1705.

REPORT REQUIREMENT: SPECIAL INSPECTORS SHALL KEEP RECORDS OF INSPECTIONS. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. REPORTS SHALL INDICATE THAT WORK INSPECTED WAS OR WAS NOT COMPLETED IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THEY ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS SHALL BE SUBMITTED.

SPECIAL INSPECTION CHECKLIST	
BEFORE CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
N/A	ENGINEER OF RECORD APPROVED SHOP DRAWINGS [1]
N/A	MATERIAL SPECIFICATIONS REPORT [2]
N/A	FABRICATOR NDE INSPECTION
N/A	PACKING SLIPS [3]
ADDITIONAL TESTING AND INSPECTIONS:	
DURING CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	STEEL INSPECTIONS
N/A	HIGH STRENGTH BOLT INSPECTIONS
N/A	HIGH WIND ZONE INSPECTIONS [4]
N/A	FOUNDATION INSPECTIONS
N/A	CONCRETE COMP. STRENGTH, SLUMP TESTS AND PLACEMENT
N/A	POST INSTALLED ANCHOR VERIFICATION [5]
N/A	GROUT VERIFICATION
N/A	CERTIFIED WELD INSPECTION
N/A	EARTHWORK: LIFT AND DENSITY
N/A	ON SITE COLD GALVANIZING VERIFICATION
N/A	GUY WIRE TENSION REPORT
ADDITIONAL TESTING AND INSPECTIONS:	
AFTER CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	MODIFICATION INSPECTOR REDLINE OR RECORD DRAWINGS [6]
N/A	POST INSTALLED ANCHOR PULL-OUT TESTING
REQUIRED	PHOTOGRAPHS
ADDITIONAL TESTING AND INSPECTIONS:	

NOTES:

1. REQUIRED FOR ANY NEW SHOP FABRICATED FRP OR STEEL.
2. PROVIDED BY MANUFACTURER, REQUIRED IF HIGH STRENGTH BOLTS OR STEEL.
3. PROVIDED BY GENERAL CONTRACTOR; PROOF OF MATERIALS.
4. HIGH WIND ZONE INSPECTION CATB 120MPH OR CAT C,D 110MPH INSPECT FRAMING OF WALLS, ANCHORING, FASTENING SCHEDULE.
5. ADHESIVE FOR REBAR AND ANCHORS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308 FOR CRACKED CONCRETE AND SEISMIC APPLICATIONS. DESIGN ADHESIVE BOND STRENGTH HAS BEEN BASED ON ACI 355.4 TEMPERATURE CATEGORY B WITH INSTALLATIONS INTO DRY HOLES DRILLED USING A CARBIDE BIT INTO CRACKED CONCRETE THAT HAS CURED FOR AT LEAST 21 DAYS. ADHESIVE ANCHORS REQUIRING CERTIFIED INSTALLATIONS SHALL BE INSTALLED BY A CERTIFIED ADHESIVE ANCHOR INSTALLER PER ACI 318-11 D.9.2.2. INSTALLATIONS REQUIRING CERTIFIED INSTALLERS SHALL BE INSPECTED PER ACI 318-11 D.8.2.4.
6. AS REQUIRED; FOR ANY FIELD CHANGES TO THE ITEMS IN THIS TABLE.

NOTES:

1. ALL CONNECTIONS TO BE SHOP WELDED & FIELD BOLTED USING 3/4"ø A325-X BOLTS, UNLESS OTHERWISE NOTIFIED.
2. SHOP DRAWING ENGINEER REVIEW & APPROVAL REQUIRED BEFORE ORDERING MATERIAL.
3. SHOP DRAWING ENGINEER REVIEW & APPROVAL REQUIRED PRIOR TO STEEL FABRICATION.
4. VERIFICATION OF EXISTING ROOF CONSTRUCTION IS REQUIRED PRIOR TO THE INSTALLATION OF THE ROOF PLATFORM. ENGINEER OF RECORD IS TO APPROVE EXISTING CONDITIONS IN ORDER TO MOVE FORWARD.
5. CENTERLINE OF PROPOSED STEEL PLATFORM SUPPORT COLUMNS TO BE CENTRALLY LOCATED OVER THE EXISTING BUILDING COLUMNS.
6. EXISTING BRICK MASONRY COLUMNS/BEARING TO BE REPAIRED/REPLACED AT ALL PROPOSED PLATFORM SUPPORT POINTS. ENGINEER OF RECORD TO REVIEW AND APPROVE.

HUDSON Design Group LLC
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TEL: (978) 557-5553
FAX: (978) 336-5586

CENTERLINE COMMUNICATIONS
95 RYAN DRIVE
RAYNHAM, MA 02767

SITE NUMBER: CT2046
SITE NAME: COLCHESTER
ATC SITE NUMBER: 302496
CHESTNUT HILL ROAD
COLCHESTER, CT 06415
NEW LONDON COUNTY

at&t
500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	04/25/18	ISSUED FOR CONSTRUCTION	SF	AT	DJC
A	09/25/17	ISSUED FOR REVIEW	SB	AT	DJC

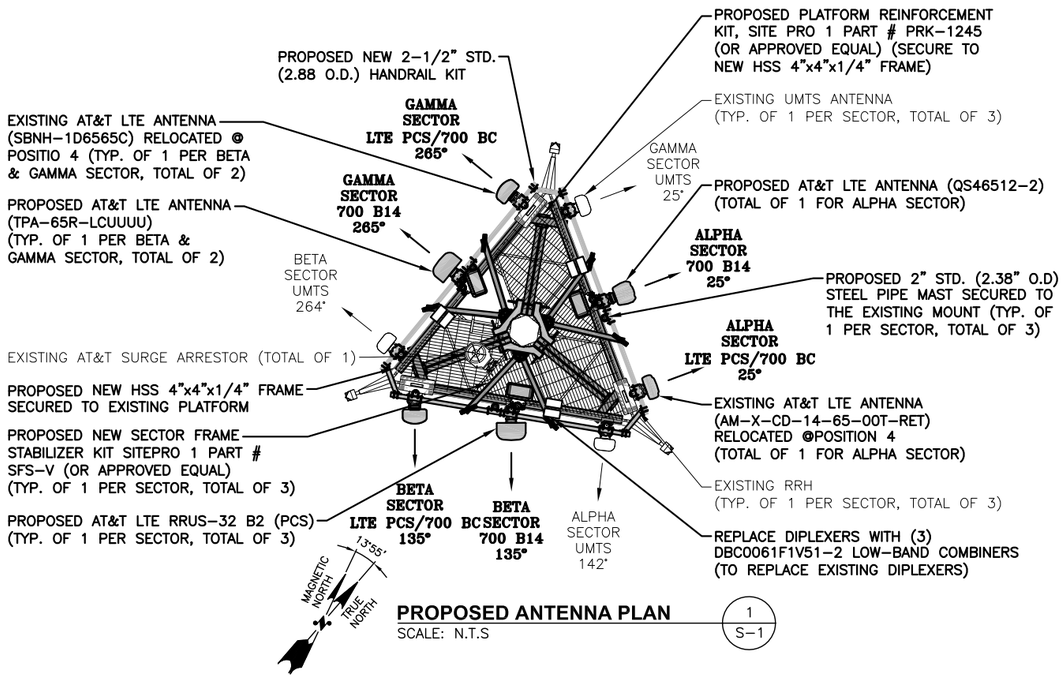
SCALE: AS SHOWN | DESIGNED BY: AT | DRAWN BY: SB

STATE OF CONNECTICUT
DEREK J. CREASEY
No. 23535
LICENSED PROFESSIONAL ENGINEER

AT&T

STRUCTURAL NOTES
(LTE 2C/3C)

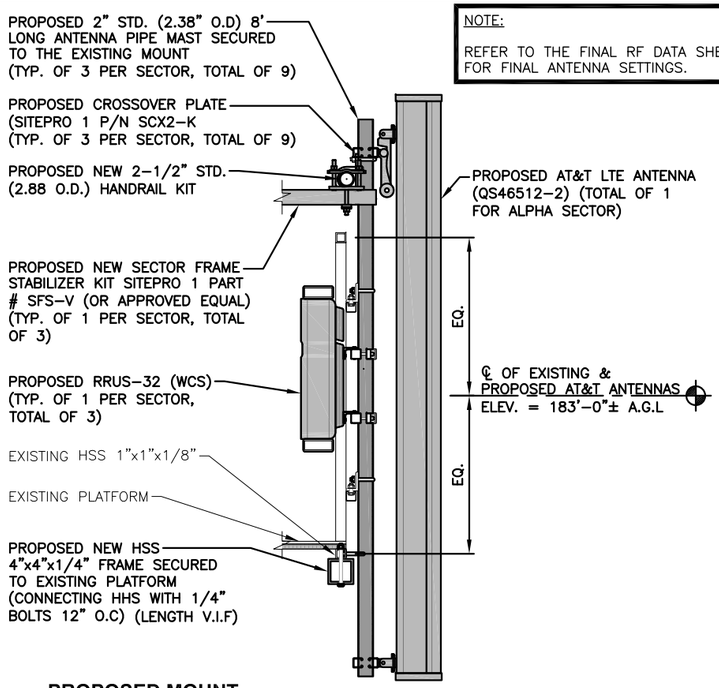
SITE NUMBER	DRAWING NUMBER	REV
CT2046	SN-1	1



PROPOSED ANTENNA PLAN

SCALE: N.T.S

1 / S-1



PROPOSED MOUNT MODIFICATION DETAIL

22x34 SCALE: 1"=1'-0"
11x17 SCALE: 1/2"=1'-0"

2 / S-1

0 0'-6" 1'-0" 2'-0" 3'-0"

NOTE:

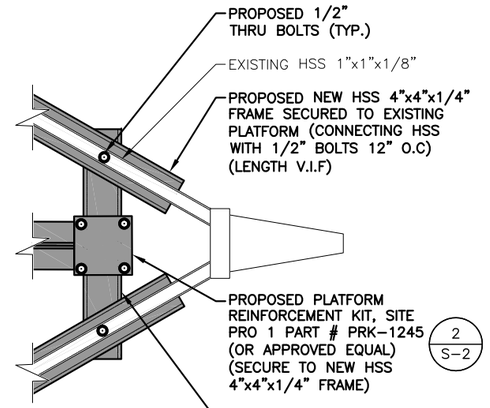
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

NOTE:

ALL ANTENNAS AND LINES TO BE INSTALLED IN ACCORDANCE WITH STRUCTURAL ANALYSIS PROVIDED BY AMERICAN TOWER AND FINAL AT&T RF DATA SHEET.

NOTE:

AN ANALYSIS FOR THE CAPACITY OF THE EXISTING **ANTENNA MOUNT** TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY: HUDSON DESIGN GROUP, LLC. DATED: MARCH 30, 2018.

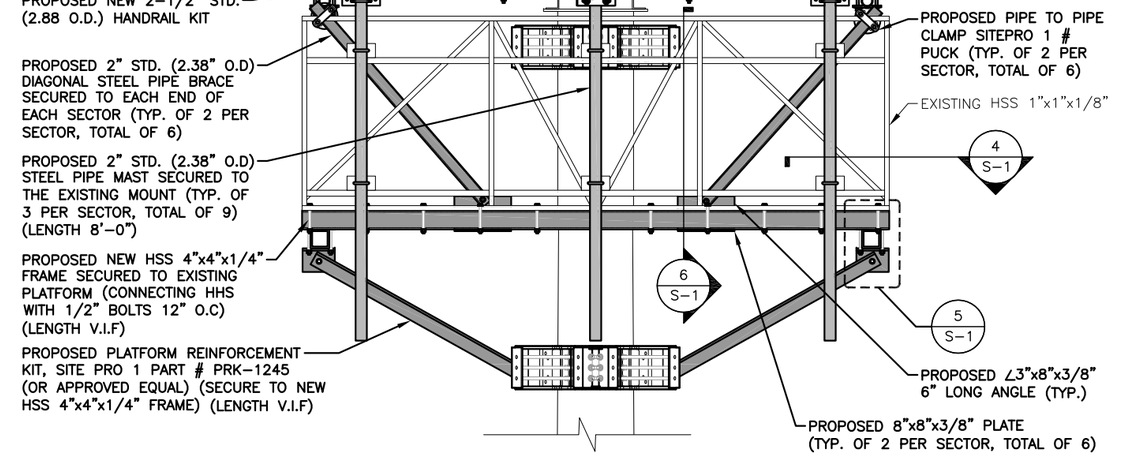


CONNECTION DETAIL PLAN

22x34 SCALE: 1-1/2"=1'-0"
11x17 SCALE: 3/4"=1'-0"

4 / S-1

0 0'-4" 0'-8" 1'-4" 2'-0"

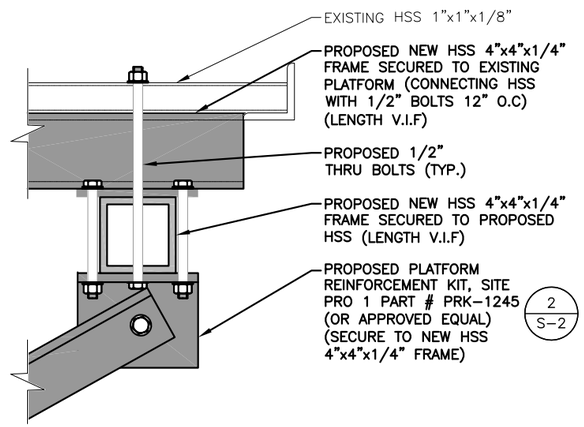


PLATFORM REINFORCEMENT PLAN

22x34 SCALE: 3/4"=1'-0"
11x17 SCALE: 3/8"=1'-0"

3 / S-1

0 8" 1'-4" 2'-8" 4'-0"

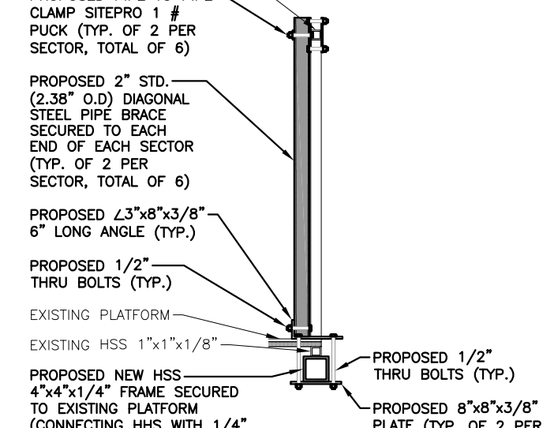


CONNECTION DETAIL ELEVATION

22x34 SCALE: 3"=1'-0"
11x17 SCALE: 1-1/2"=1'-0"

5 / S-1

0 0'-2" 0'-4" 0'-8" 1'-0"



CONNECTION DETAIL ELEVATION

22x34 SCALE: 3"=1'-0"
11x17 SCALE: 1-1/2"=1'-0"

6 / S-1

0 0'-2" 0'-4" 0'-8" 1'-0"

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SITE NUMBER: CT2046
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COLCHESTER, CT 06415
NEW LONDON COUNTY

at&t
500 ENTERPRISE DRIVE, SUITE 3A
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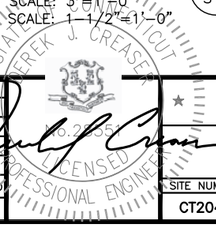
A	09/25/17	ISSUED FOR REVIEW	SB	AT	DJC

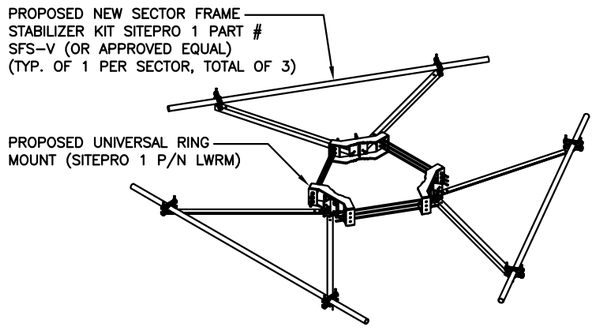
SCALE: AS SHOWN | DESIGNED BY: AT | DRAWN BY: SB



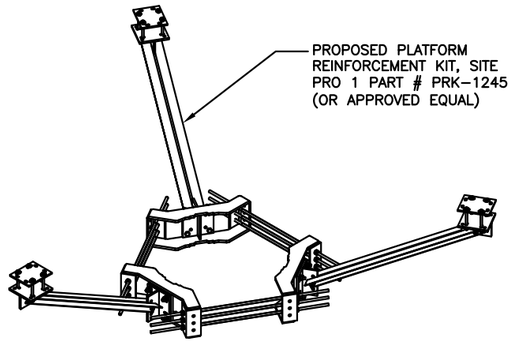
AT&T

STRUCTURAL DETAILS
(LTE 2C/3C)

SITE NUMBER	DRAWING NUMBER	REV
CT2046	S-1	1



PROPOSED REINFORCEMENT HANDRAIL KIT 1 / S-2
SCALE: N.T.S



PROPOSED PLATFORM REINFORCEMENT MOUNT DETAIL 2 / S-2
SCALE: N.T.S

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CENTERLINE COMMUNICATIONS
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SITE NUMBER: CT2046
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at&t
500 ENTERPRISE DRIVE, SUITE 3A
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A	09/25/17	ISSUED FOR REVIEW	SB	AT	DJC

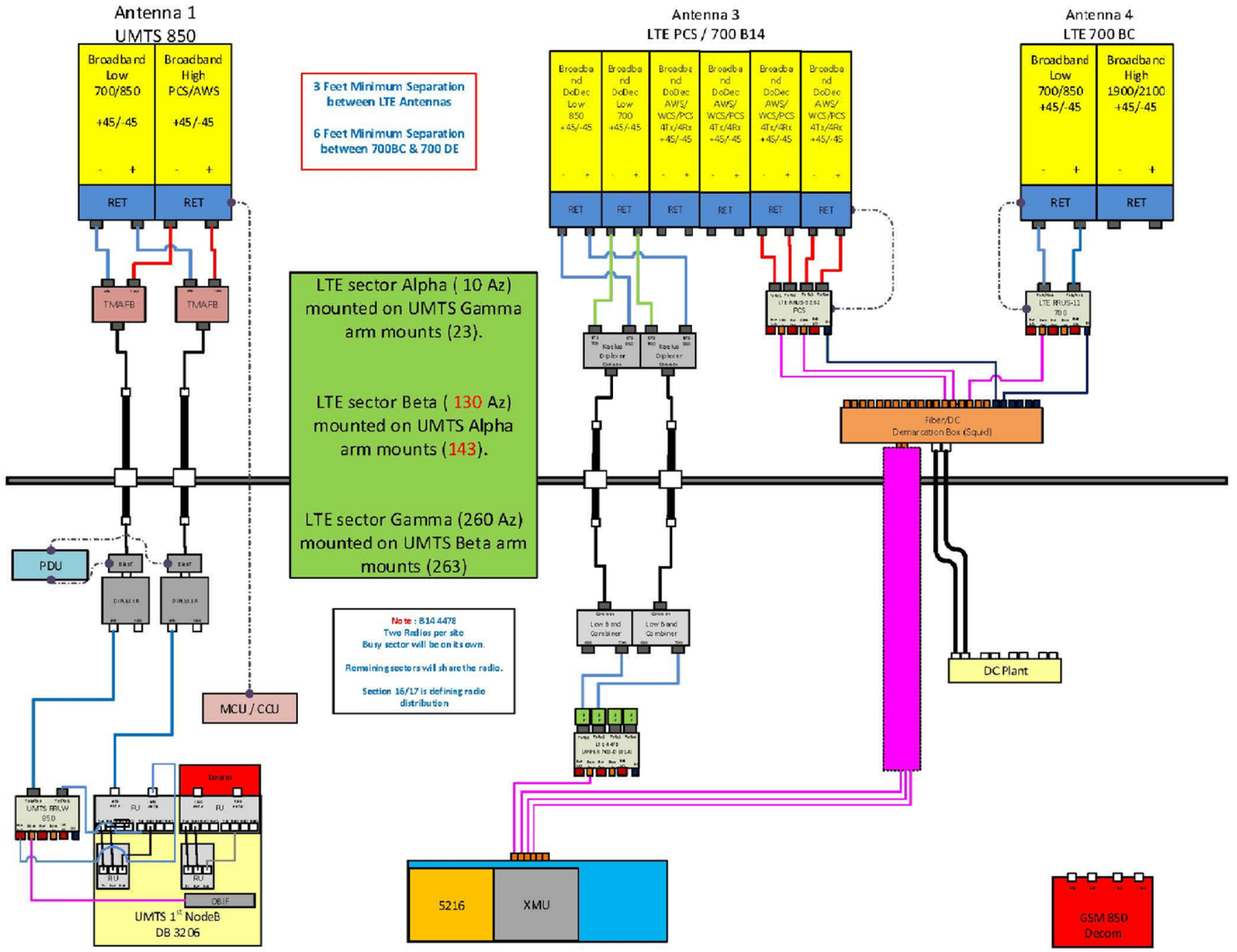
SCALE: AS SHOWN | DESIGNED BY: AT | DRAWN BY: SB

STATE OF CONNECTICUT
DEREK J. CREASER
No. 28551
LICENSED
PROFESSIONAL ENGINEER

AT&T

STRUCTURAL DETAILS
(LTE 2C/3C)

SITE NUMBER	DRAWING NUMBER	REV
CT2046	S-2	1



RF PLUMBING DIAGRAM 1 / RF–1
SCALE: N.T.S

NOTE:
1. CONTRACTOR TO CONFIRM ALL PARTS.
2. INSTALL ALL EQUIPMENT TO MANUFACTURER'S RECOMMENDATIONS

NOTE:
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

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CHESTNUT HILL ROAD
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A	09/25/17	ISSUED FOR REVIEW	SB	AT	DJC

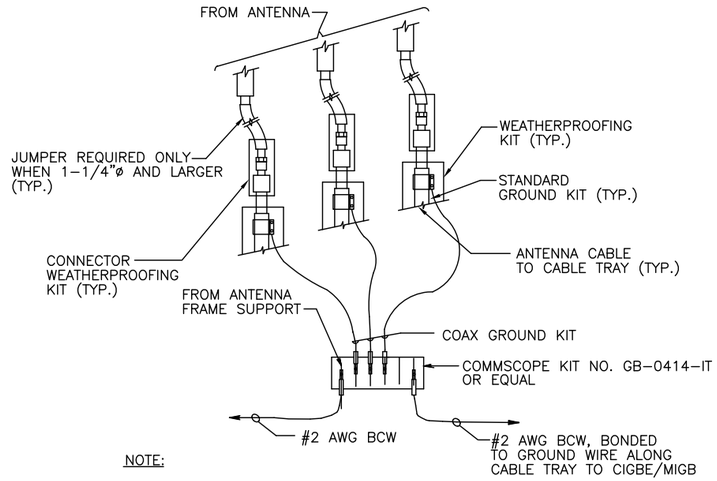
SCALE: AS SHOWN | DESIGNED BY: AT | DRAWN BY: SB

STATE OF CONNECTICUT · DEREK J. CREASEY · 26,258 · LICENSED PROFESSIONAL ENGINEER

AT&T

RF PLUMBING DIAGRAM
(LTE 2C/3C)

SITE NUMBER	DRAWING NUMBER	REV
CT2046	RF–1	1

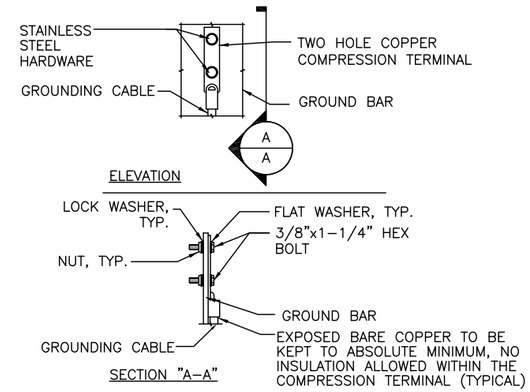


NOTE:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE.

GROUND WIRE TO GROUND BAR CONNECTION DETAIL (1 / G-1)

SCALE: N.T.S

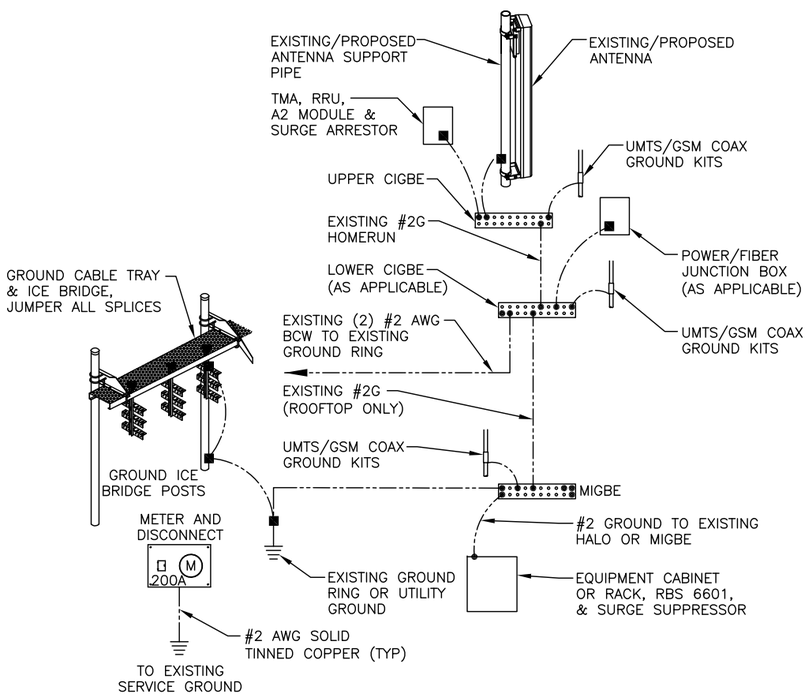


NOTE:

1. "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.
2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATION.
3. CADWELD DOWNLEADS FROM UPPER EGB, LOWER EGB, AND MGB

TYPICAL GROUND BAR CONNECTION DETAIL (3 / G-1)

SCALE: N.T.S



GROUNDING RISER DIAGRAM (2 / G-1)

SCALE: N.T.S

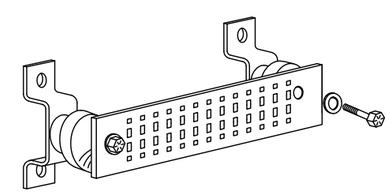
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

SECTION "P" – SURGE PRODUCERS

CABLE ENTRY PORTS (HATCH PLATES) (#2)
GENERATOR FRAMEWORK (IF AVAILABLE) (#2)
TELCO GROUND BAR
COMMERCIAL POWER COMMON NEUTRAL/GROUND BOND (#2)
+24V POWER SUPPLY RETURN BAR (#2)
-48V POWER SUPPLY RETURN BAR (#2)
RECTIFIER FRAMES.

SECTION "A" – SURGE ABSORBERS

INTERIOR GROUND RING (#2)
EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING) (#2)
METALLIC COLD WATER PIPE (IF AVAILABLE) (#2)
BUILDING STEEL (IF AVAILABLE) (#2)



GROUND BAR - DETAIL (4 / G-1)

SCALE: N.T.S

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SITE NUMBER: CT2046
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ATC SITE NUMBER: 302496
CHESTNUT HILL ROAD
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NEW LONDON COUNTY

at&t
500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

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A	09/25/17	ISSUED FOR REVIEW	SB	AT	DJC

SCALE: AS SHOWN | DESIGNED BY: AT | DRAWN BY: SB

STATE OF CONNECTICUT
DEREK J. CREASER
No. 28551
LICENSED PROFESSIONAL ENGINEER

AT&T

GROUNDING DETAILS
(LTE 2C/3C)

SITE NUMBER	DRAWING NUMBER	REV
CT2046	G-1	1

EXHIBIT 3

EXHIBIT 4

Radio Frequency Emissions Analysis Report

AT&T Existing Facility

Site ID: CT2046

FA#: 10035002

Colchester
Chestnut Hill Road
Colchester, CT 06415

July 24, 2018

Centerline Communications Project Number: 950012-130

Site Compliance Summary	
Compliance Status:	**COMPLIANT**
Site total MPE% of FCC general population allowable limit:	**1.98 %**

July 24, 2018

AT&T Mobility – New England
Attn: John Benedetto, RF Manager
550 Cochituate Road
Suite 550 – 13&14
Framingham, MA 06040

Emissions Analysis for Site: **CT2046 – Colchester**

Centerline Communications, LLC ("Centerline") was directed to analyze the proposed AT&T facility located at **Chestnut Hill Road, Colchester, CT**, for the purpose of determining whether the emissions from the Proposed AT&T Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter (μW/cm2). The number of $\mu W/cm^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general population 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 population 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.

Population exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu W/cm^2$). The general population exposure limits for the 700 and 850 MHz Bands are approximately 467 $\mu W/cm^2$ and 567 $\mu W/cm^2$ respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 2300 MHz (WCS) bands is 1000 $\mu W/cm^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

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.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were performed for the proposed AT&T Wireless antenna facility located at **Chestnut Hill Road, Colchester, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since AT&T is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was focused at the base of the tower. For this report the sample point is the top of a 6-foot person standing at the base of the tower.

Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. All power values expressed and analyzed are maximum power levels expected to be used on all radios.

All emissions values for additional carriers were taken from the Connecticut Siting Council (CSC) active MPE database. Values in this database are provided by the individual carriers themselves

For each sector the following channel counts, frequency bands and power levels were utilized as shown in *Table 1*:

Technology	Frequency Band	Channel Count	Transmit Power per Channel (W)
UMTS	850 MHz	2	30
UMTS	1900 MHz (PCS)	2	30
LTE	700 MHz (Band 14)	4	40
LTE	1900 MHz (PCS)	4	40
LTE	700 MHz	2	40

Table 1: Channel Data Table

The following antennas listed in *Table 2* were used in the modeling for transmission in the 700 MHz, 850 MHz and 1900 MHz (PCS) frequency bands. This is based on feedback from the carrier with regards to anticipated antenna selection. Maximum gain values for all antennas are listed in the Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

Sector	Antenna Number	Antenna Make / Model	Antenna Centerline (ft)
A	1	Powerwave 7770	183
A	2	Quintel QS46512-2	183
A	3	KMW AM-X-CD-14-65-00T-RET	183
B	1	Powerwave 7770	183
B	2	CCI TPA-65R-LCUUUU-H8	183
B	3	Commscope SBNH-1D6565C	183
C	1	Powerwave 7770	183
C	2	CCI TPA-65R-LCUUUU-H8	183
C	3	Commscope SBNH-1D6565C	183

Table 2: Antenna Data

All calculations were done with respect to uncontrolled / general population threshold limits.

RESULTS

Per the calculations completed for the proposed AT&T configurations *Table 3* shows resulting emissions power levels and percentages of the FCC's allowable general population limit.

Antenna ID	Antenna Make / Model	Frequency Bands	Antenna Gain (dBd)	Channel Count	Total TX Power (W)	ERP (W)	MPE %
Antenna A1	Powerwave 7770	850 MHz / 1900 MHz (PCS)	11.4 / 13.4	4	120	2,140.89	0.32
Antenna A2	Quintel QS46512-2	700 MHz (Band 14) / 1900 MHz (PCS)	10.55 / 13.15	8	320	5,120.63	0.83
Antenna A3	KMW AM-X-CD-14-65-00T-RET	700 MHz	11.85	2	80	1,224.87	0.30
						Sector A Composite MPE%	**1.44**
Antenna B1	Powerwave 7770	850 MHz / 1900 MHz (PCS)	11.4 / 13.4	4	120	2,140.89	0.32
Antenna B2	CCI TPA-65R-LCUUUU-H8	700 MHz (Band 14) / 1900 MHz (PCS)	12.95 / 13.75	8	320	6,950.07	1.21
Antenna B3	Commscope SBNH-1D6565C	700 MHz	13.65	2	80	1,853.92	0.46
						Sector B Composite MPE%	**1.98**
Antenna C1	Powerwave 7770	850 MHz / 1900 MHz (PCS)	11.4 / 13.4	4	120	2,140.89	0.32
Antenna C2	CCI TPA-65R-LCUUUU-H8	700 MHz (Band 14) / 1900 MHz (PCS)	12.95 / 13.75	8	320	6,950.07	1.21
Antenna C3	Commscope SBNH-1D6565C	700 MHz	13.65	2	80	1,853.92	0.46
						Sector C Composite MPE%	**1.98**

Table 3: AT&T Emissions Levels

The Following table (*table 4*) shows all additional carriers on site and their MPE% as recorded in the CSC active MPE database for this facility along with the newly calculated maximum AT&T MPE contributions per this report. FCC OET 65 specifies that for carriers utilizing directional antennas that the highest recorded sector value be used for composite site MPE values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. For this site, the sectors with the largest calculated MPE% are Sectors B & C. *Table 5* below shows a summary for each AT&T Sector as well as the composite MPE value for the site.

Site Composite MPE%	
Carrier	**MPE%**
AT&T – Sectors B & C	**1.98 %**
No Additional Carriers at This Facility	NA
Site Total MPE %:	**1.98 %**

Table 4: All Carrier MPE Contributions

AT&T Sector A Total:	1.44 %
AT&T Sector B Total:	1.98 %
AT&T Sector C Total:	1.98 %
Site Total:	1.98 %

Table 5: Site MPE Summary

FCC OET 65 specifies that for carriers utilizing directional antennas that the highest recorded sector value be used for composite site MPE values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. *Table 6* below details a breakdown by frequency band and technology for the MPE power values for the maximum calculated AT&T sector(s). For this site, the sectors with the largest calculated MPE% are Sectors B & C.

AT&T _ Frequency Band / Technology Max Power Values (Sectors B & C)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu W/cm^2$)	Frequency (MHz)	Allowable MPE ($\mu W/cm^2$)	Calculated % MPE
AT&T 850 MHz UMTS– Antenna 1	2	414.12	183	0.95	850 MHz	567	0.17%
AT&T 1900 MHz (PCS) UMTS – Antenna 1	2	656.33	183	1.51	1900 MHz (PCS)	1000	0.15%
AT&T 700 MHz LTE (Band 14) – Antenna 2	4	788.97	183	3.62	700 MHz	467	0.77%
AT&T 1900 MHz (PCS) LTE – Antenna 2	4	948.55	183	4.35	1900 MHz (PCS)	1000	0.44%
AT&T 700 MHz LTE – Antenna 3	2	926.96	183	2.13	700 MHz	467	0.46%
						Total:	**1.98%**

Table 6: AT&T Maximum Sector MPE Power Values

Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general population exposure to RF Emissions.

The anticipated maximum composite contributions from the AT&T facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general population exposure to RF Emissions are shown here:

AT&T Sector	Power Density Value (%)
Sector A:	1.44 %
Sector B:	1.98 %
Sector C:	1.98 %
AT&T Maximum Total (Sectors B & C):	1.98 %
Site Total:	1.98 %
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **1.98 %** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.

Scott Heffernan
RF Engineering Director
Centerline Communications, LLC
95 Ryan Drive, Suite 1
Raynham, MA 02767

EXHIBIT 5

March 19, 2018

CENTERLINE COMMUNICATIONS at&t

Centerline Communications
95 Ryan Drive
Raynham, MA 02767

RE:		
	Site Number:	CT2046 (LTE 2C/3C)
	FA Number:	10035002
	PACE Number:	MRCTB023521
	PTN Number:	2051A0B8WQ
	Site Name:	COLCHESTER
	Site Address:	Chestnut Hill Road Colchester, CT 06415

To Whom It May Concern:

Hudson Design Group LLC (HDG) has been authorized by Centerline Communications to perform a mount analysis on the existing AT&T antenna mount to determine their capability of supporting the following equipment loading:

- (3) 7770 Antennas (55.0"x11.0"x5.0" – Wt. = 35 lbs. /each)
- (1) AM-X-CD-14-05-OOT-RET Antenna (48.0"x11.8"x5.9" – Wt. = 37 lbs.)
- (3) RRUS-11 RRH's (19.7"x17.0"x7.2" – Wt. = 51 lbs. /each)
- (1) B14 4478 RRH (18.1"x13.4"x8.3" – Wt. = 60 lbs. /each)
- (6) LPG 17201 TMA's (14.0"x7.0"x2.7" – Wt. = 19 lbs. /each)
- (1) Squid Surge Arrestor (24.0"x9.7"ø – Wt. = 33 lbs.) (Tower Mounted)
- **(1) QS46512-2 Antenna (52.0"x12.0"x10.8" – Wt. = 75 lbs.)**
- **(2) SBNH-1D6565C Antennas (96.4"x11.9"x7.1" – Wt. = 61 lbs. /each)**
- **(2) TPA-65R-LCUUUU-H8 Antennas (96.0"x14.4"x8.6" – Wt. = 75 lbs. /each)**
- **(3) RRUS-32 B2 RRH's (27.2"x12.1"x7" – Wt. = 60 lbs. /each)**
- **(6) DBC0061F151-2 Diplexers (8.0"x6.2"x6.5" – Wt. = 26 lbs. /each)**

**Proposed Loading Shown in Bold.*

No original structural design documents or fabrication drawings were available for the existing mounts. HDG's subconsultant, ProVertic LLC, conducted a survey climb and mapping of the existing AT&T antenna mounts on September 18, 2017.

Based on our analysis, we have determined that the existing antenna mount **IS NOT CAPABLE** of supporting the proposed installation. HDG recommends the following modifications:

- **Install new 2-1/2" std. (2.88" O.D.) handrail kit (typ. of 1 per sector, total of 3).**
- **Install new sector frame stabilizer kit, SitePro1 P/N SFS-v (or approved equal) (typ. of 1 per sector, total of 3).**
- **Install new HSS 4x4x1/4 frame, secure to existing platform.**
- **Install new platform reinforcement kit, SitePro1 P/N PRK-1245 (or approved equal), secure to new HSS 4x4x1/4 frame.**
- **Install new 2" std. (2.38" O.D.) diagonal pipe braces, typ. each end of each sector (typ. of 2 per sector, total of 6).**
- **Install new 2" std. (2.38" O.D.) pipe mast, secure to existing mount (typ. of 2 per sector, total of 6).**
- **Secure new and existing pipe masts to each horizontal member.**

	Member	Controlling Load Case	Stress Ratio	Pass/Fail
Existing 2C/3C Mount Rating	79	LC2	446%	**FAIL**
Proposed 2C/3C Mount Rating	81	LC5	97%	**PASS**

This analysis was conducted in accordance with EIA/TIA-222-G, Structural Standards for Steel Antenna Towers and Antenna Supporting Structures, International Building Code 2012, and 2005 Connecticut Supplement with 2016 amendments. (See the attached analysis).

Reference Documents:

- Mount mapping data prepared by ProVertic LLC.

This determination was based on the following limitations and assumptions:

1. HDG is not responsible for any modifications completed prior to and hereafter which HDG was not directly involved.
2. All structural members and their connections are assumed to be in good condition and are free from defects with no deterioration to its member capacities.
3. All antennas, coax cables and waveguide cables are assumed to be properly installed and supported as per the manufacturer's requirements.
4. The existing mount has been adequately secured to the tower structure per the mount manufacturer's specifications.
5. All components pertaining to AT&T's mounts must be tightened and re-plumbed prior to the installation of new appurtenances.
6. HDG performed a localized analysis on the mount itself and not on the supporting tower structure.

Please feel free to contact our office should you have any questions.

Respectfully Submitted,
Hudson Design Group LLC

Michael Cabral
Structural Dept. Head

STATE OF CONNECTICUT DANIEL HAMM PROFESSIONAL ENGINEER

Daniel Hamm, PE
Principal

FIELD PHOTOS:

p: 978.557.5553 f: 978.336.5586 a: 45 Beechwood Drive, N. Andover, MA 01845
p: 413.588.8139 f: 413.517.0590 a: 116 Pleasant Street, Ste 302, Easthampton, MA 01027

p: 978.557.5553 f: 978.336.5586 a: 45 Beechwood Drive, N. Andover, MA 01845
p: 413.588.8139 f: 413.517.0590 a: 116 Pleasant Street, Ste 302, Easthampton, MA 01027

HUDSON
Design Group LLC

Wind & Ice
Calculations

Date: 3/19/2018
Project Name: COLCHESTER
Project Number: CT2046
Designed By: BD **Checked By**: MSC

HUDSON Design Group LLC

2.6.5.2 Velocity Pressure Coeff:

$K_z = 2.01 (z/z_g)^{2/\alpha}$

z=	183 (ft)
z_g=	1200 (ft)
α=	7.0

K_z= 1.174

Kzmin ≤ Kz ≤ 2.01

Table 2-4

Exposure	Z_g	α	K_{zmin}	K_e
B	1200 ft	7.0	0.70	0.9
C	900 ft	9.5	0.85	1.0
D	700 ft	11.5	1.03	1.1

2.6.6.4 Topographic Factor:

Table 2-5

Topo. Category	K_t	f
2	0.43	1.25
3	0.53	2.0
4	0.72	1.5

$K_{zt} = [1+(K_e K_t/K_h)]^2$

$K_h = e^{(f*z/H)}$

K_{zt}= #DIV/0!

K_h=	#DIV/0!
K_e=	0 (from Table 2-4)
K_t=	0 (from Table 2-5)
f=	0 (from Table 2-5)
z=	183
H=	0 (Ht. of the crest above surrounding terrain)
K_{zt}=	1.00

(If Category 1 then K_{zt} =1.0)

Category= **1**

Date: 3/19/2018
Project Name: COLCHESTER
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Designed By: BD Checked By: MSC

HUDSON Design Group LLC

2.6.7 Gust Effect Factor

2.6.7.1 Self Supporting Lattice Structures

Gh = 1.0 Latticed Structures > 600 ft

Gh = 0.85 Latticed Structures 450 ft or less

Gh = 0.85 + 0.15 [h/150 - 3.0] h= ht. of structure

h=	180	Gh=	0.85

2.6.7.2 Guyed Masts Gh= 0.85

2.6.7.3 Pole Structures Gh= 1.1

2.6.9 Appurtenances Gh= 1.0

2.6.7.4 Structures Supported on Other Structures
(Cantilivered tubular or latticed spines, pole, structures on buildings (ht. : width ratio > 5)

Gh=	1.35	**Gh=**	**1.10**

2.6.9.2 Design Wind Force on Appurtenances

$F = q_z * Gh * (EPA)_A$

$q_z = 0.00256 * K_z * K_{zt} * K_d * V_{max}^2 * I$

q_z=	**41.13**	K_z=	1.174
$q_{z\,(ice)}$=	**7.14**	K_{zt}=	1.0
		K_d=	0.95
		V_{max}=	120
		$V_{max\,(ice)}$=	50
		I=	1.0

Table 2-2

Structure Type	Wind Direction Probability Factor, Kd
Latticed structures with triangular, square or rectangular cross sections	0.85
Tubular pole structures, latticed structures with other cross sections, appurtenances	0.95

Date: 3/19/2018
Project Name: COLCHESTER
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Designed By: BD Checked By: MSC

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Determine Ca:

Table 2-8

Force Coefficients (Ca) for Appurtenances				
Member Type		Aspect Ratio ≤ 2.5	Aspect Ratio = 7	Aspect Ratio ≥ 25
		Ca	Ca	Ca
Flat		1.2	1.4	2.0
Round	C < 32 (Subcritical)	0.7	0.8	1.2
	32 ≤ C ≤ 64 (Transitional)	$3.76/(C^{0.485})$	$3.37/(C^{0.415})$	$38.4/(C^{1.0})$
	C > 64 (Supercritical)	0.5	0.6	0.6

Aspect Ratio is the overall length/width ratio in the plane normal to the wind direction.
(Aspect ratio is independent of the spacing between support points of a linear appurtenance,

Note: Linear interpolation may be used for aspect ratios other than those shown.

Ice Thickness = 0.75 in | **Angle =** 0 (deg) | **Equivalent Angle =** 180 (deg)

Appurtenances	Height	Width	Depth	Flat Area	Aspect Ratio	Ca	Force (lbs)	Force (lbs) (w/ Ice)
7770 Antenna	55.0	11.0	5.0	4.20	5.00	1.31	**249**	**51**
QS46512-2 Antenna	52.0	12.0	10.8	4.33	4.33	1.28	**251**	**50**
AM-X-CD-14-05-OOT-RET Antenna	48.0	11.8	5.9	3.93	4.07	1.27	**226**	**46**
SBNH-1D6565C Antenna	96.4	11.9	7.1	7.97	8.10	1.44	**518**	**103**
TPA-65R-LCUUUU-H8 Antenna	96.0	14.4	8.6	9.60	6.67	1.39	**602**	**117**
RRUS-11 RRH	19.7	17.0	7.2	2.33	1.16	1.20	**126**	**26**
RRUS-11 RRH (Shielded)	19.7	5.0	7.2	0.68	3.94	1.26	**39**	**10**
RRUS-11 RRH (Shielded)	19.7	2.6	7.2	0.36	7.58	1.42	**23**	**7**
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	2.25	1.20	**124**	**26**
B14 4478 RRH	18.1	13.4	8.3	1.68	1.35	1.20	**91**	**19**
B14 4478 RRH (Shielded)	18.1	1.4	8.3	0.18	12.93	1.60	**13**	**5**
LPG 17201 TMA	14.0	7.0	2.7	0.68	2.00	1.20	**37**	**9**
DBC0061F151-2 Diplexer	8.0	6.2	6.5	0.34	1.29	1.20	**19**	**5**
Squid Surge Arrestor	24.0	9.7	9.7	1.62	2.47	0.70	**51**	**11**
S Tube 1x1x1/8	1.0	12.0		0.08	0.08	1.20	**5**	**2**
2" Pipe	2.4	12.0		0.20	0.20	0.70	**6**	**2**
Unistrut P1000	1.6	12.0		0.14	0.14	1.20	**7**	**3**
C 3x6	3.0	12.0		0.25	0.25	1.20	**14**	**4**
L 3x3x1/4 Angle	3.0	12.0		0.25	0.25	1.20	**14**	**4**

Date: 3/19/2018
Project Name: COLCHESTER
Project Number: CT2046
Designed By: BD Checked By: MSC

HUDSON Design Group LLC

WIND LOADS

Angle = 30 (deg) | Ice Thickness = 0.75 in. | Equivalent Angle = 210 (deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Aspect Ratio	Aspect Ratio	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	249	132	220
QS46512-2 Antenna	52.0	12.0	10.8	4.33	3.90	4.33	4.81	1.28	1.30	251	230	246
AM-X-CD-14-05-OOT-RET Antenna	48.0	11.8	5.9	3.93	1.97	4.07	8.14	1.27	1.44	226	128	201
SBNH-1D6565C Antenna	96.4	11.9	7.1	7.97	4.75	8.10	13.58	1.44	1.62	518	348	475
TPA-65R-LCUUUU-H8 Antenna	96.0	14.4	8.6	9.60	5.73	6.67	11.16	1.39	1.54	602	399	551
RRUS-11 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	126	54	108
RRUS-11 RRH (Shielded)	19.7	8.5	7.2	1.16	0.99	2.32	2.74	1.20	1.21	63	54	61
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	124	75	112
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	91	57	83
B14 4478 RRH (Shielded)	18.1	6.7	8.3	0.84	1.04	2.70	2.18	1.21	1.20	46	57	49
LPG 17201 TMA	14.0	7.0	2.7	0.68	0.26	2.00	5.19	1.20	1.32	37	16	32
DBC0061F151-2 Diplexer	8.0	6.2	6.5	0.34	0.36	1.29	1.23	1.20	1.20	19	20	19
Squid Surge Arrestor	24.0	9.7	9.7	1.62	1.62	2.47	2.47	1.20	1.20	88	88	88

WIND LOADS WITH ICE:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	43	23	38
QS46512-2 Antenna	52.0	12.0	10.8	4.33	3.90	4.33	4.81	1.28	1.30	44	40	43
AM-X-CD-14-05-OOT-RET Antenna	48.0	11.8	5.9	3.93	1.97	4.07	8.14	1.27	1.44	39	22	35
SBNH-1D6565C Antenna	96.4	11.9	7.1	7.97	4.75	8.10	13.58	1.44	1.62	90	60	83
TPA-65R-LCUUUU-H8 Antenna	96.0	14.4	8.6	9.60	5.73	6.67	11.16	1.39	1.54	104	69	96
RRUS-11 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	22	9	19
RRUS-11 RRH (Shielded)	19.7	8.5	7.2	1.16	0.99	2.32	2.74	1.20	1.21	11	9	11
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	22	13	19
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	16	10	14
B14 4478 RRH (Shielded)	18.1	6.7	8.3	0.84	1.04	2.70	2.18	1.21	1.20	8	10	8
LPG 17201 TMA	14.0	7.0	2.7	0.68	0.26	2.00	5.19	1.20	1.32	6	3	5
DBC0061F151-2 Diplexer	8.0	6.2	6.5	0.34	0.36	1.29	1.23	1.20	1.20	3	3	3
Squid Surge Arrestor	24.0	9.7	9.7	1.62	1.62	2.47	2.47	1.20	1.20	15	15	15

Date: 3/19/2018
Project Name: COLCHESTER
Project Number: CT2046
Designed By: BD Checked By: MSC

HUDSON Design Group LLC

WIND LOADS

Angle =	60	(deg)	Ice Thickness =	0.75	in.	Equivalent Angle =	240	(deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	249	132	162
QS46512-2 Antenna	52.0	12.0	10.8	4.33	3.90	4.33	4.81	1.28	1.30	251	230	235
AM-X-CD-14-05-OOT-RET Antenna	48.0	11.8	5.9	3.93	1.97	4.07	8.14	1.27	1.44	226	128	152
SBNH-1D6565C Antenna	96.4	11.9	7.1	7.97	4.75	8.10	13.58	1.44	1.62	518	348	391
TPA-65R-LCUUUU-H8 Antenna	96.0	14.4	8.6	9.60	5.73	6.67	11.16	1.39	1.54	602	399	450
RRUS-11 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	126	54	72
RRUS-11 RRH (Shielded)	19.7	12.8	7.2	1.75	0.99	1.54	2.74	1.20	1.21	95	54	64
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	124	75	88
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	91	57	65
B14 4478 RRH (Shielded)	18.1	10.1	8.3	1.27	1.04	1.79	2.18	1.20	1.20	69	57	60
LPG 17201 TMA	14.0	7.0	2.7	0.68	0.26	2.00	5.19	1.20	1.32	37	16	21
DBC0061F151-2 Diplexer	8.0	6.2	6.5	0.34	0.36	1.29	1.23	1.20	1.20	19	20	19
Squid Surge Arrestor	24.0	9.7	9.7	1.62	1.62	2.47	2.47	1.20	1.20	88	88	88

WIND LOADS WITH ICE:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	43	23	28
QS46512-2 Antenna	52.0	12.0	10.8	4.33	3.90	4.33	4.81	1.28	1.30	44	40	41
AM-X-CD-14-05-OOT-RET Antenna	48.0	11.8	5.9	3.93	1.97	4.07	8.14	1.27	1.44	39	22	26
SBNH-1D6565C Antenna	96.4	11.9	7.1	7.97	4.75	8.10	13.58	1.44	1.62	90	60	68
TPA-65R-LCUUUU-H8 Antenna	96.0	14.4	8.6	9.60	5.73	6.67	11.16	1.39	1.54	104	69	78
RRUS-11 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	22	9	13
RRUS-11 RRH (Shielded)	19.7	12.8	7.2	1.75	0.99	1.54	2.74	1.20	1.21	17	9	11
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	22	13	15
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	16	10	11
B14 4478 RRH (Shielded)	18.1	10.1	8.3	1.27	1.04	1.79	2.18	1.20	1.20	12	10	10
LPG 17201 TMA	14.0	7.0	2.7	0.68	0.26	2.00	5.19	1.20	1.32	6	3	4
DBC0061F151-2 Diplexer	8.0	6.2	6.5	0.34	0.36	1.29	1.23	1.20	1.20	3	3	3
Squid Surge Arrestor	24.0	9.7	9.7	1.62	1.62	2.47	2.47	1.20	1.20	15	15	15

Date: 3/19/2018
Project Name: COLCHESTER
Project Number: CT2046
Designed By: BD Checked By: MSC

HUDSON Design Group LLC

WIND LOADS

Angle =	90	(deg)	Ice Thickness =	0.75	in.	Equivalent Angle =	270	(deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	249	132	132
QS46512-2 Antenna	52.0	12.0	10.8	4.33	3.90	4.33	4.81	1.28	1.30	251	230	230
AM-X-CD-14-05-OOT-RET Antenna	48.0	11.8	5.9	3.93	1.97	4.07	8.14	1.27	1.44	226	128	128
SBNH-1D6565C Antenna	96.4	11.9	7.1	7.97	4.75	8.10	13.58	1.44	1.62	518	348	348
TPA-65R-LCUUUU-H8 Antenna	96.0	14.4	8.6	9.60	5.73	6.67	11.16	1.39	1.54	602	399	399
RRUS-11 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	126	54	54
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	124	75	75
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	91	57	57
LPG 17201 TMA	14.0	7.0	2.7	0.68	0.26	2.00	5.19	1.20	1.32	37	16	16
DBC0061F151-2 Diplexer	8.0	6.2	6.5	0.34	0.36	1.29	1.23	1.20	1.20	19	20	20
Squid Surge Arrestor	24.0	9.7	9.7	1.62	1.62	2.47	2.47	1.20	1.20	88	88	88

WIND LOADS WITH ICE:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	43	23	23
QS46512-2 Antenna	52.0	12.0	10.8	4.33	3.90	4.33	4.81	1.28	1.30	44	40	40
AM-X-CD-14-05-OOT-RET Antenna	48.0	11.8	5.9	3.93	1.97	4.07	8.14	1.27	1.44	39	22	22
SBNH-1D6565C Antenna	96.4	11.9	7.1	7.97	4.75	8.10	13.58	1.44	1.62	90	60	60
TPA-65R-LCUUUU-H8 Antenna	96.0	14.4	8.6	9.60	5.73	6.67	11.16	1.39	1.54	104	69	69
RRUS-11 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	22	9	9
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	22	13	13
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	16	10	10
LPG 17201 TMA	14.0	7.0	2.7	0.68	0.26	2.00	5.19	1.20	1.32	6	3	3
DBC0061F151-2 Diplexer	8.0	6.2	6.5	0.34	0.36	1.29	1.23	1.20	1.20	3	3	3
Squid Surge Arrestor	24.0	9.7	9.7	1.62	1.62	2.47	2.47	1.20	1.20	15	15	15

Date: 3/19/2018
Project Name: COLCHESTER
Project Number: CT2046
Designed By: BD Checked By: MSC

HUDSON Design Group LLC

WIND LOADS

Angle =	120	(deg)	Ice Thickness =	0.75	in.	Equivalent Angle =	300	(deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	249	132	162
QS46512-2 Antenna	52.0	12.0	10.8	4.33	3.90	4.33	4.81	1.28	1.30	251	230	235
AM-X-CD-14-05-OOT-RET Antenna	48.0	11.8	5.9	3.93	1.97	4.07	8.14	1.27	1.44	226	128	152
SBNH-1D6565C Antenna	96.4	11.9	7.1	7.97	4.75	8.10	13.58	1.44	1.62	518	348	391
TPA-65R-LCUUUU-H8 Antenna	96.0	14.4	8.6	9.60	5.73	6.67	11.16	1.39	1.54	602	399	450
RRUS-11 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	126	54	72
RRUS-11 RRH (Shielded)	19.7	8.5	7.2	1.16	0.99	2.32	2.74	1.20	1.21	63	54	56
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	124	75	88
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	91	57	65
B14 4478 RRH (Shielded)	18.1	6.7	8.3	0.84	1.04	2.70	2.18	1.21	1.20	46	57	54
LPG 17201 TMA	14.0	7.0	2.7	0.68	0.26	2.00	5.19	1.20	1.32	37	16	21
DBC0061F151-2 Diplexer	8.0	6.2	6.5	0.34	0.36	1.29	1.23	1.20	1.20	19	20	19
Squid Surge Arrestor	24.0	9.7	9.7	1.62	1.62	2.47	2.47	1.20	1.20	88	88	88

WIND LOADS WITH ICE:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	43	23	28
QS46512-2 Antenna	52.0	12.0	10.8	4.33	3.90	4.33	4.81	1.28	1.30	44	40	41
AM-X-CD-14-05-OOT-RET Antenna	48.0	11.8	5.9	3.93	1.97	4.07	8.14	1.27	1.44	39	22	26
SBNH-1D6565C Antenna	96.4	11.9	7.1	7.97	4.75	8.10	13.58	1.44	1.62	90	60	68
TPA-65R-LCUUUU-H8 Antenna	96.0	14.4	8.6	9.60	5.73	6.67	11.16	1.39	1.54	104	69	78
RRUS-11 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	22	9	13
RRUS-11 RRH (Shielded)	19.7	8.5	7.2	1.16	0.99	2.32	2.74	1.20	1.21	11	9	10
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	22	13	15
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	16	10	11
B14 4478 RRH (Shielded)	18.1	6.7	8.3	0.84	1.04	2.70	2.18	1.21	1.20	8	10	9
LPG 17201 TMA	14.0	7.0	2.7	0.68	0.26	2.00	5.19	1.20	1.32	6	3	4
DBC0061F151-2 Diplexer	8.0	6.2	6.5	0.34	0.36	1.29	1.23	1.20	1.20	3	3	3
Squid Surge Arrestor	24.0	9.7	9.7	1.62	1.62	2.47	2.47	1.20	1.20	15	15	15

Date: 3/19/2018
Project Name: COLCHESTER
Project Number: CT2046
Designed By: BD Checked By: MSC

HUDSON Design Group LLC

WIND LOADS

Angle =	150	(deg)	Ice Thickness =	0.75	in.	Equivalent Angle =	330	(deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	249	132	220
QS46512-2 Antenna	52.0	12.0	10.8	4.33	3.90	4.33	4.81	1.28	1.30	251	230	246
AM-X-CD-14-05-OOT-RET Antenna	48.0	11.8	5.9	3.93	1.97	4.07	8.14	1.27	1.44	226	128	201
SBNH-1D6565C Antenna	96.4	11.9	7.1	7.97	4.75	8.10	13.58	1.44	1.62	518	348	475
TPA-65R-LCUUUU-H8 Antenna	96.0	14.4	8.6	9.60	5.73	6.67	11.16	1.39	1.54	602	399	551
RRUS-11 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	126	54	108
RRUS-11 RRH (Shielded)	19.7	12.8	7.2	1.75	0.99	1.54	2.74	1.20	1.21	95	54	85
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	124	75	112
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	91	57	83
B14 4478 RRH (Shielded)	18.1	10.1	8.3	1.27	1.04	1.79	2.18	1.20	1.20	69	57	66
LPG 17201 TMA	14.0	7.0	2.7	0.68	0.26	2.00	5.19	1.20	1.32	37	16	32
DBC0061F151-2 Diplexer	8.0	6.2	6.5	0.34	0.36	1.29	1.23	1.20	1.20	19	20	19
Squid Surge Arrestor	24.0	9.7	9.7	1.62	1.62	2.47	2.47	1.20	1.20	88	88	88

WIND LOADS WITH ICE:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	43	23	38
QS46512-2 Antenna	52.0	12.0	10.8	4.33	3.90	4.33	4.81	1.28	1.30	44	40	43
AM-X-CD-14-05-OOT-RET Antenna	48.0	11.8	5.9	3.93	1.97	4.07	8.14	1.27	1.44	39	22	35
SBNH-1D6565C Antenna	96.4	11.9	7.1	7.97	4.75	8.10	13.58	1.44	1.62	90	60	83
TPA-65R-LCUUUU-H8 Antenna	96.0	14.4	8.6	9.60	5.73	6.67	11.16	1.39	1.54	104	69	96
RRUS-11 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	22	9	19
RRUS-11 RRH (Shielded)	19.7	12.8	7.2	1.75	0.99	1.54	2.74	1.20	1.21	17	9	15
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	22	13	19
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	16	10	14
B14 4478 RRH (Shielded)	18.1	10.1	8.3	1.27	1.04	1.79	2.18	1.20	1.20	12	10	11
LPG 17201 TMA	14.0	7.0	2.7	0.68	0.26	2.00	5.19	1.20	1.32	6	3	5
DBC0061F151-2 Diplexer	8.0	6.2	6.5	0.34	0.36	1.29	1.23	1.20	1.20	3	3	3
Squid Surge Arrestor	24.0	9.7	9.7	1.62	1.62	2.47	2.47	1.20	1.20	15	15	15

Date:	3/19/2018
Site Name:	COLCHESTER
Site No.:	CT2046
Done by:	BD Checked by: MSC

HUDSON Design Group LLC

ICE WEIGHT CALCULATIONS

Thickness of ice: 0.75 in.
Density of ice: 56 pcf

7770 Antenna

Weight of ice based on total radial SF area:

Height (in):	55.0
Width (in):	11.0
Depth (in):	5.0
Total weight of ice on object:	51 lbs
Weight of object:	35 lbs
Combined weight of ice and object:	86 lbs

QS46512-2 Antenna

Weight of ice based on total radial SF area:

Height (in):	52.0
Width (in):	12.0
Depth (in):	10.8
Total weight of ice on object:	69 lbs
Weight of object:	75 lbs
Combined weight of ice and object:	144 lbs

AM-X-CD-14-05-OOT-RET Antenna

Weight of ice based on total radial SF area:

Height (in):	48.0
Width (in):	11.8
Depth (in):	5.9
Total weight of ice on object:	50 lbs
Weight of object:	37 lbs
Combined weight of ice and object:	87 lbs

SBNH-1D6565C Antenna

Weight of ice based on total radial SF area:

Height (in):	96.4
Width (in):	11.9
Depth (in):	7.1
Total weight of ice on object:	102 lbs
Weight of object:	61 lbs
Combined weight of ice and object:	163 lbs

TPA-65R-LCUUUU-H8 Antenna

Weight of ice based on total radial SF area:

Height (in):	96.0
Width (in):	14.4
Depth (in):	8.6
Total weight of ice on object:	122 lbs
Weight of object:	75 lbs
Combined weight of ice and object:	197 lbs

RRUS-11 RRH

Weight of ice based on total radial SF area:

Height (in):	19.7
Width (in):	17.0
Depth (in):	7.2
Total weight of ice on object:	32 lbs
Weight of object:	51 lbs
Combined weight of ice and object:	83 lbs

B14 4478 RRH

Weight of ice based on total radial SF area:

Height (in):	18.1
Width (in):	13.4
Depth (in):	8.3
Total weight of ice on object:	28 lbs
Weight of object:	60 lbs
Combined weight of ice and object:	88 lbs

RRUS-32 B2 RRH

Weight of ice based on total radial SF area:

Height (in):	27.2
Width (in):	12.1
Depth (in):	7.0
Total weight of ice on object:	33 lbs
Weight of object:	60 lbs
Combined weight of ice and object:	93 lbs

DBC0061F151-2 Diplexer

Weight of ice based on total radial SF area:

Height (in):	8.0
Width (in):	6.2
Depth (in):	6.5
Total weight of ice on object:	9 lbs
Weight of object:	26 lbs
Combined weight of ice and object:	35 lbs

LPG 17201 TMA

Weight of ice based on total radial SF area:

Height (in):	14.0
Width (in):	7.0
Depth (in):	2.7
Total weight of ice on object:	9 lbs
Weight of object:	19 lbs
Combined weight of ice and object:	28 lbs

Squid Surge Arrestor

Weight of ice based on total radial SF area:

Height (in):	24.0
Width (in):	9.7
Depth (in):	9.7
Total weight of ice on object:	30 lbs
Weight of object:	33 lbs
Combined weight of ice and object:	63 lbs

S Tube 1x1x1/8

Weight of ice based on total radial SF area:

Thickness (in):	0.125
Height (in):	1
Width (in):	1
Per foot weight of ice on object:	1 plf

Unistrut P1000

Weight of ice based on total radial SF area:

Height (in):	1.625
Width (in):	1.625
Per foot weight of ice on object:	3 plf

L 3x3x1/4

Weight of ice based on total radial SF area:

Thickness (in):	0.25
Height (in):	3
Width (in):	3
Per foot weight of ice on object:	4 plf

C 3x6

Weight of ice based on total radial SF area:

Height (in):	3
Width (in):	1.625
Per foot weight of ice on object:	4 plf

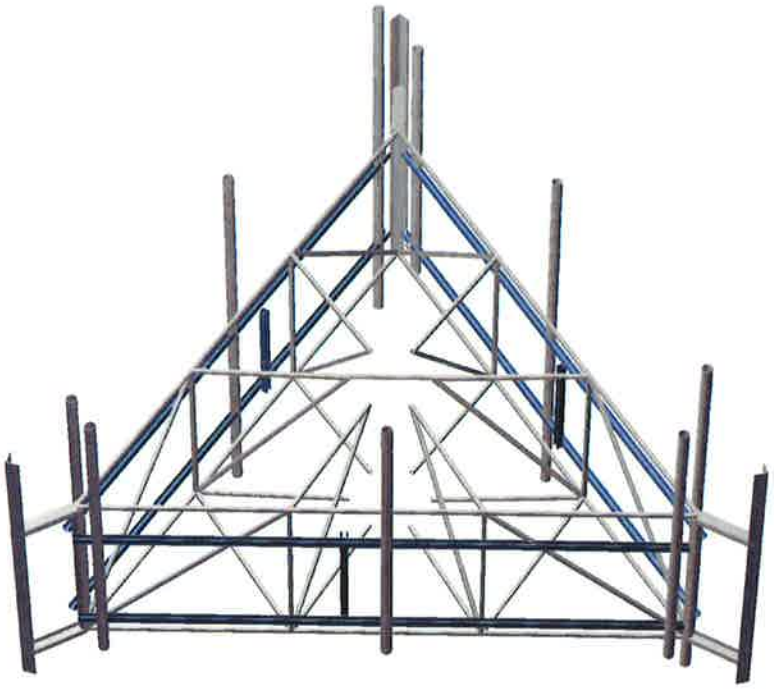
2" pipe

Per foot weight of ice:

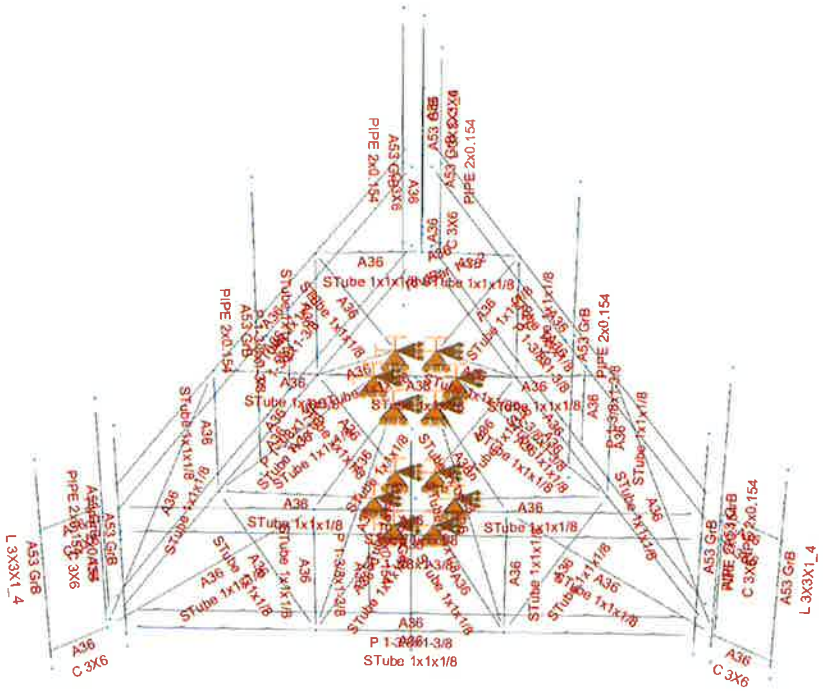
diameter (in):	2.38
Per foot weight of ice on object:	3 lbs/ft

HUDSON
Design Group LLC

Mount Calculations
(Existing Conditions)

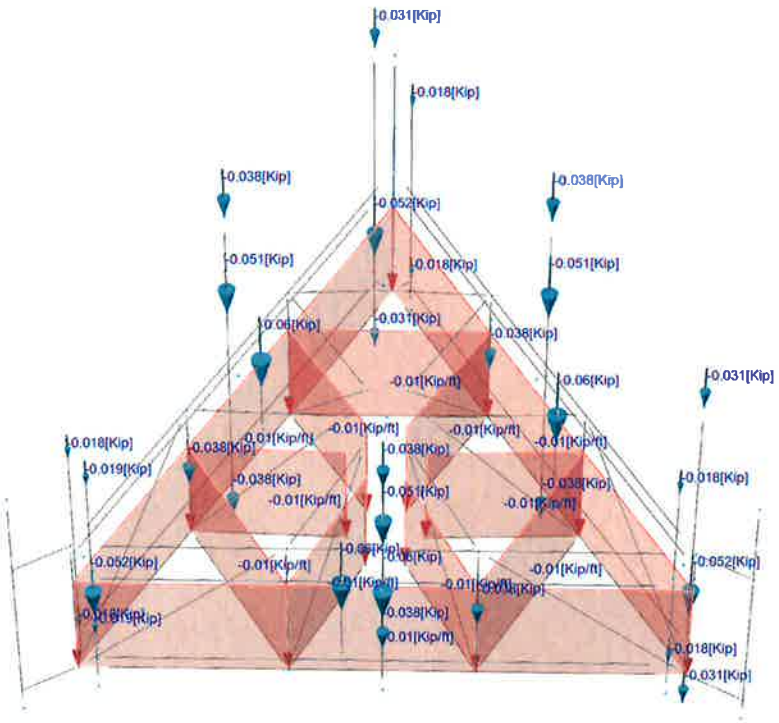


Y
X
Z


A36
STube 1x1x1/8
PIPE 2x0.154
A53 GrB
C 3X6
L 3X3X1_4
P 1-3/8x1-3/8
Y
X

Loads

Distributed user loads - Members
Concentrated user loads - Members



Bentley **Hewlett-Packard Company**

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Units system: English
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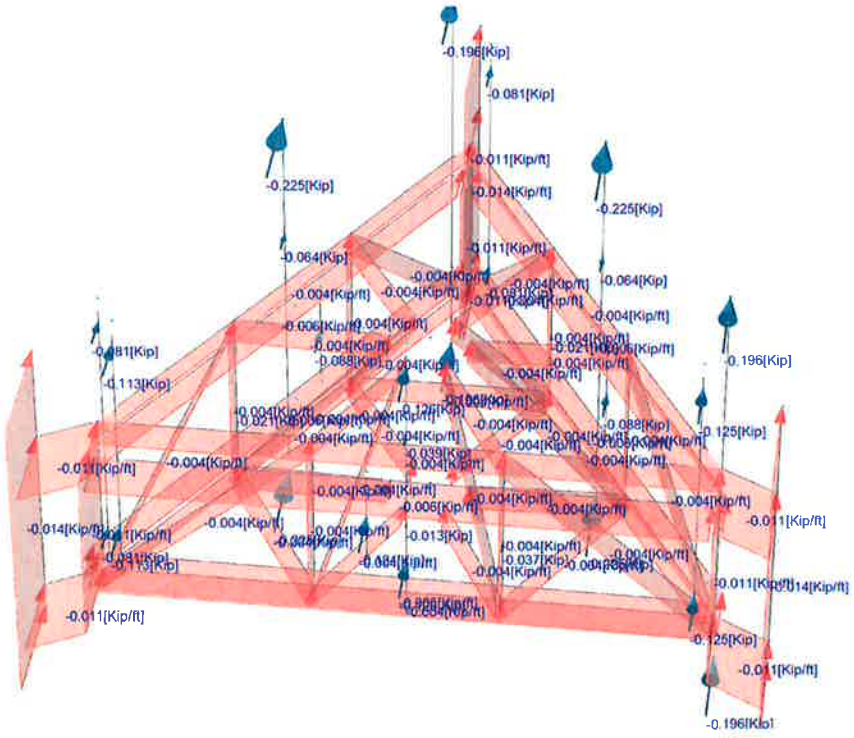
Load condition: W0=Wind Load 0/60deg

Loads

Distributed user loads - Members
Concentrated user loads - Members

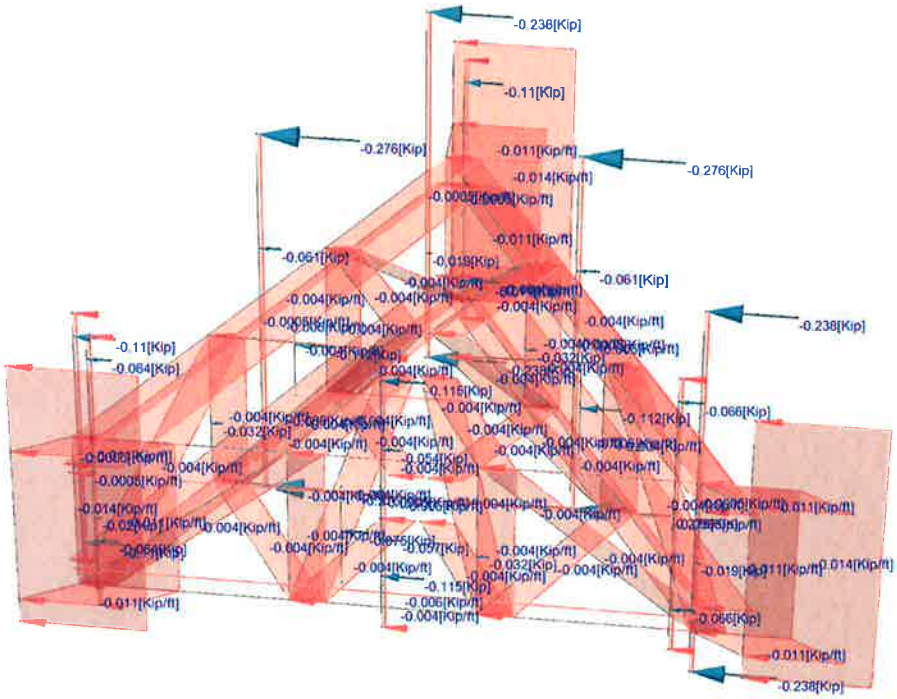


Bentley **Hewlett-Packard Company**

Current Date: 3/19/2018 6:06 PM
Units system: English
File name: W:\STRUCTURAL DEPARTMENT\ANALYSIS SOFTWARE\RAM Elements\RAM Projects\AT&T\CT\CT2046\CT2046.etz\
Load condition: W30=Wind Load 30/90deg

Loads

Distributed user loads - Members
Concentrated user loads - Members



Loads

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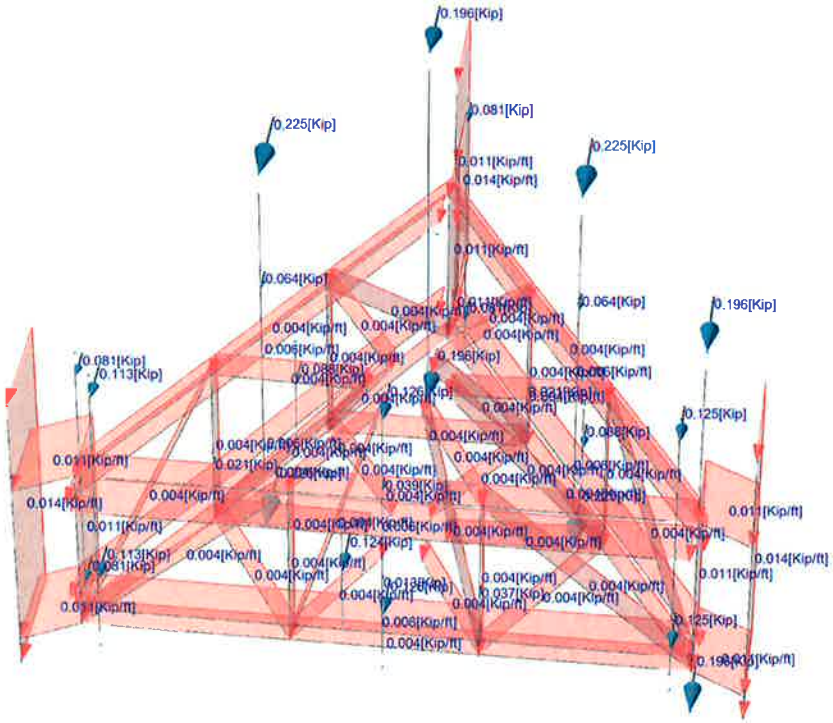
Concentrated user loads - Members



Loads

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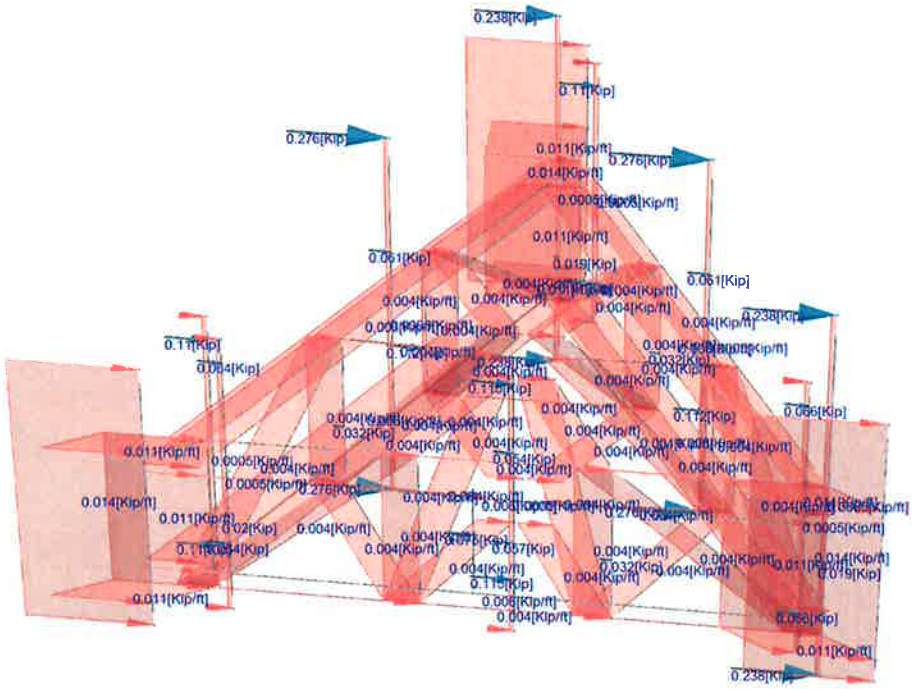

Bentley **Hewlett-Packard Company**

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Units system: English
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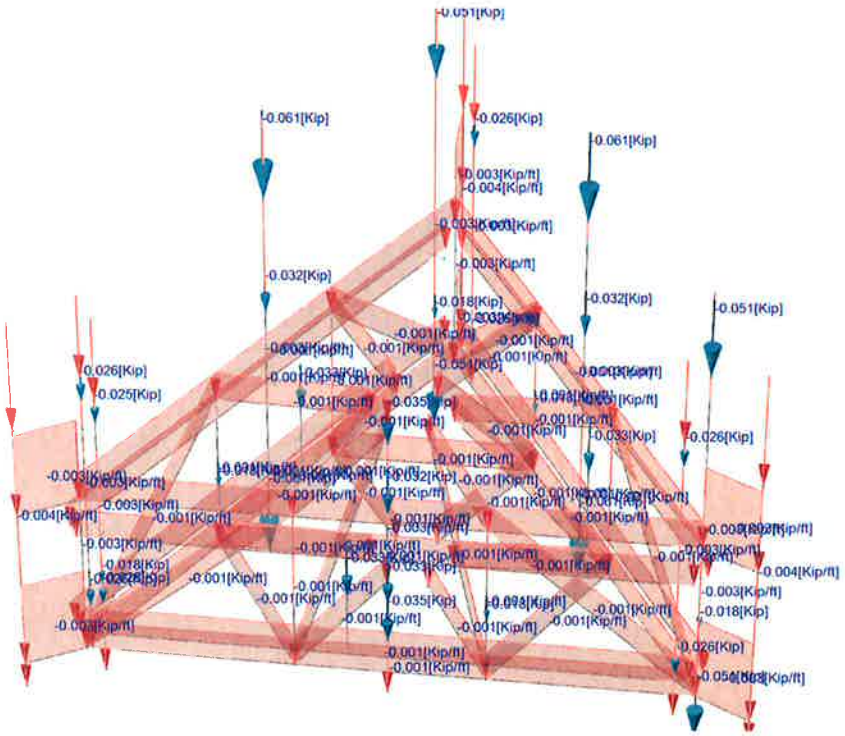
Load condition: Di=Ice Load

Loads

Distributed user loads - Members
Concentrated user loads - Members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Bentley **Hewlett-Packard Company**

Current Date: 3/19/2018 6:06 PM
Units system: English
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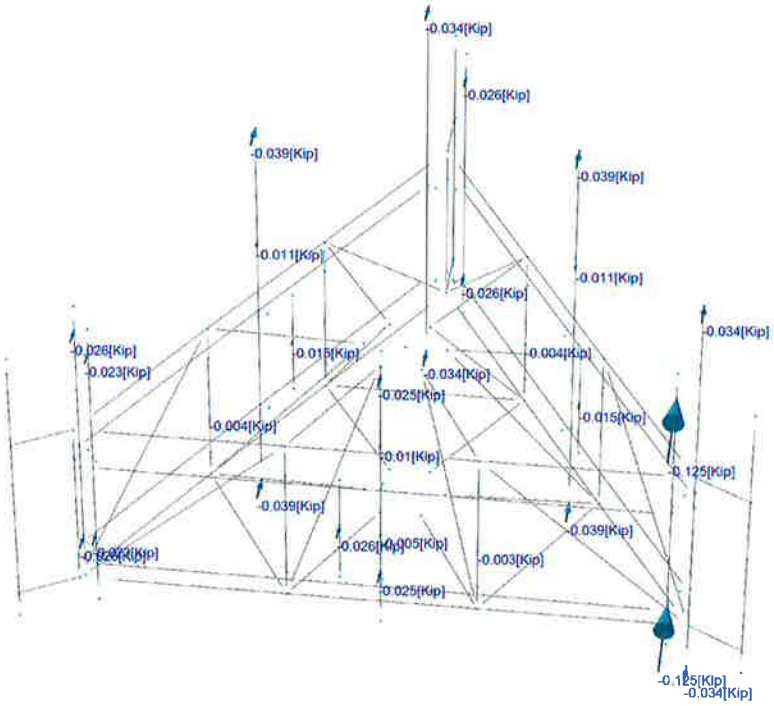
Load condition: Wi0=Ice Wind Load 0/60deg

Loads

Concentrated user loads - Members



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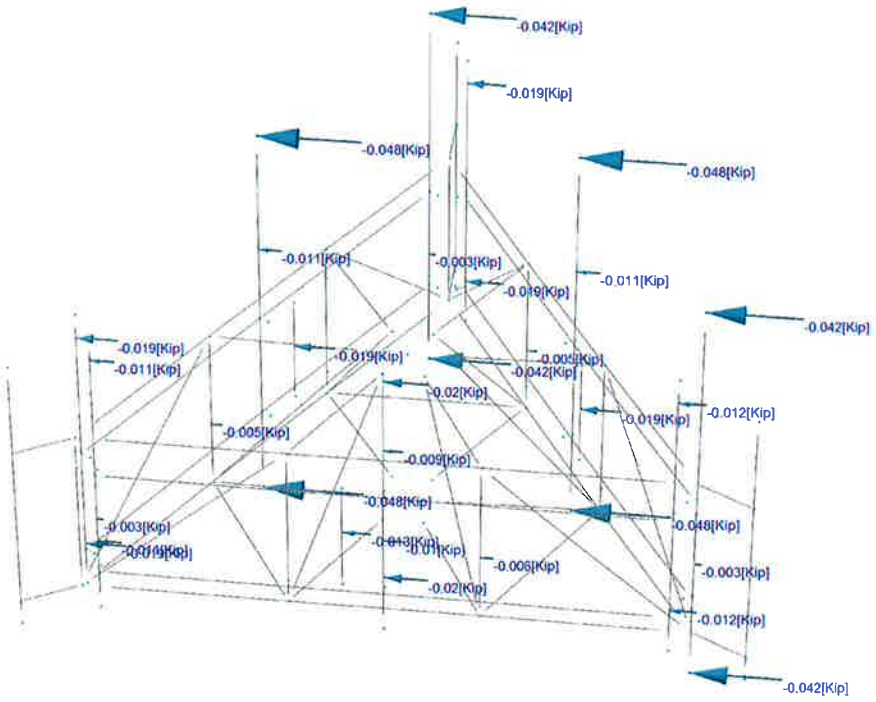
File name: W:\STRUCTURAL DEPARTMENT\ANALYSIS SOFTWARE\RAM Elements\RAM Projects\AT&T\CT\CT2046\CT2046.etz\
Load condition: Wi30=Ice Wind Load 30/90deg

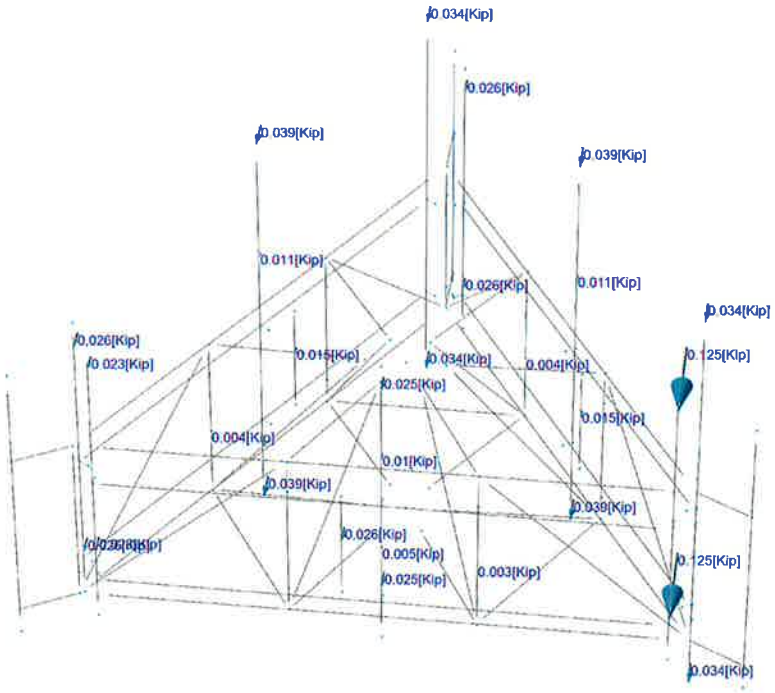
Loads

Concentrated user loads - Members



Loads

Concentrated user loads - Members



Bentley **Hewlett-Packard Company**

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Units system: English
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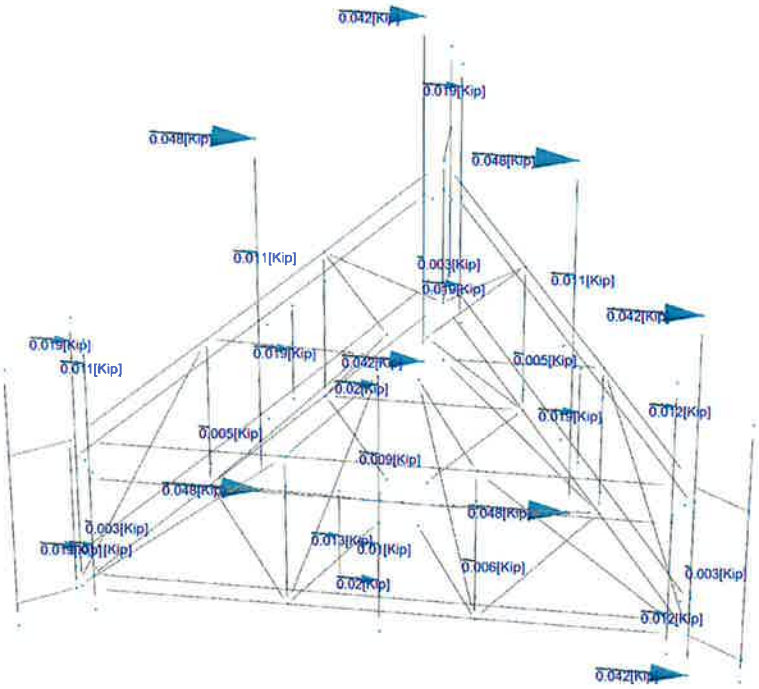
Load condition: Wi210=-Wi30

Loads

Concentrated user loads - Members



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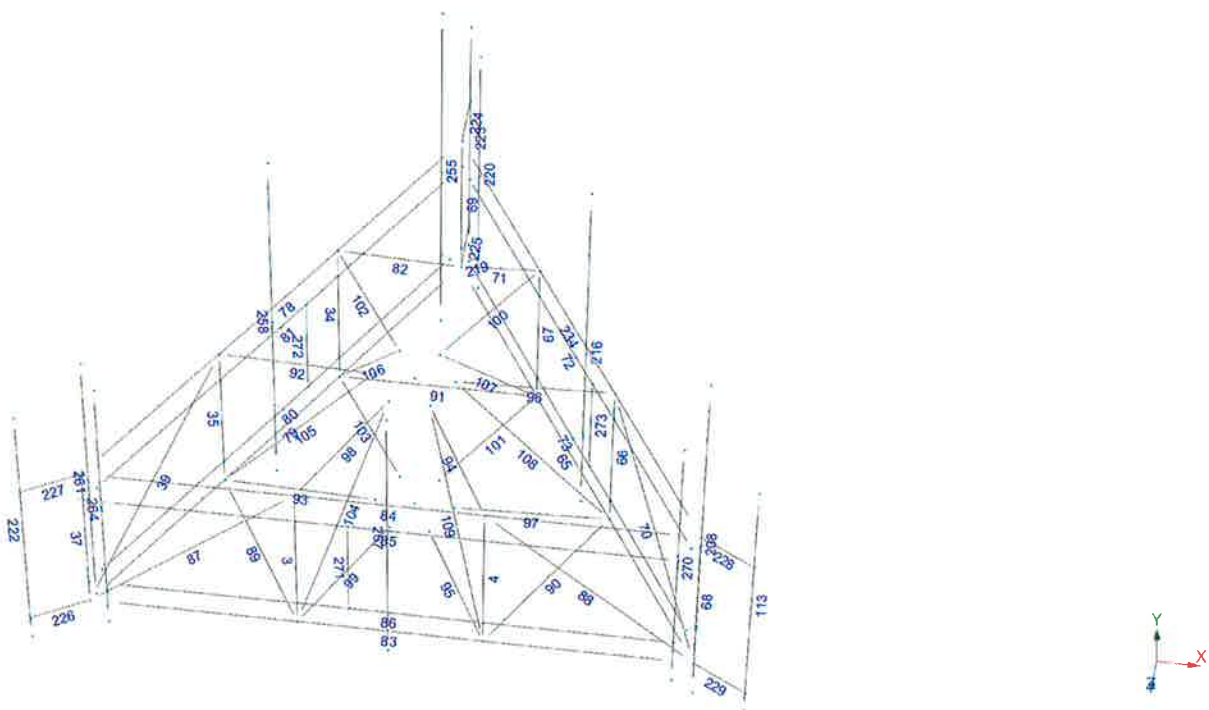
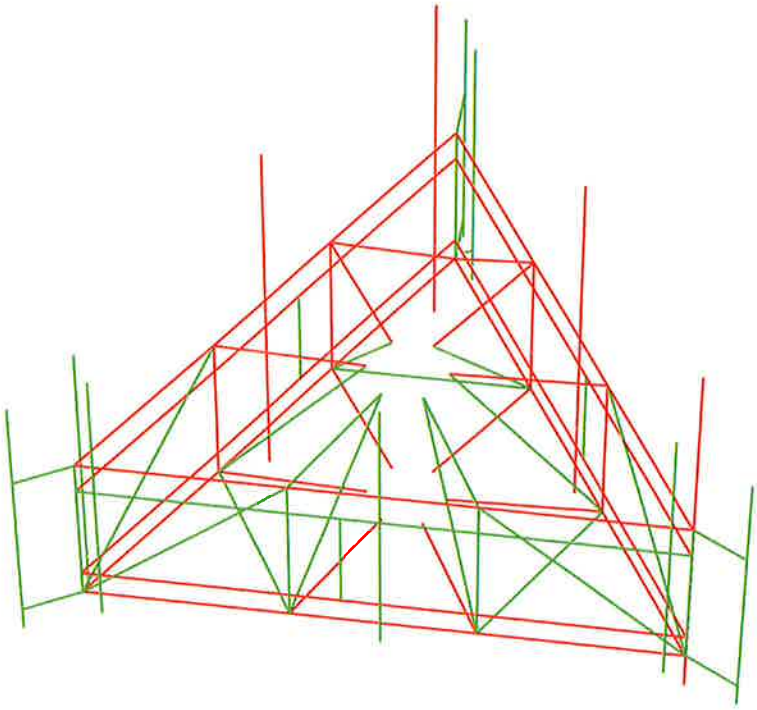


Design status

- Not designed
- Error on design
- Design O.K.
- With warnings



Bentley Hewlett-Packard Company

Current Date: 3/19/2018 6:07 PM
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Steel Code Check

Report: Summary - For all selected load conditions

Load conditions to be included in design :

W180=-W0
W210=-W30
Wi180=-Wi0
Wi210=-Wi30
LC1=1.2DL+1.6W0
LC2=1.2DL+1.6W30
LC3=1.2DL-1.6W0
LC4=1.2DL-1.6W30
LC5=0.9DL+1.6W0
LC6=0.9DL+1.6W30
LC7=0.9DL-1.6W0
LC8=0.9DL-1.6W30
LC9=1.2DL+Di+Wi0
LC10=1.2DL+Di+Wi30
LC11=1.2DL+Di-Wi0
LC12=1.2DL+Di-Wi30
LC13=1.2DL
LC14=0.9DL

Description	Section	Member	Ctrl Eq.	Ratio	Status	Reference
	C 3X6	37	LC1 at 18.75%	0.35	OK	
			LC10 at 100.00%	0.04	OK	
			LC11 at 85.42%	0.05	OK	
			LC12 at 18.75%	0.05	OK	
			LC13 at 85.42%	0.03	OK	
			LC14 at 85.42%	0.02	OK	
			LC2 at 18.75%	0.33	OK	
			LC3 at 18.75%	0.34	OK	
			LC4 at 18.75%	**0.35**	**OK**	Eq. H1-1b
			LC5 at 18.75%	0.35	OK	
			LC6 at 18.75%	0.33	OK	
			LC7 at 18.75%	0.34	OK	
			LC8 at 18.75%	0.35	OK	
			LC9 at 18.75%	0.05	OK	
			W180 at 18.75%	0.21	OK	
			W210 at 18.75%	0.21	OK	
			Wi180 at 18.75%	0.05	OK	
			Wi210 at 18.75%	0.03	OK	
		68	LC1 at 81.25%	0.39	OK	
			LC10 at 81.25%	0.06	OK	
			LC11 at 81.25%	0.10	OK	
			LC12 at 81.25%	0.06	OK	
			LC13 at 14.58%	0.02	OK	
			LC14 at 14.58%	0.01	OK	
			LC2 at 81.25%	0.55	OK	
			LC3 at 81.25%	0.38	OK	
			LC4 at 81.25%	**0.55**	**OK**	Eq. H1-1b
			LC5 at 81.25%	0.39	OK	
			LC6 at 81.25%	0.55	OK	
			LC7 at 81.25%	0.38	OK	

	LC8 at 81.25%	0.55	OK	
	LC9 at 81.25%	0.13	OK	
	W180 at 81.25%	0.24	OK	
	W210 at 81.25%	0.35	OK	
	Wi180 at 81.25%	0.12	OK	
	Wi210 at 81.25%	0.06	OK	
69	LC1 at 18.75%	0.52	OK	
	LC10 at 85.42%	0.04	OK	
	LC11 at 18.75%	0.08	OK	
	LC12 at 85.42%	0.04	OK	
	LC13 at 85.42%	0.03	OK	
	LC14 at 85.42%	0.02	OK	
	LC2 at 20.83%	0.22	OK	
	LC3 at 18.75%	**0.52**	**OK**	Eq. H1-1b
	LC4 at 20.83%	0.23	OK	Eq. H1-1b
	LC5 at 18.75%	0.52	OK	
	LC6 at 20.83%	0.22	OK	
	LC7 at 18.75%	0.52	OK	
	LC8 at 20.83%	0.23	OK	
	LC9 at 18.75%	0.07	OK	
	W180 at 18.75%	0.32	OK	
	W210 at 20.83%	0.14	OK	
	Wi180 at 18.75%	0.07	OK	
	Wi210 at 20.83%	0.02	OK	
224	LC1 at 0.00%	**0.25**	**OK**	Eq. H1-1b
	LC10 at 0.00%	0.02	OK	
	LC11 at 87.50%	0.02	OK	
	LC12 at 0.00%	0.02	OK	
	LC13 at 0.00%	0.02	OK	
	LC14 at 0.00%	0.01	OK	
	LC2 at 0.00%	0.06	OK	
	LC3 at 0.00%	0.22	OK	
	LC4 at 0.00%	0.04	OK	
	LC5 at 0.00%	0.25	OK	
	LC6 at 0.00%	0.05	OK	
	LC7 at 0.00%	0.22	OK	
	LC8 at 0.00%	0.04	OK	
	LC9 at 0.00%	0.05	OK	
	W180 at 0.00%	0.15	OK	
	W210 at 0.00%	0.03	OK	
	Wi180 at 0.00%	0.03	OK	
	Wi210 at 0.00%	0.00	OK	
225	LC1 at 0.00%	0.14	OK	
	LC10 at 0.00%	0.02	OK	
	LC11 at 0.00%	0.04	OK	
	LC12 at 0.00%	0.02	OK	
	LC13 at 0.00%	0.02	OK	
	LC14 at 0.00%	0.01	OK	
	LC2 at 0.00%	0.04	OK	
	LC3 at 0.00%	**0.18**	**OK**	Eq. H1-1b
	LC4 at 0.00%	0.04	OK	
	LC5 at 0.00%	0.14	OK	
	LC6 at 0.00%	0.03	OK	
	LC7 at 0.00%	0.17	OK	
	LC8 at 0.00%	0.04	OK	
	LC9 at 75.00%	0.01	OK	
	W180 at 0.00%	0.10	OK	
	W210 at 0.00%	0.01	OK	
	Wi180 at 0.00%	0.02	OK	
	Wi210 at 100.00%	0.00	OK	

226	LC1 at 0.00%	0.14	OK	
	LC10 at 100.00%	0.01	OK	
	LC11 at 100.00%	0.01	OK	
	LC12 at 0.00%	0.03	OK	
	LC13 at 0.00%	0.02	OK	
	LC14 at 0.00%	0.01	OK	
	LC2 at 0.00%	0.12	OK	
	LC3 at 0.00%	0.10	OK	
	LC4 at 0.00%	**0.16**	**OK**	Eq. H1-1b
	LC5 at 0.00%	0.13	OK	
	LC6 at 0.00%	0.13	OK	
	LC7 at 0.00%	0.11	OK	
	LC8 at 0.00%	0.15	OK	
	LC9 at 0.00%	0.03	OK	
	W180 at 0.00%	0.08	OK	
	W210 at 0.00%	0.09	OK	
	Wi180 at 0.00%	0.02	OK	
	Wi210 at 0.00%	0.01	OK	
227	LC1 at 0.00%	0.15	OK	
	LC10 at 0.00%	0.04	OK	
	LC11 at 0.00%	0.04	OK	
	LC12 at 100.00%	0.02	OK	
	LC13 at 0.00%	0.02	OK	
	LC14 at 0.00%	0.01	OK	
	LC2 at 0.00%	**0.21**	**OK**	Eq. H1-1b
	LC3 at 0.00%	0.18	OK	
	LC4 at 0.00%	0.18	OK	
	LC5 at 0.00%	0.15	OK	
	LC6 at 0.00%	0.21	OK	
	LC7 at 0.00%	0.18	OK	
	LC8 at 0.00%	0.18	OK	
	LC9 at 100.00%	0.02	OK	
	W180 at 0.00%	0.10	OK	
	W210 at 0.00%	0.12	OK	
	Wi180 at 0.00%	0.02	OK	
	Wi210 at 0.00%	0.02	OK	
228	LC1 at 0.00%	0.11	OK	
	LC10 at 100.00%	0.02	OK	
	LC11 at 0.00%	0.04	OK	
	LC12 at 0.00%	0.04	OK	
	LC13 at 0.00%	0.02	OK	
	LC14 at 0.00%	0.01	OK	
	LC2 at 0.00%	0.19	OK	
	LC3 at 0.00%	0.15	OK	
	LC4 at 0.00%	**0.23**	**OK**	Eq. H1-1b
	LC5 at 0.00%	0.12	OK	
	LC6 at 0.00%	0.20	OK	
	LC7 at 0.00%	0.14	OK	
	LC8 at 0.00%	0.22	OK	
	LC9 at 100.00%	0.02	OK	
	W180 at 0.00%	0.08	OK	
	W210 at 0.00%	0.13	OK	
	Wi180 at 0.00%	0.02	OK	
	Wi210 at 0.00%	0.02	OK	
229	LC1 at 0.00%	0.09	OK	
	LC10 at 0.00%	0.03	OK	
	LC11 at 0.00%	0.02	OK	
	LC12 at 0.00%	0.01	OK	
	LC13 at 0.00%	0.02	OK	
	LC14 at 0.00%	0.02	OK	
	LC2 at 0.00%	**0.15**	**OK**	Eq. H1-1b

		LC3 at 0.00%	0.05	OK	
		LC4 at 0.00%	0.11	OK	
		LC5 at 0.00%	0.09	OK	
		LC6 at 0.00%	0.14	OK	
		LC7 at 0.00%	0.05	OK	
		LC8 at 0.00%	0.11	OK	
		LC9 at 100.00%	0.02	OK	
		W180 at 0.00%	0.04	OK	
		W210 at 0.00%	0.08	OK	
		Wi180 at 100.00%	0.01	OK	
		Wi210 at 0.00%	0.01	OK	
L 3X3X1_4	**113**	LC1 at 66.67%	0.04	OK	
		LC10 at 10.42%	0.01	OK	
		LC11 at 66.67%	0.01	OK	
		LC12 at 66.67%	0.01	OK	
		LC13 at 10.42%	0.01	OK	
		LC14 at 10.42%	0.01	OK	
		LC2 at 10.42%	**0.05**	**OK**	Eq. H2-1
		LC3 at 66.67%	0.03	OK	
		LC4 at 66.67%	0.04	OK	Eq. H3-8
		LC5 at 66.67%	0.03	OK	
		LC6 at 10.42%	0.05	OK	
		LC7 at 66.67%	0.03	OK	
		LC8 at 66.67%	0.04	OK	
		LC9 at 10.42%	0.02	OK	
		W180 at 66.67%	0.02	OK	
		W210 at 10.42%	0.03	OK	
		Wi180 at 10.42%	0.01	OK	
		Wi210 at 10.42%	0.00	OK	
	222	LC1 at 66.67%	0.05	OK	
		LC10 at 66.67%	0.01	OK	
		LC11 at 66.67%	0.01	OK	
		LC12 at 10.42%	0.01	OK	
		LC13 at 10.42%	0.01	OK	
		LC14 at 10.42%	0.01	OK	
		LC2 at 66.67%	0.05	OK	Eq. H2-1
		LC3 at 66.67%	**0.05**	**OK**	Eq. H3-8
		LC4 at 10.42%	0.05	OK	Eq. H2-1
		LC5 at 66.67%	0.05	OK	
		LC6 at 66.67%	0.04	OK	
		LC7 at 66.67%	0.05	OK	
		LC8 at 10.42%	0.04	OK	
		LC9 at 10.42%	0.01	OK	
		W180 at 66.67%	0.03	OK	
		W210 at 66.67%	0.02	OK	
		Wi180 at 10.42%	0.00	OK	
		Wi210 at 10.42%	0.00	OK	
	223	LC1 at 66.67%	0.04	OK	Eq. H2-1
		LC10 at 66.67%	0.01	OK	
		LC11 at 10.42%	0.02	OK	
		LC12 at 10.42%	0.01	OK	
		LC13 at 10.42%	0.01	OK	
		LC14 at 10.42%	0.01	OK	
		LC2 at 66.67%	0.05	OK	Eq. H3-8
		LC3 at 10.42%	**0.06**	**OK**	Eq. H2-1
		LC4 at 66.67%	0.04	OK	
		LC5 at 10.42%	0.04	OK	
		LC6 at 66.67%	0.05	OK	
		LC7 at 10.42%	0.06	OK	
		LC8 at 66.67%	0.04	OK	
		LC9 at 66.67%	0.01	OK	

		W180 at 10.42%	0.03	OK	
		W210 at 66.67%	0.03	OK	
		Wi180 at 10.42%	0.01	OK	
		Wi210 at 66.67%	0.00	OK	
P 1-3/8x1-3/8	**72**	LC1 at 50.00%	1.89	N.G.	
		LC10 at 50.00%	0.43	OK	
		LC11 at 49.31%	0.35	OK	
		LC12 at 49.31%	0.36	OK	
		LC13 at 50.00%	0.13	OK	
		LC14 at 50.00%	0.10	OK	
		LC2 at 50.00%	**2.12**	**N.G.**	Sec. C5.2
		LC3 at 49.31%	1.87	N.G.	Sec. C5.2
		LC4 at 49.31%	1.75	N.G.	Sec. C5.2
		LC5 at 50.00%	1.86	N.G.	
		LC6 at 50.00%	2.09	N.G.	
		LC7 at 49.31%	1.85	N.G.	
		LC8 at 49.31%	1.73	N.G.	
		LC9 at 50.00%	0.44	OK	
		W180 at 49.31%	1.11	N.G.	
		W210 at 50.00%	1.04	N.G.	
		Wi180 at 2.78%	0.20	OK	
		Wi210 at 50.00%	0.18	OK	
	73	LC1 at 65.28%	**1.41**	**N.G.**	Sec. C5.2
		LC10 at 43.06%	0.33	OK	
		LC11 at 43.06%	0.46	OK	
		LC12 at 43.06%	0.44	OK	
		LC13 at 43.06%	0.24	OK	
		LC14 at 43.06%	0.18	OK	
		LC2 at 49.31%	0.53	OK	
		LC3 at 43.06%	0.76	OK	Sec. C5.2
		LC4 at 34.72%	1.28	N.G.	Sec. C5.2
		LC5 at 65.28%	1.33	N.G.	
		LC6 at 49.31%	0.51	OK	
		LC7 at 43.06%	0.72	OK	
		LC8 at 34.72%	1.17	N.G.	
		LC9 at 50.00%	0.48	OK	
		W180 at 2.78%	0.42	OK	
		W210 at 49.31%	0.61	OK	
		Wi180 at 65.28%	0.11	OK	
		Wi210 at 49.31%	0.09	OK	
	80	LC1 at 34.72%	0.98	OK	Sec. C5.2
		LC10 at 50.00%	0.38	OK	
		LC11 at 50.00%	0.33	OK	
		LC12 at 43.06%	0.40	OK	
		LC13 at 43.06%	0.23	OK	
		LC14 at 43.06%	0.17	OK	
		LC2 at 2.78%	**1.13**	**N.G.**	Sec. C5.2
		LC3 at 50.00%	0.84	OK	Sec. C5.2
		LC4 at 43.06%	0.73	OK	Sec. C5.2
		LC5 at 34.72%	0.91	OK	
		LC6 at 2.78%	1.12	N.G.	
		LC7 at 50.00%	0.81	OK	
		LC8 at 43.06%	0.69	OK	
		LC9 at 43.06%	0.44	OK	
		W180 at 50.00%	0.45	OK	
		W210 at 43.06%	0.36	OK	
		Wi180 at 50.00%	0.07	OK	
		Wi210 at 2.78%	0.06	OK	
	81	LC1 at 50.00%	1.95	N.G.	Sec. C5.2
		LC10 at 50.69%	0.39	OK	

	LC11 at 50.69%	0.41	OK	
	LC12 at 50.00%	0.42	OK	
	LC13 at 43.06%	0.14	OK	
	LC14 at 43.06%	0.10	OK	
	LC2 at 50.69%	1.94	N.G.	Sec. C5.2
	LC3 at 50.69%	2.03	N.G.	Sec. C5.2
	LC4 at 50.00%	**2.15**	**N.G.**	Sec. C5.2
	LC5 at 50.00%	1.92	N.G.	
	LC6 at 50.69%	1.92	N.G.	
	LC7 at 50.69%	2.00	N.G.	
	LC8 at 50.00%	2.12	N.G.	
	LC9 at 50.00%	0.41	OK	
	W180 at 50.69%	1.10	N.G.	
	W210 at 50.00%	1.17	N.G.	
	Wi180 at 50.69%	0.20	OK	
	Wi210 at 50.00%	0.21	OK	
85	LC1 at 50.00%	0.85	OK	
	LC10 at 49.31%	0.26	OK	
	LC11 at 50.00%	0.39	OK	
	LC12 at 50.00%	0.37	OK	
	LC13 at 50.00%	0.19	OK	
	LC14 at 50.00%	0.14	OK	
	LC2 at 49.31%	0.82	OK	Sec. C5.2
	LC3 at 50.00%	0.97	OK	
	LC4 at 50.00%	**0.99**	**OK**	Sec. C5.2
	LC5 at 50.00%	0.81	OK	
	LC6 at 49.31%	0.79	OK	
	LC7 at 50.00%	0.93	OK	
	LC8 at 50.00%	0.94	OK	
	LC9 at 50.00%	0.35	OK	
	W180 at 50.00%	0.48	OK	
	W210 at 50.00%	0.50	OK	
	Wi180 at 97.22%	0.24	OK	
	Wi210 at 50.00%	0.07	OK	
86	LC1 at 43.06%	0.37	OK	
	LC10 at 43.06%	0.41	OK	
	LC11 at 50.00%	0.49	OK	
	LC12 at 50.00%	0.46	OK	
	LC13 at 50.00%	0.26	OK	
	LC14 at 50.00%	0.20	OK	
	LC2 at 43.06%	0.70	OK	
	LC3 at 94.44%	**1.08**	**N.G.**	Sec. C5.2
	LC4 at 50.00%	1.07	N.G.	Sec. C5.2
	LC5 at 43.06%	0.33	OK	
	LC6 at 43.06%	0.63	OK	
	LC7 at 94.44%	1.05	N.G.	
	LC8 at 50.00%	0.99	OK	
	LC9 at 50.00%	0.31	OK	
	W180 at 94.44%	0.54	OK	
	W210 at 50.00%	0.48	OK	
	Wi180 at 94.44%	0.19	OK	
	Wi210 at 50.00%	0.07	OK	
271	LC1 at 50.00%	0.34	OK	Sec. C5.2
	LC10 at 100.00%	0.20	OK	
	LC11 at 100.00%	0.15	OK	
	LC12 at 0.00%	0.13	OK	
	LC13 at 100.00%	0.11	OK	
	LC14 at 100.00%	0.08	OK	
	LC2 at 100.00%	**0.52**	**OK**	Sec. C5.2
	LC3 at 43.75%	0.33	OK	Sec. C5.2
	LC4 at 100.00%	0.29	OK	

		LC5 at 50.00%	0.34	OK	
		LC6 at 100.00%	0.49	OK	
		LC7 at 43.75%	0.32	OK	
		LC8 at 100.00%	0.31	OK	
		LC9 at 100.00%	0.18	OK	
		W180 at 50.00%	0.20	OK	
		W210 at 100.00%	0.25	OK	
		Wi180 at 50.00%	0.04	OK	
		Wi210 at 100.00%	0.04	OK	
	272	LC1 at 100.00%	0.50	OK	
		LC10 at 0.00%	0.14	OK	
		LC11 at 0.00%	0.12	OK	
		LC12 at 100.00%	0.21	OK	
		LC13 at 100.00%	0.10	OK	
		LC14 at 100.00%	0.07	OK	
		LC2 at 43.75%	0.42	OK	
		LC3 at 0.00%	0.33	OK	
		LC4 at 100.00%	**0.63**	**OK**	Sec. C5.2
		LC5 at 100.00%	0.48	OK	
		LC6 at 43.75%	0.42	OK	
		LC7 at 0.00%	0.34	OK	
		LC8 at 100.00%	0.60	OK	
		LC9 at 100.00%	0.21	OK	
		W180 at 100.00%	0.24	OK	
		W210 at 100.00%	0.33	OK	
		Wi180 at 0.00%	0.05	OK	
		Wi210 at 100.00%	0.05	OK	
	273	LC1 at 100.00%	0.48	OK	
		LC10 at 100.00%	0.14	OK	
		LC11 at 100.00%	0.24	OK	
		LC12 at 100.00%	0.16	OK	
		LC13 at 100.00%	0.09	OK	
		LC14 at 100.00%	0.07	OK	
		LC2 at 43.75%	0.28	OK	
		LC3 at 100.00%	**0.73**	**OK**	Sec. C5.2
		LC4 at 43.75%	0.29	OK	
		LC5 at 100.00%	0.50	OK	
		LC6 at 43.75%	0.28	OK	
		LC7 at 100.00%	0.71	OK	
		LC8 at 43.75%	0.29	OK	
		LC9 at 0.00%	0.11	OK	
		W180 at 100.00%	0.40	OK	
		W210 at 43.75%	0.18	OK	
		Wi180 at 100.00%	0.08	OK	
		Wi210 at 43.75%	0.03	OK	
PIPE 2x0.154	**208**	LC1 at 50.00%	1.38	N.G.	
		LC10 at 50.00%	0.19	OK	
		LC11 at 50.00%	0.15	OK	
		LC12 at 50.00%	0.19	OK	
		LC13 at 77.08%	0.02	OK	
		LC14 at 77.08%	0.01	OK	
		LC2 at 50.00%	**1.68**	**N.G.**	Eq. H1-1b
		LC3 at 50.00%	1.38	N.G.	
		LC4 at 50.00%	1.68	N.G.	
		LC5 at 50.00%	1.38	N.G.	
		LC6 at 50.00%	1.68	N.G.	
		LC7 at 50.00%	1.38	N.G.	
		LC8 at 50.00%	1.68	N.G.	
		LC9 at 50.00%	0.15	OK	
		W180 at 50.00%	0.86	OK	
		W210 at 50.00%	1.05	N.G.	

	Wi180 at 50.00%	0.15	OK	
	Wi210 at 50.00%	0.18	OK	
216	LC1 at 50.00%	1.75	N.G.	
	LC10 at 50.00%	0.24	OK	
	LC11 at 50.00%	0.20	OK	
	LC12 at 50.00%	0.24	OK	
	LC13 at 50.00%	0.01	OK	
	LC14 at 50.00%	0.01	OK	
	LC2 at 50.00%	**2.11**	**N.G.**	Eq. H1-1b
	LC3 at 50.00%	1.75	N.G.	
	LC4 at 50.00%	2.11	N.G.	
	LC5 at 50.00%	1.75	N.G.	
	LC6 at 50.00%	2.11	N.G.	
	LC7 at 50.00%	1.75	N.G.	
	LC8 at 50.00%	2.11	N.G.	
	LC9 at 50.00%	0.20	OK	
	W180 at 50.00%	1.09	N.G.	
	W210 at 50.00%	1.32	N.G.	
	Wi180 at 50.00%	0.19	OK	
	Wi210 at 50.00%	0.23	OK	
220	LC1 at 50.00%	0.36	OK	
	LC10 at 50.00%	0.05	OK	
	LC11 at 50.00%	0.07	OK	
	LC12 at 50.00%	0.05	OK	
	LC13 at 85.42%	0.01	OK	
	LC14 at 85.42%	0.01	OK	
	LC2 at 50.00%	**0.49**	**OK**	Eq. H1-1b
	LC3 at 50.00%	0.36	OK	
	LC4 at 50.00%	0.49	OK	
	LC5 at 50.00%	0.36	OK	
	LC6 at 50.00%	0.49	OK	
	LC7 at 50.00%	0.36	OK	
	LC8 at 50.00%	0.49	OK	
	LC9 at 50.00%	0.07	OK	
	W180 at 50.00%	0.22	OK	
	W210 at 50.00%	0.30	OK	
	Wi180 at 50.00%	0.07	OK	
	Wi210 at 50.00%	0.05	OK	
255	LC1 at 50.00%	1.38	N.G.	
	LC10 at 50.00%	0.19	OK	
	LC11 at 50.00%	0.15	OK	
	LC12 at 50.00%	0.19	OK	
	LC13 at 77.08%	0.01	OK	Eq. H1-2
	LC14 at 77.08%	0.01	OK	
	LC2 at 50.00%	**1.68**	**N.G.**	Eq. H1-1b
	LC3 at 50.00%	1.38	N.G.	
	LC4 at 50.00%	1.68	N.G.	
	LC5 at 50.00%	1.38	N.G.	
	LC6 at 50.00%	1.68	N.G.	
	LC7 at 50.00%	1.38	N.G.	
	LC8 at 50.00%	1.68	N.G.	
	LC9 at 50.00%	0.15	OK	
	W180 at 50.00%	0.86	OK	
	W210 at 50.00%	1.05	N.G.	
	Wi180 at 50.00%	0.15	OK	
	Wi210 at 50.00%	0.18	OK	
258	LC1 at 50.00%	1.75	N.G.	
	LC10 at 50.00%	0.24	OK	
	LC11 at 50.00%	0.20	OK	
	LC12 at 50.00%	0.24	OK	

	LC13 at 50.00%	0.01	OK	
	LC14 at 50.00%	0.01	OK	
	LC2 at 50.00%	**2.11**	**N.G.**	Eq. H1-1b
	LC3 at 50.00%	1.75	N.G.	
	LC4 at 50.00%	2.11	N.G.	
	LC5 at 50.00%	1.75	N.G.	
	LC6 at 50.00%	2.11	N.G.	
	LC7 at 50.00%	1.75	N.G.	
	LC8 at 50.00%	2.11	N.G.	
	LC9 at 50.00%	0.20	OK	
	W180 at 50.00%	1.09	N.G.	
	W210 at 50.00%	1.32	N.G.	
	Wi180 at 50.00%	0.19	OK	
	Wi210 at 50.00%	0.23	OK	
261	LC1 at 50.00%	0.36	OK	
	LC10 at 50.00%	0.05	OK	
	LC11 at 50.00%	0.07	OK	
	LC12 at 50.00%	0.05	OK	
	LC13 at 85.42%	0.01	OK	
	LC14 at 85.42%	0.00	OK	
	LC2 at 50.00%	**0.49**	**OK**	Eq. H1-1b
	LC3 at 50.00%	0.36	OK	
	LC4 at 50.00%	0.49	OK	
	LC5 at 50.00%	0.36	OK	
	LC6 at 50.00%	0.49	OK	
	LC7 at 50.00%	0.36	OK	
	LC8 at 50.00%	0.49	OK	
	LC9 at 50.00%	0.07	OK	
	W180 at 50.00%	0.22	OK	
	W210 at 50.00%	0.30	OK	
	Wi180 at 50.00%	0.07	OK	
	Wi210 at 50.00%	0.05	OK	
264	LC1 at 52.08%	0.37	OK	
	LC10 at 50.00%	0.02	OK	
	LC11 at 52.08%	0.05	OK	
	LC12 at 50.00%	0.02	OK	
	LC13 at 85.42%	0.01	OK	
	LC14 at 85.42%	0.01	OK	
	LC2 at 50.00%	0.21	OK	
	LC3 at 52.08%	**0.37**	**OK**	Eq. H1-1b
	LC4 at 50.00%	0.21	OK	
	LC5 at 52.08%	0.37	OK	Eq. H1-1b
	LC6 at 50.00%	0.21	OK	
	LC7 at 52.08%	0.37	OK	
	LC8 at 50.00%	0.21	OK	
	LC9 at 52.08%	0.05	OK	
	W180 at 52.08%	0.23	OK	
	W210 at 50.00%	0.13	OK	
	Wi180 at 52.08%	0.05	OK	
	Wi210 at 50.00%	0.02	OK	
267	LC1 at 52.08%	0.47	OK	
	LC10 at 50.00%	0.05	OK	
	LC11 at 52.08%	0.08	OK	
	LC12 at 50.00%	0.05	OK	
	LC13 at 85.42%	0.01	OK	
	LC14 at 85.42%	0.01	OK	
	LC2 at 50.00%	0.45	OK	
	LC3 at 52.08%	**0.48**	**OK**	Eq. H1-1b
	LC4 at 50.00%	0.45	OK	
	LC5 at 52.08%	0.47	OK	
	LC6 at 50.00%	0.44	OK	

		LC7 at 52.08%	0.48	OK	
		LC8 at 50.00%	0.44	OK	
		LC9 at 50.00%	0.06	OK	
		W180 at 52.08%	0.30	OK	
		W210 at 50.00%	0.28	OK	
		Wi180 at 52.08%	0.06	OK	
		Wi210 at 50.00%	0.05	OK	
	270	LC1 at 52.08%	0.43	OK	
		LC10 at 50.00%	0.03	OK	
		LC11 at 52.08%	0.27	OK	
		LC12 at 50.00%	0.03	OK	
		LC13 at 85.42%	0.02	OK	
		LC14 at 85.42%	0.01	OK	
		LC2 at 50.00%	0.22	OK	
		LC3 at 52.08%	**0.44**	**OK**	Eq. H1-1b
		LC4 at 50.00%	0.22	OK	
		LC5 at 52.08%	0.43	OK	Eq. H1-1b
		LC6 at 50.00%	0.22	OK	
		LC7 at 52.08%	0.44	OK	
		LC8 at 50.00%	0.22	OK	
		LC9 at 52.08%	0.26	OK	
		W180 at 52.08%	0.27	OK	
		W210 at 50.00%	0.13	OK	
		Wi180 at 52.08%	0.26	OK	
		Wi210 at 50.00%	0.02	OK	
RndBar 1-1_2	**219**	LC1 at 0.00%	**0.07**	**OK**	Eq. H3-1
		LC10 at 0.00%	0.02	OK	
		LC11 at 0.00%	0.02	OK	
		LC12 at 0.00%	0.02	OK	
		LC13 at 0.00%	0.01	OK	
		LC14 at 0.00%	0.01	OK	
		LC2 at 0.00%	0.04	OK	
		LC3 at 0.00%	0.05	OK	
		LC4 at 0.00%	0.05	OK	
		LC5 at 0.00%	0.07	OK	
		LC6 at 0.00%	0.04	OK	
		LC7 at 0.00%	0.05	OK	
		LC8 at 0.00%	0.05	OK	
		LC9 at 0.00%	0.02	OK	
		W180 at 0.00%	0.04	OK	
		W210 at 0.00%	0.02	OK	
		Wi180 at 0.00%	0.01	OK	
		Wi210 at 0.00%	0.00	OK	
STube 1x1x1/8	**3**	LC1 at 20.83%	0.72	OK	Eq. H1-1b
		LC10 at 85.42%	0.29	OK	
		LC11 at 85.42%	0.30	OK	
		LC12 at 85.42%	0.21	OK	
		LC13 at 85.42%	0.13	OK	
		LC14 at 85.42%	0.10	OK	
		LC2 at 85.42%	0.60	OK	Eq. H1-1b
		LC3 at 18.75%	**0.83**	**OK**	Eq. H1-1a
		LC4 at 85.42%	0.40	OK	
		LC5 at 20.83%	0.70	OK	
		LC6 at 85.42%	0.56	OK	
		LC7 at 20.83%	0.81	OK	
		LC8 at 85.42%	0.42	OK	
		LC9 at 85.42%	0.19	OK	
		W180 at 20.83%	0.46	OK	
		W210 at 85.42%	0.30	OK	
		Wi180 at 20.83%	0.08	OK	
		Wi210 at 85.42%	0.04	OK	

4	LC1 at 20.83%	0.69	OK	Eq. H1-1b
	LC10 at 85.42%	0.12	OK	Eq. H1-1b
	LC11 at 18.75%	0.23	OK	
	LC12 at 85.42%	0.26	OK	
	LC13 at 85.42%	0.11	OK	
	LC14 at 85.42%	0.08	OK	
	LC2 at 85.42%	0.53	OK	
	LC3 at 100.00%	**0.81**	**OK**	Eq. H1-1a
	LC4 at 85.42%	0.70	OK	Eq. H1-1b
	LC5 at 20.83%	0.68	OK	
	LC6 at 85.42%	0.55	OK	
	LC7 at 20.83%	0.80	OK	
	LC8 at 85.42%	0.67	OK	
	LC9 at 85.42%	0.22	OK	
	W180 at 20.83%	0.45	OK	
	W210 at 85.42%	0.37	OK	
	Wi180 at 100.00%	0.13	OK	
	Wi210 at 85.42%	0.05	OK	
34	LC1 at 18.75%	0.77	OK	
	LC10 at 18.75%	0.27	OK	
	LC11 at 85.42%	0.21	OK	
	LC12 at 85.42%	0.28	OK	
	LC13 at 85.42%	0.13	OK	
	LC14 at 85.42%	0.09	OK	
	LC2 at 18.75%	**1.53**	**N.G.**	Eq. H3-6
	LC3 at 18.75%	0.62	OK	
	LC4 at 18.75%	1.17	N.G.	
	LC5 at 18.75%	0.75	OK	
	LC6 at 18.75%	1.50	N.G.	
	LC7 at 18.75%	0.63	OK	
	LC8 at 18.75%	1.20	N.G.	
	LC9 at 85.42%	0.32	OK	
	W180 at 18.75%	0.42	OK	
	W210 at 18.75%	0.60	OK	
	Wi180 at 18.75%	0.08	OK	
	Wi210 at 18.75%	0.10	OK	
35	LC1 at 20.83%	0.74	OK	Eq. H1-1a
	LC10 at 85.42%	0.23	OK	
	LC11 at 85.42%	0.22	OK	
	LC12 at 85.42%	0.16	OK	
	LC13 at 85.42%	0.09	OK	
	LC14 at 85.42%	0.07	OK	
	LC2 at 18.75%	**1.15**	**N.G.**	Eq. H1-1b
	LC3 at 20.83%	0.69	OK	Eq. H1-1b
	LC4 at 18.75%	1.00	OK	
	LC5 at 20.83%	0.74	OK	
	LC6 at 18.75%	1.13	N.G.	
	LC7 at 20.83%	0.68	OK	
	LC8 at 18.75%	1.01	N.G.	
	LC9 at 85.42%	0.16	OK	
	W180 at 20.83%	0.41	OK	
	W210 at 18.75%	0.66	OK	
	Wi180 at 20.83%	0.07	OK	
	Wi210 at 18.75%	0.11	OK	
39	LC1 at 20.83%	0.39	OK	Eq. H1-1a
	LC10 at 85.42%	0.07	OK	
	LC11 at 0.00%	0.06	OK	
	LC12 at 18.75%	0.05	OK	
	LC13 at 85.42%	0.04	OK	
	LC14 at 85.42%	0.03	OK	

	LC2 at 0.00%	0.46	OK	Eq. H1-1b
	LC3 at 20.83%	0.93	OK	
	LC4 at 0.00%	0.71	OK	
	LC5 at 20.83%	0.39	OK	
	LC6 at 0.00%	0.46	OK	
	LC7 at 20.83%	**0.96**	**OK**	Eq. H1-1a
	LC8 at 0.00%	0.73	OK	
	LC9 at 85.42%	0.07	OK	
	W180 at 20.83%	0.64	OK	
	W210 at 0.00%	0.50	OK	
	Wi180 at 20.83%	0.12	OK	
	Wi210 at 0.00%	0.04	OK	Eq. H1-1b
65	LC1 at 66.67%	3.19	N.G.	Eq. H1-1a
	LC10 at 35.42%	0.58	With warnings	
	LC11 at 0.00%	0.63	With warnings	
	LC12 at 64.58%	1.10	N.G.	Eq. H1-1a
	LC13 at 35.42%	0.59	With warnings	
	LC14 at 35.42%	0.44	With warnings	
	LC2 at 66.67%	0.43	With warnings	
	LC3 at 33.33%	1.53	N.G.	
	LC4 at 64.58%	**4.11**	**N.G.**	Eq. H1-1a
	LC5 at 66.67%	3.11	N.G.	
	LC6 at 35.42%	0.39	With warnings	
	LC7 at 33.33%	1.45	N.G.	
	LC8 at 64.58%	3.96	N.G.	
	LC9 at 35.42%	1.10	N.G.	
	W180 at 33.33%	0.76	With warnings	
	W210 at 35.42%	2.21	N.G.	
	Wi180 at 0.00%	0.14	With warnings	
	Wi210 at 35.42%	0.28	With warnings	
66	LC1 at 100.00%	0.80	OK	
	LC10 at 85.42%	0.22	OK	
	LC11 at 85.42%	0.30	OK	
	LC12 at 85.42%	0.28	OK	
	LC13 at 85.42%	0.12	OK	Eq. H1-1b
	LC14 at 85.42%	0.09	OK	
	LC2 at 18.75%	0.88	OK	
	LC3 at 20.83%	0.63	OK	
	LC4 at 18.75%	**1.08**	**N.G.**	Eq. H1-1b
	LC5 at 100.00%	0.77	OK	
	LC6 at 18.75%	0.90	OK	
	LC7 at 20.83%	0.62	OK	
	LC8 at 18.75%	1.06	N.G.	
	LC9 at 100.00%	0.25	OK	
	W180 at 100.00%	0.37	OK	
	W210 at 18.75%	0.62	OK	
	Wi180 at 100.00%	0.11	OK	
	Wi210 at 18.75%	0.10	OK	
67	LC1 at 18.75%	0.71	OK	
	LC10 at 85.42%	0.19	OK	
	LC11 at 100.00%	0.13	OK	Eq. H1-1b
	LC12 at 85.42%	0.22	OK	
	LC13 at 85.42%	0.10	OK	Eq. H1-1b
	LC14 at 85.42%	0.07	OK	
	LC2 at 0.00%	1.08	N.G.	
	LC3 at 18.75%	0.62	OK	
	LC4 at 0.00%	**1.24**	**N.G.**	Eq. H3-6
	LC5 at 18.75%	0.69	OK	
	LC6 at 0.00%	1.08	N.G.	Eq. H3-6
	LC7 at 18.75%	0.63	OK	
	LC8 at 0.00%	1.23	N.G.	

	LC9 at 85.42%	0.29	OK	
	W180 at 18.75%	0.41	OK	
	W210 at 20.83%	0.65	OK	
	Wi180 at 85.42%	0.08	OK	
	Wi210 at 20.83%	0.10	OK	
70	LC1 at 79.17%	0.40	OK	Eq. H1-1a
	LC10 at 81.25%	0.08	OK	
	LC11 at 81.25%	0.06	OK	
	LC12 at 14.58%	0.09	OK	
	LC13 at 81.25%	0.05	OK	
	LC14 at 81.25%	0.04	OK	
	LC2 at 100.00%	0.66	OK	
	LC3 at 79.17%	0.89	OK	
	LC4 at 100.00%	0.48	OK	Eq. H1-1b
	LC5 at 79.17%	0.39	OK	
	LC6 at 100.00%	0.69	OK	
	LC7 at 79.17%	**0.93**	**OK**	Eq. H1-1a
	LC8 at 100.00%	0.47	OK	
	LC9 at 100.00%	0.12	OK	
	W180 at 79.17%	0.65	OK	
	W210 at 100.00%	0.29	OK	
	Wi180 at 16.67%	0.14	OK	
	Wi210 at 100.00%	0.04	OK	
71	LC1 at 0.00%	0.31	OK	
	LC10 at 18.75%	0.06	OK	
	LC11 at 0.00%	0.09	OK	
	LC12 at 0.00%	0.08	OK	
	LC13 at 18.75%	0.04	OK	
	LC14 at 18.75%	0.03	OK	
	LC2 at 20.83%	1.11	N.G.	
	LC3 at 0.00%	0.31	OK	
	LC4 at 0.00%	0.54	OK	Eq. H1-1a
	LC5 at 0.00%	0.31	OK	
	LC6 at 20.83%	**1.14**	**N.G.**	Eq. H1-1a
	LC7 at 0.00%	0.31	OK	
	LC8 at 0.00%	0.53	OK	
	LC9 at 0.00%	0.10	OK	
	W180 at 0.00%	0.19	OK	
	W210 at 0.00%	0.27	OK	
	Wi180 at 0.00%	0.07	OK	
	Wi210 at 0.00%	0.04	OK	
78	LC1 at 100.00%	2.17	N.G.	
	LC10 at 0.00%	0.26	With warnings	
	LC11 at 0.00%	0.14	With warnings	
	LC12 at 66.67%	0.04	With warnings	
	LC13 at 35.42%	0.02	With warnings	
	LC14 at 35.42%	0.01	With warnings	
	LC2 at 0.00%	**2.41**	**N.G.**	Eq. H1-1a
	LC3 at 0.00%	1.21	N.G.	
	LC4 at 64.58%	0.54	With warnings	
	LC5 at 100.00%	2.18	N.G.	Eq. H1-1a
	LC6 at 0.00%	2.40	N.G.	
	LC7 at 0.00%	1.20	N.G.	
	LC8 at 64.58%	0.63	With warnings	Eq. H1-1a
	LC9 at 66.67%	0.15	With warnings	
	W180 at 33.33%	0.74	With warnings	
	W210 at 64.58%	0.57	With warnings	
	Wi180 at 35.42%	0.14	With warnings	
	Wi210 at 35.42%	0.05	With warnings	
79	LC1 at 66.67%	3.32	N.G.	Eq. H1-1a

	LC10 at 64.58%	1.06	N.G.	Eq. H1-1a
	LC11 at 64.58%	0.53	With warnings	
	LC12 at 35.42%	0.46	With warnings	
	LC13 at 64.58%	0.56	With warnings	
	LC14 at 64.58%	0.42	With warnings	
	LC2 at 64.58%	**4.46**	**N.G.**	Eq. H1-1a
	LC3 at 33.33%	1.32	N.G.	
	LC4 at 35.42%	0.41	With warnings	Eq. H1-1b
	LC5 at 66.67%	3.25	N.G.	
	LC6 at 64.58%	4.32	N.G.	
	LC7 at 33.33%	1.25	N.G.	
	LC8 at 35.42%	0.40	With warnings	
	LC9 at 35.42%	1.03	N.G.	
	W180 at 33.33%	0.64	With warnings	
	W210 at 35.42%	0.23	With warnings	
	Wi180 at 0.00%	0.08	With warnings	
	Wi210 at 35.42%	0.03	With warnings	
82	LC1 at 85.42%	0.37	OK	
	LC10 at 0.00%	0.10	OK	
	LC11 at 18.75%	0.07	OK	
	LC12 at 85.42%	0.06	OK	
	LC13 at 85.42%	0.04	OK	
	LC14 at 85.42%	0.03	OK	
	LC2 at 0.00%	0.62	OK	Eq. H1-1a
	LC3 at 85.42%	0.30	OK	
	LC4 at 0.00%	1.14	N.G.	
	LC5 at 85.42%	0.38	OK	
	LC6 at 0.00%	0.61	OK	
	LC7 at 85.42%	0.30	OK	
	LC8 at 0.00%	**1.17**	**N.G.**	Eq. H1-1a
	LC9 at 0.00%	0.10	OK	
	W180 at 85.42%	0.20	OK	
	W210 at 0.00%	0.80	OK	
	Wi180 at 0.00%	0.06	OK	
	Wi210 at 20.83%	0.09	OK	
83	LC1 at 64.58%	0.25	With warnings	
	LC10 at 35.42%	0.77	With warnings	
	LC11 at 64.58%	1.16	N.G.	Eq. H1-1a
	LC12 at 64.58%	0.73	With warnings	
	LC13 at 64.58%	0.54	With warnings	
	LC14 at 64.58%	0.40	With warnings	
	LC2 at 66.67%	2.59	N.G.	Eq. H1-1a
	LC3 at 64.58%	**4.41**	**N.G.**	Eq. H1-1a
	LC4 at 33.33%	2.31	N.G.	Eq. H1-1a
	LC5 at 64.58%	0.24	With warnings	
	LC6 at 66.67%	2.53	N.G.	
	LC7 at 64.58%	4.28	N.G.	
	LC8 at 33.33%	2.25	N.G.	
	LC9 at 64.58%	0.32	With warnings	
	W180 at 64.58%	2.42	N.G.	
	W210 at 33.33%	1.27	N.G.	
	Wi180 at 64.58%	0.47	With warnings	
	Wi210 at 0.00%	0.15	With warnings	
84	LC1 at 64.58%	1.43	N.G.	
	LC10 at 66.67%	0.06	With warnings	
	LC11 at 66.67%	0.10	With warnings	
	LC12 at 0.00%	0.14	With warnings	
	LC13 at 64.58%	0.02	With warnings	
	LC14 at 64.58%	0.01	With warnings	
	LC2 at 100.00%	1.85	N.G.	
	LC3 at 100.00%	0.93	With warnings	

	LC4 at 0.00%	1.53	N.G.	Eq. H1-1a
	LC5 at 64.58%	1.52	N.G.	Eq. H1-1a
	LC6 at 100.00%	**1.87**	**N.G.**	Eq. H1-1a
	LC7 at 100.00%	0.95	With warnings	
	LC8 at 0.00%	1.52	N.G.	
	LC9 at 64.58%	0.07	With warnings	
	W180 at 100.00%	0.63	With warnings	
	W210 at 0.00%	0.94	With warnings	
	Wi180 at 66.67%	0.19	With warnings	
	Wi210 at 0.00%	0.11	With warnings	
87	LC1 at 18.75%	0.95	OK	
	LC10 at 18.75%	0.07	OK	
	LC11 at 85.42%	0.10	OK	
	LC12 at 18.75%	0.07	OK	
	LC13 at 18.75%	0.05	OK	
	LC14 at 18.75%	0.04	OK	
	LC2 at 100.00%	0.49	OK	
	LC3 at 0.00%	0.43	OK	Eq. H1-1a
	LC4 at 18.75%	0.25	OK	
	LC5 at 18.75%	**0.98**	**OK**	Eq. H1-1a
	LC6 at 100.00%	0.51	OK	
	LC7 at 0.00%	0.42	OK	
	LC8 at 18.75%	0.24	OK	
	LC9 at 0.00%	0.06	OK	
	W180 at 18.75%	0.21	OK	
	W210 at 18.75%	0.14	OK	
	Wi180 at 0.00%	0.07	OK	
	Wi210 at 18.75%	0.02	OK	
88	LC1 at 20.83%	0.94	OK	
	LC10 at 18.75%	0.06	OK	
	LC11 at 0.00%	0.10	OK	
	LC12 at 0.00%	0.06	OK	
	LC13 at 18.75%	0.04	OK	
	LC14 at 18.75%	0.03	OK	
	LC2 at 0.00%	0.24	OK	
	LC3 at 18.75%	0.42	OK	Eq. H1-1a
	LC4 at 100.00%	0.56	OK	
	LC5 at 20.83%	**0.96**	**OK**	Eq. H1-1a
	LC6 at 0.00%	0.24	OK	
	LC7 at 18.75%	0.42	OK	
	LC8 at 100.00%	0.58	OK	
	LC9 at 18.75%	0.05	OK	
	W180 at 18.75%	0.20	OK	
	W210 at 0.00%	0.39	OK	
	Wi180 at 20.83%	0.05	OK	
	Wi210 at 20.83%	0.04	OK	
89	LC1 at 100.00%	0.30	OK	
	LC10 at 100.00%	0.11	OK	
	LC11 at 0.00%	0.12	OK	
	LC12 at 0.00%	0.08	OK	
	LC13 at 0.00%	0.07	OK	
	LC14 at 0.00%	0.06	OK	
	LC2 at 100.00%	**0.76**	**OK**	Eq. H1-1a
	LC3 at 0.00%	0.51	OK	
	LC4 at 0.00%	0.38	OK	Eq. H1-1b
	LC5 at 100.00%	0.29	OK	
	LC6 at 100.00%	0.74	OK	
	LC7 at 0.00%	0.49	OK	
	LC8 at 0.00%	0.37	OK	
	LC9 at 100.00%	0.11	OK	
	W180 at 100.00%	0.16	OK	Eq. H1-1b

	W210 at 100.00%	0.25	OK	
	Wi180 at 100.00%	0.07	OK	
	Wi210 at 100.00%	0.03	OK	
90	LC1 at 100.00%	0.30	OK	
	LC10 at 0.00%	0.08	OK	
	LC11 at 0.00%	0.11	OK	Eq. H1-1b
	LC12 at 100.00%	0.12	OK	Eq. H1-1b
	LC13 at 100.00%	0.07	OK	
	LC14 at 100.00%	0.06	OK	
	LC2 at 0.00%	0.40	OK	Eq. H1-1b
	LC3 at 0.00%	0.52	OK	
	LC4 at 100.00%	**0.80**	**OK**	Eq. H1-1a
	LC5 at 100.00%	0.29	OK	
	LC6 at 0.00%	0.39	OK	
	LC7 at 0.00%	0.49	OK	
	LC8 at 100.00%	0.77	OK	
	LC9 at 100.00%	0.11	OK	
	W180 at 0.00%	0.21	OK	
	W210 at 100.00%	0.44	OK	
	Wi180 at 0.00%	0.07	OK	
	Wi210 at 100.00%	0.04	OK	
91	LC1 at 0.00%	**0.64**	**OK**	Eq. H1-1a
	LC10 at 100.00%	0.10	OK	
	LC11 at 100.00%	0.11	OK	
	LC12 at 0.00%	0.10	OK	
	LC13 at 100.00%	0.08	OK	
	LC14 at 100.00%	0.06	OK	
	LC2 at 100.00%	0.41	OK	
	LC3 at 0.00%	0.24	OK	
	LC4 at 0.00%	0.44	OK	
	LC5 at 0.00%	0.62	OK	
	LC6 at 100.00%	0.40	OK	
	LC7 at 0.00%	0.23	OK	
	LC8 at 0.00%	0.42	OK	
	LC9 at 0.00%	0.12	OK	Eq. H1-2
	W180 at 0.00%	0.13	OK	
	W210 at 0.00%	0.23	OK	
	Wi180 at 100.00%	0.06	OK	
	Wi210 at 0.00%	0.03	OK	
92	LC1 at 0.00%	0.33	OK	
	LC10 at 0.00%	0.14	OK	
	LC11 at 0.00%	0.21	OK	
	LC12 at 0.00%	0.11	OK	
	LC13 at 0.00%	0.01	OK	
	LC14 at 0.00%	0.01	OK	
	LC2 at 0.00%	1.42	N.G.	Eq. H1-1b
	LC3 at 0.00%	0.31	OK	
	LC4 at 0.00%	1.43	N.G.	
	LC5 at 0.00%	0.33	OK	
	LC6 at 0.00%	1.42	N.G.	
	LC7 at 0.00%	0.32	OK	
	LC8 at 0.00%	**1.43**	**N.G.**	Eq. H1-1b
	LC9 at 0.00%	0.23	OK	
	W180 at 0.00%	0.20	OK	
	W210 at 0.00%	0.90	OK	
	Wi180 at 0.00%	0.21	OK	
	Wi210 at 0.00%	0.12	OK	
93	LC1 at 0.00%	0.67	OK	
	LC10 at 0.00%	0.16	OK	
	LC11 at 0.00%	0.29	OK	

	LC12 at 0.00%	0.19	OK	
	LC13 at 0.00%	0.07	OK	Eq. H1-1b
	LC14 at 0.00%	0.05	OK	
	LC2 at 0.00%	1.10	N.G.	
	LC3 at 0.00%	0.51	OK	
	LC4 at 0.00%	**1.27**	**N.G.**	Eq. H1-1b
	LC5 at 0.00%	0.65	OK	
	LC6 at 0.00%	1.11	N.G.	
	LC7 at 0.00%	0.50	OK	
	LC8 at 0.00%	1.25	N.G.	
	LC9 at 0.00%	0.32	OK	
	W180 at 0.00%	0.29	OK	
	W210 at 0.00%	0.75	OK	
	Wi180 at 0.00%	0.23	OK	
	Wi210 at 0.00%	0.10	OK	
94	LC1 at 100.00%	0.69	OK	Eq. H1-1b
	LC10 at 0.00%	0.09	OK	
	LC11 at 0.00%	0.27	OK	
	LC12 at 0.00%	0.09	OK	
	LC13 at 0.00%	0.02	OK	
	LC14 at 0.00%	0.01	OK	
	LC2 at 0.00%	0.82	OK	
	LC3 at 0.00%	0.69	OK	
	LC4 at 0.00%	**0.84**	**OK**	Eq. H1-1b
	LC5 at 100.00%	0.69	OK	
	LC6 at 0.00%	0.82	OK	
	LC7 at 0.00%	0.69	OK	
	LC8 at 0.00%	0.83	OK	
	LC9 at 0.00%	0.24	OK	
	W180 at 100.00%	0.42	OK	
	W210 at 0.00%	0.52	OK	
	Wi180 at 0.00%	0.26	OK	
	Wi210 at 0.00%	0.07	OK	
95	LC1 at 0.00%	0.55	OK	
	LC10 at 0.00%	0.19	OK	
	LC11 at 0.00%	0.31	OK	
	LC12 at 0.00%	0.17	OK	
	LC13 at 0.00%	0.08	OK	Eq. H1-1b
	LC14 at 0.00%	0.06	OK	
	LC2 at 0.00%	**1.28**	**N.G.**	Eq. H1-1a
	LC3 at 0.00%	0.44	OK	
	LC4 at 0.00%	1.09	N.G.	Eq. H1-1b
	LC5 at 0.00%	0.53	OK	
	LC6 at 0.00%	1.26	N.G.	
	LC7 at 0.00%	0.45	OK	
	LC8 at 0.00%	1.08	N.G.	
	LC9 at 0.00%	0.31	OK	
	W180 at 0.00%	0.30	OK	
	W210 at 0.00%	0.69	OK	
	Wi180 at 0.00%	0.23	OK	
	Wi210 at 0.00%	0.10	OK	
96	LC1 at 0.00%	0.76	OK	
	LC10 at 100.00%	0.11	OK	
	LC11 at 0.00%	0.25	OK	
	LC12 at 0.00%	0.15	OK	
	LC13 at 0.00%	0.02	OK	
	LC14 at 0.00%	0.01	OK	
	LC2 at 0.00%	1.47	N.G.	
	LC3 at 0.00%	0.74	OK	
	LC4 at 0.00%	1.48	N.G.	Eq. H1-1b
	LC5 at 0.00%	0.76	OK	

	LC6 at 0.00%	**1.48**	**N.G.**	Eq. H1-1b
	LC7 at 0.00%	0.74	OK	
	LC8 at 0.00%	1.47	N.G.	
	LC9 at 0.00%	0.29	OK	
	W180 at 0.00%	0.47	OK	
	W210 at 0.00%	0.91	OK	
	Wi180 at 0.00%	0.27	OK	
	Wi210 at 0.00%	0.13	OK	
97	LC1 at 100.00%	0.77	OK	
	LC10 at 100.00%	0.21	OK	
	LC11 at 100.00%	0.31	OK	
	LC12 at 100.00%	0.18	OK	
	LC13 at 100.00%	0.08	OK	Eq. H1-1b
	LC14 at 100.00%	0.06	OK	
	LC2 at 100.00%	**1.29**	**N.G.**	Eq. H1-1a
	LC3 at 100.00%	0.56	OK	
	LC4 at 100.00%	1.12	N.G.	
	LC5 at 100.00%	0.74	OK	
	LC6 at 100.00%	1.27	N.G.	
	LC7 at 100.00%	0.55	OK	
	LC8 at 100.00%	1.13	N.G.	
	LC9 at 100.00%	0.35	OK	
	W180 at 100.00%	0.33	OK	
	W210 at 100.00%	0.74	OK	
	Wi180 at 100.00%	0.24	OK	
	Wi210 at 100.00%	0.10	OK	
98	LC1 at 0.00%	0.71	OK	Eq. H1-1b
	LC10 at 100.00%	0.10	OK	
	LC11 at 100.00%	0.27	OK	
	LC12 at 100.00%	0.08	OK	
	LC13 at 100.00%	0.02	OK	
	LC14 at 100.00%	0.01	OK	
	LC2 at 100.00%	**0.85**	**OK**	Eq. H1-1b
	LC3 at 100.00%	0.68	OK	
	LC4 at 100.00%	0.82	OK	
	LC5 at 0.00%	0.71	OK	
	LC6 at 100.00%	0.84	OK	
	LC7 at 0.00%	0.68	OK	Eq. H1-1b
	LC8 at 100.00%	0.82	OK	
	LC9 at 100.00%	0.24	OK	
	W180 at 0.00%	0.43	OK	
	W210 at 100.00%	0.52	OK	
	Wi180 at 100.00%	0.26	OK	
	Wi210 at 100.00%	0.07	OK	
99	LC1 at 0.00%	0.56	OK	
	LC10 at 0.00%	0.17	OK	
	LC11 at 0.00%	0.32	OK	
	LC12 at 0.00%	0.20	OK	
	LC13 at 0.00%	0.08	OK	Eq. H1-1b
	LC14 at 0.00%	0.06	OK	
	LC2 at 0.00%	1.08	N.G.	
	LC3 at 0.00%	0.43	OK	
	LC4 at 0.00%	**1.30**	**N.G.**	Eq. H1-1a
	LC5 at 0.00%	0.54	OK	
	LC6 at 0.00%	1.07	N.G.	
	LC7 at 0.00%	0.44	OK	
	LC8 at 0.00%	1.27	N.G.	
	LC9 at 0.00%	0.33	OK	
	W180 at 0.00%	0.30	OK	
	W210 at 0.00%	0.73	OK	
	Wi180 at 0.00%	0.23	OK	

	Wi210 at 0.00%	0.10	OK	
100	LC1 at 0.00%	0.78	OK	
	LC10 at 100.00%	0.11	OK	
	LC11 at 0.00%	0.26	OK	
	LC12 at 0.00%	0.15	OK	
	LC13 at 0.00%	0.01	OK	
	LC14 at 0.00%	0.01	OK	
	LC2 at 0.00%	1.47	N.G.	
	LC3 at 0.00%	0.76	OK	
	LC4 at 0.00%	**1.48**	**N.G.**	Eq. H1-1b
	LC5 at 0.00%	0.77	OK	
	LC6 at 0.00%	1.47	N.G.	Eq. H1-1b
	LC7 at 0.00%	0.77	OK	
	LC8 at 0.00%	1.47	N.G.	
	LC9 at 0.00%	0.29	OK	
	W180 at 0.00%	0.49	OK	
	W210 at 0.00%	0.91	OK	
	Wi180 at 0.00%	0.27	OK	
	Wi210 at 0.00%	0.13	OK	
101	LC1 at 0.00%	0.50	OK	
	LC10 at 0.00%	0.18	OK	
	LC11 at 0.00%	0.34	OK	
	LC12 at 0.00%	0.18	OK	
	LC13 at 0.00%	0.08	OK	Eq. H1-1b
	LC14 at 0.00%	0.06	OK	
	LC2 at 0.00%	**1.19**	**N.G.**	Eq. H1-1b
	LC3 at 0.00%	0.79	OK	
	LC4 at 0.00%	1.14	N.G.	
	LC5 at 0.00%	0.52	OK	
	LC6 at 0.00%	1.18	N.G.	
	LC7 at 0.00%	0.77	OK	
	LC8 at 0.00%	1.15	N.G.	
	LC9 at 0.00%	0.29	OK	
	W180 at 0.00%	0.39	OK	
	W210 at 0.00%	0.74	OK	
	Wi180 at 0.00%	0.25	OK	
	Wi210 at 0.00%	0.10	OK	
102	LC1 at 100.00%	0.44	OK	
	LC10 at 0.00%	0.14	OK	
	LC11 at 0.00%	0.21	OK	
	LC12 at 100.00%	0.11	OK	
	LC13 at 0.00%	0.01	OK	
	LC14 at 0.00%	0.01	OK	
	LC2 at 0.00%	**1.46**	**N.G.**	Eq. H1-1b
	LC3 at 100.00%	0.46	OK	
	LC4 at 0.00%	1.45	N.G.	
	LC5 at 100.00%	0.44	OK	
	LC6 at 0.00%	1.45	N.G.	
	LC7 at 100.00%	0.46	OK	
	LC8 at 0.00%	1.46	N.G.	Eq. H1-1b
	LC9 at 0.00%	0.24	OK	
	W180 at 100.00%	0.29	OK	
	W210 at 0.00%	0.92	OK	
	Wi180 at 0.00%	0.22	OK	
	Wi210 at 0.00%	0.13	OK	
103	LC1 at 0.00%	0.47	OK	
	LC10 at 0.00%	0.19	OK	
	LC11 at 0.00%	0.34	OK	
	LC12 at 0.00%	0.18	OK	
	LC13 at 0.00%	0.08	OK	Eq. H1-1b

	LC14 at 0.00%	0.06	OK	
	LC2 at 0.00%	1.15	N.G.	Eq. H1-1b
	LC3 at 0.00%	0.77	OK	
	LC4 at 0.00%	**1.17**	**N.G.**	Eq. H1-1b
	LC5 at 0.00%	0.49	OK	
	LC6 at 0.00%	1.14	N.G.	
	LC7 at 0.00%	0.74	OK	
	LC8 at 0.00%	1.16	N.G.	
	LC9 at 0.00%	0.30	OK	
	W180 at 0.00%	0.37	OK	
	W210 at 0.00%	0.71	OK	
	Wi180 at 0.00%	0.24	OK	
	Wi210 at 0.00%	0.09	OK	
104	LC1 at 0.00%	0.51	OK	
	LC10 at 0.00%	0.10	OK	
	LC11 at 0.00%	0.18	OK	
	LC12 at 0.00%	0.12	OK	
	LC13 at 0.00%	0.08	OK	
	LC14 at 0.00%	0.06	OK	
	LC2 at 0.00%	0.40	OK	
	LC3 at 0.00%	0.44	OK	
	LC4 at 0.00%	0.47	OK	Eq. H1-1b
	LC5 at 0.00%	**0.57**	**OK**	Eq. H1-1a
	LC6 at 0.00%	0.39	OK	
	LC7 at 0.00%	0.42	OK	
	LC8 at 0.00%	0.45	OK	
	LC9 at 0.00%	0.15	OK	
	W180 at 0.00%	0.19	OK	
	W210 at 0.00%	0.26	OK	
	Wi180 at 0.00%	0.11	OK	
	Wi210 at 0.00%	0.04	OK	
105	LC1 at 12.50%	0.19	OK	
	LC10 at 0.00%	0.11	OK	
	LC11 at 0.00%	0.14	OK	
	LC12 at 0.00%	0.09	OK	
	LC13 at 0.00%	0.06	OK	
	LC14 at 0.00%	0.05	OK	
	LC2 at 0.00%	0.60	OK	Eq. H1-1b
	LC3 at 0.00%	0.20	OK	
	LC4 at 0.00%	0.70	OK	
	LC5 at 18.75%	0.18	OK	
	LC6 at 0.00%	0.60	OK	
	LC7 at 0.00%	0.32	OK	
	LC8 at 0.00%	**0.75**	**OK**	Eq. H1-1a
	LC9 at 0.00%	0.16	OK	
	W180 at 12.50%	0.29	OK	
	W210 at 0.00%	0.55	OK	
	Wi180 at 0.00%	0.11	OK	
	Wi210 at 0.00%	0.06	OK	
106	LC1 at 0.00%	0.25	OK	
	LC10 at 0.00%	0.12	OK	
	LC11 at 0.00%	0.17	OK	
	LC12 at 0.00%	0.11	OK	
	LC13 at 0.00%	0.07	OK	
	LC14 at 0.00%	0.05	OK	
	LC2 at 0.00%	0.70	OK	Eq. H1-1a
	LC3 at 0.00%	0.23	OK	
	LC4 at 0.00%	0.80	OK	
	LC5 at 0.00%	0.24	OK	
	LC6 at 0.00%	0.69	OK	
	LC7 at 0.00%	0.23	OK	

	LC8 at 0.00%	**0.85**	**OK**	Eq. H1-1a
	LC9 at 0.00%	0.15	OK	
	W180 at 0.00%	0.19	OK	
	W210 at 0.00%	0.63	OK	
	Wi180 at 0.00%	0.11	OK	
	Wi210 at 0.00%	0.06	OK	
107	LC1 at 0.00%	0.33	OK	
	LC10 at 0.00%	0.11	OK	
	LC11 at 0.00%	0.16	OK	
	LC12 at 0.00%	0.11	OK	
	LC13 at 0.00%	0.07	OK	
	LC14 at 0.00%	0.05	OK	
	LC2 at 0.00%	0.85	OK	
	LC3 at 0.00%	0.29	OK	
	LC4 at 0.00%	0.72	OK	Eq. H1-1a
	LC5 at 0.00%	0.33	OK	
	LC6 at 0.00%	**0.90**	**OK**	Eq. H1-1a
	LC7 at 0.00%	0.31	OK	
	LC8 at 0.00%	0.71	OK	
	LC9 at 0.00%	0.17	OK	
	W180 at 0.00%	0.24	OK	
	W210 at 0.00%	0.41	OK	
	Wi180 at 0.00%	0.11	OK	
	Wi210 at 0.00%	0.05	OK	
108	LC1 at 0.00%	0.36	OK	
	LC10 at 0.00%	0.11	OK	
	LC11 at 0.00%	0.17	OK	
	LC12 at 0.00%	0.13	OK	
	LC13 at 0.00%	0.08	OK	
	LC14 at 0.00%	0.06	OK	
	LC2 at 0.00%	0.61	OK	
	LC3 at 0.00%	0.34	OK	
	LC4 at 0.00%	0.66	OK	Eq. H1-1a
	LC5 at 0.00%	0.35	OK	
	LC6 at 0.00%	**0.69**	**OK**	Eq. H1-1a
	LC7 at 0.00%	0.37	OK	
	LC8 at 0.00%	0.60	OK	
	LC9 at 0.00%	0.18	OK	
	W180 at 0.00%	0.37	OK	
	W210 at 0.00%	0.36	OK	
	Wi180 at 0.00%	0.13	OK	
	Wi210 at 0.00%	0.05	OK	
109	LC1 at 0.00%	0.66	OK	
	LC10 at 0.00%	0.11	OK	
	LC11 at 0.00%	0.17	OK	
	LC12 at 0.00%	0.09	OK	
	LC13 at 0.00%	0.06	OK	
	LC14 at 0.00%	0.05	OK	
	LC2 at 0.00%	0.46	OK	
	LC3 at 0.00%	0.48	OK	Eq. H1-1a
	LC4 at 0.00%	0.39	OK	
	LC5 at 0.00%	**0.70**	**OK**	Eq. H1-1a
	LC6 at 0.00%	0.45	OK	
	LC7 at 0.00%	0.47	OK	
	LC8 at 0.00%	0.38	OK	
	LC9 at 0.00%	0.16	OK	
	W180 at 0.00%	0.23	OK	
	W210 at 0.00%	0.27	OK	
	Wi180 at 0.00%	0.12	OK	
	Wi210 at 0.00%	0.04	OK	

234	LC1 at 0.00%	**2.38**	**N.G.**	Eq. H1-1a
	LC10 at 0.00%	0.10	With warnings	
	LC11 at 66.67%	0.12	With warnings	
	LC12 at 66.67%	0.13	With warnings	
	LC13 at 0.00%	0.02	With warnings	
	LC14 at 0.00%	0.02	With warnings	
	LC2 at 33.33%	0.76	With warnings	
	LC3 at 66.67%	1.54	N.G.	
	LC4 at 100.00%	2.34	N.G.	
	LC5 at 0.00%	2.37	N.G.	
	LC6 at 35.42%	0.82	With warnings	Eq. H1-1a
	LC7 at 66.67%	1.56	N.G.	
	LC8 at 100.00%	2.35	N.G.	Eq. H1-1a
	LC9 at 0.00%	0.56	With warnings	
	W180 at 66.67%	1.00	N.G.	
	W210 at 100.00%	1.49	N.G.	
	Wi180 at 66.67%	0.19	With warnings	
	Wi210 at 66.67%	0.20	With warnings	

Geometry data

GLOSSARY

Cb22, Cb33	: Moment gradient coefficients
Cm22, Cm33	: Coefficients applied to bending term in interaction formula
d0	: Tapered member section depth at J end of member
DJX	: Rigid end offset distance measured from J node in axis X
DJY	: Rigid end offset distance measured from J node in axis Y
DJZ	: Rigid end offset distance measured from J node in axis Z
DKX	: Rigid end offset distance measured from K node in axis X
DKY	: Rigid end offset distance measured from K node in axis Y
DKZ	: Rigid end offset distance measured from K node in axis Z
dL	: Tapered member section depth at K end of member
Ig factor	: Inertia reduction factor (Effective Inertia/Gross Inertia) for reinforced concrete members
K22	: Effective length factor about axis 2
K33	: Effective length factor about axis 3
L22	: Member length for calculation of axial capacity
L33	: Member length for calculation of axial capacity
LB pos	: Lateral unbraced length of the compression flange in the positive side of local axis 2
LB neg	: Lateral unbraced length of the compression flange in the negative side of local axis 2
RX	: Rotation about X
RY	: Rotation about Y
RZ	: Rotation about Z
TO	: 1 = Tension only member 0 = Normal member
TX	: Translation in X
TY	: Translation in Y
TZ	: Translation in Z

Nodes

Node	X [ft]	Y [ft]	Z [ft]	Rigid Floor
5	1.7083	0.00	3.1755	0
6	-1.7083	0.00	3.1755	0
10	1.7083	3.33	3.1755	0
12	0.00	3.33	0.00	0
17	1.7083	0.50	3.1755	0
18	-1.7083	0.50	3.1755	0
21	-1.7083	2.6667	3.1755	0
22	1.7083	2.6667	3.1755	0
26	0.00	0.00	0.00	0
117	-5.50	0.00	3.1754	0
119	-3.6042	0.00	-0.1083	0
120	-1.8959	0.00	-3.0672	0
124	-3.6042	3.33	-0.1083	0
125	-5.50	3.33	3.1754	0
127	-5.50	0.50	3.1754	0
129	-3.6042	0.50	-0.1083	0
130	-1.8959	0.50	-3.0672	0
133	-1.8959	2.6667	-3.0672	0
134	-3.6042	2.6667	-0.1083	0
135	-5.50	2.6667	3.1754	0
237	2.90E-05	0.00	-6.3509	0
238	5.50	0.00	3.1754	0

239	1.8959	0.00	-3.0672	0
240	3.6042	0.00	-0.1083	0
241	5.50	3.33	3.1754	0
243	3.6042	3.33	-0.1083	0
244	1.8959	3.33	-3.0672	0
245	2.90E-05	3.33	-6.3509	0
247	2.90E-05	0.50	-6.3509	0
248	5.50	0.50	3.1754	0
249	1.8959	0.50	-3.0672	0
250	3.6042	0.50	-0.1083	0
251	5.50	2.6667	3.1754	0
253	3.6042	2.6667	-0.1083	0
254	1.8959	2.6667	-3.0672	0
255	2.90E-05	2.6667	-6.3509	0
280	-0.75	3.33	0.00	0
281	-0.75	0.00	0.00	0
282	0.75	3.33	0.00	0
283	0.75	0.00	0.00	0
284	0.375	3.33	0.6495	0
285	0.375	0.00	0.6495	0
286	-0.375	3.33	0.6495	0
287	-0.375	0.00	0.6495	0
288	0.375	3.33	-0.6495	0
289	0.375	0.00	-0.6495	0
290	-0.375	3.33	-0.6495	0
291	-0.375	0.00	-0.6495	0
302	6.4952	3.33	3.75	0
303	6.4952	0.00	3.75	0
304	6.4952	5.208	3.75	0
305	6.4952	-0.50	3.75	0
396	-1.8959	3.33	-3.0672	0
421	5.3125	2.6667	2.8507	0
423	5.3125	0.50	2.8507	0
424	5.4857	2.6667	2.7507	0
426	5.4857	0.50	2.7507	0
427	5.4857	6.708	2.7507	0
428	5.4857	-1.292	2.7507	0
429	-1.7083	3.33	3.1755	0
438	2.75	2.6667	-1.5877	0
440	2.75	0.50	-1.5877	0
441	2.9232	2.6667	-1.6877	0
443	2.9232	0.50	-1.6877	0
444	2.9232	6.708	-1.6877	0
445	2.9232	-1.292	-1.6877	0
446	0.1875	2.6667	-6.0261	0
448	0.1875	0.50	-6.0261	0
449	0.3607	2.6667	-6.1261	0
451	0.3607	0.50	-6.1261	0
452	0.3607	5.708	-6.1261	0
453	0.3607	-0.292	-6.1261	0
458	-6.4952	3.33	3.75	0
459	-6.4952	0.00	3.75	0
460	-6.4952	5.208	3.75	0
461	-6.4952	-0.50	3.75	0
462	2.90E-05	3.33	-7.50	0
463	2.90E-05	0.00	-7.50	0
464	2.90E-05	5.208	-7.50	0
465	2.90E-05	-0.50	-7.50	0
502	-0.1875	2.6667	-6.0261	0
503	-0.1875	0.50	-6.0261	0

504	-0.3607	2.6667	-6.1261	0
505	-0.3607	0.50	-6.1261	0
506	-0.3607	6.708	-6.1261	0
507	-0.3607	-1.292	-6.1261	0
508	-2.75	2.6667	-1.5877	0
509	-2.75	0.50	-1.5877	0
510	-2.9232	2.6667	-1.6877	0
511	-2.9232	0.50	-1.6877	0
512	-2.9232	6.708	-1.6877	0
513	-2.9232	-1.292	-1.6877	0
514	-5.3125	2.6667	2.8507	0
515	-5.3125	0.50	2.8507	0
516	-5.4857	2.6667	2.7507	0
517	-5.4857	0.50	2.7507	0
518	-5.4857	5.708	2.7507	0
519	-5.4857	-0.292	2.7507	0
520	-5.125	2.6667	3.1754	0
521	-5.125	0.50	3.1754	0
522	-5.125	2.6667	3.3754	0
523	-5.125	0.50	3.3754	0
524	-5.125	5.708	3.3754	0
525	-5.125	-0.292	3.3754	0
526	0.00	2.6667	3.1754	0
527	0.00	0.50	3.1754	0
528	0.00	2.6667	3.3754	0
529	0.00	0.50	3.3754	0
530	0.00	5.708	3.3754	0
531	0.00	-0.292	3.3754	0
532	5.125	2.6667	3.1754	0
533	5.125	0.50	3.1754	0
534	5.125	2.6667	3.3754	0
535	5.125	0.50	3.3754	0
536	5.125	5.708	3.3754	0
537	5.125	-0.292	3.3754	0
538	3.125	2.6667	-0.9382	0
539	3.125	0.50	-0.9382	0
544	-2.375	0.50	-2.2372	0
545	-2.375	2.6667	-2.2372	0
546	-0.75	0.50	3.1754	0
547	-0.75	2.6667	3.1754	0

Restraints

Node	TX	TY	TZ	RX	RY	RZ
280	1	1	1	1	1	1
281	1	1	1	1	1	1
282	1	1	1	1	1	1
283	1	1	1	1	1	1
284	1	1	1	1	1	1
285	1	1	1	1	1	1
286	1	1	1	1	1	1
287	1	1	1	1	1	1
288	1	1	1	1	1	1
289	1	1	1	1	1	1
290	1	1	1	1	1	1

291	1	1	1	1	1	1

Members

Member	NJ	NK	Description	Section	Material	d0 [in]	dL [in]	lg factor
3	429	6		STube 1x1x1/8	A36	0.00	0.00	0.00
4	10	5		STube 1x1x1/8	A36	0.00	0.00	0.00
34	396	120		STube 1x1x1/8	A36	0.00	0.00	0.00
35	124	119		STube 1x1x1/8	A36	0.00	0.00	0.00
37	125	117		C 3X6	A36	0.00	0.00	0.00
39	124	117		STube 1x1x1/8	A36	0.00	0.00	0.00
65	237	238		STube 1x1x1/8	A36	0.00	0.00	0.00
66	243	240		STube 1x1x1/8	A36	0.00	0.00	0.00
67	244	239		STube 1x1x1/8	A36	0.00	0.00	0.00
68	238	241		C 3X6	A36	0.00	0.00	0.00
69	245	237		C 3X6	A36	0.00	0.00	0.00
70	238	243		STube 1x1x1/8	A36	0.00	0.00	0.00
71	244	237		STube 1x1x1/8	A36	0.00	0.00	0.00
72	251	255		P 1-3/8x1-3/8	A36	0.00	0.00	0.00
73	248	247		P 1-3/8x1-3/8	A36	0.00	0.00	0.00
78	245	125		STube 1x1x1/8	A36	0.00	0.00	0.00
79	237	117		STube 1x1x1/8	A36	0.00	0.00	0.00
80	247	127		P 1-3/8x1-3/8	A36	0.00	0.00	0.00
81	255	135		P 1-3/8x1-3/8	A36	0.00	0.00	0.00
82	396	237		STube 1x1x1/8	A36	0.00	0.00	0.00
83	117	238		STube 1x1x1/8	A36	0.00	0.00	0.00
84	125	241		STube 1x1x1/8	A36	0.00	0.00	0.00
85	135	251		P 1-3/8x1-3/8	A36	0.00	0.00	0.00
86	127	248		P 1-3/8x1-3/8	A36	0.00	0.00	0.00
87	429	117		STube 1x1x1/8	A36	0.00	0.00	0.00
88	10	238		STube 1x1x1/8	A36	0.00	0.00	0.00
89	6	119		STube 1x1x1/8	A36	0.00	0.00	0.00
90	5	240		STube 1x1x1/8	A36	0.00	0.00	0.00
91	239	120		STube 1x1x1/8	A36	0.00	0.00	0.00
92	280	124		STube 1x1x1/8	A36	0.00	0.00	0.00
93	281	119		STube 1x1x1/8	A36	0.00	0.00	0.00
94	284	10		STube 1x1x1/8	A36	0.00	0.00	0.00
95	285	5		STube 1x1x1/8	A36	0.00	0.00	0.00
96	282	243		STube 1x1x1/8	A36	0.00	0.00	0.00
97	240	283		STube 1x1x1/8	A36	0.00	0.00	0.00
98	429	286		STube 1x1x1/8	A36	0.00	0.00	0.00
99	287	6		STube 1x1x1/8	A36	0.00	0.00	0.00
100	288	244		STube 1x1x1/8	A36	0.00	0.00	0.00
101	289	239		STube 1x1x1/8	A36	0.00	0.00	0.00
102	290	396		STube 1x1x1/8	A36	0.00	0.00	0.00
103	291	120		STube 1x1x1/8	A36	0.00	0.00	0.00
104	286	6		STube 1x1x1/8	A36	0.00	0.00	0.00
105	280	119		STube 1x1x1/8	A36	0.00	0.00	0.00
106	290	120		STube 1x1x1/8	A36	0.00	0.00	0.00
107	288	239		STube 1x1x1/8	A36	0.00	0.00	0.00
108	282	240		STube 1x1x1/8	A36	0.00	0.00	0.00
109	284	5		STube 1x1x1/8	A36	0.00	0.00	0.00
113	305	304		L 3X3X1_4	A53 GrB	0.00	0.00	0.00
208	427	428		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
216	444	445		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00

219	448	451	RndBar 1-1_2	A36	0.00	0.00	0.00
220	452	453	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
222	461	460	L 3X3X1_4	A53 GrB	0.00	0.00	0.00
223	465	464	L 3X3X1_4	A53 GrB	0.00	0.00	0.00
224	245	462	C 3X6	A36	0.00	0.00	0.00
225	237	463	C 3X6	A36	0.00	0.00	0.00
226	117	459	C 3X6	A36	0.00	0.00	0.00
227	125	458	C 3X6	A36	0.00	0.00	0.00
228	241	302	C 3X6	A36	0.00	0.00	0.00
229	238	303	C 3X6	A36	0.00	0.00	0.00
234	241	245	STube 1x1x1/8	A36	0.00	0.00	0.00
255	506	507	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
258	512	513	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
261	518	519	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
264	524	525	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
267	530	531	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
270	536	537	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
271	547	546	P 1-3/8x1-3/8	A36	0.00	0.00	0.00
272	545	544	P 1-3/8x1-3/8	A36	0.00	0.00	0.00
273	538	539	P 1-3/8x1-3/8	A36	0.00	0.00	0.00

Orientation of local axes

Member	Rotation [Deg]	Axes23	NX	NY	NZ
3	0.00	2	1.00	0.00	0.00
4	0.00	2	1.00	0.00	0.00
34	0.00	2	-0.50	0.00	0.866
35	0.00	2	-0.50	0.00	0.866
37	0.00	2	-0.50	0.00	-0.866
66	0.00	2	-0.50	0.00	-0.866
67	0.00	2	-0.50	0.00	-0.866
68	0.00	2	0.50	0.00	-0.866
69	0.00	2	1.00	0.00	0.00
72	270.00	0	0.00	0.00	0.00
73	270.00	0	0.00	0.00	0.00
80	270.00	0	0.00	0.00	0.00
81	270.00	0	0.00	0.00	0.00
85	270.00	0	0.00	0.00	0.00
86	270.00	0	0.00	0.00	0.00
113	0.00	2	-0.2588	0.00	-0.9659
208	0.00	2	-0.50	0.00	-0.866
216	0.00	2	-0.50	0.00	-0.866
220	0.00	2	-0.50	0.00	-0.866
222	0.00	2	0.9659	0.00	0.2588
223	45.00	0	0.00	0.00	0.00
224	90.00	0	0.00	0.00	0.00
225	270.00	0	0.00	0.00	0.00
226	270.00	0	0.00	0.00	0.00
227	90.00	0	0.00	0.00	0.00
228	90.00	0	0.00	0.00	0.00
229	270.00	0	0.00	0.00	0.00
255	0.00	2	-0.50	0.00	0.866
258	0.00	2	-0.50	0.00	0.866
261	0.00	2	-0.50	0.00	0.866
271	180.00	0	0.00	0.00	0.00

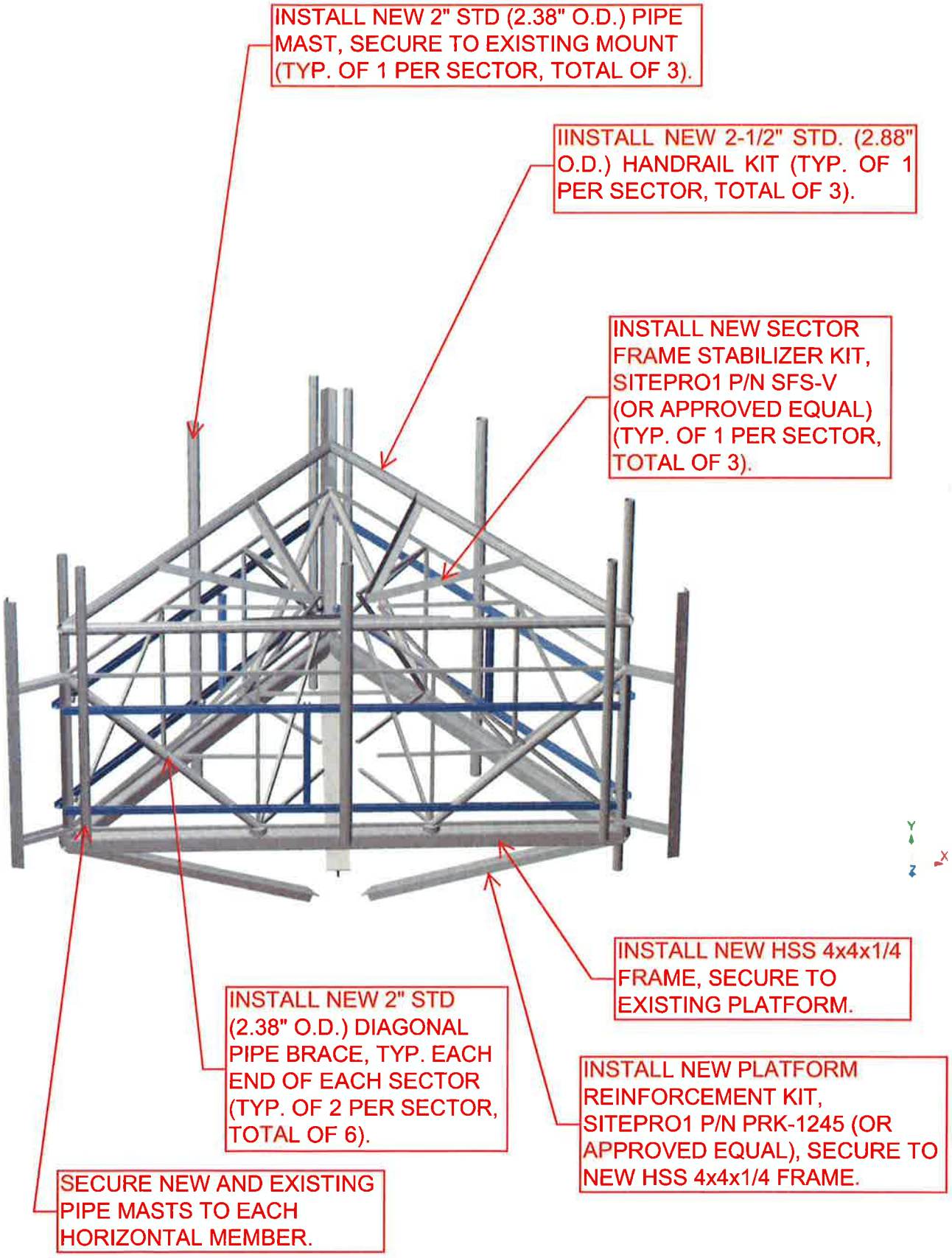
272	300.00	0	0.00	0.00	0.00
273	60.00	0	0.00	0.00	0.00

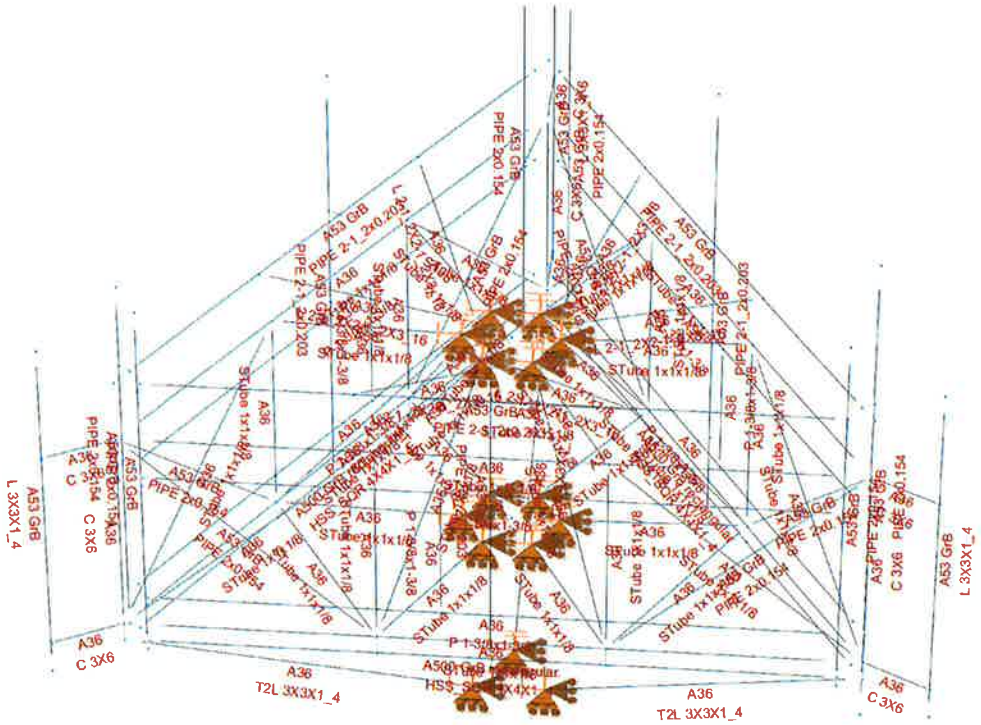
Rigid end offsets

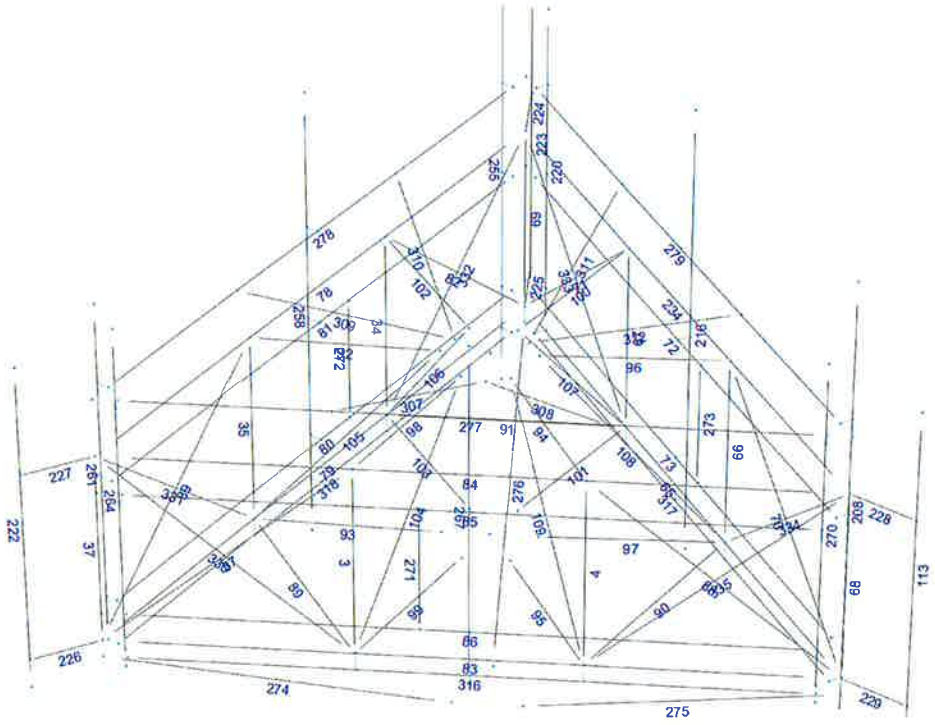
Member	DJX [in]	DJY [in]	DJZ [in]	DKX [in]	DKY [in]	DKZ [in]
72	1.4073	0.00	-0.8125	1.4073	0.00	-0.8125
73	1.4073	0.00	-0.8125	1.4073	0.00	-0.8125
80	-2.2198	0.00	-0.5948	-2.2198	0.00	-0.5948
81	-2.2198	0.00	-0.5948	-2.2198	0.00	-0.5948
85	-0.5948	0.00	2.2198	-1.4073	-1.625	0.8125
86	-0.5948	0.00	2.2198	-1.4073	-1.625	0.8125

HUDSON
Design Group LLC

Mount Calculations
(Proposed Conditions)

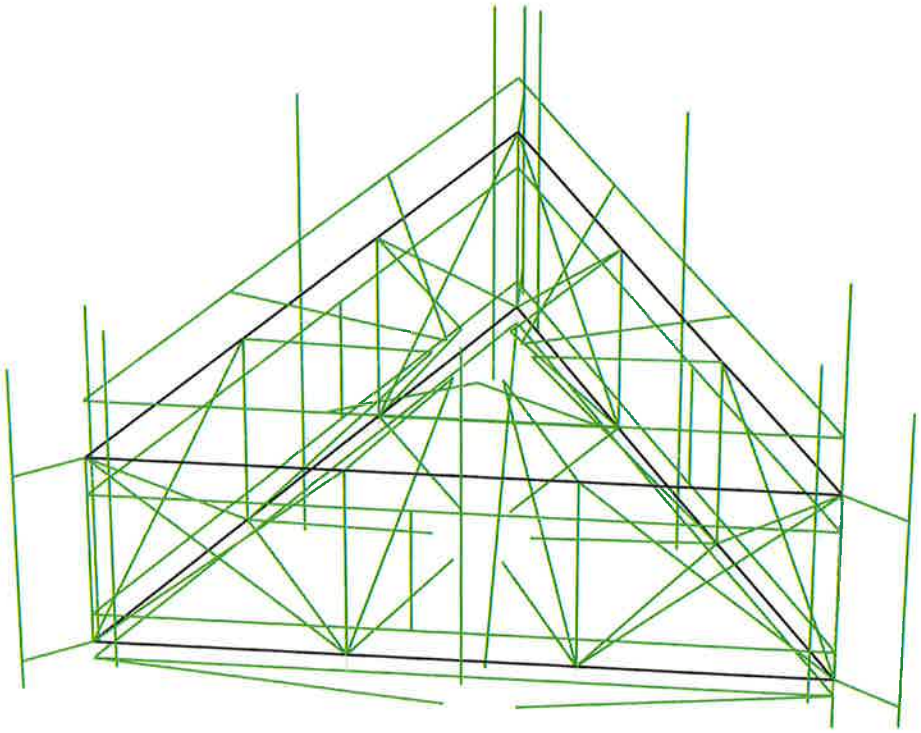

INSTALL NEW 2" STD (2.38" O.D.) PIPE MAST, SECURE TO EXISTING MOUNT (TYP. OF 1 PER SECTOR, TOTAL OF 3).
IINSTALL NEW 2-1/2" STD. (2.88" O.D.) HANDRAIL KIT (TYP. OF 1 PER SECTOR, TOTAL OF 3).
INSTALL NEW SECTOR FRAME STABILIZER KIT, SITEPRO1 P/N SFS-V (OR APPROVED EQUAL) (TYP. OF 1 PER SECTOR, TOTAL OF 3).
INSTALL NEW HSS 4x4x1/4 FRAME, SECURE TO EXISTING PLATFORM.
INSTALL NEW 2" STD (2.38" O.D.) DIAGONAL PIPE BRACE, TYP. EACH END OF EACH SECTOR (TYP. OF 2 PER SECTOR, TOTAL OF 6).
INSTALL NEW PLATFORM REINFORCEMENT KIT, SITEPRO1 P/N PRK-1245 (OR APPROVED EQUAL), SECURE TO NEW HSS 4x4x1/4 FRAME.
SECURE NEW AND EXISTING PIPE MASTS TO EACH HORIZONTAL MEMBER.
Y
X
Z


A53 GrB
A36
C 3X6
L 3X3X1_4
T2L 3X3X1_4
STube 1x1x1/8
PIPE 2x0.154
PIPE 2-1_2x0.203
Y
X


Y
X
Z

Design status

- Not designed
- Error on design
- Design O.K.
- With warnings



Current Date: 3/19/2018 6:20 PM
Units system: English
File name: W:\STRUCTURAL DEPARTMENT\ANALYSIS SOFTWARE\RAM Elements\RAM Projects\AT&T\CT\CT2046\CT2046 (MOD.).etz\

Steel Code Check

Report: Summary - For all selected load conditions

Load conditions to be included in design :

W180=-W0
W210=-W30
Wi180=-Wi0
Wi210=-Wi30
LC1=1.2DL+1.6W0
LC2=1.2DL+1.6W30
LC3=1.2DL-1.6W0
LC4=1.2DL-1.6W30
LC5=0.9DL+1.6W0
LC6=0.9DL+1.6W30
LC7=0.9DL-1.6W0
LC8=0.9DL-1.6W30
LC9=1.2DL+Di+Wi0
LC10=1.2DL+Di+Wi30
LC11=1.2DL+Di-Wi0
LC12=1.2DL+Di-Wi30
LC13=1.2DL
LC14=0.9DL

Description	Section	Member	Ctrl Eq.	Ratio	Status	Reference
	C 3X6	**37**	LC1 at 18.75%	0.12	OK	Eq. H1-1b
			LC10 at 100.00%	0.02	OK	
			LC11 at 100.00%	0.03	OK	
			LC12 at 18.75%	0.01	OK	
			LC13 at 83.33%	0.01	OK	
			LC14 at 83.33%	0.01	OK	
			LC2 at 100.00%	**0.13**	**OK**	Eq. H1-1b
			LC3 at 18.75%	0.12	OK	
			LC4 at 100.00%	0.12	OK	
			LC5 at 18.75%	0.12	OK	
			LC6 at 100.00%	0.13	OK	
			LC7 at 18.75%	0.11	OK	
			LC8 at 100.00%	0.12	OK	
			LC9 at 18.75%	0.02	OK	
			W180 at 18.75%	0.07	OK	
			W210 at 100.00%	0.08	OK	
			Wi180 at 18.75%	0.01	OK	
			Wi210 at 100.00%	0.01	OK	
		68	LC1 at 0.00%	0.11	OK	
			LC10 at 16.67%	0.01	OK	
			LC11 at 79.17%	0.03	OK	
			LC12 at 0.00%	0.02	OK	
			LC13 at 16.67%	0.01	OK	
			LC14 at 16.67%	0.01	OK	
			LC2 at 0.00%	0.11	OK	
			LC3 at 0.00%	0.11	OK	
			LC4 at 0.00%	**0.12**	**OK**	Eq. H1-1b
			LC5 at 0.00%	0.11	OK	
			LC6 at 0.00%	0.11	OK	
			LC7 at 0.00%	0.11	OK	

	LC8 at 0.00%	0.11	OK	
	LC9 at 81.25%	0.02	OK	
	W180 at 0.00%	0.07	OK	
	W210 at 0.00%	0.07	OK	
	Wi180 at 0.00%	0.01	OK	
	Wi210 at 0.00%	0.01	OK	
69	LC1 at 100.00%	**0.16**	**OK**	Eq. H1-1b
	LC10 at 18.75%	0.02	OK	
	LC11 at 100.00%	0.02	OK	
	LC12 at 83.33%	0.02	OK	
	LC13 at 83.33%	0.01	OK	
	LC14 at 83.33%	0.01	OK	
	LC2 at 18.75%	0.13	OK	Eq. H1-1b
	LC3 at 100.00%	0.14	OK	
	LC4 at 18.75%	0.13	OK	
	LC5 at 100.00%	0.15	OK	
	LC6 at 18.75%	0.13	OK	
	LC7 at 100.00%	0.14	OK	
	LC8 at 18.75%	0.13	OK	
	LC9 at 100.00%	0.04	OK	
	W180 at 100.00%	0.09	OK	
	W210 at 18.75%	0.08	OK	
	Wi180 at 100.00%	0.02	OK	
	Wi210 at 18.75%	0.01	OK	
224	LC1 at 0.00%	0.04	OK	
	LC10 at 0.00%	0.02	OK	
	LC11 at 0.00%	0.02	OK	
	LC12 at 0.00%	0.02	OK	
	LC13 at 0.00%	0.02	OK	
	LC14 at 0.00%	0.01	OK	
	LC2 at 0.00%	0.05	OK	
	LC3 at 100.00%	0.02	OK	Eq. H1-1b
	LC4 at 0.00%	**0.06**	**OK**	Eq. H1-1b
	LC5 at 0.00%	0.03	OK	
	LC6 at 0.00%	0.04	OK	
	LC7 at 100.00%	0.02	OK	
	LC8 at 0.00%	0.05	OK	
	LC9 at 0.00%	0.02	OK	
	W180 at 0.00%	0.01	OK	
	W210 at 0.00%	0.03	OK	
	Wi180 at 0.00%	0.00	OK	
	Wi210 at 0.00%	0.00	OK	
225	LC1 at 0.00%	0.03	OK	
	LC10 at 0.00%	0.03	OK	
	LC11 at 0.00%	0.03	OK	
	LC12 at 0.00%	0.03	OK	
	LC13 at 0.00%	0.03	OK	
	LC14 at 0.00%	0.02	OK	
	LC2 at 0.00%	**0.05**	**OK**	Eq. H1-1b
	LC3 at 100.00%	0.03	OK	Eq. H1-1b
	LC4 at 0.00%	0.04	OK	
	LC5 at 0.00%	0.03	OK	
	LC6 at 0.00%	0.04	OK	
	LC7 at 100.00%	0.02	OK	
	LC8 at 0.00%	0.03	OK	
	LC9 at 0.00%	0.03	OK	
	W180 at 100.00%	0.01	OK	
	W210 at 0.00%	0.01	OK	
	Wi180 at 100.00%	0.00	OK	
	Wi210 at 0.00%	0.00	OK	

226	LC1 at 0.00%	**0.05**	**OK**	Eq. H1-1b
	LC10 at 0.00%	0.03	OK	
	LC11 at 0.00%	0.03	OK	
	LC12 at 0.00%	0.03	OK	
	LC13 at 0.00%	0.03	OK	
	LC14 at 0.00%	0.02	OK	
	LC2 at 0.00%	0.03	OK	
	LC3 at 0.00%	0.03	OK	
	LC4 at 0.00%	0.04	OK	
	LC5 at 0.00%	0.04	OK	
	LC6 at 0.00%	0.02	OK	
	LC7 at 0.00%	0.03	OK	
	LC8 at 0.00%	0.03	OK	
	LC9 at 0.00%	0.03	OK	
	W180 at 0.00%	0.01	OK	
	W210 at 0.00%	0.01	OK	
	Wi180 at 0.00%	0.00	OK	
	Wi210 at 0.00%	0.00	OK	
227	LC1 at 0.00%	0.04	OK	
	LC10 at 0.00%	0.02	OK	
	LC11 at 0.00%	0.02	OK	
	LC12 at 0.00%	0.02	OK	
	LC13 at 0.00%	0.02	OK	
	LC14 at 0.00%	0.01	OK	
	LC2 at 0.00%	0.06	OK	
	LC3 at 0.00%	**0.07**	**OK**	Eq. H1-1b
	LC4 at 0.00%	0.03	OK	
	LC5 at 0.00%	0.04	OK	
	LC6 at 0.00%	0.06	OK	
	LC7 at 0.00%	0.06	OK	
	LC8 at 0.00%	0.03	OK	
	LC9 at 0.00%	0.02	OK	
	W180 at 0.00%	0.03	OK	
	W210 at 0.00%	0.03	OK	
	Wi180 at 0.00%	0.00	OK	
	Wi210 at 0.00%	0.00	OK	
228	LC1 at 0.00%	0.04	OK	
	LC10 at 0.00%	0.02	OK	
	LC11 at 0.00%	0.02	OK	
	LC12 at 0.00%	0.02	OK	
	LC13 at 0.00%	0.02	OK	
	LC14 at 0.00%	0.01	OK	
	LC2 at 100.00%	0.02	OK	Eq. H1-1b
	LC3 at 0.00%	**0.06**	**OK**	Eq. H1-1b
	LC4 at 0.00%	0.05	OK	
	LC5 at 0.00%	0.03	OK	
	LC6 at 18.75%	0.02	OK	
	LC7 at 0.00%	0.05	OK	
	LC8 at 0.00%	0.05	OK	
	LC9 at 0.00%	0.02	OK	
	W180 at 0.00%	0.03	OK	
	W210 at 0.00%	0.02	OK	
	Wi180 at 0.00%	0.00	OK	
	Wi210 at 0.00%	0.00	OK	
229	LC1 at 0.00%	0.04	OK	
	LC10 at 0.00%	0.03	OK	
	LC11 at 0.00%	0.03	OK	
	LC12 at 0.00%	0.03	OK	
	LC13 at 0.00%	0.03	OK	
	LC14 at 0.00%	0.02	OK	
	LC2 at 0.00%	0.03	OK	

		LC3 at 0.00%	**0.04**	**OK**	Eq. H1-1b
		LC4 at 0.00%	0.04	OK	
		LC5 at 0.00%	0.03	OK	
		LC6 at 0.00%	0.02	OK	
		LC7 at 0.00%	0.04	OK	
		LC8 at 0.00%	0.03	OK	
		LC9 at 0.00%	0.03	OK	
		W180 at 0.00%	0.01	OK	
		W210 at 0.00%	0.01	OK	
		Wi180 at 0.00%	0.00	OK	
		Wi210 at 100.00%	0.00	OK	
HSS_SQR 4X4X1_4	**316**	LC1 at 64.58%	0.05	OK	
		LC10 at 50.00%	0.03	OK	
		LC11 at 50.00%	0.03	OK	
		LC12 at 50.00%	0.03	OK	
		LC13 at 50.00%	0.02	OK	
		LC14 at 50.00%	0.02	OK	
		LC2 at 35.42%	0.08	OK	Eq. H1-1b
		LC3 at 65.63%	0.06	OK	
		LC4 at 64.58%	**0.09**	**OK**	Eq. H1-1b
		LC5 at 64.58%	0.05	OK	
		LC6 at 35.42%	0.08	OK	
		LC7 at 65.63%	0.06	OK	
		LC8 at 64.58%	0.09	OK	
		LC9 at 50.00%	0.03	OK	
		W180 at 65.63%	0.03	OK	
		W210 at 64.58%	0.05	OK	
		Wi180 at 3.13%	0.01	OK	
		Wi210 at 64.58%	0.01	OK	
	317	LC1 at 65.63%	0.10	OK	Eq. H1-1b
		LC10 at 50.00%	0.03	OK	
		LC11 at 50.00%	0.03	OK	
		LC12 at 50.00%	0.03	OK	
		LC13 at 50.00%	0.02	OK	
		LC14 at 50.00%	0.01	OK	
		LC2 at 64.58%	0.09	OK	Eq. H1-1b
		LC3 at 65.63%	0.08	OK	
		LC4 at 34.38%	**0.10**	**OK**	Eq. H1-1b
		LC5 at 65.63%	0.09	OK	
		LC6 at 64.58%	0.09	OK	
		LC7 at 65.63%	0.08	OK	
		LC8 at 34.38%	0.10	OK	
		LC9 at 50.00%	0.03	OK	
		W180 at 65.63%	0.06	OK	
		W210 at 34.38%	0.06	OK	
		Wi180 at 65.63%	0.01	OK	
		Wi210 at 34.38%	0.01	OK	
	318	LC1 at 34.38%	**0.10**	**OK**	Eq. H1-1b
		LC10 at 50.00%	0.03	OK	
		LC11 at 50.00%	0.03	OK	
		LC12 at 50.00%	0.03	OK	
		LC13 at 50.00%	0.02	OK	
		LC14 at 50.00%	0.01	OK	
		LC2 at 65.63%	0.09	OK	Eq. H1-1b
		LC3 at 64.58%	0.08	OK	Eq. H1-1b
		LC4 at 35.42%	0.09	OK	Eq. H1-1b
		LC5 at 34.38%	0.10	OK	
		LC6 at 65.63%	0.09	OK	
		LC7 at 64.58%	0.08	OK	
		LC8 at 35.42%	0.08	OK	
		LC9 at 34.38%	0.03	OK	

		W180 at 34.38%	0.05	OK	
		W210 at 65.63%	0.05	OK	
		Wi180 at 34.38%	0.01	OK	
		Wi210 at 65.63%	0.01	OK	
L 2-1_2X2-1_2X3_16	**307**	LC1 at 0.00%	**0.10**	**OK**	Eq. H2-1
		LC10 at 0.00%	0.03	OK	
		LC11 at 0.00%	0.03	OK	
		LC12 at 0.00%	0.02	OK	
		LC13 at 0.00%	0.03	OK	
		LC14 at 0.00%	0.02	OK	
		LC2 at 0.00%	0.05	OK	
		LC3 at 0.00%	0.09	OK	
		LC4 at 0.00%	0.02	OK	
		LC5 at 0.00%	0.10	OK	
		LC6 at 0.00%	0.05	OK	
		LC7 at 0.00%	0.09	OK	
		LC8 at 0.00%	0.02	OK	
		LC9 at 0.00%	0.03	OK	
		W180 at 0.00%	0.06	OK	
		W210 at 0.00%	0.02	OK	
		Wi180 at 0.00%	0.01	OK	
		Wi210 at 0.00%	0.00	OK	
	308	LC1 at 0.00%	**0.10**	**OK**	Eq. H2-1
		LC10 at 0.00%	0.02	OK	
		LC11 at 0.00%	0.03	OK	
		LC12 at 0.00%	0.03	OK	
		LC13 at 0.00%	0.03	OK	
		LC14 at 0.00%	0.02	OK	
		LC2 at 0.00%	0.03	OK	
		LC3 at 0.00%	0.08	OK	
		LC4 at 0.00%	0.05	OK	
		LC5 at 0.00%	0.10	OK	
		LC6 at 0.00%	0.03	OK	
		LC7 at 0.00%	0.09	OK	
		LC8 at 0.00%	0.05	OK	
		LC9 at 0.00%	0.02	OK	
		W180 at 0.00%	0.06	OK	
		W210 at 0.00%	0.02	OK	
		Wi180 at 0.00%	0.01	OK	
		Wi210 at 0.00%	0.00	OK	
	309	LC1 at 0.00%	0.10	OK	
		LC10 at 0.00%	0.03	OK	
		LC11 at 0.00%	0.03	OK	
		LC12 at 0.00%	0.04	OK	
		LC13 at 0.00%	0.03	OK	
		LC14 at 0.00%	0.02	OK	
		LC2 at 0.00%	0.20	OK	
		LC3 at 0.00%	0.12	OK	
		LC4 at 0.00%	**0.21**	**OK**	Eq. H2-1
		LC5 at 0.00%	0.11	OK	
		LC6 at 0.00%	0.20	OK	
		LC7 at 0.00%	0.12	OK	
		LC8 at 0.00%	0.21	OK	
		LC9 at 0.00%	0.03	OK	
		W180 at 0.00%	0.07	OK	
		W210 at 0.00%	0.13	OK	
		Wi180 at 0.00%	0.01	OK	
		Wi210 at 0.00%	0.02	OK	
	310	LC1 at 0.00%	0.07	OK	
		LC10 at 0.00%	0.04	OK	

		LC11 at 0.00%	0.02	OK	
		LC12 at 0.00%	0.04	OK	
		LC13 at 0.00%	0.03	OK	
		LC14 at 0.00%	0.02	OK	
		LC2 at 0.00%	0.22	OK	
		LC3 at 0.00%	0.08	OK	
		LC4 at 0.00%	**0.23**	**OK**	Eq. H2-1
		LC5 at 0.00%	0.07	OK	
		LC6 at 0.00%	0.22	OK	
		LC7 at 0.00%	0.07	OK	
		LC8 at 0.00%	0.23	OK	
		LC9 at 0.00%	0.03	OK	
		W180 at 0.00%	0.04	OK	
		W210 at 0.00%	0.14	OK	
		Wi180 at 0.00%	0.01	OK	
		Wi210 at 0.00%	0.02	OK	
	311	LC1 at 0.00%	0.06	OK	
		LC10 at 0.00%	0.04	OK	
		LC11 at 0.00%	0.03	OK	
		LC12 at 0.00%	0.03	OK	
		LC13 at 0.00%	0.03	OK	
		LC14 at 0.00%	0.02	OK	
		LC2 at 0.00%	**0.23**	**OK**	Eq. H2-1
		LC3 at 0.00%	0.08	OK	
		LC4 at 0.00%	0.22	OK	
		LC5 at 0.00%	0.06	OK	
		LC6 at 0.00%	0.23	OK	
		LC7 at 0.00%	0.08	OK	
		LC8 at 0.00%	0.22	OK	
		LC9 at 0.00%	0.03	OK	
		W180 at 0.00%	0.04	OK	
		W210 at 0.00%	0.14	OK	
		Wi180 at 0.00%	0.01	OK	
		Wi210 at 0.00%	0.02	OK	
	312	LC1 at 0.00%	0.10	OK	
		LC10 at 0.00%	0.04	OK	
		LC11 at 0.00%	0.03	OK	
		LC12 at 0.00%	0.03	OK	
		LC13 at 0.00%	0.03	OK	
		LC14 at 0.00%	0.02	OK	
		LC2 at 0.00%	**0.20**	**OK**	Eq. H2-1
		LC3 at 0.00%	0.12	OK	
		LC4 at 0.00%	0.19	OK	
		LC5 at 0.00%	0.10	OK	
		LC6 at 0.00%	0.20	OK	
		LC7 at 0.00%	0.12	OK	
		LC8 at 0.00%	0.19	OK	
		LC9 at 0.00%	0.03	OK	
		W180 at 0.00%	0.07	OK	
		W210 at 0.00%	0.12	OK	
		Wi180 at 0.00%	0.01	OK	
		Wi210 at 0.00%	0.02	OK	
L 3X3X1_4	**113**	LC1 at 68.75%	0.03	OK	
		LC10 at 10.42%	0.01	OK	
		LC11 at 10.42%	0.01	OK	
		LC12 at 10.42%	0.01	OK	
		LC13 at 10.42%	0.01	OK	
		LC14 at 10.42%	0.01	OK	
		LC2 at 68.75%	0.03	OK	Eq. H2-1
		LC3 at 66.67%	0.03	OK	
		LC4 at 66.67%	**0.04**	**OK**	Eq. H3-8

		LC5 at 68.75%	0.03	OK	
		LC6 at 68.75%	0.03	OK	
		LC7 at 66.67%	0.03	OK	
		LC8 at 66.67%	0.04	OK	
		LC9 at 10.42%	0.01	OK	
		W180 at 68.75%	0.02	OK	
		W210 at 66.67%	0.02	OK	
		Wi180 at 10.42%	0.00	OK	
		Wi210 at 10.42%	0.00	OK	
	222	LC1 at 68.75%	0.03	OK	Eq. H3-8
		LC10 at 10.42%	0.01	OK	
		LC11 at 10.42%	0.01	OK	
		LC12 at 10.42%	0.01	OK	
		LC13 at 10.42%	0.01	OK	
		LC14 at 10.42%	0.01	OK	
		LC2 at 66.67%	**0.04**	**OK**	Eq. H2-1
		LC3 at 66.67%	0.04	OK	Eq. H3-8
		LC4 at 68.75%	0.03	OK	Eq. H2-1
		LC5 at 66.67%	0.03	OK	
		LC6 at 66.67%	0.04	OK	
		LC7 at 66.67%	0.04	OK	
		LC8 at 68.75%	0.03	OK	
		LC9 at 10.42%	0.01	OK	
		W180 at 66.67%	0.02	OK	
		W210 at 68.75%	0.02	OK	
		Wi180 at 10.42%	0.00	OK	
		Wi210 at 10.42%	0.00	OK	
	223	LC1 at 68.75%	**0.03**	**OK**	Eq. H2-1
		LC10 at 10.42%	0.01	OK	
		LC11 at 10.42%	0.01	OK	
		LC12 at 10.42%	0.01	OK	
		LC13 at 10.42%	0.01	OK	
		LC14 at 10.42%	0.01	OK	
		LC2 at 66.67%	0.03	OK	Sec. F1
		LC3 at 68.75%	0.03	OK	
		LC4 at 66.67%	0.03	OK	Sec. F1
		LC5 at 68.75%	0.03	OK	
		LC6 at 66.67%	0.03	OK	
		LC7 at 68.75%	0.03	OK	
		LC8 at 66.67%	0.03	OK	
		LC9 at 10.42%	0.01	OK	
		W180 at 68.75%	0.02	OK	
		W210 at 66.67%	0.01	OK	
		Wi180 at 10.42%	0.00	OK	
		Wi210 at 10.42%	0.00	OK	
P 1-3/8x1-3/8	**72**	LC1 at 3.41%	**0.91**	**OK**	Sec. C5.2
		LC10 at 50.00%	0.10	OK	
		LC11 at 42.61%	0.12	OK	
		LC12 at 34.66%	0.10	OK	
		LC13 at 42.61%	0.04	OK	
		LC14 at 42.61%	0.03	OK	
		LC2 at 50.00%	0.89	OK	Sec. C5.2
		LC3 at 49.43%	0.79	OK	
		LC4 at 49.43%	0.73	OK	Sec. C5.2
		LC5 at 3.41%	0.90	OK	
		LC6 at 50.00%	0.89	OK	
		LC7 at 49.43%	0.80	OK	Sec. C5.2
		LC8 at 49.43%	0.73	OK	
		LC9 at 3.41%	0.18	OK	
		W180 at 49.43%	0.47	OK	
		W210 at 49.43%	0.45	OK	

	Wi180 at 49.43%	0.13	OK	
	Wi210 at 49.43%	0.07	OK	
73	LC1 at 0.00%	**0.68**	**OK**	Sec. C5.2
	LC10 at 42.61%	0.08	OK	
	LC11 at 42.61%	0.11	OK	
	LC12 at 42.61%	0.12	OK	
	LC13 at 42.61%	0.06	OK	
	LC14 at 42.61%	0.05	OK	
	LC2 at 100.00%	0.26	OK	
	LC3 at 3.41%	0.31	OK	Sec. C3.4
	LC4 at 65.34%	0.61	OK	
	LC5 at 0.00%	0.68	OK	
	LC6 at 100.00%	0.26	OK	
	LC7 at 3.41%	0.31	OK	
	LC8 at 65.34%	0.61	OK	Sec. C5.2
	LC9 at 43.18%	0.15	OK	
	W180 at 3.41%	0.19	OK	
	W210 at 65.34%	0.36	OK	
	Wi180 at 0.00%	0.07	OK	
	Wi210 at 65.34%	0.05	OK	
80	LC1 at 65.34%	0.52	OK	
	LC10 at 43.18%	0.12	OK	
	LC11 at 43.75%	0.08	OK	
	LC12 at 43.18%	0.10	OK	
	LC13 at 43.18%	0.07	OK	
	LC14 at 43.18%	0.05	OK	
	LC2 at 0.00%	**0.66**	**OK**	Sec. C5.2
	LC3 at 43.75%	0.26	OK	Sec. C5.2
	LC4 at 3.98%	0.43	OK	Sec. C3.4
	LC5 at 65.34%	0.52	OK	Sec. C5.2
	LC6 at 0.00%	0.66	OK	
	LC7 at 43.75%	0.25	OK	
	LC8 at 3.98%	0.43	OK	
	LC9 at 43.18%	0.13	OK	
	W180 at 3.41%	0.14	OK	
	W210 at 3.98%	0.26	OK	
	Wi180 at 3.98%	0.02	OK	
	Wi210 at 3.98%	0.04	OK	
81	LC1 at 96.59%	0.97	OK	
	LC10 at 50.57%	0.11	OK	
	LC11 at 50.57%	0.08	OK	
	LC12 at 43.18%	0.12	OK	
	LC13 at 43.18%	0.05	OK	
	LC14 at 43.18%	0.04	OK	
	LC2 at 50.57%	0.81	OK	Sec. C5.2
	LC3 at 96.59%	0.59	OK	
	LC4 at 50.00%	0.79	OK	
	LC5 at 96.59%	**0.97**	**OK**	Sec. C5.2
	LC6 at 50.57%	0.81	OK	
	LC7 at 96.59%	0.59	OK	
	LC8 at 50.00%	0.80	OK	Sec. C5.2
	LC9 at 96.59%	0.11	OK	
	W180 at 96.59%	0.37	OK	
	W210 at 50.57%	0.51	OK	
	Wi180 at 50.57%	0.07	OK	
	Wi210 at 50.00%	0.08	OK	
85	LC1 at 50.00%	0.64	OK	
	LC10 at 43.18%	0.10	OK	
	LC11 at 34.66%	0.11	OK	
	LC12 at 50.00%	0.11	OK	

	LC13 at 43.18%	0.04	OK	
	LC14 at 43.18%	0.03	OK	
	LC2 at 49.43%	0.69	OK	Sec. C5.2
	LC3 at 50.00%	0.59	OK	
	LC4 at 50.00%	**0.73**	**OK**	Sec. C5.2
	LC5 at 50.00%	0.65	OK	Sec. C5.2
	LC6 at 49.43%	0.68	OK	
	LC7 at 50.00%	0.58	OK	
	LC8 at 50.00%	0.72	OK	
	LC9 at 50.00%	0.09	OK	
	W180 at 50.00%	0.35	OK	
	W210 at 50.00%	0.41	OK	
	Wi180 at 49.43%	0.08	OK	
	Wi210 at 50.00%	0.07	OK	
86	LC1 at 70.45%	0.24	OK	
	LC10 at 43.18%	0.13	OK	
	LC11 at 43.18%	0.13	OK	
	LC12 at 43.75%	0.09	OK	
	LC13 at 43.18%	0.07	OK	
	LC14 at 43.18%	0.05	OK	
	LC2 at 43.18%	0.34	OK	Sec. C5.2
	LC3 at 70.45%	**0.46**	**OK**	Sec. C5.2
	LC4 at 43.75%	0.29	OK	Sec. C5.2
	LC5 at 70.45%	0.25	OK	
	LC6 at 43.18%	0.33	OK	
	LC7 at 70.45%	0.46	OK	
	LC8 at 43.75%	0.27	OK	
	LC9 at 43.18%	0.07	OK	
	W180 at 70.45%	0.28	OK	Sec. C5.2
	W210 at 34.66%	0.18	OK	
	Wi180 at 96.59%	0.07	OK	
	Wi210 at 34.66%	0.03	OK	
271	LC1 at 50.00%	0.28	OK	Sec. C5.2
	LC10 at 100.00%	0.07	OK	
	LC11 at 100.00%	0.05	OK	
	LC12 at 0.00%	0.03	OK	
	LC13 at 100.00%	0.03	OK	
	LC14 at 100.00%	0.02	OK	
	LC2 at 100.00%	0.29	OK	Sec. C5.2
	LC3 at 43.75%	**0.29**	**OK**	Sec. C5.2
	LC4 at 100.00%	0.22	OK	
	LC5 at 50.00%	0.28	OK	
	LC6 at 100.00%	0.28	OK	
	LC7 at 43.75%	0.29	OK	
	LC8 at 100.00%	0.22	OK	
	LC9 at 100.00%	0.04	OK	
	W180 at 43.75%	0.18	OK	
	W210 at 100.00%	0.15	OK	
	Wi180 at 43.75%	0.04	OK	
	Wi210 at 100.00%	0.02	OK	
272	LC1 at 100.00%	0.22	OK	Sec. C5.2
	LC10 at 100.00%	0.04	OK	
	LC11 at 100.00%	0.04	OK	
	LC12 at 100.00%	0.06	OK	
	LC13 at 100.00%	0.03	OK	
	LC14 at 100.00%	0.02	OK	
	LC2 at 43.75%	0.25	OK	
	LC3 at 100.00%	0.18	OK	
	LC4 at 43.75%	**0.25**	**OK**	Sec. C5.2
	LC5 at 100.00%	0.21	OK	
	LC6 at 43.75%	0.25	OK	

		LC7 at 100.00%	0.18	OK	
		LC8 at 43.75%	0.25	OK	
		LC9 at 100.00%	0.07	OK	
		W180 at 100.00%	0.12	OK	
		W210 at 43.75%	0.16	OK	
		Wi180 at 100.00%	0.02	OK	
		Wi210 at 43.75%	0.03	OK	
	273	LC1 at 100.00%	0.23	OK	
		LC10 at 50.00%	0.03	OK	
		LC11 at 100.00%	0.08	OK	
		LC12 at 100.00%	0.05	OK	
		LC13 at 100.00%	0.03	OK	
		LC14 at 100.00%	0.02	OK	
		LC2 at 43.75%	0.27	OK	
		LC3 at 100.00%	**0.29**	**OK**	Sec. C5.2
		LC4 at 43.75%	0.28	OK	Sec. C5.2
		LC5 at 100.00%	0.23	OK	
		LC6 at 43.75%	0.27	OK	
		LC7 at 100.00%	0.28	OK	
		LC8 at 43.75%	0.28	OK	
		LC9 at 100.00%	0.04	OK	
		W180 at 100.00%	0.16	OK	
		W210 at 43.75%	0.17	OK	
		Wi180 at 100.00%	0.04	OK	
		Wi210 at 43.75%	0.03	OK	
PIPE 2-1_2x0.203	**216**	LC1 at 28.75%	0.47	OK	
		LC10 at 28.75%	0.07	OK	
		LC11 at 50.00%	0.07	OK	
		LC12 at 28.75%	0.07	OK	
		LC13 at 31.25%	0.01	OK	
		LC14 at 31.25%	0.01	OK	
		LC2 at 28.75%	**0.58**	**OK**	Eq. H1-1b
		LC3 at 28.75%	0.47	OK	
		LC4 at 28.75%	0.58	OK	
		LC5 at 28.75%	0.47	OK	
		LC6 at 28.75%	0.58	OK	
		LC7 at 28.75%	0.47	OK	
		LC8 at 28.75%	0.58	OK	
		LC9 at 50.00%	0.06	OK	
		W180 at 28.75%	0.30	OK	
		W210 at 28.75%	0.36	OK	
		Wi180 at 50.00%	0.06	OK	
		Wi210 at 28.75%	0.06	OK	
	258	LC1 at 28.75%	0.47	OK	
		LC10 at 28.75%	0.07	OK	
		LC11 at 50.00%	0.05	OK	
		LC12 at 28.75%	0.07	OK	
		LC13 at 31.25%	0.01	OK	
		LC14 at 31.25%	0.01	OK	
		LC2 at 28.75%	**0.58**	**OK**	Eq. H1-1b
		LC3 at 28.75%	0.47	OK	
		LC4 at 28.75%	0.58	OK	
		LC5 at 28.75%	0.47	OK	
		LC6 at 28.75%	0.58	OK	
		LC7 at 28.75%	0.47	OK	
		LC8 at 28.75%	0.58	OK	
		LC9 at 28.75%	0.05	OK	
		W180 at 28.75%	0.30	OK	
		W210 at 28.75%	0.36	OK	
		Wi180 at 28.75%	0.05	OK	
		Wi210 at 28.75%	0.06	OK	

267	LC1 at 51.25%	0.15	OK	Eq. H1-1b
	LC10 at 50.00%	0.03	OK	
	LC11 at 51.25%	0.03	OK	
	LC12 at 50.00%	0.03	OK	
	LC13 at 100.00%	0.01	OK	
	LC14 at 100.00%	0.01	OK	
	LC2 at 50.00%	0.26	OK	
	LC3 at 51.25%	0.14	OK	
	LC4 at 50.00%	**0.27**	**OK**	Eq. H1-1b
	LC5 at 51.25%	0.15	OK	
	LC6 at 50.00%	0.26	OK	
	LC7 at 51.25%	0.14	OK	
	LC8 at 50.00%	0.27	OK	
	LC9 at 50.00%	0.03	OK	
	W180 at 51.25%	0.09	OK	
	W210 at 50.00%	0.16	OK	
	Wi180 at 50.00%	0.02	OK	
	Wi210 at 50.00%	0.03	OK	
277	LC1 at 100.00%	0.21	OK	
	LC10 at 100.00%	0.05	OK	
	LC11 at 100.00%	0.04	OK	
	LC12 at 100.00%	0.04	OK	
	LC13 at 50.00%	0.01	OK	
	LC14 at 50.00%	0.01	OK	
	LC2 at 100.00%	**0.45**	**OK**	Eq. H1-1b
	LC3 at 100.00%	0.20	OK	
	LC4 at 100.00%	0.43	OK	
	LC5 at 100.00%	0.21	OK	
	LC6 at 100.00%	0.45	OK	
	LC7 at 100.00%	0.20	OK	
	LC8 at 100.00%	0.43	OK	
	LC9 at 100.00%	0.05	OK	
	W180 at 100.00%	0.13	OK	
	W210 at 100.00%	0.27	OK	
	Wi180 at 100.00%	0.04	OK	
	Wi210 at 100.00%	0.05	OK	
278	LC1 at 4.17%	0.28	OK	
	LC10 at 50.00%	0.04	OK	
	LC11 at 50.00%	0.04	OK	
	LC12 at 0.00%	0.04	OK	
	LC13 at 50.00%	0.01	OK	
	LC14 at 50.00%	0.01	OK	
	LC2 at 0.00%	0.58	OK	
	LC3 at 4.17%	0.29	OK	Eq. H1-1b
	LC4 at 0.00%	**0.59**	**OK**	Eq. H3-6
	LC5 at 4.17%	0.28	OK	Eq. H1-1b
	LC6 at 0.00%	0.58	OK	
	LC7 at 4.17%	0.29	OK	
	LC8 at 0.00%	0.59	OK	
	LC9 at 4.17%	0.04	OK	
	W180 at 4.17%	0.18	OK	
	W210 at 0.00%	0.19	OK	
	Wi180 at 4.17%	0.03	OK	
	Wi210 at 0.00%	0.03	OK	
279	LC1 at 95.83%	0.30	OK	Eq. H1-1b
	LC10 at 100.00%	0.04	OK	
	LC11 at 50.00%	0.04	OK	
	LC12 at 100.00%	0.05	OK	
	LC13 at 50.00%	0.01	OK	
	LC14 at 50.00%	0.01	OK	

		LC2 at 100.00%	0.39	OK	
		LC3 at 95.83%	0.30	OK	
		LC4 at 100.00%	**0.40**	**OK**	Eq. H1-1b
		LC5 at 95.83%	0.30	OK	
		LC6 at 100.00%	0.39	OK	
		LC7 at 95.83%	0.30	OK	
		LC8 at 100.00%	0.40	OK	
		LC9 at 0.00%	0.05	OK	
		W180 at 95.83%	0.19	OK	
		W210 at 100.00%	0.25	OK	
		Wi180 at 0.00%	0.05	OK	
		Wi210 at 100.00%	0.04	OK	
PIPE 2x0.154	**208**	LC1 at 28.75%	0.79	OK	
		LC10 at 28.75%	0.11	OK	
		LC11 at 28.75%	0.09	OK	
		LC12 at 28.75%	0.11	OK	
		LC13 at 30.00%	0.02	OK	
		LC14 at 30.00%	0.01	OK	
		LC2 at 28.75%	**0.97**	**OK**	Eq. H1-1b
		LC3 at 28.75%	0.79	OK	
		LC4 at 28.75%	0.97	OK	
		LC5 at 28.75%	0.79	OK	
		LC6 at 28.75%	0.96	OK	
		LC7 at 28.75%	0.79	OK	
		LC8 at 28.75%	0.96	OK	
		LC9 at 28.75%	0.09	OK	
		W180 at 28.75%	0.49	OK	
		W210 at 28.75%	0.60	OK	
		Wi180 at 28.75%	0.09	OK	
		Wi210 at 28.75%	0.11	OK	
	220	LC1 at 50.00%	0.39	OK	
		LC10 at 50.00%	0.05	OK	
		LC11 at 50.00%	0.06	OK	
		LC12 at 50.00%	0.06	OK	
		LC13 at 23.44%	0.02	OK	
		LC14 at 23.44%	0.01	OK	
		LC2 at 50.00%	0.52	OK	
		LC3 at 50.00%	0.38	OK	
		LC4 at 50.00%	**0.55**	**OK**	Eq. H1-1b
		LC5 at 50.00%	0.38	OK	
		LC6 at 50.00%	0.52	OK	Eq. H1-1b
		LC7 at 50.00%	0.38	OK	
		LC8 at 50.00%	0.55	OK	
		LC9 at 50.00%	0.06	OK	
		W180 at 50.00%	0.24	OK	
		W210 at 50.00%	0.34	OK	
		Wi180 at 50.00%	0.06	OK	
		Wi210 at 50.00%	0.06	OK	
	255	LC1 at 28.75%	0.79	OK	
		LC10 at 28.75%	0.11	OK	
		LC11 at 28.75%	0.09	OK	
		LC12 at 28.75%	0.11	OK	
		LC13 at 30.00%	0.02	OK	
		LC14 at 30.00%	0.01	OK	
		LC2 at 28.75%	**0.97**	**OK**	Eq. H1-1b
		LC3 at 28.75%	0.79	OK	
		LC4 at 28.75%	0.97	OK	
		LC5 at 28.75%	0.79	OK	
		LC6 at 28.75%	0.96	OK	
		LC7 at 28.75%	0.79	OK	
		LC8 at 28.75%	0.96	OK	

	LC9 at 28.75%	0.09	OK	
	W180 at 28.75%	0.49	OK	
	W210 at 28.75%	0.60	OK	
	Wi180 at 28.75%	0.09	OK	
	Wi210 at 28.75%	0.11	OK	
261	LC1 at 50.00%	**0.43**	**OK**	Eq. H1-1b
	LC10 at 50.00%	0.04	OK	
	LC11 at 50.00%	0.05	OK	
	LC12 at 50.00%	0.04	OK	
	LC13 at 23.75%	0.01	OK	
	LC14 at 23.75%	0.01	OK	
	LC2 at 50.00%	0.40	OK	
	LC3 at 50.00%	0.41	OK	Eq. H1-1b
	LC4 at 50.00%	0.38	OK	
	LC5 at 50.00%	0.43	OK	
	LC6 at 50.00%	0.40	OK	
	LC7 at 50.00%	0.41	OK	
	LC8 at 50.00%	0.38	OK	
	LC9 at 50.00%	0.05	OK	
	W180 at 50.00%	0.26	OK	
	W210 at 50.00%	0.24	OK	
	Wi180 at 50.00%	0.05	OK	
	Wi210 at 50.00%	0.04	OK	
264	LC1 at 50.00%	0.29	OK	
	LC10 at 50.00%	0.03	OK	
	LC11 at 50.00%	0.05	OK	
	LC12 at 50.00%	0.03	OK	
	LC13 at 23.75%	0.01	OK	
	LC14 at 23.75%	0.01	OK	
	LC2 at 50.00%	0.28	OK	
	LC3 at 50.00%	**0.32**	**OK**	Eq. H1-1b
	LC4 at 50.00%	0.29	OK	
	LC5 at 50.00%	0.30	OK	Eq. H1-1b
	LC6 at 50.00%	0.28	OK	
	LC7 at 50.00%	0.32	OK	
	LC8 at 50.00%	0.29	OK	
	LC9 at 51.25%	0.04	OK	
	W180 at 50.00%	0.20	OK	
	W210 at 50.00%	0.17	OK	Eq. H1-1b
	Wi180 at 50.00%	0.04	OK	
	Wi210 at 50.00%	0.03	OK	
270	LC1 at 51.25%	0.33	OK	
	LC10 at 50.00%	0.03	OK	Eq. H1-1b
	LC11 at 22.50%	0.09	OK	
	LC12 at 50.00%	0.03	OK	
	LC13 at 23.75%	0.01	OK	
	LC14 at 23.75%	0.01	OK	
	LC2 at 50.00%	0.31	OK	Eq. H1-1b
	LC3 at 51.25%	**0.35**	**OK**	Eq. H1-1b
	LC4 at 50.00%	0.30	OK	
	LC5 at 51.25%	0.33	OK	Eq. H1-1b
	LC6 at 50.00%	0.31	OK	
	LC7 at 51.25%	0.35	OK	
	LC8 at 50.00%	0.30	OK	Eq. H1-1b
	LC9 at 22.50%	0.09	OK	
	W180 at 51.25%	0.22	OK	
	W210 at 50.00%	0.19	OK	
	Wi180 at 22.50%	0.09	OK	
	Wi210 at 50.00%	0.03	OK	
330	LC1 at 18.75%	0.16	OK	

	LC10 at 100.00%	0.03	OK	
	LC11 at 100.00%	0.03	OK	
	LC12 at 18.75%	0.01	OK	
	LC13 at 100.00%	0.01	OK	
	LC14 at 100.00%	0.01	OK	
	LC2 at 100.00%	0.15	OK	
	LC3 at 100.00%	**0.18**	**OK**	Eq. H1-1b
	LC4 at 100.00%	0.13	OK	
	LC5 at 18.75%	0.16	OK	Eq. H1-1b
	LC6 at 100.00%	0.14	OK	
	LC7 at 100.00%	0.18	OK	
	LC8 at 100.00%	0.13	OK	
	LC9 at 100.00%	0.01	OK	
	W180 at 18.75%	0.11	OK	
	W210 at 100.00%	0.09	OK	Eq. H1-1b
	Wi180 at 18.75%	0.02	OK	
	Wi210 at 100.00%	0.01	OK	
331	LC1 at 18.75%	0.18	OK	Eq. H1-1b
	LC10 at 100.00%	0.04	OK	
	LC11 at 100.00%	0.03	OK	
	LC12 at 100.00%	0.02	OK	
	LC13 at 100.00%	0.01	OK	
	LC14 at 100.00%	0.01	OK	
	LC2 at 100.00%	**0.23**	**OK**	Eq. H1-1b
	LC3 at 18.75%	0.17	OK	
	LC4 at 100.00%	0.20	OK	
	LC5 at 18.75%	0.18	OK	
	LC6 at 100.00%	0.22	OK	
	LC7 at 18.75%	0.17	OK	Eq. H1-1b
	LC8 at 100.00%	0.20	OK	
	LC9 at 100.00%	0.02	OK	Eq. H1-1b
	W180 at 18.75%	0.11	OK	
	W210 at 100.00%	0.13	OK	
	Wi180 at 18.75%	0.02	OK	
	Wi210 at 100.00%	0.02	OK	
332	LC1 at 100.00%	0.15	OK	Eq. H1-1b
	LC10 at 100.00%	0.03	OK	
	LC11 at 100.00%	0.02	OK	
	LC12 at 100.00%	0.03	OK	
	LC13 at 100.00%	0.01	OK	
	LC14 at 100.00%	0.01	OK	
	LC2 at 18.75%	**0.24**	**OK**	Eq. H1-1b
	LC3 at 100.00%	0.11	OK	
	LC4 at 18.75%	0.22	OK	
	LC5 at 100.00%	0.15	OK	
	LC6 at 18.75%	0.24	OK	
	LC7 at 100.00%	0.12	OK	
	LC8 at 18.75%	0.22	OK	Eq. H1-1b
	LC9 at 100.00%	0.03	OK	
	W180 at 100.00%	0.08	OK	
	W210 at 18.75%	0.14	OK	
	Wi180 at 100.00%	0.01	OK	
	Wi210 at 18.75%	0.02	OK	
333	LC1 at 100.00%	0.20	OK	Eq. H1-1b
	LC10 at 100.00%	0.04	OK	
	LC11 at 20.31%	0.01	OK	
	LC12 at 100.00%	0.03	OK	
	LC13 at 100.00%	0.02	OK	
	LC14 at 100.00%	0.01	OK	
	LC2 at 18.75%	0.21	OK	
	LC3 at 100.00%	0.15	OK	

		LC4 at 18.75%	**0.23**	**OK**	Eq. H1-1b
		LC5 at 100.00%	0.19	OK	
		LC6 at 18.75%	0.21	OK	Eq. H1-1b
		LC7 at 100.00%	0.15	OK	
		LC8 at 18.75%	0.23	OK	
		LC9 at 100.00%	0.05	OK	
		W180 at 100.00%	0.10	OK	
		W210 at 18.75%	0.14	OK	
		Wi180 at 100.00%	0.02	OK	
		Wi210 at 18.75%	0.02	OK	
	334	LC1 at 18.75%	0.17	OK	Eq. H1-1b
		LC10 at 100.00%	0.02	OK	
		LC11 at 100.00%	0.04	OK	
		LC12 at 100.00%	0.03	OK	
		LC13 at 100.00%	0.01	OK	
		LC14 at 100.00%	0.01	OK	
		LC2 at 100.00%	0.17	OK	
		LC3 at 18.75%	0.15	OK	
		LC4 at 100.00%	**0.19**	**OK**	Eq. H1-1b
		LC5 at 18.75%	0.17	OK	
		LC6 at 100.00%	0.17	OK	
		LC7 at 18.75%	0.15	OK	Eq. H1-1b
		LC8 at 100.00%	0.19	OK	
		LC9 at 18.75%	0.03	OK	
		W180 at 18.75%	0.10	OK	
		W210 at 100.00%	0.11	OK	
		Wi180 at 18.75%	0.03	OK	
		Wi210 at 100.00%	0.01	OK	
	335	LC1 at 100.00%	0.15	OK	
		LC10 at 100.00%	0.02	OK	
		LC11 at 100.00%	0.04	OK	
		LC12 at 100.00%	0.04	OK	
		LC13 at 100.00%	0.02	OK	
		LC14 at 100.00%	0.01	OK	
		LC2 at 100.00%	0.14	OK	
		LC3 at 100.00%	**0.19**	**OK**	Eq. H1-1b
		LC4 at 100.00%	0.18	OK	Eq. H1-1b
		LC5 at 100.00%	0.16	OK	
		LC6 at 100.00%	0.15	OK	Eq. H1-1b
		LC7 at 100.00%	0.19	OK	
		LC8 at 100.00%	0.17	OK	
		LC9 at 100.00%	0.04	OK	
		W180 at 100.00%	0.11	OK	
		W210 at 100.00%	0.10	OK	
		Wi180 at 100.00%	0.02	OK	
		Wi210 at 100.00%	0.01	OK	
STube 1x1x1/8	**3**	LC1 at 20.83%	0.38	OK	Eq. H1-1b
		LC10 at 85.42%	0.05	OK	
		LC11 at 18.75%	0.08	OK	
		LC12 at 85.42%	0.03	OK	
		LC13 at 85.42%	0.03	OK	
		LC14 at 85.42%	0.02	OK	
		LC2 at 85.42%	0.22	OK	Eq. H1-1b
		LC3 at 18.75%	**0.42**	**OK**	Eq. H1-1b
		LC4 at 85.42%	0.14	OK	
		LC5 at 18.75%	0.37	OK	
		LC6 at 85.42%	0.21	OK	
		LC7 at 18.75%	0.42	OK	
		LC8 at 85.42%	0.15	OK	
		LC9 at 20.83%	0.07	OK	
		W180 at 18.75%	0.25	OK	

	W210 at 85.42%	0.11	OK	
	Wi180 at 18.75%	0.05	OK	
	Wi210 at 85.42%	0.02	OK	
4	LC1 at 20.83%	0.33	OK	Eq. H1-1b
	LC10 at 85.42%	0.02	OK	
	LC11 at 18.75%	0.06	OK	
	LC12 at 100.00%	0.05	OK	
	LC13 at 100.00%	0.02	OK	
	LC14 at 100.00%	0.02	OK	
	LC2 at 18.75%	0.13	OK	
	LC3 at 18.75%	**0.34**	**OK**	Eq. H1-1b
	LC4 at 100.00%	0.17	OK	
	LC5 at 20.83%	0.33	OK	
	LC6 at 18.75%	0.14	OK	
	LC7 at 20.83%	0.34	OK	Eq. H1-1b
	LC8 at 18.75%	0.16	OK	
	LC9 at 20.83%	0.05	OK	
	W180 at 20.83%	0.21	OK	
	W210 at 18.75%	0.10	OK	
	Wi180 at 20.83%	0.05	OK	
	Wi210 at 18.75%	0.01	OK	
34	LC1 at 18.75%	0.42	OK	Eq. H1-1b
	LC10 at 18.75%	0.08	OK	
	LC11 at 20.83%	0.04	OK	
	LC12 at 20.83%	0.07	OK	
	LC13 at 85.42%	0.03	OK	
	LC14 at 85.42%	0.02	OK	
	LC2 at 18.75%	0.42	OK	Eq. H1-1b
	LC3 at 18.75%	0.37	OK	
	LC4 at 20.83%	**0.43**	**OK**	Eq. H1-1b
	LC5 at 18.75%	0.41	OK	
	LC6 at 20.83%	0.41	OK	
	LC7 at 18.75%	0.38	OK	
	LC8 at 20.83%	0.43	OK	
	LC9 at 18.75%	0.09	OK	
	W180 at 18.75%	0.25	OK	
	W210 at 20.83%	0.26	OK	
	Wi180 at 18.75%	0.05	OK	
	Wi210 at 20.83%	0.04	OK	
35	LC1 at 83.33%	0.21	OK	
	LC10 at 18.75%	0.07	OK	
	LC11 at 100.00%	0.04	OK	Eq. H1-1b
	LC12 at 20.83%	0.03	OK	
	LC13 at 100.00%	0.02	OK	
	LC14 at 100.00%	0.02	OK	
	LC2 at 18.75%	**0.53**	**OK**	Eq. H1-1b
	LC3 at 83.33%	0.20	OK	
	LC4 at 18.75%	0.50	OK	
	LC5 at 83.33%	0.21	OK	
	LC6 at 18.75%	0.53	OK	
	LC7 at 83.33%	0.20	OK	
	LC8 at 18.75%	0.51	OK	
	LC9 at 100.00%	0.04	OK	
	W180 at 83.33%	0.13	OK	
	W210 at 18.75%	0.32	OK	
	Wi180 at 83.33%	0.02	OK	
	Wi210 at 18.75%	0.05	OK	
39	LC1 at 20.31%	0.11	OK	
	LC10 at 18.75%	0.02	OK	
	LC11 at 84.38%	0.03	OK	

	LC12 at 100.00%	0.02	OK	
	LC13 at 100.00%	0.01	OK	
	LC14 at 100.00%	0.01	OK	
	LC2 at 18.75%	0.17	OK	Eq. H1-1b
	LC3 at 20.31%	0.18	OK	
	LC4 at 18.75%	0.20	OK	
	LC5 at 20.31%	0.11	OK	
	LC6 at 18.75%	0.17	OK	
	LC7 at 20.31%	0.18	OK	
	LC8 at 18.75%	**0.20**	**OK**	Eq. H1-1b
	LC9 at 20.31%	0.01	OK	
	W180 at 20.31%	0.11	OK	
	W210 at 18.75%	0.13	OK	
	Wi180 at 20.31%	0.02	OK	
	Wi210 at 18.75%	0.02	OK	
65	LC1 at 66.67%	0.66	With warnings	
	LC10 at 0.00%	0.07	With warnings	
	LC11 at 100.00%	0.08	With warnings	
	LC12 at 35.42%	0.15	With warnings	
	LC13 at 35.42%	0.07	With warnings	
	LC14 at 35.42%	0.05	With warnings	
	LC2 at 100.00%	0.44	With warnings	
	LC3 at 0.00%	0.64	With warnings	
	LC4 at 64.58%	**0.78**	**With warnings**	Eq. H1-1a
	LC5 at 66.67%	0.69	With warnings	Eq. H1-1a
	LC6 at 100.00%	0.46	With warnings	
	LC7 at 0.00%	0.66	With warnings	Eq. H1-1a
	LC8 at 64.58%	0.76	With warnings	
	LC9 at 35.42%	0.15	With warnings	
	W180 at 33.33%	0.48	With warnings	
	W210 at 64.58%	0.44	With warnings	Eq. H1-1a
	Wi180 at 0.00%	0.11	With warnings	
	Wi210 at 35.42%	0.06	With warnings	
66	LC1 at 20.83%	0.23	OK	
	LC10 at 20.83%	0.06	OK	
	LC11 at 85.42%	0.06	OK	Eq. H1-1b
	LC12 at 18.75%	0.08	OK	
	LC13 at 85.42%	0.03	OK	
	LC14 at 85.42%	0.02	OK	
	LC2 at 18.75%	0.48	OK	
	LC3 at 20.83%	0.25	OK	
	LC4 at 18.75%	**0.53**	**OK**	Eq. H1-1b
	LC5 at 20.83%	0.24	OK	
	LC6 at 18.75%	0.48	OK	
	LC7 at 20.83%	0.25	OK	
	LC8 at 18.75%	0.52	OK	
	LC9 at 18.75%	0.04	OK	
	W180 at 20.83%	0.15	OK	
	W210 at 18.75%	0.32	OK	
	Wi180 at 20.83%	0.04	OK	
	Wi210 at 18.75%	0.05	OK	
67	LC1 at 18.75%	0.31	OK	
	LC10 at 85.42%	0.04	OK	
	LC11 at 83.33%	0.03	OK	
	LC12 at 18.75%	0.05	OK	
	LC13 at 100.00%	0.02	OK	
	LC14 at 100.00%	0.02	OK	
	LC2 at 20.83%	0.37	OK	Eq. H1-1b
	LC3 at 18.75%	0.29	OK	
	LC4 at 20.83%	0.38	OK	
	LC5 at 18.75%	0.31	OK	

	LC6 at 20.83%	0.37	OK	
	LC7 at 18.75%	0.29	OK	
	LC8 at 20.83%	**0.38**	**OK**	Eq. H1-1b
	LC9 at 100.00%	0.06	OK	Eq. H1-1b
	W180 at 18.75%	0.19	OK	
	W210 at 20.83%	0.24	OK	
	Wi180 at 18.75%	0.04	OK	
	Wi210 at 20.83%	0.04	OK	
70	LC1 at 14.06%	0.12	OK	
	LC10 at 0.00%	0.02	OK	
	LC11 at 15.63%	0.03	OK	
	LC12 at 81.25%	0.02	OK	
	LC13 at 0.00%	0.01	OK	
	LC14 at 0.00%	0.00	OK	
	LC2 at 81.25%	0.20	OK	
	LC3 at 15.63%	0.18	OK	Sec. E1
	LC4 at 81.25%	0.17	OK	Eq. H1-1b
	LC5 at 14.06%	0.12	OK	Eq. H1-1b
	LC6 at 81.25%	**0.20**	**OK**	Eq. H1-1b
	LC7 at 15.63%	0.18	OK	
	LC8 at 81.25%	0.17	OK	
	LC9 at 100.00%	0.03	OK	
	W180 at 79.69%	0.11	OK	
	W210 at 81.25%	0.11	OK	
	Wi180 at 79.69%	0.02	OK	
	Wi210 at 81.25%	0.01	OK	
71	LC1 at 0.00%	0.12	OK	
	LC10 at 84.38%	0.02	OK	
	LC11 at 0.00%	0.02	OK	
	LC12 at 20.31%	0.02	OK	
	LC13 at 100.00%	0.01	OK	
	LC14 at 100.00%	0.00	OK	
	LC2 at 20.31%	0.39	OK	
	LC3 at 0.00%	0.13	OK	
	LC4 at 20.31%	0.20	OK	Eq. H1-1b
	LC5 at 0.00%	0.12	OK	
	LC6 at 20.31%	**0.39**	**OK**	Eq. H1-1a
	LC7 at 0.00%	0.13	OK	
	LC8 at 20.31%	0.20	OK	
	LC9 at 0.00%	0.02	OK	
	W180 at 0.00%	0.08	OK	
	W210 at 20.31%	0.13	OK	
	Wi180 at 0.00%	0.02	OK	
	Wi210 at 20.31%	0.02	OK	
78	LC1 at 66.67%	0.44	With warnings	
	LC10 at 0.00%	0.08	With warnings	
	LC11 at 35.42%	0.08	With warnings	
	LC12 at 66.67%	0.07	With warnings	
	LC13 at 35.42%	0.04	With warnings	
	LC14 at 35.42%	0.03	With warnings	
	LC2 at 33.33%	0.41	With warnings	
	LC3 at 33.33%	0.42	With warnings	Eq. H1-1a
	LC4 at 66.67%	**0.45**	**With warnings**	Eq. H1-1a
	LC5 at 66.67%	0.43	With warnings	
	LC6 at 33.33%	0.40	With warnings	
	LC7 at 33.33%	0.41	With warnings	
	LC8 at 66.67%	0.44	With warnings	
	LC9 at 66.67%	0.08	With warnings	
	W180 at 33.33%	0.24	With warnings	
	W210 at 66.67%	0.19	With warnings	
	Wi180 at 0.00%	0.03	With warnings	

	Wi210 at 66.67%	0.02	With warnings	
79	LC1 at 100.00%	0.65	With warnings	
	LC10 at 35.42%	0.15	With warnings	
	LC11 at 100.00%	0.07	With warnings	
	LC12 at 0.00%	0.07	With warnings	
	LC13 at 100.00%	0.07	With warnings	
	LC14 at 100.00%	0.05	With warnings	
	LC2 at 64.58%	**0.84**	**With warnings**	Eq. H1-1a
	LC3 at 0.00%	0.64	With warnings	
	LC4 at 100.00%	0.50	With warnings	
	LC5 at 66.67%	0.67	With warnings	Eq. H1-1a
	LC6 at 64.58%	0.82	With warnings	
	LC7 at 0.00%	0.66	With warnings	Eq. H1-1a
	LC8 at 100.00%	0.53	With warnings	
	LC9 at 35.42%	0.12	With warnings	
	W180 at 33.33%	0.47	With warnings	
	W210 at 66.67%	0.41	With warnings	Eq. H1-1a
	Wi180 at 0.00%	0.08	With warnings	
	Wi210 at 66.67%	0.05	With warnings	
82	LC1 at 18.75%	0.11	OK	
	LC10 at 0.00%	0.03	OK	
	LC11 at 100.00%	0.02	OK	
	LC12 at 20.31%	0.03	OK	
	LC13 at 100.00%	0.01	OK	
	LC14 at 100.00%	0.01	OK	
	LC2 at 20.31%	0.21	OK	
	LC3 at 100.00%	0.12	OK	
	LC4 at 20.31%	**0.40**	**OK**	Eq. H1-1a
	LC5 at 18.75%	0.11	OK	
	LC6 at 20.31%	0.22	OK	Eq. H1-1b
	LC7 at 100.00%	0.12	OK	
	LC8 at 20.31%	0.40	OK	
	LC9 at 0.00%	0.02	OK	
	W180 at 18.75%	0.07	OK	
	W210 at 20.31%	0.19	OK	
	Wi180 at 18.75%	0.01	OK	
	Wi210 at 20.31%	0.03	OK	
83	LC1 at 100.00%	0.11	With warnings	Eq. H1-1b
	LC10 at 35.42%	0.09	With warnings	
	LC11 at 35.42%	0.18	With warnings	
	LC12 at 64.58%	0.09	With warnings	
	LC13 at 64.58%	0.07	With warnings	
	LC14 at 64.58%	0.05	With warnings	
	LC2 at 100.00%	0.66	With warnings	
	LC3 at 35.42%	**0.83**	**With warnings**	Eq. H1-1a
	LC4 at 0.00%	0.72	With warnings	
	LC5 at 100.00%	0.09	With warnings	
	LC6 at 100.00%	0.69	With warnings	Eq. H1-1a
	LC7 at 35.42%	0.81	With warnings	
	LC8 at 0.00%	0.74	With warnings	Eq. H1-1a
	LC9 at 100.00%	0.08	With warnings	
	W180 at 64.58%	0.48	With warnings	Eq. H1-1a
	W210 at 33.33%	0.51	With warnings	
	Wi180 at 35.42%	0.09	With warnings	
	Wi210 at 0.00%	0.07	With warnings	
84	LC1 at 64.58%	0.40	With warnings	Eq. H1-1a
	LC10 at 35.42%	0.07	With warnings	
	LC11 at 66.67%	0.07	With warnings	
	LC12 at 35.42%	0.09	With warnings	
	LC13 at 35.42%	0.06	With warnings	

	LC14 at 35.42%	0.05	With warnings	
	LC2 at 100.00%	0.34	With warnings	Eq. H1-1a
	LC3 at 33.33%	0.10	With warnings	
	LC4 at 0.00%	**0.46**	**With warnings**	Eq. H1-1a
	LC5 at 64.58%	0.38	With warnings	
	LC6 at 100.00%	0.33	With warnings	
	LC7 at 33.33%	0.10	With warnings	
	LC8 at 0.00%	0.45	With warnings	
	LC9 at 35.42%	0.12	With warnings	
	W180 at 33.33%	0.06	With warnings	
	W210 at 0.00%	0.26	With warnings	
	Wi180 at 100.00%	0.02	With warnings	
	Wi210 at 0.00%	0.04	With warnings	
87	LC1 at 20.31%	**0.26**	**OK**	Eq. H1-1b
	LC10 at 84.38%	0.02	OK	
	LC11 at 18.75%	0.02	OK	
	LC12 at 85.94%	0.01	OK	
	LC13 at 100.00%	0.01	OK	
	LC14 at 100.00%	0.01	OK	
	LC2 at 84.38%	0.11	OK	
	LC3 at 18.75%	0.20	OK	
	LC4 at 18.75%	0.07	OK	
	LC5 at 20.31%	0.26	OK	
	LC6 at 84.38%	0.11	OK	
	LC7 at 18.75%	0.20	OK	Eq. H1-1b
	LC8 at 18.75%	0.07	OK	
	LC9 at 18.75%	0.03	OK	
	W180 at 18.75%	0.12	OK	
	W210 at 18.75%	0.04	OK	
	Wi180 at 18.75%	0.02	OK	
	Wi210 at 18.75%	0.01	OK	
88	LC1 at 20.31%	**0.37**	**OK**	Eq. H1-1a
	LC10 at 100.00%	0.01	OK	Eq. H1-2
	LC11 at 18.75%	0.03	OK	
	LC12 at 84.38%	0.02	OK	
	LC13 at 84.38%	0.01	OK	
	LC14 at 84.38%	0.01	OK	
	LC2 at 85.94%	0.09	OK	
	LC3 at 20.31%	0.21	OK	
	LC4 at 84.38%	0.12	OK	
	LC5 at 20.31%	0.37	OK	
	LC6 at 85.94%	0.09	OK	
	LC7 at 20.31%	0.21	OK	Eq. H1-1b
	LC8 at 84.38%	0.11	OK	
	LC9 at 84.38%	0.04	OK	
	W180 at 20.31%	0.13	OK	
	W210 at 84.38%	0.07	OK	
	Wi180 at 20.31%	0.02	OK	
	Wi210 at 50.00%	0.01	OK	
89	LC1 at 100.00%	0.13	OK	
	LC10 at 100.00%	0.12	OK	
	LC11 at 0.00%	0.12	OK	
	LC12 at 0.00%	0.08	OK	
	LC13 at 0.00%	0.09	OK	
	LC14 at 0.00%	0.07	OK	
	LC2 at 100.00%	**0.62**	**OK**	Eq. H1-1a
	LC3 at 0.00%	0.42	OK	
	LC4 at 100.00%	0.19	OK	
	LC5 at 100.00%	0.12	OK	
	LC6 at 100.00%	0.59	OK	
	LC7 at 0.00%	0.39	OK	

	LC8 at 100.00%	0.20	OK	Eq. Sec. D2
	LC9 at 100.00%	0.08	OK	
	W180 at 0.00%	0.18	OK	
	W210 at 100.00%	0.13	OK	
	Wi180 at 0.00%	0.04	OK	
	Wi210 at 0.00%	0.02	OK	
90	LC1 at 100.00%	0.13	OK	
	LC10 at 0.00%	0.08	OK	
	LC11 at 0.00%	0.13	OK	
	LC12 at 0.00%	0.13	OK	
	LC13 at 0.00%	0.09	OK	
	LC14 at 0.00%	0.07	OK	
	LC2 at 100.00%	0.19	OK	
	LC3 at 0.00%	0.43	OK	
	LC4 at 100.00%	**0.62**	**OK**	Eq. H1-1a
	LC5 at 100.00%	0.12	OK	
	LC6 at 100.00%	0.20	OK	Eq. Sec. D2
	LC7 at 0.00%	0.40	OK	
	LC8 at 100.00%	0.59	OK	
	LC9 at 100.00%	0.09	OK	
	W180 at 0.00%	0.18	OK	
	W210 at 100.00%	0.33	OK	Eq. H1-1a
	Wi180 at 0.00%	0.04	OK	
	Wi210 at 0.00%	0.04	OK	
91	LC1 at 0.00%	**0.68**	**OK**	Eq. H1-1a
	LC10 at 100.00%	0.11	OK	
	LC11 at 100.00%	0.07	OK	
	LC12 at 0.00%	0.11	OK	
	LC13 at 100.00%	0.09	OK	
	LC14 at 100.00%	0.07	OK	
	LC2 at 100.00%	0.10	OK	
	LC3 at 100.00%	0.30	OK	Eq. H1-1a
	LC4 at 0.00%	0.10	OK	
	LC5 at 0.00%	0.66	OK	
	LC6 at 100.00%	0.08	OK	
	LC7 at 100.00%	0.29	OK	
	LC8 at 0.00%	0.08	OK	
	LC9 at 0.00%	0.14	OK	Eq. H1-1b
	W180 at 100.00%	0.15	OK	
	W210 at 0.00%	0.01	OK	
	Wi180 at 0.00%	0.03	OK	
	Wi210 at 0.00%	0.00	OK	
92	LC1 at 100.00%	0.10	OK	
	LC10 at 0.00%	0.05	OK	
	LC11 at 0.00%	0.05	OK	
	LC12 at 100.00%	0.03	OK	
	LC13 at 0.00%	0.01	OK	
	LC14 at 0.00%	0.01	OK	
	LC2 at 100.00%	0.40	OK	Eq. H1-1b
	LC3 at 100.00%	0.09	OK	
	LC4 at 100.00%	0.41	OK	
	LC5 at 100.00%	0.10	OK	
	LC6 at 100.00%	0.40	OK	
	LC7 at 100.00%	0.09	OK	
	LC8 at 100.00%	**0.41**	**OK**	Eq. H1-1b
	LC9 at 0.00%	0.05	OK	
	W180 at 100.00%	0.06	OK	
	W210 at 100.00%	0.26	OK	
	Wi180 at 0.00%	0.04	OK	
	Wi210 at 100.00%	0.03	OK	

93	LC1 at 0.00%	0.32	OK	Eq. H1-1a
	LC10 at 0.00%	0.07	OK	
	LC11 at 0.00%	0.09	OK	
	LC12 at 0.00%	0.08	OK	
	LC13 at 0.00%	0.06	OK	
	LC14 at 0.00%	0.04	OK	
	LC2 at 0.00%	0.34	OK	Eq. H1-1b
	LC3 at 100.00%	0.14	OK	
	LC4 at 0.00%	**0.55**	**OK**	Eq. H1-1a
	LC5 at 0.00%	0.30	OK	
	LC6 at 0.00%	0.33	OK	
	LC7 at 100.00%	0.14	OK	
	LC8 at 0.00%	0.53	OK	
	LC9 at 0.00%	0.09	OK	
	W180 at 100.00%	0.09	OK	
	W210 at 0.00%	0.23	OK	
	Wi180 at 0.00%	0.05	OK	
	Wi210 at 0.00%	0.03	OK	
94	LC1 at 100.00%	0.30	OK	
	LC10 at 0.00%	0.03	OK	
	LC11 at 0.00%	0.08	OK	
	LC12 at 0.00%	0.03	OK	
	LC13 at 0.00%	0.01	OK	
	LC14 at 0.00%	0.01	OK	
	LC2 at 0.00%	0.09	OK	
	LC3 at 100.00%	0.30	OK	Eq. H1-1b
	LC4 at 0.00%	0.11	OK	
	LC5 at 100.00%	**0.30**	**OK**	Eq. H1-1b
	LC6 at 0.00%	0.09	OK	
	LC7 at 100.00%	0.30	OK	
	LC8 at 0.00%	0.11	OK	
	LC9 at 0.00%	0.05	OK	
	W180 at 100.00%	0.18	OK	
	W210 at 0.00%	0.06	OK	
	Wi180 at 0.00%	0.06	OK	
	Wi210 at 0.00%	0.01	OK	
95	LC1 at 0.00%	0.19	OK	
	LC10 at 0.00%	0.08	OK	Eq. H1-1b
	LC11 at 0.00%	0.09	OK	
	LC12 at 0.00%	0.06	OK	
	LC13 at 0.00%	0.06	OK	
	LC14 at 0.00%	0.04	OK	
	LC2 at 0.00%	**0.54**	**OK**	Eq. H1-1a
	LC3 at 0.00%	0.13	OK	
	LC4 at 0.00%	0.29	OK	Eq. H1-1b
	LC5 at 0.00%	0.18	OK	
	LC6 at 0.00%	0.52	OK	
	LC7 at 0.00%	0.12	OK	
	LC8 at 0.00%	0.28	OK	
	LC9 at 0.00%	0.10	OK	
	W180 at 0.00%	0.07	OK	
	W210 at 0.00%	0.17	OK	
	Wi180 at 0.00%	0.05	OK	
	Wi210 at 0.00%	0.02	OK	
96	LC1 at 0.00%	0.24	OK	
	LC10 at 100.00%	0.03	OK	
	LC11 at 0.00%	0.06	OK	
	LC12 at 0.00%	0.05	OK	
	LC13 at 0.00%	0.01	OK	
	LC14 at 0.00%	0.01	OK	
	LC2 at 100.00%	0.41	OK	

	LC3 at 0.00%	0.22	OK	
	LC4 at 100.00%	0.40	OK	Eq. H1-1b
	LC5 at 0.00%	0.24	OK	
	LC6 at 100.00%	**0.41**	**OK**	Eq. H1-1b
	LC7 at 0.00%	0.22	OK	
	LC8 at 100.00%	0.40	OK	
	LC9 at 0.00%	0.08	OK	
	W180 at 0.00%	0.14	OK	
	W210 at 100.00%	0.25	OK	
	Wi180 at 0.00%	0.06	OK	
	Wi210 at 100.00%	0.03	OK	
97	LC1 at 100.00%	0.43	OK	
	LC10 at 100.00%	0.08	OK	
	LC11 at 100.00%	0.10	OK	
	LC12 at 100.00%	0.07	OK	
	LC13 at 100.00%	0.06	OK	
	LC14 at 100.00%	0.04	OK	
	LC2 at 100.00%	**0.55**	**OK**	Eq. H1-1a
	LC3 at 100.00%	0.22	OK	
	LC4 at 100.00%	0.35	OK	Eq. H1-1b
	LC5 at 100.00%	0.42	OK	
	LC6 at 100.00%	0.54	OK	
	LC7 at 100.00%	0.21	OK	
	LC8 at 100.00%	0.34	OK	
	LC9 at 100.00%	0.10	OK	
	W180 at 100.00%	0.13	OK	
	W210 at 100.00%	0.19	OK	
	Wi180 at 100.00%	0.06	OK	
	Wi210 at 100.00%	0.03	OK	
98	LC1 at 0.00%	0.33	OK	
	LC10 at 100.00%	0.03	OK	
	LC11 at 100.00%	0.08	OK	
	LC12 at 100.00%	0.02	OK	
	LC13 at 100.00%	0.02	OK	
	LC14 at 100.00%	0.01	OK	
	LC2 at 100.00%	0.12	OK	
	LC3 at 0.00%	0.33	OK	Eq. H1-1b
	LC4 at 100.00%	0.09	OK	
	LC5 at 0.00%	**0.33**	**OK**	Eq. H1-1b
	LC6 at 100.00%	0.11	OK	
	LC7 at 0.00%	0.32	OK	
	LC8 at 100.00%	0.09	OK	
	LC9 at 0.00%	0.05	OK	
	W180 at 0.00%	0.20	OK	
	W210 at 100.00%	0.07	OK	
	Wi180 at 100.00%	0.06	OK	
	Wi210 at 100.00%	0.01	OK	
99	LC1 at 0.00%	0.20	OK	
	LC10 at 0.00%	0.06	OK	
	LC11 at 0.00%	0.09	OK	
	LC12 at 0.00%	0.09	OK	Eq. H1-1b
	LC13 at 0.00%	0.06	OK	
	LC14 at 0.00%	0.05	OK	
	LC2 at 0.00%	0.29	OK	Eq. H1-1b
	LC3 at 100.00%	0.15	OK	
	LC4 at 0.00%	**0.55**	**OK**	Eq. H1-1a
	LC5 at 0.00%	0.18	OK	
	LC6 at 0.00%	0.28	OK	
	LC7 at 100.00%	0.15	OK	
	LC8 at 0.00%	0.53	OK	
	LC9 at 0.00%	0.10	OK	

	W180 at 100.00%	0.08	OK	
	W210 at 0.00%	0.21	OK	
	Wi180 at 0.00%	0.05	OK	
	Wi210 at 0.00%	0.03	OK	
100	LC1 at 100.00%	0.26	OK	
	LC10 at 0.00%	0.03	OK	
	LC11 at 0.00%	0.07	OK	
	LC12 at 0.00%	0.05	OK	
	LC13 at 0.00%	0.01	OK	
	LC14 at 0.00%	0.01	OK	
	LC2 at 0.00%	0.39	OK	
	LC3 at 100.00%	0.26	OK	
	LC4 at 0.00%	**0.41**	**OK**	Eq. H1-1b
	LC5 at 100.00%	0.26	OK	
	LC6 at 0.00%	0.39	OK	Eq. H1-1b
	LC7 at 100.00%	0.26	OK	
	LC8 at 0.00%	0.41	OK	
	LC9 at 0.00%	0.08	OK	
	W180 at 100.00%	0.17	OK	
	W210 at 0.00%	0.25	OK	
	Wi180 at 0.00%	0.06	OK	
	Wi210 at 100.00%	0.03	OK	
101	LC1 at 0.00%	0.24	OK	
	LC10 at 0.00%	0.07	OK	
	LC11 at 0.00%	0.10	OK	
	LC12 at 0.00%	0.07	OK	
	LC13 at 0.00%	0.06	OK	
	LC14 at 0.00%	0.04	OK	
	LC2 at 0.00%	0.29	OK	Eq. H1-1b
	LC3 at 0.00%	**0.51**	**OK**	Eq. H1-1a
	LC4 at 0.00%	0.35	OK	
	LC5 at 0.00%	0.23	OK	
	LC6 at 0.00%	0.28	OK	
	LC7 at 0.00%	0.49	OK	
	LC8 at 0.00%	0.34	OK	
	LC9 at 0.00%	0.10	OK	
	W180 at 0.00%	0.28	OK	
	W210 at 0.00%	0.18	OK	
	Wi180 at 0.00%	0.07	OK	
	Wi210 at 0.00%	0.02	OK	
102	LC1 at 100.00%	0.18	OK	
	LC10 at 0.00%	0.05	OK	
	LC11 at 0.00%	0.04	OK	
	LC12 at 0.00%	0.03	OK	
	LC13 at 0.00%	0.01	OK	
	LC14 at 0.00%	0.01	OK	
	LC2 at 0.00%	**0.41**	**OK**	Eq. H1-1b
	LC3 at 100.00%	0.16	OK	
	LC4 at 0.00%	0.39	OK	
	LC5 at 100.00%	0.18	OK	
	LC6 at 0.00%	0.41	OK	
	LC7 at 100.00%	0.16	OK	
	LC8 at 0.00%	0.39	OK	Eq. H1-1b
	LC9 at 0.00%	0.06	OK	
	W180 at 100.00%	0.10	OK	
	W210 at 0.00%	0.25	OK	
	Wi180 at 0.00%	0.04	OK	
	Wi210 at 100.00%	0.03	OK	
103	LC1 at 0.00%	0.19	OK	
	LC10 at 0.00%	0.07	OK	

	LC11 at 0.00%	0.09	OK	
	LC12 at 0.00%	0.07	OK	
	LC13 at 0.00%	0.06	OK	
	LC14 at 0.00%	0.04	OK	
	LC2 at 0.00%	0.35	OK	
	LC3 at 0.00%	0.40	OK	Eq. H1-1a
	LC4 at 0.00%	0.29	OK	Eq. H1-1b
	LC5 at 0.00%	0.19	OK	Eq. Sec. D2
	LC6 at 0.00%	0.34	OK	
	LC7 at 0.00%	**0.43**	**OK**	Eq. H1-1a
	LC8 at 0.00%	0.28	OK	
	LC9 at 0.00%	0.09	OK	
	W180 at 0.00%	0.23	OK	
	W210 at 0.00%	0.17	OK	
	Wi180 at 0.00%	0.06	OK	
	Wi210 at 0.00%	0.02	OK	
104	LC1 at 0.00%	0.36	OK	
	LC10 at 0.00%	0.08	OK	
	LC11 at 0.00%	0.10	OK	
	LC12 at 0.00%	0.08	OK	
	LC13 at 0.00%	0.06	OK	
	LC14 at 0.00%	0.05	OK	
	LC2 at 100.00%	0.12	OK	
	LC3 at 0.00%	0.26	OK	Eq. H1-1a
	LC4 at 100.00%	0.10	OK	
	LC5 at 0.00%	**0.41**	**OK**	Eq. H1-1a
	LC6 at 100.00%	0.11	OK	
	LC7 at 0.00%	0.25	OK	
	LC8 at 100.00%	0.09	OK	
	LC9 at 0.00%	0.06	OK	
	W180 at 0.00%	0.10	OK	
	W210 at 100.00%	0.06	OK	
	Wi180 at 0.00%	0.03	OK	
	Wi210 at 0.00%	0.01	OK	
105	LC1 at 0.00%	0.14	OK	
	LC10 at 0.00%	0.09	OK	
	LC11 at 0.00%	0.07	OK	
	LC12 at 0.00%	0.07	OK	
	LC13 at 0.00%	0.06	OK	
	LC14 at 0.00%	0.04	OK	
	LC2 at 0.00%	0.30	OK	Eq. H1-1a
	LC3 at 100.00%	0.08	OK	
	LC4 at 0.00%	0.37	OK	
	LC5 at 0.00%	0.12	OK	
	LC6 at 0.00%	0.21	OK	
	LC7 at 100.00%	0.11	OK	
	LC8 at 0.00%	**0.42**	**OK**	Eq. H1-1a
	LC9 at 0.00%	0.09	OK	
	W180 at 0.00%	0.15	OK	
	W210 at 0.00%	0.34	OK	
	Wi180 at 0.00%	0.03	OK	
	Wi210 at 0.00%	0.04	OK	
106	LC1 at 0.00%	0.15	OK	
	LC10 at 0.00%	0.10	OK	
	LC11 at 0.00%	0.07	OK	
	LC12 at 0.00%	0.07	OK	
	LC13 at 0.00%	0.06	OK	
	LC14 at 0.00%	0.05	OK	
	LC2 at 0.00%	0.35	OK	Eq. H1-1a
	LC3 at 0.00%	0.10	OK	
	LC4 at 0.00%	0.47	OK	

	LC5 at 0.00%	0.14	OK	
	LC6 at 0.00%	0.34	OK	
	LC7 at 0.00%	0.15	OK	
	LC8 at 0.00%	**0.51**	**OK**	Eq. H1-1a
	LC9 at 0.00%	0.10	OK	
	W180 at 0.00%	0.18	OK	
	W210 at 0.00%	0.40	OK	
	Wi180 at 0.00%	0.04	OK	
	Wi210 at 0.00%	0.05	OK	
107	LC1 at 0.00%	0.16	OK	
	LC10 at 0.00%	0.07	OK	
	LC11 at 0.00%	0.07	OK	
	LC12 at 0.00%	0.10	OK	
	LC13 at 0.00%	0.06	OK	
	LC14 at 0.00%	0.05	OK	
	LC2 at 0.00%	0.46	OK	
	LC3 at 0.00%	0.14	OK	
	LC4 at 0.00%	0.35	OK	Eq. H1-1a
	LC5 at 0.00%	0.15	OK	
	LC6 at 0.00%	**0.51**	**OK**	Eq. H1-1a
	LC7 at 0.00%	0.16	OK	
	LC8 at 0.00%	0.33	OK	
	LC9 at 0.00%	0.09	OK	
	W180 at 0.00%	0.17	OK	
	W210 at 0.00%	0.14	OK	
	Wi180 at 0.00%	0.03	OK	
	Wi210 at 0.00%	0.02	OK	
108	LC1 at 0.00%	0.17	OK	
	LC10 at 0.00%	0.07	OK	
	LC11 at 0.00%	0.07	OK	
	LC12 at 0.00%	0.10	OK	
	LC13 at 0.00%	0.06	OK	
	LC14 at 0.00%	0.05	OK	
	LC2 at 0.00%	0.37	OK	
	LC3 at 0.00%	0.13	OK	
	LC4 at 0.00%	0.31	OK	Eq. H1-1a
	LC5 at 0.00%	0.16	OK	
	LC6 at 0.00%	**0.42**	**OK**	Eq. H1-1a
	LC7 at 0.00%	0.15	OK	
	LC8 at 0.00%	0.21	OK	
	LC9 at 0.00%	0.10	OK	
	W180 at 0.00%	0.16	OK	
	W210 at 0.00%	0.12	OK	
	Wi180 at 0.00%	0.04	OK	
	Wi210 at 0.00%	0.01	OK	
109	LC1 at 0.00%	0.43	OK	
	LC10 at 0.00%	0.08	OK	
	LC11 at 0.00%	0.11	OK	
	LC12 at 0.00%	0.08	OK	
	LC13 at 0.00%	0.06	OK	
	LC14 at 0.00%	0.05	OK	
	LC2 at 100.00%	0.10	OK	
	LC3 at 0.00%	0.31	OK	Eq. H1-1a
	LC4 at 100.00%	0.12	OK	
	LC5 at 0.00%	**0.48**	**OK**	Eq. H1-1a
	LC6 at 100.00%	0.09	OK	
	LC7 at 0.00%	0.30	OK	
	LC8 at 100.00%	0.11	OK	
	LC9 at 0.00%	0.06	OK	
	W180 at 0.00%	0.11	OK	
	W210 at 100.00%	0.05	OK	

		Wi180 at 0.00%	0.03	OK	
		Wi210 at 0.00%	0.01	OK	
	234	LC1 at 31.25%	0.35	With warnings	
		LC10 at 0.00%	0.06	With warnings	
		LC11 at 66.67%	0.10	With warnings	
		LC12 at 66.67%	0.07	With warnings	
		LC13 at 35.42%	0.02	With warnings	
		LC14 at 35.42%	0.02	With warnings	
		LC2 at 33.33%	**0.52**	**With warnings**	Eq. H1-1a
		LC3 at 66.67%	0.51	With warnings	Eq. H1-1a
		LC4 at 66.67%	0.43	With warnings	
		LC5 at 33.33%	0.35	With warnings	
		LC6 at 33.33%	0.52	With warnings	
		LC7 at 66.67%	0.50	With warnings	
		LC8 at 66.67%	0.42	With warnings	
		LC9 at 0.00%	0.09	With warnings	
		W180 at 66.67%	0.31	With warnings	
		W210 at 66.67%	0.26	With warnings	
		Wi180 at 66.67%	0.07	With warnings	
		Wi210 at 66.67%	0.04	With warnings	
T2L 3X3X1_4	**274**	LC1 at 100.00%	0.16	OK	
		LC10 at 100.00%	0.10	OK	
		LC11 at 100.00%	0.14	OK	
		LC12 at 100.00%	0.09	OK	
		LC13 at 100.00%	0.06	OK	
		LC14 at 100.00%	0.04	OK	
		LC2 at 100.00%	**0.41**	**OK**	Eq. H2-1
		LC3 at 100.00%	0.20	OK	
		LC4 at 100.00%	0.33	OK	
		LC5 at 100.00%	0.14	OK	
		LC6 at 100.00%	0.40	OK	
		LC7 at 100.00%	0.19	OK	
		LC8 at 100.00%	0.33	OK	
		LC9 at 100.00%	0.13	OK	
		W180 at 100.00%	0.09	OK	
		W210 at 100.00%	0.21	OK	
		Wi180 at 100.00%	0.07	OK	
		Wi210 at 100.00%	0.03	OK	
	275	LC1 at 0.00%	0.15	OK	
		LC10 at 0.00%	0.09	OK	
		LC11 at 0.00%	0.14	OK	
		LC12 at 0.00%	0.10	OK	
		LC13 at 0.00%	0.06	OK	
		LC14 at 0.00%	0.04	OK	
		LC2 at 0.00%	0.33	OK	
		LC3 at 0.00%	0.20	OK	
		LC4 at 0.00%	**0.41**	**OK**	Eq. H2-1
		LC5 at 0.00%	0.14	OK	
		LC6 at 0.00%	0.33	OK	
		LC7 at 0.00%	0.19	OK	
		LC8 at 0.00%	0.40	OK	
		LC9 at 0.00%	0.13	OK	
		W180 at 0.00%	0.09	OK	
		W210 at 0.00%	0.22	OK	
		Wi180 at 0.00%	0.07	OK	
		Wi210 at 0.00%	0.03	OK	
	276	LC1 at 0.00%	0.23	OK	
		LC10 at 0.00%	0.10	OK	
		LC11 at 0.00%	0.13	OK	
		LC12 at 0.00%	0.10	OK	

LC13 at 0.00%	0.06	OK	
LC14 at 0.00%	0.04	OK	
LC2 at 0.00%	**0.37**	**OK**	Eq. H2-1
LC3 at 0.00%	0.14	OK	
LC4 at 0.00%	0.37	OK	
LC5 at 0.00%	0.22	OK	
LC6 at 0.00%	0.36	OK	
LC7 at 0.00%	0.14	OK	
LC8 at 0.00%	0.36	OK	
LC9 at 0.00%	0.14	OK	
W180 at 0.00%	0.10	OK	
W210 at 0.00%	0.20	OK	
Wi180 at 0.00%	0.07	OK	
Wi210 at 0.00%	0.03	OK	

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Geometry data

GLOSSARY

Cb22, Cb33	: Moment gradient coefficients
Cm22, Cm33	: Coefficients applied to bending term in interaction formula
d0	: Tapered member section depth at J end of member
DJX	: Rigid end offset distance measured from J node in axis X
DJY	: Rigid end offset distance measured from J node in axis Y
DJZ	: Rigid end offset distance measured from J node in axis Z
DKX	: Rigid end offset distance measured from K node in axis X
DKY	: Rigid end offset distance measured from K node in axis Y
DKZ	: Rigid end offset distance measured from K node in axis Z
dL	: Tapered member section depth at K end of member
Ig factor	: Inertia reduction factor (Effective Inertia/Gross Inertia) for reinforced concrete members
K22	: Effective length factor about axis 2
K33	: Effective length factor about axis 3
L22	: Member length for calculation of axial capacity
L33	: Member length for calculation of axial capacity
LB pos	: Lateral unbraced length of the compression flange in the positive side of local axis 2
LB neg	: Lateral unbraced length of the compression flange in the negative side of local axis 2
RX	: Rotation about X
RY	: Rotation about Y
RZ	: Rotation about Z
TO	: 1 = Tension only member 0 = Normal member
TX	: Translation in X
TY	: Translation in Y
TZ	: Translation in Z

Nodes

Node	X [ft]	Y [ft]	Z [ft]	Rigid Floor
5	1.7083	0.00	3.1755	0
6	-1.7083	0.00	3.1755	0
10	1.7083	3.33	3.1755	0
12	0.00	3.33	0.00	0
17	1.7083	0.50	3.1755	0
18	-1.7083	0.50	3.1755	0
21	-1.7083	2.6667	3.1755	0
22	1.7083	2.6667	3.1755	0
26	0.00	0.00	0.00	0
117	-5.50	0.00	3.1754	0
119	-3.6042	0.00	-0.1083	0
120	-1.8959	0.00	-3.0672	0
124	-3.6042	3.33	-0.1083	0
125	-5.50	3.33	3.1754	0
127	-5.50	0.50	3.1754	0
129	-3.6042	0.50	-0.1083	0
130	-1.8959	0.50	-3.0672	0
133	-1.8959	2.6667	-3.0672	0
134	-3.6042	2.6667	-0.1083	0
135	-5.50	2.6667	3.1754	0
237	2.90E-05	0.00	-6.3509	0
238	5.50	0.00	3.1754	0

239	1.8959	0.00	-3.0672	0
240	3.6042	0.00	-0.1083	0
241	5.50	3.33	3.1754	0
243	3.6042	3.33	-0.1083	0
244	1.8959	3.33	-3.0672	0
245	2.90E-05	3.33	-6.3509	0
247	2.90E-05	0.50	-6.3509	0
248	5.50	0.50	3.1754	0
249	1.8959	0.50	-3.0672	0
250	3.6042	0.50	-0.1083	0
251	5.50	2.6667	3.1754	0
253	3.6042	2.6667	-0.1083	0
254	1.8959	2.6667	-3.0672	0
255	2.90E-05	2.6667	-6.3509	0
280	-0.75	3.33	0.00	0
281	-0.75	0.00	0.00	0
282	0.75	3.33	0.00	0
283	0.75	0.00	0.00	0
284	0.375	3.33	0.6495	0
285	0.375	0.00	0.6495	0
286	-0.375	3.33	0.6495	0
287	-0.375	0.00	0.6495	0
288	0.375	3.33	-0.6495	0
289	0.375	0.00	-0.6495	0
290	-0.375	3.33	-0.6495	0
291	-0.375	0.00	-0.6495	0
302	6.4952	3.33	3.75	0
303	6.4952	0.00	3.75	0
304	6.4952	5.208	3.75	0
305	6.4952	-0.50	3.75	0
396	-1.8959	3.33	-3.0672	0
421	5.3125	2.6667	2.8507	0
423	5.3125	0.50	2.8507	0
424	5.4857	2.6667	2.7507	0
426	5.4857	0.50	2.7507	0
427	5.4857	6.708	2.7507	0
428	5.4857	-1.292	2.7507	0
429	-1.7083	3.33	3.1755	0
438	2.75	2.6667	-1.5877	0
440	2.75	0.50	-1.5877	0
441	2.9232	2.6667	-1.6877	0
443	2.9232	0.50	-1.6877	0
444	2.9232	6.708	-1.6877	0
445	2.9232	-1.292	-1.6877	0
446	0.1875	2.6667	-6.0261	0
448	0.1875	0.50	-6.0261	0
449	0.3607	2.6667	-6.1261	0
451	0.3607	0.50	-6.1261	0
452	0.3607	5.708	-6.1261	0
453	0.3607	-0.30	-6.1261	0
458	-6.4952	3.33	3.75	0
459	-6.4952	0.00	3.75	0
460	-6.4952	5.208	3.75	0
461	-6.4952	-0.50	3.75	0
462	2.90E-05	3.33	-7.50	0
463	2.90E-05	0.00	-7.50	0
464	2.90E-05	5.208	-7.50	0
465	2.90E-05	-0.50	-7.50	0
502	-0.1875	2.6667	-6.0261	0
503	-0.1875	0.50	-6.0261	0

504	-0.3607	2.6667	-6.1261	0
505	-0.3607	0.50	-6.1261	0
506	-0.3607	6.708	-6.1261	0
507	-0.3607	-1.292	-6.1261	0
508	-2.75	2.6667	-1.5877	0
509	-2.75	0.50	-1.5877	0
510	-2.9232	2.6667	-1.6877	0
511	-2.9232	0.50	-1.6877	0
512	-2.9232	6.708	-1.6877	0
513	-2.9232	-1.292	-1.6877	0
514	-5.3125	2.6667	2.8507	0
515	-5.3125	0.50	2.8507	0
516	-5.4857	2.6667	2.7507	0
517	-5.4857	0.50	2.7507	0
518	-5.4857	5.708	2.7507	0
519	-5.4857	-0.30	2.7507	0
520	-5.125	2.6667	3.1754	0
521	-5.125	0.50	3.1754	0
522	-5.125	2.6667	3.3754	0
523	-5.125	0.50	3.3754	0
524	-5.125	5.708	3.3754	0
525	-5.125	-0.30	3.3754	0
526	0.00	2.6667	3.1754	0
527	0.00	0.50	3.1754	0
528	0.00	2.6667	3.3754	0
529	0.00	0.50	3.3754	0
530	0.00	5.708	3.3754	0
531	0.00	-0.30	3.3754	0
532	5.125	2.6667	3.1754	0
533	5.125	0.50	3.1754	0
534	5.125	2.6667	3.3754	0
535	5.125	0.50	3.3754	0
536	5.125	5.708	3.3754	0
537	5.125	-0.30	3.3754	0
538	3.125	2.6667	-0.9382	0
539	3.125	0.50	-0.9382	0
544	-2.375	0.50	-2.2372	0
545	-2.375	2.6667	-2.2372	0
546	-0.75	0.50	3.1754	0
547	-0.75	2.6667	3.1754	0
551	0.5625	-3.003	0.3248	0
552	-0.5625	-3.003	0.3248	0
553	0.00	-3.003	-0.6495	0
554	-5.50	4.33	3.1754	0
555	5.50	4.33	3.1754	0
556	2.90E-05	4.33	-6.3509	0
575	5.125	4.33	3.1754	0
576	5.125	4.33	3.3754	0
577	0.00	4.33	3.1754	0
578	0.00	4.33	3.3754	0
579	-5.125	4.33	3.1754	0
580	-5.125	4.33	3.3754	0
581	-5.3125	4.33	2.8507	0
582	-5.4857	4.33	2.7507	0
583	-2.75	4.33	-1.5877	0
584	-2.9232	4.33	-1.6877	0
585	-0.1875	4.33	-6.0261	0
586	-0.3607	4.33	-6.1261	0
587	0.1875	4.33	-6.0261	0
588	0.3607	4.33	-6.1261	0

589	2.75	4.33	-1.5877	0
590	2.9232	4.33	-1.6877	0
591	5.3125	4.33	2.8507	0
592	5.4857	4.33	2.7507	0
594	0.00	0.00	3.3754	0
596	5.125	0.00	3.3754	0
598	-5.125	0.00	3.3754	0
600	-5.4857	0.00	2.7507	0
601	-2.75	-0.30	-1.5877	0
602	-2.9232	-0.30	-1.6877	0
603	-0.1875	-0.30	-6.0261	0
604	-0.3607	-0.30	-6.1261	0
605	0.1875	-0.30	-6.0261	0
607	2.75	-0.30	-1.5877	0
608	2.9232	-0.30	-1.6877	0
609	5.3125	-0.30	2.8507	0
610	5.4857	-0.30	2.7507	0
611	1.75	4.33	-3.3198	0
612	3.75	4.33	0.1443	0
617	-3.75	4.33	0.1443	0
618	-1.75	4.33	-3.3198	0
619	2.00	4.33	3.1754	0
620	-2.00	4.33	3.1754	0
621	0.00	3.33	0.7578	0
622	-0.5625	3.33	-0.3248	0
623	0.5625	3.33	-0.3248	0
624	-5.50	-0.30	3.1754	0
625	5.50	-0.30	3.1754	0
626	2.90E-05	-0.30	-6.3509	0
627	0.00	-0.30	3.1754	0
628	5.125	-0.30	3.1754	0
629	-5.125	-0.30	3.1754	0
630	-5.3125	-0.30	2.8507	0
631	-1.7083	-0.30	3.1755	0
632	1.7083	-0.30	3.1755	0
633	-3.6042	-0.30	-0.1083	0
634	-1.8959	-0.30	-3.0672	0
635	1.8959	-0.30	-3.0672	0
636	3.6042	-0.30	-0.1083	0

Restraints

Node	TX	TY	TZ	RX	RY	RZ
280	1	1	1	1	1	1
281	1	1	1	1	1	1
282	1	1	1	1	1	1
283	1	1	1	1	1	1
284	1	1	1	1	1	1
285	1	1	1	1	1	1
286	1	1	1	1	1	1
287	1	1	1	1	1	1
288	1	1	1	1	1	1
289	1	1	1	1	1	1
290	1	1	1	1	1	1
291	1	1	1	1	1	1

551	1	1	1	1	1	1
552	1	1	1	1	1	1
553	1	1	1	1	1	1

Members

Member	NJ	NK	Description	Section	Material	d0 [in]	dL [in]	lg factor
3	429	6		STube 1x1x1/8	A36	0.00	0.00	0.00
4	10	5		STube 1x1x1/8	A36	0.00	0.00	0.00
34	396	120		STube 1x1x1/8	A36	0.00	0.00	0.00
35	124	119		STube 1x1x1/8	A36	0.00	0.00	0.00
37	125	117		C 3X6	A36	0.00	0.00	0.00
39	124	117		STube 1x1x1/8	A36	0.00	0.00	0.00
65	237	238		STube 1x1x1/8	A36	0.00	0.00	0.00
66	243	240		STube 1x1x1/8	A36	0.00	0.00	0.00
67	244	239		STube 1x1x1/8	A36	0.00	0.00	0.00
68	238	241		C 3X6	A36	0.00	0.00	0.00
69	245	237		C 3X6	A36	0.00	0.00	0.00
70	238	243		STube 1x1x1/8	A36	0.00	0.00	0.00
71	244	237		STube 1x1x1/8	A36	0.00	0.00	0.00
72	251	255		P 1-3/8x1-3/8	A36	0.00	0.00	0.00
73	248	247		P 1-3/8x1-3/8	A36	0.00	0.00	0.00
78	245	125		STube 1x1x1/8	A36	0.00	0.00	0.00
79	237	117		STube 1x1x1/8	A36	0.00	0.00	0.00
80	247	127		P 1-3/8x1-3/8	A36	0.00	0.00	0.00
81	255	135		P 1-3/8x1-3/8	A36	0.00	0.00	0.00
82	396	237		STube 1x1x1/8	A36	0.00	0.00	0.00
83	117	238		STube 1x1x1/8	A36	0.00	0.00	0.00
84	125	241		STube 1x1x1/8	A36	0.00	0.00	0.00
85	135	251		P 1-3/8x1-3/8	A36	0.00	0.00	0.00
86	127	248		P 1-3/8x1-3/8	A36	0.00	0.00	0.00
87	429	117		STube 1x1x1/8	A36	0.00	0.00	0.00
88	10	238		STube 1x1x1/8	A36	0.00	0.00	0.00
89	6	119		STube 1x1x1/8	A36	0.00	0.00	0.00
90	5	240		STube 1x1x1/8	A36	0.00	0.00	0.00
91	239	120		STube 1x1x1/8	A36	0.00	0.00	0.00
92	280	124		STube 1x1x1/8	A36	0.00	0.00	0.00
93	281	119		STube 1x1x1/8	A36	0.00	0.00	0.00
94	284	10		STube 1x1x1/8	A36	0.00	0.00	0.00
95	285	5		STube 1x1x1/8	A36	0.00	0.00	0.00
96	282	243		STube 1x1x1/8	A36	0.00	0.00	0.00
97	240	283		STube 1x1x1/8	A36	0.00	0.00	0.00
98	429	286		STube 1x1x1/8	A36	0.00	0.00	0.00
99	287	6		STube 1x1x1/8	A36	0.00	0.00	0.00
100	288	244		STube 1x1x1/8	A36	0.00	0.00	0.00
101	289	239		STube 1x1x1/8	A36	0.00	0.00	0.00
102	290	396		STube 1x1x1/8	A36	0.00	0.00	0.00
103	291	120		STube 1x1x1/8	A36	0.00	0.00	0.00
104	286	6		STube 1x1x1/8	A36	0.00	0.00	0.00
105	280	119		STube 1x1x1/8	A36	0.00	0.00	0.00
106	290	120		STube 1x1x1/8	A36	0.00	0.00	0.00
107	288	239		STube 1x1x1/8	A36	0.00	0.00	0.00
108	282	240		STube 1x1x1/8	A36	0.00	0.00	0.00
109	284	5		STube 1x1x1/8	A36	0.00	0.00	0.00
113	305	304		L 3X3X1_4	A53 GrB	0.00	0.00	0.00

208	427	428	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
216	444	445	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
220	452	453	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
222	461	460	L 3X3X1_4	A53 GrB	0.00	0.00	0.00
223	465	464	L 3X3X1_4	A53 GrB	0.00	0.00	0.00
224	245	462	C 3X6	A36	0.00	0.00	0.00
225	237	463	C 3X6	A36	0.00	0.00	0.00
226	117	459	C 3X6	A36	0.00	0.00	0.00
227	125	458	C 3X6	A36	0.00	0.00	0.00
228	241	302	C 3X6	A36	0.00	0.00	0.00
229	238	303	C 3X6	A36	0.00	0.00	0.00
234	241	245	STube 1x1x1/8	A36	0.00	0.00	0.00
255	506	507	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
258	512	513	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
261	518	519	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
264	524	525	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
267	530	531	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
270	536	537	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
271	547	546	P 1-3/8x1-3/8	A36	0.00	0.00	0.00
272	545	544	P 1-3/8x1-3/8	A36	0.00	0.00	0.00
273	538	539	P 1-3/8x1-3/8	A36	0.00	0.00	0.00
274	624	552	T2L 3X3X1_4	A36	0.00	0.00	0.00
275	551	625	T2L 3X3X1_4	A36	0.00	0.00	0.00
276	553	626	T2L 3X3X1_4	A36	0.00	0.00	0.00
277	554	555	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
278	556	554	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
279	555	556	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
307	620	621	L 2-1_2X2-1_2X3_16	A36	0.00	0.00	0.00
308	619	621	L 2-1_2X2-1_2X3_16	A36	0.00	0.00	0.00
309	617	622	L 2-1_2X2-1_2X3_16	A36	0.00	0.00	0.00
310	618	622	L 2-1_2X2-1_2X3_16	A36	0.00	0.00	0.00
311	611	623	L 2-1_2X2-1_2X3_16	A36	0.00	0.00	0.00
312	612	623	L 2-1_2X2-1_2X3_16	A36	0.00	0.00	0.00
316	624	625	HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
317	625	626	HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
318	626	624	HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
330	125	6	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
331	125	119	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
332	245	120	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
333	245	239	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
334	241	240	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
335	241	5	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00

Orientation of local axes

Member	Rotation [Deg]	Axes23	NX	NY	NZ
3	0.00	2	1.00	0.00	0.00
4	0.00	2	1.00	0.00	0.00
34	0.00	2	-0.50	0.00	0.866
35	0.00	2	-0.50	0.00	0.866
37	0.00	2	-0.50	0.00	-0.866
66	0.00	2	-0.50	0.00	-0.866
67	0.00	2	-0.50	0.00	-0.866
68	0.00	2	0.50	0.00	-0.866
69	0.00	2	1.00	0.00	0.00

72	270.00	0	0.00	0.00	0.00
73	270.00	0	0.00	0.00	0.00
80	270.00	0	0.00	0.00	0.00
81	270.00	0	0.00	0.00	0.00
85	270.00	0	0.00	0.00	0.00
86	270.00	0	0.00	0.00	0.00
113	0.00	2	-0.2588	0.00	-0.9659
208	0.00	2	-0.50	0.00	-0.866
216	0.00	2	-0.50	0.00	-0.866
220	0.00	2	-0.50	0.00	-0.866
222	0.00	2	0.9659	0.00	0.2588
223	45.00	0	0.00	0.00	0.00
224	90.00	0	0.00	0.00	0.00
225	270.00	0	0.00	0.00	0.00
226	270.00	0	0.00	0.00	0.00
227	90.00	0	0.00	0.00	0.00
228	90.00	0	0.00	0.00	0.00
229	270.00	0	0.00	0.00	0.00
255	0.00	2	-0.50	0.00	0.866
258	0.00	2	-0.50	0.00	0.866
261	0.00	2	-0.50	0.00	0.866
271	180.00	0	0.00	0.00	0.00
272	300.00	0	0.00	0.00	0.00
273	60.00	0	0.00	0.00	0.00
308	270.00	0	0.00	0.00	0.00
309	270.00	0	0.00	0.00	0.00
311	270.00	0	0.00	0.00	0.00

Rigid end offsets

Member	DJX [in]	DJY [in]	DJZ [in]	DKX [in]	DKY [in]	DKZ [in]
72	1.4073	0.00	-0.8125	1.4073	0.00	-0.8125
73	1.4073	0.00	-0.8125	1.4073	0.00	-0.8125
80	-2.2198	0.00	-0.5948	-2.2198	0.00	-0.5948
81	-2.2198	0.00	-0.5948	-2.2198	0.00	-0.5948
85	-0.5948	0.00	2.2198	-1.4073	-1.625	0.8125
86	-0.5948	0.00	2.2198	-1.4073	-1.625	0.8125

EXHIBIT 3

AMERICAN TOWER®
CORPORATION

This report was prepared for American Tower Corporation by

TOWER
ENGINEERING
PROFESSIONALS

Structural Analysis Report

Structure	:	**180.6 ft Monopole**
ATC Site Name	:	**Clch - Colchester, CT**
ATC Site Number	:	**302496**
Engineering Number	:	**OAA735982_C3_01**
Proposed Carrier	:	**AT&T Mobility**
Carrier Site Name	:	**Colchester CT**
Carrier Site Number	:	**CT2046**
Site Location	:	**Chestnut Hill Road** **Colchester, CT 06415-2906** **41.568900,-72.303700**
County	:	**New London**
Date	:	**July 3, 2018**
Max Usage	:	**95%**
Result	:	**Pass**

Prepared By:
Connor Klein
TEP

Reviewed By:

STATE OF CONNECTICUT
AARON THOMAS RICKER
32608
LICENSED
PROFESSIONAL ENGINEER

07/03/2018

COA: PEC.0001553

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Calculations ..... Attached

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 180.6 ft monopole to reflect the change in loading by AT&T Mobility.

Supporting Documents

Tower Drawings	Mapping by HighTower, Project #HTS011509, dated January 13, 2008
Foundation Drawing	Mapping by American Tower, dated January 22, 2009
Geotechnical Report	GEOServices Project #21-07254, dated January 6, 2009

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, V_{asd}) / 130 mph (3-Second Gust, V_{ult})
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 3/4" radial ice concurrent
Code:	ANSI/TIA-222-G / 2012 IBC / 2016 Connecticut State Building Code
Structure Class:	II
Exposure Category:	B
Topographic Category:	1
Spectral Response:	$Ss = 0.17$, $S_1 = 0.06$
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

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
180.0	185.0	3	Kaelus DBC0061F1V51-2	Platform w/ Handrails	(12) 1 1/4" Coax (2) 0.78" 8 AWG 6 (1) 0.39" Fiber Trunk	AT&T Mobility
		1	Raycap DC6-48-60-18-8F			
		6	Powerwave LGP17201			
		3	Ericsson RRUS-11 800MHz			
		3	Ericsson RRUS 32 B2			
		3	Powerwave 7770.00			
		1	Quintel QS46512-2			
		2	CCI TPA-65R-LCUUUU-H8			

Equipment to be Removed

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
180.0	185.0	1	CCI OPA-65R-LCUU-H4	-	-	AT&T Mobility
		2	CCI OPA-65R-LCUU-H8			

Proposed Equipment

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
180.0	185.0	1	KMW AM-X-CD-14-65-00T-RET	Reinforced Platform w/ Handrails (SitePro 1 P/N SFS-v Sector Frame Stabilizer Kit & SitePro1 P/N PRK-1245 Platform Reinforcement Kit)	-	AT&T Mobility
		2	Andrew SBNH-1D6565C			

[1]Mount elevation is defined as height above bottom of steel structure to the bottom of mount, RAD elevation is defined as center of antenna above ground level (AGL).

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	77%	Pass
Shaft	95%	Pass
Base Plate	32%	Pass
Flanges	71%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Moment (Kips-Ft)	2,385.8	72%
Axial (Kips)	43.4	27%

The structure base reactions resulting from this analysis were found to be acceptable through analysis based on geotechnical and foundation information, therefore no modification or reinforcement of the foundation will be required.

Deflection and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
180.0	KMW AM-X-CD-14-65-00T-RET	AT&T Mobility	4.183	2.761
	Andrew SBNH-1D6565C			

***Deflection 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.

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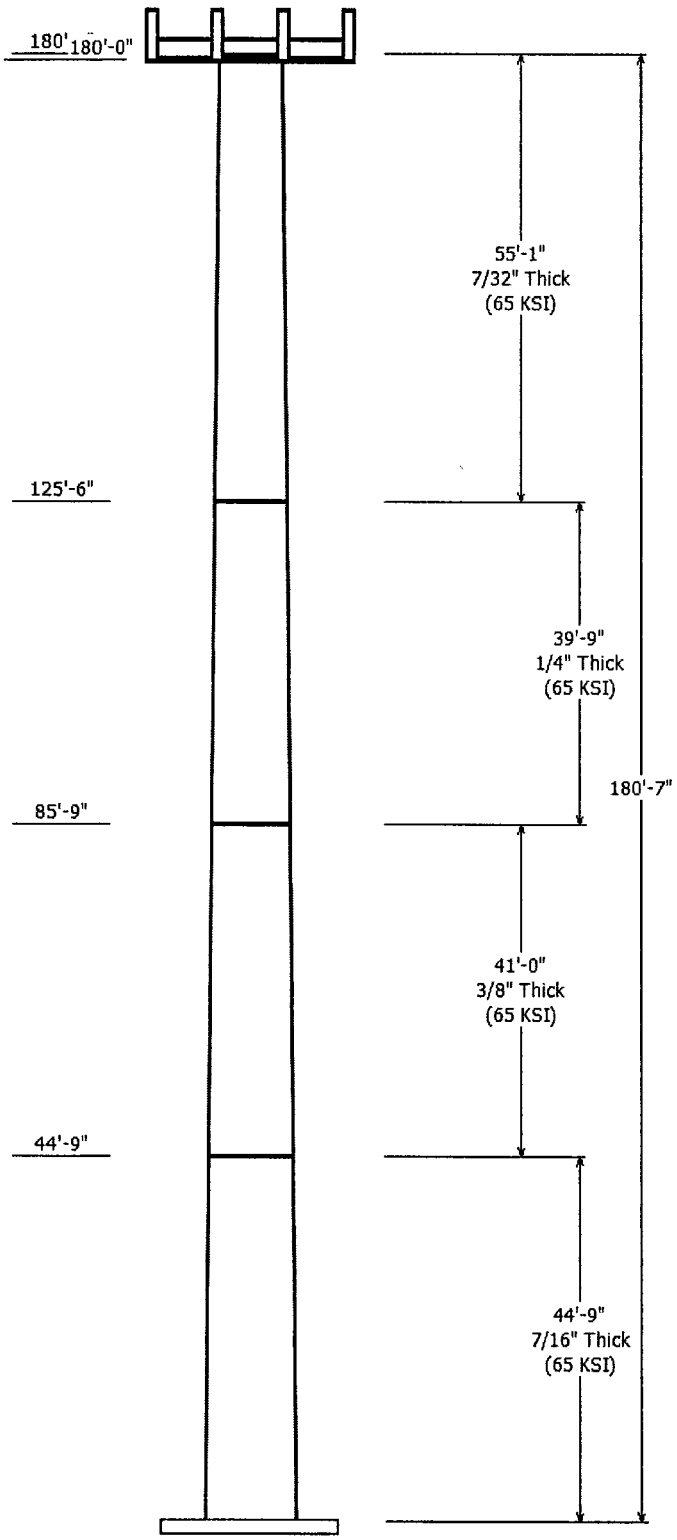


Job Information

Pole : 302496	Code: ANSI/TIA-222-G
Location : Clch - Colchester, CT	
Description : 180 ft Monopole	
Client : AT&T MOBILITY	Struct Class : II
Shape : 12 Sides	Exposure : B
Height : 180.58 (ft)	Topo : 1
Base Elev (ft): 0.00	
Taper: 0.144532 (in/ft)	

Sections Properties

Shaft Section	Length (ft)	Diameter (in) Accross Flats Top	Bottom	Thick (in)	Joint Type	Overlap Length (in)	Shape	Steel Grade (ksi)
1	44.750	35.232	41.700	0.438		0.000	12 Sides	65
2	41.000	29.306	35.232	0.375	Butt Joint	0.000	12 Sides	65
3	39.750	23.561	29.306	0.250	Butt Joint	0.000	12 Sides	65
4	55.083	15.600	23.561	0.219	Butt Joint	0.000	12 Sides	65

Discrete Appurtenance

Attach Elev (ft)	Force Elev (ft)	Qty	Description
180.000	185.000	2	Andrew SBNH-1D6565C
180.000	185.000	1	KMW AM-X-CD-14-65-00T-RET
180.000	185.000	1	Quintel QS46512-2
180.000	185.000	2	CCI TPA-65R-LCUUUU-H8
180.000	185.000	3	Ericsson RRUS 32 B2
180.000	185.000	3	Kaelus DBC0061F1V51-2
180.000	185.000	3	Ericsson RRUS-11 800 MHz
180.000	185.000	1	Raycap DC6-48-60-18-8F
180.000	180.000	1	Round Platform w/ Handrails
180.000	185.000	6	Powerwave LGP17201
180.000	185.000	3	Powerwave 7770.00

Linear Appurtenance

Elev (ft) From	To	Description	Exposed To Wind
0.000	180.00	0.39" Fiber Trunk	No
0.000	180.00	0.78" 8 AWG 6	No
0.000	180.00	1 1/4" Coax	No

Load Cases

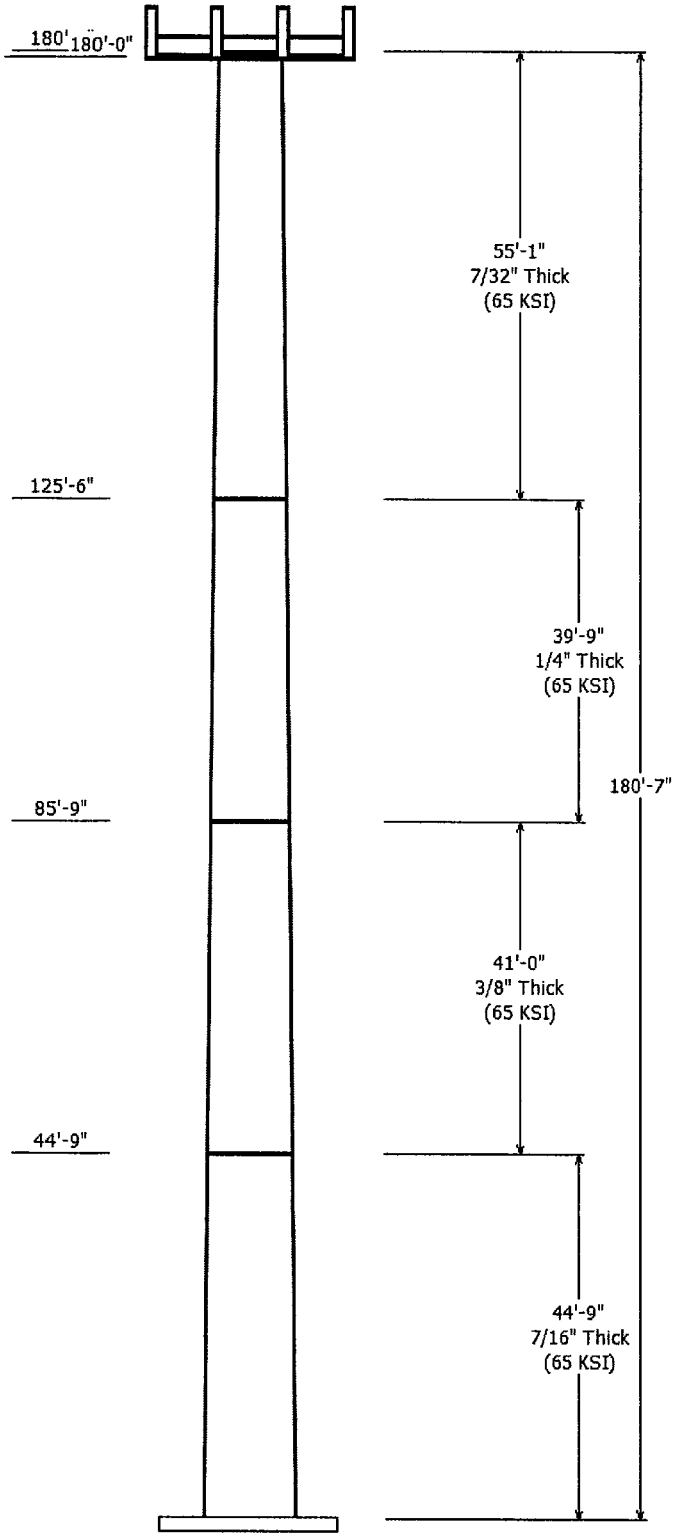
1.2D + 1.6W	101 mph with No Ice
0.9D + 1.6W	101 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 0.75 in Radial Ice
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2Sds) * DL + E ELFM	Seismic (Reduced DL) Equivalent Lateral
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Modal
1.0D + 1.0W	Serviceability 60 mph

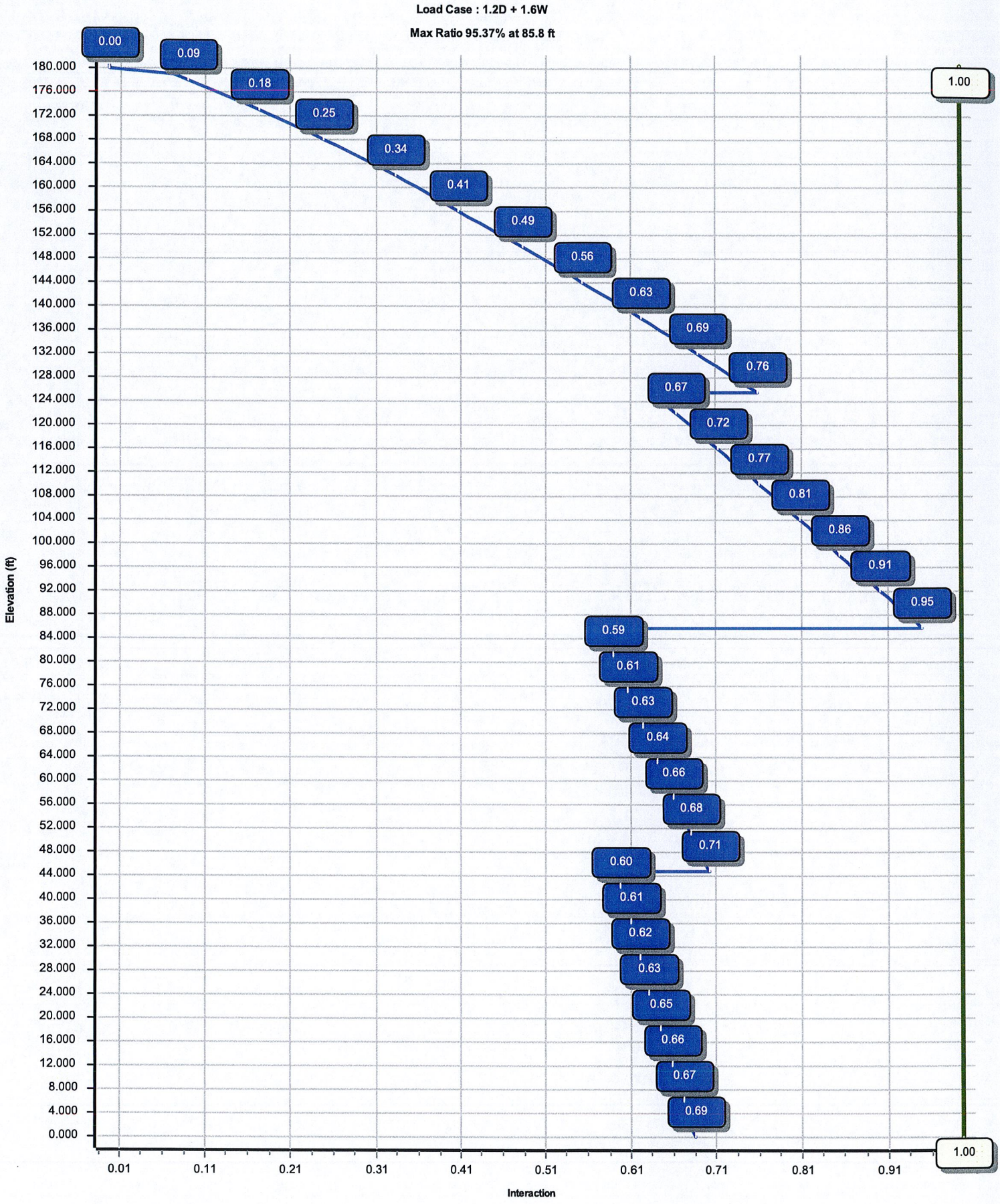
Reactions

Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.6W	2385.75	21.48	28.39
0.9D + 1.6W	2342.84	21.48	21.29
1.2D + 1.0Di + 1.0Wi	547.19	4.47	43.38
(1.2 + 0.2Sds) * DL + E ELFM	146.64	0.92	29.02
(1.2 + 0.2Sds) * DL + E EMAM	236.58	1.62	29.02
(0.9 - 0.2Sds) * DL + E ELFM	142.72	0.92	20.25

(0.9 - 0.2Sds) * DL + E EMAM	229.89	1.62	20.25
1.0D + 1.0W	522.25	4.74	23.67

Dish Deflections			
Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
	0.00	0.000	0.000




Load Case : 1.2D + 1.6W
Max Ratio 95.37% at 85.8 ft
0.00
0.09
0.18
0.25
0.34
0.41
0.49
0.56
0.63
0.69
0.76
0.67
0.72
0.77
0.81
0.86
0.91
0.95
1.00
0.59
0.61
0.63
0.64
0.66
0.68
0.71
0.60
0.61
0.62
0.63
0.65
0.66
0.67
0.69
1.00
Elevation (ft)
180.000
176.000
172.000
168.000
164.000
160.000
156.000
152.000
148.000
144.000
140.000
136.000
132.000
128.000
124.000
120.000
116.000
112.000
108.000
104.000
100.000
96.000
92.000
88.000
84.000
80.000
76.000
72.000
68.000
64.000
60.000
56.000
52.000
48.000
44.000
40.000
36.000
32.000
28.000
24.000
20.000
16.000
12.000
8.000
4.000
0.000
0.01
0.11
0.21
0.31
0.41
0.51
0.61
0.71
0.81
0.91
Interaction

Site Number:	302496	Code: ANSI/TIA-222-G	© 2007 - 2018 by ATC IP LLC. All rights reserved.
Site Name:	CIch - Colchester, CT	Engineering Number: OAA735982_C3_01	7/2/2018 6:10:25 PM
Customer:	AT&T MOBILITY		

Analysis Parameters

Location :	NEW LONDON County, CT	Height (ft) :	180.5833
Code :	ANSI/TIA-222-G	Base Diameter (in) :	41.70
Shape :	12 Sides	Top Diameter (in) :	15.60
Pole Type :	Taper	Taper (in/ft) :	0.145
Pole Manfacturer :	Mapped	Rotation (deg) :	0.00

Ice & Wind Parameters

Structure Class:	II	Design Wind Speed Without Ice:	101 mph
Exposure Category:	B	Design Wind Speed With Ice:	50 mph
Topographic Category:	1	Operational Wind Speed:	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):		3.39			
T_L (sec):	6	p:	1.3	C_s:	0.030
S_s:	0.173	S_1:	0.061	C_s Max:	0.030
F_a:	1.600	F_v:	2.400	C_s Min:	0.030
S_{ds}:	0.185	S_{d1}:	0.098		

Load Cases

1.2D + 1.6W	101 mph with No Ice
0.9D + 1.6W	101 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 0.75 in Radial Ice
(1.2 + 0.2Sds) * DL + E ELFM	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2Sds) * DL + E EMAM	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2Sds) * DL + E ELFM	Seismic (Reduced DL) Equivalent Lateral Forces Method
(0.9 - 0.2Sds) * DL + E EMAM	Seismic (Reduced DL) Equivalent Modal Analysis Method
1.0D + 1.0W	Serviceability 60 mph

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Shaft Section Properties

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Slip Joint Len (in)	Weight (lb)	Bottom Dia (in)	Bottom Elev (ft)	Bottom Area (in²)	Bottom Ix (in⁴)	Bottom W/t Ratio	Bottom D/t Ratio	Top Dia (in)	Top Elev (ft)	Top Area (in²)	Top Ix (in⁴)	Top W/t Ratio	Top D/t Ratio	Taper (in/ft)
1-12	44.750	0.4375	65		0.00	8,158	41.70	0.00	58.13	12632.4	22.86	95.31	35.232	44.75	49.02	7574.6	18.90	80.53	0.144532
2-12	41.000	0.3750	65	Butt	0.00	5,373	35.23	44.75	42.09	6527.6	22.50	93.95	29.306	85.75	34.93	3732.3	18.26	78.15	0.144532
3-12	39.750	0.2500	65	Butt	0.00	2,851	29.30	85.75	23.39	2520.6	28.73	117.23	23.561	125.50	18.77	1301.6	22.57	94.25	0.144532
4-12	55.083	0.2188	65	Butt	0.00	2,556	23.56	125.50	16.44	1143.5	26.18	107.71	15.600	180.58	10.83	327.2	16.43	71.31	0.144532
				Shaft Weight		18,938													

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	Distance From Face (ft)	Vert Ecc (ft)	No Ice Weight (lb)	No Ice EPAa (sf)	Orientation Factor
180.00	Andrew SBNH-1D6565C	2	0.000	5.000	66.10	11.450	0.70
180.00	CCI TPA-65R-LCUUUU-H8	2	0.000	5.000	81.60	13.300	0.69
180.00	Ericsson RRUS 32 B2	3	0.000	5.000	53.00	2.740	0.67
180.00	Ericsson RRUS-11 800 MHz	3	0.000	5.000	54.00	2.520	0.67
180.00	Kaelus DBC0061F1V51-2	3	0.000	5.000	25.50	0.510	0.50
180.00	KMW AM-X-CD-14-65-00T-RET	1	0.000	5.000	36.40	4.990	0.66
180.00	Powerwave 7770.00	3	0.000	5.000	35.00	5.510	0.65
180.00	Powerwave LGP17201	6	0.000	5.000	31.00	1.670	0.50
180.00	Quintel QS46512-2	1	0.000	5.000	104.00	5.550	0.74
180.00	Raycap DC6-48-60-18-8F	1	0.000	5.000	20.00	1.110	1.00
180.00	Round Platform w/ Handrails	1	0.000	0.000	2000.00	27.200	1.00
Totals	Num Loadings: 11	26			3144.30		

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Diameter (in)	Coax Weight (lb/ft)	Flat	Projected Width (in)	Exposed To Wind	Carrier
0.00	180.00	1	0.39" Fiber Trunk	0.39	0.06	N	0.00	N	AT&T Mobility
0.00	180.00	2	0.78" 8 AWG 6	0.78	0.59	N	0.00	N	AT&T Mobility
0.00	180.00	12	1 1/4" Coax	1.55	0.63	N	0.00	N	AT&T Mobility

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Segment Properties (Max Len : 1.ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in^3)	Z (in^3)	Weight (lb)
0.00		0.4375	41.700	58.129	12,632.4	22.86	95.31	79.8	585.2	0.0	0.0
1.00		0.4375	41.555	57.925	12,500.1	22.77	94.98	79.9	581.1	0.0	197.5
2.00		0.4375	41.411	57.721	12,368.8	22.68	94.65	80.0	577.0	0.0	196.8
3.00		0.4375	41.266	57.518	12,238.4	22.59	94.32	80.1	572.9	0.0	196.1
4.00		0.4375	41.122	57.314	12,108.8	22.51	93.99	80.2	568.9	0.0	195.4
5.00		0.4375	40.977	57.111	11,980.3	22.42	93.66	80.3	564.8	0.0	194.7
6.00		0.4375	40.833	56.907	11,852.6	22.33	93.33	80.4	560.8	0.0	194.0
7.00		0.4375	40.688	56.703	11,725.8	22.24	93.00	80.5	556.7	0.0	193.3
8.00		0.4375	40.544	56.500	11,599.9	22.15	92.67	80.6	552.7	0.0	192.6
9.00		0.4375	40.399	56.296	11,475.0	22.06	92.34	80.7	548.7	0.0	191.9
10.00		0.4375	40.255	56.092	11,350.9	21.97	92.01	80.7	544.7	0.0	191.2
11.00		0.4375	40.110	55.889	11,227.8	21.89	91.68	80.8	540.8	0.0	190.5
12.00		0.4375	39.966	55.685	11,105.5	21.80	91.35	80.9	536.8	0.0	189.8
13.00		0.4375	39.821	55.482	10,984.1	21.71	91.02	81.0	532.9	0.0	189.1
14.00		0.4375	39.677	55.278	10,863.6	21.62	90.69	81.1	529.0	0.0	188.4
15.00		0.4375	39.532	55.074	10,744.0	21.53	90.36	81.2	525.0	0.0	187.8
16.00		0.4375	39.387	54.871	10,625.3	21.44	90.03	81.3	521.1	0.0	187.1
17.00		0.4375	39.243	54.667	10,507.5	21.36	89.70	81.4	517.3	0.0	186.4
18.00		0.4375	39.098	54.464	10,390.5	21.27	89.37	81.5	513.4	0.0	185.7
19.00		0.4375	38.954	54.260	10,274.4	21.18	89.04	81.6	509.5	0.0	185.0
20.00		0.4375	38.809	54.056	10,159.2	21.09	88.71	81.7	505.7	0.0	184.3
21.00		0.4375	38.665	53.853	10,044.8	21.00	88.38	81.8	501.9	0.0	183.6
22.00		0.4375	38.520	53.649	9,931.3	20.91	88.05	81.9	498.1	0.0	182.9
23.00		0.4375	38.376	53.446	9,818.7	20.82	87.72	81.9	494.3	0.0	182.2
24.00		0.4375	38.231	53.242	9,706.9	20.74	87.39	81.9	490.5	0.0	181.5
25.00		0.4375	38.087	53.038	9,595.9	20.65	87.06	81.9	486.7	0.0	180.8
26.00		0.4375	37.942	52.835	9,485.8	20.56	86.72	81.9	483.0	0.0	180.1
27.00		0.4375	37.798	52.631	9,376.6	20.47	86.39	81.9	479.2	0.0	179.4
28.00		0.4375	37.653	52.427	9,268.2	20.38	86.06	81.9	475.5	0.0	178.7
29.00		0.4375	37.509	52.224	9,160.6	20.29	85.73	81.9	471.8	0.0	178.1
30.00		0.4375	37.364	52.020	9,053.9	20.20	85.40	81.9	468.1	0.0	177.4
31.00		0.4375	37.220	51.817	8,948.0	20.12	85.07	81.9	464.4	0.0	176.7
32.00		0.4375	37.075	51.613	8,842.9	20.03	84.74	81.9	460.8	0.0	176.0
33.00		0.4375	36.930	51.409	8,738.7	19.94	84.41	81.9	457.1	0.0	175.3
34.00		0.4375	36.786	51.206	8,635.3	19.85	84.08	81.9	453.5	0.0	174.6
35.00		0.4375	36.641	51.002	8,532.7	19.76	83.75	81.9	449.9	0.0	173.9
36.00		0.4375	36.497	50.799	8,430.9	19.67	83.42	81.9	446.3	0.0	173.2
37.00		0.4375	36.352	50.595	8,329.9	19.58	83.09	81.9	442.7	0.0	172.5
38.00		0.4375	36.208	50.391	8,229.8	19.50	82.76	81.9	439.1	0.0	171.8
39.00		0.4375	36.063	50.188	8,130.4	19.41	82.43	81.9	435.5	0.0	171.1
40.00		0.4375	35.919	49.984	8,031.9	19.32	82.10	81.9	432.0	0.0	170.4
41.00		0.4375	35.774	49.781	7,934.1	19.23	81.77	81.9	428.5	0.0	169.7
42.00		0.4375	35.630	49.577	7,837.1	19.14	81.44	81.9	424.9	0.0	169.0
43.00		0.4375	35.485	49.373	7,741.0	19.05	81.11	81.9	421.4	0.0	168.4
44.00		0.4375	35.341	49.170	7,645.6	18.97	80.78	81.9	417.9	0.0	167.7
44.75	Top - Section 1	0.4375	35.232	49.017	7,574.6	18.90	80.53	81.9	415.3	0.0	125.3
44.75	Bot - Section 2	0.3750	35.232	42.090	6,527.6	22.50	93.95	80.2	357.9	0.0	
45.00		0.3750	35.196	42.046	6,507.3	22.47	93.86	80.2	357.2	0.0	35.8
46.00		0.3750	35.052	41.872	6,426.6	22.37	93.47	80.3	354.2	0.0	142.8
47.00		0.3750	34.907	41.697	6,346.6	22.26	93.09	80.4	351.2	0.0	142.2
48.00		0.3750	34.762	41.523	6,267.2	22.16	92.70	80.5	348.3	0.0	141.6
49.00		0.3750	34.618	41.348	6,188.5	22.06	92.31	80.7	345.3	0.0	141.0
50.00		0.3750	34.473	41.174	6,110.5	21.95	91.93	80.8	342.4	0.0	140.4
51.00		0.3750	34.329	40.999	6,033.1	21.85	91.54	80.9	339.5	0.0	139.8
52.00		0.3750	34.184	40.825	5,956.4	21.75	91.16	81.0	336.6	0.0	139.2
53.00		0.3750	34.040	40.650	5,880.3	21.64	90.77	81.1	333.7	0.0	138.6
54.00		0.3750	33.895	40.476	5,804.9	21.54	90.39	81.2	330.8	0.0	138.0
55.00		0.3750	33.751	40.301	5,730.2	21.44	90.00	81.3	328.0	0.0	137.4

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56.00		0.3750	33.606	40.127	5,656.0	21.33	89.62	81.4	325.1	0.0	136.8
57.00		0.3750	33.462	39.952	5,582.6	21.23	89.23	81.6	322.3	0.0	136.2
58.00		0.3750	33.317	39.778	5,509.7	21.13	88.85	81.7	319.5	0.0	135.7
59.00		0.3750	33.173	39.603	5,437.5	21.02	88.46	81.8	316.7	0.0	135.1
60.00		0.3750	33.028	39.429	5,365.9	20.92	88.07	81.9	313.9	0.0	134.5
61.00		0.3750	32.884	39.254	5,295.0	20.82	87.69	81.9	311.1	0.0	133.9
62.00		0.3750	32.739	39.080	5,224.7	20.71	87.30	81.9	308.3	0.0	133.3
63.00		0.3750	32.595	38.905	5,155.0	20.61	86.92	81.9	305.5	0.0	132.7
64.00		0.3750	32.450	38.731	5,085.9	20.51	86.53	81.9	302.8	0.0	132.1
65.00		0.3750	32.305	38.556	5,017.5	20.40	86.15	81.9	300.0	0.0	131.5
66.00		0.3750	32.161	38.381	4,949.7	20.30	85.76	81.9	297.3	0.0	130.9
67.00		0.3750	32.016	38.207	4,882.5	20.20	85.38	81.9	294.6	0.0	130.3
68.00		0.3750	31.872	38.032	4,815.9	20.09	84.99	81.9	291.9	0.0	129.7
69.00		0.3750	31.727	37.858	4,749.9	19.99	84.61	81.9	289.2	0.0	129.1
70.00		0.3750	31.583	37.683	4,684.5	19.89	84.22	81.9	286.5	0.0	128.5
71.00		0.3750	31.438	37.509	4,619.7	19.78	83.84	81.9	283.9	0.0	127.9
72.00		0.3750	31.294	37.334	4,555.5	19.68	83.45	81.9	281.2	0.0	127.3
73.00		0.3750	31.149	37.160	4,491.9	19.58	83.06	81.9	278.6	0.0	126.7
74.00		0.3750	31.005	36.985	4,428.9	19.47	82.68	81.9	276.0	0.0	126.1
75.00		0.3750	30.860	36.811	4,366.5	19.37	82.29	81.9	273.3	0.0	125.6
76.00		0.3750	30.716	36.636	4,304.7	19.27	81.91	81.9	270.7	0.0	125.0
77.00		0.3750	30.571	36.462	4,243.5	19.16	81.52	81.9	268.2	0.0	124.4
78.00		0.3750	30.427	36.287	4,182.9	19.06	81.14	81.9	265.6	0.0	123.8
79.00		0.3750	30.282	36.113	4,122.8	18.96	80.75	81.9	263.0	0.0	123.2
80.00		0.3750	30.137	35.938	4,063.3	18.85	80.37	81.9	260.5	0.0	122.6
81.00		0.3750	29.993	35.764	4,004.4	18.75	79.98	81.9	257.9	0.0	122.0
82.00		0.3750	29.848	35.589	3,946.1	18.65	79.60	81.9	255.4	0.0	121.4
83.00		0.3750	29.704	35.415	3,888.3	18.54	79.21	81.9	252.9	0.0	120.8
84.00		0.3750	29.559	35.240	3,831.1	18.44	78.82	81.9	250.4	0.0	120.2
85.00		0.3750	29.415	35.066	3,774.5	18.34	78.44	81.9	247.9	0.0	119.6
85.75	Top - Section 2	0.3750	29.306	34.935	3,732.3	18.26	78.15	81.9	246.0	0.0	89.3
85.75	Bot - Section 3	0.2500	29.306	23.390	2,520.6	28.73	117.23	73.4	166.2	0.0	
86.00		0.2500	29.270	23.361	2,511.2	28.69	117.08	73.4	165.7	0.0	19.9
87.00		0.2500	29.126	23.245	2,473.9	28.54	116.50	73.6	164.1	0.0	79.3
88.00		0.2500	28.981	23.129	2,436.9	28.38	115.92	73.8	162.4	0.0	78.9
89.00		0.2500	28.837	23.012	2,400.3	28.23	115.35	73.9	160.8	0.0	78.5
90.00		0.2500	28.692	22.896	2,364.1	28.07	114.77	74.1	159.2	0.0	78.1
91.00		0.2500	28.548	22.780	2,328.3	27.92	114.19	74.3	157.6	0.0	77.7
92.00		0.2500	28.403	22.663	2,292.8	27.76	113.61	74.4	155.9	0.0	77.3
93.00		0.2500	28.259	22.547	2,257.6	27.61	113.03	74.6	154.3	0.0	76.9
94.00		0.2500	28.114	22.431	2,222.9	27.45	112.46	74.8	152.7	0.0	76.5
95.00		0.2500	27.969	22.314	2,188.5	27.30	111.88	74.9	151.2	0.0	76.1
96.00		0.2500	27.825	22.198	2,154.4	27.14	111.30	75.1	149.6	0.0	75.7
97.00		0.2500	27.680	22.081	2,120.7	26.99	110.72	75.3	148.0	0.0	75.3
98.00		0.2500	27.536	21.965	2,087.4	26.83	110.14	75.4	146.4	0.0	74.9
99.00		0.2500	27.391	21.849	2,054.4	26.68	109.57	75.6	144.9	0.0	74.5
100.00		0.2500	27.247	21.732	2,021.7	26.52	108.99	75.8	143.3	0.0	74.1
101.00		0.2500	27.102	21.616	1,989.4	26.37	108.41	76.0	141.8	0.0	73.8
102.00		0.2500	26.958	21.500	1,957.5	26.21	107.83	76.1	140.3	0.0	73.4
103.00		0.2500	26.813	21.383	1,925.9	26.06	107.25	76.3	138.8	0.0	73.0
104.00		0.2500	26.669	21.267	1,894.6	25.90	106.67	76.5	137.2	0.0	72.6
105.00		0.2500	26.524	21.151	1,863.7	25.75	106.10	76.6	135.7	0.0	72.2
106.00		0.2500	26.380	21.034	1,833.1	25.59	105.52	76.8	134.2	0.0	71.8
107.00		0.2500	26.235	20.918	1,802.8	25.44	104.94	77.0	132.8	0.0	71.4
108.00		0.2500	26.091	20.802	1,772.9	25.28	104.36	77.1	131.3	0.0	71.0
109.00		0.2500	25.946	20.685	1,743.3	25.13	103.78	77.3	129.8	0.0	70.6
110.00		0.2500	25.802	20.569	1,714.1	24.97	103.21	77.5	128.3	0.0	70.2
111.00		0.2500	25.657	20.453	1,685.2	24.82	102.63	77.6	126.9	0.0	69.8
112.00		0.2500	25.512	20.336	1,656.6	24.66	102.05	77.8	125.4	0.0	69.4
113.00		0.2500	25.368	20.220	1,628.3	24.51	101.47	78.0	124.0	0.0	69.0
114.00		0.2500	25.223	20.104	1,600.3	24.35	100.89	78.2	122.6	0.0	68.6
115.00		0.2500	25.079	19.987	1,572.7	24.20	100.32	78.3	121.1	0.0	68.2
116.00		0.2500	24.934	19.871	1,545.4	24.05	99.74	78.5	119.7	0.0	67.8
117.00		0.2500	24.790	19.755	1,518.4	23.89	99.16	78.7	118.3	0.0	67.4

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118.00		0.2500	24.645	19.638	1,491.8	23.74	98.58	78.8	116.9	0.0	67.0
119.00		0.2500	24.501	19.522	1,465.4	23.58	98.00	79.0	115.5	0.0	66.6
120.00		0.2500	24.356	19.405	1,439.4	23.43	97.42	79.2	114.2	0.0	66.2
121.00		0.2500	24.212	19.289	1,413.6	23.27	96.85	79.3	112.8	0.0	65.8
122.00		0.2500	24.067	19.173	1,388.2	23.12	96.27	79.5	111.4	0.0	65.4
123.00		0.2500	23.923	19.056	1,363.1	22.96	95.69	79.7	110.1	0.0	65.0
124.00		0.2500	23.778	18.940	1,338.3	22.81	95.11	79.8	108.7	0.0	64.6
125.00		0.2500	23.634	18.824	1,313.8	22.65	94.53	80.0	107.4	0.0	64.3
125.50	Top - Section 3	0.2500	23.561	18.766	1,301.6	22.57	94.25	80.1	106.7	0.0	32.0
125.50	Bot - Section 4	0.2188	23.561	16.442	1,143.5	26.18	107.71	76.2	93.8	0.0	
126.00		0.2188	23.489	16.391	1,132.9	26.09	107.38	76.3	93.2	0.0	27.9
127.00		0.2188	23.344	16.289	1,111.9	25.92	106.72	76.5	92.0	0.0	55.6
128.00		0.2188	23.200	16.187	1,091.2	25.74	106.06	76.6	90.9	0.0	55.3
129.00		0.2188	23.055	16.086	1,070.8	25.56	105.40	76.8	89.7	0.0	54.9
130.00		0.2188	22.911	15.984	1,050.5	25.38	104.74	77.0	88.6	0.0	54.6
131.00		0.2188	22.766	15.882	1,030.6	25.21	104.07	77.2	87.5	0.0	54.2
132.00		0.2188	22.622	15.780	1,010.9	25.03	103.41	77.4	86.3	0.0	53.9
133.00		0.2188	22.477	15.678	991.5	24.85	102.75	77.6	85.2	0.0	53.5
134.00		0.2188	22.333	15.577	972.3	24.68	102.09	77.8	84.1	0.0	53.2
135.00		0.2188	22.188	15.475	953.3	24.50	101.43	78.0	83.0	0.0	52.8
136.00		0.2188	22.044	15.373	934.7	24.32	100.77	78.2	81.9	0.0	52.5
137.00		0.2188	21.899	15.271	916.2	24.15	100.11	78.4	80.8	0.0	52.1
138.00		0.2188	21.755	15.169	898.0	23.97	99.45	78.6	79.7	0.0	51.8
139.00		0.2188	21.610	15.068	880.0	23.79	98.79	78.8	78.7	0.0	51.4
140.00		0.2188	21.466	14.966	862.3	23.61	98.13	79.0	77.6	0.0	51.1
141.00		0.2188	21.321	14.864	844.8	23.44	97.47	79.2	76.5	0.0	50.8
142.00		0.2188	21.177	14.762	827.6	23.26	96.81	79.3	75.5	0.0	50.4
143.00		0.2188	21.032	14.660	810.6	23.08	96.15	79.5	74.5	0.0	50.1
144.00		0.2188	20.887	14.559	793.8	22.91	95.49	79.7	73.4	0.0	49.7
145.00		0.2188	20.743	14.457	777.3	22.73	94.82	79.9	72.4	0.0	49.4
146.00		0.2188	20.598	14.355	761.0	22.55	94.16	80.1	71.4	0.0	49.0
147.00		0.2188	20.454	14.253	744.9	22.37	93.50	80.3	70.4	0.0	48.7
148.00		0.2188	20.309	14.151	729.1	22.20	92.84	80.5	69.3	0.0	48.3
149.00		0.2188	20.165	14.049	713.4	22.02	92.18	80.7	68.4	0.0	48.0
150.00		0.2188	20.020	13.948	698.0	21.84	91.52	80.9	67.4	0.0	47.6
151.00		0.2188	19.876	13.846	682.9	21.67	90.86	81.1	66.4	0.0	47.3
152.00		0.2188	19.731	13.744	667.9	21.49	90.20	81.3	65.4	0.0	46.9
153.00		0.2188	19.587	13.642	653.2	21.31	89.54	81.5	64.4	0.0	46.6
154.00		0.2188	19.442	13.540	638.7	21.14	88.88	81.7	63.5	0.0	46.2
155.00		0.2188	19.298	13.439	624.4	20.96	88.22	81.9	62.5	0.0	45.9
156.00		0.2188	19.153	13.337	610.3	20.78	87.56	81.9	61.6	0.0	45.6
157.00		0.2188	19.009	13.235	596.4	20.60	86.90	81.9	60.6	0.0	45.2
158.00		0.2188	18.864	13.133	582.8	20.43	86.24	81.9	59.7	0.0	44.9
159.00		0.2188	18.719	13.031	569.3	20.25	85.57	81.9	58.8	0.0	44.5
160.00		0.2188	18.575	12.930	556.1	20.07	84.91	81.9	57.8	0.0	44.2
161.00		0.2188	18.430	12.828	543.0	19.90	84.25	81.9	56.9	0.0	43.8
162.00		0.2188	18.286	12.726	530.2	19.72	83.59	81.9	56.0	0.0	43.5
163.00		0.2188	18.141	12.624	517.6	19.54	82.93	81.9	55.1	0.0	43.1
164.00		0.2188	17.997	12.522	505.2	19.36	82.27	81.9	54.2	0.0	42.8
165.00		0.2188	17.852	12.421	493.0	19.19	81.61	81.9	53.3	0.0	42.4
166.00		0.2188	17.708	12.319	480.9	19.01	80.95	81.9	52.5	0.0	42.1
167.00		0.2188	17.563	12.217	469.1	18.83	80.29	81.9	51.6	0.0	41.7
168.00		0.2188	17.419	12.115	457.5	18.66	79.63	81.9	50.7	0.0	41.4
169.00		0.2188	17.274	12.013	446.0	18.48	78.97	81.9	49.9	0.0	41.1
170.00		0.2188	17.130	11.912	434.8	18.30	78.31	81.9	49.0	0.0	40.7
171.00		0.2188	16.985	11.810	423.7	18.13	77.65	81.9	48.2	0.0	40.4
172.00		0.2188	16.841	11.708	412.9	17.95	76.99	81.9	47.4	0.0	40.0
173.00		0.2188	16.696	11.606	402.2	17.77	76.32	81.9	46.5	0.0	39.7
174.00		0.2188	16.551	11.504	391.7	17.59	75.66	81.9	45.7	0.0	39.3
175.00		0.2188	16.407	11.403	381.4	17.42	75.00	81.9	44.9	0.0	39.0
176.00		0.2188	16.262	11.301	371.3	17.24	74.34	81.9	44.1	0.0	38.6
177.00		0.2188	16.118	11.199	361.3	17.06	73.68	81.9	43.3	0.0	38.3
178.00		0.2188	15.973	11.097	351.6	16.89	73.02	81.9	42.5	0.0	37.9
179.00		0.2188	15.829	10.995	342.0	16.71	72.36	81.9	41.7	0.0	37.6

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180.00	0.2188	15.684	10.894	332.6	16.53	71.70	81.9	41.0	0.0	37.2
180.58	0.2188	15.600	10.834	327.2	16.43	71.31	81.9	40.5	0.0	21.6
										18,938.1

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Load Case: 1.2D + 1.6W — 101 mph with No Ice — 45 Iterations

Gust Response Factor 1.10 — Wind Importance Factor 1.00
Dead Load Factor : 1.20
Wind Load Factor : 1.60

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces Wind FX (lb)	Shaft Forces Dead Load (lb)	Discrete Forces Wind FX (lb)	Discrete Forces Torsion MY (lb-ft)	Discrete Forces Moment MZ (lb-ft)	Linear Forces Dead Load (lb)	Sum of Forces Wind FX (lb)	Sum of Forces Dead Load (lb)	Sum of Forces Wind FX (lb)	Sum of Forces Dead Load (lb)	Sum of Forces Torsion MY (lb-ft)	Sum of Forces Moment MZ (lb)
0.00		54.9	0.0					0.0	0.0	54.9	0.0	0.0	0.0
1.00		109.6	236.9					0.0	10.6	109.6	247.5	0.0	0.0
2.00		109.2	236.1					0.0	10.6	109.2	246.7	0.0	0.0
3.00		108.8	235.3					0.0	10.6	108.8	245.8	0.0	0.0
4.00		108.4	234.4					0.0	10.6	108.4	245.0	0.0	0.0
5.00		108.1	233.6					0.0	10.6	108.1	244.2	0.0	0.0
6.00		107.7	232.8					0.0	10.6	107.7	243.3	0.0	0.0
7.00		107.3	232.0					0.0	10.6	107.3	242.5	0.0	0.0
8.00		106.9	231.1					0.0	10.6	106.9	241.7	0.0	0.0
9.00		106.5	230.3					0.0	10.6	106.5	240.9	0.0	0.0
10.00		106.1	229.5					0.0	10.6	106.1	240.0	0.0	0.0
11.00		105.8	228.6					0.0	10.6	105.8	239.2	0.0	0.0
12.00		105.4	227.8					0.0	10.6	105.4	238.4	0.0	0.0
13.00		105.0	227.0					0.0	10.6	105.0	237.5	0.0	0.0
14.00		104.6	226.1					0.0	10.6	104.6	236.7	0.0	0.0
15.00		104.2	225.3					0.0	10.6	104.2	235.9	0.0	0.0
16.00		103.9	224.5					0.0	10.6	103.9	235.0	0.0	0.0
17.00		103.5	223.6					0.0	10.6	103.5	234.2	0.0	0.0
18.00		103.1	222.8					0.0	10.6	103.1	233.4	0.0	0.0
19.00		102.7	222.0					0.0	10.6	102.7	232.5	0.0	0.0
20.00		102.3	221.1					0.0	10.6	102.3	231.7	0.0	0.0
21.00		102.0	220.3					0.0	10.6	102.0	230.9	0.0	0.0
22.00		101.6	219.5					0.0	10.6	101.6	230.0	0.0	0.0
23.00		101.2	218.7					0.0	10.6	101.2	229.2	0.0	0.0
24.00		100.8	217.8					0.0	10.6	100.8	228.4	0.0	0.0
25.00		100.4	217.0					0.0	10.6	100.4	227.5	0.0	0.0
26.00		100.0	216.2					0.0	10.6	100.0	226.7	0.0	0.0
27.00		99.7	215.3					0.0	10.6	99.7	225.9	0.0	0.0
28.00		99.3	214.5					0.0	10.6	99.3	225.1	0.0	0.0
29.00		98.9	213.7					0.0	10.6	98.9	224.2	0.0	0.0
30.00		98.8	212.8					0.0	10.6	98.8	223.4	0.0	0.0
31.00		99.1	212.0					0.0	10.6	99.1	222.6	0.0	0.0
32.00		99.7	211.2					0.0	10.6	99.7	221.7	0.0	0.0
33.00		100.2	210.3					0.0	10.6	100.2	220.9	0.0	0.0
34.00		100.6	209.5					0.0	10.6	100.6	220.1	0.0	0.0
35.00		101.1	208.7					0.0	10.6	101.1	219.2	0.0	0.0
36.00		101.5	207.8					0.0	10.6	101.5	218.4	0.0	0.0
37.00		101.9	207.0					0.0	10.6	101.9	217.6	0.0	0.0
38.00		102.2	206.2					0.0	10.6	102.2	216.7	0.0	0.0
39.00		102.6	205.3					0.0	10.6	102.6	215.9	0.0	0.0
40.00		102.9	204.5					0.0	10.6	102.9	215.1	0.0	0.0
41.00		103.2	203.7					0.0	10.6	103.2	214.2	0.0	0.0
42.00		103.5	202.9					0.0	10.6	103.5	213.4	0.0	0.0
43.00		103.8	202.0					0.0	10.6	103.8	212.6	0.0	0.0
44.00		91.0	201.2					0.0	10.6	91.0	211.8	0.0	0.0
44.75	Top - Section 1	52.1	150.3					0.0	7.9	52.1	158.3	0.0	0.0
45.00		65.2	42.9					0.0	2.6	65.2	45.6	0.0	0.0

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Load Case: 1.2D + 1.6W — 101 mph with No Ice — 45 Iterations

Gust Response Factor 1.10 — Wind Importance Factor 1.00
Dead Load Factor : 1.20
Wind Load Factor : 1.60

46.00		104.5	171.3	0.0	10.6	104.5	181.9	0.0	0.0
47.00		104.7	170.6	0.0	10.6	104.7	181.2	0.0	0.0
48.00		104.9	169.9	0.0	10.6	104.9	180.5	0.0	0.0
49.00		105.1	169.2	0.0	10.6	105.1	179.8	0.0	0.0
50.00		105.3	168.5	0.0	10.6	105.3	179.0	0.0	0.0
51.00		105.4	167.8	0.0	10.6	105.4	178.3	0.0	0.0
52.00		105.6	167.1	0.0	10.6	105.6	177.6	0.0	0.0
53.00		105.7	166.3	0.0	10.6	105.7	176.9	0.0	0.0
54.00		105.8	165.6	0.0	10.6	105.8	176.2	0.0	0.0
55.00		105.9	164.9	0.0	10.6	105.9	175.5	0.0	0.0
56.00		106.0	164.2	0.0	10.6	106.0	174.8	0.0	0.0
57.00		106.1	163.5	0.0	10.6	106.1	174.1	0.0	0.0
58.00		106.2	162.8	0.0	10.6	106.2	173.3	0.0	0.0
59.00		106.2	162.1	0.0	10.6	106.2	172.6	0.0	0.0
60.00		106.3	161.4	0.0	10.6	106.3	171.9	0.0	0.0
61.00		106.3	160.6	0.0	10.6	106.3	171.2	0.0	0.0
62.00		106.3	159.9	0.0	10.6	106.3	170.5	0.0	0.0
63.00		106.3	159.2	0.0	10.6	106.3	169.8	0.0	0.0
64.00		106.3	158.5	0.0	10.6	106.3	169.1	0.0	0.0
65.00		106.3	157.8	0.0	10.6	106.3	168.4	0.0	0.0
66.00		106.3	157.1	0.0	10.6	106.3	167.6	0.0	0.0
67.00		106.3	156.4	0.0	10.6	106.3	166.9	0.0	0.0
68.00		106.3	155.7	0.0	10.6	106.3	166.2	0.0	0.0
69.00		106.2	154.9	0.0	10.6	106.2	165.5	0.0	0.0
70.00		106.2	154.2	0.0	10.6	106.2	164.8	0.0	0.0
71.00		106.1	153.5	0.0	10.6	106.1	164.1	0.0	0.0
72.00		106.1	152.8	0.0	10.6	106.1	163.4	0.0	0.0
73.00		106.0	152.1	0.0	10.6	106.0	162.7	0.0	0.0
74.00		105.9	151.4	0.0	10.6	105.9	161.9	0.0	0.0
75.00		105.8	150.7	0.0	10.6	105.8	161.2	0.0	0.0
76.00		105.7	150.0	0.0	10.6	105.7	160.5	0.0	0.0
77.00		105.6	149.2	0.0	10.6	105.6	159.8	0.0	0.0
78.00		105.5	148.5	0.0	10.6	105.5	159.1	0.0	0.0
79.00		105.4	147.8	0.0	10.6	105.4	158.4	0.0	0.0
80.00		105.3	147.1	0.0	10.6	105.3	157.7	0.0	0.0
81.00		105.1	146.4	0.0	10.6	105.1	157.0	0.0	0.0
82.00		105.0	145.7	0.0	10.6	105.0	156.2	0.0	0.0
83.00		104.8	145.0	0.0	10.6	104.8	155.5	0.0	0.0
84.00		104.7	144.3	0.0	10.6	104.7	154.8	0.0	0.0
85.00		91.5	143.5	0.0	10.6	91.5	154.1	0.0	0.0
85.75	Top - Section 2	52.2	107.2	0.0	7.9	52.2	115.1	0.0	0.0
86.00		65.2	23.9	0.0	2.6	65.2	26.5	0.0	0.0
87.00		104.2	95.2	0.0	10.6	104.2	105.7	0.0	0.0
88.00		104.0	94.7	0.0	10.6	104.0	105.2	0.0	0.0
89.00		103.8	94.2	0.0	10.6	103.8	104.8	0.0	0.0
90.00		103.6	93.7	0.0	10.6	103.6	104.3	0.0	0.0
91.00		103.4	93.3	0.0	10.6	103.4	103.8	0.0	0.0
92.00		103.2	92.8	0.0	10.6	103.2	103.3	0.0	0.0
93.00		103.0	92.3	0.0	10.6	103.0	102.9	0.0	0.0
94.00		102.8	91.8	0.0	10.6	102.8	102.4	0.0	0.0
95.00		102.6	91.4	0.0	10.6	102.6	101.9	0.0	0.0
96.00		102.4	90.9	0.0	10.6	102.4	101.4	0.0	0.0
97.00		102.2	90.4	0.0	10.6	102.2	101.0	0.0	0.0
98.00		101.9	89.9	0.0	10.6	101.9	100.5	0.0	0.0
99.00		101.7	89.5	0.0	10.6	101.7	100.0	0.0	0.0
100.00		101.4	89.0	0.0	10.6	101.4	99.5	0.0	0.0
101.00		101.2	88.5	0.0	10.6	101.2	99.1	0.0	0.0

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Load Case: 1.2D + 1.6W — 101 mph with No Ice — 45 Iterations

Gust Response Factor 1.10 — Wind Importance Factor 1.00
Dead Load Factor : 1.20
Wind Load Factor : 1.60

102.00		100.9	88.0	0.0	10.6	100.9	98.6	0.0	0.0
103.00		100.7	87.6	0.0	10.6	100.7	98.1	0.0	0.0
104.00		100.4	87.1	0.0	10.6	100.4	97.6	0.0	0.0
105.00		100.1	86.6	0.0	10.6	100.1	97.2	0.0	0.0
106.00		99.9	86.1	0.0	10.6	99.9	96.7	0.0	0.0
107.00		99.6	85.7	0.0	10.6	99.6	96.2	0.0	0.0
108.00		99.3	85.2	0.0	10.6	99.3	95.7	0.0	0.0
109.00		99.0	84.7	0.0	10.6	99.0	95.3	0.0	0.0
110.00		98.7	84.2	0.0	10.6	98.7	94.8	0.0	0.0
111.00		98.4	83.8	0.0	10.6	98.4	94.3	0.0	0.0
112.00		98.1	83.3	0.0	10.6	98.1	93.8	0.0	0.0
113.00		97.8	82.8	0.0	10.6	97.8	93.4	0.0	0.0
114.00		97.5	82.3	0.0	10.6	97.5	92.9	0.0	0.0
115.00		97.2	81.9	0.0	10.6	97.2	92.4	0.0	0.0
116.00		96.8	81.4	0.0	10.6	96.8	91.9	0.0	0.0
117.00		96.5	80.9	0.0	10.6	96.5	91.5	0.0	0.0
118.00		96.2	80.4	0.0	10.6	96.2	91.0	0.0	0.0
119.00		95.9	80.0	0.0	10.6	95.9	90.5	0.0	0.0
120.00		95.5	79.5	0.0	10.6	95.5	90.0	0.0	0.0
121.00		95.2	79.0	0.0	10.6	95.2	89.6	0.0	0.0
122.00		94.8	78.5	0.0	10.6	94.8	89.1	0.0	0.0
123.00		94.5	78.1	0.0	10.6	94.5	88.6	0.0	0.0
124.00		94.1	77.6	0.0	10.6	94.1	88.1	0.0	0.0
125.00		70.4	77.1	0.0	10.6	70.4	87.7	0.0	0.0
125.50	Top - Section 3	46.8	38.4	0.0	5.3	46.8	43.7	0.0	0.0
126.00		70.0	33.5	0.0	5.3	70.0	38.8	0.0	0.0
127.00		93.0	66.7	0.0	10.6	93.0	77.3	0.0	0.0
128.00		92.7	66.3	0.0	10.6	92.7	76.9	0.0	0.0
129.00		92.3	65.9	0.0	10.6	92.3	76.5	0.0	0.0
130.00		91.9	65.5	0.0	10.6	91.9	76.0	0.0	0.0
131.00		91.5	65.1	0.0	10.6	91.5	75.6	0.0	0.0
132.00		91.2	64.6	0.0	10.6	91.2	75.2	0.0	0.0
133.00		90.8	64.2	0.0	10.6	90.8	74.8	0.0	0.0
134.00		90.4	63.8	0.0	10.6	90.4	74.4	0.0	0.0
135.00		90.0	63.4	0.0	10.6	90.0	74.0	0.0	0.0
136.00		89.6	63.0	0.0	10.6	89.6	73.5	0.0	0.0
137.00		89.2	62.6	0.0	10.6	89.2	73.1	0.0	0.0
138.00		88.8	62.1	0.0	10.6	88.8	72.7	0.0	0.0
139.00		88.4	61.7	0.0	10.6	88.4	72.3	0.0	0.0
140.00		88.0	61.3	0.0	10.6	88.0	71.9	0.0	0.0
141.00		87.6	60.9	0.0	10.6	87.6	71.5	0.0	0.0
142.00		87.1	60.5	0.0	10.6	87.1	71.0	0.0	0.0
143.00		86.7	60.1	0.0	10.6	86.7	70.6	0.0	0.0
144.00		86.3	59.7	0.0	10.6	86.3	70.2	0.0	0.0
145.00		85.9	59.2	0.0	10.6	85.9	69.8	0.0	0.0
146.00		85.4	58.8	0.0	10.6	85.4	69.4	0.0	0.0
147.00		85.0	58.4	0.0	10.6	85.0	69.0	0.0	0.0
148.00		84.6	58.0	0.0	10.6	84.6	68.6	0.0	0.0
149.00		84.1	57.6	0.0	10.6	84.1	68.1	0.0	0.0
150.00		83.7	57.2	0.0	10.6	83.7	67.7	0.0	0.0
151.00		83.2	56.7	0.0	10.6	83.2	67.3	0.0	0.0
152.00		82.8	56.3	0.0	10.6	82.8	66.9	0.0	0.0
153.00		82.3	55.9	0.0	10.6	82.3	66.5	0.0	0.0
154.00		81.9	55.5	0.0	10.6	81.9	66.1	0.0	0.0
155.00		81.4	55.1	0.0	10.6	81.4	65.6	0.0	0.0
156.00		81.0	54.7	0.0	10.6	81.0	65.2	0.0	0.0
157.00		80.5	54.3	0.0	10.6	80.5	64.8	0.0	0.0

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Load Case: 1.2D + 1.6W — 101 mph with No Ice — 45 Iterations

Gust Response Factor 1.10 — Wind Importance Factor 1.00
Dead Load Factor : 1.20
Wind Load Factor : 1.60

158.00		80.0	53.8				0.0	10.6	80.0	64.4	0.0	0.0
159.00		79.6	53.4				0.0	10.6	79.6	64.0	0.0	0.0
160.00		79.1	53.0				0.0	10.6	79.1	63.6	0.0	0.0
161.00		78.6	52.6				0.0	10.6	78.6	63.1	0.0	0.0
162.00		78.1	52.2				0.0	10.6	78.1	62.7	0.0	0.0
163.00		77.7	51.8				0.0	10.6	77.7	62.3	0.0	0.0
164.00		77.2	51.3				0.0	10.6	77.2	61.9	0.0	0.0
165.00		76.7	50.9				0.0	10.6	76.7	61.5	0.0	0.0
166.00		76.2	50.5				0.0	10.6	76.2	61.1	0.0	0.0
167.00		75.7	50.1				0.0	10.6	75.7	60.7	0.0	0.0
168.00		75.2	49.7				0.0	10.6	75.2	60.2	0.0	0.0
169.00		74.7	49.3				0.0	10.6	74.7	59.8	0.0	0.0
170.00		74.2	48.8				0.0	10.6	74.2	59.4	0.0	0.0
171.00		73.7	48.4				0.0	10.6	73.7	59.0	0.0	0.0
172.00		73.2	48.0				0.0	10.6	73.2	58.6	0.0	0.0
173.00		72.7	47.6				0.0	10.6	72.7	58.2	0.0	0.0
174.00		72.2	47.2				0.0	10.6	72.2	57.7	0.0	0.0
175.00		71.7	46.8				0.0	10.6	71.7	57.3	0.0	0.0
176.00		71.2	46.4				0.0	10.6	71.2	56.9	0.0	0.0
177.00		70.6	45.9				0.0	10.6	70.6	56.5	0.0	0.0
178.00		70.1	45.5				0.0	10.6	70.1	56.1	0.0	0.0
179.00		69.6	45.1				0.0	10.6	69.6	55.7	0.0	0.0
180.00	Appurtenance(s)	54.8	44.7	4,088.4	0.0	13,500.8	3,773.2	0.0	10.6	4,143.2	3,828.4	0.0	0.0
180.58		20.1	25.9					0.0	0.0	20.1	25.9	0.0	0.0
								Totals:		21,523.8	28,399.6	2 0.00	0.00

Site Number: 302496 Code: ANSI/TIA-222-G © 2007 - 2018 by ATC IP LLC. All rights reserved.

Site Name: Clch - Colchester, CT Engineering Number: OAA735982_C3_01 7/2/2018 6:10:31 PM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.6W 101 mph with No Ice 45 Iterations

Gust Response Factor 1.10 Wind Importance Factor 1.00

Dead Load Factor : 1.20

Wind Load Factor : 1.60

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-28.39	-21.48	0.00	-2,385.75	0.00	2,385.75	4,173.88	2,086.94	7,090.68	3,501.82	0.00	0.00	0.688
1.00	-28.12	-21.40	0.00	-2,364.27	0.00	2,364.27	4,164.30	2,082.15	7,049.35	3,481.41	0.01	-0.05	0.686
2.00	-27.86	-21.32	0.00	-2,342.87	0.00	2,342.87	4,154.67	2,077.34	7,008.08	3,461.03	0.02	-0.11	0.684
3.00	-27.59	-21.23	0.00	-2,321.56	0.00	2,321.56	4,145.02	2,072.51	6,966.87	3,440.67	0.05	-0.16	0.681
4.00	-27.33	-21.15	0.00	-2,300.32	0.00	2,300.32	4,135.32	2,067.66	6,925.71	3,420.35	0.09	-0.21	0.679
5.00	-27.06	-21.06	0.00	-2,279.18	0.00	2,279.18	4,125.60	2,062.80	6,884.61	3,400.05	0.14	-0.27	0.677
6.00	-26.80	-20.98	0.00	-2,258.11	0.00	2,258.11	4,115.83	2,057.92	6,843.57	3,379.78	0.20	-0.32	0.675
7.00	-26.54	-20.90	0.00	-2,237.13	0.00	2,237.13	4,106.03	2,053.02	6,802.59	3,359.54	0.28	-0.38	0.672
8.00	-26.28	-20.81	0.00	-2,216.23	0.00	2,216.23	4,096.20	2,048.10	6,761.66	3,339.33	0.36	-0.43	0.670
9.00	-26.02	-20.73	0.00	-2,195.42	0.00	2,195.42	4,086.33	2,043.16	6,720.80	3,319.15	0.46	-0.48	0.668
10.00	-25.76	-20.65	0.00	-2,174.69	0.00	2,174.69	4,076.42	2,038.21	6,680.00	3,299.00	0.57	-0.54	0.666
11.00	-25.50	-20.56	0.00	-2,154.05	0.00	2,154.05	4,066.48	2,033.24	6,639.26	3,278.88	0.68	-0.59	0.663
12.00	-25.24	-20.48	0.00	-2,133.49	0.00	2,133.49	4,056.51	2,028.25	6,598.58	3,258.79	0.81	-0.65	0.661
13.00	-24.99	-20.39	0.00	-2,113.01	0.00	2,113.01	4,046.49	2,023.25	6,557.96	3,238.73	0.96	-0.70	0.659
14.00	-24.73	-20.31	0.00	-2,092.62	0.00	2,092.62	4,036.45	2,018.22	6,517.41	3,218.70	1.11	-0.76	0.656
15.00	-24.48	-20.23	0.00	-2,072.31	0.00	2,072.31	4,026.36	2,013.18	6,476.92	3,198.71	1.27	-0.81	0.654
16.00	-24.23	-20.14	0.00	-2,052.08	0.00	2,052.08	4,016.25	2,008.12	6,436.49	3,178.74	1.45	-0.86	0.652
17.00	-23.98	-20.06	0.00	-2,031.94	0.00	2,031.94	4,006.09	2,003.05	6,396.13	3,158.81	1.64	-0.92	0.649
18.00	-23.73	-19.97	0.00	-2,011.88	0.00	2,011.88	3,995.91	1,997.95	6,355.84	3,138.91	1.83	-0.97	0.647
19.00	-23.48	-19.89	0.00	-1,991.91	0.00	1,991.91	3,985.68	1,992.84	6,315.61	3,119.04	2.04	-1.03	0.645
20.00	-23.23	-19.80	0.00	-1,972.02	0.00	1,972.02	3,975.42	1,987.71	6,275.45	3,099.21	2.27	-1.08	0.642
21.00	-22.98	-19.72	0.00	-1,952.22	0.00	1,952.22	3,965.13	1,982.56	6,235.36	3,079.41	2.50	-1.14	0.640
22.00	-22.73	-19.64	0.00	-1,932.50	0.00	1,932.50	3,954.48	1,977.24	6,194.84	3,059.40	2.74	-1.19	0.638
23.00	-22.49	-19.55	0.00	-1,912.87	0.00	1,912.87	3,939.47	1,969.74	6,147.64	3,036.09	3.00	-1.25	0.636
24.00	-22.24	-19.47	0.00	-1,893.32	0.00	1,893.32	3,924.46	1,962.23	6,100.62	3,012.87	3.27	-1.30	0.634
25.00	-22.00	-19.38	0.00	-1,873.85	0.00	1,873.85	3,909.45	1,954.73	6,053.78	2,989.74	3.55	-1.36	0.632
26.00	-21.76	-19.30	0.00	-1,854.47	0.00	1,854.47	3,894.45	1,947.22	6,007.13	2,966.69	3.84	-1.41	0.631
27.00	-21.51	-19.21	0.00	-1,835.17	0.00	1,835.17	3,879.44	1,939.72	5,960.65	2,943.74	4.14	-1.47	0.629
28.00	-21.27	-19.13	0.00	-1,815.96	0.00	1,815.96	3,864.43	1,932.22	5,914.36	2,920.88	4.45	-1.53	0.627
29.00	-21.03	-19.04	0.00	-1,796.83	0.00	1,796.83	3,849.42	1,924.71	5,868.24	2,898.10	4.78	-1.58	0.626
30.00	-20.79	-18.96	0.00	-1,777.79	0.00	1,777.79	3,834.41	1,917.21	5,822.31	2,875.42	5.12	-1.64	0.624
31.00	-20.56	-18.87	0.00	-1,758.83	0.00	1,758.83	3,819.41	1,909.70	5,776.55	2,852.82	5.47	-1.69	0.622
32.00	-20.32	-18.79	0.00	-1,739.95	0.00	1,739.95	3,804.40	1,902.20	5,730.98	2,830.32	5.83	-1.75	0.620
33.00	-20.08	-18.70	0.00	-1,721.17	0.00	1,721.17	3,789.39	1,894.70	5,685.59	2,807.90	6.20	-1.80	0.618
34.00	-19.85	-18.61	0.00	-1,702.47	0.00	1,702.47	3,774.38	1,887.19	5,640.38	2,785.57	6.58	-1.86	0.617
35.00	-19.61	-18.52	0.00	-1,683.86	0.00	1,683.86	3,759.37	1,879.69	5,595.34	2,763.33	6.98	-1.91	0.615
36.00	-19.38	-18.43	0.00	-1,665.34	0.00	1,665.34	3,744.37	1,872.18	5,550.49	2,741.18	7.38	-1.97	0.613
37.00	-19.15	-18.34	0.00	-1,646.90	0.00	1,646.90	3,729.36	1,864.68	5,505.82	2,719.12	7.80	-2.03	0.611
38.00	-18.92	-18.25	0.00	-1,628.56	0.00	1,628.56	3,714.35	1,857.18	5,461.33	2,697.15	8.23	-2.08	0.609
39.00	-18.69	-18.16	0.00	-1,610.31	0.00	1,610.31	3,699.34	1,849.67	5,417.02	2,675.26	8.68	-2.14	0.607
40.00	-18.46	-18.06	0.00	-1,592.16	0.00	1,592.16	3,684.33	1,842.17	5,372.89	2,653.47	9.13	-2.19	0.605
41.00	-18.23	-17.97	0.00	-1,574.09	0.00	1,574.09	3,669.33	1,834.66	5,328.94	2,631.76	9.60	-2.25	0.603
42.00	-18.01	-17.88	0.00	-1,556.12	0.00	1,556.12	3,654.32	1,827.16	5,285.17	2,610.15	10.07	-2.31	0.601
43.00	-17.78	-17.78	0.00	-1,538.24	0.00	1,538.24	3,639.31	1,819.66	5,241.59	2,588.62	10.56	-2.36	0.599
44.00	-17.56	-17.70	0.00	-1,520.46	0.00	1,520.46	3,624.30	1,812.15	5,198.18	2,567.18	11.06	-2.42	0.597
44.75	-17.39	-17.65	0.00	-1,507.19	0.00	1,507.19	3,613.05	1,806.52	5,165.74	2,551.17	11.45	-2.46	0.596
44.75	-17.39	-17.65	0.00	-1,507.19	0.00	1,507.19	3,037.33	1,518.66	4,358.22	2,152.36	11.45	-2.46	0.706
45.00	-17.34	-17.59	0.00	-1,502.78	0.00	1,502.78	3,035.24	1,517.62	4,350.67	2,148.63	11.58	-2.48	0.705
46.00	-17.14	-17.50	0.00	-1,485.19	0.00	1,485.19	3,026.89	1,513.44	4,320.50	2,133.73	12.10	-2.54	0.702
47.00	-16.95	-17.41	0.00	-1,467.69	0.00	1,467.69	3,018.50	1,509.25	4,290.37	2,118.85	12.64	-2.61	0.698
48.00	-16.75	-17.31	0.00	-1,450.28	0.00	1,450.28	3,010.08	1,505.04	4,260.30	2,104.00	13.19	-2.67	0.695

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Load Case: 1.2D + 1.6W — 101 mph with No Ice — 45 Iterations

Gust Response Factor 1.10 — Wind Importance Factor 1.00
Dead Load Factor : 1.20
Wind Load Factor : 1.60

49.00	-16.56	-17.22	0.00	-1,432.97	0.00	1,432.97	3,001.62	1,500.81	4,230.28	2,089.17	13.76	-2.74	0.692
50.00	-16.36	-17.12	0.00	-1,415.75	0.00	1,415.75	2,993.12	1,496.56	4,200.31	2,074.37	14.34	-2.80	0.688
51.00	-16.17	-17.03	0.00	-1,398.63	0.00	1,398.63	2,984.59	1,492.30	4,170.39	2,059.60	14.93	-2.87	0.685
52.00	-15.98	-16.93	0.00	-1,381.61	0.00	1,381.61	2,976.02	1,488.01	4,140.52	2,044.85	15.54	-2.93	0.681
53.00	-15.79	-16.83	0.00	-1,364.67	0.00	1,364.67	2,967.42	1,483.71	4,110.71	2,030.13	16.16	-3.00	0.678
54.00	-15.60	-16.74	0.00	-1,347.84	0.00	1,347.84	2,958.79	1,479.39	4,080.96	2,015.43	16.80	-3.06	0.674
55.00	-15.41	-16.64	0.00	-1,331.10	0.00	1,331.10	2,950.11	1,475.06	4,051.26	2,000.76	17.45	-3.13	0.671
56.00	-15.22	-16.54	0.00	-1,314.47	0.00	1,314.47	2,941.41	1,470.70	4,021.62	1,986.12	18.11	-3.20	0.667
57.00	-15.04	-16.44	0.00	-1,297.93	0.00	1,297.93	2,932.66	1,466.33	3,992.03	1,971.51	18.79	-3.26	0.664
58.00	-14.85	-16.34	0.00	-1,281.48	0.00	1,281.48	2,923.89	1,461.94	3,962.50	1,956.93	19.48	-3.33	0.660
59.00	-14.67	-16.24	0.00	-1,265.14	0.00	1,265.14	2,915.07	1,457.54	3,933.03	1,942.37	20.18	-3.39	0.656
60.00	-14.48	-16.14	0.00	-1,248.90	0.00	1,248.90	2,906.28	1,453.14	3,903.69	1,927.89	20.90	-3.46	0.653
61.00	-14.30	-16.04	0.00	-1,232.75	0.00	1,232.75	2,893.42	1,446.71	3,869.02	1,910.76	21.63	-3.52	0.650
62.00	-14.12	-15.94	0.00	-1,216.71	0.00	1,216.71	2,880.56	1,440.28	3,834.50	1,893.71	22.37	-3.59	0.648
63.00	-13.94	-15.84	0.00	-1,200.76	0.00	1,200.76	2,867.69	1,433.85	3,800.13	1,876.74	23.13	-3.66	0.645
64.00	-13.76	-15.74	0.00	-1,184.92	0.00	1,184.92	2,854.83	1,427.41	3,765.92	1,859.84	23.90	-3.72	0.642
65.00	-13.58	-15.64	0.00	-1,169.18	0.00	1,169.18	2,841.96	1,420.98	3,731.86	1,843.02	24.69	-3.79	0.639
66.00	-13.40	-15.54	0.00	-1,153.54	0.00	1,153.54	2,829.10	1,414.55	3,697.96	1,826.28	25.49	-3.85	0.636
67.00	-13.22	-15.44	0.00	-1,138.00	0.00	1,138.00	2,816.24	1,408.12	3,664.21	1,809.61	26.30	-3.92	0.634
68.00	-13.05	-15.33	0.00	-1,122.56	0.00	1,122.56	2,803.37	1,401.69	3,630.61	1,793.02	27.13	-3.99	0.631
69.00	-12.87	-15.23	0.00	-1,107.23	0.00	1,107.23	2,790.51	1,395.25	3,597.18	1,776.51	27.97	-4.05	0.628
70.00	-12.70	-15.13	0.00	-1,092.00	0.00	1,092.00	2,777.64	1,388.82	3,563.89	1,760.07	28.83	-4.12	0.625
71.00	-12.52	-15.03	0.00	-1,076.87	0.00	1,076.87	2,764.78	1,382.39	3,530.76	1,743.71	29.70	-4.18	0.622
72.00	-12.35	-14.92	0.00	-1,061.84	0.00	1,061.84	2,751.92	1,375.96	3,497.79	1,727.43	30.58	-4.25	0.619
73.00	-12.18	-14.82	0.00	-1,046.92	0.00	1,046.92	2,739.05	1,369.53	3,464.97	1,711.22	31.48	-4.31	0.616
74.00	-12.01	-14.71	0.00	-1,032.11	0.00	1,032.11	2,726.19	1,363.09	3,432.30	1,695.08	32.39	-4.38	0.613
75.00	-11.84	-14.61	0.00	-1,017.39	0.00	1,017.39	2,713.32	1,356.66	3,399.79	1,679.03	33.31	-4.45	0.610
76.00	-11.67	-14.50	0.00	-1,002.78	0.00	1,002.78	2,700.46	1,350.23	3,367.44	1,663.05	34.25	-4.51	0.607
77.00	-11.50	-14.40	0.00	-988.28	0.00	988.28	2,687.60	1,343.80	3,335.24	1,647.15	35.20	-4.58	0.604
78.00	-11.34	-14.30	0.00	-973.88	0.00	973.88	2,674.73	1,337.37	3,303.19	1,631.32	36.16	-4.64	0.601
79.00	-11.17	-14.19	0.00	-959.58	0.00	959.58	2,661.87	1,330.93	3,271.30	1,615.57	37.14	-4.71	0.598
80.00	-11.01	-14.08	0.00	-945.39	0.00	945.39	2,649.00	1,324.50	3,239.56	1,599.90	38.13	-4.78	0.595
81.00	-10.84	-13.98	0.00	-931.31	0.00	931.31	2,636.14	1,318.07	3,207.98	1,584.30	39.14	-4.84	0.592
82.00	-10.68	-13.87	0.00	-917.33	0.00	917.33	2,623.28	1,311.64	3,176.55	1,568.78	40.16	-4.91	0.589
83.00	-10.52	-13.77	0.00	-903.46	0.00	903.46	2,610.41	1,305.21	3,145.28	1,553.33	41.19	-4.97	0.586
84.00	-10.36	-13.66	0.00	-889.69	0.00	889.69	2,597.55	1,298.77	3,114.16	1,537.97	42.24	-5.04	0.583
85.00	-10.20	-13.57	0.00	-876.03	0.00	876.03	2,584.68	1,292.34	3,083.20	1,522.68	43.30	-5.10	0.579
85.75	-10.08	-13.51	0.00	-865.85	0.00	865.85	2,575.04	1,287.52	3,060.08	1,511.26	44.11	-5.15	0.577
85.75	-10.08	-13.51	0.00	-865.85	0.00	865.85	1,544.73	772.37	1,851.60	914.44	44.11	-5.15	0.954
86.00	-10.05	-13.45	0.00	-862.48	0.00	862.48	1,543.70	771.85	1,848.04	912.68	44.38	-5.17	0.952
87.00	-9.93	-13.36	0.00	-849.02	0.00	849.02	1,539.55	769.77	1,833.81	905.65	45.47	-5.27	0.944
88.00	-9.81	-13.26	0.00	-835.66	0.00	835.66	1,535.36	767.68	1,819.59	898.63	46.58	-5.36	0.937
89.00	-9.70	-13.16	0.00	-822.40	0.00	822.40	1,531.13	765.57	1,805.38	891.61	47.71	-5.46	0.929
90.00	-9.58	-13.07	0.00	-809.24	0.00	809.24	1,526.87	763.44	1,791.17	884.59	48.87	-5.56	0.921
91.00	-9.46	-12.97	0.00	-796.18	0.00	796.18	1,522.58	761.29	1,776.98	877.58	50.04	-5.65	0.914
92.00	-9.35	-12.87	0.00	-783.21	0.00	783.21	1,518.25	759.12	1,762.79	870.58	51.23	-5.75	0.906
93.00	-9.24	-12.77	0.00	-770.33	0.00	770.33	1,513.88	756.94	1,748.62	863.58	52.44	-5.85	0.898
94.00	-9.12	-12.68	0.00	-757.56	0.00	757.56	1,509.48	754.74	1,734.46	856.59	53.68	-5.94	0.891
95.00	-9.01	-12.58	0.00	-744.88	0.00	744.88	1,505.04	752.52	1,720.31	849.60	54.93	-6.04	0.883
96.00	-8.90	-12.48	0.00	-732.30	0.00	732.30	1,500.57	750.29	1,706.18	842.62	56.20	-6.13	0.875
97.00	-8.79	-12.38	0.00	-719.82	0.00	719.82	1,496.06	748.03	1,692.06	835.64	57.49	-6.23	0.868
98.00	-8.68	-12.29	0.00	-707.44	0.00	707.44	1,491.52	745.76	1,677.95	828.68	58.81	-6.33	0.860
99.00	-8.57	-12.19	0.00	-695.15	0.00	695.15	1,486.94	743.47	1,663.86	821.72	60.14	-6.42	0.852
100.00	-8.47	-12.09	0.00	-682.96	0.00	682.96	1,482.33	741.16	1,649.78	814.77	61.49	-6.52	0.844
101.00	-8.36	-11.99	0.00	-670.87	0.00	670.87	1,477.68	738.84	1,635.72	807.82	62.86	-6.61	0.836
102.00	-8.25	-11.89	0.00	-658.88	0.00	658.88	1,473.00	736.50	1,621.68	800.89	64.26	-6.71	0.829
103.00	-8.15	-11.80	0.00	-646.99	0.00	646.99	1,468.28	734.14	1,607.66	793.96	65.67	-6.80	0.821

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Load Case: 1.2D + 1.6W — 101 mph with No Ice — 45 Iterations

Gust Response Factor 1.10 — Wind Importance Factor 1.00
Dead Load Factor : 1.20
Wind Load Factor : 1.60

104.00	-8.04	-11.70	0.00	-635.19	0.00	635.19	1,463.52	731.76	1,593.65	787.04	67.10	-6.90	0.813
105.00	-7.94	-11.60	0.00	-623.49	0.00	623.49	1,458.73	729.37	1,579.66	780.14	68.55	-6.99	0.805
106.00	-7.84	-11.50	0.00	-611.89	0.00	611.89	1,453.91	726.95	1,565.69	773.24	70.02	-7.09	0.797
107.00	-7.74	-11.40	0.00	-600.39	0.00	600.39	1,449.04	724.52	1,551.74	766.35	71.51	-7.18	0.789
108.00	-7.64	-11.31	0.00	-588.98	0.00	588.98	1,444.15	722.07	1,537.82	759.47	73.02	-7.27	0.781
109.00	-7.54	-11.21	0.00	-577.68	0.00	577.68	1,439.21	719.61	1,523.91	752.60	74.55	-7.37	0.773
110.00	-7.44	-11.11	0.00	-566.47	0.00	566.47	1,434.25	717.12	1,510.03	745.75	76.10	-7.46	0.765
111.00	-7.34	-11.01	0.00	-555.36	0.00	555.36	1,429.24	714.62	1,496.17	738.90	77.67	-7.55	0.757
112.00	-7.24	-10.91	0.00	-544.34	0.00	544.34	1,424.21	712.10	1,482.33	732.07	79.26	-7.65	0.749
113.00	-7.14	-10.82	0.00	-533.43	0.00	533.43	1,419.13	709.57	1,468.51	725.24	80.86	-7.74	0.741
114.00	-7.05	-10.72	0.00	-522.61	0.00	522.61	1,414.02	707.01	1,454.73	718.43	82.49	-7.83	0.733
115.00	-6.95	-10.62	0.00	-511.89	0.00	511.89	1,408.88	704.44	1,440.96	711.64	84.14	-7.92	0.724
116.00	-6.86	-10.52	0.00	-501.27	0.00	501.27	1,403.70	701.85	1,427.22	704.85	85.80	-8.02	0.716
117.00	-6.76	-10.43	0.00	-490.75	0.00	490.75	1,398.48	699.24	1,413.51	698.08	87.48	-8.11	0.708
118.00	-6.67	-10.33	0.00	-480.32	0.00	480.32	1,393.23	696.62	1,399.83	691.32	89.19	-8.20	0.700
119.00	-6.58	-10.23	0.00	-470.00	0.00	470.00	1,387.95	693.97	1,386.17	684.58	90.91	-8.29	0.692
120.00	-6.49	-10.13	0.00	-459.76	0.00	459.76	1,382.63	691.31	1,372.54	677.85	92.65	-8.38	0.683
121.00	-6.40	-10.04	0.00	-449.63	0.00	449.63	1,377.27	688.64	1,358.94	671.13	94.40	-8.47	0.675
122.00	-6.31	-9.94	0.00	-439.59	0.00	439.59	1,371.88	685.94	1,345.37	664.43	96.18	-8.56	0.666
123.00	-6.22	-9.84	0.00	-429.66	0.00	429.66	1,366.45	683.23	1,331.83	657.74	97.98	-8.65	0.658
124.00	-6.13	-9.75	0.00	-419.81	0.00	419.81	1,360.99	680.49	1,318.33	651.07	99.79	-8.74	0.650
125.00	-6.04	-9.67	0.00	-410.07	0.00	410.07	1,355.49	677.74	1,304.85	644.42	101.62	-8.82	0.641
125.50	-6.00	-9.62	0.00	-405.23	0.00	405.23	1,352.73	676.36	1,298.12	641.09	102.54	-8.87	0.637
125.50	-6.00	-9.62	0.00	-405.23	0.00	405.23	1,127.00	563.50	1,084.41	535.55	102.54	-8.87	0.762
126.00	-5.96	-9.55	0.00	-400.42	0.00	400.42	1,124.94	562.47	1,079.04	532.90	103.47	-8.91	0.757
127.00	-5.88	-9.46	0.00	-390.87	0.00	390.87	1,120.78	560.39	1,068.31	527.60	105.34	-9.01	0.746
128.00	-5.81	-9.37	0.00	-381.41	0.00	381.41	1,116.59	558.29	1,057.61	522.31	107.23	-9.11	0.736
129.00	-5.73	-9.27	0.00	-372.04	0.00	372.04	1,112.36	556.18	1,046.91	517.03	109.14	-9.21	0.725
130.00	-5.65	-9.18	0.00	-362.77	0.00	362.77	1,108.10	554.05	1,036.24	511.76	111.07	-9.31	0.714
131.00	-5.58	-9.09	0.00	-353.59	0.00	353.59	1,103.80	551.90	1,025.58	506.50	113.02	-9.40	0.703
132.00	-5.50	-8.99	0.00	-344.51	0.00	344.51	1,099.47	549.73	1,014.94	501.24	115.00	-9.50	0.693
133.00	-5.43	-8.90	0.00	-335.51	0.00	335.51	1,095.10	547.55	1,004.33	496.00	116.99	-9.59	0.682
134.00	-5.36	-8.81	0.00	-326.61	0.00	326.61	1,090.69	545.35	993.73	490.77	119.00	-9.69	0.671
135.00	-5.29	-8.71	0.00	-317.81	0.00	317.81	1,086.26	543.13	983.15	485.54	121.03	-9.78	0.660
136.00	-5.21	-8.62	0.00	-309.09	0.00	309.09	1,081.78	540.89	972.60	480.33	123.08	-9.88	0.649
137.00	-5.14	-8.53	0.00	-300.47	0.00	300.47	1,077.27	538.64	962.07	475.13	125.14	-9.97	0.637
138.00	-5.07	-8.44	0.00	-291.94	0.00	291.94	1,072.73	536.36	951.56	469.94	127.23	-10.06	0.626
139.00	-5.01	-8.35	0.00	-283.50	0.00	283.50	1,068.14	534.07	941.07	464.76	129.34	-10.15	0.615
140.00	-4.94	-8.26	0.00	-275.15	0.00	275.15	1,063.53	531.76	930.61	459.59	131.46	-10.24	0.604
141.00	-4.87	-8.16	0.00	-266.90	0.00	266.90	1,058.88	529.44	920.17	454.44	133.61	-10.33	0.592
142.00	-4.80	-8.07	0.00	-258.73	0.00	258.73	1,054.19	527.09	909.76	449.30	135.77	-10.42	0.581
143.00	-4.74	-7.98	0.00	-250.66	0.00	250.66	1,049.47	524.73	899.37	444.17	137.95	-10.51	0.569
144.00	-4.67	-7.89	0.00	-242.68	0.00	242.68	1,044.71	522.35	889.01	439.05	140.15	-10.60	0.557
145.00	-4.61	-7.80	0.00	-234.79	0.00	234.79	1,039.92	519.96	878.68	433.95	142.36	-10.68	0.546
146.00	-4.55	-7.71	0.00	-226.99	0.00	226.99	1,035.09	517.54	868.38	428.86	144.60	-10.77	0.534
147.00	-4.48	-7.62	0.00	-219.28	0.00	219.28	1,030.22	515.11	858.10	423.79	146.85	-10.85	0.522
148.00	-4.42	-7.53	0.00	-211.66	0.00	211.66	1,025.32	512.66	847.86	418.72	149.12	-10.93	0.510
149.00	-4.36	-7.44	0.00	-204.13	0.00	204.13	1,020.39	510.19	837.64	413.68	151.40	-11.01	0.498
150.00	-4.30	-7.35	0.00	-196.68	0.00	196.68	1,015.42	507.71	827.46	408.65	153.70	-11.09	0.486
151.00	-4.24	-7.26	0.00	-189.33	0.00	189.33	1,010.41	505.21	817.30	403.63	156.02	-11.17	0.473
152.00	-4.18	-7.17	0.00	-182.07	0.00	182.07	1,005.37	502.69	807.18	398.64	158.35	-11.25	0.461
153.00	-4.12	-7.09	0.00	-174.89	0.00	174.89	1,000.30	500.15	797.09	393.65	160.70	-11.32	0.449
154.00	-4.06	-7.00	0.00	-167.81	0.00	167.81	995.19	497.59	787.03	388.69	163.07	-11.40	0.436
155.00	-4.01	-6.91	0.00	-160.81	0.00	160.81	990.04	495.02	777.01	383.74	165.44	-11.47	0.423
156.00	-3.95	-6.82	0.00	-153.90	0.00	153.90	983.06	491.53	765.62	378.11	167.84	-11.54	0.411
157.00	-3.89	-6.74	0.00	-147.08	0.00	147.08	975.56	487.78	753.91	372.33	170.25	-11.61	0.399
158.00	-3.84	-6.65	0.00	-140.34	0.00	140.34	968.05	484.03	742.29	366.59	172.67	-11.68	0.387

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Load Case: 1.2D + 1.6W 101 mph with No Ice 45 Iterations

Gust Response Factor 1.10 Wind Importance Factor 1.00
Dead Load Factor : 1.20
Wind Load Factor : 1.60

159.00	-3.79	-6.56	0.00	-133.69	0.00	133.69	960.55	480.27	730.76	360.90	175.11	-11.75	0.375
160.00	-3.73	-6.48	0.00	-127.13	0.00	127.13	953.04	476.52	719.32	355.25	177.56	-11.82	0.362
161.00	-3.68	-6.39	0.00	-120.65	0.00	120.65	945.54	472.77	707.97	349.64	180.02	-11.88	0.349
162.00	-3.63	-6.31	0.00	-114.26	0.00	114.26	938.04	469.02	696.71	344.08	182.50	-11.94	0.336
163.00	-3.58	-6.22	0.00	-107.95	0.00	107.95	930.53	465.27	685.54	338.56	184.99	-12.00	0.323
164.00	-3.53	-6.14	0.00	-101.73	0.00	101.73	923.03	461.51	674.47	333.09	187.49	-12.06	0.309
165.00	-3.48	-6.05	0.00	-95.60	0.00	95.60	915.52	457.76	663.48	327.67	190.00	-12.11	0.296
166.00	-3.43	-5.97	0.00	-89.55	0.00	89.55	908.02	454.01	652.58	322.29	192.53	-12.17	0.282
167.00	-3.38	-5.88	0.00	-83.58	0.00	83.58	900.52	450.26	641.77	316.95	195.06	-12.22	0.268
168.00	-3.33	-5.80	0.00	-77.70	0.00	77.70	893.01	446.51	631.06	311.65	197.61	-12.27	0.253
169.00	-3.28	-5.72	0.00	-71.90	0.00	71.90	885.51	442.75	620.43	306.41	200.16	-12.31	0.239
170.00	-3.24	-5.63	0.00	-66.19	0.00	66.19	878.00	439.00	609.89	301.20	202.73	-12.36	0.224
171.00	-3.19	-5.55	0.00	-60.55	0.00	60.55	870.50	435.25	599.45	296.04	205.30	-12.40	0.208
172.00	-3.15	-5.47	0.00	-55.00	0.00	55.00	863.00	431.50	589.09	290.93	207.88	-12.44	0.193
173.00	-3.10	-5.39	0.00	-49.53	0.00	49.53	855.49	427.75	578.82	285.86	210.47	-12.47	0.177
174.00	-3.06	-5.31	0.00	-44.15	0.00	44.15	847.99	423.99	568.65	280.83	213.06	-12.51	0.161
175.00	-3.02	-5.23	0.00	-38.84	0.00	38.84	840.48	420.24	558.56	275.85	215.67	-12.54	0.145
176.00	-2.97	-5.14	0.00	-33.61	0.00	33.61	832.98	416.49	548.57	270.92	218.27	-12.56	0.128
177.00	-2.93	-5.06	0.00	-28.47	0.00	28.47	825.48	412.74	538.66	266.02	220.89	-12.59	0.111
178.00	-2.89	-4.98	0.00	-23.41	0.00	23.41	817.97	408.99	528.85	261.18	223.50	-12.61	0.093
179.00	-2.85	-4.91	0.00	-18.42	0.00	18.42	810.47	405.23	519.12	256.38	226.13	-12.62	0.076
180.00	-0.02	-0.03	0.00	-0.01	0.00	0.01	802.96	401.48	509.49	251.62	228.75	-12.64	0.000
180.58	0.00	-0.02	0.00	0.00	0.00	0.00	798.59	399.29	503.91	248.86	230.28	-12.64	0.000

Site Number: 302496 Code: ANSI/TIA-222-G © 2007 - 2018 by ATC IP LLC. All rights reserved.
Site Name: CIch - Colchester, CT Engineering Number: OAA735982_C3_01 7/2/2018 6:10:32 PM
Customer: AT&T MOBILITY

Load Case: 0.9D + 1.6W — 101 mph with No Ice (Reduced DL) — 44 Iterations

Gust Response Factor 1.10 — Wind Importance Factor 1.00
Dead Load Factor :0.90
Wind Load Factor :1.60

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces Wind FX (lb)	Shaft Forces Dead Load (lb)	Discrete Forces Wind FX (lb)	Discrete Forces Torsion MY (lb-ft)	Discrete Forces Moment MZ (lb-ft)	Linear Forces Dead Load (lb)	Linear Forces Wind FX (lb)	Linear Forces Dead Load (lb)	Sum of Forces Wind FX (lb)	Sum of Forces Dead Load (lb)	Sum of Forces Torsion MY (lb-ft)	Sum of Forces Moment MZ (lb)
0.00		54.9	0.0					0.0	0.0	54.9	0.0	0.0	0.0
1.00		109.6	177.7					0.0	7.9	109.6	185.6	0.0	0.0
2.00		109.2	177.1					0.0	7.9	109.2	185.0	0.0	0.0
3.00		108.8	176.5					0.0	7.9	108.8	184.4	0.0	0.0
4.00		108.4	175.8					0.0	7.9	108.4	183.8	0.0	0.0
5.00		108.1	175.2					0.0	7.9	108.1	183.1	0.0	0.0
6.00		107.7	174.6					0.0	7.9	107.7	182.5	0.0	0.0
7.00		107.3	174.0					0.0	7.9	107.3	181.9	0.0	0.0
8.00		106.9	173.3					0.0	7.9	106.9	181.3	0.0	0.0
9.00		106.5	172.7					0.0	7.9	106.5	180.6	0.0	0.0
10.00		106.1	172.1					0.0	7.9	106.1	180.0	0.0	0.0
11.00		105.8	171.5					0.0	7.9	105.8	179.4	0.0	0.0
12.00		105.4	170.8					0.0	7.9	105.4	178.8	0.0	0.0
13.00		105.0	170.2					0.0	7.9	105.0	178.1	0.0	0.0
14.00		104.6	169.6					0.0	7.9	104.6	177.5	0.0	0.0
15.00		104.2	169.0					0.0	7.9	104.2	176.9	0.0	0.0
16.00		103.9	168.4					0.0	7.9	103.9	176.3	0.0	0.0
17.00		103.5	167.7					0.0	7.9	103.5	175.7	0.0	0.0
18.00		103.1	167.1					0.0	7.9	103.1	175.0	0.0	0.0
19.00		102.7	166.5					0.0	7.9	102.7	174.4	0.0	0.0
20.00		102.3	165.9					0.0	7.9	102.3	173.8	0.0	0.0
21.00		102.0	165.2					0.0	7.9	102.0	173.2	0.0	0.0
22.00		101.6	164.6					0.0	7.9	101.6	172.5	0.0	0.0
23.00		101.2	164.0					0.0	7.9	101.2	171.9	0.0	0.0
24.00		100.8	163.4					0.0	7.9	100.8	171.3	0.0	0.0
25.00		100.4	162.7					0.0	7.9	100.4	170.7	0.0	0.0
26.00		100.0	162.1					0.0	7.9	100.0	170.0	0.0	0.0
27.00		99.7	161.5					0.0	7.9	99.7	169.4	0.0	0.0
28.00		99.3	160.9					0.0	7.9	99.3	168.8	0.0	0.0
29.00		98.9	160.2					0.0	7.9	98.9	168.2	0.0	0.0
30.00		98.8	159.6					0.0	7.9	98.8	167.5	0.0	0.0
31.00		99.1	159.0					0.0	7.9	99.1	166.9	0.0	0.0
32.00		99.7	158.4					0.0	7.9	99.7	166.3	0.0	0.0
33.00		100.2	157.8					0.0	7.9	100.2	165.7	0.0	0.0
34.00		100.6	157.1					0.0	7.9	100.6	165.0	0.0	0.0
35.00		101.1	156.5					0.0	7.9	101.1	164.4	0.0	0.0
36.00		101.5	155.9					0.0	7.9	101.5	163.8	0.0	0.0
37.00		101.9	155.3					0.0	7.9	101.9	163.2	0.0	0.0
38.00		102.2	154.6					0.0	7.9	102.2	162.6	0.0	0.0
39.00		102.6	154.0					0.0	7.9	102.6	161.9	0.0	0.0
40.00		102.9	153.4					0.0	7.9	102.9	161.3	0.0	0.0
41.00		103.2	152.8					0.0	7.9	103.2	160.7	0.0	0.0
42.00		103.5	152.1					0.0	7.9	103.5	160.1	0.0	0.0
43.00		103.8	151.5					0.0	7.9	103.8	159.4	0.0	0.0
44.00		91.0	150.9					0.0	7.9	91.0	158.8	0.0	0.0
44.75	Top - Section 1	52.1	112.8					0.0	5.9	52.1	118.7	0.0	0.0
45.00		65.2	32.2					0.0	2.0	65.2	34.2	0.0	0.0

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Load Case: 0.9D + 1.6W — 101 mph with No Ice (Reduced DL) — 44 Iterations

Gust Response Factor 1.10 — Wind Importance Factor 1.00
Dead Load Factor :0.90
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46.00		104.5	128.5	0.0	7.9	104.5	136.4	0.0	0.0
47.00		104.7	128.0	0.0	7.9	104.7	135.9	0.0	0.0
48.00		104.9	127.4	0.0	7.9	104.9	135.4	0.0	0.0
49.00		105.1	126.9	0.0	7.9	105.1	134.8	0.0	0.0
50.00		105.3	126.4	0.0	7.9	105.3	134.3	0.0	0.0
51.00		105.4	125.8	0.0	7.9	105.4	133.7	0.0	0.0
52.00		105.6	125.3	0.0	7.9	105.6	133.2	0.0	0.0
53.00		105.7	124.8	0.0	7.9	105.7	132.7	0.0	0.0
54.00		105.8	124.2	0.0	7.9	105.8	132.1	0.0	0.0
55.00		105.9	123.7	0.0	7.9	105.9	131.6	0.0	0.0
56.00		106.0	123.2	0.0	7.9	106.0	131.1	0.0	0.0
57.00		106.1	122.6	0.0	7.9	106.1	130.5	0.0	0.0
58.00		106.2	122.1	0.0	7.9	106.2	130.0	0.0	0.0
59.00		106.2	121.6	0.0	7.9	106.2	129.5	0.0	0.0
60.00		106.3	121.0	0.0	7.9	106.3	128.9	0.0	0.0
61.00		106.3	120.5	0.0	7.9	106.3	128.4	0.0	0.0
62.00		106.3	119.9	0.0	7.9	106.3	127.9	0.0	0.0
63.00		106.3	119.4	0.0	7.9	106.3	127.3	0.0	0.0
64.00		106.3	118.9	0.0	7.9	106.3	126.8	0.0	0.0
65.00		106.3	118.3	0.0	7.9	106.3	126.3	0.0	0.0
66.00		106.3	117.8	0.0	7.9	106.3	125.7	0.0	0.0
67.00		106.3	117.3	0.0	7.9	106.3	125.2	0.0	0.0
68.00		106.3	116.7	0.0	7.9	106.3	124.7	0.0	0.0
69.00		106.2	116.2	0.0	7.9	106.2	124.1	0.0	0.0
70.00		106.2	115.7	0.0	7.9	106.2	123.6	0.0	0.0
71.00		106.1	115.1	0.0	7.9	106.1	123.1	0.0	0.0
72.00		106.1	114.6	0.0	7.9	106.1	122.5	0.0	0.0
73.00		106.0	114.1	0.0	7.9	106.0	122.0	0.0	0.0
74.00		105.9	113.5	0.0	7.9	105.9	121.5	0.0	0.0
75.00		105.8	113.0	0.0	7.9	105.8	120.9	0.0	0.0
76.00		105.7	112.5	0.0	7.9	105.7	120.4	0.0	0.0
77.00		105.6	111.9	0.0	7.9	105.6	119.9	0.0	0.0
78.00		105.5	111.4	0.0	7.9	105.5	119.3	0.0	0.0
79.00		105.4	110.9	0.0	7.9	105.4	118.8	0.0	0.0
80.00		105.3	110.3	0.0	7.9	105.3	118.2	0.0	0.0
81.00		105.1	109.8	0.0	7.9	105.1	117.7	0.0	0.0
82.00		105.0	109.3	0.0	7.9	105.0	117.2	0.0	0.0
83.00		104.8	108.7	0.0	7.9	104.8	116.6	0.0	0.0
84.00		104.7	108.2	0.0	7.9	104.7	116.1	0.0	0.0
85.00		91.5	107.7	0.0	7.9	91.5	115.6	0.0	0.0
85.75	Top - Section 2	52.2	80.4	0.0	5.9	52.2	86.3	0.0	0.0
86.00		65.2	17.9	0.0	2.0	65.2	19.9	0.0	0.0
87.00		104.2	71.4	0.0	7.9	104.2	79.3	0.0	0.0
88.00		104.0	71.0	0.0	7.9	104.0	78.9	0.0	0.0
89.00		103.8	70.7	0.0	7.9	103.8	78.6	0.0	0.0
90.00		103.6	70.3	0.0	7.9	103.6	78.2	0.0	0.0
91.00		103.4	69.9	0.0	7.9	103.4	77.9	0.0	0.0
92.00		103.2	69.6	0.0	7.9	103.2	77.5	0.0	0.0
93.00		103.0	69.2	0.0	7.9	103.0	77.1	0.0	0.0
94.00		102.8	68.9	0.0	7.9	102.8	76.8	0.0	0.0
95.00		102.6	68.5	0.0	7.9	102.6	76.4	0.0	0.0
96.00		102.4	68.2	0.0	7.9	102.4	76.1	0.0	0.0
97.00		102.2	67.8	0.0	7.9	102.2	75.7	0.0	0.0
98.00		101.9	67.4	0.0	7.9	101.9	75.4	0.0	0.0
99.00		101.7	67.1	0.0	7.9	101.7	75.0	0.0	0.0
100.00		101.4	66.7	0.0	7.9	101.4	74.7	0.0	0.0
101.00		101.2	66.4	0.0	7.9	101.2	74.3	0.0	0.0

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Load Case: 0.9D + 1.6W — 101 mph with No Ice (Reduced DL) — 44 Iterations

Gust Response Factor 1.10 — Wind Importance Factor 1.00
Dead Load Factor :0.90
Wind Load Factor :1.60

102.00		100.9	66.0	0.0	7.9	100.9	73.9	0.0	0.0
103.00		100.7	65.7	0.0	7.9	100.7	73.6	0.0	0.0
104.00		100.4	65.3	0.0	7.9	100.4	73.2	0.0	0.0
105.00		100.1	65.0	0.0	7.9	100.1	72.9	0.0	0.0
106.00		99.9	64.6	0.0	7.9	99.9	72.5	0.0	0.0
107.00		99.6	64.2	0.0	7.9	99.6	72.2	0.0	0.0
108.00		99.3	63.9	0.0	7.9	99.3	71.8	0.0	0.0
109.00		99.0	63.5	0.0	7.9	99.0	71.4	0.0	0.0
110.00		98.7	63.2	0.0	7.9	98.7	71.1	0.0	0.0
111.00		98.4	62.8	0.0	7.9	98.4	70.7	0.0	0.0
112.00		98.1	62.5	0.0	7.9	98.1	70.4	0.0	0.0
113.00		97.8	62.1	0.0	7.9	97.8	70.0	0.0	0.0
114.00		97.5	61.7	0.0	7.9	97.5	69.7	0.0	0.0
115.00		97.2	61.4	0.0	7.9	97.2	69.3	0.0	0.0
116.00		96.8	61.0	0.0	7.9	96.8	69.0	0.0	0.0
117.00		96.5	60.7	0.0	7.9	96.5	68.6	0.0	0.0
118.00		96.2	60.3	0.0	7.9	96.2	68.2	0.0	0.0
119.00		95.9	60.0	0.0	7.9	95.9	67.9	0.0	0.0
120.00		95.5	59.6	0.0	7.9	95.5	67.5	0.0	0.0
121.00		95.2	59.3	0.0	7.9	95.2	67.2	0.0	0.0
122.00		94.8	58.9	0.0	7.9	94.8	66.8	0.0	0.0
123.00		94.5	58.5	0.0	7.9	94.5	66.5	0.0	0.0
124.00		94.1	58.2	0.0	7.9	94.1	66.1	0.0	0.0
125.00		70.4	57.8	0.0	7.9	70.4	65.7	0.0	0.0
125.50	Top - Section 3	46.8	28.8	0.0	4.0	46.8	32.7	0.0	0.0
126.00		70.0	25.1	0.0	4.0	70.0	29.1	0.0	0.0
127.00		93.0	50.0	0.0	7.9	93.0	58.0	0.0	0.0
128.00		92.7	49.7	0.0	7.9	92.7	57.6	0.0	0.0
129.00		92.3	49.4	0.0	7.9	92.3	57.3	0.0	0.0
130.00		91.9	49.1	0.0	7.9	91.9	57.0	0.0	0.0
131.00		91.5	48.8	0.0	7.9	91.5	56.7	0.0	0.0
132.00		91.2	48.5	0.0	7.9	91.2	56.4	0.0	0.0
133.00		90.8	48.2	0.0	7.9	90.8	56.1	0.0	0.0
134.00		90.4	47.9	0.0	7.9	90.4	55.8	0.0	0.0
135.00		90.0	47.5	0.0	7.9	90.0	55.5	0.0	0.0
136.00		89.6	47.2	0.0	7.9	89.6	55.2	0.0	0.0
137.00		89.2	46.9	0.0	7.9	89.2	54.8	0.0	0.0
138.00		88.8	46.6	0.0	7.9	88.8	54.5	0.0	0.0
139.00		88.4	46.3	0.0	7.9	88.4	54.2	0.0	0.0
140.00		88.0	46.0	0.0	7.9	88.0	53.9	0.0	0.0
141.00		87.6	45.7	0.0	7.9	87.6	53.6	0.0	0.0
142.00		87.1	45.4	0.0	7.9	87.1	53.3	0.0	0.0
143.00		86.7	45.1	0.0	7.9	86.7	53.0	0.0	0.0
144.00		86.3	44.7	0.0	7.9	86.3	52.7	0.0	0.0
145.00		85.9	44.4	0.0	7.9	85.9	52.3	0.0	0.0
146.00		85.4	44.1	0.0	7.9	85.4	52.0	0.0	0.0
147.00		85.0	43.8	0.0	7.9	85.0	51.7	0.0	0.0
148.00		84.6	43.5	0.0	7.9	84.6	51.4	0.0	0.0
149.00		84.1	43.2	0.0	7.9	84.1	51.1	0.0	0.0
150.00		83.7	42.9	0.0	7.9	83.7	50.8	0.0	0.0
151.00		83.2	42.6	0.0	7.9	83.2	50.5	0.0	0.0
152.00		82.8	42.2	0.0	7.9	82.8	50.2	0.0	0.0
153.00		82.3	41.9	0.0	7.9	82.3	49.9	0.0	0.0
154.00		81.9	41.6	0.0	7.9	81.9	49.5	0.0	0.0
155.00		81.4	41.3	0.0	7.9	81.4	49.2	0.0	0.0
156.00		81.0	41.0	0.0	7.9	81.0	48.9	0.0	0.0
157.00		80.5	40.7	0.0	7.9	80.5	48.6	0.0	0.0

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Load Case: 0.9D + 1.6W — 101 mph with No Ice (Reduced DL) — 44 Iterations

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Wind Load Factor : 1.60

158.00		80.0	40.4				0.0	7.9	80.0	48.3	0.0	0.0
159.00		79.6	40.1				0.0	7.9	79.6	48.0	0.0	0.0
160.00		79.1	39.8				0.0	7.9	79.1	47.7	0.0	0.0
161.00		78.6	39.4				0.0	7.9	78.6	47.4	0.0	0.0
162.00		78.1	39.1				0.0	7.9	78.1	47.0	0.0	0.0
163.00		77.7	38.8				0.0	7.9	77.7	46.7	0.0	0.0
164.00		77.2	38.5				0.0	7.9	77.2	46.4	0.0	0.0
165.00		76.7	38.2				0.0	7.9	76.7	46.1	0.0	0.0
166.00		76.2	37.9				0.0	7.9	76.2	45.8	0.0	0.0
167.00		75.7	37.6				0.0	7.9	75.7	45.5	0.0	0.0
168.00		75.2	37.3				0.0	7.9	75.2	45.2	0.0	0.0
169.00		74.7	36.9				0.0	7.9	74.7	44.9	0.0	0.0
170.00		74.2	36.6				0.0	7.9	74.2	44.6	0.0	0.0
171.00		73.7	36.3				0.0	7.9	73.7	44.2	0.0	0.0
172.00		73.2	36.0				0.0	7.9	73.2	43.9	0.0	0.0
173.00		72.7	35.7				0.0	7.9	72.7	43.6	0.0	0.0
174.00		72.2	35.4				0.0	7.9	72.2	43.3	0.0	0.0
175.00		71.7	35.1				0.0	7.9	71.7	43.0	0.0	0.0
176.00		71.2	34.8				0.0	7.9	71.2	42.7	0.0	0.0
177.00		70.6	34.5				0.0	7.9	70.6	42.4	0.0	0.0
178.00		70.1	34.1				0.0	7.9	70.1	42.1	0.0	0.0
179.00		69.6	33.8				0.0	7.9	69.6	41.7	0.0	0.0
180.00	Appurtenance(s)	54.8	33.5	4,088.4	0.0	13,500.8	2,829.9	0.0	7.9	4,143.2	2,871.3	0.0	0.0
180.58		20.1	19.4					0.0	0.0	20.1	19.4	0.0	0.0
								Totals:		21,523.88	21,299.72	0.00	0.00

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Wind Load Factor :1.60

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-21.29	-21.48	0.00	-2,342.84	0.00	2,342.84	4,173.88	2,086.94	7,090.68	3,501.82	0.00	0.00	0.674
1.00	-21.08	-21.39	0.00	-2,321.36	0.00	2,321.36	4,164.30	2,082.15	7,049.35	3,481.41	0.01	-0.05	0.672
2.00	-20.88	-21.30	0.00	-2,299.97	0.00	2,299.97	4,154.67	2,077.34	7,008.08	3,461.03	0.02	-0.11	0.670
3.00	-20.68	-21.21	0.00	-2,278.68	0.00	2,278.68	4,145.02	2,072.51	6,966.87	3,440.67	0.05	-0.16	0.667
4.00	-20.47	-21.12	0.00	-2,257.47	0.00	2,257.47	4,135.32	2,067.66	6,925.71	3,420.35	0.09	-0.21	0.665
5.00	-20.27	-21.03	0.00	-2,236.35	0.00	2,236.35	4,125.60	2,062.80	6,884.61	3,400.05	0.14	-0.26	0.663
6.00	-20.07	-20.94	0.00	-2,215.33	0.00	2,215.33	4,115.83	2,057.92	6,843.57	3,379.78	0.20	-0.32	0.660
7.00	-19.87	-20.85	0.00	-2,194.39	0.00	2,194.39	4,106.03	2,053.02	6,802.59	3,359.54	0.27	-0.37	0.658
8.00	-19.67	-20.76	0.00	-2,173.54	0.00	2,173.54	4,096.20	2,048.10	6,761.66	3,339.33	0.36	-0.42	0.656
9.00	-19.47	-20.67	0.00	-2,152.79	0.00	2,152.79	4,086.33	2,043.16	6,720.80	3,319.15	0.45	-0.48	0.653
10.00	-19.27	-20.58	0.00	-2,132.12	0.00	2,132.12	4,076.42	2,038.21	6,680.00	3,299.00	0.56	-0.53	0.651
11.00	-19.08	-20.49	0.00	-2,111.54	0.00	2,111.54	4,066.48	2,033.24	6,639.26	3,278.88	0.67	-0.58	0.649
12.00	-18.88	-20.40	0.00	-2,091.05	0.00	2,091.05	4,056.51	2,028.25	6,598.58	3,258.79	0.80	-0.63	0.646
13.00	-18.68	-20.31	0.00	-2,070.66	0.00	2,070.66	4,046.49	2,023.25	6,557.96	3,238.73	0.94	-0.69	0.644
14.00	-18.49	-20.22	0.00	-2,050.35	0.00	2,050.35	4,036.45	2,018.22	6,517.41	3,218.70	1.09	-0.74	0.642
15.00	-18.29	-20.13	0.00	-2,030.13	0.00	2,030.13	4,026.36	2,013.18	6,476.92	3,198.71	1.25	-0.79	0.639
16.00	-18.10	-20.04	0.00	-2,010.00	0.00	2,010.00	4,016.25	2,008.12	6,436.49	3,178.74	1.42	-0.85	0.637
17.00	-17.91	-19.95	0.00	-1,989.96	0.00	1,989.96	4,006.09	2,003.05	6,396.13	3,158.81	1.61	-0.90	0.635
18.00	-17.72	-19.86	0.00	-1,970.01	0.00	1,970.01	3,995.91	1,997.95	6,355.84	3,138.91	1.80	-0.96	0.632
19.00	-17.52	-19.77	0.00	-1,950.15	0.00	1,950.15	3,985.68	1,992.84	6,315.61	3,119.04	2.01	-1.01	0.630
20.00	-17.33	-19.68	0.00	-1,930.38	0.00	1,930.38	3,975.42	1,987.71	6,275.45	3,099.21	2.22	-1.06	0.627
21.00	-17.14	-19.59	0.00	-1,910.70	0.00	1,910.70	3,965.13	1,982.56	6,235.36	3,079.41	2.45	-1.12	0.625
22.00	-16.96	-19.50	0.00	-1,891.11	0.00	1,891.11	3,954.48	1,977.24	6,194.84	3,059.40	2.69	-1.17	0.623
23.00	-16.77	-19.42	0.00	-1,871.60	0.00	1,871.60	3,939.47	1,969.74	6,147.64	3,036.09	2.94	-1.22	0.621
24.00	-16.58	-19.33	0.00	-1,852.19	0.00	1,852.19	3,924.46	1,962.23	6,100.62	3,012.87	3.21	-1.28	0.619
25.00	-16.39	-19.24	0.00	-1,832.86	0.00	1,832.86	3,909.45	1,954.73	6,053.78	2,989.74	3.48	-1.33	0.617
26.00	-16.21	-19.15	0.00	-1,813.63	0.00	1,813.63	3,894.45	1,947.22	6,007.13	2,966.69	3.76	-1.39	0.616
27.00	-16.02	-19.06	0.00	-1,794.48	0.00	1,794.48	3,879.44	1,939.72	5,960.65	2,943.74	4.06	-1.44	0.614
28.00	-15.84	-18.97	0.00	-1,775.42	0.00	1,775.42	3,864.43	1,932.22	5,914.36	2,920.88	4.37	-1.49	0.612
29.00	-15.66	-18.88	0.00	-1,756.45	0.00	1,756.45	3,849.42	1,924.71	5,868.24	2,898.10	4.69	-1.55	0.610
30.00	-15.47	-18.79	0.00	-1,737.56	0.00	1,737.56	3,834.41	1,917.21	5,822.31	2,875.42	5.02	-1.60	0.608
31.00	-15.29	-18.70	0.00	-1,718.77	0.00	1,718.77	3,819.41	1,909.70	5,776.55	2,852.82	5.36	-1.66	0.607
32.00	-15.11	-18.61	0.00	-1,700.06	0.00	1,700.06	3,804.40	1,902.20	5,730.98	2,830.32	5.71	-1.71	0.605
33.00	-14.93	-18.52	0.00	-1,681.45	0.00	1,681.45	3,789.39	1,894.70	5,685.59	2,807.90	6.08	-1.77	0.603
34.00	-14.75	-18.43	0.00	-1,662.93	0.00	1,662.93	3,774.38	1,887.19	5,640.38	2,785.57	6.45	-1.82	0.601
35.00	-14.57	-18.34	0.00	-1,644.50	0.00	1,644.50	3,759.37	1,879.69	5,595.34	2,763.33	6.84	-1.88	0.599
36.00	-14.39	-18.25	0.00	-1,626.16	0.00	1,626.16	3,744.37	1,872.18	5,550.49	2,741.18	7.24	-1.93	0.597
37.00	-14.22	-18.15	0.00	-1,607.91	0.00	1,607.91	3,729.36	1,864.68	5,505.82	2,719.12	7.65	-1.98	0.595
38.00	-14.04	-18.06	0.00	-1,589.76	0.00	1,589.76	3,714.35	1,857.18	5,461.33	2,697.15	8.07	-2.04	0.593
39.00	-13.87	-17.96	0.00	-1,571.70	0.00	1,571.70	3,699.34	1,849.67	5,417.02	2,675.26	8.50	-2.09	0.591
40.00	-13.69	-17.87	0.00	-1,553.74	0.00	1,553.74	3,684.33	1,842.17	5,372.89	2,653.47	8.95	-2.15	0.589
41.00	-13.52	-17.77	0.00	-1,535.87	0.00	1,535.87	3,669.33	1,834.66	5,328.94	2,631.76	9.40	-2.20	0.587
42.00	-13.35	-17.67	0.00	-1,518.10	0.00	1,518.10	3,654.32	1,827.16	5,285.17	2,610.15	9.87	-2.26	0.585
43.00	-13.17	-17.58	0.00	-1,500.42	0.00	1,500.42	3,639.31	1,819.66	5,241.59	2,588.62	10.35	-2.31	0.583
44.00	-13.00	-17.49	0.00	-1,482.85	0.00	1,482.85	3,624.30	1,812.15	5,198.18	2,567.18	10.84	-2.37	0.581
44.75	-12.88	-17.44	0.00	-1,469.73	0.00	1,469.73	3,613.05	1,806.52	5,165.74	2,551.17	11.21	-2.41	0.580
44.75	-12.88	-17.44	0.00	-1,469.73	0.00	1,469.73	3,037.33	1,518.66	4,358.22	2,152.36	11.21	-2.41	0.687
45.00	-12.84	-17.38	0.00	-1,465.37	0.00	1,465.37	3,035.24	1,517.62	4,350.67	2,148.63	11.34	-2.42	0.686
46.00	-12.69	-17.29	0.00	-1,447.99	0.00	1,447.99	3,026.89	1,513.44	4,320.50	2,133.73	11.85	-2.49	0.683
47.00	-12.53	-17.19	0.00	-1,430.71	0.00	1,430.71	3,018.50	1,509.25	4,290.37	2,118.85	12.38	-2.55	0.680
48.00	-12.39	-17.09	0.00	-1,413.52	0.00	1,413.52	3,010.08	1,505.04	4,260.30	2,104.00	12.92	-2.61	0.676

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Load Case: 0.9D + 1.6W — 101 mph with No Ice (Reduced DL) — 44 Iterations

Gust Response Factor 1.10 — Wind Importance Factor 1.00
Dead Load Factor : 0.90
Wind Load Factor : 1.60

49.00	-12.24	-16.99	0.00	-1,396.43	0.00	1,396.43	3,001.62	1,500.81	4,230.28	2,089.17	13.48	-2.68	0.673
50.00	-12.09	-16.90	0.00	-1,379.43	0.00	1,379.43	2,993.12	1,496.56	4,200.31	2,074.37	14.04	-2.74	0.669
51.00	-11.94	-16.80	0.00	-1,362.54	0.00	1,362.54	2,984.59	1,492.30	4,170.39	2,059.60	14.63	-2.80	0.666
52.00	-11.79	-16.70	0.00	-1,345.74	0.00	1,345.74	2,976.02	1,488.01	4,140.52	2,044.85	15.22	-2.87	0.662
53.00	-11.65	-16.60	0.00	-1,329.04	0.00	1,329.04	2,967.42	1,483.71	4,110.71	2,030.13	15.83	-2.93	0.659
54.00	-11.50	-16.50	0.00	-1,312.44	0.00	1,312.44	2,958.79	1,479.39	4,080.96	2,015.43	16.45	-3.00	0.655
55.00	-11.36	-16.40	0.00	-1,295.94	0.00	1,295.94	2,950.11	1,475.06	4,051.26	2,000.76	17.08	-3.06	0.652
56.00	-11.22	-16.30	0.00	-1,279.54	0.00	1,279.54	2,941.41	1,470.70	4,021.62	1,986.12	17.73	-3.12	0.648
57.00	-11.07	-16.20	0.00	-1,263.24	0.00	1,263.24	2,932.66	1,466.33	3,992.03	1,971.51	18.39	-3.19	0.645
58.00	-10.93	-16.10	0.00	-1,247.05	0.00	1,247.05	2,923.89	1,461.94	3,962.50	1,956.93	19.07	-3.25	0.641
59.00	-10.79	-16.00	0.00	-1,230.95	0.00	1,230.95	2,915.07	1,457.54	3,933.03	1,942.37	19.75	-3.32	0.638
60.00	-10.65	-15.89	0.00	-1,214.95	0.00	1,214.95	2,906.28	1,453.14	3,903.69	1,927.89	20.45	-3.38	0.634
61.00	-10.51	-15.79	0.00	-1,199.06	0.00	1,199.06	2,893.42	1,446.71	3,869.02	1,910.76	21.17	-3.44	0.631
62.00	-10.37	-15.69	0.00	-1,183.27	0.00	1,183.27	2,880.56	1,440.28	3,834.50	1,893.71	21.90	-3.51	0.629
63.00	-10.24	-15.59	0.00	-1,167.58	0.00	1,167.58	2,867.69	1,433.85	3,800.13	1,876.74	22.64	-3.57	0.626
64.00	-10.10	-15.48	0.00	-1,151.99	0.00	1,151.99	2,854.83	1,427.41	3,765.92	1,859.84	23.39	-3.64	0.623
65.00	-9.96	-15.38	0.00	-1,136.51	0.00	1,136.51	2,841.96	1,420.98	3,731.86	1,843.02	24.16	-3.70	0.620
66.00	-9.83	-15.28	0.00	-1,121.12	0.00	1,121.12	2,829.10	1,414.55	3,697.96	1,826.28	24.94	-3.76	0.617
67.00	-9.69	-15.17	0.00	-1,105.85	0.00	1,105.85	2,816.24	1,408.12	3,664.21	1,809.61	25.74	-3.83	0.615
68.00	-9.56	-15.07	0.00	-1,090.67	0.00	1,090.67	2,803.37	1,401.69	3,630.61	1,793.02	26.55	-3.89	0.612
69.00	-9.42	-14.97	0.00	-1,075.60	0.00	1,075.60	2,790.51	1,395.25	3,597.18	1,776.51	27.37	-3.96	0.609
70.00	-9.29	-14.86	0.00	-1,060.63	0.00	1,060.63	2,777.64	1,388.82	3,563.89	1,760.07	28.20	-4.02	0.606
71.00	-9.16	-14.76	0.00	-1,045.77	0.00	1,045.77	2,764.78	1,382.39	3,530.76	1,743.71	29.05	-4.08	0.603
72.00	-9.03	-14.65	0.00	-1,031.01	0.00	1,031.01	2,751.92	1,375.96	3,497.79	1,727.43	29.91	-4.15	0.600
73.00	-8.90	-14.55	0.00	-1,016.36	0.00	1,016.36	2,739.05	1,369.53	3,464.97	1,711.22	30.79	-4.21	0.597
74.00	-8.77	-14.44	0.00	-1,001.81	0.00	1,001.81	2,726.19	1,363.09	3,432.30	1,695.08	31.68	-4.28	0.594
75.00	-8.64	-14.34	0.00	-987.37	0.00	987.37	2,713.32	1,356.66	3,399.79	1,679.03	32.58	-4.34	0.591
76.00	-8.51	-14.23	0.00	-973.03	0.00	973.03	2,700.46	1,350.23	3,367.44	1,663.05	33.49	-4.40	0.588
77.00	-8.39	-14.13	0.00	-958.79	0.00	958.79	2,687.60	1,343.80	3,335.24	1,647.15	34.42	-4.47	0.585
78.00	-8.26	-14.02	0.00	-944.66	0.00	944.66	2,674.73	1,337.37	3,303.19	1,631.32	35.36	-4.53	0.582
79.00	-8.13	-13.92	0.00	-930.64	0.00	930.64	2,661.87	1,330.93	3,271.30	1,615.57	36.32	-4.60	0.579
80.00	-8.01	-13.81	0.00	-916.72	0.00	916.72	2,649.00	1,324.50	3,239.56	1,599.90	37.29	-4.66	0.576
81.00	-7.89	-13.71	0.00	-902.91	0.00	902.91	2,636.14	1,318.07	3,207.98	1,584.30	38.27	-4.72	0.573
82.00	-7.76	-13.60	0.00	-889.20	0.00	889.20	2,623.28	1,311.64	3,176.55	1,568.78	39.26	-4.79	0.570
83.00	-7.64	-13.50	0.00	-875.60	0.00	875.60	2,610.41	1,305.21	3,145.28	1,553.33	40.27	-4.85	0.567
84.00	-7.52	-13.39	0.00	-862.10	0.00	862.10	2,597.55	1,298.77	3,114.16	1,537.97	41.29	-4.91	0.564
85.00	-7.40	-13.30	0.00	-848.71	0.00	848.71	2,584.68	1,292.34	3,083.20	1,522.68	42.33	-4.98	0.560
85.75	-7.31	-13.24	0.00	-838.74	0.00	838.74	2,575.04	1,287.52	3,060.08	1,511.26	43.11	-5.02	0.558
85.75	-7.31	-13.24	0.00	-838.74	0.00	838.74	1,544.73	772.37	1,851.60	914.44	43.11	-5.02	0.922
86.00	-7.28	-13.18	0.00	-835.43	0.00	835.43	1,543.70	771.85	1,848.04	912.68	43.37	-5.04	0.920
87.00	-7.19	-13.08	0.00	-822.25	0.00	822.25	1,539.55	769.77	1,833.81	905.65	44.44	-5.13	0.913
88.00	-7.10	-12.98	0.00	-809.17	0.00	809.17	1,535.36	767.68	1,819.59	898.63	45.52	-5.23	0.905
89.00	-7.01	-12.88	0.00	-796.19	0.00	796.19	1,531.13	765.57	1,805.38	891.61	46.63	-5.32	0.898
90.00	-6.92	-12.78	0.00	-783.30	0.00	783.30	1,526.87	763.44	1,791.17	884.59	47.75	-5.42	0.890
91.00	-6.83	-12.69	0.00	-770.52	0.00	770.52	1,522.58	761.29	1,776.98	877.58	48.89	-5.51	0.883
92.00	-6.75	-12.59	0.00	-757.83	0.00	757.83	1,518.25	759.12	1,762.79	870.58	50.06	-5.60	0.875
93.00	-6.66	-12.49	0.00	-745.25	0.00	745.25	1,513.88	756.94	1,748.62	863.58	51.24	-5.70	0.868
94.00	-6.57	-12.39	0.00	-732.76	0.00	732.76	1,509.48	754.74	1,734.46	856.59	52.44	-5.79	0.860
95.00	-6.49	-12.29	0.00	-720.37	0.00	720.37	1,505.04	752.52	1,720.31	849.60	53.66	-5.88	0.852
96.00	-6.40	-12.19	0.00	-708.08	0.00	708.08	1,500.57	750.29	1,706.18	842.62	54.90	-5.97	0.845
97.00	-6.32	-12.09	0.00	-695.90	0.00	695.90	1,496.06	748.03	1,692.06	835.64	56.16	-6.07	0.837
98.00	-6.23	-11.99	0.00	-683.81	0.00	683.81	1,491.52	745.76	1,677.95	828.68	57.44	-6.16	0.830
99.00	-6.15	-11.89	0.00	-671.82	0.00	671.82	1,486.94	743.47	1,663.86	821.72	58.73	-6.25	0.822
100.00	-6.07	-11.79	0.00	-659.92	0.00	659.92	1,482.33	741.16	1,649.78	814.77	60.05	-6.34	0.814
101.00	-5.99	-11.69	0.00	-648.13	0.00	648.13	1,477.68	738.84	1,635.72	807.82	61.39	-6.44	0.807
102.00	-5.91	-11.59	0.00	-636.44	0.00	636.44	1,473.00	736.50	1,621.68	800.89	62.74	-6.53	0.799
103.00	-5.83	-11.49	0.00	-624.85	0.00	624.85	1,468.28	734.14	1,607.66	793.96	64.12	-6.62	0.791

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Load Case: 0.9D + 1.6W — 101 mph with No Ice (Reduced DL) — 44 Iterations

Gust Response Factor 1.10 — Wind Importance Factor 1.00
Dead Load Factor : 0.90
Wind Load Factor : 1.60

104.00	-5.75	-11.40	0.00	-613.35	0.00	613.35	1,463.52	731.76	1,593.65	787.04	65.51	-6.71	0.783
105.00	-5.67	-11.30	0.00	-601.96	0.00	601.96	1,458.73	729.37	1,579.66	780.14	66.92	-6.80	0.776
106.00	-5.59	-11.20	0.00	-590.66	0.00	590.66	1,453.91	726.95	1,565.69	773.24	68.35	-6.89	0.768
107.00	-5.52	-11.10	0.00	-579.46	0.00	579.46	1,449.04	724.52	1,551.74	766.35	69.80	-6.98	0.760
108.00	-5.44	-11.00	0.00	-568.37	0.00	568.37	1,444.15	722.07	1,537.82	759.47	71.27	-7.08	0.752
109.00	-5.36	-10.90	0.00	-557.37	0.00	557.37	1,439.21	719.61	1,523.91	752.60	72.76	-7.17	0.745
110.00	-5.29	-10.80	0.00	-546.46	0.00	546.46	1,434.25	717.12	1,510.03	745.75	74.27	-7.26	0.737
111.00	-5.21	-10.70	0.00	-535.66	0.00	535.66	1,429.24	714.62	1,496.17	738.90	75.79	-7.35	0.729
112.00	-5.14	-10.61	0.00	-524.96	0.00	524.96	1,424.21	712.10	1,482.33	732.07	77.34	-7.43	0.721
113.00	-5.07	-10.51	0.00	-514.35	0.00	514.35	1,419.13	709.57	1,468.51	725.24	78.90	-7.52	0.713
114.00	-4.99	-10.41	0.00	-503.84	0.00	503.84	1,414.02	707.01	1,454.73	718.43	80.48	-7.61	0.705
115.00	-4.92	-10.31	0.00	-493.43	0.00	493.43	1,408.88	704.44	1,440.96	711.64	82.08	-7.70	0.697
116.00	-4.85	-10.21	0.00	-483.12	0.00	483.12	1,403.70	701.85	1,427.22	704.85	83.70	-7.79	0.689
117.00	-4.78	-10.12	0.00	-472.91	0.00	472.91	1,398.48	699.24	1,413.51	698.08	85.33	-7.88	0.681
118.00	-4.71	-10.02	0.00	-462.79	0.00	462.79	1,393.23	696.62	1,399.83	691.32	86.99	-7.97	0.673
119.00	-4.64	-9.92	0.00	-452.77	0.00	452.77	1,387.95	693.97	1,386.17	684.58	88.66	-8.05	0.665
120.00	-4.57	-9.82	0.00	-442.85	0.00	442.85	1,382.63	691.31	1,372.54	677.85	90.35	-8.14	0.657
121.00	-4.51	-9.73	0.00	-433.03	0.00	433.03	1,377.27	688.64	1,358.94	671.13	92.06	-8.23	0.649
122.00	-4.44	-9.63	0.00	-423.30	0.00	423.30	1,371.88	685.94	1,345.37	664.43	93.79	-8.31	0.641
123.00	-4.37	-9.53	0.00	-413.67	0.00	413.67	1,366.45	683.23	1,331.83	657.74	95.53	-8.40	0.632
124.00	-4.31	-9.44	0.00	-404.13	0.00	404.13	1,360.99	680.49	1,318.33	651.07	97.29	-8.48	0.624
125.00	-4.24	-9.36	0.00	-394.69	0.00	394.69	1,355.49	677.74	1,304.85	644.42	99.07	-8.57	0.616
125.50	-4.21	-9.32	0.00	-390.01	0.00	390.01	1,352.73	676.36	1,298.12	641.09	99.97	-8.61	0.612
125.50	-4.21	-9.32	0.00	-390.01	0.00	390.01	1,127.00	563.50	1,084.41	535.55	99.97	-8.61	0.732
126.00	-4.18	-9.25	0.00	-385.36	0.00	385.36	1,124.94	562.47	1,079.04	532.90	100.87	-8.65	0.727
127.00	-4.12	-9.15	0.00	-376.11	0.00	376.11	1,120.78	560.39	1,068.31	527.60	102.68	-8.75	0.717
128.00	-4.07	-9.06	0.00	-366.96	0.00	366.96	1,116.59	558.29	1,057.61	522.31	104.52	-8.84	0.706
129.00	-4.01	-8.97	0.00	-357.90	0.00	357.90	1,112.36	556.18	1,046.91	517.03	106.38	-8.94	0.696
130.00	-3.95	-8.87	0.00	-348.93	0.00	348.93	1,108.10	554.05	1,036.24	511.76	108.25	-9.03	0.686
131.00	-3.90	-8.78	0.00	-340.06	0.00	340.06	1,103.80	551.90	1,025.58	506.50	110.14	-9.13	0.675
132.00	-3.84	-8.69	0.00	-331.28	0.00	331.28	1,099.47	549.73	1,014.94	501.24	112.06	-9.22	0.665
133.00	-3.79	-8.59	0.00	-322.59	0.00	322.59	1,095.10	547.55	1,004.33	496.00	113.99	-9.31	0.654
134.00	-3.73	-8.50	0.00	-314.00	0.00	314.00	1,090.69	545.35	993.73	490.77	115.94	-9.40	0.643
135.00	-3.68	-8.41	0.00	-305.50	0.00	305.50	1,086.26	543.13	983.15	485.54	117.91	-9.49	0.633
136.00	-3.63	-8.32	0.00	-297.09	0.00	297.09	1,081.78	540.89	972.60	480.33	119.90	-9.58	0.622
137.00	-3.58	-8.23	0.00	-288.77	0.00	288.77	1,077.27	538.64	962.07	475.13	121.91	-9.67	0.611
138.00	-3.52	-8.14	0.00	-280.54	0.00	280.54	1,072.73	536.36	951.56	469.94	123.93	-9.76	0.600
139.00	-3.47	-8.04	0.00	-272.41	0.00	272.41	1,068.14	534.07	941.07	464.76	125.98	-9.85	0.590
140.00	-3.42	-7.95	0.00	-264.36	0.00	264.36	1,063.53	531.76	930.61	459.59	128.04	-9.93	0.579
141.00	-3.37	-7.86	0.00	-256.41	0.00	256.41	1,058.88	529.44	920.17	454.44	130.12	-10.02	0.568
142.00	-3.33	-7.77	0.00	-248.55	0.00	248.55	1,054.19	527.09	909.76	449.30	132.22	-10.11	0.557
143.00	-3.28	-7.68	0.00	-240.77	0.00	240.77	1,049.47	524.73	899.37	444.17	134.33	-10.19	0.545
144.00	-3.23	-7.59	0.00	-233.09	0.00	233.09	1,044.71	522.35	889.01	439.05	136.46	-10.27	0.534
145.00	-3.18	-7.50	0.00	-225.50	0.00	225.50	1,039.92	519.96	878.68	433.95	138.61	-10.35	0.523
146.00	-3.14	-7.42	0.00	-217.99	0.00	217.99	1,035.09	517.54	868.38	428.86	140.78	-10.44	0.512
147.00	-3.09	-7.33	0.00	-210.58	0.00	210.58	1,030.22	515.11	858.10	423.79	142.96	-10.52	0.500
148.00	-3.05	-7.24	0.00	-203.25	0.00	203.25	1,025.32	512.66	847.86	418.72	145.16	-10.60	0.489
149.00	-3.00	-7.15	0.00	-196.01	0.00	196.01	1,020.39	510.19	837.64	413.68	147.37	-10.67	0.477
150.00	-2.96	-7.06	0.00	-188.86	0.00	188.86	1,015.42	507.71	827.46	408.65	149.60	-10.75	0.465
151.00	-2.92	-6.97	0.00	-181.80	0.00	181.80	1,010.41	505.21	817.30	403.63	151.85	-10.83	0.453
152.00	-2.87	-6.89	0.00	-174.83	0.00	174.83	1,005.37	502.69	807.18	398.64	154.11	-10.90	0.442
153.00	-2.83	-6.80	0.00	-167.94	0.00	167.94	1,000.30	500.15	797.09	393.65	156.39	-10.97	0.430
154.00	-2.79	-6.71	0.00	-161.14	0.00	161.14	995.19	497.59	787.03	388.69	158.68	-11.04	0.418
155.00	-2.75	-6.63	0.00	-154.42	0.00	154.42	990.04	495.02	777.01	383.74	160.99	-11.11	0.405
156.00	-2.71	-6.54	0.00	-147.79	0.00	147.79	983.06	491.53	765.62	378.11	163.31	-11.18	0.394
157.00	-2.67	-6.46	0.00	-141.25	0.00	141.25	975.56	487.78	753.91	372.33	165.64	-11.25	0.382
158.00	-2.63	-6.37	0.00	-134.79	0.00	134.79	968.05	484.03	742.29	366.59	167.99	-11.32	0.371

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Load Case: 0.9D + 1.6W — 101 mph with No Ice (Reduced DL) — 44 Iterations

Gust Response Factor 1.10 — Wind Importance Factor 1.00
Dead Load Factor : 0.90
Wind Load Factor : 1.60

159.00	-2.59	-6.29	0.00	-128.42	0.00	128.42	960.55	480.27	730.76	360.90	170.35	-11.38	0.359
160.00	-2.55	-6.20	0.00	-122.13	0.00	122.13	953.04	476.52	719.32	355.25	172.73	-11.44	0.347
161.00	-2.52	-6.12	0.00	-115.93	0.00	115.93	945.54	472.77	707.97	349.64	175.11	-11.50	0.334
162.00	-2.48	-6.04	0.00	-109.81	0.00	109.81	938.04	469.02	696.71	344.08	177.51	-11.56	0.322
163.00	-2.44	-5.95	0.00	-103.77	0.00	103.77	930.53	465.27	685.54	338.56	179.93	-11.62	0.309
164.00	-2.41	-5.87	0.00	-97.82	0.00	97.82	923.03	461.51	674.47	333.09	182.35	-11.68	0.296
165.00	-2.37	-5.79	0.00	-91.94	0.00	91.94	915.52	457.76	663.48	327.67	184.78	-11.73	0.283
166.00	-2.34	-5.71	0.00	-86.16	0.00	86.16	908.02	454.01	652.58	322.29	187.23	-11.78	0.270
167.00	-2.31	-5.63	0.00	-80.45	0.00	80.45	900.52	450.26	641.77	316.95	189.68	-11.83	0.257
168.00	-2.27	-5.54	0.00	-74.82	0.00	74.82	893.01	446.51	631.06	311.65	192.15	-11.88	0.243
169.00	-2.24	-5.46	0.00	-69.28	0.00	69.28	885.51	442.75	620.43	306.41	194.62	-11.92	0.229
170.00	-2.21	-5.38	0.00	-63.81	0.00	63.81	878.00	439.00	609.89	301.20	197.11	-11.96	0.215
171.00	-2.18	-5.30	0.00	-58.43	0.00	58.43	870.50	435.25	599.45	296.04	199.60	-12.00	0.200
172.00	-2.15	-5.22	0.00	-53.13	0.00	53.13	863.00	431.50	589.09	290.93	202.10	-12.04	0.185
173.00	-2.11	-5.15	0.00	-47.90	0.00	47.90	855.49	427.75	578.82	285.86	204.61	-12.08	0.170
174.00	-2.08	-5.07	0.00	-42.76	0.00	42.76	847.99	423.99	568.65	280.83	207.12	-12.11	0.155
175.00	-2.06	-4.99	0.00	-37.69	0.00	37.69	840.48	420.24	558.56	275.85	209.64	-12.14	0.139
176.00	-2.03	-4.91	0.00	-32.70	0.00	32.70	832.98	416.49	548.57	270.92	212.17	-12.16	0.123
177.00	-2.00	-4.83	0.00	-27.79	0.00	27.79	825.48	412.74	538.66	266.02	214.70	-12.19	0.107
178.00	-1.97	-4.76	0.00	-22.95	0.00	22.95	817.97	408.99	528.85	261.18	217.24	-12.21	0.090
179.00	-1.94	-4.68	0.00	-18.20	0.00	18.20	810.47	405.23	519.12	256.38	219.78	-12.22	0.074
180.00	-0.01	-0.02	0.00	-0.01	0.00	0.01	802.96	401.48	509.49	251.62	222.32	-12.24	0.000
180.58	0.00	-0.02	0.00	0.00	0.00	0.00	798.59	399.29	503.91	248.86	223.80	-12.24	0.000

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Load Case: 1.2D + 1.0Di + 1.0Wi — 50 mph with 0.75 in Radial Ice — 43 Iterations

Gust Response Factor 1.10 | Ice Dead Load Factor :1.00 | Wind Importance Factor 1.00
Dead Load Factor :1.20 | Ice Importance Factor :1.00
Wind Load Factor :1.00

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces Wind FX (lb)	Shaft Forces Dead Load (lb)	Discrete Forces Wind FX (lb)	Discrete Forces Torsion MY (lb-ft)	Discrete Forces Moment MZ (lb-ft)	Linear Forces Dead Load (lb)	Linear Forces Wind FX (lb)	Linear Forces Dead Load (lb)	Sum of Forces Wind FX (lb)	Sum of Forces Dead Load (lb)	Sum of Forces Torsion MY (lb-ft)	Sum of Forces Moment MZ (lb)
0.00		10.5	0.0					0.0	0.0	10.5	0.0	0.0	0.0
1.00		21.1	291.3					0.0	10.6	21.1	301.9	0.0	0.0
2.00		21.1	296.7					0.0	10.6	21.1	307.3	0.0	0.0
3.00		21.1	299.0					0.0	10.6	21.1	309.5	0.0	0.0
4.00		21.1	300.1					0.0	10.6	21.1	310.7	0.0	0.0
5.00		21.0	300.8					0.0	10.6	21.0	311.4	0.0	0.0
6.00		21.0	301.1					0.0	10.6	21.0	311.7	0.0	0.0
7.00		20.9	301.2					0.0	10.6	20.9	311.8	0.0	0.0
8.00		20.9	301.2					0.0	10.6	20.9	311.8	0.0	0.0
9.00		20.8	301.0					0.0	10.6	20.8	311.6	0.0	0.0
10.00		20.8	300.8					0.0	10.6	20.8	311.3	0.0	0.0
11.00		20.7	300.4					0.0	10.6	20.7	311.0	0.0	0.0
12.00		20.6	300.0					0.0	10.6	20.6	310.6	0.0	0.0
13.00		20.6	299.6					0.0	10.6	20.6	310.1	0.0	0.0
14.00		20.5	299.0					0.0	10.6	20.5	309.6	0.0	0.0
15.00		20.5	298.5					0.0	10.6	20.5	309.1	0.0	0.0
16.00		20.4	297.9					0.0	10.6	20.4	308.5	0.0	0.0
17.00		20.3	297.3					0.0	10.6	20.3	307.9	0.0	0.0
18.00		20.3	296.6					0.0	10.6	20.3	307.2	0.0	0.0
19.00		20.2	296.0					0.0	10.6	20.2	306.5	0.0	0.0
20.00		20.1	295.3					0.0	10.6	20.1	305.8	0.0	0.0
21.00		20.1	294.6					0.0	10.6	20.1	305.1	0.0	0.0
22.00		20.0	293.8					0.0	10.6	20.0	304.4	0.0	0.0
23.00		20.0	293.1					0.0	10.6	20.0	303.6	0.0	0.0
24.00		19.9	292.3					0.0	10.6	19.9	302.9	0.0	0.0
25.00		19.8	291.5					0.0	10.6	19.8	302.1	0.0	0.0
26.00		19.8	290.7					0.0	10.6	19.8	301.3	0.0	0.0
27.00		19.7	289.9					0.0	10.6	19.7	300.5	0.0	0.0
28.00		19.6	289.1					0.0	10.6	19.6	299.7	0.0	0.0
29.00		19.6	288.3					0.0	10.6	19.6	298.8	0.0	0.0
30.00		19.6	287.4					0.0	10.6	19.6	298.0	0.0	0.0
31.00		19.6	286.6					0.0	10.6	19.6	297.1	0.0	0.0
32.00		19.7	285.7					0.0	10.6	19.7	296.3	0.0	0.0
33.00		19.9	284.9					0.0	10.6	19.9	295.4	0.0	0.0
34.00		20.0	284.0					0.0	10.6	20.0	294.5	0.0	0.0
35.00		20.1	283.1					0.0	10.6	20.1	293.6	0.0	0.0
36.00		20.1	282.2					0.0	10.6	20.1	292.8	0.0	0.0
37.00		20.2	281.3					0.0	10.6	20.2	291.9	0.0	0.0
38.00		20.3	280.4					0.0	10.6	20.3	290.9	0.0	0.0
39.00		20.4	279.5					0.0	10.6	20.4	290.0	0.0	0.0
40.00		20.5	278.6					0.0	10.6	20.5	289.1	0.0	0.0
41.00		20.5	277.6					0.0	10.6	20.5	288.2	0.0	0.0
42.00		20.6	276.7					0.0	10.6	20.6	287.3	0.0	0.0
43.00		20.7	275.8					0.0	10.6	20.7	286.3	0.0	0.0
44.00		18.1	274.8					0.0	10.6	18.1	285.4	0.0	0.0
44.75	Top - Section 1	10.4	205.5					0.0	7.9	10.4	213.4	0.0	0.0
45.00		13.0	61.3					0.0	2.6	13.0	64.0	0.0	0.0

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Load Case: 1.2D + 1.0Di + 1.0Wi — 50 mph with 0.75 in Radial Ice — 43 Iterations

Gust Response Factor 1.10 | Ice Dead Load Factor :1.00 | Wind Importance Factor 1.00
Dead Load Factor : 1.20 | Ice Importance Factor 1.00
Wind Load Factor : 1.00

46.00		20.9	244.7	0.0	10.6	20.9	255.3	0.0	0.0
47.00		20.9	243.9	0.0	10.6	20.9	254.4	0.0	0.0
48.00		21.0	243.0	0.0	10.6	21.0	253.6	0.0	0.0
49.00		21.0	242.2	0.0	10.6	21.0	252.8	0.0	0.0
50.00		21.0	241.3	0.0	10.6	21.0	251.9	0.0	0.0
51.00		21.1	240.5	0.0	10.6	21.1	251.1	0.0	0.0
52.00		21.1	239.6	0.0	10.6	21.1	250.2	0.0	0.0
53.00		21.2	238.8	0.0	10.6	21.2	249.3	0.0	0.0
54.00		21.2	237.9	0.0	10.6	21.2	248.5	0.0	0.0
55.00		21.2	237.0	0.0	10.6	21.2	247.6	0.0	0.0
56.00		21.3	236.2	0.0	10.6	21.3	246.7	0.0	0.0
57.00		21.3	235.3	0.0	10.6	21.3	245.9	0.0	0.0
58.00		21.3	234.4	0.0	10.6	21.3	245.0	0.0	0.0
59.00		21.3	233.5	0.0	10.6	21.3	244.1	0.0	0.0
60.00		21.3	232.7	0.0	10.6	21.3	243.2	0.0	0.0
61.00		21.4	231.8	0.0	10.6	21.4	242.3	0.0	0.0
62.00		21.4	230.9	0.0	10.6	21.4	241.4	0.0	0.0
63.00		21.4	230.0	0.0	10.6	21.4	240.5	0.0	0.0
64.00		21.4	229.1	0.0	10.6	21.4	239.6	0.0	0.0
65.00		21.4	228.2	0.0	10.6	21.4	238.8	0.0	0.0
66.00		21.4	227.3	0.0	10.6	21.4	237.8	0.0	0.0
67.00		21.4	226.4	0.0	10.6	21.4	236.9	0.0	0.0
68.00		21.4	225.5	0.0	10.6	21.4	236.0	0.0	0.0
69.00		21.4	224.6	0.0	10.6	21.4	235.1	0.0	0.0
70.00		21.4	223.7	0.0	10.6	21.4	234.2	0.0	0.0
71.00		21.4	222.8	0.0	10.6	21.4	233.3	0.0	0.0
72.00		21.4	221.8	0.0	10.6	21.4	232.4	0.0	0.0
73.00		21.4	220.9	0.0	10.6	21.4	231.5	0.0	0.0
74.00		21.4	220.0	0.0	10.6	21.4	230.6	0.0	0.0
75.00		21.4	219.1	0.0	10.6	21.4	229.6	0.0	0.0
76.00		21.4	218.2	0.0	10.6	21.4	228.7	0.0	0.0
77.00		21.4	217.2	0.0	10.6	21.4	227.8	0.0	0.0
78.00		21.4	216.3	0.0	10.6	21.4	226.9	0.0	0.0
79.00		21.4	215.4	0.0	10.6	21.4	225.9	0.0	0.0
80.00		21.4	214.5	0.0	10.6	21.4	225.0	0.0	0.0
81.00		21.4	213.5	0.0	10.6	21.4	224.1	0.0	0.0
82.00		21.3	212.6	0.0	10.6	21.3	223.1	0.0	0.0
83.00		21.3	211.7	0.0	10.6	21.3	222.2	0.0	0.0
84.00		21.3	210.7	0.0	10.6	21.3	221.3	0.0	0.0
85.00		18.6	209.8	0.0	10.6	18.6	220.3	0.0	0.0
85.75	Top - Section 2	10.6	156.7	0.0	7.9	10.6	164.7	0.0	0.0
86.00		13.3	40.4	0.0	2.6	13.3	43.0	0.0	0.0
87.00		21.3	160.9	0.0	10.6	21.3	171.5	0.0	0.0
88.00		21.2	160.2	0.0	10.6	21.2	170.8	0.0	0.0
89.00		21.2	159.5	0.0	10.6	21.2	170.1	0.0	0.0
90.00		21.2	158.8	0.0	10.6	21.2	169.4	0.0	0.0
91.00		21.2	158.1	0.0	10.6	21.2	168.7	0.0	0.0
92.00		21.1	157.4	0.0	10.6	21.1	168.0	0.0	0.0
93.00		21.1	156.7	0.0	10.6	21.1	167.2	0.0	0.0
94.00		21.1	156.0	0.0	10.6	21.1	166.5	0.0	0.0
95.00		21.0	155.3	0.0	10.6	21.0	165.8	0.0	0.0
96.00		21.0	154.5	0.0	10.6	21.0	165.1	0.0	0.0
97.00		21.0	153.8	0.0	10.6	21.0	164.4	0.0	0.0
98.00		20.9	153.1	0.0	10.6	20.9	163.7	0.0	0.0
99.00		20.9	152.4	0.0	10.6	20.9	162.9	0.0	0.0
100.00		20.9	151.7	0.0	10.6	20.9	162.2	0.0	0.0
101.00		20.8	150.9	0.0	10.6	20.8	161.5	0.0	0.0

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Load Case: 1.2D + 1.0Di + 1.0Wi — 50 mph with 0.75 in Radial Ice — 43 Iterations

Gust Response Factor 1.10 — Ice Dead Load Factor :1.00 — Wind Importance Factor 1.00
Dead Load Factor : 1.20 — Ice Importance Factor :1.00
Wind Load Factor : 1.00

102.00		20.8	150.2	0.0	10.6	20.8	160.8	0.0	0.0
103.00		20.7	149.5	0.0	10.6	20.7	160.0	0.0	0.0
104.00		20.7	148.8	0.0	10.6	20.7	159.3	0.0	0.0
105.00		20.7	148.0	0.0	10.6	20.7	158.6	0.0	0.0
106.00		20.6	147.3	0.0	10.6	20.6	157.9	0.0	0.0
107.00		20.6	146.6	0.0	10.6	20.6	157.1	0.0	0.0
108.00		20.5	145.8	0.0	10.6	20.5	156.4	0.0	0.0
109.00		20.5	145.1	0.0	10.6	20.5	155.7	0.0	0.0
110.00		20.4	144.4	0.0	10.6	20.4	154.9	0.0	0.0
111.00		20.4	143.6	0.0	10.6	20.4	154.2	0.0	0.0
112.00		20.3	142.9	0.0	10.6	20.3	153.5	0.0	0.0
113.00		20.3	142.2	0.0	10.6	20.3	152.7	0.0	0.0
114.00		20.2	141.4	0.0	10.6	20.2	152.0	0.0	0.0
115.00		20.2	140.7	0.0	10.6	20.2	151.3	0.0	0.0
116.00		20.1	140.0	0.0	10.6	20.1	150.5	0.0	0.0
117.00		20.1	139.2	0.0	10.6	20.1	149.8	0.0	0.0
118.00		20.0	138.5	0.0	10.6	20.0	149.0	0.0	0.0
119.00		20.0	137.7	0.0	10.6	20.0	148.3	0.0	0.0
120.00		19.9	137.0	0.0	10.6	19.9	147.5	0.0	0.0
121.00		19.9	136.2	0.0	10.6	19.9	146.8	0.0	0.0
122.00		19.8	135.5	0.0	10.6	19.8	146.1	0.0	0.0
123.00		19.8	134.8	0.0	10.6	19.8	145.3	0.0	0.0
124.00		19.7	134.0	0.0	10.6	19.7	144.6	0.0	0.0
125.00		14.7	133.3	0.0	10.6	14.7	143.8	0.0	0.0
125.50	Top - Section 3	9.8	66.4	0.0	5.3	9.8	71.7	0.0	0.0
126.00		14.7	61.5	0.0	5.3	14.7	66.7	0.0	0.0
127.00		19.5	122.3	0.0	10.6	19.5	132.9	0.0	0.0
128.00		19.5	121.6	0.0	10.6	19.5	132.2	0.0	0.0
129.00		19.4	121.0	0.0	10.6	19.4	131.5	0.0	0.0
130.00		19.3	120.3	0.0	10.6	19.3	130.8	0.0	0.0
131.00		19.3	119.6	0.0	10.6	19.3	130.1	0.0	0.0
132.00		19.2	118.9	0.0	10.6	19.2	129.4	0.0	0.0
133.00		19.2	118.2	0.0	10.6	19.2	128.7	0.0	0.0
134.00		19.1	117.5	0.0	10.6	19.1	128.0	0.0	0.0
135.00		19.0	116.8	0.0	10.6	19.0	127.3	0.0	0.0
136.00		19.0	116.1	0.0	10.6	19.0	126.6	0.0	0.0
137.00		18.9	115.4	0.0	10.6	18.9	125.9	0.0	0.0
138.00		18.8	114.7	0.0	10.6	18.8	125.3	0.0	0.0
139.00		18.8	114.0	0.0	10.6	18.8	124.6	0.0	0.0
140.00		18.7	113.3	0.0	10.6	18.7	123.9	0.0	0.0
141.00		18.6	112.6	0.0	10.6	18.6	123.2	0.0	0.0
142.00		18.6	111.9	0.0	10.6	18.6	122.4	0.0	0.0
143.00		18.5	111.2	0.0	10.6	18.5	121.7	0.0	0.0
144.00		18.4	110.5	0.0	10.6	18.4	121.0	0.0	0.0
145.00		18.3	109.8	0.0	10.6	18.3	120.3	0.0	0.0
146.00		18.3	109.1	0.0	10.6	18.3	119.6	0.0	0.0
147.00		18.2	108.4	0.0	10.6	18.2	118.9	0.0	0.0
148.00		18.1	107.7	0.0	10.6	18.1	118.2	0.0	0.0
149.00		18.0	107.0	0.0	10.6	18.0	117.5	0.0	0.0
150.00		18.0	106.3	0.0	10.6	18.0	116.8	0.0	0.0
151.00		17.9	105.5	0.0	10.6	17.9	116.1	0.0	0.0
152.00		17.8	104.8	0.0	10.6	17.8	115.4	0.0	0.0
153.00		17.7	104.1	0.0	10.6	17.7	114.7	0.0	0.0
154.00		17.7	103.4	0.0	10.6	17.7	114.0	0.0	0.0
155.00		17.6	102.7	0.0	10.6	17.6	113.3	0.0	0.0
156.00		17.5	102.0	0.0	10.6	17.5	112.6	0.0	0.0
157.00		17.4	101.3	0.0	10.6	17.4	111.8	0.0	0.0

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Load Case: 1.2D + 1.0Di + 1.0Wi — 50 mph with 0.75 in Radial Ice — 43 Iterations

Gust Response Factor 1.10 | Ice Dead Load Factor :1.00 | Wind Importance Factor 1.00
Dead Load Factor :1.20 | Ice Importance Factor :1.00
Wind Load Factor :1.00

158.00		17.4	100.6					0.0	10.6	17.4	111.1	0.0	0.0
159.00		17.3	99.9					0.0	10.6	17.3	110.4	0.0	0.0
160.00		17.2	99.1					0.0	10.6	17.2	109.7	0.0	0.0
161.00		17.1	98.4					0.0	10.6	17.1	109.0	0.0	0.0
162.00		17.0	97.7					0.0	10.6	17.0	108.3	0.0	0.0
163.00		16.9	97.0					0.0	10.6	16.9	107.6	0.0	0.0
164.00		16.9	96.3					0.0	10.6	16.9	106.9	0.0	0.0
165.00		16.8	95.6					0.0	10.6	16.8	106.1	0.0	0.0
166.00		16.7	94.9					0.0	10.6	16.7	105.4	0.0	0.0
167.00		16.6	94.1					0.0	10.6	16.6	104.7	0.0	0.0
168.00		16.5	93.4					0.0	10.6	16.5	104.0	0.0	0.0
169.00		16.4	92.7					0.0	10.6	16.4	103.3	0.0	0.0
170.00		16.4	92.0					0.0	10.6	16.4	102.5	0.0	0.0
171.00		16.3	91.3					0.0	10.6	16.3	101.8	0.0	0.0
172.00		16.2	90.5					0.0	10.6	16.2	101.1	0.0	0.0
173.00		16.1	89.8					0.0	10.6	16.1	100.4	0.0	0.0
174.00		16.0	89.1					0.0	10.6	16.0	99.7	0.0	0.0
175.00		15.9	88.4					0.0	10.6	15.9	98.9	0.0	0.0
176.00		15.8	87.7					0.0	10.6	15.8	98.2	0.0	0.0
177.00		15.7	86.9					0.0	10.6	15.7	97.5	0.0	0.0
178.00		15.7	86.2					0.0	10.6	15.7	96.8	0.0	0.0
179.00		15.6	85.5					0.0	10.6	15.6	96.1	0.0	0.0
180.00	Appurtenance(s)	12.3	84.8	906.7	0.0	2,495.5	7,578.8	0.0	10.6	919.0	7,674.1	0.0	0.0
180.58		4.5	49.2					0.0	0.0	4.5	49.2	0.0	0.0
								Totals:		4,481.8	743,380.98	0.00	0.00

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Load Case: 1.2D + 1.0Di + 1.0Wi — 50 mph with 0.75 in Radial Ice — 43 Iterations

Gust Response Factor 1.10 | Ice Dead Load Factor :1.00 | Wind Importance Factor 1.00
Dead Load Factor :1.20 | Ice Importance Factor :1.00
Wind Load Factor :1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-43.38	-4.47	0.00	-547.19	0.00	547.19	4,173.88	2,086.94	7,090.68	3,501.82	0.00	0.00	0.167
1.00	-43.08	-4.46	0.00	-542.71	0.00	542.71	4,164.30	2,082.15	7,049.35	3,481.41	0.00	-0.01	0.166
2.00	-42.77	-4.45	0.00	-538.25	0.00	538.25	4,154.67	2,077.34	7,008.08	3,461.03	0.01	-0.02	0.166
3.00	-42.46	-4.44	0.00	-533.80	0.00	533.80	4,145.02	2,072.51	6,966.87	3,440.67	0.01	-0.04	0.165
4.00	-42.15	-4.43	0.00	-529.36	0.00	529.36	4,135.32	2,067.66	6,925.71	3,420.35	0.02	-0.05	0.165
5.00	-41.83	-4.41	0.00	-524.94	0.00	524.94	4,125.60	2,062.80	6,884.61	3,400.05	0.03	-0.06	0.165
6.00	-41.52	-4.40	0.00	-520.52	0.00	520.52	4,115.83	2,057.92	6,843.57	3,379.78	0.05	-0.07	0.164
7.00	-41.21	-4.39	0.00	-516.12	0.00	516.12	4,106.03	2,053.02	6,802.59	3,359.54	0.06	-0.09	0.164
8.00	-40.90	-4.38	0.00	-511.73	0.00	511.73	4,096.20	2,048.10	6,761.66	3,339.33	0.08	-0.10	0.163
9.00	-40.58	-4.36	0.00	-507.35	0.00	507.35	4,086.33	2,043.16	6,720.80	3,319.15	0.11	-0.11	0.163
10.00	-40.27	-4.35	0.00	-502.99	0.00	502.99	4,076.42	2,038.21	6,680.00	3,299.00	0.13	-0.12	0.162
11.00	-39.96	-4.34	0.00	-498.64	0.00	498.64	4,066.48	2,033.24	6,639.26	3,278.88	0.16	-0.14	0.162
12.00	-39.65	-4.33	0.00	-494.30	0.00	494.30	4,056.51	2,028.25	6,598.58	3,258.79	0.19	-0.15	0.161
13.00	-39.34	-4.31	0.00	-489.97	0.00	489.97	4,046.49	2,023.25	6,557.96	3,238.73	0.22	-0.16	0.161
14.00	-39.03	-4.30	0.00	-485.66	0.00	485.66	4,036.45	2,018.22	6,517.41	3,218.70	0.26	-0.17	0.161
15.00	-38.72	-4.29	0.00	-481.36	0.00	481.36	4,026.36	2,013.18	6,476.92	3,198.71	0.29	-0.19	0.160
16.00	-38.41	-4.28	0.00	-477.07	0.00	477.07	4,016.25	2,008.12	6,436.49	3,178.74	0.33	-0.20	0.160
17.00	-38.10	-4.26	0.00	-472.79	0.00	472.79	4,006.09	2,003.05	6,396.13	3,158.81	0.38	-0.21	0.159
18.00	-37.79	-4.25	0.00	-468.53	0.00	468.53	3,995.91	1,997.95	6,355.84	3,138.91	0.42	-0.23	0.159
19.00	-37.48	-4.24	0.00	-464.28	0.00	464.28	3,985.68	1,992.84	6,315.61	3,119.04	0.47	-0.24	0.158
20.00	-37.18	-4.22	0.00	-460.05	0.00	460.05	3,975.42	1,987.71	6,275.45	3,099.21	0.52	-0.25	0.158
21.00	-36.87	-4.21	0.00	-455.82	0.00	455.82	3,965.13	1,982.56	6,235.36	3,079.41	0.58	-0.26	0.157
22.00	-36.57	-4.20	0.00	-451.61	0.00	451.61	3,954.48	1,977.24	6,194.84	3,059.40	0.63	-0.28	0.157
23.00	-36.26	-4.18	0.00	-447.42	0.00	447.42	3,939.47	1,969.74	6,147.64	3,036.09	0.69	-0.29	0.157
24.00	-35.96	-4.17	0.00	-443.23	0.00	443.23	3,924.46	1,962.23	6,100.62	3,012.87	0.75	-0.30	0.156
25.00	-35.65	-4.16	0.00	-439.06	0.00	439.06	3,909.45	1,954.73	6,053.78	2,989.74	0.82	-0.32	0.156
26.00	-35.35	-4.14	0.00	-434.91	0.00	434.91	3,894.45	1,947.22	6,007.13	2,966.69	0.89	-0.33	0.156
27.00	-35.05	-4.13	0.00	-430.77	0.00	430.77	3,879.44	1,939.72	5,960.65	2,943.74	0.96	-0.34	0.155
28.00	-34.75	-4.12	0.00	-426.64	0.00	426.64	3,864.43	1,932.22	5,914.36	2,920.88	1.03	-0.35	0.155
29.00	-34.45	-4.10	0.00	-422.52	0.00	422.52	3,849.42	1,924.71	5,868.24	2,898.10	1.11	-0.37	0.155
30.00	-34.15	-4.09	0.00	-418.42	0.00	418.42	3,834.41	1,917.21	5,822.31	2,875.42	1.18	-0.38	0.154
31.00	-33.85	-4.07	0.00	-414.33	0.00	414.33	3,819.41	1,909.70	5,776.55	2,852.82	1.26	-0.39	0.154
32.00	-33.56	-4.06	0.00	-410.25	0.00	410.25	3,804.40	1,902.20	5,730.98	2,830.32	1.35	-0.41	0.154
33.00	-33.26	-4.05	0.00	-406.19	0.00	406.19	3,789.39	1,894.70	5,685.59	2,807.90	1.43	-0.42	0.153
34.00	-32.97	-4.03	0.00	-402.15	0.00	402.15	3,774.38	1,887.19	5,640.38	2,785.57	1.52	-0.43	0.153
35.00	-32.67	-4.02	0.00	-398.12	0.00	398.12	3,759.37	1,879.69	5,595.34	2,763.33	1.62	-0.45	0.153
36.00	-32.38	-4.00	0.00	-394.10	0.00	394.10	3,744.37	1,872.18	5,550.49	2,741.18	1.71	-0.46	0.152
37.00	-32.09	-3.99	0.00	-390.10	0.00	390.10	3,729.36	1,864.68	5,505.82	2,719.12	1.81	-0.47	0.152
38.00	-31.79	-3.97	0.00	-386.11	0.00	386.11	3,714.35	1,857.18	5,461.33	2,697.15	1.91	-0.49	0.152
39.00	-31.50	-3.96	0.00	-382.14	0.00	382.14	3,699.34	1,849.67	5,417.02	2,675.26	2.01	-0.50	0.151
40.00	-31.21	-3.94	0.00	-378.18	0.00	378.18	3,684.33	1,842.17	5,372.89	2,653.47	2.12	-0.51	0.151
41.00	-30.92	-3.92	0.00	-374.24	0.00	374.24	3,669.33	1,834.66	5,328.94	2,631.76	2.23	-0.53	0.151
42.00	-30.64	-3.91	0.00	-370.32	0.00	370.32	3,654.32	1,827.16	5,285.17	2,610.15	2.34	-0.54	0.150
43.00	-30.35	-3.89	0.00	-366.41	0.00	366.41	3,639.31	1,819.66	5,241.59	2,588.62	2.45	-0.55	0.150
44.00	-30.06	-3.88	0.00	-362.52	0.00	362.52	3,624.30	1,812.15	5,198.18	2,567.18	2.57	-0.57	0.150
44.75	-29.85	-3.87	0.00	-359.61	0.00	359.61	3,613.05	1,806.52	5,165.74	2,551.17	2.66	-0.58	0.149
44.75	-29.85	-3.87	0.00	-359.61	0.00	359.61	3,037.33	1,518.66	4,358.22	2,152.36	2.66	-0.58	0.177
45.00	-29.79	-3.86	0.00	-358.65	0.00	358.65	3,035.24	1,517.62	4,350.67	2,148.63	2.69	-0.58	0.177
46.00	-29.53	-3.84	0.00	-354.79	0.00	354.79	3,026.89	1,513.44	4,320.50	2,133.73	2.81	-0.59	0.176
47.00	-29.27	-3.83	0.00	-350.94	0.00	350.94	3,018.50	1,509.25	4,290.37	2,118.85	2.94	-0.61	0.175
48.00	-29.02	-3.81	0.00	-347.11	0.00	347.11	3,010.08	1,505.04	4,260.30	2,104.00	3.07	-0.63	0.175

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Load Case: 1.2D + 1.0Di + 1.0Wi — 50 mph with 0.75 in Radial Ice — 43 Iterations

Gust Response Factor 1.10 — Ice Dead Load Factor :1.00 — Wind Importance Factor 1.00
Dead Load Factor : 1.20 — Ice Importance Factor 1.00
Wind Load Factor : 1.00

49.00	-28.77	-3.80	0.00	-343.30	0.00	343.30	3,001.62	1,500.81	4,230.28	2,089.17	3.20	-0.64	0.174
50.00	-28.51	-3.78	0.00	-339.51	0.00	339.51	2,993.12	1,496.56	4,200.31	2,074.37	3.34	-0.66	0.173
51.00	-28.26	-3.76	0.00	-335.73	0.00	335.73	2,984.59	1,492.30	4,170.39	2,059.60	3.48	-0.67	0.172
52.00	-28.01	-3.75	0.00	-331.96	0.00	331.96	2,976.02	1,488.01	4,140.52	2,044.85	3.62	-0.69	0.172
53.00	-27.76	-3.73	0.00	-328.21	0.00	328.21	2,967.42	1,483.71	4,110.71	2,030.13	3.77	-0.70	0.171
54.00	-27.51	-3.71	0.00	-324.48	0.00	324.48	2,958.79	1,479.39	4,080.96	2,015.43	3.91	-0.72	0.170
55.00	-27.26	-3.70	0.00	-320.77	0.00	320.77	2,950.11	1,475.06	4,051.26	2,000.76	4.07	-0.74	0.170
56.00	-27.02	-3.68	0.00	-317.07	0.00	317.07	2,941.41	1,470.70	4,021.62	1,986.12	4.22	-0.75	0.169
57.00	-26.77	-3.66	0.00	-313.39	0.00	313.39	2,932.66	1,466.33	3,992.03	1,971.51	4.38	-0.77	0.168
58.00	-26.52	-3.65	0.00	-309.73	0.00	309.73	2,923.89	1,461.94	3,962.50	1,956.93	4.54	-0.78	0.167
59.00	-26.28	-3.63	0.00	-306.08	0.00	306.08	2,915.07	1,457.54	3,933.03	1,942.37	4.71	-0.80	0.167
60.00	-26.03	-3.61	0.00	-302.45	0.00	302.45	2,906.28	1,453.14	3,903.69	1,927.89	4.88	-0.82	0.166
61.00	-25.79	-3.59	0.00	-298.84	0.00	298.84	2,893.42	1,446.71	3,869.02	1,910.76	5.05	-0.83	0.165
62.00	-25.55	-3.58	0.00	-295.25	0.00	295.25	2,880.56	1,440.28	3,834.50	1,893.71	5.23	-0.85	0.165
63.00	-25.31	-3.56	0.00	-291.67	0.00	291.67	2,867.69	1,433.85	3,800.13	1,876.74	5.41	-0.86	0.164
64.00	-25.07	-3.54	0.00	-288.11	0.00	288.11	2,854.83	1,427.41	3,765.92	1,859.84	5.59	-0.88	0.164
65.00	-24.83	-3.52	0.00	-284.57	0.00	284.57	2,841.96	1,420.98	3,731.86	1,843.02	5.78	-0.90	0.163
66.00	-24.59	-3.50	0.00	-281.05	0.00	281.05	2,829.10	1,414.55	3,697.96	1,826.28	5.97	-0.91	0.163
67.00	-24.35	-3.49	0.00	-277.55	0.00	277.55	2,816.24	1,408.12	3,664.21	1,809.61	6.16	-0.93	0.162
68.00	-24.12	-3.47	0.00	-274.06	0.00	274.06	2,803.37	1,401.69	3,630.61	1,793.02	6.35	-0.94	0.161
69.00	-23.88	-3.45	0.00	-270.60	0.00	270.60	2,790.51	1,395.25	3,597.18	1,776.51	6.55	-0.96	0.161
70.00	-23.65	-3.43	0.00	-267.15	0.00	267.15	2,777.64	1,388.82	3,563.89	1,760.07	6.76	-0.98	0.160
71.00	-23.41	-3.41	0.00	-263.72	0.00	263.72	2,764.78	1,382.39	3,530.76	1,743.71	6.96	-0.99	0.160
72.00	-23.18	-3.39	0.00	-260.31	0.00	260.31	2,751.92	1,375.96	3,497.79	1,727.43	7.17	-1.01	0.159
73.00	-22.95	-3.37	0.00	-256.92	0.00	256.92	2,739.05	1,369.53	3,464.97	1,711.22	7.38	-1.02	0.159
74.00	-22.72	-3.35	0.00	-253.55	0.00	253.55	2,726.19	1,363.09	3,432.30	1,695.08	7.60	-1.04	0.158
75.00	-22.49	-3.33	0.00	-250.19	0.00	250.19	2,713.32	1,356.66	3,399.79	1,679.03	7.82	-1.06	0.157
76.00	-22.26	-3.31	0.00	-246.86	0.00	246.86	2,700.46	1,350.23	3,367.44	1,663.05	8.04	-1.07	0.157
77.00	-22.03	-3.30	0.00	-243.55	0.00	243.55	2,687.60	1,343.80	3,335.24	1,647.15	8.27	-1.09	0.156
78.00	-21.80	-3.28	0.00	-240.25	0.00	240.25	2,674.73	1,337.37	3,303.19	1,631.32	8.50	-1.11	0.155
79.00	-21.57	-3.26	0.00	-236.98	0.00	236.98	2,661.87	1,330.93	3,271.30	1,615.57	8.73	-1.12	0.155
80.00	-21.35	-3.24	0.00	-233.72	0.00	233.72	2,649.00	1,324.50	3,239.56	1,599.90	8.97	-1.14	0.154
81.00	-21.12	-3.22	0.00	-230.48	0.00	230.48	2,636.14	1,318.07	3,207.98	1,584.30	9.21	-1.15	0.153
82.00	-20.90	-3.20	0.00	-227.27	0.00	227.27	2,623.28	1,311.64	3,176.55	1,568.78	9.45	-1.17	0.153
83.00	-20.68	-3.18	0.00	-224.07	0.00	224.07	2,610.41	1,305.21	3,145.28	1,553.33	9.70	-1.19	0.152
84.00	-20.46	-3.16	0.00	-220.90	0.00	220.90	2,597.55	1,298.77	3,114.16	1,537.97	9.95	-1.20	0.152
85.00	-20.24	-3.14	0.00	-217.74	0.00	217.74	2,584.68	1,292.34	3,083.20	1,522.68	10.20	-1.22	0.151
85.75	-20.07	-3.13	0.00	-215.39	0.00	215.39	2,575.04	1,287.52	3,060.08	1,511.26	10.40	-1.23	0.150
85.75	-20.07	-3.13	0.00	-215.39	0.00	215.39	1,544.73	772.37	1,851.60	914.44	10.40	-1.23	0.249
86.00	-20.03	-3.12	0.00	-214.60	0.00	214.60	1,543.70	771.85	1,848.04	912.68	10.46	-1.24	0.248
87.00	-19.85	-3.10	0.00	-211.49	0.00	211.49	1,539.55	769.77	1,833.81	905.65	10.72	-1.26	0.246
88.00	-19.68	-3.08	0.00	-208.39	0.00	208.39	1,535.36	767.68	1,819.59	898.63	10.99	-1.28	0.245
89.00	-19.51	-3.07	0.00	-205.30	0.00	205.30	1,531.13	765.57	1,805.38	891.61	11.26	-1.31	0.243
90.00	-19.34	-3.05	0.00	-202.24	0.00	202.24	1,526.87	763.44	1,791.17	884.59	11.54	-1.33	0.241
91.00	-19.17	-3.03	0.00	-199.19	0.00	199.19	1,522.58	761.29	1,776.98	877.58	11.82	-1.36	0.240
92.00	-19.00	-3.02	0.00	-196.15	0.00	196.15	1,518.25	759.12	1,762.79	870.58	12.10	-1.38	0.238
93.00	-18.84	-3.00	0.00	-193.14	0.00	193.14	1,513.88	756.94	1,748.62	863.58	12.40	-1.40	0.236
94.00	-18.67	-2.98	0.00	-190.14	0.00	190.14	1,509.48	754.74	1,734.46	856.59	12.69	-1.43	0.234
95.00	-18.50	-2.96	0.00	-187.16	0.00	187.16	1,505.04	752.52	1,720.31	849.60	12.99	-1.45	0.233
96.00	-18.34	-2.95	0.00	-184.19	0.00	184.19	1,500.57	750.29	1,706.18	842.62	13.30	-1.48	0.231
97.00	-18.17	-2.93	0.00	-181.25	0.00	181.25	1,496.06	748.03	1,692.06	835.64	13.61	-1.50	0.229
98.00	-18.01	-2.91	0.00	-178.32	0.00	178.32	1,491.52	745.76	1,677.95	828.68	13.93	-1.52	0.227
99.00	-17.84	-2.89	0.00	-175.41	0.00	175.41	1,486.94	743.47	1,663.86	821.72	14.25	-1.55	0.225
100.00	-17.68	-2.88	0.00	-172.51	0.00	172.51	1,482.33	741.16	1,649.78	814.77	14.58	-1.57	0.224
101.00	-17.52	-2.86	0.00	-169.64	0.00	169.64	1,477.68	738.84	1,635.72	807.82	14.91	-1.60	0.222
102.00	-17.36	-2.84	0.00	-166.78	0.00	166.78	1,473.00	736.50	1,621.68	800.89	15.25	-1.62	0.220
103.00	-17.20	-2.82	0.00	-163.94	0.00	163.94	1,468.28	734.14	1,607.66	793.96	15.59	-1.65	0.218

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Load Case: 1.2D + 1.0Di + 1.0Wi — 50 mph with 0.75 in Radial Ice — 43 Iterations

Gust Response Factor 1.10 — Ice Dead Load Factor :1.00 — Wind Importance Factor 1.00
Dead Load Factor : 1.20 — Ice Importance Factor 1.00
Wind Load Factor : 1.00

104.00	-17.04	-2.80	0.00	-161.12	0.00	161.12	1,463.52	731.76	1,593.65	787.04	15.94	-1.67	0.216
105.00	-16.88	-2.79	0.00	-158.31	0.00	158.31	1,458.73	729.37	1,579.66	780.14	16.29	-1.69	0.215
106.00	-16.72	-2.77	0.00	-155.53	0.00	155.53	1,453.91	726.95	1,565.69	773.24	16.65	-1.72	0.213
107.00	-16.56	-2.75	0.00	-152.76	0.00	152.76	1,449.04	724.52	1,551.74	766.35	17.01	-1.74	0.211
108.00	-16.41	-2.73	0.00	-150.01	0.00	150.01	1,444.15	722.07	1,537.82	759.47	17.38	-1.77	0.209
109.00	-16.25	-2.71	0.00	-147.28	0.00	147.28	1,439.21	719.61	1,523.91	752.60	17.75	-1.79	0.207
110.00	-16.09	-2.69	0.00	-144.57	0.00	144.57	1,434.25	717.12	1,510.03	745.75	18.13	-1.81	0.205
111.00	-15.94	-2.67	0.00	-141.88	0.00	141.88	1,429.24	714.62	1,496.17	738.90	18.51	-1.84	0.203
112.00	-15.79	-2.66	0.00	-139.20	0.00	139.20	1,424.21	712.10	1,482.33	732.07	18.90	-1.86	0.201
113.00	-15.63	-2.64	0.00	-136.55	0.00	136.55	1,419.13	709.57	1,468.51	725.24	19.29	-1.88	0.199
114.00	-15.48	-2.62	0.00	-133.91	0.00	133.91	1,414.02	707.01	1,454.73	718.43	19.68	-1.91	0.197
115.00	-15.33	-2.60	0.00	-131.29	0.00	131.29	1,408.88	704.44	1,440.96	711.64	20.09	-1.93	0.195
116.00	-15.18	-2.58	0.00	-128.69	0.00	128.69	1,403.70	701.85	1,427.22	704.85	20.49	-1.95	0.193
117.00	-15.03	-2.56	0.00	-126.11	0.00	126.11	1,398.48	699.24	1,413.51	698.08	20.91	-1.98	0.191
118.00	-14.88	-2.54	0.00	-123.55	0.00	123.55	1,393.23	696.62	1,399.83	691.32	21.32	-2.00	0.189
119.00	-14.73	-2.52	0.00	-121.01	0.00	121.01	1,387.95	693.97	1,386.17	684.58	21.74	-2.02	0.187
120.00	-14.58	-2.50	0.00	-118.49	0.00	118.49	1,382.63	691.31	1,372.54	677.85	22.17	-2.05	0.185
121.00	-14.44	-2.48	0.00	-115.98	0.00	115.98	1,377.27	688.64	1,358.94	671.13	22.60	-2.07	0.183
122.00	-14.29	-2.46	0.00	-113.50	0.00	113.50	1,371.88	685.94	1,345.37	664.43	23.04	-2.09	0.181
123.00	-14.14	-2.45	0.00	-111.03	0.00	111.03	1,366.45	683.23	1,331.83	657.74	23.48	-2.12	0.179
124.00	-14.00	-2.43	0.00	-108.59	0.00	108.59	1,360.99	680.49	1,318.33	651.07	23.92	-2.14	0.177
125.00	-13.85	-2.41	0.00	-106.16	0.00	106.16	1,355.49	677.74	1,304.85	644.42	24.38	-2.16	0.175
125.50	-13.78	-2.40	0.00	-104.96	0.00	104.96	1,352.73	676.36	1,298.12	641.09	24.60	-2.17	0.174
125.50	-13.78	-2.40	0.00	-104.96	0.00	104.96	1,127.00	563.50	1,084.41	535.55	24.60	-2.17	0.208
126.00	-13.72	-2.39	0.00	-103.76	0.00	103.76	1,124.94	562.47	1,079.04	532.90	24.83	-2.19	0.207
127.00	-13.58	-2.37	0.00	-101.37	0.00	101.37	1,120.78	560.39	1,068.31	527.60	25.29	-2.21	0.204
128.00	-13.45	-2.35	0.00	-99.00	0.00	99.00	1,116.59	558.29	1,057.61	522.31	25.76	-2.24	0.202
129.00	-13.32	-2.33	0.00	-96.65	0.00	96.65	1,112.36	556.18	1,046.91	517.03	26.23	-2.26	0.199
130.00	-13.19	-2.31	0.00	-94.32	0.00	94.32	1,108.10	554.05	1,036.24	511.76	26.70	-2.29	0.196
131.00	-13.06	-2.29	0.00	-92.01	0.00	92.01	1,103.80	551.90	1,025.58	506.50	27.19	-2.31	0.193
132.00	-12.93	-2.28	0.00	-89.71	0.00	89.71	1,099.47	549.73	1,014.94	501.24	27.67	-2.34	0.191
133.00	-12.80	-2.26	0.00	-87.44	0.00	87.44	1,095.10	547.55	1,004.33	496.00	28.17	-2.36	0.188
134.00	-12.67	-2.24	0.00	-85.18	0.00	85.18	1,090.69	545.35	993.73	490.77	28.66	-2.39	0.185
135.00	-12.54	-2.22	0.00	-82.94	0.00	82.94	1,086.26	543.13	983.15	485.54	29.17	-2.41	0.182
136.00	-12.42	-2.20	0.00	-80.72	0.00	80.72	1,081.78	540.89	972.60	480.33	29.67	-2.44	0.180
137.00	-12.29	-2.18	0.00	-78.52	0.00	78.52	1,077.27	538.64	962.07	475.13	30.19	-2.46	0.177
138.00	-12.17	-2.16	0.00	-76.34	0.00	76.34	1,072.73	536.36	951.56	469.94	30.71	-2.49	0.174
139.00	-12.04	-2.14	0.00	-74.18	0.00	74.18	1,068.14	534.07	941.07	464.76	31.23	-2.51	0.171
140.00	-11.92	-2.12	0.00	-72.04	0.00	72.04	1,063.53	531.76	930.61	459.59	31.76	-2.53	0.168
141.00	-11.79	-2.10	0.00	-69.92	0.00	69.92	1,058.88	529.44	920.17	454.44	32.29	-2.56	0.165
142.00	-11.67	-2.08	0.00	-67.81	0.00	67.81	1,054.19	527.09	909.76	449.30	32.83	-2.58	0.162
143.00	-11.55	-2.07	0.00	-65.73	0.00	65.73	1,049.47	524.73	899.37	444.17	33.37	-2.60	0.159
144.00	-11.43	-2.05	0.00	-63.66	0.00	63.66	1,044.71	522.35	889.01	439.05	33.92	-2.63	0.156
145.00	-11.31	-2.03	0.00	-61.62	0.00	61.62	1,039.92	519.96	878.68	433.95	34.47	-2.65	0.153
146.00	-11.19	-2.01	0.00	-59.59	0.00	59.59	1,035.09	517.54	868.38	428.86	35.03	-2.67	0.150
147.00	-11.07	-1.99	0.00	-57.58	0.00	57.58	1,030.22	515.11	858.10	423.79	35.59	-2.69	0.147
148.00	-10.95	-1.97	0.00	-55.60	0.00	55.60	1,025.32	512.66	847.86	418.72	36.15	-2.71	0.143
149.00	-10.84	-1.95	0.00	-53.63	0.00	53.63	1,020.39	510.19	837.64	413.68	36.72	-2.73	0.140
150.00	-10.72	-1.93	0.00	-51.68	0.00	51.68	1,015.42	507.71	827.46	408.65	37.30	-2.76	0.137
151.00	-10.60	-1.91	0.00	-49.75	0.00	49.75	1,010.41	505.21	817.30	403.63	37.88	-2.78	0.134
152.00	-10.49	-1.89	0.00	-47.84	0.00	47.84	1,005.37	502.69	807.18	398.64	38.46	-2.80	0.130
153.00	-10.37	-1.87	0.00	-45.95	0.00	45.95	1,000.30	500.15	797.09	393.65	39.05	-2.82	0.127
154.00	-10.26	-1.85	0.00	-44.08	0.00	44.08	995.19	497.59	787.03	388.69	39.64	-2.84	0.124
155.00	-10.15	-1.83	0.00	-42.24	0.00	42.24	990.04	495.02	777.01	383.74	40.24	-2.86	0.120
156.00	-10.04	-1.81	0.00	-40.41	0.00	40.41	983.06	491.53	765.62	378.11	40.84	-2.87	0.117
157.00	-9.92	-1.79	0.00	-38.60	0.00	38.60	975.56	487.78	753.91	372.33	41.44	-2.89	0.114
158.00	-9.81	-1.77	0.00	-36.81	0.00	36.81	968.05	484.03	742.29	366.59	42.05	-2.91	0.111

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Load Case: 1.2D + 1.0Di + 1.0Wi — 50 mph with 0.75 in Radial Ice — 43 Iterations

Gust Response Factor 1.10 — Ice Dead Load Factor :1.00 — Wind Importance Factor 1.00
Dead Load Factor : 1.20 — Ice Importance Factor 1.00
Wind Load Factor : 1.00

159.00	-9.70	-1.75	0.00	-35.03	0.00	35.03	960.55	480.27	730.76	360.90	42.66	-2.93	0.107
160.00	-9.60	-1.73	0.00	-33.28	0.00	33.28	953.04	476.52	719.32	355.25	43.27	-2.95	0.104
161.00	-9.49	-1.71	0.00	-31.55	0.00	31.55	945.54	472.77	707.97	349.64	43.89	-2.96	0.100
162.00	-9.38	-1.69	0.00	-29.84	0.00	29.84	938.04	469.02	696.71	344.08	44.51	-2.98	0.097
163.00	-9.27	-1.67	0.00	-28.15	0.00	28.15	930.53	465.27	685.54	338.56	45.14	-2.99	0.093
164.00	-9.17	-1.65	0.00	-26.48	0.00	26.48	923.03	461.51	674.47	333.09	45.77	-3.01	0.089
165.00	-9.06	-1.63	0.00	-24.83	0.00	24.83	915.52	457.76	663.48	327.67	46.40	-3.02	0.086
166.00	-8.96	-1.61	0.00	-23.20	0.00	23.20	908.02	454.01	652.58	322.29	47.03	-3.04	0.082
167.00	-8.85	-1.59	0.00	-21.59	0.00	21.59	900.52	450.26	641.77	316.95	47.67	-3.05	0.078
168.00	-8.75	-1.57	0.00	-20.00	0.00	20.00	893.01	446.51	631.06	311.65	48.31	-3.06	0.074
169.00	-8.65	-1.55	0.00	-18.43	0.00	18.43	885.51	442.75	620.43	306.41	48.95	-3.07	0.070
170.00	-8.54	-1.53	0.00	-16.88	0.00	16.88	878.00	439.00	609.89	301.20	49.60	-3.09	0.066
171.00	-8.44	-1.51	0.00	-15.35	0.00	15.35	870.50	435.25	599.45	296.04	50.25	-3.10	0.062
172.00	-8.34	-1.49	0.00	-13.84	0.00	13.84	863.00	431.50	589.09	290.93	50.89	-3.11	0.057
173.00	-8.24	-1.47	0.00	-12.35	0.00	12.35	855.49	427.75	578.82	285.86	51.55	-3.12	0.053
174.00	-8.14	-1.45	0.00	-10.89	0.00	10.89	847.99	423.99	568.65	280.83	52.20	-3.12	0.048
175.00	-8.05	-1.43	0.00	-9.44	0.00	9.44	840.48	420.24	558.56	275.85	52.85	-3.13	0.044
176.00	-7.95	-1.41	0.00	-8.01	0.00	8.01	832.98	416.49	548.57	270.92	53.51	-3.14	0.039
177.00	-7.85	-1.39	0.00	-6.60	0.00	6.60	825.48	412.74	538.66	266.02	54.17	-3.14	0.034
178.00	-7.76	-1.37	0.00	-5.21	0.00	5.21	817.97	408.99	528.85	261.18	54.83	-3.15	0.029
179.00	-7.66	-1.35	0.00	-3.85	0.00	3.85	810.47	405.23	519.12	256.38	55.49	-3.15	0.024
180.00	-0.05	-0.01	0.00	0.00	0.00	0.00	802.96	401.48	509.49	251.62	56.15	-3.15	0.000
180.58	0.00	0.00	0.00	0.00	0.00	0.00	798.59	399.29	503.91	248.86	56.53	-3.15	0.000

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Load Case: 1.0D + 1.0W Serviceability 60 mph 42 Iterations

Gust Response Factor 1.10 Wind Importance Factor 1.00
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Applied Segment Forces Summary

		Shaft Forces		Discrete Forces				Linear Forces		Sum of Forces			
Seg Elev (ft)	Description	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		12.1	0.0					0.0	0.0	12.1	0.0	0.0	0.0
1.00		24.2	197.5					0.0	8.8	24.2	206.3	0.0	0.0
2.00		24.1	196.8					0.0	8.8	24.1	205.6	0.0	0.0
3.00		24.0	196.1					0.0	8.8	24.0	204.9	0.0	0.0
4.00		23.9	195.4					0.0	8.8	23.9	204.2	0.0	0.0
5.00		23.8	194.7					0.0	8.8	23.8	203.5	0.0	0.0
6.00		23.7	194.0					0.0	8.8	23.7	202.8	0.0	0.0
7.00		23.7	193.3					0.0	8.8	23.7	202.1	0.0	0.0
8.00		23.6	192.6					0.0	8.8	23.6	201.4	0.0	0.0
9.00		23.5	191.9					0.0	8.8	23.5	200.7	0.0	0.0
10.00		23.4	191.2					0.0	8.8	23.4	200.0	0.0	0.0
11.00		23.3	190.5					0.0	8.8	23.3	199.3	0.0	0.0
12.00		23.2	189.8					0.0	8.8	23.2	198.6	0.0	0.0
13.00		23.2	189.1					0.0	8.8	23.2	197.9	0.0	0.0
14.00		23.1	188.4					0.0	8.8	23.1	197.2	0.0	0.0
15.00		23.0	187.8					0.0	8.8	23.0	196.6	0.0	0.0
16.00		22.9	187.1					0.0	8.8	22.9	195.9	0.0	0.0
17.00		22.8	186.4					0.0	8.8	22.8	195.2	0.0	0.0
18.00		22.7	185.7					0.0	8.8	22.7	194.5	0.0	0.0
19.00		22.7	185.0					0.0	8.8	22.7	193.8	0.0	0.0
20.00		22.6	184.3					0.0	8.8	22.6	193.1	0.0	0.0
21.00		22.5	183.6					0.0	8.8	22.5	192.4	0.0	0.0
22.00		22.4	182.9					0.0	8.8	22.4	191.7	0.0	0.0
23.00		22.3	182.2					0.0	8.8	22.3	191.0	0.0	0.0
24.00		22.2	181.5					0.0	8.8	22.2	190.3	0.0	0.0
25.00		22.2	180.8					0.0	8.8	22.2	189.6	0.0	0.0
26.00		22.1	180.1					0.0	8.8	22.1	188.9	0.0	0.0
27.00		22.0	179.4					0.0	8.8	22.0	188.2	0.0	0.0
28.00		21.9	178.7					0.0	8.8	21.9	187.5	0.0	0.0
29.00		21.8	178.1					0.0	8.8	21.8	186.9	0.0	0.0
30.00		21.8	177.4					0.0	8.8	21.8	186.2	0.0	0.0
31.00		21.9	176.7					0.0	8.8	21.9	185.5	0.0	0.0
32.00		22.0	176.0					0.0	8.8	22.0	184.8	0.0	0.0
33.00		22.1	175.3					0.0	8.8	22.1	184.1	0.0	0.0
34.00		22.2	174.6					0.0	8.8	22.2	183.4	0.0	0.0
35.00		22.3	173.9					0.0	8.8	22.3	182.7	0.0	0.0
36.00		22.4	173.2					0.0	8.8	22.4	182.0	0.0	0.0
37.00		22.5	172.5					0.0	8.8	22.5	181.3	0.0	0.0
38.00		22.5	171.8					0.0	8.8	22.5	180.6	0.0	0.0
39.00		22.6	171.1					0.0	8.8	22.6	179.9	0.0	0.0
40.00		22.7	170.4					0.0	8.8	22.7	179.2	0.0	0.0
41.00		22.8	169.7					0.0	8.8	22.8	178.5	0.0	0.0
42.00		22.8	169.0					0.0	8.8	22.8	177.8	0.0	0.0
43.00		22.9	168.4					0.0	8.8	22.9	177.2	0.0	0.0
44.00		20.1	167.7					0.0	8.8	20.1	176.5	0.0	0.0
44.75	Top - Section 1	11.5	125.3					0.0	6.6	11.5	131.9	0.0	0.0
45.00		14.4	35.8					0.0	2.2	14.4	38.0	0.0	0.0

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Load Case: 1.0D + 1.0W — Serviceability 60 mph — 42 Iterations

Gust Response Factor 1.10 — Wind Importance Factor 1.00
Dead Load Factor : 1.00
Wind Load Factor : 1.00

46.00		23.1	142.8	0.0	8.8	23.1	151.6	0.0	0.0
47.00		23.1	142.2	0.0	8.8	23.1	151.0	0.0	0.0
48.00		23.1	141.6	0.0	8.8	23.1	150.4	0.0	0.0
49.00		23.2	141.0	0.0	8.8	23.2	149.8	0.0	0.0
50.00		23.2	140.4	0.0	8.8	23.2	149.2	0.0	0.0
51.00		23.3	139.8	0.0	8.8	23.3	148.6	0.0	0.0
52.00		23.3	139.2	0.0	8.8	23.3	148.0	0.0	0.0
53.00		23.3	138.6	0.0	8.8	23.3	147.4	0.0	0.0
54.00		23.3	138.0	0.0	8.8	23.3	146.8	0.0	0.0
55.00		23.4	137.4	0.0	8.8	23.4	146.2	0.0	0.0
56.00		23.4	136.8	0.0	8.8	23.4	145.6	0.0	0.0
57.00		23.4	136.2	0.0	8.8	23.4	145.0	0.0	0.0
58.00		23.4	135.7	0.0	8.8	23.4	144.5	0.0	0.0
59.00		23.4	135.1	0.0	8.8	23.4	143.9	0.0	0.0
60.00		23.4	134.5	0.0	8.8	23.4	143.3	0.0	0.0
61.00		23.4	133.9	0.0	8.8	23.4	142.7	0.0	0.0
62.00		23.4	133.3	0.0	8.8	23.4	142.1	0.0	0.0
63.00		23.5	132.7	0.0	8.8	23.5	141.5	0.0	0.0
64.00		23.5	132.1	0.0	8.8	23.5	140.9	0.0	0.0
65.00		23.5	131.5	0.0	8.8	23.5	140.3	0.0	0.0
66.00		23.5	130.9	0.0	8.8	23.5	139.7	0.0	0.0
67.00		23.4	130.3	0.0	8.8	23.4	139.1	0.0	0.0
68.00		23.4	129.7	0.0	8.8	23.4	138.5	0.0	0.0
69.00		23.4	129.1	0.0	8.8	23.4	137.9	0.0	0.0
70.00		23.4	128.5	0.0	8.8	23.4	137.3	0.0	0.0
71.00		23.4	127.9	0.0	8.8	23.4	136.7	0.0	0.0
72.00		23.4	127.3	0.0	8.8	23.4	136.1	0.0	0.0
73.00		23.4	126.7	0.0	8.8	23.4	135.5	0.0	0.0
74.00		23.4	126.1	0.0	8.8	23.4	134.9	0.0	0.0
75.00		23.3	125.6	0.0	8.8	23.3	134.4	0.0	0.0
76.00		23.3	125.0	0.0	8.8	23.3	133.8	0.0	0.0
77.00		23.3	124.4	0.0	8.8	23.3	133.2	0.0	0.0
78.00		23.3	123.8	0.0	8.8	23.3	132.6	0.0	0.0
79.00		23.2	123.2	0.0	8.8	23.2	132.0	0.0	0.0
80.00		23.2	122.6	0.0	8.8	23.2	131.4	0.0	0.0
81.00		23.2	122.0	0.0	8.8	23.2	130.8	0.0	0.0
82.00		23.2	121.4	0.0	8.8	23.2	130.2	0.0	0.0
83.00		23.1	120.8	0.0	8.8	23.1	129.6	0.0	0.0
84.00		23.1	120.2	0.0	8.8	23.1	129.0	0.0	0.0
85.00		20.2	119.6	0.0	8.8	20.2	128.4	0.0	0.0
85.75	Top - Section 2	11.5	89.3	0.0	6.6	11.5	95.9	0.0	0.0
86.00		14.4	19.9	0.0	2.2	14.4	22.1	0.0	0.0
87.00		23.0	79.3	0.0	8.8	23.0	88.1	0.0	0.0
88.00		22.9	78.9	0.0	8.8	22.9	87.7	0.0	0.0
89.00		22.9	78.5	0.0	8.8	22.9	87.3	0.0	0.0
90.00		22.9	78.1	0.0	8.8	22.9	86.9	0.0	0.0
91.00		22.8	77.7	0.0	8.8	22.8	86.5	0.0	0.0
92.00		22.8	77.3	0.0	8.8	22.8	86.1	0.0	0.0
93.00		22.7	76.9	0.0	8.8	22.7	85.7	0.0	0.0
94.00		22.7	76.5	0.0	8.8	22.7	85.3	0.0	0.0
95.00		22.6	76.1	0.0	8.8	22.6	84.9	0.0	0.0
96.00		22.6	75.7	0.0	8.8	22.6	84.5	0.0	0.0
97.00		22.5	75.3	0.0	8.8	22.5	84.1	0.0	0.0
98.00		22.5	74.9	0.0	8.8	22.5	83.7	0.0	0.0
99.00		22.4	74.5	0.0	8.8	22.4	83.3	0.0	0.0
100.00		22.4	74.1	0.0	8.8	22.4	82.9	0.0	0.0
101.00		22.3	73.8	0.0	8.8	22.3	82.6	0.0	0.0

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Load Case: 1.0D + 1.0W Serviceability 60 mph 42 Iterations

Gust Response Factor 1.10 Wind Importance Factor 1.00
Dead Load Factor : 1.00
Wind Load Factor : 1.00

102.00		22.3	73.4	0.0	8.8	22.3	82.2	0.0	0.0
103.00		22.2	73.0	0.0	8.8	22.2	81.8	0.0	0.0
104.00		22.1	72.6	0.0	8.8	22.1	81.4	0.0	0.0
105.00		22.1	72.2	0.0	8.8	22.1	81.0	0.0	0.0
106.00		22.0	71.8	0.0	8.8	22.0	80.6	0.0	0.0
107.00		22.0	71.4	0.0	8.8	22.0	80.2	0.0	0.0
108.00		21.9	71.0	0.0	8.8	21.9	79.8	0.0	0.0
109.00		21.8	70.6	0.0	8.8	21.8	79.4	0.0	0.0
110.00		21.8	70.2	0.0	8.8	21.8	79.0	0.0	0.0
111.00		21.7	69.8	0.0	8.8	21.7	78.6	0.0	0.0
112.00		21.6	69.4	0.0	8.8	21.6	78.2	0.0	0.0
113.00		21.6	69.0	0.0	8.8	21.6	77.8	0.0	0.0
114.00		21.5	68.6	0.0	8.8	21.5	77.4	0.0	0.0
115.00		21.4	68.2	0.0	8.8	21.4	77.0	0.0	0.0
116.00		21.4	67.8	0.0	8.8	21.4	76.6	0.0	0.0
117.00		21.3	67.4	0.0	8.8	21.3	76.2	0.0	0.0
118.00		21.2	67.0	0.0	8.8	21.2	75.8	0.0	0.0
119.00		21.1	66.6	0.0	8.8	21.1	75.4	0.0	0.0
120.00		21.1	66.2	0.0	8.8	21.1	75.0	0.0	0.0
121.00		21.0	65.8	0.0	8.8	21.0	74.6	0.0	0.0
122.00		20.9	65.4	0.0	8.8	20.9	74.2	0.0	0.0
123.00		20.8	65.0	0.0	8.8	20.8	73.8	0.0	0.0
124.00		20.8	64.6	0.0	8.8	20.8	73.4	0.0	0.0
125.00		15.5	64.3	0.0	8.8	15.5	73.1	0.0	0.0
125.50	Top - Section 3	10.3	32.0	0.0	4.4	10.3	36.4	0.0	0.0
126.00		15.4	27.9	0.0	4.4	15.4	32.3	0.0	0.0
127.00		20.5	55.6	0.0	8.8	20.5	64.4	0.0	0.0
128.00		20.4	55.3	0.0	8.8	20.4	64.1	0.0	0.0
129.00		20.4	54.9	0.0	8.8	20.4	63.7	0.0	0.0
130.00		20.3	54.6	0.0	8.8	20.3	63.4	0.0	0.0
131.00		20.2	54.2	0.0	8.8	20.2	63.0	0.0	0.0
132.00		20.1	53.9	0.0	8.8	20.1	62.7	0.0	0.0
133.00		20.0	53.5	0.0	8.8	20.0	62.3	0.0	0.0
134.00		19.9	53.2	0.0	8.8	19.9	62.0	0.0	0.0
135.00		19.8	52.8	0.0	8.8	19.8	61.6	0.0	0.0
136.00		19.8	52.5	0.0	8.8	19.8	61.3	0.0	0.0
137.00		19.7	52.1	0.0	8.8	19.7	60.9	0.0	0.0
138.00		19.6	51.8	0.0	8.8	19.6	60.6	0.0	0.0
139.00		19.5	51.4	0.0	8.8	19.5	60.2	0.0	0.0
140.00		19.4	51.1	0.0	8.8	19.4	59.9	0.0	0.0
141.00		19.3	50.8	0.0	8.8	19.3	59.6	0.0	0.0
142.00		19.2	50.4	0.0	8.8	19.2	59.2	0.0	0.0
143.00		19.1	50.1	0.0	8.8	19.1	58.9	0.0	0.0
144.00		19.0	49.7	0.0	8.8	19.0	58.5	0.0	0.0
145.00		18.9	49.4	0.0	8.8	18.9	58.2	0.0	0.0
146.00		18.8	49.0	0.0	8.8	18.8	57.8	0.0	0.0
147.00		18.7	48.7	0.0	8.8	18.7	57.5	0.0	0.0
148.00		18.7	48.3	0.0	8.8	18.7	57.1	0.0	0.0
149.00		18.6	48.0	0.0	8.8	18.6	56.8	0.0	0.0
150.00		18.5	47.6	0.0	8.8	18.5	56.4	0.0	0.0
151.00		18.4	47.3	0.0	8.8	18.4	56.1	0.0	0.0
152.00		18.3	46.9	0.0	8.8	18.3	55.7	0.0	0.0
153.00		18.2	46.6	0.0	8.8	18.2	55.4	0.0	0.0
154.00		18.1	46.2	0.0	8.8	18.1	55.0	0.0	0.0
155.00		18.0	45.9	0.0	8.8	18.0	54.7	0.0	0.0
156.00		17.9	45.6	0.0	8.8	17.9	54.4	0.0	0.0
157.00		17.8	45.2	0.0	8.8	17.8	54.0	0.0	0.0

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Load Case: 1.0D + 1.0W — Serviceability 60 mph — 42 Iterations

Gust Response Factor 1.10 — Wind Importance Factor 1.00
Dead Load Factor : 1.00
Wind Load Factor : 1.00

158.00		17.7	44.9					0.0	8.8	17.7	53.7	0.0	0.0
159.00		17.5	44.5					0.0	8.8	17.5	53.3	0.0	0.0
160.00		17.4	44.2					0.0	8.8	17.4	53.0	0.0	0.0
161.00		17.3	43.8					0.0	8.8	17.3	52.6	0.0	0.0
162.00		17.2	43.5					0.0	8.8	17.2	52.3	0.0	0.0
163.00		17.1	43.1					0.0	8.8	17.1	51.9	0.0	0.0
164.00		17.0	42.8					0.0	8.8	17.0	51.6	0.0	0.0
165.00		16.9	42.4					0.0	8.8	16.9	51.2	0.0	0.0
166.00		16.8	42.1					0.0	8.8	16.8	50.9	0.0	0.0
167.00		16.7	41.7					0.0	8.8	16.7	50.5	0.0	0.0
168.00		16.6	41.4					0.0	8.8	16.6	50.2	0.0	0.0
169.00		16.5	41.1					0.0	8.8	16.5	49.9	0.0	0.0
170.00		16.4	40.7					0.0	8.8	16.4	49.5	0.0	0.0
171.00		16.3	40.4					0.0	8.8	16.3	49.2	0.0	0.0
172.00		16.1	40.0					0.0	8.8	16.1	48.8	0.0	0.0
173.00		16.0	39.7					0.0	8.8	16.0	48.5	0.0	0.0
174.00		15.9	39.3					0.0	8.8	15.9	48.1	0.0	0.0
175.00		15.8	39.0					0.0	8.8	15.8	47.8	0.0	0.0
176.00		15.7	38.6					0.0	8.8	15.7	47.4	0.0	0.0
177.00		15.6	38.3					0.0	8.8	15.6	47.1	0.0	0.0
178.00		15.5	37.9					0.0	8.8	15.5	46.7	0.0	0.0
179.00		15.3	37.6					0.0	8.8	15.3	46.4	0.0	0.0
180.00	Appurtenance(s)	12.1	37.2	901.8	0.0	2,977.8	3,144.3	0.0	8.8	913.9	3,190.3	0.0	0.0
180.58		4.4	21.6					0.0	0.0	4.4	21.6	0.0	0.0
								Totals:		4,747.4	523,666.35	0.00	0.00

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Load Case: 1.0D + 1.0W Serviceability 60 mph 42 Iterations

Gust Response Factor 1.10 Wind Importance Factor 1.00
Dead Load Factor :1.00
Wind Load Factor :1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-23.67	-4.74	0.00	-522.25	0.00	522.25	4,173.88	2,086.94	7,090.68	3,501.82	0.00	0.00	0.155
1.00	-23.46	-4.72	0.00	-517.52	0.00	517.52	4,164.30	2,082.15	7,049.35	3,481.41	0.00	-0.01	0.154
2.00	-23.25	-4.70	0.00	-512.80	0.00	512.80	4,154.67	2,077.34	7,008.08	3,461.03	0.01	-0.02	0.154
3.00	-23.05	-4.68	0.00	-508.10	0.00	508.10	4,145.02	2,072.51	6,966.87	3,440.67	0.01	-0.04	0.153
4.00	-22.84	-4.66	0.00	-503.42	0.00	503.42	4,135.32	2,067.66	6,925.71	3,420.35	0.02	-0.05	0.153
5.00	-22.64	-4.64	0.00	-498.76	0.00	498.76	4,125.60	2,062.80	6,884.61	3,400.05	0.03	-0.06	0.152
6.00	-22.43	-4.62	0.00	-494.12	0.00	494.12	4,115.83	2,057.92	6,843.57	3,379.78	0.04	-0.07	0.152
7.00	-22.23	-4.60	0.00	-489.50	0.00	489.50	4,106.03	2,053.02	6,802.59	3,359.54	0.06	-0.08	0.151
8.00	-22.03	-4.58	0.00	-484.90	0.00	484.90	4,096.20	2,048.10	6,761.66	3,339.33	0.08	-0.09	0.151
9.00	-21.83	-4.56	0.00	-480.32	0.00	480.32	4,086.33	2,043.16	6,720.80	3,319.15	0.10	-0.11	0.150
10.00	-21.63	-4.54	0.00	-475.76	0.00	475.76	4,076.42	2,038.21	6,680.00	3,299.00	0.12	-0.12	0.150
11.00	-21.42	-4.52	0.00	-471.22	0.00	471.22	4,066.48	2,033.24	6,639.26	3,278.88	0.15	-0.13	0.149
12.00	-21.23	-4.50	0.00	-466.69	0.00	466.69	4,056.51	2,028.25	6,598.58	3,258.79	0.18	-0.14	0.148
13.00	-21.03	-4.49	0.00	-462.19	0.00	462.19	4,046.49	2,023.25	6,557.96	3,238.73	0.21	-0.15	0.148
14.00	-20.83	-4.47	0.00	-457.70	0.00	457.70	4,036.45	2,018.22	6,517.41	3,218.70	0.24	-0.17	0.147
15.00	-20.63	-4.45	0.00	-453.24	0.00	453.24	4,026.36	2,013.18	6,476.92	3,198.71	0.28	-0.18	0.147
16.00	-20.43	-4.43	0.00	-448.79	0.00	448.79	4,016.25	2,008.12	6,436.49	3,178.74	0.32	-0.19	0.146
17.00	-20.24	-4.41	0.00	-444.36	0.00	444.36	4,006.09	2,003.05	6,396.13	3,158.81	0.36	-0.20	0.146
18.00	-20.04	-4.39	0.00	-439.96	0.00	439.96	3,995.91	1,997.95	6,355.84	3,138.91	0.40	-0.21	0.145
19.00	-19.85	-4.37	0.00	-435.57	0.00	435.57	3,985.68	1,992.84	6,315.61	3,119.04	0.45	-0.23	0.145
20.00	-19.65	-4.35	0.00	-431.20	0.00	431.20	3,975.42	1,987.71	6,275.45	3,099.21	0.50	-0.24	0.144
21.00	-19.46	-4.33	0.00	-426.85	0.00	426.85	3,965.13	1,982.56	6,235.36	3,079.41	0.55	-0.25	0.144
22.00	-19.27	-4.31	0.00	-422.52	0.00	422.52	3,954.48	1,977.24	6,194.84	3,059.40	0.60	-0.26	0.143
23.00	-19.08	-4.29	0.00	-418.21	0.00	418.21	3,939.47	1,969.74	6,147.64	3,036.09	0.66	-0.27	0.143
24.00	-18.89	-4.27	0.00	-413.91	0.00	413.91	3,924.46	1,962.23	6,100.62	3,012.87	0.72	-0.29	0.142
25.00	-18.70	-4.25	0.00	-409.64	0.00	409.64	3,909.45	1,954.73	6,053.78	2,989.74	0.78	-0.30	0.142
26.00	-18.51	-4.24	0.00	-405.39	0.00	405.39	3,894.45	1,947.22	6,007.13	2,966.69	0.84	-0.31	0.141
27.00	-18.32	-4.22	0.00	-401.15	0.00	401.15	3,879.44	1,939.72	5,960.65	2,943.74	0.91	-0.32	0.141
28.00	-18.13	-4.20	0.00	-396.93	0.00	396.93	3,864.43	1,932.22	5,914.36	2,920.88	0.97	-0.33	0.141
29.00	-17.94	-4.18	0.00	-392.74	0.00	392.74	3,849.42	1,924.71	5,868.24	2,898.10	1.05	-0.35	0.140
30.00	-17.75	-4.16	0.00	-388.56	0.00	388.56	3,834.41	1,917.21	5,822.31	2,875.42	1.12	-0.36	0.140
31.00	-17.57	-4.14	0.00	-384.40	0.00	384.40	3,819.41	1,909.70	5,776.55	2,852.82	1.20	-0.37	0.139
32.00	-17.38	-4.12	0.00	-380.26	0.00	380.26	3,804.40	1,902.20	5,730.98	2,830.32	1.27	-0.38	0.139
33.00	-17.20	-4.10	0.00	-376.14	0.00	376.14	3,789.39	1,894.70	5,685.59	2,807.90	1.36	-0.39	0.139
34.00	-17.01	-4.08	0.00	-372.04	0.00	372.04	3,774.38	1,887.19	5,640.38	2,785.57	1.44	-0.41	0.138
35.00	-16.83	-4.06	0.00	-367.96	0.00	367.96	3,759.37	1,879.69	5,595.34	2,763.33	1.53	-0.42	0.138
36.00	-16.65	-4.04	0.00	-363.90	0.00	363.90	3,744.37	1,872.18	5,550.49	2,741.18	1.62	-0.43	0.137
37.00	-16.47	-4.02	0.00	-359.86	0.00	359.86	3,729.36	1,864.68	5,505.82	2,719.12	1.71	-0.44	0.137
38.00	-16.28	-4.00	0.00	-355.84	0.00	355.84	3,714.35	1,857.18	5,461.33	2,697.15	1.80	-0.46	0.136
39.00	-16.10	-3.98	0.00	-351.84	0.00	351.84	3,699.34	1,849.67	5,417.02	2,675.26	1.90	-0.47	0.136
40.00	-15.92	-3.96	0.00	-347.87	0.00	347.87	3,684.33	1,842.17	5,372.89	2,653.47	2.00	-0.48	0.135
41.00	-15.74	-3.94	0.00	-343.91	0.00	343.91	3,669.33	1,834.66	5,328.94	2,631.76	2.10	-0.49	0.135
42.00	-15.57	-3.92	0.00	-339.97	0.00	339.97	3,654.32	1,827.16	5,285.17	2,610.15	2.20	-0.50	0.135
43.00	-15.39	-3.89	0.00	-336.06	0.00	336.06	3,639.31	1,819.66	5,241.59	2,588.62	2.31	-0.52	0.134
44.00	-15.21	-3.88	0.00	-332.16	0.00	332.16	3,624.30	1,812.15	5,198.18	2,567.18	2.42	-0.53	0.134
44.75	-15.08	-3.86	0.00	-329.25	0.00	329.25	3,613.05	1,806.52	5,165.74	2,551.17	2.50	-0.54	0.133
44.75	-15.08	-3.86	0.00	-329.25	0.00	329.25	3,037.33	1,518.66	4,358.22	2,152.36	2.50	-0.54	0.158
45.00	-15.04	-3.85	0.00	-328.29	0.00	328.29	3,035.24	1,517.62	4,350.67	2,148.63	2.53	-0.54	0.158
46.00	-14.89	-3.83	0.00	-324.44	0.00	324.44	3,026.89	1,513.44	4,320.50	2,133.73	2.65	-0.56	0.157
47.00	-14.74	-3.81	0.00	-320.61	0.00	320.61	3,018.50	1,509.25	4,290.37	2,118.85	2.77	-0.57	0.156
48.00	-14.59	-3.79	0.00	-316.79	0.00	316.79	3,010.08	1,505.04	4,260.30	2,104.00	2.89	-0.58	0.155

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Load Case: 1.0D + 1.0W Serviceability 60 mph 42 Iterations

Gust Response Factor 1.10 Wind Importance Factor 1.00
Dead Load Factor : 1.00
Wind Load Factor : 1.00

49.00	-14.43	-3.77	0.00	-313.01	0.00	313.01	3,001.62	1,500.81	4,230.28	2,089.17	3.01	-0.60	0.155
50.00	-14.29	-3.75	0.00	-309.24	0.00	309.24	2,993.12	1,496.56	4,200.31	2,074.37	3.14	-0.61	0.154
51.00	-14.14	-3.73	0.00	-305.49	0.00	305.49	2,984.59	1,492.30	4,170.39	2,059.60	3.27	-0.63	0.153
52.00	-13.99	-3.70	0.00	-301.76	0.00	301.76	2,976.02	1,488.01	4,140.52	2,044.85	3.40	-0.64	0.152
53.00	-13.84	-3.68	0.00	-298.06	0.00	298.06	2,967.42	1,483.71	4,110.71	2,030.13	3.54	-0.66	0.151
54.00	-13.69	-3.66	0.00	-294.38	0.00	294.38	2,958.79	1,479.39	4,080.96	2,015.43	3.67	-0.67	0.151
55.00	-13.54	-3.64	0.00	-290.72	0.00	290.72	2,950.11	1,475.06	4,051.26	2,000.76	3.82	-0.68	0.150
56.00	-13.40	-3.62	0.00	-287.08	0.00	287.08	2,941.41	1,470.70	4,021.62	1,986.12	3.96	-0.70	0.149
57.00	-13.25	-3.60	0.00	-283.46	0.00	283.46	2,932.66	1,466.33	3,992.03	1,971.51	4.11	-0.71	0.148
58.00	-13.11	-3.57	0.00	-279.86	0.00	279.86	2,923.89	1,461.94	3,962.50	1,956.93	4.26	-0.73	0.148
59.00	-12.96	-3.55	0.00	-276.29	0.00	276.29	2,915.07	1,457.54	3,933.03	1,942.37	4.41	-0.74	0.147
60.00	-12.82	-3.53	0.00	-272.74	0.00	272.74	2,906.28	1,453.14	3,903.69	1,927.89	4.57	-0.76	0.146
61.00	-12.68	-3.51	0.00	-269.21	0.00	269.21	2,893.42	1,446.71	3,869.02	1,910.76	4.73	-0.77	0.145
62.00	-12.53	-3.49	0.00	-265.70	0.00	265.70	2,880.56	1,440.28	3,834.50	1,893.71	4.89	-0.78	0.145
63.00	-12.39	-3.46	0.00	-262.21	0.00	262.21	2,867.69	1,433.85	3,800.13	1,876.74	5.06	-0.80	0.144
64.00	-12.25	-3.44	0.00	-258.75	0.00	258.75	2,854.83	1,427.41	3,765.92	1,859.84	5.23	-0.81	0.143
65.00	-12.11	-3.42	0.00	-255.31	0.00	255.31	2,841.96	1,420.98	3,731.86	1,843.02	5.40	-0.83	0.143
66.00	-11.97	-3.40	0.00	-251.89	0.00	251.89	2,829.10	1,414.55	3,697.96	1,826.28	5.58	-0.84	0.142
67.00	-11.83	-3.37	0.00	-248.50	0.00	248.50	2,816.24	1,408.12	3,664.21	1,809.61	5.75	-0.86	0.142
68.00	-11.69	-3.35	0.00	-245.12	0.00	245.12	2,803.37	1,401.69	3,630.61	1,793.02	5.93	-0.87	0.141
69.00	-11.55	-3.33	0.00	-241.77	0.00	241.77	2,790.51	1,395.25	3,597.18	1,776.51	6.12	-0.89	0.140
70.00	-11.41	-3.31	0.00	-238.44	0.00	238.44	2,777.64	1,388.82	3,563.89	1,760.07	6.31	-0.90	0.140
71.00	-11.28	-3.28	0.00	-235.14	0.00	235.14	2,764.78	1,382.39	3,530.76	1,743.71	6.50	-0.91	0.139
72.00	-11.14	-3.26	0.00	-231.86	0.00	231.86	2,751.92	1,375.96	3,497.79	1,727.43	6.69	-0.93	0.138
73.00	-11.00	-3.24	0.00	-228.60	0.00	228.60	2,739.05	1,369.53	3,464.97	1,711.22	6.88	-0.94	0.138
74.00	-10.87	-3.21	0.00	-225.36	0.00	225.36	2,726.19	1,363.09	3,432.30	1,695.08	7.08	-0.96	0.137
75.00	-10.73	-3.19	0.00	-222.15	0.00	222.15	2,713.32	1,356.66	3,399.79	1,679.03	7.29	-0.97	0.136
76.00	-10.60	-3.17	0.00	-218.95	0.00	218.95	2,700.46	1,350.23	3,367.44	1,663.05	7.49	-0.99	0.136
77.00	-10.47	-3.15	0.00	-215.79	0.00	215.79	2,687.60	1,343.80	3,335.24	1,647.15	7.70	-1.00	0.135
78.00	-10.33	-3.12	0.00	-212.64	0.00	212.64	2,674.73	1,337.37	3,303.19	1,631.32	7.91	-1.01	0.134
79.00	-10.20	-3.10	0.00	-209.52	0.00	209.52	2,661.87	1,330.93	3,271.30	1,615.57	8.12	-1.03	0.134
80.00	-10.07	-3.08	0.00	-206.42	0.00	206.42	2,649.00	1,324.50	3,239.56	1,599.90	8.34	-1.04	0.133
81.00	-9.94	-3.05	0.00	-203.34	0.00	203.34	2,636.14	1,318.07	3,207.98	1,584.30	8.56	-1.06	0.132
82.00	-9.81	-3.03	0.00	-200.29	0.00	200.29	2,623.28	1,311.64	3,176.55	1,568.78	8.78	-1.07	0.131
83.00	-9.68	-3.01	0.00	-197.26	0.00	197.26	2,610.41	1,305.21	3,145.28	1,553.33	9.01	-1.09	0.131
84.00	-9.55	-2.98	0.00	-194.25	0.00	194.25	2,597.55	1,298.77	3,114.16	1,537.97	9.24	-1.10	0.130
85.00	-9.42	-2.96	0.00	-191.27	0.00	191.27	2,584.68	1,292.34	3,083.20	1,522.68	9.47	-1.12	0.129
85.75	-9.32	-2.95	0.00	-189.05	0.00	189.05	2,575.04	1,287.52	3,060.08	1,511.26	9.65	-1.13	0.129
85.75	-9.32	-2.95	0.00	-189.05	0.00	189.05	1,544.73	772.37	1,851.60	914.44	9.65	-1.13	0.213
86.00	-9.30	-2.94	0.00	-188.31	0.00	188.31	1,543.70	771.85	1,848.04	912.68	9.71	-1.13	0.212
87.00	-9.21	-2.92	0.00	-185.37	0.00	185.37	1,539.55	769.77	1,833.81	905.65	9.95	-1.15	0.211
88.00	-9.13	-2.90	0.00	-182.45	0.00	182.45	1,535.36	767.68	1,819.59	898.63	10.19	-1.17	0.209
89.00	-9.04	-2.87	0.00	-179.56	0.00	179.56	1,531.13	765.57	1,805.38	891.61	10.44	-1.19	0.207
90.00	-8.95	-2.85	0.00	-176.68	0.00	176.68	1,526.87	763.44	1,791.17	884.59	10.69	-1.21	0.206
91.00	-8.86	-2.83	0.00	-173.83	0.00	173.83	1,522.58	761.29	1,776.98	877.58	10.95	-1.24	0.204
92.00	-8.78	-2.81	0.00	-171.00	0.00	171.00	1,518.25	759.12	1,762.79	870.58	11.21	-1.26	0.202
93.00	-8.69	-2.79	0.00	-168.19	0.00	168.19	1,513.88	756.94	1,748.62	863.58	11.47	-1.28	0.201
94.00	-8.60	-2.77	0.00	-165.40	0.00	165.40	1,509.48	754.74	1,734.46	856.59	11.74	-1.30	0.199
95.00	-8.52	-2.75	0.00	-162.63	0.00	162.63	1,505.04	752.52	1,720.31	849.60	12.02	-1.32	0.197
96.00	-8.43	-2.72	0.00	-159.89	0.00	159.89	1,500.57	750.29	1,706.18	842.62	12.29	-1.34	0.195
97.00	-8.35	-2.70	0.00	-157.16	0.00	157.16	1,496.06	748.03	1,692.06	835.64	12.58	-1.36	0.194
98.00	-8.27	-2.68	0.00	-154.46	0.00	154.46	1,491.52	745.76	1,677.95	828.68	12.86	-1.38	0.192
99.00	-8.18	-2.66	0.00	-151.78	0.00	151.78	1,486.94	743.47	1,663.86	821.72	13.16	-1.40	0.190
100.00	-8.10	-2.64	0.00	-149.12	0.00	149.12	1,482.33	741.16	1,649.78	814.77	13.45	-1.42	0.188
101.00	-8.02	-2.62	0.00	-146.48	0.00	146.48	1,477.68	738.84	1,635.72	807.82	13.75	-1.44	0.187
102.00	-7.93	-2.60	0.00	-143.86	0.00	143.86	1,473.00	736.50	1,621.68	800.89	14.06	-1.47	0.185
103.00	-7.85	-2.57	0.00	-141.27	0.00	141.27	1,468.28	734.14	1,607.66	793.96	14.37	-1.49	0.183

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Load Case: 1.0D + 1.0W Serviceability 60 mph 42 Iterations

Gust Response Factor 1.10 Wind Importance Factor 1.00
Dead Load Factor :1.00
Wind Load Factor :1.00

104.00	-7.77	-2.55	0.00	-138.70	0.00	138.70	1,463.52	731.76	1,593.65	787.04	14.68	-1.51	0.182
105.00	-7.69	-2.53	0.00	-136.14	0.00	136.14	1,458.73	729.37	1,579.66	780.14	15.00	-1.53	0.180
106.00	-7.61	-2.51	0.00	-133.61	0.00	133.61	1,453.91	726.95	1,565.69	773.24	15.32	-1.55	0.178
107.00	-7.53	-2.49	0.00	-131.10	0.00	131.10	1,449.04	724.52	1,551.74	766.35	15.65	-1.57	0.176
108.00	-7.45	-2.47	0.00	-128.61	0.00	128.61	1,444.15	722.07	1,537.82	759.47	15.98	-1.59	0.175
109.00	-7.37	-2.45	0.00	-126.15	0.00	126.15	1,439.21	719.61	1,523.91	752.60	16.31	-1.61	0.173
110.00	-7.29	-2.42	0.00	-123.70	0.00	123.70	1,434.25	717.12	1,510.03	745.75	16.65	-1.63	0.171
111.00	-7.21	-2.40	0.00	-121.28	0.00	121.28	1,429.24	714.62	1,496.17	738.90	17.00	-1.65	0.169
112.00	-7.13	-2.38	0.00	-118.88	0.00	118.88	1,424.21	712.10	1,482.33	732.07	17.34	-1.67	0.167
113.00	-7.05	-2.36	0.00	-116.49	0.00	116.49	1,419.13	709.57	1,468.51	725.24	17.70	-1.69	0.166
114.00	-6.97	-2.34	0.00	-114.13	0.00	114.13	1,414.02	707.01	1,454.73	718.43	18.05	-1.71	0.164
115.00	-6.90	-2.32	0.00	-111.80	0.00	111.80	1,408.88	704.44	1,440.96	711.64	18.41	-1.73	0.162
116.00	-6.82	-2.30	0.00	-109.48	0.00	109.48	1,403.70	701.85	1,427.22	704.85	18.78	-1.75	0.160
117.00	-6.74	-2.27	0.00	-107.18	0.00	107.18	1,398.48	699.24	1,413.51	698.08	19.15	-1.77	0.158
118.00	-6.67	-2.25	0.00	-104.91	0.00	104.91	1,393.23	696.62	1,399.83	691.32	19.52	-1.79	0.157
119.00	-6.59	-2.23	0.00	-102.65	0.00	102.65	1,387.95	693.97	1,386.17	684.58	19.90	-1.81	0.155
120.00	-6.52	-2.21	0.00	-100.42	0.00	100.42	1,382.63	691.31	1,372.54	677.85	20.28	-1.83	0.153
121.00	-6.44	-2.19	0.00	-98.21	0.00	98.21	1,377.27	688.64	1,358.94	671.13	20.66	-1.85	0.151
122.00	-6.37	-2.17	0.00	-96.02	0.00	96.02	1,371.88	685.94	1,345.37	664.43	21.05	-1.87	0.149
123.00	-6.30	-2.15	0.00	-93.85	0.00	93.85	1,366.45	683.23	1,331.83	657.74	21.45	-1.89	0.147
124.00	-6.22	-2.13	0.00	-91.70	0.00	91.70	1,360.99	680.49	1,318.33	651.07	21.84	-1.91	0.145
125.00	-6.15	-2.11	0.00	-89.58	0.00	89.58	1,355.49	677.74	1,304.85	644.42	22.24	-1.93	0.144
125.50	-6.11	-2.10	0.00	-88.52	0.00	88.52	1,352.73	676.36	1,298.12	641.09	22.45	-1.94	0.143
125.50	-6.11	-2.10	0.00	-88.52	0.00	88.52	1,127.00	563.50	1,084.41	535.55	22.45	-1.94	0.171
126.00	-6.08	-2.08	0.00	-87.47	0.00	87.47	1,124.94	562.47	1,079.04	532.90	22.65	-1.95	0.170
127.00	-6.02	-2.06	0.00	-85.39	0.00	85.39	1,120.78	560.39	1,068.31	527.60	23.06	-1.97	0.167
128.00	-5.95	-2.04	0.00	-83.32	0.00	83.32	1,116.59	558.29	1,057.61	522.31	23.48	-1.99	0.165
129.00	-5.89	-2.02	0.00	-81.28	0.00	81.28	1,112.36	556.18	1,046.91	517.03	23.89	-2.01	0.163
130.00	-5.82	-2.00	0.00	-79.26	0.00	79.26	1,108.10	554.05	1,036.24	511.76	24.32	-2.03	0.160
131.00	-5.76	-1.98	0.00	-77.25	0.00	77.25	1,103.80	551.90	1,025.58	506.50	24.75	-2.05	0.158
132.00	-5.70	-1.96	0.00	-75.27	0.00	75.27	1,099.47	549.73	1,014.94	501.24	25.18	-2.08	0.155
133.00	-5.64	-1.94	0.00	-73.31	0.00	73.31	1,095.10	547.55	1,004.33	496.00	25.61	-2.10	0.153
134.00	-5.57	-1.92	0.00	-71.37	0.00	71.37	1,090.69	545.35	993.73	490.77	26.06	-2.12	0.151
135.00	-5.51	-1.90	0.00	-69.44	0.00	69.44	1,086.26	543.13	983.15	485.54	26.50	-2.14	0.148
136.00	-5.45	-1.88	0.00	-67.54	0.00	67.54	1,081.78	540.89	972.60	480.33	26.95	-2.16	0.146
137.00	-5.39	-1.86	0.00	-65.66	0.00	65.66	1,077.27	538.64	962.07	475.13	27.41	-2.18	0.143
138.00	-5.33	-1.84	0.00	-63.80	0.00	63.80	1,072.73	536.36	951.56	469.94	27.86	-2.20	0.141
139.00	-5.27	-1.82	0.00	-61.96	0.00	61.96	1,068.14	534.07	941.07	464.76	28.33	-2.22	0.138
140.00	-5.21	-1.80	0.00	-60.13	0.00	60.13	1,063.53	531.76	930.61	459.59	28.79	-2.24	0.136
141.00	-5.15	-1.78	0.00	-58.33	0.00	58.33	1,058.88	529.44	920.17	454.44	29.26	-2.26	0.133
142.00	-5.09	-1.76	0.00	-56.55	0.00	56.55	1,054.19	527.09	909.76	449.30	29.74	-2.28	0.131
143.00	-5.03	-1.74	0.00	-54.79	0.00	54.79	1,049.47	524.73	899.37	444.17	30.22	-2.30	0.128
144.00	-4.98	-1.72	0.00	-53.04	0.00	53.04	1,044.71	522.35	889.01	439.05	30.70	-2.31	0.126
145.00	-4.92	-1.70	0.00	-51.32	0.00	51.32	1,039.92	519.96	878.68	433.95	31.19	-2.33	0.123
146.00	-4.86	-1.68	0.00	-49.62	0.00	49.62	1,035.09	517.54	868.38	428.86	31.68	-2.35	0.120
147.00	-4.80	-1.66	0.00	-47.93	0.00	47.93	1,030.22	515.11	858.10	423.79	32.17	-2.37	0.118
148.00	-4.75	-1.64	0.00	-46.27	0.00	46.27	1,025.32	512.66	847.86	418.72	32.67	-2.39	0.115
149.00	-4.69	-1.63	0.00	-44.63	0.00	44.63	1,020.39	510.19	837.64	413.68	33.17	-2.41	0.112
150.00	-4.63	-1.61	0.00	-43.00	0.00	43.00	1,015.42	507.71	827.46	408.65	33.68	-2.42	0.110
151.00	-4.58	-1.59	0.00	-41.39	0.00	41.39	1,010.41	505.21	817.30	403.63	34.19	-2.44	0.107
152.00	-4.52	-1.57	0.00	-39.81	0.00	39.81	1,005.37	502.69	807.18	398.64	34.70	-2.46	0.104
153.00	-4.47	-1.55	0.00	-38.24	0.00	38.24	1,000.30	500.15	797.09	393.65	35.22	-2.47	0.102
154.00	-4.41	-1.53	0.00	-36.69	0.00	36.69	995.19	497.59	787.03	388.69	35.74	-2.49	0.099
155.00	-4.36	-1.51	0.00	-35.16	0.00	35.16	990.04	495.02	777.01	383.74	36.26	-2.51	0.096
156.00	-4.30	-1.49	0.00	-33.65	0.00	33.65	983.06	491.53	765.62	378.11	36.79	-2.52	0.093
157.00	-4.25	-1.47	0.00	-32.16	0.00	32.16	975.56	487.78	753.91	372.33	37.32	-2.54	0.091
158.00	-4.20	-1.45	0.00	-30.69	0.00	30.69	968.05	484.03	742.29	366.59	37.85	-2.55	0.088

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Load Case: 1.0D + 1.0W Serviceability 60 mph 42 Iterations

Gust Response Factor 1.10 Wind Importance Factor 1.00
Dead Load Factor : 1.00
Wind Load Factor : 1.00

159.00	-4.15	-1.43	0.00	-29.24	0.00	29.24	960.55	480.27	730.76	360.90	38.38	-2.57	0.085
160.00	-4.09	-1.42	0.00	-27.81	0.00	27.81	953.04	476.52	719.32	355.25	38.92	-2.58	0.083
161.00	-4.04	-1.40	0.00	-26.39	0.00	26.39	945.54	472.77	707.97	349.64	39.47	-2.60	0.080
162.00	-3.99	-1.38	0.00	-25.00	0.00	25.00	938.04	469.02	696.71	344.08	40.01	-2.61	0.077
163.00	-3.94	-1.36	0.00	-23.62	0.00	23.62	930.53	465.27	685.54	338.56	40.56	-2.62	0.074
164.00	-3.89	-1.34	0.00	-22.26	0.00	22.26	923.03	461.51	674.47	333.09	41.11	-2.63	0.071
165.00	-3.84	-1.32	0.00	-20.92	0.00	20.92	915.52	457.76	663.48	327.67	41.66	-2.65	0.068
166.00	-3.79	-1.30	0.00	-19.60	0.00	19.60	908.02	454.01	652.58	322.29	42.22	-2.66	0.065
167.00	-3.74	-1.29	0.00	-18.29	0.00	18.29	900.52	450.26	641.77	316.95	42.77	-2.67	0.062
168.00	-3.69	-1.27	0.00	-17.01	0.00	17.01	893.01	446.51	631.06	311.65	43.33	-2.68	0.059
169.00	-3.64	-1.25	0.00	-15.74	0.00	15.74	885.51	442.75	620.43	306.41	43.90	-2.69	0.055
170.00	-3.59	-1.23	0.00	-14.49	0.00	14.49	878.00	439.00	609.89	301.20	44.46	-2.70	0.052
171.00	-3.54	-1.21	0.00	-13.26	0.00	13.26	870.50	435.25	599.45	296.04	45.03	-2.71	0.049
172.00	-3.49	-1.20	0.00	-12.05	0.00	12.05	863.00	431.50	589.09	290.93	45.60	-2.72	0.045
173.00	-3.44	-1.18	0.00	-10.85	0.00	10.85	855.49	427.75	578.82	285.86	46.17	-2.73	0.042
174.00	-3.40	-1.16	0.00	-9.67	0.00	9.67	847.99	423.99	568.65	280.83	46.74	-2.73	0.038
175.00	-3.35	-1.14	0.00	-8.51	0.00	8.51	840.48	420.24	558.56	275.85	47.31	-2.74	0.035
176.00	-3.30	-1.12	0.00	-7.37	0.00	7.37	832.98	416.49	548.57	270.92	47.88	-2.75	0.031
177.00	-3.26	-1.11	0.00	-6.25	0.00	6.25	825.48	412.74	538.66	266.02	48.46	-2.75	0.027
178.00	-3.21	-1.09	0.00	-5.14	0.00	5.14	817.97	408.99	528.85	261.18	49.04	-2.75	0.024
179.00	-3.16	-1.07	0.00	-4.05	0.00	4.05	810.47	405.23	519.12	256.38	49.61	-2.76	0.020
180.00	-0.02	-0.01	0.00	0.00	0.00	0.00	802.96	401.48	509.49	251.62	50.19	-2.76	0.000
180.58	0.00	0.00	0.00	0.00	0.00	0.00	798.59	399.29	503.91	248.86	50.53	-2.76	0.000

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Equivalent Lateral Forces Method Analysis

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

Spectral Response Acceleration for Short Period (S_s):	0.17
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.06
Long-Period Transition Period (T_L):	6
Importance Factor (I_E):	1.00
Site Coefficient F_a:	1.60
Site Coeffiecient F_v:	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.18
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):	3.39
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	2.00
Total Unfactored Dead Load:	23.67 k
Seismic Base Shear (E):	0.92 k

Load Case (1.2 + 0.2Sds) * DL + E ELFM Seismic Equivalent Lateral Forces Method

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
184	180.29	22	701	0.003	3	27
183	179.50	46	1,483	0.006	6	57
182	178.50	46	1,478	0.006	6	57
181	177.50	47	1,472	0.006	6	58
180	176.50	47	1,467	0.006	6	58
179	175.50	47	1,461	0.006	6	59
178	174.50	48	1,455	0.006	6	59
177	173.50	48	1,449	0.006	6	60
176	172.50	48	1,442	0.006	6	60
175	171.50	49	1,436	0.006	6	60
174	170.50	49	1,429	0.006	6	61
173	169.50	50	1,422	0.006	6	61
172	168.50	50	1,415	0.006	5	62
171	167.50	50	1,408	0.006	5	62
170	166.50	51	1,401	0.006	5	63
169	165.50	51	1,394	0.006	5	63
168	164.50	51	1,387	0.006	5	63
167	163.50	52	1,379	0.006	5	64
166	162.50	52	1,371	0.006	5	64
165	161.50	52	1,364	0.006	5	65
164	160.50	53	1,356	0.006	5	65
163	159.50	53	1,348	0.006	5	66
162	158.50	53	1,339	0.006	5	66

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161	157.50	54	1,331	0.006	5	66
160	156.50	54	1,323	0.006	5	67
159	155.50	54	1,314	0.006	5	67
158	154.50	55	1,306	0.005	5	68
157	153.50	55	1,297	0.005	5	68
156	152.50	55	1,288	0.005	5	69
155	151.50	56	1,279	0.005	5	69
154	150.50	56	1,270	0.005	5	69
153	149.50	56	1,261	0.005	5	70
152	148.50	57	1,252	0.005	5	70
151	147.50	57	1,243	0.005	5	71
150	146.50	57	1,234	0.005	5	71
149	145.50	58	1,224	0.005	5	72
148	144.50	58	1,215	0.005	5	72
147	143.50	59	1,205	0.005	5	72
146	142.50	59	1,195	0.005	5	73
145	141.50	59	1,185	0.005	5	73
144	140.50	60	1,176	0.005	5	74
143	139.50	60	1,166	0.005	5	74
142	138.50	60	1,156	0.005	4	75
141	137.50	61	1,146	0.005	4	75
140	136.50	61	1,135	0.005	4	75
139	135.50	61	1,125	0.005	4	76
138	134.50	62	1,115	0.005	4	76
137	133.50	62	1,105	0.005	4	77
136	132.50	62	1,094	0.005	4	77
135	131.50	63	1,084	0.005	4	78
134	130.50	63	1,073	0.005	4	78
133	129.50	63	1,063	0.004	4	78
132	128.50	64	1,052	0.004	4	79
131	127.50	64	1,041	0.004	4	79
130	126.50	64	1,031	0.004	4	80
129	125.75	32	511	0.002	2	40
128	125.25	36	571	0.002	2	45
127	124.50	73	1,132	0.005	4	90
126	123.50	73	1,120	0.005	4	91
125	122.50	74	1,108	0.005	4	91
124	121.50	74	1,096	0.005	4	92
123	120.50	75	1,084	0.005	4	92
122	119.50	75	1,071	0.004	4	93
121	118.50	75	1,059	0.004	4	93
120	117.50	76	1,047	0.004	4	94
119	116.50	76	1,034	0.004	4	94
118	115.50	77	1,022	0.004	4	95
117	114.50	77	1,010	0.004	4	95
116	113.50	77	997	0.004	4	96
115	112.50	78	985	0.004	4	96
114	111.50	78	972	0.004	4	97
113	110.50	79	960	0.004	4	97
112	109.50	79	947	0.004	4	98
111	108.50	79	935	0.004	4	98
110	107.50	80	922	0.004	4	99
109	106.50	80	909	0.004	4	99
108	105.50	81	897	0.004	3	100
107	104.50	81	884	0.004	3	100
106	103.50	81	872	0.004	3	101
105	102.50	82	859	0.004	3	101
104	101.50	82	846	0.004	3	102
103	100.50	83	834	0.004	3	102
102	99.50	83	821	0.003	3	103
101	98.50	83	809	0.003	3	103
100	97.50	84	796	0.003	3	104
99	96.50	84	783	0.003	3	104
98	95.50	85	771	0.003	3	105

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97	94.50	85	758	0.003	3	105
96	93.50	85	746	0.003	3	106
95	92.50	86	733	0.003	3	106
94	91.50	86	721	0.003	3	107
93	90.50	87	709	0.003	3	107
92	89.50	87	696	0.003	3	107
91	88.50	87	684	0.003	3	108
90	87.50	88	671	0.003	3	108
89	86.50	88	659	0.003	3	109
88	85.88	22	163	0.001	1	27
87	85.38	96	699	0.003	3	119
86	84.50	128	917	0.004	4	159
85	83.50	129	899	0.004	3	160
84	82.50	130	882	0.004	3	160
83	81.50	130	865	0.004	3	161
82	80.50	131	848	0.004	3	162
81	79.50	131	830	0.003	3	163
80	78.50	132	813	0.003	3	163
79	77.50	133	796	0.003	3	164
78	76.50	133	779	0.003	3	165
77	75.50	134	762	0.003	3	165
76	74.50	134	746	0.003	3	166
75	73.50	135	729	0.003	3	167
74	72.50	136	712	0.003	3	168
73	71.50	136	696	0.003	3	168
72	70.50	137	680	0.003	3	169
71	69.50	137	663	0.003	3	170
70	68.50	138	647	0.003	3	171
69	67.50	139	631	0.003	2	171
68	66.50	139	615	0.003	2	172
67	65.50	140	599	0.003	2	173
66	64.50	140	584	0.002	2	174
65	63.50	141	568	0.002	2	174
64	62.50	141	553	0.002	2	175
63	61.50	142	537	0.002	2	176
62	60.50	143	522	0.002	2	176
61	59.50	143	507	0.002	2	177
60	58.50	144	492	0.002	2	178
59	57.50	144	478	0.002	2	179
58	56.50	145	463	0.002	2	179
57	55.50	146	449	0.002	2	180
56	54.50	146	434	0.002	2	181
55	53.50	147	420	0.002	2	182
54	52.50	147	406	0.002	2	182
53	51.50	148	393	0.002	2	183
52	50.50	149	379	0.002	1	184
51	49.50	149	366	0.002	1	185
50	48.50	150	352	0.001	1	185
49	47.50	150	339	0.001	1	186
48	46.50	151	326	0.001	1	187
47	45.50	152	314	0.001	1	187
46	44.88	38	76	0.000	0	47
45	44.38	132	260	0.001	1	163
44	43.50	176	334	0.001	1	218
43	42.50	177	320	0.001	1	219
42	41.50	178	306	0.001	1	220
41	40.50	179	293	0.001	1	221
40	39.50	179	280	0.001	1	222
39	38.50	180	267	0.001	1	223
38	37.50	181	254	0.001	1	223
37	36.50	181	242	0.001	1	224
36	35.50	182	229	0.001	1	225
35	34.50	183	217	0.001	1	226
34	33.50	183	206	0.001	1	227

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33	32.50	184	194	0.001	1	228
32	31.50	185	183	0.001	1	229
31	30.50	185	173	0.001	1	229
30	29.50	186	162	0.001	1	230
29	28.50	187	152	0.001	1	231
28	27.50	188	142	0.001	1	232
27	26.50	188	132	0.001	1	233
26	25.50	189	123	0.001	0	234
25	24.50	190	114	0.000	0	235
24	23.50	190	105	0.000	0	235
23	22.50	191	97	0.000	0	236
22	21.50	192	89	0.000	0	237
21	20.50	192	81	0.000	0	238
20	19.50	193	73	0.000	0	239
19	18.50	194	66	0.000	0	240
18	17.50	194	60	0.000	0	241
17	16.50	195	53	0.000	0	241
16	15.50	196	47	0.000	0	242
15	14.50	197	41	0.000	0	243
14	13.50	197	36	0.000	0	244
13	12.50	198	31	0.000	0	245
12	11.50	199	26	0.000	0	246
11	10.50	199	22	0.000	0	247
10	9.50	200	18	0.000	0	247
9	8.50	201	15	0.000	0	248
8	7.50	201	11	0.000	0	249
7	6.50	202	9	0.000	0	250
6	5.50	203	6	0.000	0	251
5	4.50	203	4	0.000	0	252
4	3.50	204	3	0.000	0	253
3	2.50	205	1	0.000	0	253
2	1.50	206	0	0.000	0	254
1	0.50	206	0	0.000	0	255
Kaelus DBC0061F1V51-	180.00	76	2,479	0.010	10	95
Raycap DC6-48-60-18-	180.00	20	648	0.003	3	25
Powerwave LGP17201	180.00	186	6,026	0.025	23	230
Ericsson RRUS-11 800	180.00	162	5,249	0.022	20	200
Ericsson RRUS 32 B2	180.00	159	5,152	0.022	20	197
KMW AM-X-CD-14-65-00	180.00	36	1,179	0.005	5	45
Powerwave 7770.00	180.00	105	3,402	0.014	13	130
Quintel QS46512-2	180.00	104	3,370	0.014	13	129
Andrew SBNH-1D6565C	180.00	132	4,283	0.018	17	164
CCI TPA-65R-LCUUUU-H	180.00	163	5,288	0.022	20	202
Round Platform w/ Ha	180.00	2,000	64,800	0.272	251	2,474
		23,666	238,166	1.000	923	29,273

Load Case (0.9 - 0.2Sds) * DL + E ELFM Seismic (Reduced DL) Equivalent Lateral Forces Method

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
184	180.29	22	701	0.003	3	19
183	179.50	46	1,483	0.006	6	40
182	178.50	46	1,478	0.006	6	40
181	177.50	47	1,472	0.006	6	40
180	176.50	47	1,467	0.006	6	41
179	175.50	47	1,461	0.006	6	41
178	174.50	48	1,455	0.006	6	41
177	173.50	48	1,449	0.006	6	42
176	172.50	48	1,442	0.006	6	42
175	171.50	49	1,436	0.006	6	42

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174	170.50	49	1,429	0.006	6	42
173	169.50	50	1,422	0.006	6	43
172	168.50	50	1,415	0.006	5	43
171	167.50	50	1,408	0.006	5	43
170	166.50	51	1,401	0.006	5	44
169	165.50	51	1,394	0.006	5	44
168	164.50	51	1,387	0.006	5	44
167	163.50	52	1,379	0.006	5	45
166	162.50	52	1,371	0.006	5	45
165	161.50	52	1,364	0.006	5	45
164	160.50	53	1,356	0.006	5	45
163	159.50	53	1,348	0.006	5	46
162	158.50	53	1,339	0.006	5	46
161	157.50	54	1,331	0.006	5	46
160	156.50	54	1,323	0.006	5	47
159	155.50	54	1,314	0.006	5	47
158	154.50	55	1,306	0.005	5	47
157	153.50	55	1,297	0.005	5	48
156	152.50	55	1,288	0.005	5	48
155	151.50	56	1,279	0.005	5	48
154	150.50	56	1,270	0.005	5	48
153	149.50	56	1,261	0.005	5	49
152	148.50	57	1,252	0.005	5	49
151	147.50	57	1,243	0.005	5	49
150	146.50	57	1,234	0.005	5	50
149	145.50	58	1,224	0.005	5	50
148	144.50	58	1,215	0.005	5	50
147	143.50	59	1,205	0.005	5	51
146	142.50	59	1,195	0.005	5	51
145	141.50	59	1,185	0.005	5	51
144	140.50	60	1,176	0.005	5	51
143	139.50	60	1,166	0.005	5	52
142	138.50	60	1,156	0.005	4	52
141	137.50	61	1,146	0.005	4	52
140	136.50	61	1,135	0.005	4	53
139	135.50	61	1,125	0.005	4	53
138	134.50	62	1,115	0.005	4	53
137	133.50	62	1,105	0.005	4	53
136	132.50	62	1,094	0.005	4	54
135	131.50	63	1,084	0.005	4	54
134	130.50	63	1,073	0.005	4	54
133	129.50	63	1,063	0.004	4	55
132	128.50	64	1,052	0.004	4	55
131	127.50	64	1,041	0.004	4	55
130	126.50	64	1,031	0.004	4	56
129	125.75	32	511	0.002	2	28
128	125.25	36	571	0.002	2	31
127	124.50	73	1,132	0.005	4	63
126	123.50	73	1,120	0.005	4	63
125	122.50	74	1,108	0.005	4	64
124	121.50	74	1,096	0.005	4	64
123	120.50	75	1,084	0.005	4	64
122	119.50	75	1,071	0.004	4	65
121	118.50	75	1,059	0.004	4	65
120	117.50	76	1,047	0.004	4	65
119	116.50	76	1,034	0.004	4	66
118	115.50	77	1,022	0.004	4	66
117	114.50	77	1,010	0.004	4	66
116	113.50	77	997	0.004	4	67
115	112.50	78	985	0.004	4	67
114	111.50	78	972	0.004	4	67
113	110.50	79	960	0.004	4	68
112	109.50	79	947	0.004	4	68
111	108.50	79	935	0.004	4	69

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110	107.50	80	922	0.004	4	69
109	106.50	80	909	0.004	4	69
108	105.50	81	897	0.004	3	70
107	104.50	81	884	0.004	3	70
106	103.50	81	872	0.004	3	70
105	102.50	82	859	0.004	3	71
104	101.50	82	846	0.004	3	71
103	100.50	83	834	0.004	3	71
102	99.50	83	821	0.003	3	72
101	98.50	83	809	0.003	3	72
100	97.50	84	796	0.003	3	72
99	96.50	84	783	0.003	3	73
98	95.50	85	771	0.003	3	73
97	94.50	85	758	0.003	3	73
96	93.50	85	746	0.003	3	74
95	92.50	86	733	0.003	3	74
94	91.50	86	721	0.003	3	74
93	90.50	87	709	0.003	3	75
92	89.50	87	696	0.003	3	75
91	88.50	87	684	0.003	3	75
90	87.50	88	671	0.003	3	76
89	86.50	88	659	0.003	3	76
88	85.88	22	163	0.001	1	19
87	85.38	96	699	0.003	3	83
86	84.50	128	917	0.004	4	111
85	83.50	129	899	0.004	3	111
84	82.50	130	882	0.004	3	112
83	81.50	130	865	0.004	3	112
82	80.50	131	848	0.004	3	113
81	79.50	131	830	0.003	3	113
80	78.50	132	813	0.003	3	114
79	77.50	133	796	0.003	3	114
78	76.50	133	779	0.003	3	115
77	75.50	134	762	0.003	3	115
76	74.50	134	746	0.003	3	116
75	73.50	135	729	0.003	3	116
74	72.50	136	712	0.003	3	117
73	71.50	136	696	0.003	3	117
72	70.50	137	680	0.003	3	118
71	69.50	137	663	0.003	3	119
70	68.50	138	647	0.003	3	119
69	67.50	139	631	0.003	2	120
68	66.50	139	615	0.003	2	120
67	65.50	140	599	0.003	2	121
66	64.50	140	584	0.002	2	121
65	63.50	141	568	0.002	2	122
64	62.50	141	553	0.002	2	122
63	61.50	142	537	0.002	2	123
62	60.50	143	522	0.002	2	123
61	59.50	143	507	0.002	2	124
60	58.50	144	492	0.002	2	124
59	57.50	144	478	0.002	2	125
58	56.50	145	463	0.002	2	125
57	55.50	146	449	0.002	2	126
56	54.50	146	434	0.002	2	126
55	53.50	147	420	0.002	2	127
54	52.50	147	406	0.002	2	127
53	51.50	148	393	0.002	2	128
52	50.50	149	379	0.002	1	128
51	49.50	149	366	0.002	1	129
50	48.50	150	352	0.001	1	129
49	47.50	150	339	0.001	1	130
48	46.50	151	326	0.001	1	130
47	45.50	152	314	0.001	1	131

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46	44.88	38	76	0.000	0	33
45	44.38	132	260	0.001	1	114
44	43.50	176	334	0.001	1	152
43	42.50	177	320	0.001	1	153
42	41.50	178	306	0.001	1	153
41	40.50	179	293	0.001	1	154
40	39.50	179	280	0.001	1	155
39	38.50	180	267	0.001	1	155
38	37.50	181	254	0.001	1	156
37	36.50	181	242	0.001	1	156
36	35.50	182	229	0.001	1	157
35	34.50	183	217	0.001	1	158
34	33.50	183	206	0.001	1	158
33	32.50	184	194	0.001	1	159
32	31.50	185	183	0.001	1	159
31	30.50	185	173	0.001	1	160
30	29.50	186	162	0.001	1	161
29	28.50	187	152	0.001	1	161
28	27.50	188	142	0.001	1	162
27	26.50	188	132	0.001	1	162
26	25.50	189	123	0.001	0	163
25	24.50	190	114	0.000	0	164
24	23.50	190	105	0.000	0	164
23	22.50	191	97	0.000	0	165
22	21.50	192	89	0.000	0	165
21	20.50	192	81	0.000	0	166
20	19.50	193	73	0.000	0	167
19	18.50	194	66	0.000	0	167
18	17.50	194	60	0.000	0	168
17	16.50	195	53	0.000	0	168
16	15.50	196	47	0.000	0	169
15	14.50	197	41	0.000	0	170
14	13.50	197	36	0.000	0	170
13	12.50	198	31	0.000	0	171
12	11.50	199	26	0.000	0	171
11	10.50	199	22	0.000	0	172
10	9.50	200	18	0.000	0	173
9	8.50	201	15	0.000	0	173
8	7.50	201	11	0.000	0	174
7	6.50	202	9	0.000	0	174
6	5.50	203	6	0.000	0	175
5	4.50	203	4	0.000	0	176
4	3.50	204	3	0.000	0	176
3	2.50	205	1	0.000	0	177
2	1.50	206	0	0.000	0	177
1	0.50	206	0	0.000	0	178
Kaelus DBC0061F1V51-	180.00	76	2,479	0.010	10	66
Raycap DC6-48-60-18-	180.00	20	648	0.003	3	17
Powerwave LGP17201	180.00	186	6,026	0.025	23	161
Ericsson RRUS-11 800	180.00	162	5,249	0.022	20	140
Ericsson RRUS 32 B2	180.00	159	5,152	0.022	20	137
KMW AM-X-CD-14-65-00	180.00	36	1,179	0.005	5	31
Powerwave 7770.00	180.00	105	3,402	0.014	13	91
Quintel QS46512-2	180.00	104	3,370	0.014	13	90
Andrew SBNH-1D6565C	180.00	132	4,283	0.018	17	114
CCI TPA-65R-LCUUUU-H	180.00	163	5,288	0.022	20	141
Round Platform w/ Ha	180.00	2,000	64,800	0.272	251	1,726
		23,666	238,166	1.000	923	20,426

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Load Case (1.2 + 0.2Sds) * DL + E ELFM Seismic Equivalent Lateral Forces Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-29.02	-0.92	0.00	-146.64	0.00	146.64	4,173.88	2,086.94	7,090.68	3,501.82	0.00	0.00	0.049
1.00	-28.76	-0.92	0.00	-145.72	0.00	145.72	4,164.30	2,082.15	7,049.35	3,481.41	0.00	0.00	0.049
2.00	-28.51	-0.93	0.00	-144.80	0.00	144.80	4,154.67	2,077.34	7,008.08	3,461.03	0.00	-0.01	0.049
3.00	-28.26	-0.93	0.00	-143.87	0.00	143.87	4,145.02	2,072.51	6,966.87	3,440.67	0.00	-0.01	0.049
4.00	-28.01	-0.93	0.00	-142.95	0.00	142.95	4,135.32	2,067.66	6,925.71	3,420.35	0.01	-0.01	0.049
5.00	-27.75	-0.93	0.00	-142.02	0.00	142.02	4,125.60	2,062.80	6,884.61	3,400.05	0.01	-0.02	0.048
6.00	-27.50	-0.93	0.00	-141.09	0.00	141.09	4,115.83	2,057.92	6,843.57	3,379.78	0.01	-0.02	0.048
7.00	-27.26	-0.93	0.00	-140.16	0.00	140.16	4,106.03	2,053.02	6,802.59	3,359.54	0.02	-0.02	0.048
8.00	-27.01	-0.93	0.00	-139.22	0.00	139.22	4,096.20	2,048.10	6,761.66	3,339.33	0.02	-0.03	0.048
9.00	-26.76	-0.94	0.00	-138.29	0.00	138.29	4,086.33	2,043.16	6,720.80	3,319.15	0.03	-0.03	0.048
10.00	-26.51	-0.94	0.00	-137.35	0.00	137.35	4,076.42	2,038.21	6,680.00	3,299.00	0.04	-0.03	0.048
11.00	-26.27	-0.94	0.00	-136.41	0.00	136.41	4,066.48	2,033.24	6,639.26	3,278.88	0.04	-0.04	0.048
12.00	-26.02	-0.94	0.00	-135.48	0.00	135.48	4,056.51	2,028.25	6,598.58	3,258.79	0.05	-0.04	0.048
13.00	-25.78	-0.94	0.00	-134.54	0.00	134.54	4,046.49	2,023.25	6,557.96	3,238.73	0.06	-0.04	0.048
14.00	-25.54	-0.94	0.00	-133.59	0.00	133.59	4,036.45	2,018.22	6,517.41	3,218.70	0.07	-0.05	0.048
15.00	-25.29	-0.94	0.00	-132.65	0.00	132.65	4,026.36	2,013.18	6,476.92	3,198.71	0.08	-0.05	0.048
16.00	-25.05	-0.94	0.00	-131.71	0.00	131.71	4,016.25	2,008.12	6,436.49	3,178.74	0.09	-0.05	0.048
17.00	-24.81	-0.95	0.00	-130.76	0.00	130.76	4,006.09	2,003.05	6,396.13	3,158.81	0.10	-0.06	0.048
18.00	-24.57	-0.95	0.00	-129.82	0.00	129.82	3,995.91	1,997.95	6,355.84	3,138.91	0.11	-0.06	0.048
19.00	-24.33	-0.95	0.00	-128.87	0.00	128.87	3,985.68	1,992.84	6,315.61	3,119.04	0.13	-0.06	0.047
20.00	-24.09	-0.95	0.00	-127.92	0.00	127.92	3,975.42	1,987.71	6,275.45	3,099.21	0.14	-0.07	0.047
21.00	-23.86	-0.95	0.00	-126.97	0.00	126.97	3,965.13	1,982.56	6,235.36	3,079.41	0.16	-0.07	0.047
22.00	-23.62	-0.95	0.00	-126.02	0.00	126.02	3,954.48	1,977.24	6,194.84	3,059.40	0.17	-0.08	0.047
23.00	-23.39	-0.95	0.00	-125.07	0.00	125.07	3,939.47	1,969.74	6,147.64	3,036.09	0.19	-0.08	0.047
24.00	-23.15	-0.95	0.00	-124.12	0.00	124.12	3,924.46	1,962.23	6,100.62	3,012.87	0.21	-0.08	0.047
25.00	-22.92	-0.95	0.00	-123.17	0.00	123.17	3,909.45	1,954.73	6,053.78	2,989.74	0.22	-0.09	0.047
26.00	-22.68	-0.95	0.00	-122.22	0.00	122.22	3,894.45	1,947.22	6,007.13	2,966.69	0.24	-0.09	0.047
27.00	-22.45	-0.95	0.00	-121.27	0.00	121.27	3,879.44	1,939.72	5,960.65	2,943.74	0.26	-0.09	0.047
28.00	-22.22	-0.95	0.00	-120.31	0.00	120.31	3,864.43	1,932.22	5,914.36	2,920.88	0.28	-0.10	0.047
29.00	-21.99	-0.95	0.00	-119.36	0.00	119.36	3,849.42	1,924.71	5,868.24	2,898.10	0.30	-0.10	0.047
30.00	-21.76	-0.95	0.00	-118.40	0.00	118.40	3,834.41	1,917.21	5,822.31	2,875.42	0.32	-0.10	0.047
31.00	-21.53	-0.95	0.00	-117.45	0.00	117.45	3,819.41	1,909.70	5,776.55	2,852.82	0.35	-0.11	0.047
32.00	-21.30	-0.96	0.00	-116.50	0.00	116.50	3,804.40	1,902.20	5,730.98	2,830.32	0.37	-0.11	0.047
33.00	-21.08	-0.96	0.00	-115.54	0.00	115.54	3,789.39	1,894.70	5,685.59	2,807.90	0.39	-0.12	0.047
34.00	-20.85	-0.96	0.00	-114.58	0.00	114.58	3,774.38	1,887.19	5,640.38	2,785.57	0.42	-0.12	0.047
35.00	-20.63	-0.96	0.00	-113.63	0.00	113.63	3,759.37	1,879.69	5,595.34	2,763.33	0.44	-0.12	0.047
36.00	-20.40	-0.96	0.00	-112.67	0.00	112.67	3,744.37	1,872.18	5,550.49	2,741.18	0.47	-0.13	0.047
37.00	-20.18	-0.96	0.00	-111.72	0.00	111.72	3,729.36	1,864.68	5,505.82	2,719.12	0.50	-0.13	0.046
38.00	-19.96	-0.95	0.00	-110.76	0.00	110.76	3,714.35	1,857.18	5,461.33	2,697.15	0.52	-0.13	0.046
39.00	-19.73	-0.95	0.00	-109.81	0.00	109.81	3,699.34	1,849.67	5,417.02	2,675.26	0.55	-0.14	0.046
40.00	-19.51	-0.95	0.00	-108.86	0.00	108.86	3,684.33	1,842.17	5,372.89	2,653.47	0.58	-0.14	0.046
41.00	-19.29	-0.95	0.00	-107.90	0.00	107.90	3,669.33	1,834.66	5,328.94	2,631.76	0.61	-0.15	0.046
42.00	-19.07	-0.95	0.00	-106.95	0.00	106.95	3,654.32	1,827.16	5,285.17	2,610.15	0.64	-0.15	0.046
43.00	-18.86	-0.95	0.00	-105.99	0.00	105.99	3,639.31	1,819.66	5,241.59	2,588.62	0.68	-0.15	0.046
44.00	-18.69	-0.95	0.00	-105.04	0.00	105.04	3,624.30	1,812.15	5,198.18	2,567.18	0.71	-0.16	0.046
44.75	-18.65	-0.95	0.00	-104.33	0.00	104.33	3,613.05	1,806.52	5,165.74	2,551.17	0.73	-0.16	0.046
44.75	-18.65	-0.95	0.00	-104.33	0.00	104.33	3,037.33	1,518.66	4,358.22	2,152.36	0.73	-0.16	0.055
45.00	-18.46	-0.95	0.00	-104.09	0.00	104.09	3,035.24	1,517.62	4,350.67	2,148.63	0.74	-0.16	0.055
46.00	-18.27	-0.95	0.00	-103.14	0.00	103.14	3,026.89	1,513.44	4,320.50	2,133.73	0.78	-0.17	0.054
47.00	-18.09	-0.95	0.00	-102.19	0.00	102.19	3,018.50	1,509.25	4,290.37	2,118.85	0.81	-0.17	0.054
48.00	-17.90	-0.95	0.00	-101.24	0.00	101.24	3,010.08	1,505.04	4,260.30	2,104.00	0.85	-0.18	0.054
49.00	-17.72	-0.95	0.00	-100.29	0.00	100.29	3,001.62	1,500.81	4,230.28	2,089.17	0.88	-0.18	0.054
50.00	-17.53	-0.95	0.00	-99.34	0.00	99.34	2,993.12	1,496.56	4,200.31	2,074.37	0.92	-0.18	0.054
51.00	-17.35	-0.95	0.00	-98.39	0.00	98.39	2,984.59	1,492.30	4,170.39	2,059.60	0.96	-0.19	0.054
52.00	-17.17	-0.95	0.00	-97.44	0.00	97.44	2,976.02	1,488.01	4,140.52	2,044.85	1.00	-0.19	0.053
53.00	-16.98	-0.95	0.00	-96.49	0.00	96.49	2,967.42	1,483.71	4,110.71	2,030.13	1.04	-0.20	0.053

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54.00	-16.80	-0.95	0.00	-95.54	0.00	95.54	2,958.79	1,479.39	4,080.96	2,015.43	1.09	-0.20	0.053
55.00	-16.62	-0.94	0.00	-94.60	0.00	94.60	2,950.11	1,475.06	4,051.26	2,000.76	1.13	-0.21	0.053
56.00	-16.44	-0.94	0.00	-93.65	0.00	93.65	2,941.41	1,470.70	4,021.62	1,986.12	1.17	-0.21	0.053
57.00	-16.27	-0.94	0.00	-92.71	0.00	92.71	2,932.66	1,466.33	3,992.03	1,971.51	1.22	-0.22	0.053
58.00	-16.09	-0.94	0.00	-91.77	0.00	91.77	2,923.89	1,461.94	3,962.50	1,956.93	1.26	-0.22	0.052
59.00	-15.91	-0.94	0.00	-90.83	0.00	90.83	2,915.07	1,457.54	3,933.03	1,942.37	1.31	-0.23	0.052
60.00	-15.73	-0.94	0.00	-89.89	0.00	89.89	2,906.28	1,453.14	3,903.69	1,927.89	1.36	-0.23	0.052
61.00	-15.56	-0.94	0.00	-88.95	0.00	88.95	2,893.42	1,446.71	3,869.02	1,910.76	1.41	-0.24	0.052
62.00	-15.38	-0.94	0.00	-88.01	0.00	88.01	2,880.56	1,440.28	3,834.50	1,893.71	1.46	-0.24	0.052
63.00	-15.21	-0.93	0.00	-87.08	0.00	87.08	2,867.69	1,433.85	3,800.13	1,876.74	1.51	-0.25	0.052
64.00	-15.03	-0.93	0.00	-86.14	0.00	86.14	2,854.83	1,427.41	3,765.92	1,859.84	1.56	-0.25	0.052
65.00	-14.86	-0.93	0.00	-85.21	0.00	85.21	2,841.96	1,420.98	3,731.86	1,843.02	1.61	-0.26	0.051
66.00	-14.69	-0.93	0.00	-84.28	0.00	84.28	2,829.10	1,414.55	3,697.96	1,826.28	1.67	-0.26	0.051
67.00	-14.52	-0.93	0.00	-83.35	0.00	83.35	2,816.24	1,408.12	3,664.21	1,809.61	1.72	-0.26	0.051
68.00	-14.35	-0.92	0.00	-82.43	0.00	82.43	2,803.37	1,401.69	3,630.61	1,793.02	1.78	-0.27	0.051
69.00	-14.18	-0.92	0.00	-81.50	0.00	81.50	2,790.51	1,395.25	3,597.18	1,776.51	1.83	-0.27	0.051
70.00	-14.01	-0.92	0.00	-80.58	0.00	80.58	2,777.64	1,388.82	3,563.89	1,760.07	1.89	-0.28	0.051
71.00	-13.84	-0.92	0.00	-79.66	0.00	79.66	2,764.78	1,382.39	3,530.76	1,743.71	1.95	-0.28	0.051
72.00	-13.67	-0.91	0.00	-78.74	0.00	78.74	2,751.92	1,375.96	3,497.79	1,727.43	2.01	-0.29	0.051
73.00	-13.51	-0.91	0.00	-77.83	0.00	77.83	2,739.05	1,369.53	3,464.97	1,711.22	2.07	-0.29	0.050
74.00	-13.34	-0.91	0.00	-76.92	0.00	76.92	2,726.19	1,363.09	3,432.30	1,695.08	2.13	-0.30	0.050
75.00	-13.17	-0.91	0.00	-76.01	0.00	76.01	2,713.32	1,356.66	3,399.79	1,679.03	2.20	-0.30	0.050
76.00	-13.01	-0.90	0.00	-75.10	0.00	75.10	2,700.46	1,350.23	3,367.44	1,663.05	2.26	-0.31	0.050
77.00	-12.84	-0.90	0.00	-74.20	0.00	74.20	2,687.60	1,343.80	3,335.24	1,647.15	2.33	-0.31	0.050
78.00	-12.68	-0.90	0.00	-73.29	0.00	73.29	2,674.73	1,337.37	3,303.19	1,631.32	2.39	-0.32	0.050
79.00	-12.52	-0.90	0.00	-72.40	0.00	72.40	2,661.87	1,330.93	3,271.30	1,615.57	2.46	-0.32	0.050
80.00	-12.36	-0.89	0.00	-71.50	0.00	71.50	2,649.00	1,324.50	3,239.56	1,599.90	2.53	-0.33	0.049
81.00	-12.20	-0.89	0.00	-70.61	0.00	70.61	2,636.14	1,318.07	3,207.98	1,584.30	2.60	-0.33	0.049
82.00	-12.04	-0.89	0.00	-69.72	0.00	69.72	2,623.28	1,311.64	3,176.55	1,568.78	2.67	-0.34	0.049
83.00	-11.88	-0.88	0.00	-68.83	0.00	68.83	2,610.41	1,305.21	3,145.28	1,553.33	2.74	-0.34	0.049
84.00	-11.72	-0.88	0.00	-67.95	0.00	67.95	2,597.55	1,298.77	3,114.16	1,537.97	2.81	-0.35	0.049
85.00	-11.60	-0.88	0.00	-67.07	0.00	67.07	2,584.68	1,292.34	3,083.20	1,522.68	2.89	-0.35	0.049
85.75	-11.57	-0.88	0.00	-66.42	0.00	66.42	2,575.04	1,287.52	3,060.08	1,511.26	2.94	-0.36	0.048
85.75	-11.57	-0.88	0.00	-66.42	0.00	66.42	1,544.73	772.37	1,851.60	914.44	2.94	-0.36	0.080
86.00	-11.46	-0.87	0.00	-66.20	0.00	66.20	1,543.70	771.85	1,848.04	912.68	2.96	-0.36	0.080
87.00	-11.35	-0.87	0.00	-65.32	0.00	65.32	1,539.55	769.77	1,833.81	905.65	3.04	-0.37	0.080
88.00	-11.25	-0.87	0.00	-64.45	0.00	64.45	1,535.36	767.68	1,819.59	898.63	3.11	-0.37	0.079
89.00	-11.14	-0.87	0.00	-63.58	0.00	63.58	1,531.13	765.57	1,805.38	891.61	3.19	-0.38	0.079
90.00	-11.03	-0.87	0.00	-62.71	0.00	62.71	1,526.87	763.44	1,791.17	884.59	3.27	-0.39	0.078
91.00	-10.92	-0.86	0.00	-61.85	0.00	61.85	1,522.58	761.29	1,776.98	877.58	3.36	-0.40	0.078
92.00	-10.82	-0.86	0.00	-60.98	0.00	60.98	1,518.25	759.12	1,762.79	870.58	3.44	-0.40	0.077
93.00	-10.71	-0.86	0.00	-60.12	0.00	60.12	1,513.88	756.94	1,748.62	863.58	3.52	-0.41	0.077
94.00	-10.61	-0.86	0.00	-59.26	0.00	59.26	1,509.48	754.74	1,734.46	856.59	3.61	-0.42	0.076
95.00	-10.50	-0.85	0.00	-58.40	0.00	58.40	1,505.04	752.52	1,720.31	849.60	3.70	-0.43	0.076
96.00	-10.40	-0.85	0.00	-57.55	0.00	57.55	1,500.57	750.29	1,706.18	842.62	3.79	-0.43	0.075
97.00	-10.29	-0.85	0.00	-56.70	0.00	56.70	1,496.06	748.03	1,692.06	835.64	3.88	-0.44	0.075
98.00	-10.19	-0.85	0.00	-55.85	0.00	55.85	1,491.52	745.76	1,677.95	828.68	3.97	-0.45	0.074
99.00	-10.09	-0.84	0.00	-55.00	0.00	55.00	1,486.94	743.47	1,663.86	821.72	4.07	-0.46	0.074
100.00	-9.99	-0.84	0.00	-54.15	0.00	54.15	1,482.33	741.16	1,649.78	814.77	4.17	-0.46	0.073
101.00	-9.88	-0.84	0.00	-53.31	0.00	53.31	1,477.68	738.84	1,635.72	807.82	4.26	-0.47	0.073
102.00	-9.78	-0.84	0.00	-52.47	0.00	52.47	1,473.00	736.50	1,621.68	800.89	4.36	-0.48	0.072
103.00	-9.68	-0.83	0.00	-51.64	0.00	51.64	1,468.28	734.14	1,607.66	793.96	4.46	-0.49	0.072
104.00	-9.58	-0.83	0.00	-50.80	0.00	50.80	1,463.52	731.76	1,593.65	787.04	4.57	-0.49	0.071
105.00	-9.48	-0.83	0.00	-49.97	0.00	49.97	1,458.73	729.37	1,579.66	780.14	4.67	-0.50	0.071
106.00	-9.38	-0.82	0.00	-49.15	0.00	49.15	1,453.91	726.95	1,565.69	773.24	4.78	-0.51	0.070
107.00	-9.28	-0.82	0.00	-48.32	0.00	48.32	1,449.04	724.52	1,551.74	766.35	4.88	-0.52	0.069
108.00	-9.19	-0.82	0.00	-47.50	0.00	47.50	1,444.15	722.07	1,537.82	759.47	4.99	-0.52	0.069
109.00	-9.09	-0.81	0.00	-46.68	0.00	46.68	1,439.21	719.61	1,523.91	752.60	5.10	-0.53	0.068
110.00	-8.99	-0.81	0.00	-45.87	0.00	45.87	1,434.25	717.12	1,510.03	745.75	5.22	-0.54	0.068
111.00	-8.89	-0.81	0.00	-45.06	0.00	45.06	1,429.24	714.62	1,496.17	738.90	5.33	-0.55	0.067
112.00	-8.80	-0.80	0.00	-44.25	0.00	44.25	1,424.21	712.10	1,482.33	732.07	5.45	-0.55	0.067
113.00	-8.70	-0.80	0.00	-43.45	0.00	43.45	1,419.13	709.57	1,468.51	725.24	5.56	-0.56	0.066
114.00	-8.61	-0.80	0.00	-42.65	0.00	42.65	1,414.02	707.01	1,454.73	718.43	5.68	-0.57	0.065
115.00	-8.51	-0.79	0.00	-41.85	0.00	41.85	1,408.88	704.44	1,440.96	711.64	5.80	-0.58	0.065

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116.00	-8.42	-0.79	0.00	-41.06	0.00	41.06	1,403.70	701.85	1,427.22	704.85	5.92	-0.58	0.064
117.00	-8.32	-0.78	0.00	-40.27	0.00	40.27	1,398.48	699.24	1,413.51	698.08	6.05	-0.59	0.064
118.00	-8.23	-0.78	0.00	-39.49	0.00	39.49	1,393.23	696.62	1,399.83	691.32	6.17	-0.60	0.063
119.00	-8.14	-0.78	0.00	-38.70	0.00	38.70	1,387.95	693.97	1,386.17	684.58	6.30	-0.61	0.062
120.00	-8.05	-0.77	0.00	-37.93	0.00	37.93	1,382.63	691.31	1,372.54	677.85	6.42	-0.61	0.062
121.00	-7.95	-0.77	0.00	-37.16	0.00	37.16	1,377.27	688.64	1,358.94	671.13	6.55	-0.62	0.061
122.00	-7.86	-0.76	0.00	-36.39	0.00	36.39	1,371.88	685.94	1,345.37	664.43	6.68	-0.63	0.060
123.00	-7.77	-0.76	0.00	-35.62	0.00	35.62	1,366.45	683.23	1,331.83	657.74	6.82	-0.64	0.060
124.00	-7.68	-0.76	0.00	-34.86	0.00	34.86	1,360.99	680.49	1,318.33	651.07	6.95	-0.64	0.059
125.00	-7.64	-0.75	0.00	-34.11	0.00	34.11	1,355.49	677.74	1,304.85	644.42	7.09	-0.65	0.059
125.50	-7.60	-0.75	0.00	-33.73	0.00	33.73	1,352.73	676.36	1,298.12	641.09	7.16	-0.65	0.058
125.50	-7.60	-0.75	0.00	-33.73	0.00	33.73	1,127.00	563.50	1,084.41	535.55	7.16	-0.65	0.070
126.00	-7.52	-0.75	0.00	-33.36	0.00	33.36	1,124.94	562.47	1,079.04	532.90	7.22	-0.66	0.069
127.00	-7.44	-0.74	0.00	-32.61	0.00	32.61	1,120.78	560.39	1,068.31	527.60	7.36	-0.67	0.068
128.00	-7.36	-0.74	0.00	-31.86	0.00	31.86	1,116.59	558.29	1,057.61	522.31	7.50	-0.67	0.068
129.00	-7.28	-0.74	0.00	-31.12	0.00	31.12	1,112.36	556.18	1,046.91	517.03	7.65	-0.68	0.067
130.00	-7.20	-0.73	0.00	-30.39	0.00	30.39	1,108.10	554.05	1,036.24	511.76	7.79	-0.69	0.066
131.00	-7.12	-0.73	0.00	-29.66	0.00	29.66	1,103.80	551.90	1,025.58	506.50	7.94	-0.70	0.065
132.00	-7.05	-0.72	0.00	-28.93	0.00	28.93	1,099.47	549.73	1,014.94	501.24	8.08	-0.71	0.064
133.00	-6.97	-0.72	0.00	-28.21	0.00	28.21	1,095.10	547.55	1,004.33	496.00	8.23	-0.72	0.063
134.00	-6.89	-0.71	0.00	-27.49	0.00	27.49	1,090.69	545.35	993.73	490.77	8.38	-0.72	0.062
135.00	-6.82	-0.71	0.00	-26.77	0.00	26.77	1,086.26	543.13	983.15	485.54	8.54	-0.73	0.061
136.00	-6.74	-0.71	0.00	-26.06	0.00	26.06	1,081.78	540.89	972.60	480.33	8.69	-0.74	0.060
137.00	-6.67	-0.70	0.00	-25.36	0.00	25.36	1,077.27	538.64	962.07	475.13	8.84	-0.75	0.060
138.00	-6.59	-0.70	0.00	-24.66	0.00	24.66	1,072.73	536.36	951.56	469.94	9.00	-0.75	0.059
139.00	-6.52	-0.69	0.00	-23.96	0.00	23.96	1,068.14	534.07	941.07	464.76	9.16	-0.76	0.058
140.00	-6.45	-0.69	0.00	-23.27	0.00	23.27	1,063.53	531.76	930.61	459.59	9.32	-0.77	0.057
141.00	-6.37	-0.68	0.00	-22.58	0.00	22.58	1,058.88	529.44	920.17	454.44	9.48	-0.78	0.056
142.00	-6.30	-0.68	0.00	-21.90	0.00	21.90	1,054.19	527.09	909.76	449.30	9.65	-0.79	0.055
143.00	-6.23	-0.67	0.00	-21.22	0.00	21.22	1,049.47	524.73	899.37	444.17	9.81	-0.79	0.054
144.00	-6.16	-0.67	0.00	-20.54	0.00	20.54	1,044.71	522.35	889.01	439.05	9.98	-0.80	0.053
145.00	-6.08	-0.66	0.00	-19.88	0.00	19.88	1,039.92	519.96	878.68	433.95	10.15	-0.81	0.052
146.00	-6.01	-0.66	0.00	-19.21	0.00	19.21	1,035.09	517.54	868.38	428.86	10.32	-0.81	0.051
147.00	-5.94	-0.65	0.00	-18.55	0.00	18.55	1,030.22	515.11	858.10	423.79	10.49	-0.82	0.050
148.00	-5.87	-0.65	0.00	-17.90	0.00	17.90	1,025.32	512.66	847.86	418.72	10.66	-0.83	0.048
149.00	-5.80	-0.64	0.00	-17.25	0.00	17.25	1,020.39	510.19	837.64	413.68	10.84	-0.84	0.047
150.00	-5.73	-0.64	0.00	-16.61	0.00	16.61	1,015.42	507.71	827.46	408.65	11.01	-0.84	0.046
151.00	-5.66	-0.63	0.00	-15.97	0.00	15.97	1,010.41	505.21	817.30	403.63	11.19	-0.85	0.045
152.00	-5.60	-0.63	0.00	-15.34	0.00	15.34	1,005.37	502.69	807.18	398.64	11.37	-0.86	0.044
153.00	-5.53	-0.62	0.00	-14.71	0.00	14.71	1,000.30	500.15	797.09	393.65	11.55	-0.86	0.043
154.00	-5.46	-0.62	0.00	-14.09	0.00	14.09	995.19	497.59	787.03	388.69	11.73	-0.87	0.042
155.00	-5.39	-0.61	0.00	-13.48	0.00	13.48	990.04	495.02	777.01	383.74	11.91	-0.87	0.041
156.00	-5.33	-0.61	0.00	-12.87	0.00	12.87	983.06	491.53	765.62	378.11	12.10	-0.88	0.039
157.00	-5.26	-0.60	0.00	-12.26	0.00	12.26	975.56	487.78	753.91	372.33	12.28	-0.89	0.038
158.00	-5.19	-0.59	0.00	-11.66	0.00	11.66	968.05	484.03	742.29	366.59	12.47	-0.89	0.037
159.00	-5.13	-0.59	0.00	-11.07	0.00	11.07	960.55	480.27	730.76	360.90	12.65	-0.90	0.036
160.00	-5.06	-0.58	0.00	-10.48	0.00	10.48	953.04	476.52	719.32	355.25	12.84	-0.90	0.035
161.00	-5.00	-0.58	0.00	-9.90	0.00	9.90	945.54	472.77	707.97	349.64	13.03	-0.91	0.034
162.00	-4.93	-0.57	0.00	-9.32	0.00	9.32	938.04	469.02	696.71	344.08	13.22	-0.91	0.032
163.00	-4.87	-0.56	0.00	-8.75	0.00	8.75	930.53	465.27	685.54	338.56	13.41	-0.92	0.031
164.00	-4.81	-0.56	0.00	-8.19	0.00	8.19	923.03	461.51	674.47	333.09	13.61	-0.92	0.030
165.00	-4.74	-0.55	0.00	-7.63	0.00	7.63	915.52	457.76	663.48	327.67	13.80	-0.93	0.028
166.00	-4.68	-0.55	0.00	-7.08	0.00	7.08	908.02	454.01	652.58	322.29	14.00	-0.93	0.027
167.00	-4.62	-0.54	0.00	-6.53	0.00	6.53	900.52	450.26	641.77	316.95	14.19	-0.94	0.026
168.00	-4.56	-0.53	0.00	-5.99	0.00	5.99	893.01	446.51	631.06	311.65	14.39	-0.94	0.024
169.00	-4.50	-0.53	0.00	-5.45	0.00	5.45	885.51	442.75	620.43	306.41	14.58	-0.94	0.023
170.00	-4.44	-0.52	0.00	-4.93	0.00	4.93	878.00	439.00	609.89	301.20	14.78	-0.95	0.021
171.00	-4.38	-0.52	0.00	-4.40	0.00	4.40	870.50	435.25	599.45	296.04	14.98	-0.95	0.020
172.00	-4.32	-0.51	0.00	-3.89	0.00	3.89	863.00	431.50	589.09	290.93	15.18	-0.95	0.018
173.00	-4.26	-0.50	0.00	-3.38	0.00	3.38	855.49	427.75	578.82	285.86	15.38	-0.95	0.017
174.00	-4.20	-0.50	0.00	-2.88	0.00	2.88	847.99	423.99	568.65	280.83	15.58	-0.96	0.015
175.00	-4.14	-0.49	0.00	-2.38	0.00	2.38	840.48	420.24	558.56	275.85	15.78	-0.96	0.014
176.00	-4.08	-0.48	0.00	-1.89	0.00	1.89	832.98	416.49	548.57	270.92	15.98	-0.96	0.012
177.00	-4.02	-0.48	0.00	-1.41	0.00	1.41	825.48	412.74	538.66	266.02	16.18	-0.96	0.010

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178.00	-3.97	-0.47	0.00	-0.93	0.00	0.93	817.97	408.99	528.85	261.18	16.38	-0.96	0.008
179.00	-3.91	-0.46	0.00	-0.46	0.00	0.46	810.47	405.23	519.12	256.38	16.58	-0.96	0.007
180.00	0.00	0.00	0.00	0.00	0.00	0.00	802.96	401.48	509.49	251.62	16.79	-0.96	0.000
180.58	0.00	0.00	0.00	0.00	0.00	0.00	798.59	399.29	503.91	248.86	16.90	-0.96	0.000

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Load Case (0.9 - 0.2Sds) * DL + E ELFM Seismic (Reduced DL) Equivalent Lateral Forces Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-20.25	-0.92	0.00	-142.72	0.00	142.72	4,173.88	2,086.94	7,090.68	3,501.82	0.00	0.00	0.046
1.00	-20.07	-0.92	0.00	-141.80	0.00	141.80	4,164.30	2,082.15	7,049.35	3,481.41	0.00	0.00	0.046
2.00	-19.89	-0.92	0.00	-140.88	0.00	140.88	4,154.67	2,077.34	7,008.08	3,461.03	0.00	-0.01	0.045
3.00	-19.72	-0.92	0.00	-139.95	0.00	139.95	4,145.02	2,072.51	6,966.87	3,440.67	0.00	-0.01	0.045
4.00	-19.54	-0.93	0.00	-139.03	0.00	139.03	4,135.32	2,067.66	6,925.71	3,420.35	0.01	-0.01	0.045
5.00	-19.37	-0.93	0.00	-138.10	0.00	138.10	4,125.60	2,062.80	6,884.61	3,400.05	0.01	-0.02	0.045
6.00	-19.19	-0.93	0.00	-137.18	0.00	137.18	4,115.83	2,057.92	6,843.57	3,379.78	0.01	-0.02	0.045
7.00	-19.02	-0.93	0.00	-136.25	0.00	136.25	4,106.03	2,053.02	6,802.59	3,359.54	0.02	-0.02	0.045
8.00	-18.85	-0.93	0.00	-135.32	0.00	135.32	4,096.20	2,048.10	6,761.66	3,339.33	0.02	-0.03	0.045
9.00	-18.67	-0.93	0.00	-134.39	0.00	134.39	4,086.33	2,043.16	6,720.80	3,319.15	0.03	-0.03	0.045
10.00	-18.50	-0.93	0.00	-133.46	0.00	133.46	4,076.42	2,038.21	6,680.00	3,299.00	0.03	-0.03	0.045
11.00	-18.33	-0.93	0.00	-132.53	0.00	132.53	4,066.48	2,033.24	6,639.26	3,278.88	0.04	-0.04	0.045
12.00	-18.16	-0.93	0.00	-131.60	0.00	131.60	4,056.51	2,028.25	6,598.58	3,258.79	0.05	-0.04	0.045
13.00	-17.99	-0.93	0.00	-130.66	0.00	130.66	4,046.49	2,023.25	6,557.96	3,238.73	0.06	-0.04	0.045
14.00	-17.82	-0.93	0.00	-129.73	0.00	129.73	4,036.45	2,018.22	6,517.41	3,218.70	0.07	-0.05	0.045
15.00	-17.65	-0.94	0.00	-128.80	0.00	128.80	4,026.36	2,013.18	6,476.92	3,198.71	0.08	-0.05	0.045
16.00	-17.48	-0.94	0.00	-127.86	0.00	127.86	4,016.25	2,008.12	6,436.49	3,178.74	0.09	-0.05	0.045
17.00	-17.31	-0.94	0.00	-126.92	0.00	126.92	4,006.09	2,003.05	6,396.13	3,158.81	0.10	-0.06	0.045
18.00	-17.15	-0.94	0.00	-125.99	0.00	125.99	3,995.91	1,997.95	6,355.84	3,138.91	0.11	-0.06	0.044
19.00	-16.98	-0.94	0.00	-125.05	0.00	125.05	3,985.68	1,992.84	6,315.61	3,119.04	0.12	-0.06	0.044
20.00	-16.81	-0.94	0.00	-124.11	0.00	124.11	3,975.42	1,987.71	6,275.45	3,099.21	0.14	-0.07	0.044
21.00	-16.65	-0.94	0.00	-123.17	0.00	123.17	3,965.13	1,982.56	6,235.36	3,079.41	0.15	-0.07	0.044
22.00	-16.48	-0.94	0.00	-122.24	0.00	122.24	3,954.48	1,977.24	6,194.84	3,059.40	0.17	-0.07	0.044
23.00	-16.32	-0.94	0.00	-121.30	0.00	121.30	3,939.47	1,969.74	6,147.64	3,036.09	0.18	-0.08	0.044
24.00	-16.15	-0.94	0.00	-120.36	0.00	120.36	3,924.46	1,962.23	6,100.62	3,012.87	0.20	-0.08	0.044
25.00	-15.99	-0.94	0.00	-119.42	0.00	119.42	3,909.45	1,954.73	6,053.78	2,989.74	0.22	-0.08	0.044
26.00	-15.83	-0.94	0.00	-118.48	0.00	118.48	3,894.45	1,947.22	6,007.13	2,966.69	0.23	-0.09	0.044
27.00	-15.67	-0.94	0.00	-117.54	0.00	117.54	3,879.44	1,939.72	5,960.65	2,943.74	0.25	-0.09	0.044
28.00	-15.51	-0.94	0.00	-116.59	0.00	116.59	3,864.43	1,932.22	5,914.36	2,920.88	0.27	-0.09	0.044
29.00	-15.34	-0.94	0.00	-115.65	0.00	115.65	3,849.42	1,924.71	5,868.24	2,898.10	0.29	-0.10	0.044
30.00	-15.18	-0.94	0.00	-114.71	0.00	114.71	3,834.41	1,917.21	5,822.31	2,875.42	0.31	-0.10	0.044
31.00	-15.02	-0.94	0.00	-113.77	0.00	113.77	3,819.41	1,909.70	5,776.55	2,852.82	0.34	-0.11	0.044
32.00	-14.87	-0.94	0.00	-112.83	0.00	112.83	3,804.40	1,902.20	5,730.98	2,830.32	0.36	-0.11	0.044
33.00	-14.71	-0.94	0.00	-111.89	0.00	111.89	3,789.39	1,894.70	5,685.59	2,807.90	0.38	-0.11	0.044
34.00	-14.55	-0.94	0.00	-110.95	0.00	110.95	3,774.38	1,887.19	5,640.38	2,785.57	0.41	-0.12	0.044
35.00	-14.39	-0.94	0.00	-110.01	0.00	110.01	3,759.37	1,879.69	5,595.34	2,763.33	0.43	-0.12	0.044
36.00	-14.24	-0.94	0.00	-109.07	0.00	109.07	3,744.37	1,872.18	5,550.49	2,741.18	0.46	-0.12	0.044
37.00	-14.08	-0.94	0.00	-108.13	0.00	108.13	3,729.36	1,864.68	5,505.82	2,719.12	0.48	-0.13	0.044
38.00	-13.92	-0.94	0.00	-107.19	0.00	107.19	3,714.35	1,857.18	5,461.33	2,697.15	0.51	-0.13	0.043
39.00	-13.77	-0.94	0.00	-106.25	0.00	106.25	3,699.34	1,849.67	5,417.02	2,675.26	0.54	-0.13	0.043
40.00	-13.62	-0.94	0.00	-105.31	0.00	105.31	3,684.33	1,842.17	5,372.89	2,653.47	0.57	-0.14	0.043
41.00	-13.46	-0.94	0.00	-104.38	0.00	104.38	3,669.33	1,834.66	5,328.94	2,631.76	0.59	-0.14	0.043
42.00	-13.31	-0.94	0.00	-103.44	0.00	103.44	3,654.32	1,827.16	5,285.17	2,610.15	0.62	-0.15	0.043
43.00	-13.16	-0.94	0.00	-102.50	0.00	102.50	3,639.31	1,819.66	5,241.59	2,588.62	0.66	-0.15	0.043
44.00	-13.04	-0.93	0.00	-101.57	0.00	101.57	3,624.30	1,812.15	5,198.18	2,567.18	0.69	-0.15	0.043
44.75	-13.01	-0.93	0.00	-100.87	0.00	100.87	3,613.05	1,806.52	5,165.74	2,551.17	0.71	-0.16	0.043
44.75	-13.01	-0.93	0.00	-100.87	0.00	100.87	3,037.33	1,518.66	4,358.22	2,152.36	0.71	-0.16	0.051
45.00	-12.88	-0.93	0.00	-100.63	0.00	100.63	3,035.24	1,517.62	4,350.67	2,148.63	0.72	-0.16	0.051
46.00	-12.75	-0.93	0.00	-99.70	0.00	99.70	3,026.89	1,513.44	4,320.50	2,133.73	0.75	-0.16	0.051
47.00	-12.62	-0.93	0.00	-98.77	0.00	98.77	3,018.50	1,509.25	4,290.37	2,118.85	0.79	-0.17	0.051
48.00	-12.49	-0.93	0.00	-97.83	0.00	97.83	3,010.08	1,505.04	4,260.30	2,104.00	0.82	-0.17	0.051
49.00	-12.36	-0.93	0.00	-96.90	0.00	96.90	3,001.62	1,500.81	4,230.28	2,089.17	0.86	-0.17	0.051
50.00	-12.23	-0.93	0.00	-95.97	0.00	95.97	2,993.12	1,496.56	4,200.31	2,074.37	0.90	-0.18	0.050
51.00	-12.10	-0.93	0.00	-95.04	0.00	95.04	2,984.59	1,492.30	4,170.39	2,059.60	0.93	-0.18	0.050
52.00	-11.98	-0.93	0.00	-94.11	0.00	94.11	2,976.02	1,488.01	4,140.52	2,044.85	0.97	-0.19	0.050
53.00	-11.85	-0.93	0.00	-93.19	0.00	93.19	2,967.42	1,483.71	4,110.71	2,030.13	1.01	-0.19	0.050

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54.00	-11.72	-0.93	0.00	-92.26	0.00	92.26	2,958.79	1,479.39	4,080.96	2,015.43	1.05	-0.20	0.050
55.00	-11.60	-0.92	0.00	-91.33	0.00	91.33	2,950.11	1,475.06	4,051.26	2,000.76	1.09	-0.20	0.050
56.00	-11.47	-0.92	0.00	-90.41	0.00	90.41	2,941.41	1,470.70	4,021.62	1,986.12	1.14	-0.21	0.049
57.00	-11.35	-0.92	0.00	-89.49	0.00	89.49	2,932.66	1,466.33	3,992.03	1,971.51	1.18	-0.21	0.049
58.00	-11.22	-0.92	0.00	-88.56	0.00	88.56	2,923.89	1,461.94	3,962.50	1,956.93	1.23	-0.21	0.049
59.00	-11.10	-0.92	0.00	-87.64	0.00	87.64	2,915.07	1,457.54	3,933.03	1,942.37	1.27	-0.22	0.049
60.00	-10.98	-0.92	0.00	-86.73	0.00	86.73	2,906.28	1,453.14	3,903.69	1,927.89	1.32	-0.22	0.049
61.00	-10.85	-0.92	0.00	-85.81	0.00	85.81	2,893.42	1,446.71	3,869.02	1,910.76	1.36	-0.23	0.049
62.00	-10.73	-0.91	0.00	-84.89	0.00	84.89	2,880.56	1,440.28	3,834.50	1,893.71	1.41	-0.23	0.049
63.00	-10.61	-0.91	0.00	-83.98	0.00	83.98	2,867.69	1,433.85	3,800.13	1,876.74	1.46	-0.24	0.048
64.00	-10.49	-0.91	0.00	-83.07	0.00	83.07	2,854.83	1,427.41	3,765.92	1,859.84	1.51	-0.24	0.048
65.00	-10.37	-0.91	0.00	-82.16	0.00	82.16	2,841.96	1,420.98	3,731.86	1,843.02	1.56	-0.25	0.048
66.00	-10.25	-0.91	0.00	-81.25	0.00	81.25	2,829.10	1,414.55	3,697.96	1,826.28	1.62	-0.25	0.048
67.00	-10.13	-0.90	0.00	-80.35	0.00	80.35	2,816.24	1,408.12	3,664.21	1,809.61	1.67	-0.26	0.048
68.00	-10.01	-0.90	0.00	-79.44	0.00	79.44	2,803.37	1,401.69	3,630.61	1,793.02	1.72	-0.26	0.048
69.00	-9.89	-0.90	0.00	-78.54	0.00	78.54	2,790.51	1,395.25	3,597.18	1,776.51	1.78	-0.27	0.048
70.00	-9.77	-0.90	0.00	-77.64	0.00	77.64	2,777.64	1,388.82	3,563.89	1,760.07	1.84	-0.27	0.048
71.00	-9.66	-0.89	0.00	-76.75	0.00	76.75	2,764.78	1,382.39	3,530.76	1,743.71	1.89	-0.27	0.048
72.00	-9.54	-0.89	0.00	-75.85	0.00	75.85	2,751.92	1,375.96	3,497.79	1,727.43	1.95	-0.28	0.047
73.00	-9.42	-0.89	0.00	-74.96	0.00	74.96	2,739.05	1,369.53	3,464.97	1,711.22	2.01	-0.28	0.047
74.00	-9.31	-0.89	0.00	-74.07	0.00	74.07	2,726.19	1,363.09	3,432.30	1,695.08	2.07	-0.29	0.047
75.00	-9.19	-0.88	0.00	-73.19	0.00	73.19	2,713.32	1,356.66	3,399.79	1,679.03	2.13	-0.29	0.047
76.00	-9.08	-0.88	0.00	-72.30	0.00	72.30	2,700.46	1,350.23	3,367.44	1,663.05	2.19	-0.30	0.047
77.00	-8.96	-0.88	0.00	-71.42	0.00	71.42	2,687.60	1,343.80	3,335.24	1,647.15	2.26	-0.30	0.047
78.00	-8.85	-0.87	0.00	-70.54	0.00	70.54	2,674.73	1,337.37	3,303.19	1,631.32	2.32	-0.31	0.047
79.00	-8.73	-0.87	0.00	-69.67	0.00	69.67	2,661.87	1,330.93	3,271.30	1,615.57	2.38	-0.31	0.046
80.00	-8.62	-0.87	0.00	-68.80	0.00	68.80	2,649.00	1,324.50	3,239.56	1,599.90	2.45	-0.32	0.046
81.00	-8.51	-0.87	0.00	-67.93	0.00	67.93	2,636.14	1,318.07	3,207.98	1,584.30	2.52	-0.32	0.046
82.00	-8.40	-0.86	0.00	-67.06	0.00	67.06	2,623.28	1,311.64	3,176.55	1,568.78	2.59	-0.33	0.046
83.00	-8.29	-0.86	0.00	-66.20	0.00	66.20	2,610.41	1,305.21	3,145.28	1,553.33	2.65	-0.33	0.046
84.00	-8.17	-0.85	0.00	-65.34	0.00	65.34	2,597.55	1,298.77	3,114.16	1,537.97	2.72	-0.34	0.046
85.00	-8.09	-0.85	0.00	-64.49	0.00	64.49	2,584.68	1,292.34	3,083.20	1,522.68	2.80	-0.34	0.045
85.75	-8.07	-0.85	0.00	-63.85	0.00	63.85	2,575.04	1,287.52	3,060.08	1,511.26	2.85	-0.35	0.045
85.75	-8.07	-0.85	0.00	-63.85	0.00	63.85	1,544.73	772.37	1,851.60	914.44	2.85	-0.35	0.075
86.00	-8.00	-0.85	0.00	-63.64	0.00	63.64	1,543.70	771.85	1,848.04	912.68	2.87	-0.35	0.075
87.00	-7.92	-0.85	0.00	-62.79	0.00	62.79	1,539.55	769.77	1,833.81	905.65	2.94	-0.35	0.074
88.00	-7.85	-0.85	0.00	-61.94	0.00	61.94	1,535.36	767.68	1,819.59	898.63	3.02	-0.36	0.074
89.00	-7.77	-0.84	0.00	-61.09	0.00	61.09	1,531.13	765.57	1,805.38	891.61	3.09	-0.37	0.074
90.00	-7.70	-0.84	0.00	-60.25	0.00	60.25	1,526.87	763.44	1,791.17	884.59	3.17	-0.38	0.073
91.00	-7.62	-0.84	0.00	-59.41	0.00	59.41	1,522.58	761.29	1,776.98	877.58	3.25	-0.38	0.073
92.00	-7.55	-0.84	0.00	-58.57	0.00	58.57	1,518.25	759.12	1,762.79	870.58	3.33	-0.39	0.072
93.00	-7.47	-0.83	0.00	-57.74	0.00	57.74	1,513.88	756.94	1,748.62	863.58	3.41	-0.40	0.072
94.00	-7.40	-0.83	0.00	-56.90	0.00	56.90	1,509.48	754.74	1,734.46	856.59	3.50	-0.40	0.071
95.00	-7.33	-0.83	0.00	-56.07	0.00	56.07	1,505.04	752.52	1,720.31	849.60	3.58	-0.41	0.071
96.00	-7.25	-0.83	0.00	-55.24	0.00	55.24	1,500.57	750.29	1,706.18	842.62	3.67	-0.42	0.070
97.00	-7.18	-0.82	0.00	-54.42	0.00	54.42	1,496.06	748.03	1,692.06	835.64	3.76	-0.43	0.070
98.00	-7.11	-0.82	0.00	-53.59	0.00	53.59	1,491.52	745.76	1,677.95	828.68	3.85	-0.43	0.069
99.00	-7.04	-0.82	0.00	-52.77	0.00	52.77	1,486.94	743.47	1,663.86	821.72	3.94	-0.44	0.069
100.00	-6.97	-0.81	0.00	-51.96	0.00	51.96	1,482.33	741.16	1,649.78	814.77	4.03	-0.45	0.068
101.00	-6.90	-0.81	0.00	-51.14	0.00	51.14	1,477.68	738.84	1,635.72	807.82	4.13	-0.45	0.068
102.00	-6.83	-0.81	0.00	-50.33	0.00	50.33	1,473.00	736.50	1,621.68	800.89	4.22	-0.46	0.067
103.00	-6.75	-0.81	0.00	-49.52	0.00	49.52	1,468.28	734.14	1,607.66	793.96	4.32	-0.47	0.067
104.00	-6.68	-0.80	0.00	-48.72	0.00	48.72	1,463.52	731.76	1,593.65	787.04	4.42	-0.48	0.066
105.00	-6.62	-0.80	0.00	-47.91	0.00	47.91	1,458.73	729.37	1,579.66	780.14	4.52	-0.48	0.066
106.00	-6.55	-0.80	0.00	-47.11	0.00	47.11	1,453.91	726.95	1,565.69	773.24	4.62	-0.49	0.065
107.00	-6.48	-0.79	0.00	-46.32	0.00	46.32	1,449.04	724.52	1,551.74	766.35	4.73	-0.50	0.065
108.00	-6.41	-0.79	0.00	-45.52	0.00	45.52	1,444.15	722.07	1,537.82	759.47	4.83	-0.51	0.064
109.00	-6.34	-0.79	0.00	-44.74	0.00	44.74	1,439.21	719.61	1,523.91	752.60	4.94	-0.51	0.064
110.00	-6.27	-0.78	0.00	-43.95	0.00	43.95	1,434.25	717.12	1,510.03	745.75	5.05	-0.52	0.063
111.00	-6.20	-0.78	0.00	-43.17	0.00	43.17	1,429.24	714.62	1,496.17	738.90	5.16	-0.53	0.063
112.00	-6.14	-0.78	0.00	-42.39	0.00	42.39	1,424.21	712.10	1,482.33	732.07	5.27	-0.53	0.062
113.00	-6.07	-0.77	0.00	-41.61	0.00	41.61	1,419.13	709.57	1,468.51	725.24	5.38	-0.54	0.062
114.00	-6.00	-0.77	0.00	-40.84	0.00	40.84	1,414.02	707.01	1,454.73	718.43	5.49	-0.55	0.061
115.00	-5.94	-0.76	0.00	-40.07	0.00	40.07	1,408.88	704.44	1,440.96	711.64	5.61	-0.56	0.061

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116.00	-5.87	-0.76	0.00	-39.31	0.00	39.31	1,403.70	701.85	1,427.22	704.85	5.73	-0.56	0.060
117.00	-5.81	-0.76	0.00	-38.55	0.00	38.55	1,398.48	699.24	1,413.51	698.08	5.84	-0.57	0.059
118.00	-5.74	-0.75	0.00	-37.79	0.00	37.79	1,393.23	696.62	1,399.83	691.32	5.97	-0.58	0.059
119.00	-5.68	-0.75	0.00	-37.04	0.00	37.04	1,387.95	693.97	1,386.17	684.58	6.09	-0.58	0.058
120.00	-5.61	-0.74	0.00	-36.30	0.00	36.30	1,382.63	691.31	1,372.54	677.85	6.21	-0.59	0.058
121.00	-5.55	-0.74	0.00	-35.55	0.00	35.55	1,377.27	688.64	1,358.94	671.13	6.33	-0.60	0.057
122.00	-5.48	-0.74	0.00	-34.81	0.00	34.81	1,371.88	685.94	1,345.37	664.43	6.46	-0.61	0.056
123.00	-5.42	-0.73	0.00	-34.08	0.00	34.08	1,366.45	683.23	1,331.83	657.74	6.59	-0.61	0.056
124.00	-5.36	-0.73	0.00	-33.35	0.00	33.35	1,360.99	680.49	1,318.33	651.07	6.72	-0.62	0.055
125.00	-5.33	-0.72	0.00	-32.62	0.00	32.62	1,355.49	677.74	1,304.85	644.42	6.85	-0.63	0.055
125.50	-5.30	-0.72	0.00	-32.26	0.00	32.26	1,352.73	676.36	1,298.12	641.09	6.91	-0.63	0.054
125.50	-5.30	-0.72	0.00	-32.26	0.00	32.26	1,127.00	563.50	1,084.41	535.55	6.91	-0.63	0.065
126.00	-5.24	-0.72	0.00	-31.90	0.00	31.90	1,124.94	562.47	1,079.04	532.90	6.98	-0.63	0.065
127.00	-5.19	-0.71	0.00	-31.18	0.00	31.18	1,120.78	560.39	1,068.31	527.60	7.11	-0.64	0.064
128.00	-5.13	-0.71	0.00	-30.46	0.00	30.46	1,116.59	558.29	1,057.61	522.31	7.25	-0.65	0.063
129.00	-5.08	-0.71	0.00	-29.75	0.00	29.75	1,112.36	556.18	1,046.91	517.03	7.39	-0.66	0.062
130.00	-5.02	-0.70	0.00	-29.05	0.00	29.05	1,108.10	554.05	1,036.24	511.76	7.53	-0.67	0.061
131.00	-4.97	-0.70	0.00	-28.34	0.00	28.34	1,103.80	551.90	1,025.58	506.50	7.67	-0.67	0.060
132.00	-4.92	-0.69	0.00	-27.65	0.00	27.65	1,099.47	549.73	1,014.94	501.24	7.81	-0.68	0.060
133.00	-4.86	-0.69	0.00	-26.95	0.00	26.95	1,095.10	547.55	1,004.33	496.00	7.95	-0.69	0.059
134.00	-4.81	-0.69	0.00	-26.26	0.00	26.26	1,090.69	545.35	993.73	490.77	8.10	-0.70	0.058
135.00	-4.76	-0.68	0.00	-25.58	0.00	25.58	1,086.26	543.13	983.15	485.54	8.24	-0.70	0.057
136.00	-4.70	-0.68	0.00	-24.90	0.00	24.90	1,081.78	540.89	972.60	480.33	8.39	-0.71	0.056
137.00	-4.65	-0.67	0.00	-24.22	0.00	24.22	1,077.27	538.64	962.07	475.13	8.54	-0.72	0.055
138.00	-4.60	-0.67	0.00	-23.55	0.00	23.55	1,072.73	536.36	951.56	469.94	8.69	-0.73	0.054
139.00	-4.55	-0.66	0.00	-22.88	0.00	22.88	1,068.14	534.07	941.07	464.76	8.84	-0.73	0.053
140.00	-4.50	-0.66	0.00	-22.22	0.00	22.22	1,063.53	531.76	930.61	459.59	9.00	-0.74	0.053
141.00	-4.44	-0.65	0.00	-21.56	0.00	21.56	1,058.88	529.44	920.17	454.44	9.16	-0.75	0.052
142.00	-4.39	-0.65	0.00	-20.90	0.00	20.90	1,054.19	527.09	909.76	449.30	9.31	-0.76	0.051
143.00	-4.34	-0.64	0.00	-20.25	0.00	20.25	1,049.47	524.73	899.37	444.17	9.47	-0.76	0.050
144.00	-4.29	-0.64	0.00	-19.61	0.00	19.61	1,044.71	522.35	889.01	439.05	9.63	-0.77	0.049
145.00	-4.24	-0.63	0.00	-18.97	0.00	18.97	1,039.92	519.96	878.68	433.95	9.79	-0.78	0.048
146.00	-4.19	-0.63	0.00	-18.34	0.00	18.34	1,035.09	517.54	868.38	428.86	9.96	-0.78	0.047
147.00	-4.14	-0.62	0.00	-17.71	0.00	17.71	1,030.22	515.11	858.10	423.79	10.12	-0.79	0.046
148.00	-4.10	-0.62	0.00	-17.08	0.00	17.08	1,025.32	512.66	847.86	418.72	10.29	-0.80	0.045
149.00	-4.05	-0.61	0.00	-16.46	0.00	16.46	1,020.39	510.19	837.64	413.68	10.46	-0.80	0.044
150.00	-4.00	-0.61	0.00	-15.85	0.00	15.85	1,015.42	507.71	827.46	408.65	10.63	-0.81	0.043
151.00	-3.95	-0.60	0.00	-15.24	0.00	15.24	1,010.41	505.21	817.30	403.63	10.80	-0.82	0.042
152.00	-3.90	-0.60	0.00	-14.63	0.00	14.63	1,005.37	502.69	807.18	398.64	10.97	-0.82	0.041
153.00	-3.85	-0.59	0.00	-14.03	0.00	14.03	1,000.30	500.15	797.09	393.65	11.14	-0.83	0.040
154.00	-3.81	-0.59	0.00	-13.44	0.00	13.44	995.19	497.59	787.03	388.69	11.31	-0.83	0.038
155.00	-3.76	-0.58	0.00	-12.85	0.00	12.85	990.04	495.02	777.01	383.74	11.49	-0.84	0.037
156.00	-3.71	-0.58	0.00	-12.27	0.00	12.27	983.06	491.53	765.62	378.11	11.67	-0.85	0.036
157.00	-3.67	-0.57	0.00	-11.69	0.00	11.69	975.56	487.78	753.91	372.33	11.84	-0.85	0.035
158.00	-3.62	-0.57	0.00	-11.12	0.00	11.12	968.05	484.03	742.29	366.59	12.02	-0.86	0.034
159.00	-3.58	-0.56	0.00	-10.55	0.00	10.55	960.55	480.27	730.76	360.90	12.20	-0.86	0.033
160.00	-3.53	-0.56	0.00	-9.99	0.00	9.99	953.04	476.52	719.32	355.25	12.38	-0.87	0.032
161.00	-3.49	-0.55	0.00	-9.44	0.00	9.44	945.54	472.77	707.97	349.64	12.57	-0.87	0.031
162.00	-3.44	-0.54	0.00	-8.89	0.00	8.89	938.04	469.02	696.71	344.08	12.75	-0.88	0.029
163.00	-3.40	-0.54	0.00	-8.34	0.00	8.34	930.53	465.27	685.54	338.56	12.93	-0.88	0.028
164.00	-3.35	-0.53	0.00	-7.80	0.00	7.80	923.03	461.51	674.47	333.09	13.12	-0.89	0.027
165.00	-3.31	-0.53	0.00	-7.27	0.00	7.27	915.52	457.76	663.48	327.67	13.30	-0.89	0.026
166.00	-3.26	-0.52	0.00	-6.74	0.00	6.74	908.02	454.01	652.58	322.29	13.49	-0.89	0.025
167.00	-3.22	-0.52	0.00	-6.22	0.00	6.22	900.52	450.26	641.77	316.95	13.68	-0.90	0.023
168.00	-3.18	-0.51	0.00	-5.71	0.00	5.71	893.01	446.51	631.06	311.65	13.87	-0.90	0.022
169.00	-3.14	-0.50	0.00	-5.20	0.00	5.20	885.51	442.75	620.43	306.41	14.06	-0.91	0.021
170.00	-3.09	-0.50	0.00	-4.70	0.00	4.70	878.00	439.00	609.89	301.20	14.25	-0.91	0.019
171.00	-3.05	-0.49	0.00	-4.20	0.00	4.20	870.50	435.25	599.45	296.04	14.44	-0.91	0.018
172.00	-3.01	-0.49	0.00	-3.71	0.00	3.71	863.00	431.50	589.09	290.93	14.63	-0.91	0.016
173.00	-2.97	-0.48	0.00	-3.22	0.00	3.22	855.49	427.75	578.82	285.86	14.82	-0.92	0.015
174.00	-2.93	-0.47	0.00	-2.74	0.00	2.74	847.99	423.99	568.65	280.83	15.01	-0.92	0.013
175.00	-2.89	-0.47	0.00	-2.27	0.00	2.27	840.48	420.24	558.56	275.85	15.20	-0.92	0.012
176.00	-2.85	-0.46	0.00	-1.80	0.00	1.80	832.98	416.49	548.57	270.92	15.40	-0.92	0.010
177.00	-2.81	-0.45	0.00	-1.34	0.00	1.34	825.48	412.74	538.66	266.02	15.59	-0.92	0.008

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178.00	-2.77	-0.45	0.00	-0.89	0.00	0.89	817.97	408.99	528.85	261.18	15.78	-0.92	0.007
179.00	-2.73	-0.44	0.00	-0.44	0.00	0.44	810.47	405.23	519.12	256.38	15.98	-0.92	0.005
180.00	0.00	0.00	0.00	0.00	0.00	0.00	802.96	401.48	509.49	251.62	16.17	-0.92	0.000
180.58	0.00	0.00	0.00	0.00	0.00	0.00	798.59	399.29	503.91	248.86	16.28	-0.92	0.000

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Equivalent Modal Forces Analysis

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

Spectral Response Acceleration for Short Period (S_s):	0.17
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.06
Importance Factor (I_E):	1.00
Site Coefficient F_a:	1.60
Site Coefficient F_v	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.18
Desing Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Period Based on Rayleigh Method (sec):	3.39
Redundancy Factor (p):	1.30

Load Case (1.2 + 0.2Sds) * DL + E EMAM Seismic Equivalent Modal Analysis Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
184	180.29	22	1.884	1.948	1.128	0.343	6	27
183	179.50	46	1.867	1.863	1.098	0.332	13	57
182	178.50	46	1.847	1.759	1.060	0.320	13	57
181	177.50	47	1.826	1.659	1.023	0.307	12	58
180	176.50	47	1.805	1.564	0.987	0.295	12	58
179	175.50	47	1.785	1.472	0.952	0.283	12	59
178	174.50	48	1.765	1.383	0.918	0.271	11	59
177	173.50	48	1.745	1.299	0.885	0.260	11	60
176	172.50	48	1.725	1.218	0.853	0.248	10	60
175	171.50	49	1.705	1.140	0.822	0.237	10	60
174	170.50	49	1.685	1.066	0.791	0.226	10	61
173	169.50	50	1.665	0.994	0.762	0.215	9	61
172	168.50	50	1.646	0.926	0.734	0.205	9	62
171	167.50	50	1.626	0.861	0.706	0.195	8	62
170	166.50	51	1.607	0.799	0.679	0.184	8	63
169	165.50	51	1.587	0.740	0.653	0.175	8	63
168	164.50	51	1.568	0.684	0.628	0.165	7	63
167	163.50	52	1.549	0.630	0.603	0.156	7	64
166	162.50	52	1.530	0.579	0.580	0.146	7	64
165	161.50	52	1.512	0.530	0.557	0.137	6	65
164	160.50	53	1.493	0.484	0.534	0.128	6	65
163	159.50	53	1.474	0.440	0.513	0.120	6	66
162	158.50	53	1.456	0.398	0.492	0.111	5	66
161	157.50	54	1.438	0.359	0.472	0.103	5	66
160	156.50	54	1.419	0.322	0.452	0.095	4	67
159	155.50	54	1.401	0.287	0.433	0.087	4	67
158	154.50	55	1.383	0.253	0.415	0.080	4	68
157	153.50	55	1.366	0.222	0.397	0.073	3	68
156	152.50	55	1.348	0.192	0.380	0.065	3	69
155	151.50	56	1.330	0.165	0.363	0.058	3	69
154	150.50	56	1.313	0.139	0.347	0.052	3	69
153	149.50	56	1.295	0.114	0.332	0.045	2	70
152	148.50	57	1.278	0.091	0.317	0.039	2	70
151	147.50	57	1.261	0.070	0.303	0.032	2	71

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150	146.50	57	1.244	0.050	0.289	0.027	1	71
149	145.50	58	1.227	0.032	0.275	0.021	1	72
148	144.50	58	1.210	0.015	0.262	0.015	1	72
147	143.50	59	1.193	-0.001	0.250	0.010	0	72
146	142.50	59	1.177	-0.016	0.238	0.005	0	73
145	141.50	59	1.160	-0.029	0.226	0.000	0	73
144	140.50	60	1.144	-0.042	0.215	-0.005	0	74
143	139.50	60	1.128	-0.053	0.204	-0.010	-1	74
142	138.50	60	1.112	-0.063	0.194	-0.014	-1	75
141	137.50	61	1.096	-0.072	0.184	-0.018	-1	75
140	136.50	61	1.080	-0.081	0.175	-0.022	-1	75
139	135.50	61	1.064	-0.088	0.166	-0.026	-1	76
138	134.50	62	1.048	-0.094	0.157	-0.030	-2	76
137	133.50	62	1.033	-0.100	0.148	-0.033	-2	77
136	132.50	62	1.018	-0.105	0.140	-0.037	-2	77
135	131.50	63	1.002	-0.109	0.132	-0.040	-2	78
134	130.50	63	0.987	-0.113	0.125	-0.042	-2	78
133	129.50	63	0.972	-0.116	0.118	-0.045	-2	78
132	128.50	64	0.957	-0.118	0.111	-0.048	-3	79
131	127.50	64	0.942	-0.120	0.105	-0.050	-3	79
130	126.50	64	0.927	-0.121	0.098	-0.052	-3	80
129	125.75	32	0.916	-0.121	0.094	-0.053	-1	40
128	125.25	36	0.909	-0.122	0.091	-0.054	-2	45
127	124.50	73	0.898	-0.122	0.087	-0.055	-4	90
126	123.50	73	0.884	-0.121	0.081	-0.057	-4	91
125	122.50	74	0.870	-0.121	0.076	-0.058	-4	91
124	121.50	74	0.856	-0.120	0.071	-0.059	-4	92
123	120.50	75	0.842	-0.118	0.067	-0.060	-4	92
122	119.50	75	0.828	-0.116	0.062	-0.060	-4	93
121	118.50	75	0.814	-0.114	0.058	-0.061	-4	93
120	117.50	76	0.800	-0.112	0.054	-0.061	-4	94
119	116.50	76	0.787	-0.109	0.050	-0.061	-4	94
118	115.50	77	0.773	-0.106	0.046	-0.061	-4	95
117	114.50	77	0.760	-0.103	0.043	-0.060	-4	95
116	113.50	77	0.747	-0.100	0.040	-0.060	-4	96
115	112.50	78	0.734	-0.097	0.037	-0.059	-4	96
114	111.50	78	0.721	-0.093	0.034	-0.058	-4	97
113	110.50	79	0.708	-0.089	0.031	-0.056	-4	97
112	109.50	79	0.695	-0.085	0.029	-0.055	-4	98
111	108.50	79	0.682	-0.081	0.027	-0.053	-4	98
110	107.50	80	0.670	-0.077	0.024	-0.051	-4	99
109	106.50	80	0.657	-0.073	0.022	-0.049	-3	99
108	105.50	81	0.645	-0.069	0.020	-0.046	-3	100
107	104.50	81	0.633	-0.065	0.019	-0.044	-3	100
106	103.50	81	0.621	-0.060	0.017	-0.041	-3	101
105	102.50	82	0.609	-0.056	0.016	-0.038	-3	101
104	101.50	82	0.597	-0.052	0.014	-0.035	-3	102
103	100.50	83	0.585	-0.048	0.013	-0.032	-2	102
102	99.50	83	0.574	-0.043	0.012	-0.029	-2	103
101	98.50	83	0.562	-0.039	0.011	-0.025	-2	103
100	97.50	84	0.551	-0.035	0.010	-0.021	-2	104
99	96.50	84	0.540	-0.031	0.009	-0.018	-1	104
98	95.50	85	0.529	-0.027	0.008	-0.014	-1	105
97	94.50	85	0.518	-0.023	0.008	-0.010	-1	105
96	93.50	85	0.507	-0.019	0.007	-0.006	0	106
95	92.50	86	0.496	-0.015	0.007	-0.003	0	106
94	91.50	86	0.485	-0.011	0.007	0.001	0	107
93	90.50	87	0.475	-0.007	0.006	0.005	0	107
92	89.50	87	0.464	-0.003	0.006	0.008	1	107
91	88.50	87	0.454	0.000	0.006	0.012	1	108
90	87.50	88	0.444	0.004	0.006	0.015	1	108
89	86.50	88	0.434	0.007	0.006	0.019	1	109
88	85.88	22	0.427	0.009	0.006	0.021	0	27
87	85.38	96	0.422	0.011	0.006	0.022	2	119

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86	84.50	128	0.414	0.014	0.006	0.025	3	159
85	83.50	129	0.404	0.017	0.006	0.028	3	160
84	82.50	130	0.394	0.020	0.007	0.031	3	160
83	81.50	130	0.385	0.023	0.007	0.033	4	161
82	80.50	131	0.376	0.026	0.007	0.036	4	162
81	79.50	131	0.366	0.028	0.008	0.038	4	163
80	78.50	132	0.357	0.031	0.008	0.040	5	163
79	77.50	133	0.348	0.033	0.009	0.042	5	164
78	76.50	133	0.339	0.036	0.009	0.044	5	165
77	75.50	134	0.330	0.038	0.010	0.046	5	165
76	74.50	134	0.322	0.040	0.011	0.047	6	166
75	73.50	135	0.313	0.042	0.011	0.049	6	167
74	72.50	136	0.305	0.044	0.012	0.050	6	168
73	71.50	136	0.296	0.046	0.013	0.051	6	168
72	70.50	137	0.288	0.048	0.013	0.052	6	169
71	69.50	137	0.280	0.050	0.014	0.053	6	170
70	68.50	138	0.272	0.051	0.015	0.054	6	171
69	67.50	139	0.264	0.053	0.016	0.055	7	171
68	66.50	139	0.256	0.054	0.016	0.055	7	172
67	65.50	140	0.249	0.056	0.017	0.056	7	173
66	64.50	140	0.241	0.057	0.018	0.056	7	174
65	63.50	141	0.234	0.058	0.019	0.056	7	174
64	62.50	141	0.226	0.059	0.020	0.057	7	175
63	61.50	142	0.219	0.060	0.021	0.057	7	176
62	60.50	143	0.212	0.061	0.022	0.057	7	176
61	59.50	143	0.205	0.062	0.023	0.057	7	177
60	58.50	144	0.198	0.063	0.023	0.057	7	178
59	57.50	144	0.192	0.064	0.024	0.057	7	179
58	56.50	145	0.185	0.065	0.025	0.057	7	179
57	55.50	146	0.179	0.065	0.026	0.057	7	180
56	54.50	146	0.172	0.066	0.027	0.057	7	181
55	53.50	147	0.166	0.067	0.028	0.057	7	182
54	52.50	147	0.160	0.067	0.029	0.057	7	182
53	51.50	148	0.154	0.068	0.030	0.057	7	183
52	50.50	149	0.148	0.068	0.030	0.057	7	184
51	49.50	149	0.142	0.069	0.031	0.056	7	185
50	48.50	150	0.136	0.069	0.032	0.056	7	185
49	47.50	150	0.131	0.069	0.033	0.056	7	186
48	46.50	151	0.125	0.070	0.034	0.056	7	187
47	45.50	152	0.120	0.070	0.034	0.055	7	187
46	44.88	38	0.117	0.070	0.035	0.055	2	47
45	44.38	132	0.114	0.070	0.035	0.055	6	163
44	43.50	176	0.110	0.071	0.036	0.055	8	218
43	42.50	177	0.105	0.071	0.037	0.055	8	219
42	41.50	178	0.100	0.071	0.037	0.055	8	220
41	40.50	179	0.095	0.071	0.038	0.054	8	221
40	39.50	179	0.090	0.071	0.038	0.054	8	222
39	38.50	180	0.086	0.071	0.039	0.054	8	223
38	37.50	181	0.082	0.072	0.039	0.054	8	223
37	36.50	181	0.077	0.072	0.040	0.054	8	224
36	35.50	182	0.073	0.072	0.040	0.053	8	225
35	34.50	183	0.069	0.072	0.041	0.053	8	226
34	33.50	183	0.065	0.072	0.041	0.053	8	227
33	32.50	184	0.061	0.072	0.041	0.053	8	228
32	31.50	185	0.058	0.072	0.041	0.052	8	229
31	30.50	185	0.054	0.071	0.042	0.052	8	229
30	29.50	186	0.050	0.071	0.042	0.052	8	230
29	28.50	187	0.047	0.071	0.042	0.052	8	231
28	27.50	188	0.044	0.071	0.042	0.051	8	232
27	26.50	188	0.041	0.070	0.042	0.051	8	233
26	25.50	189	0.038	0.070	0.041	0.051	8	234
25	24.50	190	0.035	0.069	0.041	0.051	8	235
24	23.50	190	0.032	0.069	0.041	0.050	8	235
23	22.50	191	0.029	0.068	0.040	0.050	8	236

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22	21.50	192	0.027	0.067	0.040	0.049	8	237
21	20.50	192	0.024	0.066	0.039	0.049	8	238
20	19.50	193	0.022	0.065	0.039	0.048	8	239
19	18.50	194	0.020	0.064	0.038	0.048	8	240
18	17.50	194	0.018	0.063	0.037	0.047	8	241
17	16.50	195	0.016	0.061	0.036	0.046	8	241
16	15.50	196	0.014	0.060	0.035	0.045	8	242
15	14.50	197	0.012	0.058	0.034	0.044	8	243
14	13.50	197	0.011	0.056	0.032	0.043	7	244
13	12.50	198	0.009	0.053	0.031	0.042	7	245
12	11.50	199	0.008	0.051	0.029	0.041	7	246
11	10.50	199	0.006	0.048	0.027	0.039	7	247
10	9.50	200	0.005	0.045	0.026	0.037	6	247
9	8.50	201	0.004	0.042	0.024	0.035	6	248
8	7.50	201	0.003	0.038	0.021	0.033	6	249
7	6.50	202	0.002	0.035	0.019	0.031	5	250
6	5.50	203	0.002	0.030	0.017	0.028	5	251
5	4.50	203	0.001	0.026	0.014	0.024	4	252
4	3.50	204	0.001	0.021	0.011	0.020	4	253
3	2.50	205	0.000	0.015	0.008	0.016	3	253
2	1.50	206	0.000	0.010	0.005	0.010	2	254
1	0.50	206	0.000	0.003	0.002	0.004	1	255
Kaelus DBC0061F1V51-	180.00	76	1.878	1.916	1.117	0.339	22	95
Raycap DC6-48-60-18-	180.00	20	1.878	1.916	1.117	0.339	6	25
Powerwave LGP17201	180.00	186	1.878	1.916	1.117	0.339	55	230
Ericsson RRUS-11 800	180.00	162	1.878	1.916	1.117	0.339	48	200
Ericsson RRUS 32 B2	180.00	159	1.878	1.916	1.117	0.339	47	197
KMW AM-X-CD-14-65-00	180.00	36	1.878	1.916	1.117	0.339	11	45
Powerwave 7770.00	180.00	105	1.878	1.916	1.117	0.339	31	130
Quintel QS46512-2	180.00	104	1.878	1.916	1.117	0.339	31	129
Andrew SBNH-1D6565C	180.00	132	1.878	1.916	1.117	0.339	39	164
CCI TPA-65R-LCUUUU-H	180.00	163	1.878	1.916	1.117	0.339	48	202
Round Platform w/ Ha	180.00	2,000	1.878	1.916	1.117	0.339	587	2,474
		23,666	136.663	48.331	41.873	11.733	1,622	29,273

Load Case (0.9 - 0.2Sds) * DL + E EMAM Seismic (Reduced DL) Equivalent Modal Analysis Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
184	180.29	22	1.884	1.948	1.128	0.343	6	19
183	179.50	46	1.867	1.863	1.098	0.332	13	40
182	178.50	46	1.847	1.759	1.060	0.320	13	40
181	177.50	47	1.826	1.659	1.023	0.307	12	40
180	176.50	47	1.805	1.564	0.987	0.295	12	41
179	175.50	47	1.785	1.472	0.952	0.283	12	41
178	174.50	48	1.765	1.383	0.918	0.271	11	41
177	173.50	48	1.745	1.299	0.885	0.260	11	42
176	172.50	48	1.725	1.218	0.853	0.248	10	42
175	171.50	49	1.705	1.140	0.822	0.237	10	42
174	170.50	49	1.685	1.066	0.791	0.226	10	42
173	169.50	50	1.665	0.994	0.762	0.215	9	43
172	168.50	50	1.646	0.926	0.734	0.205	9	43
171	167.50	50	1.626	0.861	0.706	0.195	8	43
170	166.50	51	1.607	0.799	0.679	0.184	8	44
169	165.50	51	1.587	0.740	0.653	0.175	8	44
168	164.50	51	1.568	0.684	0.628	0.165	7	44
167	163.50	52	1.549	0.630	0.603	0.156	7	45
166	162.50	52	1.530	0.579	0.580	0.146	7	45
165	161.50	52	1.512	0.530	0.557	0.137	6	45

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164	160.50	53	1.493	0.484	0.534	0.128	6	45
163	159.50	53	1.474	0.440	0.513	0.120	6	46
162	158.50	53	1.456	0.398	0.492	0.111	5	46
161	157.50	54	1.438	0.359	0.472	0.103	5	46
160	156.50	54	1.419	0.322	0.452	0.095	4	47
159	155.50	54	1.401	0.287	0.433	0.087	4	47
158	154.50	55	1.383	0.253	0.415	0.080	4	47
157	153.50	55	1.366	0.222	0.397	0.073	3	48
156	152.50	55	1.348	0.192	0.380	0.065	3	48
155	151.50	56	1.330	0.165	0.363	0.058	3	48
154	150.50	56	1.313	0.139	0.347	0.052	3	48
153	149.50	56	1.295	0.114	0.332	0.045	2	49
152	148.50	57	1.278	0.091	0.317	0.039	2	49
151	147.50	57	1.261	0.070	0.303	0.032	2	49
150	146.50	57	1.244	0.050	0.289	0.027	1	50
149	145.50	58	1.227	0.032	0.275	0.021	1	50
148	144.50	58	1.210	0.015	0.262	0.015	1	50
147	143.50	59	1.193	-0.001	0.250	0.010	0	51
146	142.50	59	1.177	-0.016	0.238	0.005	0	51
145	141.50	59	1.160	-0.029	0.226	0.000	0	51
144	140.50	60	1.144	-0.042	0.215	-0.005	0	51
143	139.50	60	1.128	-0.053	0.204	-0.010	-1	52
142	138.50	60	1.112	-0.063	0.194	-0.014	-1	52
141	137.50	61	1.096	-0.072	0.184	-0.018	-1	52
140	136.50	61	1.080	-0.081	0.175	-0.022	-1	53
139	135.50	61	1.064	-0.088	0.166	-0.026	-1	53
138	134.50	62	1.048	-0.094	0.157	-0.030	-2	53
137	133.50	62	1.033	-0.100	0.148	-0.033	-2	53
136	132.50	62	1.018	-0.105	0.140	-0.037	-2	54
135	131.50	63	1.002	-0.109	0.132	-0.040	-2	54
134	130.50	63	0.987	-0.113	0.125	-0.042	-2	54
133	129.50	63	0.972	-0.116	0.118	-0.045	-2	55
132	128.50	64	0.957	-0.118	0.111	-0.048	-3	55
131	127.50	64	0.942	-0.120	0.105	-0.050	-3	55
130	126.50	64	0.927	-0.121	0.098	-0.052	-3	56
129	125.75	32	0.916	-0.121	0.094	-0.053	-1	28
128	125.25	36	0.909	-0.122	0.091	-0.054	-2	31
127	124.50	73	0.898	-0.122	0.087	-0.055	-4	63
126	123.50	73	0.884	-0.121	0.081	-0.057	-4	63
125	122.50	74	0.870	-0.121	0.076	-0.058	-4	64
124	121.50	74	0.856	-0.120	0.071	-0.059	-4	64
123	120.50	75	0.842	-0.118	0.067	-0.060	-4	64
122	119.50	75	0.828	-0.116	0.062	-0.060	-4	65
121	118.50	75	0.814	-0.114	0.058	-0.061	-4	65
120	117.50	76	0.800	-0.112	0.054	-0.061	-4	65
119	116.50	76	0.787	-0.109	0.050	-0.061	-4	66
118	115.50	77	0.773	-0.106	0.046	-0.061	-4	66
117	114.50	77	0.760	-0.103	0.043	-0.060	-4	66
116	113.50	77	0.747	-0.100	0.040	-0.060	-4	67
115	112.50	78	0.734	-0.097	0.037	-0.059	-4	67
114	111.50	78	0.721	-0.093	0.034	-0.058	-4	67
113	110.50	79	0.708	-0.089	0.031	-0.056	-4	68
112	109.50	79	0.695	-0.085	0.029	-0.055	-4	68
111	108.50	79	0.682	-0.081	0.027	-0.053	-4	69
110	107.50	80	0.670	-0.077	0.024	-0.051	-4	69
109	106.50	80	0.657	-0.073	0.022	-0.049	-3	69
108	105.50	81	0.645	-0.069	0.020	-0.046	-3	70
107	104.50	81	0.633	-0.065	0.019	-0.044	-3	70
106	103.50	81	0.621	-0.060	0.017	-0.041	-3	70
105	102.50	82	0.609	-0.056	0.016	-0.038	-3	71
104	101.50	82	0.597	-0.052	0.014	-0.035	-3	71
103	100.50	83	0.585	-0.048	0.013	-0.032	-2	71
102	99.50	83	0.574	-0.043	0.012	-0.029	-2	72
101	98.50	83	0.562	-0.039	0.011	-0.025	-2	72

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100	97.50	84	0.551	-0.035	0.010	-0.021	-2	72
99	96.50	84	0.540	-0.031	0.009	-0.018	-1	73
98	95.50	85	0.529	-0.027	0.008	-0.014	-1	73
97	94.50	85	0.518	-0.023	0.008	-0.010	-1	73
96	93.50	85	0.507	-0.019	0.007	-0.006	0	74
95	92.50	86	0.496	-0.015	0.007	-0.003	0	74
94	91.50	86	0.485	-0.011	0.007	0.001	0	74
93	90.50	87	0.475	-0.007	0.006	0.005	0	75
92	89.50	87	0.464	-0.003	0.006	0.008	1	75
91	88.50	87	0.454	0.000	0.006	0.012	1	75
90	87.50	88	0.444	0.004	0.006	0.015	1	76
89	86.50	88	0.434	0.007	0.006	0.019	1	76
88	85.88	22	0.427	0.009	0.006	0.021	0	19
87	85.38	96	0.422	0.011	0.006	0.022	2	83
86	84.50	128	0.414	0.014	0.006	0.025	3	111
85	83.50	129	0.404	0.017	0.006	0.028	3	111
84	82.50	130	0.394	0.020	0.007	0.031	3	112
83	81.50	130	0.385	0.023	0.007	0.033	4	112
82	80.50	131	0.376	0.026	0.007	0.036	4	113
81	79.50	131	0.366	0.028	0.008	0.038	4	113
80	78.50	132	0.357	0.031	0.008	0.040	5	114
79	77.50	133	0.348	0.033	0.009	0.042	5	114
78	76.50	133	0.339	0.036	0.009	0.044	5	115
77	75.50	134	0.330	0.038	0.010	0.046	5	115
76	74.50	134	0.322	0.040	0.011	0.047	6	116
75	73.50	135	0.313	0.042	0.011	0.049	6	116
74	72.50	136	0.305	0.044	0.012	0.050	6	117
73	71.50	136	0.296	0.046	0.013	0.051	6	117
72	70.50	137	0.288	0.048	0.013	0.052	6	118
71	69.50	137	0.280	0.050	0.014	0.053	6	119
70	68.50	138	0.272	0.051	0.015	0.054	6	119
69	67.50	139	0.264	0.053	0.016	0.055	7	120
68	66.50	139	0.256	0.054	0.016	0.055	7	120
67	65.50	140	0.249	0.056	0.017	0.056	7	121
66	64.50	140	0.241	0.057	0.018	0.056	7	121
65	63.50	141	0.234	0.058	0.019	0.056	7	122
64	62.50	141	0.226	0.059	0.020	0.057	7	122
63	61.50	142	0.219	0.060	0.021	0.057	7	123
62	60.50	143	0.212	0.061	0.022	0.057	7	123
61	59.50	143	0.205	0.062	0.023	0.057	7	124
60	58.50	144	0.198	0.063	0.023	0.057	7	124
59	57.50	144	0.192	0.064	0.024	0.057	7	125
58	56.50	145	0.185	0.065	0.025	0.057	7	125
57	55.50	146	0.179	0.065	0.026	0.057	7	126
56	54.50	146	0.172	0.066	0.027	0.057	7	126
55	53.50	147	0.166	0.067	0.028	0.057	7	127
54	52.50	147	0.160	0.067	0.029	0.057	7	127
53	51.50	148	0.154	0.068	0.030	0.057	7	128
52	50.50	149	0.148	0.068	0.030	0.057	7	128
51	49.50	149	0.142	0.069	0.031	0.056	7	129
50	48.50	150	0.136	0.069	0.032	0.056	7	129
49	47.50	150	0.131	0.069	0.033	0.056	7	130
48	46.50	151	0.125	0.070	0.034	0.056	7	130
47	45.50	152	0.120	0.070	0.034	0.055	7	131
46	44.88	38	0.117	0.070	0.035	0.055	2	33
45	44.38	132	0.114	0.070	0.035	0.055	6	114
44	43.50	176	0.110	0.071	0.036	0.055	8	152
43	42.50	177	0.105	0.071	0.037	0.055	8	153
42	41.50	178	0.100	0.071	0.037	0.055	8	153
41	40.50	179	0.095	0.071	0.038	0.054	8	154
40	39.50	179	0.090	0.071	0.038	0.054	8	155
39	38.50	180	0.086	0.071	0.039	0.054	8	155
38	37.50	181	0.082	0.072	0.039	0.054	8	156
37	36.50	181	0.077	0.072	0.040	0.054	8	156

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36	35.50	182	0.073	0.072	0.040	0.053	8	157
35	34.50	183	0.069	0.072	0.041	0.053	8	158
34	33.50	183	0.065	0.072	0.041	0.053	8	158
33	32.50	184	0.061	0.072	0.041	0.053	8	159
32	31.50	185	0.058	0.072	0.041	0.052	8	159
31	30.50	185	0.054	0.071	0.042	0.052	8	160
30	29.50	186	0.050	0.071	0.042	0.052	8	161
29	28.50	187	0.047	0.071	0.042	0.052	8	161
28	27.50	188	0.044	0.071	0.042	0.051	8	162
27	26.50	188	0.041	0.070	0.042	0.051	8	162
26	25.50	189	0.038	0.070	0.041	0.051	8	163
25	24.50	190	0.035	0.069	0.041	0.051	8	164
24	23.50	190	0.032	0.069	0.041	0.050	8	164
23	22.50	191	0.029	0.068	0.040	0.050	8	165
22	21.50	192	0.027	0.067	0.040	0.049	8	165
21	20.50	192	0.024	0.066	0.039	0.049	8	166
20	19.50	193	0.022	0.065	0.039	0.048	8	167
19	18.50	194	0.020	0.064	0.038	0.048	8	167
18	17.50	194	0.018	0.063	0.037	0.047	8	168
17	16.50	195	0.016	0.061	0.036	0.046	8	168
16	15.50	196	0.014	0.060	0.035	0.045	8	169
15	14.50	197	0.012	0.058	0.034	0.044	8	170
14	13.50	197	0.011	0.056	0.032	0.043	7	170
13	12.50	198	0.009	0.053	0.031	0.042	7	171
12	11.50	199	0.008	0.051	0.029	0.041	7	171
11	10.50	199	0.006	0.048	0.027	0.039	7	172
10	9.50	200	0.005	0.045	0.026	0.037	6	173
9	8.50	201	0.004	0.042	0.024	0.035	6	173
8	7.50	201	0.003	0.038	0.021	0.033	6	174
7	6.50	202	0.002	0.035	0.019	0.031	5	174
6	5.50	203	0.002	0.030	0.017	0.028	5	175
5	4.50	203	0.001	0.026	0.014	0.024	4	176
4	3.50	204	0.001	0.021	0.011	0.020	4	176
3	2.50	205	0.000	0.015	0.008	0.016	3	177
2	1.50	206	0.000	0.010	0.005	0.010	2	177
1	0.50	206	0.000	0.003	0.002	0.004	1	178
Kaelus DBC0061F1V51-	180.00	76	1.878	1.916	1.117	0.339	22	66
Raycap DC6-48-60-18-	180.00	20	1.878	1.916	1.117	0.339	6	17
Powerwave LGP17201	180.00	186	1.878	1.916	1.117	0.339	55	161
Ericsson RRUS-11 800	180.00	162	1.878	1.916	1.117	0.339	48	140
Ericsson RRUS 32 B2	180.00	159	1.878	1.916	1.117	0.339	47	137
KMW AM-X-CD-14-65-00	180.00	36	1.878	1.916	1.117	0.339	11	31
Powerwave 7770.00	180.00	105	1.878	1.916	1.117	0.339	31	91
Quintel QS46512-2	180.00	104	1.878	1.916	1.117	0.339	31	90
Andrew SBNH-1D6565C	180.00	132	1.878	1.916	1.117	0.339	39	114
CCI TPA-65R-LCUUUU-H	180.00	163	1.878	1.916	1.117	0.339	48	141
Round Platform w/ Ha	180.00	2,000	1.878	1.916	1.117	0.339	587	1,726
		23,666	136.663	48.331	41.873	11.733	1,622	20,426

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Load Case (1.2 + 0.2Sds) * DL + E EMAM Seismic Equivalent Modal Analysis Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-29.02	-1.62	0.00	-236.58	0.00	236.58	4,173.88	2,086.94	7,090.68	3,501.82	0.00	0.00	0.075
1.00	-28.76	-1.62	0.00	-234.96	0.00	234.96	4,164.30	2,082.15	7,049.35	3,481.41	0.00	-0.01	0.074
2.00	-28.51	-1.62	0.00	-233.34	0.00	233.34	4,154.67	2,077.34	7,008.08	3,461.03	0.00	-0.01	0.074
3.00	-28.26	-1.62	0.00	-231.71	0.00	231.71	4,145.02	2,072.51	6,966.87	3,440.67	0.01	-0.02	0.074
4.00	-28.01	-1.62	0.00	-230.09	0.00	230.09	4,135.32	2,067.66	6,925.71	3,420.35	0.01	-0.02	0.074
5.00	-27.75	-1.62	0.00	-228.47	0.00	228.47	4,125.60	2,062.80	6,884.61	3,400.05	0.01	-0.03	0.074
6.00	-27.50	-1.61	0.00	-226.86	0.00	226.86	4,115.83	2,057.92	6,843.57	3,379.78	0.02	-0.03	0.074
7.00	-27.25	-1.61	0.00	-225.24	0.00	225.24	4,106.03	2,053.02	6,802.59	3,359.54	0.03	-0.04	0.074
8.00	-27.01	-1.61	0.00	-223.63	0.00	223.63	4,096.20	2,048.10	6,761.66	3,339.33	0.04	-0.04	0.074
9.00	-26.76	-1.60	0.00	-222.03	0.00	222.03	4,086.33	2,043.16	6,720.80	3,319.15	0.05	-0.05	0.073
10.00	-26.51	-1.60	0.00	-220.43	0.00	220.43	4,076.42	2,038.21	6,680.00	3,299.00	0.06	-0.05	0.073
11.00	-26.27	-1.59	0.00	-218.83	0.00	218.83	4,066.48	2,033.24	6,639.26	3,278.88	0.07	-0.06	0.073
12.00	-26.02	-1.59	0.00	-217.23	0.00	217.23	4,056.51	2,028.25	6,598.58	3,258.79	0.08	-0.07	0.073
13.00	-25.78	-1.58	0.00	-215.65	0.00	215.65	4,046.49	2,023.25	6,557.96	3,238.73	0.10	-0.07	0.073
14.00	-25.53	-1.58	0.00	-214.06	0.00	214.06	4,036.45	2,018.22	6,517.41	3,218.70	0.11	-0.08	0.073
15.00	-25.29	-1.57	0.00	-212.49	0.00	212.49	4,026.36	2,013.18	6,476.92	3,198.71	0.13	-0.08	0.073
16.00	-25.05	-1.57	0.00	-210.91	0.00	210.91	4,016.25	2,008.12	6,436.49	3,178.74	0.15	-0.09	0.073
17.00	-24.81	-1.56	0.00	-209.35	0.00	209.35	4,006.09	2,003.05	6,396.13	3,158.81	0.16	-0.09	0.072
18.00	-24.57	-1.55	0.00	-207.79	0.00	207.79	3,995.91	1,997.95	6,355.84	3,138.91	0.18	-0.10	0.072
19.00	-24.33	-1.55	0.00	-206.23	0.00	206.23	3,985.68	1,992.84	6,315.61	3,119.04	0.21	-0.10	0.072
20.00	-24.09	-1.54	0.00	-204.68	0.00	204.68	3,975.42	1,987.71	6,275.45	3,099.21	0.23	-0.11	0.072
21.00	-23.86	-1.54	0.00	-203.14	0.00	203.14	3,965.13	1,982.56	6,235.36	3,079.41	0.25	-0.12	0.072
22.00	-23.62	-1.53	0.00	-201.61	0.00	201.61	3,954.48	1,977.24	6,194.84	3,059.40	0.28	-0.12	0.072
23.00	-23.38	-1.52	0.00	-200.08	0.00	200.08	3,939.47	1,969.74	6,147.64	3,036.09	0.30	-0.13	0.072
24.00	-23.15	-1.52	0.00	-198.55	0.00	198.55	3,924.46	1,962.23	6,100.62	3,012.87	0.33	-0.13	0.072
25.00	-22.91	-1.51	0.00	-197.04	0.00	197.04	3,909.45	1,954.73	6,053.78	2,989.74	0.36	-0.14	0.072
26.00	-22.68	-1.50	0.00	-195.53	0.00	195.53	3,894.45	1,947.22	6,007.13	2,966.69	0.39	-0.14	0.072
27.00	-22.45	-1.50	0.00	-194.02	0.00	194.02	3,879.44	1,939.72	5,960.65	2,943.74	0.42	-0.15	0.072
28.00	-22.22	-1.49	0.00	-192.53	0.00	192.53	3,864.43	1,932.22	5,914.36	2,920.88	0.45	-0.16	0.072
29.00	-21.99	-1.48	0.00	-191.04	0.00	191.04	3,849.42	1,924.71	5,868.24	2,898.10	0.48	-0.16	0.072
30.00	-21.76	-1.48	0.00	-189.56	0.00	189.56	3,834.41	1,917.21	5,822.31	2,875.42	0.52	-0.17	0.072
31.00	-21.53	-1.47	0.00	-188.08	0.00	188.08	3,819.41	1,909.70	5,776.55	2,852.82	0.55	-0.17	0.072
32.00	-21.30	-1.46	0.00	-186.61	0.00	186.61	3,804.40	1,902.20	5,730.98	2,830.32	0.59	-0.18	0.072
33.00	-21.08	-1.46	0.00	-185.15	0.00	185.15	3,789.39	1,894.70	5,685.59	2,807.90	0.63	-0.19	0.072
34.00	-20.85	-1.45	0.00	-183.69	0.00	183.69	3,774.38	1,887.19	5,640.38	2,785.57	0.67	-0.19	0.071
35.00	-20.62	-1.44	0.00	-182.24	0.00	182.24	3,759.37	1,879.69	5,595.34	2,763.33	0.71	-0.20	0.071
36.00	-20.40	-1.43	0.00	-180.80	0.00	180.80	3,744.37	1,872.18	5,550.49	2,741.18	0.75	-0.20	0.071
37.00	-20.18	-1.43	0.00	-179.37	0.00	179.37	3,729.36	1,864.68	5,505.82	2,719.12	0.80	-0.21	0.071
38.00	-19.95	-1.42	0.00	-177.94	0.00	177.94	3,714.35	1,857.18	5,461.33	2,697.15	0.84	-0.22	0.071
39.00	-19.73	-1.41	0.00	-176.52	0.00	176.52	3,699.34	1,849.67	5,417.02	2,675.26	0.89	-0.22	0.071
40.00	-19.51	-1.41	0.00	-175.10	0.00	175.10	3,684.33	1,842.17	5,372.89	2,653.47	0.93	-0.23	0.071
41.00	-19.29	-1.40	0.00	-173.70	0.00	173.70	3,669.33	1,834.66	5,328.94	2,631.76	0.98	-0.23	0.071
42.00	-19.07	-1.39	0.00	-172.30	0.00	172.30	3,654.32	1,827.16	5,285.17	2,610.15	1.03	-0.24	0.071
43.00	-18.85	-1.38	0.00	-170.91	0.00	170.91	3,639.31	1,819.66	5,241.59	2,588.62	1.08	-0.25	0.071
44.00	-18.69	-1.38	0.00	-169.52	0.00	169.52	3,624.30	1,812.15	5,198.18	2,567.18	1.14	-0.25	0.071
44.75	-18.64	-1.38	0.00	-168.49	0.00	168.49	3,613.05	1,806.52	5,165.74	2,551.17	1.18	-0.26	0.071
44.75	-18.64	-1.38	0.00	-168.49	0.00	168.49	3,037.33	1,518.66	4,358.22	2,152.36	1.18	-0.26	0.084
45.00	-18.45	-1.37	0.00	-168.14	0.00	168.14	3,035.24	1,517.62	4,350.67	2,148.63	1.19	-0.26	0.084
46.00	-18.27	-1.37	0.00	-166.77	0.00	166.77	3,026.89	1,513.44	4,320.50	2,133.73	1.24	-0.27	0.084
47.00	-18.08	-1.36	0.00	-165.41	0.00	165.41	3,018.50	1,509.25	4,290.37	2,118.85	1.30	-0.27	0.084
48.00	-17.90	-1.35	0.00	-164.05	0.00	164.05	3,010.08	1,505.04	4,260.30	2,104.00	1.36	-0.28	0.084
49.00	-17.71	-1.35	0.00	-162.69	0.00	162.69	3,001.62	1,500.81	4,230.28	2,089.17	1.42	-0.29	0.084
50.00	-17.53	-1.34	0.00	-161.35	0.00	161.35	2,993.12	1,496.56	4,200.31	2,074.37	1.48	-0.30	0.084
51.00	-17.34	-1.34	0.00	-160.00	0.00	160.00	2,984.59	1,492.30	4,170.39	2,059.60	1.54	-0.30	0.083
52.00	-17.16	-1.33	0.00	-158.67	0.00	158.67	2,976.02	1,488.01	4,140.52	2,044.85	1.61	-0.31	0.083
53.00	-16.98	-1.32	0.00	-157.34	0.00	157.34	2,967.42	1,483.71	4,110.71	2,030.13	1.67	-0.32	0.083

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54.00	-16.80	-1.32	0.00	-156.01	0.00	156.01	2,958.79	1,479.39	4,080.96	2,015.43	1.74	-0.33	0.083
55.00	-16.62	-1.31	0.00	-154.69	0.00	154.69	2,950.11	1,475.06	4,051.26	2,000.76	1.81	-0.33	0.083
56.00	-16.44	-1.31	0.00	-153.38	0.00	153.38	2,941.41	1,470.70	4,021.62	1,986.12	1.88	-0.34	0.083
57.00	-16.26	-1.30	0.00	-152.08	0.00	152.08	2,932.66	1,466.33	3,992.03	1,971.51	1.95	-0.35	0.083
58.00	-16.08	-1.29	0.00	-150.78	0.00	150.78	2,923.89	1,461.94	3,962.50	1,956.93	2.03	-0.36	0.083
59.00	-15.91	-1.29	0.00	-149.48	0.00	149.48	2,915.07	1,457.54	3,933.03	1,942.37	2.10	-0.37	0.082
60.00	-15.73	-1.28	0.00	-148.20	0.00	148.20	2,906.28	1,453.14	3,903.69	1,927.89	2.18	-0.37	0.082
61.00	-15.55	-1.28	0.00	-146.91	0.00	146.91	2,893.42	1,446.71	3,869.02	1,910.76	2.26	-0.38	0.082
62.00	-15.38	-1.27	0.00	-145.64	0.00	145.64	2,880.56	1,440.28	3,834.50	1,893.71	2.34	-0.39	0.082
63.00	-15.20	-1.26	0.00	-144.37	0.00	144.37	2,867.69	1,433.85	3,800.13	1,876.74	2.42	-0.40	0.082
64.00	-15.03	-1.26	0.00	-143.10	0.00	143.10	2,854.83	1,427.41	3,765.92	1,859.84	2.51	-0.40	0.082
65.00	-14.86	-1.25	0.00	-141.85	0.00	141.85	2,841.96	1,420.98	3,731.86	1,843.02	2.59	-0.41	0.082
66.00	-14.68	-1.25	0.00	-140.59	0.00	140.59	2,829.10	1,414.55	3,697.96	1,826.28	2.68	-0.42	0.082
67.00	-14.51	-1.24	0.00	-139.35	0.00	139.35	2,816.24	1,408.12	3,664.21	1,809.61	2.77	-0.43	0.082
68.00	-14.34	-1.23	0.00	-138.11	0.00	138.11	2,803.37	1,401.69	3,630.61	1,793.02	2.86	-0.44	0.082
69.00	-14.17	-1.23	0.00	-136.87	0.00	136.87	2,790.51	1,395.25	3,597.18	1,776.51	2.95	-0.44	0.082
70.00	-14.00	-1.22	0.00	-135.64	0.00	135.64	2,777.64	1,388.82	3,563.89	1,760.07	3.05	-0.45	0.082
71.00	-13.83	-1.22	0.00	-134.42	0.00	134.42	2,764.78	1,382.39	3,530.76	1,743.71	3.14	-0.46	0.082
72.00	-13.67	-1.21	0.00	-133.20	0.00	133.20	2,751.92	1,375.96	3,497.79	1,727.43	3.24	-0.47	0.082
73.00	-13.50	-1.21	0.00	-131.99	0.00	131.99	2,739.05	1,369.53	3,464.97	1,711.22	3.34	-0.48	0.082
74.00	-13.33	-1.20	0.00	-130.78	0.00	130.78	2,726.19	1,363.09	3,432.30	1,695.08	3.44	-0.49	0.082
75.00	-13.17	-1.20	0.00	-129.58	0.00	129.58	2,713.32	1,356.66	3,399.79	1,679.03	3.54	-0.49	0.082
76.00	-13.00	-1.19	0.00	-128.38	0.00	128.38	2,700.46	1,350.23	3,367.44	1,663.05	3.65	-0.50	0.082
77.00	-12.84	-1.19	0.00	-127.19	0.00	127.19	2,687.60	1,343.80	3,335.24	1,647.15	3.75	-0.51	0.082
78.00	-12.68	-1.18	0.00	-126.00	0.00	126.00	2,674.73	1,337.37	3,303.19	1,631.32	3.86	-0.52	0.082
79.00	-12.51	-1.18	0.00	-124.82	0.00	124.82	2,661.87	1,330.93	3,271.30	1,615.57	3.97	-0.53	0.082
80.00	-12.35	-1.18	0.00	-123.64	0.00	123.64	2,649.00	1,324.50	3,239.56	1,599.90	4.08	-0.54	0.082
81.00	-12.19	-1.17	0.00	-122.46	0.00	122.46	2,636.14	1,318.07	3,207.98	1,584.30	4.19	-0.55	0.082
82.00	-12.03	-1.17	0.00	-121.28	0.00	121.28	2,623.28	1,311.64	3,176.55	1,568.78	4.31	-0.55	0.082
83.00	-11.87	-1.17	0.00	-120.11	0.00	120.11	2,610.41	1,305.21	3,145.28	1,553.33	4.43	-0.56	0.082
84.00	-11.71	-1.16	0.00	-118.95	0.00	118.95	2,597.55	1,298.77	3,114.16	1,537.97	4.55	-0.57	0.082
85.00	-11.59	-1.16	0.00	-117.78	0.00	117.78	2,584.68	1,292.34	3,083.20	1,522.68	4.67	-0.58	0.082
85.75	-11.56	-1.16	0.00	-116.91	0.00	116.91	2,575.04	1,287.52	3,060.08	1,511.26	4.76	-0.59	0.082
85.75	-11.56	-1.16	0.00	-116.91	0.00	116.91	1,544.73	772.37	1,851.60	914.44	4.76	-0.59	0.135
86.00	-11.46	-1.16	0.00	-116.62	0.00	116.62	1,543.70	771.85	1,848.04	912.68	4.79	-0.59	0.135
87.00	-11.35	-1.16	0.00	-115.46	0.00	115.46	1,539.55	769.77	1,833.81	905.65	4.91	-0.60	0.135
88.00	-11.24	-1.16	0.00	-114.29	0.00	114.29	1,535.36	767.68	1,819.59	898.63	5.04	-0.62	0.135
89.00	-11.13	-1.16	0.00	-113.13	0.00	113.13	1,531.13	765.57	1,805.38	891.61	5.17	-0.63	0.134
90.00	-11.02	-1.17	0.00	-111.97	0.00	111.97	1,526.87	763.44	1,791.17	884.59	5.30	-0.64	0.134
91.00	-10.92	-1.17	0.00	-110.80	0.00	110.80	1,522.58	761.29	1,776.98	877.58	5.44	-0.66	0.133
92.00	-10.81	-1.17	0.00	-109.63	0.00	109.63	1,518.25	759.12	1,762.79	870.58	5.58	-0.67	0.133
93.00	-10.70	-1.17	0.00	-108.47	0.00	108.47	1,513.88	756.94	1,748.62	863.58	5.72	-0.68	0.133
94.00	-10.60	-1.17	0.00	-107.30	0.00	107.30	1,509.48	754.74	1,734.46	856.59	5.86	-0.70	0.132
95.00	-10.49	-1.17	0.00	-106.12	0.00	106.12	1,505.04	752.52	1,720.31	849.60	6.01	-0.71	0.132
96.00	-10.39	-1.18	0.00	-104.95	0.00	104.95	1,500.57	750.29	1,706.18	842.62	6.16	-0.72	0.131
97.00	-10.29	-1.18	0.00	-103.77	0.00	103.77	1,496.06	748.03	1,692.06	835.64	6.31	-0.74	0.131
98.00	-10.18	-1.18	0.00	-102.59	0.00	102.59	1,491.52	745.76	1,677.95	828.68	6.47	-0.75	0.131
99.00	-10.08	-1.19	0.00	-101.41	0.00	101.41	1,486.94	743.47	1,663.86	821.72	6.63	-0.76	0.130
100.00	-9.98	-1.19	0.00	-100.23	0.00	100.23	1,482.33	741.16	1,649.78	814.77	6.79	-0.78	0.130
101.00	-9.88	-1.19	0.00	-99.04	0.00	99.04	1,477.68	738.84	1,635.72	807.82	6.96	-0.79	0.129
102.00	-9.77	-1.20	0.00	-97.85	0.00	97.85	1,473.00	736.50	1,621.68	800.89	7.12	-0.81	0.129
103.00	-9.67	-1.20	0.00	-96.65	0.00	96.65	1,468.28	734.14	1,607.66	793.96	7.29	-0.82	0.128
104.00	-9.57	-1.20	0.00	-95.45	0.00	95.45	1,463.52	731.76	1,593.65	787.04	7.47	-0.84	0.128
105.00	-9.47	-1.21	0.00	-94.25	0.00	94.25	1,458.73	729.37	1,579.66	780.14	7.64	-0.85	0.127
106.00	-9.37	-1.21	0.00	-93.04	0.00	93.04	1,453.91	726.95	1,565.69	773.24	7.82	-0.86	0.127
107.00	-9.27	-1.22	0.00	-91.83	0.00	91.83	1,449.04	724.52	1,551.74	766.35	8.01	-0.88	0.126
108.00	-9.18	-1.22	0.00	-90.61	0.00	90.61	1,444.15	722.07	1,537.82	759.47	8.19	-0.89	0.126
109.00	-9.08	-1.23	0.00	-89.39	0.00	89.39	1,439.21	719.61	1,523.91	752.60	8.38	-0.91	0.125
110.00	-8.98	-1.23	0.00	-88.16	0.00	88.16	1,434.25	717.12	1,510.03	745.75	8.57	-0.92	0.124
111.00	-8.88	-1.23	0.00	-86.93	0.00	86.93	1,429.24	714.62	1,496.17	738.90	8.77	-0.94	0.124
112.00	-8.79	-1.24	0.00	-85.70	0.00	85.70	1,424.21	712.10	1,482.33	732.07	8.96	-0.95	0.123
113.00	-8.69	-1.24	0.00	-84.46	0.00	84.46	1,419.13	709.57	1,468.51	725.24	9.16	-0.97	0.123
114.00	-8.59	-1.25	0.00	-83.21	0.00	83.21	1,414.02	707.01	1,454.73	718.43	9.37	-0.98	0.122
115.00	-8.50	-1.25	0.00	-81.96	0.00	81.96	1,408.88	704.44	1,440.96	711.64	9.57	-0.99	0.121

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116.00	-8.40	-1.26	0.00	-80.71	0.00	80.71	1,403.70	701.85	1,427.22	704.85	9.78	-1.01	0.120
117.00	-8.31	-1.26	0.00	-79.45	0.00	79.45	1,398.48	699.24	1,413.51	698.08	10.00	-1.02	0.120
118.00	-8.22	-1.27	0.00	-78.19	0.00	78.19	1,393.23	696.62	1,399.83	691.32	10.21	-1.04	0.119
119.00	-8.12	-1.27	0.00	-76.92	0.00	76.92	1,387.95	693.97	1,386.17	684.58	10.43	-1.05	0.118
120.00	-8.03	-1.28	0.00	-75.65	0.00	75.65	1,382.63	691.31	1,372.54	677.85	10.65	-1.07	0.117
121.00	-7.94	-1.28	0.00	-74.38	0.00	74.38	1,377.27	688.64	1,358.94	671.13	10.88	-1.08	0.117
122.00	-7.85	-1.28	0.00	-73.10	0.00	73.10	1,371.88	685.94	1,345.37	664.43	11.11	-1.10	0.116
123.00	-7.76	-1.29	0.00	-71.82	0.00	71.82	1,366.45	683.23	1,331.83	657.74	11.34	-1.11	0.115
124.00	-7.67	-1.29	0.00	-70.53	0.00	70.53	1,360.99	680.49	1,318.33	651.07	11.57	-1.13	0.114
125.00	-7.62	-1.29	0.00	-69.24	0.00	69.24	1,355.49	677.74	1,304.85	644.42	11.81	-1.14	0.113
125.50	-7.58	-1.30	0.00	-68.59	0.00	68.59	1,352.73	676.36	1,298.12	641.09	11.93	-1.15	0.113
125.50	-7.58	-1.30	0.00	-68.59	0.00	68.59	1,127.00	563.50	1,084.41	535.55	11.93	-1.15	0.135
126.00	-7.50	-1.30	0.00	-67.94	0.00	67.94	1,124.94	562.47	1,079.04	532.90	12.05	-1.16	0.134
127.00	-7.42	-1.30	0.00	-66.65	0.00	66.65	1,120.78	560.39	1,068.31	527.60	12.30	-1.17	0.133
128.00	-7.34	-1.30	0.00	-65.34	0.00	65.34	1,116.59	558.29	1,057.61	522.31	12.55	-1.19	0.132
129.00	-7.26	-1.31	0.00	-64.04	0.00	64.04	1,112.36	556.18	1,046.91	517.03	12.80	-1.21	0.130
130.00	-7.18	-1.31	0.00	-62.73	0.00	62.73	1,108.10	554.05	1,036.24	511.76	13.05	-1.22	0.129
131.00	-7.11	-1.31	0.00	-61.42	0.00	61.42	1,103.80	551.90	1,025.58	506.50	13.31	-1.24	0.128
132.00	-7.03	-1.32	0.00	-60.11	0.00	60.11	1,099.47	549.73	1,014.94	501.24	13.57	-1.26	0.126
133.00	-6.95	-1.32	0.00	-58.79	0.00	58.79	1,095.10	547.55	1,004.33	496.00	13.84	-1.28	0.125
134.00	-6.87	-1.32	0.00	-57.48	0.00	57.48	1,090.69	545.35	993.73	490.77	14.11	-1.29	0.123
135.00	-6.80	-1.32	0.00	-56.16	0.00	56.16	1,086.26	543.13	983.15	485.54	14.38	-1.31	0.122
136.00	-6.72	-1.32	0.00	-54.84	0.00	54.84	1,081.78	540.89	972.60	480.33	14.65	-1.33	0.120
137.00	-6.65	-1.32	0.00	-53.51	0.00	53.51	1,077.27	538.64	962.07	475.13	14.93	-1.34	0.119
138.00	-6.57	-1.32	0.00	-52.19	0.00	52.19	1,072.73	536.36	951.56	469.94	15.22	-1.36	0.117
139.00	-6.50	-1.32	0.00	-50.87	0.00	50.87	1,068.14	534.07	941.07	464.76	15.50	-1.37	0.116
140.00	-6.42	-1.33	0.00	-49.54	0.00	49.54	1,063.53	531.76	930.61	459.59	15.79	-1.39	0.114
141.00	-6.35	-1.33	0.00	-48.22	0.00	48.22	1,058.88	529.44	920.17	454.44	16.09	-1.41	0.112
142.00	-6.28	-1.33	0.00	-46.89	0.00	46.89	1,054.19	527.09	909.76	449.30	16.38	-1.42	0.110
143.00	-6.20	-1.32	0.00	-45.57	0.00	45.57	1,049.47	524.73	899.37	444.17	16.68	-1.44	0.109
144.00	-6.13	-1.32	0.00	-44.24	0.00	44.24	1,044.71	522.35	889.01	439.05	16.98	-1.45	0.107
145.00	-6.06	-1.32	0.00	-42.92	0.00	42.92	1,039.92	519.96	878.68	433.95	17.29	-1.47	0.105
146.00	-5.99	-1.32	0.00	-41.60	0.00	41.60	1,035.09	517.54	868.38	428.86	17.60	-1.49	0.103
147.00	-5.92	-1.32	0.00	-40.27	0.00	40.27	1,030.22	515.11	858.10	423.79	17.91	-1.50	0.101
148.00	-5.85	-1.32	0.00	-38.96	0.00	38.96	1,025.32	512.66	847.86	418.72	18.23	-1.52	0.099
149.00	-5.78	-1.31	0.00	-37.64	0.00	37.64	1,020.39	510.19	837.64	413.68	18.55	-1.53	0.097
150.00	-5.71	-1.31	0.00	-36.32	0.00	36.32	1,015.42	507.71	827.46	408.65	18.87	-1.55	0.095
151.00	-5.64	-1.31	0.00	-35.01	0.00	35.01	1,010.41	505.21	817.30	403.63	19.20	-1.56	0.092
152.00	-5.57	-1.30	0.00	-33.71	0.00	33.71	1,005.37	502.69	807.18	398.64	19.52	-1.57	0.090
153.00	-5.50	-1.30	0.00	-32.40	0.00	32.40	1,000.30	500.15	797.09	393.65	19.85	-1.59	0.088
154.00	-5.43	-1.30	0.00	-31.10	0.00	31.10	995.19	497.59	787.03	388.69	20.19	-1.60	0.085
155.00	-5.37	-1.29	0.00	-29.80	0.00	29.80	990.04	495.02	777.01	383.74	20.53	-1.62	0.083
156.00	-5.30	-1.29	0.00	-28.51	0.00	28.51	983.06	491.53	765.62	378.11	20.87	-1.63	0.081
157.00	-5.23	-1.28	0.00	-27.23	0.00	27.23	975.56	487.78	753.91	372.33	21.21	-1.64	0.078
158.00	-5.17	-1.27	0.00	-25.95	0.00	25.95	968.05	484.03	742.29	366.59	21.55	-1.65	0.076
159.00	-5.10	-1.27	0.00	-24.67	0.00	24.67	960.55	480.27	730.76	360.90	21.90	-1.67	0.074
160.00	-5.04	-1.26	0.00	-23.40	0.00	23.40	953.04	476.52	719.32	355.25	22.25	-1.68	0.071
161.00	-4.97	-1.25	0.00	-22.14	0.00	22.14	945.54	472.77	707.97	349.64	22.61	-1.69	0.069
162.00	-4.91	-1.25	0.00	-20.89	0.00	20.89	938.04	469.02	696.71	344.08	22.96	-1.70	0.066
163.00	-4.84	-1.24	0.00	-19.64	0.00	19.64	930.53	465.27	685.54	338.56	23.32	-1.71	0.063
164.00	-4.78	-1.23	0.00	-18.40	0.00	18.40	923.03	461.51	674.47	333.09	23.68	-1.72	0.060
165.00	-4.72	-1.22	0.00	-17.17	0.00	17.17	915.52	457.76	663.48	327.67	24.04	-1.73	0.058
166.00	-4.65	-1.21	0.00	-15.95	0.00	15.95	908.02	454.01	652.58	322.29	24.40	-1.74	0.055
167.00	-4.59	-1.20	0.00	-14.73	0.00	14.73	900.52	450.26	641.77	316.95	24.77	-1.75	0.052
168.00	-4.53	-1.19	0.00	-13.53	0.00	13.53	893.01	446.51	631.06	311.65	25.14	-1.76	0.048
169.00	-4.47	-1.18	0.00	-12.34	0.00	12.34	885.51	442.75	620.43	306.41	25.51	-1.77	0.045
170.00	-4.41	-1.17	0.00	-11.15	0.00	11.15	878.00	439.00	609.89	301.20	25.88	-1.78	0.042
171.00	-4.35	-1.16	0.00	-9.98	0.00	9.98	870.50	435.25	599.45	296.04	26.25	-1.78	0.039
172.00	-4.29	-1.15	0.00	-8.82	0.00	8.82	863.00	431.50	589.09	290.93	26.63	-1.79	0.035
173.00	-4.23	-1.14	0.00	-7.67	0.00	7.67	855.49	427.75	578.82	285.86	27.00	-1.80	0.032
174.00	-4.17	-1.12	0.00	-6.54	0.00	6.54	847.99	423.99	568.65	280.83	27.38	-1.80	0.028
175.00	-4.11	-1.11	0.00	-5.41	0.00	5.41	840.48	420.24	558.56	275.85	27.76	-1.80	0.025
176.00	-4.06	-1.10	0.00	-4.30	0.00	4.30	832.98	416.49	548.57	270.92	28.13	-1.81	0.021
177.00	-4.00	-1.08	0.00	-3.20	0.00	3.20	825.48	412.74	538.66	266.02	28.51	-1.81	0.017

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178.00	-3.94	-1.07	0.00	-2.12	0.00	2.12	817.97	408.99	528.85	261.18	28.89	-1.81	0.013
179.00	-3.88	-1.05	0.00	-1.05	0.00	1.05	810.47	405.23	519.12	256.38	29.27	-1.81	0.009
180.00	0.00	0.00	0.00	0.00	0.00	0.00	802.96	401.48	509.49	251.62	29.65	-1.81	0.000
180.58	0.00	0.00	0.00	0.00	0.00	0.00	798.59	399.29	503.91	248.86	29.87	-1.81	0.000

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Load Case (0.9 - 0.2Sds) * DL + E EMAM Seismic (Reduced DL) Equivalent Modal Analysis Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-20.25	-1.62	0.00	-229.89	0.00	229.89	4,173.88	2,086.94	7,090.68	3,501.82	0.00	0.00	0.071
1.00	-20.07	-1.62	0.00	-228.27	0.00	228.27	4,164.30	2,082.15	7,049.35	3,481.41	0.00	-0.01	0.070
2.00	-19.89	-1.62	0.00	-226.65	0.00	226.65	4,154.67	2,077.34	7,008.08	3,461.03	0.00	-0.01	0.070
3.00	-19.72	-1.62	0.00	-225.03	0.00	225.03	4,145.02	2,072.51	6,966.87	3,440.67	0.00	-0.02	0.070
4.00	-19.54	-1.61	0.00	-223.42	0.00	223.42	4,135.32	2,067.66	6,925.71	3,420.35	0.01	-0.02	0.070
5.00	-19.37	-1.61	0.00	-221.80	0.00	221.80	4,125.60	2,062.80	6,884.61	3,400.05	0.01	-0.03	0.070
6.00	-19.19	-1.61	0.00	-220.19	0.00	220.19	4,115.83	2,057.92	6,843.57	3,379.78	0.02	-0.03	0.070
7.00	-19.02	-1.60	0.00	-218.58	0.00	218.58	4,106.03	2,053.02	6,802.59	3,359.54	0.03	-0.04	0.070
8.00	-18.84	-1.60	0.00	-216.98	0.00	216.98	4,096.20	2,048.10	6,761.66	3,339.33	0.04	-0.04	0.070
9.00	-18.67	-1.59	0.00	-215.38	0.00	215.38	4,086.33	2,043.16	6,720.80	3,319.15	0.04	-0.05	0.069
10.00	-18.50	-1.59	0.00	-213.79	0.00	213.79	4,076.42	2,038.21	6,680.00	3,299.00	0.05	-0.05	0.069
11.00	-18.33	-1.58	0.00	-212.20	0.00	212.20	4,066.48	2,033.24	6,639.26	3,278.88	0.07	-0.06	0.069
12.00	-18.16	-1.58	0.00	-210.62	0.00	210.62	4,056.51	2,028.25	6,598.58	3,258.79	0.08	-0.06	0.069
13.00	-17.99	-1.57	0.00	-209.04	0.00	209.04	4,046.49	2,023.25	6,557.96	3,238.73	0.09	-0.07	0.069
14.00	-17.82	-1.57	0.00	-207.47	0.00	207.47	4,036.45	2,018.22	6,517.41	3,218.70	0.11	-0.07	0.069
15.00	-17.65	-1.56	0.00	-205.90	0.00	205.90	4,026.36	2,013.18	6,476.92	3,198.71	0.12	-0.08	0.069
16.00	-17.48	-1.55	0.00	-204.34	0.00	204.34	4,016.25	2,008.12	6,436.49	3,178.74	0.14	-0.08	0.069
17.00	-17.31	-1.55	0.00	-202.79	0.00	202.79	4,006.09	2,003.05	6,396.13	3,158.81	0.16	-0.09	0.069
18.00	-17.14	-1.54	0.00	-201.24	0.00	201.24	3,995.91	1,997.95	6,355.84	3,138.91	0.18	-0.10	0.068
19.00	-16.98	-1.53	0.00	-199.70	0.00	199.70	3,985.68	1,992.84	6,315.61	3,119.04	0.20	-0.10	0.068
20.00	-16.81	-1.53	0.00	-198.17	0.00	198.17	3,975.42	1,987.71	6,275.45	3,099.21	0.22	-0.11	0.068
21.00	-16.65	-1.52	0.00	-196.64	0.00	196.64	3,965.13	1,982.56	6,235.36	3,079.41	0.24	-0.11	0.068
22.00	-16.48	-1.51	0.00	-195.13	0.00	195.13	3,954.48	1,977.24	6,194.84	3,059.40	0.27	-0.12	0.068
23.00	-16.32	-1.51	0.00	-193.61	0.00	193.61	3,939.47	1,969.74	6,147.64	3,036.09	0.29	-0.12	0.068
24.00	-16.15	-1.50	0.00	-192.11	0.00	192.11	3,924.46	1,962.23	6,100.62	3,012.87	0.32	-0.13	0.068
25.00	-15.99	-1.49	0.00	-190.61	0.00	190.61	3,909.45	1,954.73	6,053.78	2,989.74	0.35	-0.13	0.068
26.00	-15.83	-1.48	0.00	-189.12	0.00	189.12	3,894.45	1,947.22	6,007.13	2,966.69	0.38	-0.14	0.068
27.00	-15.66	-1.48	0.00	-187.64	0.00	187.64	3,879.44	1,939.72	5,960.65	2,943.74	0.41	-0.15	0.068
28.00	-15.50	-1.47	0.00	-186.16	0.00	186.16	3,864.43	1,932.22	5,914.36	2,920.88	0.44	-0.15	0.068
29.00	-15.34	-1.46	0.00	-184.69	0.00	184.69	3,849.42	1,924.71	5,868.24	2,898.10	0.47	-0.16	0.068
30.00	-15.18	-1.45	0.00	-183.23	0.00	183.23	3,834.41	1,917.21	5,822.31	2,875.42	0.50	-0.16	0.068
31.00	-15.02	-1.45	0.00	-181.77	0.00	181.77	3,819.41	1,909.70	5,776.55	2,852.82	0.54	-0.17	0.068
32.00	-14.86	-1.44	0.00	-180.33	0.00	180.33	3,804.40	1,902.20	5,730.98	2,830.32	0.57	-0.17	0.068
33.00	-14.70	-1.43	0.00	-178.89	0.00	178.89	3,789.39	1,894.70	5,685.59	2,807.90	0.61	-0.18	0.068
34.00	-14.55	-1.43	0.00	-177.45	0.00	177.45	3,774.38	1,887.19	5,640.38	2,785.57	0.65	-0.19	0.068
35.00	-14.39	-1.42	0.00	-176.03	0.00	176.03	3,759.37	1,879.69	5,595.34	2,763.33	0.69	-0.19	0.068
36.00	-14.23	-1.41	0.00	-174.61	0.00	174.61	3,744.37	1,872.18	5,550.49	2,741.18	0.73	-0.20	0.068
37.00	-14.08	-1.40	0.00	-173.20	0.00	173.20	3,729.36	1,864.68	5,505.82	2,719.12	0.77	-0.20	0.067
38.00	-13.92	-1.40	0.00	-171.80	0.00	171.80	3,714.35	1,857.18	5,461.33	2,697.15	0.82	-0.21	0.067
39.00	-13.77	-1.39	0.00	-170.40	0.00	170.40	3,699.34	1,849.67	5,417.02	2,675.26	0.86	-0.22	0.067
40.00	-13.61	-1.38	0.00	-169.02	0.00	169.02	3,684.33	1,842.17	5,372.89	2,653.47	0.91	-0.22	0.067
41.00	-13.46	-1.37	0.00	-167.64	0.00	167.64	3,669.33	1,834.66	5,328.94	2,631.76	0.95	-0.23	0.067
42.00	-13.31	-1.36	0.00	-166.26	0.00	166.26	3,654.32	1,827.16	5,285.17	2,610.15	1.00	-0.23	0.067
43.00	-13.15	-1.36	0.00	-164.90	0.00	164.90	3,639.31	1,819.66	5,241.59	2,588.62	1.05	-0.24	0.067
44.00	-13.04	-1.35	0.00	-163.54	0.00	163.54	3,624.30	1,812.15	5,198.18	2,567.18	1.10	-0.25	0.067
44.75	-13.01	-1.35	0.00	-162.53	0.00	162.53	3,613.05	1,806.52	5,165.74	2,551.17	1.14	-0.25	0.067
44.75	-13.01	-1.35	0.00	-162.53	0.00	162.53	3,037.33	1,518.66	4,358.22	2,152.36	1.14	-0.25	0.080
45.00	-12.88	-1.34	0.00	-162.19	0.00	162.19	3,035.24	1,517.62	4,350.67	2,148.63	1.15	-0.25	0.080
46.00	-12.75	-1.34	0.00	-160.85	0.00	160.85	3,026.89	1,513.44	4,320.50	2,133.73	1.21	-0.26	0.080
47.00	-12.62	-1.33	0.00	-159.51	0.00	159.51	3,018.50	1,509.25	4,290.37	2,118.85	1.26	-0.27	0.079
48.00	-12.49	-1.32	0.00	-158.18	0.00	158.18	3,010.08	1,505.04	4,260.30	2,104.00	1.32	-0.27	0.079
49.00	-12.36	-1.32	0.00	-156.86	0.00	156.86	3,001.62	1,500.81	4,230.28	2,089.17	1.38	-0.28	0.079
50.00	-12.23	-1.31	0.00	-155.54	0.00	155.54	2,993.12	1,496.56	4,200.31	2,074.37	1.43	-0.29	0.079
51.00	-12.10	-1.31	0.00	-154.23	0.00	154.23	2,984.59	1,492.30	4,170.39	2,059.60	1.50	-0.29	0.079
52.00	-11.97	-1.30	0.00	-152.92	0.00	152.92	2,976.02	1,488.01	4,140.52	2,044.85	1.56	-0.30	0.079
53.00	-11.85	-1.29	0.00	-151.62	0.00	151.62	2,967.42	1,483.71	4,110.71	2,030.13	1.62	-0.31	0.079

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54.00	-11.72	-1.29	0.00	-150.33	0.00	150.33	2,958.79	1,479.39	4,080.96	2,015.43	1.69	-0.32	0.079
55.00	-11.59	-1.28	0.00	-149.05	0.00	149.05	2,950.11	1,475.06	4,051.26	2,000.76	1.75	-0.32	0.078
56.00	-11.47	-1.27	0.00	-147.77	0.00	147.77	2,941.41	1,470.70	4,021.62	1,986.12	1.82	-0.33	0.078
57.00	-11.34	-1.27	0.00	-146.49	0.00	146.49	2,932.66	1,466.33	3,992.03	1,971.51	1.89	-0.34	0.078
58.00	-11.22	-1.26	0.00	-145.23	0.00	145.23	2,923.89	1,461.94	3,962.50	1,956.93	1.96	-0.35	0.078
59.00	-11.10	-1.25	0.00	-143.97	0.00	143.97	2,915.07	1,457.54	3,933.03	1,942.37	2.04	-0.35	0.078
60.00	-10.97	-1.25	0.00	-142.71	0.00	142.71	2,906.28	1,453.14	3,903.69	1,927.89	2.11	-0.36	0.078
61.00	-10.85	-1.24	0.00	-141.46	0.00	141.46	2,893.42	1,446.71	3,869.02	1,910.76	2.19	-0.37	0.078
62.00	-10.73	-1.23	0.00	-140.22	0.00	140.22	2,880.56	1,440.28	3,834.50	1,893.71	2.27	-0.38	0.078
63.00	-10.61	-1.23	0.00	-138.99	0.00	138.99	2,867.69	1,433.85	3,800.13	1,876.74	2.35	-0.38	0.078
64.00	-10.49	-1.22	0.00	-137.76	0.00	137.76	2,854.83	1,427.41	3,765.92	1,859.84	2.43	-0.39	0.078
65.00	-10.36	-1.22	0.00	-136.54	0.00	136.54	2,841.96	1,420.98	3,731.86	1,843.02	2.51	-0.40	0.078
66.00	-10.24	-1.21	0.00	-135.32	0.00	135.32	2,829.10	1,414.55	3,697.96	1,826.28	2.59	-0.41	0.078
67.00	-10.12	-1.20	0.00	-134.11	0.00	134.11	2,816.24	1,408.12	3,664.21	1,809.61	2.68	-0.41	0.078
68.00	-10.01	-1.20	0.00	-132.91	0.00	132.91	2,803.37	1,401.69	3,630.61	1,793.02	2.77	-0.42	0.078
69.00	-9.89	-1.19	0.00	-131.71	0.00	131.71	2,790.51	1,395.25	3,597.18	1,776.51	2.86	-0.43	0.078
70.00	-9.77	-1.19	0.00	-130.52	0.00	130.52	2,777.64	1,388.82	3,563.89	1,760.07	2.95	-0.44	0.078
71.00	-9.65	-1.18	0.00	-129.33	0.00	129.33	2,764.78	1,382.39	3,530.76	1,743.71	3.04	-0.45	0.078
72.00	-9.53	-1.18	0.00	-128.15	0.00	128.15	2,751.92	1,375.96	3,497.79	1,727.43	3.13	-0.45	0.078
73.00	-9.42	-1.17	0.00	-126.98	0.00	126.98	2,739.05	1,369.53	3,464.97	1,711.22	3.23	-0.46	0.078
74.00	-9.30	-1.16	0.00	-125.81	0.00	125.81	2,726.19	1,363.09	3,432.30	1,695.08	3.33	-0.47	0.078
75.00	-9.19	-1.16	0.00	-124.64	0.00	124.64	2,713.32	1,356.66	3,399.79	1,679.03	3.43	-0.48	0.078
76.00	-9.07	-1.16	0.00	-123.48	0.00	123.48	2,700.46	1,350.23	3,367.44	1,663.05	3.53	-0.49	0.078
77.00	-8.96	-1.15	0.00	-122.33	0.00	122.33	2,687.60	1,343.80	3,335.24	1,647.15	3.63	-0.49	0.078
78.00	-8.84	-1.15	0.00	-121.18	0.00	121.18	2,674.73	1,337.37	3,303.19	1,631.32	3.73	-0.50	0.078
79.00	-8.73	-1.14	0.00	-120.03	0.00	120.03	2,661.87	1,330.93	3,271.30	1,615.57	3.84	-0.51	0.078
80.00	-8.62	-1.14	0.00	-118.89	0.00	118.89	2,649.00	1,324.50	3,239.56	1,599.90	3.95	-0.52	0.078
81.00	-8.50	-1.13	0.00	-117.75	0.00	117.75	2,636.14	1,318.07	3,207.98	1,584.30	4.06	-0.53	0.078
82.00	-8.39	-1.13	0.00	-116.62	0.00	116.62	2,623.28	1,311.64	3,176.55	1,568.78	4.17	-0.53	0.078
83.00	-8.28	-1.13	0.00	-115.48	0.00	115.48	2,610.41	1,305.21	3,145.28	1,553.33	4.28	-0.54	0.078
84.00	-8.17	-1.13	0.00	-114.36	0.00	114.36	2,597.55	1,298.77	3,114.16	1,537.97	4.39	-0.55	0.078
85.00	-8.09	-1.12	0.00	-113.23	0.00	113.23	2,584.68	1,292.34	3,083.20	1,522.68	4.51	-0.56	0.077
85.75	-8.07	-1.12	0.00	-112.39	0.00	112.39	2,575.04	1,287.52	3,060.08	1,511.26	4.60	-0.57	0.078
85.75	-8.07	-1.12	0.00	-112.39	0.00	112.39	1,544.73	772.37	1,851.60	914.44	4.60	-0.57	0.128
86.00	-7.99	-1.12	0.00	-112.11	0.00	112.11	1,543.70	771.85	1,848.04	912.68	4.63	-0.57	0.128
87.00	-7.91	-1.12	0.00	-110.98	0.00	110.98	1,539.55	769.77	1,833.81	905.65	4.75	-0.58	0.128
88.00	-7.84	-1.12	0.00	-109.86	0.00	109.86	1,535.36	767.68	1,819.59	898.63	4.87	-0.59	0.127
89.00	-7.76	-1.12	0.00	-108.74	0.00	108.74	1,531.13	765.57	1,805.38	891.61	5.00	-0.61	0.127
90.00	-7.69	-1.12	0.00	-107.61	0.00	107.61	1,526.87	763.44	1,791.17	884.59	5.13	-0.62	0.127
91.00	-7.61	-1.12	0.00	-106.49	0.00	106.49	1,522.58	761.29	1,776.98	877.58	5.26	-0.63	0.126
92.00	-7.54	-1.13	0.00	-105.37	0.00	105.37	1,518.25	759.12	1,762.79	870.58	5.39	-0.65	0.126
93.00	-7.47	-1.13	0.00	-104.24	0.00	104.24	1,513.88	756.94	1,748.62	863.58	5.53	-0.66	0.126
94.00	-7.39	-1.13	0.00	-103.11	0.00	103.11	1,509.48	754.74	1,734.46	856.59	5.67	-0.67	0.125
95.00	-7.32	-1.13	0.00	-101.98	0.00	101.98	1,505.04	752.52	1,720.31	849.60	5.81	-0.68	0.125
96.00	-7.25	-1.13	0.00	-100.85	0.00	100.85	1,500.57	750.29	1,706.18	842.62	5.95	-0.70	0.125
97.00	-7.17	-1.13	0.00	-99.72	0.00	99.72	1,496.06	748.03	1,692.06	835.64	6.10	-0.71	0.124
98.00	-7.10	-1.14	0.00	-98.59	0.00	98.59	1,491.52	745.76	1,677.95	828.68	6.25	-0.72	0.124
99.00	-7.03	-1.14	0.00	-97.45	0.00	97.45	1,486.94	743.47	1,663.86	821.72	6.40	-0.74	0.123
100.00	-6.96	-1.14	0.00	-96.31	0.00	96.31	1,482.33	741.16	1,649.78	814.77	6.56	-0.75	0.123
101.00	-6.89	-1.15	0.00	-95.17	0.00	95.17	1,477.68	738.84	1,635.72	807.82	6.72	-0.76	0.122
102.00	-6.82	-1.15	0.00	-94.02	0.00	94.02	1,473.00	736.50	1,621.68	800.89	6.88	-0.78	0.122
103.00	-6.75	-1.15	0.00	-92.87	0.00	92.87	1,468.28	734.14	1,607.66	793.96	7.05	-0.79	0.122
104.00	-6.68	-1.16	0.00	-91.72	0.00	91.72	1,463.52	731.76	1,593.65	787.04	7.21	-0.80	0.121
105.00	-6.61	-1.16	0.00	-90.56	0.00	90.56	1,458.73	729.37	1,579.66	780.14	7.38	-0.82	0.121
106.00	-6.54	-1.17	0.00	-89.40	0.00	89.40	1,453.91	726.95	1,565.69	773.24	7.56	-0.83	0.120
107.00	-6.47	-1.17	0.00	-88.23	0.00	88.23	1,449.04	724.52	1,551.74	766.35	7.73	-0.85	0.120
108.00	-6.40	-1.17	0.00	-87.06	0.00	87.06	1,444.15	722.07	1,537.82	759.47	7.91	-0.86	0.119
109.00	-6.33	-1.18	0.00	-85.89	0.00	85.89	1,439.21	719.61	1,523.91	752.60	8.09	-0.87	0.119
110.00	-6.26	-1.18	0.00	-84.71	0.00	84.71	1,434.25	717.12	1,510.03	745.75	8.28	-0.89	0.118
111.00	-6.19	-1.19	0.00	-83.53	0.00	83.53	1,429.24	714.62	1,496.17	738.90	8.46	-0.90	0.117
112.00	-6.13	-1.19	0.00	-82.34	0.00	82.34	1,424.21	712.10	1,482.33	732.07	8.65	-0.92	0.117
113.00	-6.06	-1.20	0.00	-81.15	0.00	81.15	1,419.13	709.57	1,468.51	725.24	8.85	-0.93	0.116
114.00	-5.99	-1.20	0.00	-79.96	0.00	79.96	1,414.02	707.01	1,454.73	718.43	9.04	-0.94	0.116
115.00	-5.93	-1.20	0.00	-78.76	0.00	78.76	1,408.88	704.44	1,440.96	711.64	9.24	-0.96	0.115

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116.00	-5.86	-1.21	0.00	-77.56	0.00	77.56	1,403.70	701.85	1,427.22	704.85	9.44	-0.97	0.114
117.00	-5.79	-1.21	0.00	-76.35	0.00	76.35	1,398.48	699.24	1,413.51	698.08	9.65	-0.99	0.114
118.00	-5.73	-1.22	0.00	-75.14	0.00	75.14	1,393.23	696.62	1,399.83	691.32	9.86	-1.00	0.113
119.00	-5.66	-1.22	0.00	-73.92	0.00	73.92	1,387.95	693.97	1,386.17	684.58	10.07	-1.01	0.112
120.00	-5.60	-1.23	0.00	-72.70	0.00	72.70	1,382.63	691.31	1,372.54	677.85	10.28	-1.03	0.111
121.00	-5.53	-1.23	0.00	-71.47	0.00	71.47	1,377.27	688.64	1,358.94	671.13	10.50	-1.04	0.111
122.00	-5.47	-1.23	0.00	-70.24	0.00	70.24	1,371.88	685.94	1,345.37	664.43	10.72	-1.06	0.110
123.00	-5.41	-1.24	0.00	-69.01	0.00	69.01	1,366.45	683.23	1,331.83	657.74	10.94	-1.07	0.109
124.00	-5.34	-1.24	0.00	-67.77	0.00	67.77	1,360.99	680.49	1,318.33	651.07	11.17	-1.09	0.108
125.00	-5.31	-1.24	0.00	-66.53	0.00	66.53	1,355.49	677.74	1,304.85	644.42	11.40	-1.10	0.107
125.50	-5.28	-1.24	0.00	-65.91	0.00	65.91	1,352.73	676.36	1,298.12	641.09	11.51	-1.11	0.107
125.50	-5.28	-1.24	0.00	-65.91	0.00	65.91	1,127.00	563.50	1,084.41	535.55	11.51	-1.11	0.128
126.00	-5.23	-1.25	0.00	-65.29	0.00	65.29	1,124.94	562.47	1,079.04	532.90	11.63	-1.11	0.127
127.00	-5.17	-1.25	0.00	-64.04	0.00	64.04	1,120.78	560.39	1,068.31	527.60	11.87	-1.13	0.126
128.00	-5.12	-1.25	0.00	-62.79	0.00	62.79	1,116.59	558.29	1,057.61	522.31	12.10	-1.15	0.125
129.00	-5.06	-1.26	0.00	-61.54	0.00	61.54	1,112.36	556.18	1,046.91	517.03	12.35	-1.16	0.124
130.00	-5.01	-1.26	0.00	-60.28	0.00	60.28	1,108.10	554.05	1,036.24	511.76	12.59	-1.18	0.122
131.00	-4.95	-1.26	0.00	-59.02	0.00	59.02	1,103.80	551.90	1,025.58	506.50	12.84	-1.20	0.121
132.00	-4.90	-1.26	0.00	-57.76	0.00	57.76	1,099.47	549.73	1,014.94	501.24	13.09	-1.21	0.120
133.00	-4.84	-1.27	0.00	-56.50	0.00	56.50	1,095.10	547.55	1,004.33	496.00	13.35	-1.23	0.118
134.00	-4.79	-1.27	0.00	-55.23	0.00	55.23	1,090.69	545.35	993.73	490.77	13.61	-1.24	0.117
135.00	-4.74	-1.27	0.00	-53.96	0.00	53.96	1,086.26	543.13	983.15	485.54	13.87	-1.26	0.116
136.00	-4.68	-1.27	0.00	-52.70	0.00	52.70	1,081.78	540.89	972.60	480.33	14.13	-1.28	0.114
137.00	-4.63	-1.27	0.00	-51.43	0.00	51.43	1,077.27	538.64	962.07	475.13	14.40	-1.29	0.113
138.00	-4.58	-1.27	0.00	-50.15	0.00	50.15	1,072.73	536.36	951.56	469.94	14.68	-1.31	0.111
139.00	-4.53	-1.27	0.00	-48.88	0.00	48.88	1,068.14	534.07	941.07	464.76	14.95	-1.32	0.109
140.00	-4.48	-1.27	0.00	-47.61	0.00	47.61	1,063.53	531.76	930.61	459.59	15.23	-1.34	0.108
141.00	-4.42	-1.27	0.00	-46.34	0.00	46.34	1,058.88	529.44	920.17	454.44	15.51	-1.35	0.106
142.00	-4.37	-1.27	0.00	-45.06	0.00	45.06	1,054.19	527.09	909.76	449.30	15.80	-1.37	0.104
143.00	-4.32	-1.27	0.00	-43.79	0.00	43.79	1,049.47	524.73	899.37	444.17	16.09	-1.38	0.103
144.00	-4.27	-1.27	0.00	-42.52	0.00	42.52	1,044.71	522.35	889.01	439.05	16.38	-1.40	0.101
145.00	-4.22	-1.27	0.00	-41.25	0.00	41.25	1,039.92	519.96	878.68	433.95	16.67	-1.41	0.099
146.00	-4.17	-1.27	0.00	-39.98	0.00	39.98	1,035.09	517.54	868.38	428.86	16.97	-1.43	0.097
147.00	-4.12	-1.27	0.00	-38.71	0.00	38.71	1,030.22	515.11	858.10	423.79	17.27	-1.44	0.095
148.00	-4.07	-1.27	0.00	-37.44	0.00	37.44	1,025.32	512.66	847.86	418.72	17.58	-1.46	0.093
149.00	-4.02	-1.26	0.00	-36.17	0.00	36.17	1,020.39	510.19	837.64	413.68	17.88	-1.47	0.091
150.00	-3.97	-1.26	0.00	-34.91	0.00	34.91	1,015.42	507.71	827.46	408.65	18.19	-1.49	0.089
151.00	-3.93	-1.26	0.00	-33.65	0.00	33.65	1,010.41	505.21	817.30	403.63	18.51	-1.50	0.087
152.00	-3.88	-1.25	0.00	-32.39	0.00	32.39	1,005.37	502.69	807.18	398.64	18.82	-1.52	0.085
153.00	-3.83	-1.25	0.00	-31.14	0.00	31.14	1,000.30	500.15	797.09	393.65	19.14	-1.53	0.083
154.00	-3.78	-1.25	0.00	-29.89	0.00	29.89	995.19	497.59	787.03	388.69	19.46	-1.54	0.081
155.00	-3.74	-1.24	0.00	-28.65	0.00	28.65	990.04	495.02	777.01	383.74	19.79	-1.56	0.078
156.00	-3.69	-1.24	0.00	-27.41	0.00	27.41	983.06	491.53	765.62	378.11	20.11	-1.57	0.076
157.00	-3.64	-1.23	0.00	-26.17	0.00	26.17	975.56	487.78	753.91	372.33	20.44	-1.58	0.074
158.00	-3.60	-1.23	0.00	-24.94	0.00	24.94	968.05	484.03	742.29	366.59	20.78	-1.59	0.072
159.00	-3.55	-1.22	0.00	-23.71	0.00	23.71	960.55	480.27	730.76	360.90	21.11	-1.60	0.069
160.00	-3.51	-1.21	0.00	-22.49	0.00	22.49	953.04	476.52	719.32	355.25	21.45	-1.62	0.067
161.00	-3.46	-1.21	0.00	-21.28	0.00	21.28	945.54	472.77	707.97	349.64	21.79	-1.63	0.065
162.00	-3.42	-1.20	0.00	-20.08	0.00	20.08	938.04	469.02	696.71	344.08	22.13	-1.64	0.062
163.00	-3.37	-1.19	0.00	-18.88	0.00	18.88	930.53	465.27	685.54	338.56	22.47	-1.65	0.059
164.00	-3.33	-1.18	0.00	-17.69	0.00	17.69	923.03	461.51	674.47	333.09	22.82	-1.66	0.057
165.00	-3.28	-1.17	0.00	-16.50	0.00	16.50	915.52	457.76	663.48	327.67	23.17	-1.67	0.054
166.00	-3.24	-1.17	0.00	-15.33	0.00	15.33	908.02	454.01	652.58	322.29	23.52	-1.68	0.051
167.00	-3.20	-1.16	0.00	-14.16	0.00	14.16	900.52	450.26	641.77	316.95	23.87	-1.69	0.048
168.00	-3.15	-1.15	0.00	-13.01	0.00	13.01	893.01	446.51	631.06	311.65	24.23	-1.69	0.045
169.00	-3.11	-1.14	0.00	-11.86	0.00	11.86	885.51	442.75	620.43	306.41	24.58	-1.70	0.042
170.00	-3.07	-1.13	0.00	-10.72	0.00	10.72	878.00	439.00	609.89	301.20	24.94	-1.71	0.039
171.00	-3.03	-1.12	0.00	-9.60	0.00	9.60	870.50	435.25	599.45	296.04	25.30	-1.72	0.036
172.00	-2.98	-1.10	0.00	-8.48	0.00	8.48	863.00	431.50	589.09	290.93	25.66	-1.72	0.033
173.00	-2.94	-1.09	0.00	-7.38	0.00	7.38	855.49	427.75	578.82	285.86	26.02	-1.73	0.029
174.00	-2.90	-1.08	0.00	-6.28	0.00	6.28	847.99	423.99	568.65	280.83	26.38	-1.73	0.026
175.00	-2.86	-1.07	0.00	-5.20	0.00	5.20	840.48	420.24	558.56	275.85	26.74	-1.74	0.022
176.00	-2.82	-1.05	0.00	-4.14	0.00	4.14	832.98	416.49	548.57	270.92	27.11	-1.74	0.019
177.00	-2.78	-1.04	0.00	-3.08	0.00	3.08	825.48	412.74	538.66	266.02	27.47	-1.74	0.015

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178.00	-2.74	-1.03	0.00	-2.04	0.00	2.04	817.97	408.99	528.85	261.18	27.84	-1.74	0.011
179.00	-2.70	-1.01	0.00	-1.01	0.00	1.01	810.47	405.23	519.12	256.38	28.20	-1.75	0.007
180.00	0.00	0.00	0.00	0.00	0.00	0.00	802.96	401.48	509.49	251.62	28.57	-1.75	0.000
180.58	0.00	0.00	0.00	0.00	0.00	0.00	798.59	399.29	503.91	248.86	28.78	-1.75	0.000

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Analysis Summary

Load Case	Reactions Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Max Usage Elev (ft)	Interaction Ratio
1.2D + 1.6W	21.48	0.00	28.39	0.00	0.00	2385.75	85.75	0.95
0.9D + 1.6W	21.48	0.00	21.29	0.00	0.00	2342.84	85.75	0.92
1.2D + 1.0Di + 1.0Wi	4.47	0.00	43.38	0.00	0.00	547.19	85.75	0.25
(1.2 + 0.2Sds) * DL + E ELFM	0.92	0.00	29.02	0.00	0.00	146.64	85.75	0.08
(1.2 + 0.2Sds) * DL + E EMAM	1.62	0.00	29.02	0.00	0.00	236.58	85.75	0.14
(0.9 - 0.2Sds) * DL + E ELFM	0.92	0.00	20.25	0.00	0.00	142.72	85.75	0.08
(0.9 - 0.2Sds) * DL + E EMAM	1.62	0.00	20.25	0.00	0.00	229.89	85.75	0.13
1.0D + 1.0W	4.74	0.00	23.67	0.00	0.00	522.25	85.75	0.21

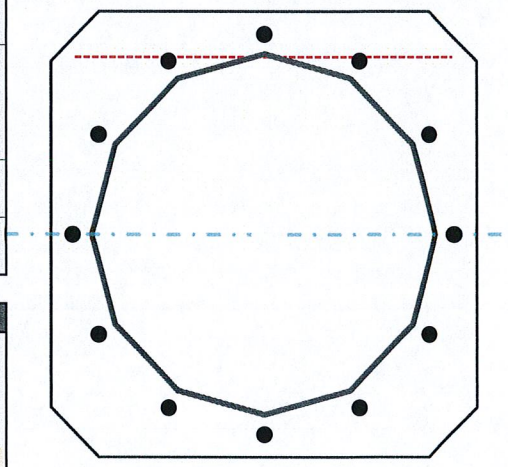
Base Plate & Anchor Rod Analysis

Pole Dimensions		
Number of Sides	12	-
Diameter	41.7	in
Thickness	0.4375	in
Orientation Offset		°

Base Reactions		
Moment, Mu	2385.8	k-ft
Axial, Pu	28.4	k
Shear, Vu	21.5	k
Neutral Axis	0	°

Report Capacities		
Component	Capacity	Result
Base Plate	32%	Pass
Anchor Rods	77%	Pass
Dwyidag	-	-

Base Plate		
Shape	Square	-
Width	53.7	in
Thickness	2 1/2	in
Grade	A36	-
Yield Strength, Fy	36	ksi
Tensile Strength, Fu	58	ksi
Clip	6	in
Orientation Offset		°
Anchor Rod Detail	c	η=0.55
Clear Distance	N/A	in
Applied Moment, Mu	625.6	k
Bending Stress, ϕMn	1974.0	k



Original Anchor Rods		
Arrangement	Radial	-
Quantity	12	-
Diameter, ø	2 1/4	in
Bolt Circle	48.2	in
Grade	A615-75	
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Spacing	12.6	in
Orientation Offset		°
Applied Force, Pu	200.2	k
Anchor Rods, ϕPn	259.8	k

Base/Flange Plate	Plate Type	***Flange @ 125.5 ft***
	Pole Diameter	23.561 in
	Pole Thickness	0.21875 in
	Plate Diameter	29.6 in
	Plate Thickness	1.25 in
	Plate Fy	36 ksi
	Weld Length	0.5 in
	ϕ_s Resistance	52.04 k-in
	Applied	37.13 k-in
Stiffeners	#	***0***

Bolts ⊛	#	***18***
	Bolt Circle	27.6 in
	(R)adial / (S)quare	R
	Diameter	1 in
	Hole Diameter	1.125 in
	Type	A325
	Fy	92 ksi
	Fu	120 ksi
	ϕ_s Resistance	54.52 k
	Applied	38.80 k
Reinforcement ●	#	***0***
Extra Bolts O	#	***0***

Code Rev. **G**

Moment 405.2 k-ft
Axial 6.0 k

Date	7/2/2018
Engineer	Connor.Klein
Site #	302496
Carrier	AT&T MOBILITY

Required Flange Thickness:
1.06 in OK

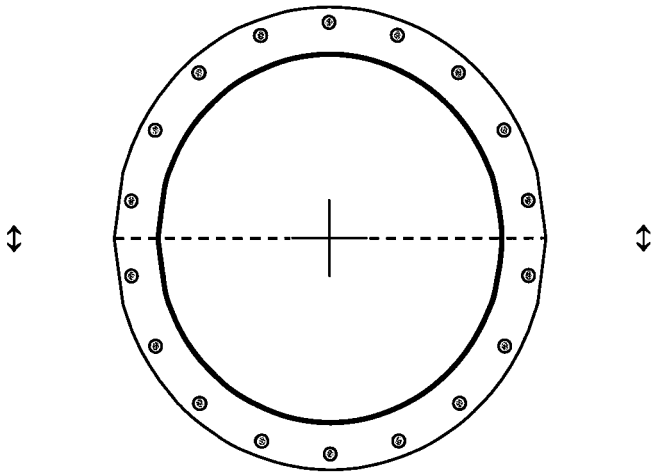
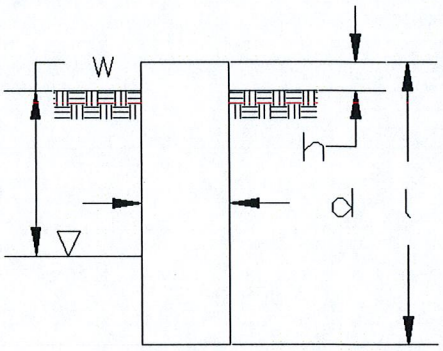


Plate Stress Ratio:
0.71 (Pass)

Bolt Stress Ratio:
0.71 (Pass)

Site Name:	Clch Colchester, CT	*Program Last Updated:*	*5/13/2014*
Site Number:	302496	*American Tower Corporation*	
Engineer:	Connor.Klein		
Engineering Number:	OAA735982		
Date:	07/02/18		



Design Base Loads (Factored) - Analysis per TIA-222-G Standards

Analyze or Design a Foundation?	Analyze	
Foundation Mapped:	Y	
Moment (M):	2385.8	k-ft
Shear/Leg (V):	21.5	k
Axial Load (P):	28.4	k
Uplift/Leg (U):	0.0	k
Tower Type (GT / SST / MP):	MP	
Diameter of Caisson (d):	6.0	ft
Caisson Embedment (L-h):	33.3	ft
Caisson Height Above Ground (h):	0.8	ft
Depth Below Ground Surface to Water Table (w):	12.0	ft
Unit Weight of Concrete:	150.0	pcf
Unit Weight of Water:	62.4	pcf
Tension Skin Friction/Compression Skin Friction:	1.00	
Pullout Angle:	30.0	degrees

Engineer Notes

Soil Mechanical Properties

Depth (ft) Top	Depth (ft) Bottom	γ_{Soil} (pcf)	Cohesion (psf)	ϕ (degree)	Ultimate Skin Friction (psf)	Ultimate Bearing Pressure (psf)
0.0	3.5	115	0	0	0	0
3.5	10.5	115	0	0	0	0
10.5	15.5	115	0	0	0	0
15.5	34.3	115	0	0	0	12000

Required Embedment:	30.0	ft - OK, Caisson Embedment Satisfactory
Volume of Concrete:	964.2	ft^3 = 35.7 yd^3
Weight of Concrete (Buoyancy Effect Considered):	107.0	k
Average Soil Unit Weight:	75.1	pcf
Skin Friction Resistance:	0.0	k
Compressive Bearing Resistance:	339.3	k
Pullout Weight (Minus Concrete Weight):	1420.9	k
Nominal Uplift Capacity per Leg ($\phi_s T_n$):	80.3	k
Nominal Compressive Capacity per Leg ($\phi_s P_n$):	254.5	k
P_u:	67.9	k
$T_u/\phi_s T_n$:	0.00	Result: OK
$P_u/\phi_s P_n$:	0.27	Result: OK
Total Lateral Resistance:	771.8	k
Inflection Point (Below Ground Surface):	22.0	ft
Design Overturning Moment At Inflection Point (M_D):	2875.7	k-ft
Nominal Moment Capacity ($\phi_s M_n$):	3985.3	k-ft
$M_D/\phi_s M_n$:	0.72	Result: OK
ϕ_s:	0.75	