



Filed by:
Kri Pelletier, Property Specialist - SBA Communications
134 Flanders Rd., Suite 125, Westborough, MA 01581
508.251.0720 x 3804 - kpelletier@sbsite.com

July 18, 2018

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

Notice of Exempt Modification
398 Pomfret Street, Pomfret, CT 06258
41 53 24.34 N
-71 57 18.03 W
Sprint #: CT33XC017_DOMU

Dear Ms. Bachman:

Sprint currently maintains antennas at the 167-foot of the existing 168-foot Monopole Tower at 398 Pomfret Street, Pomfret, CT. The tower is owned by SBA Properties, LLC. The property is owned by the Town of Pomfret. Sprint now intends to replace (6) existing cell antenna with (6) newer technology cell antenna at the 167-foot level of the tower. Sprint's proposed full scope of work is as follows:

Remove: N/A

Remove and Replace:

- Remove:
 - (6) Decibel DB908H90E-M panel antennas w/ Mount Pipe
- Replace with:
 - (3) RFS - APXVTM14-C-I20 – Panel Antennas
 - (3) CommScope - NNVV-65B-R4 – Panel Antennas
- Remove:
 - (6) 1-5/8 lines
- Replace with:
 - (4) 1-1/4" fiber

Install:

- (3) ALU 1900 Mhz RRUs
- (6) ALU 800 Mhz RRUs
- (3) ALU TD-RRH8x20-25 RRUs
- Modifications to low profile platform:
 - (1) Sitepro PRK-1245L
 - (1) Sitepro PRK-SFS-H-L

Existing Equipment to Remain (Including entitlements):

- (1) low profile platform



This facility was approved by the Town of Pomfret prior to the Council's jurisdiction. The Town signed a Lease Agreement for the Tower with SBA on 11/17/99. Since the tower is on Town owned property, no further zoning approvals were necessary. Per the Town, the date of the Zoning Decision is that of the date of the Lease Agreement. This modification complies with all known tower conditions.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. §16.50j-72(b)(2). In accordance with R.C.S.A. § 16.50j-73, a copy of this letter is being sent to the Town of Pomfret's First Selectmen and representative to the Town as Property Owner, Craig Baldwin, as well as to the Town's Zoning Enforcement Officer, Ryan Brais. Separate notice is not being sent to tower owner, as it belongs to SBA.)

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. §16.50j-72(b)(2).

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modification will not require the 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 replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.
5. The proposed modification will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading.

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

Sincerely,

Kri Pelletier
Property Specialist
SBA COMMUNICATIONS CORPORATION
134 Flanders Rd., Suite 125
Westborough, MA 01581

508.251.0720 x3804 + T
508.366.2610 + F
203.446.7700 + C
kpelletier@sbsite.com
Attachments

cc: Craig Baldwin, First Selectman / with attachments
Town of Pomfret, 5 Haven Road, Pomfret Center, CT 06259
Ryan Brais, Zoning Enforcement Officer / with attachments
Town of Pomfret, 5 Haven Road, Pomfret Center, CT 06259



POWER DENSITY

SPRINT Site Inventory and Power Data by Antenna

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	Commscope NNVV-65B-R4	Make / Model:	Commscope NNVV-65B-R4	Make / Model:	Commscope NNVV-65B-R4
Gain:	12.75 / 15.05 dBd	Gain:	12.75 / 15.05 dBd	Gain:	12.75 / 15.05 dBd
Height (AGL):	167 feet	Height (AGL):	167 feet	Height (AGL):	167 feet
Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)
Channel Count	10	Channel Count	10	Channel Count	10
Total TX Power(W):	280 Watts	Total TX Power(W):	280 Watts	Total TX Power(W):	280 Watts
ERP (W):	7,378.61	ERP (W):	7,378.61	ERP (W):	7,378.61
Antenna A1 MPE%	1.27 %	Antenna B1 MPE%	1.27 %	Antenna C1 MPE%	1.27 %
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	RFS APXVTM14- ALU- I20	Make / Model:	RFS APXVTM14- ALU- I20	Make / Model:	RFS APXVTM14- ALU- I20
Gain:	15.9 dBd	Gain:	15.9 dBd	Gain:	15.9 dBd
Height (AGL):	167 feet	Height (AGL):	167 feet	Height (AGL):	167 feet
Frequency Bands	2500 MHz (BRS)	Frequency Bands	2500 MHz (BRS)	Frequency Bands	2500 MHz (BRS)
Channel Count	8	Channel Count	8	Channel Count	8
Total TX Power(W):	160 Watts	Total TX Power(W):	160 Watts	Total TX Power(W):	160 Watts
ERP (W):	6,224.72	ERP (W):	6,224.72	ERP (W):	6,224.72
Antenna A2 MPE%	0.86 %	Antenna B2 MPE%	0.86 %	Antenna C2 MPE%	0.86 %

Site Composite MPE%	
Carrier	MPE%
SPRINT – Max per sector	2.13 %
Verizon Wireless	2.98 %
T-Mobile	1.51 %
Site Total MPE %:	6.62 %

SPRINT Sector A Total:	2.13 %
SPRINT Sector B Total:	2.13 %
SPRINT Sector C Total:	2.13 %
Site Total:	
	6.62 %

SPRINT Frequency Band / Technology Max Power Values (All Sectors)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density (μW/cm ²)	Frequency (MHz)	Allowable MPE (μW/cm ²)	Calculated % MPE
Sprint 850 MHz CDMA	1	376.73	167	0.52	850 MHz	567	0.09%
Sprint 850 MHz LTE	2	941.82	167	2.61	850 MHz	567	0.46%
Sprint 1900 MHz (PCS) CDMA	5	511.82	167	3.55	1900 MHz (PCS)	1000	0.36%
Sprint 1900 MHz (PCS) LTE	2	1,279.56	167	3.55	1900 MHz (PCS)	1000	0.36%
Sprint 2500 MHz (BRS) LTE	8	778.09	167	8.63	2500 MHz (BRS)	1000	0.86%
Total:							2.13%

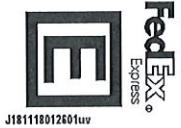
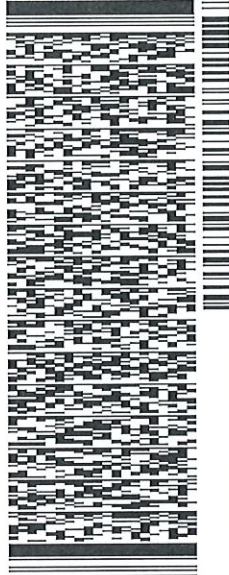
ORIGIN ID:BBFA (508) 251-0720
KRI PELLETIER
SBA COMMUNICATIONS CORPORATION
134 FLANDERS RD
SUITE 125
WESTBOROUGH, MA 01581
UNITED STATES US

SHIP DATE: 18 JUL 18
ACTWGT: 1.00 LB
CAD: 105843304/N/E/13980
BILL SENDER

TO CRAIG BALDWIN, FIRST SELECTMAN
TOWN OF POMFRET
5 HAVEN RD.

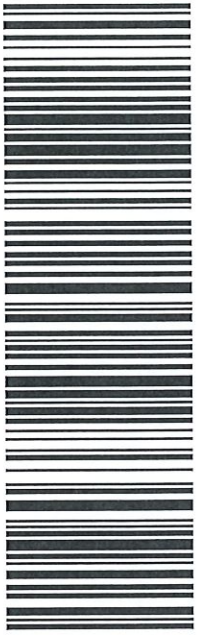
POMFRET CENTER CT 06259
(508) 251-0720 X 3804 REF: 10-56-92009-8089
INV. PO. DEPT:

552J2R532/DCA5



TRK# 0201 7727 3467 6290
THU - 19 JUL 4:30P
PRIORITY OVERNIGHT

EB GONA
CT-US 06259
BDL



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Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

ORIGIN:DBFEA (508) 251-0720
KRIPELLETTER
SBA COMMUNICATIONS CORPORATION
134 ELANDERS RD
SUITE 103
WESTBOROUGH, MA 01581
UNITED STATES US

SHIP DATE: 18JUL18
ACTWGT: 1.00 LB
CAD: 105843304/INET3980

BILL SENDER

TO RYAN BRAIS, ZONING ENF. OFFICER
TOWN OF POMFRET
5 HAVEN RD.

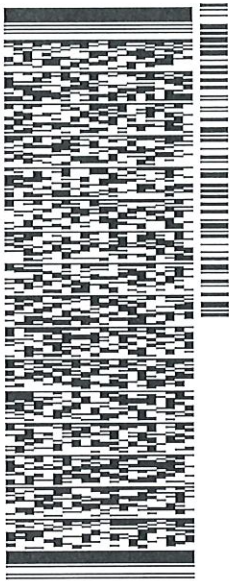
POMFRET CENTER CT 06259

(508) 251-0720 X 3804

REF: 1056920096089

PO:

DEPT:



J181118012601uv

552J2/8532/DCA5

TRK# 7727 3470 0998
0201

THU - 19 JUL 4:30P
PRIORITY OVERNIGHT

EB GONA

06259
BDL
CT-US



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398 POMFRET ST

Location 398 POMFRET ST

Mblu 14/ A/ 008.00/ /

Acct# P0185900

Owner POMFRET SCHOOL INC

Assessment \$23,746,200

Appraisal \$33,922,600

PID 584

Building Count 22

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2015	\$32,631,100	\$1,291,500	\$33,922,600
Assessment			
Valuation Year	Improvements	Land	Total
2015	\$22,842,100	\$904,100	\$23,746,200

Owner of Record

Owner POMFRET SCHOOL INC

Sale Price \$0

Co-Owner

Certificate

Book & Page 0030/0047

Sale Date 11/21/1928

Ownership History

Ownership History				
Owner	Sale Price	Certificate	Book & Page	Sale Date
POMFRET SCHOOL INC	\$0		0030/0047	11/21/1928

Building Information

Building 1 : Section 1

Year Built: 1870

Living Area: 7,591

Replacement Cost

Less Depreciation: \$564,900

Building Attributes	
Field	Description
STYLE	Office Bldg
MODEL	Comm/Ind

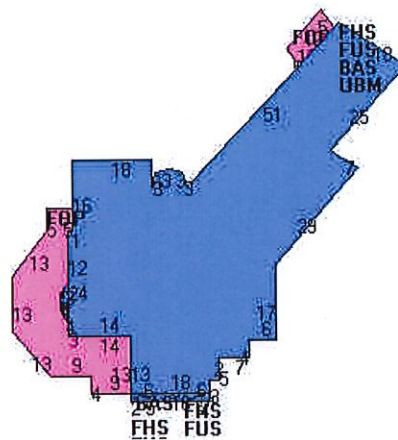
Stories:	2.5
Occupancy	6
Exterior Wall 1	Clapboard
Exterior Wall 2	
Roof Structure	Gable/Hip
Roof Cover	Asph/F Gls/Cmp
Interior Wall 1	Plastered
Interior Wall 2	
Interior Floor 1	Hardwood
Interior Floor 2	Carpet
Heating Fuel	Oil
Heating Type	Steam
AC Type	None
Bldg Use	PVT SCHOOL MDL-94
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	904C
Heat/AC	NONE
Frame Type	WOOD FRAME
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	AVERAGE
Wall Height	9
% Comn Wall	0

Building Photo



(<http://images.vgsi.com/photos/PomfretCTPhotos/\00\00\37\36>)

Building Layout



(<http://images.vgsi.com/photos/PomfretCTPhotos//Sketches/584>)

Building Sub-Areas (sq ft)		Legend	
Code	Description	Gross Area	Living Area
FUS	Finished Upper Story	3,041	3,041
BAS	First Floor	3,036	3,036
FHS	Finished Half Story	3,028	1,514
FOP	Open Porch	595	0
UBM	Unfin Bsmt	3,014	0
		12,714	7,591

Building 2 : Section 1

Year Built: 1955
Living Area: 24,484
Replacement Cost
Less Depreciation: \$3,879,800

Building Attributes : Bldg 2 of 22	
Field	Description
STYLE	School/College

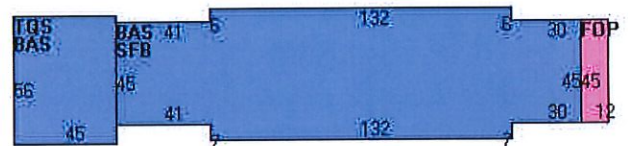
MODEL	Ind/Comm
Stories:	1.75
Occupancy	1
Exterior Wall 1	Brick/Masonry
Exterior Wall 2	
Roof Structure	Gable/Hip
Roof Cover	Asph/F GlS/Cmp
Interior Wall 1	Plywood Panel
Interior Wall 2	Drywall/Sheet
Interior Floor 1	Vinyl/Asphalt
Interior Floor 2	Carpet
Heating Fuel	Oil
Heating Type	Steam
AC Type	None
Bldg Use	PVT SCHOOL MDL-96
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	904I
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	AVERAGE
Wall Height	14
% Comn Wall	0

Building Photo



(<http://images.vgsi.com/photos/PomfretCTPhotos//\00\00\37\46>)

Building Layout



(<http://images.vgsi.com/photos/PomfretCTPhotos//Sketches/584>)

Building Sub-Areas (sq ft)		Legend	
Code	Description	Gross Area	Living Area
BAS	First Floor	13,371	13,371
SFB	Finished Raised Bsmt	10,851	9,223
TQS	Three Quarter Story	2,520	1,890
FOP	Open Porch	540	0
		27,282	24,484

Building 3 : Section 1

Year Built: 1969
Living Area: 6,924
Replacement Cost
Less Depreciation: \$1,280,000

Building Attributes : Bldg 3 of 22	
Field	Description
STYLE	Library
MODEL	Comm/Ind

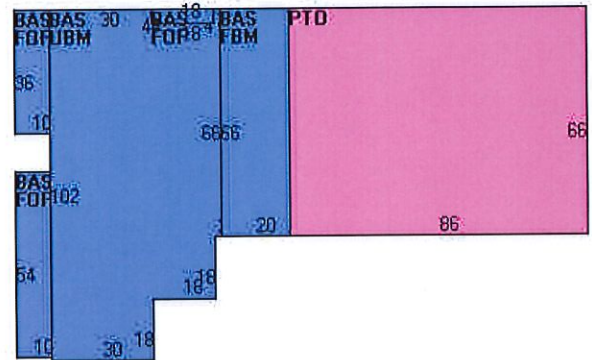
Stories:	1
Occupancy	1
Exterior Wall 1	Pre-cast Concr
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Tar & Gravel
Interior Wall 1	Minim/Masonry
Interior Wall 2	
Interior Floor 1	Concr-Finished
Interior Floor 2	
Heating Fuel	Oil
Heating Type	Steam
AC Type	None
Bldg Use	PVT SCHOOL MDL-94
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	904C
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	AVERAGE
Wall Height	10
% Comn Wall	0

Building Photo



(<http://images.vgsi.com/photos/PomfretCTPhotos//\00\00\37\25>)

Building Layout



(<http://images.vgsi.com/photos/PomfretCTPhotos//Sketches/584>)

Building Sub-Areas (sq ft)			Legend	
Code	Description	Gross Area	Living Area	
BAS	First Floor	6,924	6,924	
FBM	Finished Basement	1,320	0	
FOP	Open Porch	972	0	
PTO	Patio	5,676	0	
UBM	Unfin Bsmt	4,632	0	
		19,524	6,924	

Building 4 : Section 1

Year Built: 1907
Living Area: 4,480
Replacement Cost
Less Depreciation: \$856,100

Building Attributes : Bldg 4 of 22	
Field	Description
STYLE	Churches

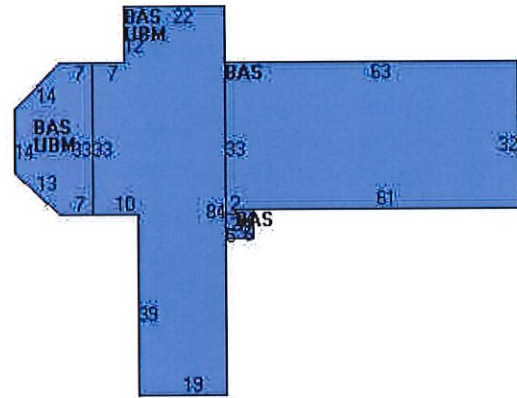
MODEL	Ind/Comm
Stories:	1
Occupancy	1
Exterior Wall 1	Stone/Masonry
Exterior Wall 2	
Roof Structure	Gable/Hip
Roof Cover	Slate
Interior Wall 1	Minim/Masonry
Interior Wall 2	Cust Wd Panel
Interior Floor 1	Marble
Interior Floor 2	
Heating Fuel	Oil
Heating Type	Forced Air-Duc
AC Type	None
Bldg Use	PVT SCHOOL MDL-96
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	904I
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	AVERAGE
Wall Height	20
% Comn Wall	0

Building Photo



(<http://images.vgsi.com/photos/PomfretCTPhotos//\00\00\37\32>)

Building Layout



(<http://images.vgsi.com/photos/PomfretCTPhotos//Sketches/584>)

Building Sub-Areas (sq ft)			<u>Legend</u>
Code	Description	Gross Area	Living Area
BAS	First Floor	4,480	4,480
UBM	Unfin Bsmt	2,428	0
		6,908	4,480

Building 5 : Section 1

Year Built: 1958
Living Area: 10,211
Replacement Cost
Less Depreciation: \$1,463,500

Building Attributes : Bldg 5 of 22	
Field	Description
STYLE	School/College
MODEL	Ind/Comm
Stories:	2
Occupancy	1

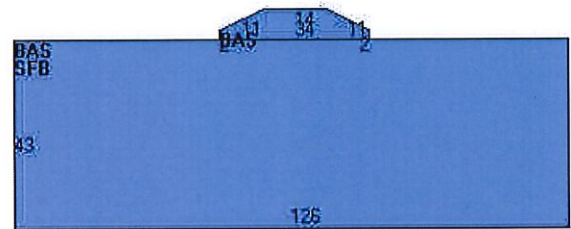
Exterior Wall 1	Brick/Masonry
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Tar & Gravel
Interior Wall 1	Minim/Masonry
Interior Wall 2	Drywall/Sheet
Interior Floor 1	Vinyl/Asphalt
Interior Floor 2	
Heating Fuel	Oil
Heating Type	Steam
AC Type	None
Bldg Use	PVT SCHOOL MDL-96
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	904I
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	AVERAGE
Wall Height	10
% Comn Wall	0

Building Photo



(<http://images.vgsi.com/photos/PomfretCTPhotos//\00\00\37\42>)

Building Layout



(<http://images.vgsi.com/photos/PomfretCTPhotos//Sketches/584>)

Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	5,606	5,606
SFB	Finished Raised Bsmt	5,418	4,605
		11,024	10,211

Building 6 : Section 1

Year Built: 1900
Living Area: 8,303
Replacement Cost
Less Depreciation: \$941,800

Building Attributes : Bldg 6 of 22	
Field	Description
STYLE	Aud/Gym
MODEL	Ind/Comm
Stories:	1
Occupancy	1

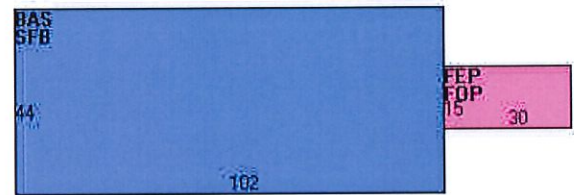
Exterior Wall 1	Brick/Masonry
Exterior Wall 2	
Roof Structure	Gable/Hip
Roof Cover	Slate
Interior Wall 1	Minim/Masonry
Interior Wall 2	Plastered
Interior Floor 1	Carpet
Interior Floor 2	
Heating Fuel	Oil
Heating Type	Steam
AC Type	None
Bldg Use	PVT SCHOOL MDL-96
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	904I
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	AVERAGE
Wall Height	14
% Comn Wall	0

Building Photo



(<http://images.vgsi.com/photos/PomfretCTPhotos//\00\00\37\34>)

Building Layout



(<http://images.vgsi.com/photos/PomfretCTPhotos//Sketches/584>)

Building Sub-Areas (sq ft)		Legend	
Code	Description	Gross Area	Living Area
BAS	First Floor	4,488	4,488
SFB	Finished Raised Bsmt	4,488	3,815
FEP	Finished Enclosed Porch	450	0
FOP	Open Porch	450	0
		9,876	8,303

Building 7 : Section 1

Year Built: 1900
Living Area: 17,523
Replacement Cost
Less Depreciation: \$3,067,000

Building Attributes : Bldg 7 of 22	
Field	Description
STYLE	School/College
MODEL	Ind/Comm

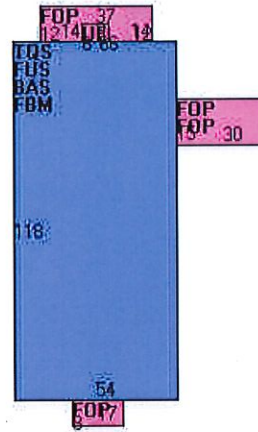
Stories:	2.75
Occupancy	1
Exterior Wall 1	Brick/Masonry
Exterior Wall 2	
Roof Structure	Gable/Hip
Roof Cover	Slate
Interior Wall 1	Minim/Masonry
Interior Wall 2	Drywall/Sheet
Interior Floor 1	Carpet
Interior Floor 2	
Heating Fuel	Oil
Heating Type	Steam
AC Type	None
Bldg Use	PVT SCHOOL MDL-96
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	904I
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	AVERAGE
Wall Height	10
% Comn Wall	0

Building Photo



(<http://images.vgsi.com/photos/PomfretCTPhotos//00\00\37\35>)

Building Layout



(<http://images.vgsi.com/photos/PomfretCTPhotos//Sketches/584>)

Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	6,372	6,372
FUS	Finished Upper Story	6,372	6,372
TQS	Three Quarter Story	6,372	4,779
FBM	Finished Basement	6,372	0
FOP	Open Porch	1,426	0
UEP	Unfin Enclosed Porch	54	0
		26,968	17,523

Building 8 : Section 1

Year Built: 1900
Living Area: 11,834
Replacement Cost
Less Depreciation: \$1,117,200

Building Attributes : Bldg 8 of 22	
Field	Description

STYLE	Dormitory
MODEL	Ind/Comm
Stories:	2
Occupancy	29
Exterior Wall 1	Brick/Masonry
Exterior Wall 2	
Roof Structure	Gable/Hip
Roof Cover	Slate
Interior Wall 1	Minim/Masonry
Interior Wall 2	Drywall/Sheet
Interior Floor 1	Vinyl/Asphalt
Interior Floor 2	Carpet
Heating Fuel	Oil
Heating Type	Steam
AC Type	None
Bldg Use	PVT SCHOOL MDL-96
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	904I
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	AVERAGE
Wall Height	10
% Comn Wall	0

Building Photo



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Building Layout



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Building Sub-Areas (sq ft)			Legend	
Code	Description	Gross Area	Living Area	
BAS	First Floor	4,384	4,384	
SFB	Finished Raised Bsmt	4,384	3,726	
FUS	Finished Upper Story	3,724	3,724	
FOP	Open Porch	300	0	
UAT	Unfinished Attic	3,724	0	
		16,516	11,834	

Building 9 : Section 1

Year Built: 1900
Living Area: 13,853
Replacement Cost
Less Depreciation: \$1,325,200

Building Attributes : Bldg 9 of 22	
Field	Description
STYLE	Dormitory

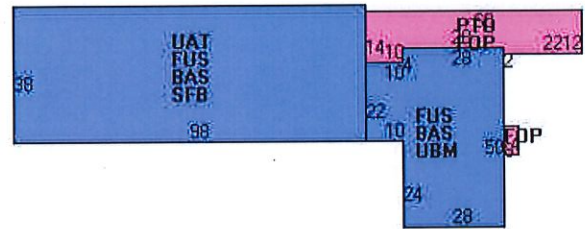
MODEL	Ind/Comm
Stories:	2
Occupancy	40
Exterior Wall 1	Brick/Masonry
Exterior Wall 2	
Roof Structure	Gable/Hip
Roof Cover	Slate
Interior Wall 1	Minim/Masonry
Interior Wall 2	Drywall/Sheet
Interior Floor 1	Vinyl/Asphalt
Interior Floor 2	Carpet
Heating Fuel	Oil
Heating Type	Steam
AC Type	None
Bldg Use	PVT SCHOOL MDL-96
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	904I
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	AVERAGE
Wall Height	10
% Comn Wall	0

Building Photo



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Building Layout



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Building Sub-Areas (sq ft)		Legend	
Code	Description	Gross Area	Living Area
BAS	First Floor	5,344	5,344
FUS	Finished Upper Story	5,344	5,344
SFB	Finished Raised Bsmt	3,724	3,165
FOP	Open Porch	716	0
PTO	Patio	684	0
UAT	Unfinished Attic	3,724	0
UBM	Unfin Bsmt	1,620	0
		21,156	13,853

Building 10 : Section 1

Year Built: 1900
Living Area: 13,853
Replacement Cost
Less Depreciation: \$1,325,200

Building Attributes : Bldg 10 of 22

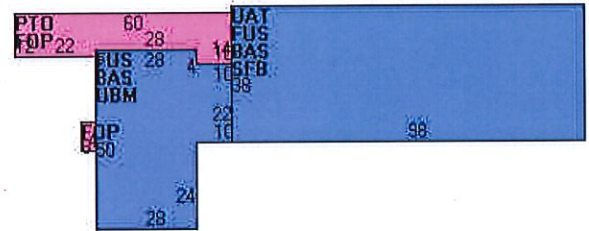
Field	Description
STYLE	Dormitory
MODEL	Ind/Comm
Stories:	2
Occupancy	40
Exterior Wall 1	Brick/Masonry
Exterior Wall 2	
Roof Structure	Gable/Hip
Roof Cover	Slate
Interior Wall 1	Minim/Masonry
Interior Wall 2	Drywall/Sheet
Interior Floor 1	Vinyl/Asphalt
Interior Floor 2	Carpet
Heating Fuel	Oil
Heating Type	Steam
AC Type	None
Bldg Use	PVT SCHOOL MDL-96
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	904I
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	AVERAGE
Wall Height	10
% Comn Wall	0

Building Photo



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Building Layout



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Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	5,344	5,344
FUS	Finished Upper Story	5,344	5,344
SFB	Finished Raised Bsmt	3,724	3,165
FOP	Open Porch	716	0
PTO	Patio	684	0
UAT	Unfinished Attic	3,724	0
UBM	Unfin Bsmt	1,620	0
		21,156	13,853

Building 11 : Section 1

Year Built: 1900
Living Area: 11,834
Replacement Cost
Less Depreciation: \$1,117,200

Building Attributes : Bldg 11 of 22

Field	Description
STYLE	Dormitory
MODEL	Ind/Comm
Stories:	2
Occupancy	34
Exterior Wall 1	Brick/Masonry
Exterior Wall 2	
Roof Structure	Gable/Hip
Roof Cover	Slate
Interior Wall 1	Minim/Masonry
Interior Wall 2	Drywall/Sheet
Interior Floor 1	Vinyl/Asphalt
Interior Floor 2	Carpet
Heating Fuel	Oil
Heating Type	Steam
AC Type	None
Bldg Use	PVT SCHOOL MDL-96
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	904I
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	AVERAGE
Wall Height	10
% Conn Wall	0

Building Photo



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Building Layout



(<http://images.vgsi.com/photos/PomfretCTPhotos//Sketches/584>)

Building Sub-Areas (sq ft)		Legend	
Code	Description	Gross Area	Living Area
BAS	First Floor	4,384	4,384
SFB	Finished Raised Bsmt	4,384	3,726
FUS	Finished Upper Story	3,724	3,724
FOP	Open Porch	300	0
UAT	Unfinished Attic	3,724	0
		16,516	11,834

Building 12 : Section 1

Year Built: 1971
Living Area: 6,508
Replacement Cost
Less Depreciation: \$832,400

Building Attributes : Bldg 12 of 22	
Field	Description
STYLE	Dormitory

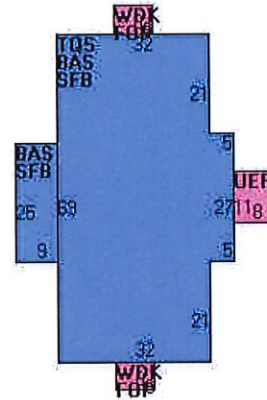
MODEL	Ind/Comm
Stories:	1.75
Occupancy	11
Exterior Wall 1	Brick/Masonry
Exterior Wall 2	
Roof Structure	Gable/Hip
Roof Cover	Slate
Interior Wall 1	Drywall/Sheet
Interior Wall 2	
Interior Floor 1	Vinyl/Asphalt
Interior Floor 2	Carpet
Heating Fuel	Oil
Heating Type	Hot Water
AC Type	None
Bldg Use	PVT SCHOOL MDL-96
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	904I
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	AVERAGE
Wall Height	10
% Conn Wall	0

Building Photo



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Building Layout



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Building Sub-Areas (sq ft)			Legend	
Code	Description	Gross Area	Living Area	
BAS	First Floor	2,568	2,568	
SFB	Finished Raised Bsmt	2,568	2,183	
TQS	Three Quarter Story	2,343	1,757	
FOP	Open Porch	96	0	
UEP	Unfin Enclosed Porch	88	0	
WDK	Deck	96	0	
		7,759	6,508	

Building 13 : Section 1

Year Built: 1920
Living Area: 72,166
Replacement Cost
Less Depreciation: \$6,962,100

Building Attributes : Bldg 13 of 22	
Field	Description

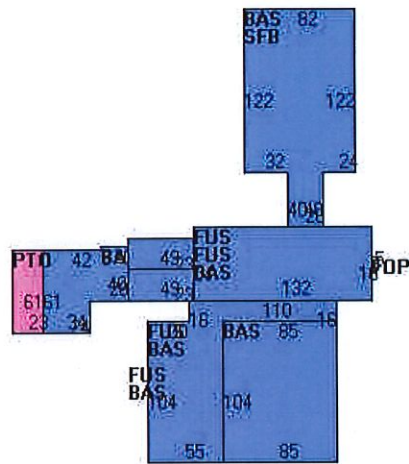
STYLE	Aud/Gym
MODEL	Ind/Comm
Stories:	3
Occupancy	1
Exterior Wall 1	Brick/Masonry
Exterior Wall 2	
Roof Structure	Gable/Hip
Roof Cover	Asph/F Gls/Cmp
Interior Wall 1	Minim/Masonry
Interior Wall 2	Drywall/Sheet
Interior Floor 1	Hardwood
Interior Floor 2	Carpet
Heating Fuel	Oil
Heating Type	Steam
AC Type	None
Bldg Use	PVT SCHOOL MDL-96
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	904I
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	AVERAGE
Wall Height	18
% Comn Wall	0

Building Photo



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Building Layout



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Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	39,916	39,916
FUS	Finished Upper Story	22,863	22,863
SFB	Finished Raised Bsmt	11,044	9,387
FOP	Open Porch	50	0
PTO	Patio	1,403	0
		75,276	72,166

Building 14 : Section 1

Year Built: 1994
Living Area: 19,061
Replacement Cost
Less Depreciation: \$3,973,500

Building Attributes : Bldg 14 of 22	
Field	Description
STYLE	School/College

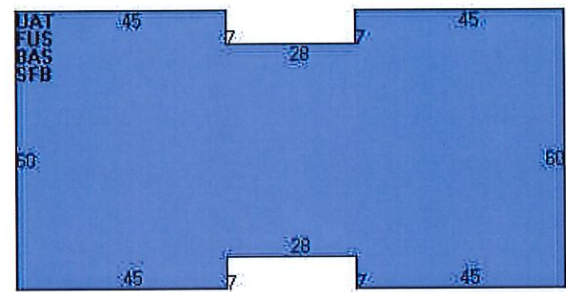
MODEL	Ind/Comm
Stories:	2
Occupancy	1
Exterior Wall 1	Brick/Masonry
Exterior Wall 2	
Roof Structure	Gable/Hip
Roof Cover	Slate
Interior Wall 1	Minim/Masonry
Interior Wall 2	Drywall/Sheet
Interior Floor 1	Carpet
Interior Floor 2	Vinyl/Asphalt
Heating Fuel	Oil
Heating Type	Steam
AC Type	Central
Bldg Use	STATE EDUC MDL-96
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	901L
Heat/AC	HEAT/AC SPLIT
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	AVERAGE
Wall Height	10
% Comn Wall	0

Building Photo



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Building Layout



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Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	6,688	6,688
FUS	Finished Upper Story	6,688	6,688
SFB	Finished Raised Bsmt	6,688	5,685
UAT	Unfinished Attic	6,688	0
		26,752	19,061

Building 15 : Section 1

Year Built: 1965
Living Area: 32,502
Replacement Cost
Less Depreciation: \$1,753,200

Building Attributes : Bldg 15 of 22	
Field	Description
STYLE	Skating Arena
MODEL	Ind/Comm

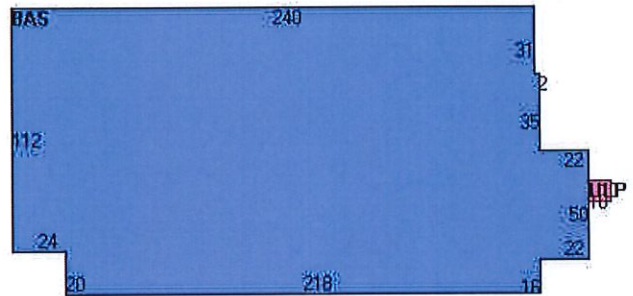
Stories:	1
Occupancy	1
Exterior Wall 1	Pre-finish Metl
Exterior Wall 2	
Roof Structure	Gable/Hip
Roof Cover	Metal/Tin
Interior Wall 1	Minim/Masonry
Interior Wall 2	
Interior Floor 1	Concr-Finished
Interior Floor 2	
Heating Fuel	Gas
Heating Type	Forced Air-Duc
AC Type	None
Bldg Use	PVT SCHOOL MDL-96
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	904I
Heat/AC	NONE
Frame Type	STEEL
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & MIN WL
Rooms/Prtns	AVERAGE
Wall Height	16
% Comn Wall	0

Building Photo



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Building Layout



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Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	32,502	32,502
ULP	Loading Platform	100	0
		32,602	32,502

Building 16 : Section 1

Year Built: 1975
Living Area: 1,652
Replacement Cost
Less Depreciation: \$115,700

Building Attributes : Bldg 16 of 22	
Field	Description
Style	Cape
Model	Residential
Stories:	1 1/2 Stories
Occupancy	1

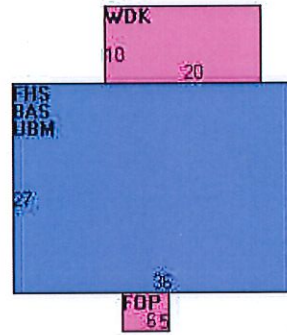
Exterior Wall 1	Clapboard
Exterior Wall 2	
Roof Structure:	Gable
Roof Cover	Asphalt
Interior Wall 1	Drywall
Interior Wall 2	
Interior Flr 1	Carpet
Interior Flr 2	Hardwood
Heat Fuel	Oil
Heat Type:	Steam
AC Type:	None
Total Bedrooms:	4 Bedrooms
Full Baths:	2
Half Baths:	0
Xtra Fixtrs:	
Total Rooms:	8
Extra Kitchens	
Whirlpool	
Fireplace	
Xtra Opening	
Blocked FPL	
Gas Fireplace	

Building Photo



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Building Layout



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Building Sub-Areas (sq ft)			Legend	
Code	Description	Gross Area	Living Area	
BAS	First Floor	972	972	
FHS	Finished Half Story	972	680	
FOP	Open Porch	30	0	
UBM	Unfin Bsmt	972	0	
WDK	Deck	200	0	
		3,146	1,652	

Building 17 : Section 1

Year Built: 1900
Living Area: 1,403
Replacement Cost
Less Depreciation: \$86,400

Building Attributes : Bldg 17 of 22	
Field	Description
Style	Cape

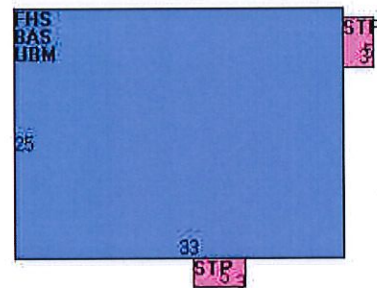
Model	Residential
Stories:	1.5
Occupancy	1
Exterior Wall 1	Clapboard
Exterior Wall 2	
Roof Structure:	Gable
Roof Cover	Asphalt
Interior Wall 1	Drywall
Interior Wall 2	
Interior Flr 1	Hardwood
Interior Flr 2	
Heat Fuel	Oil
Heat Type:	Hot Water
AC Type:	None
Total Bedrooms:	3 Bedrooms
Full Baths:	2
Half Baths:	0
Xtra Fixtrs:	
Total Rooms:	7
Extra Kitchens	
Whirlpool	
Fireplace	1
Xtra Opening	
Blocked FPL	
Gas Fireplace	

Building Photo



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Building Layout



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Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	825	825
FHS	Finished Half Story	825	578
STP	Stoop	30	0
UBM	Unfin Bsmt	825	0
		2,505	1,403

Building 18 : Section 1

Year Built: 1900
Living Area: 2,245
Replacement Cost
Less Depreciation: \$131,300

Building Attributes : Bldg 18 of 22	
Field	Description
Style	Conventional
Model	Residential

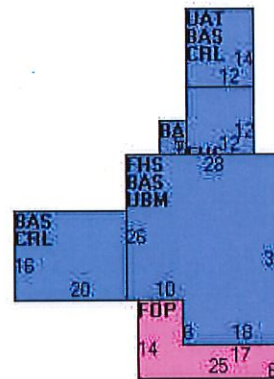
Stories:	1 3/4 Stories
Occupancy	1
Exterior Wall 1	Clapboard
Exterior Wall 2	
Roof Structure:	Gable
Roof Cover	Asphalt
Interior Wall 1	Drywall
Interior Wall 2	Plaster
Interior Flr 1	Carpet
Interior Flr 2	Hardwood
Heat Fuel	Oil
Heat Type:	Steam
AC Type:	None
Total Bedrooms:	5 Bedrooms
Full Baths:	2
Half Baths:	1
Xtra Fixtrs:	
Total Rooms:	9
Extra Kitchens	
Whirlpool	
Fireplace	1
Xtra Opening	1
Blocked FPL	
Gas Fireplace	

Building Photo



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Building Layout



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Building Sub-Areas (sq ft)			Legend	
Code	Description	Gross Area	Living Area	
BAS	First Floor	1,534	1,534	
FHS	Finished Half Story	1,016	711	
CRL	Crawl Space	632	0	
FOP	Open Porch	214	0	
UAT	Unfinished Attic	168	0	
UBM	Unfin Bsmt	872	0	
		4,436	2,245	

Building 19 : Section 1

Year Built: 1900
Living Area: 1,225
Replacement Cost
Less Depreciation: \$77,700

Building Attributes : Bldg 19 of 22	
Field	Description

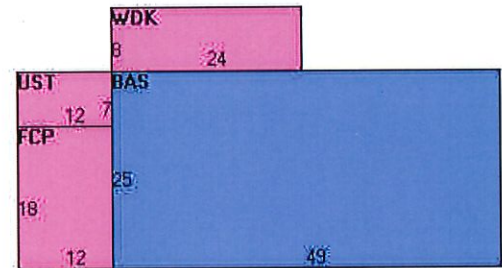
Style	Ranch
Model	Residential
Stories:	1 Story
Occupancy	1
Exterior Wall 1	Wood on Sheath
Exterior Wall 2	
Roof Structure:	Gable
Roof Cover	Asphalt
Interior Wall 1	Drywall
Interior Wall 2	
Interior Flr 1	Carpet
Interior Flr 2	
Heat Fuel	Oil
Heat Type:	Hot Water
AC Type:	None
Total Bedrooms:	3 Bedrooms
Full Baths:	1
Half Baths:	1
Xtra Fixtrs:	
Total Rooms:	5 Rooms
Extra Kitchens	
Whirlpool	
Fireplace	
Xtra Opening	
Blocked FPL	
Gas Fireplace	

Building Photo



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Building Layout



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Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	1,225	1,225
FCP	Carport	216	0
UST	Unfinished Storage	84	0
WDK	Deck	192	0
		1,717	1,225

Building 20 : Section 1

Year Built: 1900
Living Area: 2,352
Replacement Cost
Less Depreciation: \$140,300

Building Attributes : Bldg 20 of 22	
Field	Description
Style	Conventional
Model	Residential

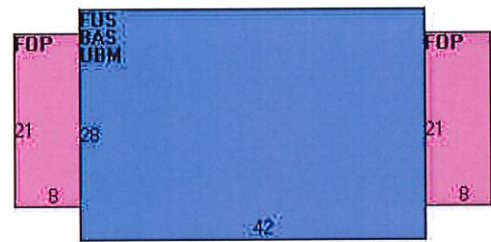
Stories:	2 Stories
Occupancy	1
Exterior Wall 1	Wood Shingle
Exterior Wall 2	
Roof Structure:	Gable
Roof Cover	Asphalt
Interior Wall 1	Drywall
Interior Wall 2	Plaster
Interior Flr 1	Hardwood
Interior Flr 2	
Heat Fuel	Oil
Heat Type:	Hot Water
AC Type:	None
Total Bedrooms:	4 Bedrooms
Full Baths:	2
Half Baths:	1
Xtra Fixtrs:	
Total Rooms:	8
Extra Kitchens	
Whirlpool	
Fireplace	2
Xtra Opening	
Blocked FPL	
Gas Fireplace	

Building Photo



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Building Layout



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Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	1,176	1,176
FUS	Finished Upper Story	1,176	1,176
FOP	Open Porch	336	0
UBM	Unfin Bsmt	1,176	0
		3,864	2,352

Building 21 : Section 1

Year Built: 2002
Living Area: 2,611
Replacement Cost
Less Depreciation: \$192,500

Building Attributes : Bldg 21 of 22	
Field	Description
Style	Cape
Model	Residential

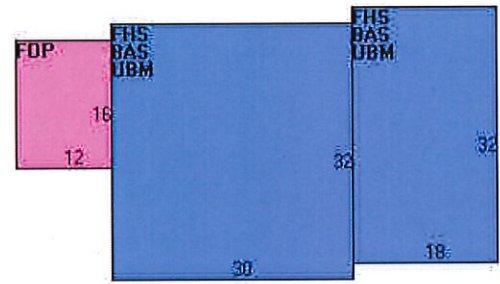
Stories:	1 1/2 Stories
Occupancy	1
Exterior Wall 1	Cedar or Redwd
Exterior Wall 2	
Roof Structure:	Gable
Roof Cover	Asphalt
Interior Wall 1	Drywall
Interior Wall 2	
Interior Flr 1	Hardwood
Interior Flr 2	
Heat Fuel	Oil
Heat Type:	Hot Water
AC Type:	None
Total Bedrooms:	4 Bedrooms
Full Baths:	2
Half Baths:	1
Xtra Fixtrs:	1
Total Rooms:	8 Rooms
Extra Kitchens	
Whirlpool	
Fireplace	1
Xtra Opening	1
Blocked FPL	
Gas Fireplace	

Building Photo



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Building Layout



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Building Sub-Areas (sq ft)			Legend	
Code	Description	Gross Area	Living Area	
BAS	First Floor	1,536	1,536	
FHS	Finished Half Story	1,536	1,075	
FOP	Open Porch	192	0	
UBM	Unfin Bsmt	1,536	0	
		4,800	2,611	

Building 22 : Section 1

Year Built: 2002
Living Area: 6,900
Replacement Cost
Less Depreciation: \$624,600

Building Attributes : Bldg 22 of 22	
Field	Description
STYLE	Garage/Office
MODEL	Ind/Comm

MEZ2	FINISHED	660 S.F.	\$4,900	6
SPR1	SPRINKLERS-WET	16516 S.F.	\$8,200	8
SPR1	SPRINKLERS-WET	16516 S.F.	\$8,200	11
SPR1	SPRINKLERS-WET	21156 S.F.	\$10,500	10
SPR2	WET/CONCEALED	7759 S.F.	\$6,700	12
FPL3	2ST COMM FPL	1 UNITS	\$1,700	10
MEZ2	FINISHED	3848 S.F.	\$33,700	3
SPR1	SPRINKLERS-WET	21156 S.F.	\$10,500	9
SPR2	WET/CONCEALED	26752 S.F.	\$27,400	14
A/C	AIR CONDITIONING	1320 S.F.	\$1,900	3
FPL3	2ST COMM FPL	3 UNITS	\$4,900	1
A/C	AIR CONDITIONING	12000 S.F.	\$14,900	13
FPO	COMM FPL - XTRA OP	1 UNITS	\$500	1
ELV1	ELEVATOR	5 STOPS	\$93,000	13
SPR1	SPRINKLERS-WET	12714 S.F.	\$5,900	1
SPR2	WET/CONCEALED	75276 S.F.	\$51,300	13
MEZ2	FINISHED	1680 S.F.	\$12,500	13

Land

Land Use

Use Code 904C
Description PVT SCHOOL MDL-94
Zone PSR
Neighborhood 800
Alt Land Appr No
Category

Land Line Valuation

Size (Acres) 141.24
Frontage 0
Depth 0
Assessed Value \$904,100
Appraised Value \$1,291,500

Outbuildings

Outbuildings						Legend
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
FGR1	Garage - Ave			2636 S.F.	\$34,300	13
PAT2	Patio - Good			6768 S.F.	\$27,100	3
PAV1	PAVING-ASPHALT			120000 S.F.	\$54,000	1
TEN	Tennis Court			4 UNITS	\$56,000	15
BRN5	2S Barn			2880 S.F.	\$40,300	22
PAT1	Patio - Ave			400 S.F.	\$1,000	12
SHD1	Shed			360 S.F.	\$2,500	13
TNK2	3000-10000 GAL			1000 GALS	\$400	15
BRN8	Pole Barn			1440 S.F.	\$10,800	22
SHD1	Shed			192 S.F.	\$1,300	13
SHD1	Shed			96 S.F.	\$700	15

SHD2	Shed - Good			96 S.F.	\$900	13
COM	COMM BLDG			920 UNITS	\$92,000	3
SHD2	Shed - Good			375 S.F.	\$6,800	1
SHD2	Shed - Good			375 S.F.	\$6,800	1
SHD2	Shed - Good			375 S.F.	\$6,800	1
TNK1	TANK-UNDERGRND			120000 GALS	\$66,000	13
SHD2	Shed - Good			375 S.F.	\$6,800	1

Valuation History

Appraisal			
Valuation Year	Improvements	Land	Total
2017	\$32,631,100	\$1,291,500	\$33,922,600
2016	\$32,631,100	\$1,291,500	\$33,922,600
2015	\$32,383,900	\$1,291,500	\$33,675,400

Assessment			
Valuation Year	Improvements	Land	Total
2017	\$22,842,100	\$904,100	\$23,746,200
2016	\$22,842,100	\$904,100	\$23,746,200
2015	\$22,669,000	\$904,100	\$23,573,100

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RADIO FREQUENCY EMISSIONS ANALYSIS REPORT EVALUATION OF HUMAN EXPOSURE POTENTIAL TO NON-IONIZING EMISSIONS

SPRINT Existing Facility

Site ID: CT33XC017

Pomfret School (SBA)
398 Pomfret Street
Pomfret, CT 06258

July 10, 2018

EBI Project Number: 6218004836

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	6.62 %



July 10, 2018

SPRINT

Attn: RF Engineering Manager
1 International Boulevard, Suite 800
Mahwah, NJ 07495

Emissions Analysis for Site: **CT33XC017 – Pomfret School (SBA)**

EBI Consulting was directed to analyze the proposed SPRINT facility located at **398 Pomfret Street, Pomfret, CT**, for the purpose of determining whether the emissions from the Proposed SPRINT 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 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The number of $\mu\text{W}/\text{cm}^2$ 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.

General population exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The general population exposure limits for the 850 MHz Band is approximately $567 \mu\text{W}/\text{cm}^2$. The general population exposure limit for the 1900 MHz (PCS) and 2500 MHz (BRS) bands is $1000 \mu\text{W}/\text{cm}^2$. 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 done for the proposed SPRINT Wireless antenna facility located at **398 Pomfret Street, Pomfret, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since SPRINT 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.

For all calculations, all equipment was calculated using the following assumptions:

- 1) 1 CDMA channels (850 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 20 Watts per Channel.
- 2) 2 LTE channels (850 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 50 Watts per Channel.
- 3) 5 CDMA channels (1900 MHz (PCS)) were considered for each sector of the proposed installation. These Channels have a transmit power of 16 Watts per Channel.
- 4) 2 LTE channels (1900 MHz (PCS)) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.
- 5) 8 LTE channels (2500 MHz (BRS)) were considered for each sector of the proposed installation. These Channels have a transmit power of 20 Watts per Channel.



- 6) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. 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. This is rarely the case, and if so, is never continuous.
- 7) For the following calculations, the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufactures supplied specifications minus 10 dB was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 8) The antennas used in this modeling are the **Commscope NNVV-65B-R4 and the RFS APXVTM14-ALU-I20** for transmission in the 850 MHz, 1900 MHz (PCS) and 2500 MHz (BRS) 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.
- 9) The antenna mounting height centerlines of the proposed antennas are **167 feet** above ground level (AGL) for **Sector A**, **167 feet** above ground level (AGL) for **Sector B** and **167 feet** above ground level (AGL) for Sector C.
- 10) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

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



SPRINT Site Inventory and Power Data by Antenna

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	Commscope NNVV-65B-R4	Make / Model:	Commscope NNVV-65B-R4	Make / Model:	Commscope NNVV-65B-R4
Gain:	12.75 / 15.05 dBd	Gain:	12.75 / 15.05 dBd	Gain:	12.75 / 15.05 dBd
Height (AGL):	167 feet	Height (AGL):	167 feet	Height (AGL):	167 feet
Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)
Channel Count	10	Channel Count	10	Channel Count	10
Total TX Power(W):	280 Watts	Total TX Power(W):	280 Watts	Total TX Power(W):	280 Watts
ERP (W):	7,378.61	ERP (W):	7,378.61	ERP (W):	7,378.61
Antenna A1 MPE%	1.27 %	Antenna B1 MPE%	1.27 %	Antenna C1 MPE%	1.27 %
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	RFS APXVTM14-ALU-I20	Make / Model:	RFS APXVTM14-ALU-I20	Make / Model:	RFS APXVTM14-ALU-I20
Gain:	15.9 dBd	Gain:	15.9 dBd	Gain:	15.9 dBd
Height (AGL):	167 feet	Height (AGL):	167 feet	Height (AGL):	167 feet
Frequency Bands	2500 MHz (BRS)	Frequency Bands	2500 MHz (BRS)	Frequency Bands	2500 MHz (BRS)
Channel Count	8	Channel Count	8	Channel Count	8
Total TX Power(W):	160 Watts	Total TX Power(W):	160 Watts	Total TX Power(W):	160 Watts
ERP (W):	6,224.72	ERP (W):	6,224.72	ERP (W):	6,224.72
Antenna A2 MPE%	0.86 %	Antenna B2 MPE%	0.86 %	Antenna C2 MPE%	0.86 %

Site Composite MPE%	
Carrier	MPE%
SPRINT – Max per sector	2.13 %
Verizon Wireless	2.98 %
T-Mobile	1.51 %
Site Total MPE %:	6.62 %

SPRINT Sector A Total:	2.13 %
SPRINT Sector B Total:	2.13 %
SPRINT Sector C Total:	2.13 %
Site Total:	6.62 %

SPRINT _ Frequency Band / Technology Max Power Values (All Sectors)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu\text{W}/\text{cm}^2$)	Frequency (MHz)	Allowable MPE ($\mu\text{W}/\text{cm}^2$)	Calculated % MPE
Sprint 850 MHz CDMA	1	376.73	167	0.52	850 MHz	567	0.09%
Sprint 850 MHz LTE	2	941.82	167	2.61	850 MHz	567	0.46%
Sprint 1900 MHz (PCS) CDMA	5	511.82	167	3.55	1900 MHz (PCS)	1000	0.36%
Sprint 1900 MHz (PCS) LTE	2	1,279.56	167	3.55	1900 MHz (PCS)	1000	0.36%
Sprint 2500 MHz (BRS) LTE	8	778.09	167	8.63	2500 MHz (BRS)	1000	0.86%
						Total:	2.13%



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 SPRINT 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:

SPRINT Sector	Power Density Value (%)
Sector A:	2.13 %
Sector B:	2.13 %
Sector C:	2.13 %
SPRINT Maximum Total (per sector):	2.13 %
Site Total:	6.62 %
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **6.62 %** 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.



Tower Engineering Solutions

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8445 Freeport Parkway, Suite 375, Irving, Texas 75063

Structural Analysis Report

Existing 168 ft SUMMIT Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT02217-S

Customer Site Name: Pomfret School

Carrier Name: Sprint Nextel

Carrier Site ID / Name: CT33XC017 / Kingston E./Pomfret

Site Location: 398 Pomfret Street

Pomfret, Connecticut

Windham County

Latitude: 41.890094

Longitude: -71.955008

Analysis Result:

Max Structural Usage: 65.7% [Pass]

Max Foundation Usage: 55.0% [Pass]

Additional Usage Caused by New Mount/Mount Modification: 3%

Report Prepared By: Tawfeeq Alajaj



Introduction

The purpose of this report is to summarize the analysis results on the 168 ft SUMMIT Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

Tower Drawings	Original shaft section data prepared by Summit, LLC & Paul J. Ford and Company. Dated 11-23-1999. Job No 29299-802. Design No 5762. Previous structural report prepared by FDH Engineering, Inc. Dated 11-14-2014. Project No 146GSJ1400.
Foundation Drawing	Foundation mapping report prepared by FDH Engineering, Inc. Dated 08-21-2012. Project No 1201570EN1.
Geotechnical Report	Geotechnical report prepared by FDH Engineering, Inc. Dated 09-12-2012. Project No 1201570EG1.
Modification Drawings	N/A

Analysis Criteria

The rigorous analysis was performed in accordance with the requirements and stipulations of the ANSI/TIA/EIA 222-G. In accordance with this standard, the structure was analyzed using **TESPoles**, a proprietary analysis software. The program considers the structure as an elastic 3-D model with second-order effects and temperature effects incorporated in the analysis. The analysis was performed using multiple wind directions.

Wind Speed Used in the Analysis:	Ultimate Design Wind Speed $V_{ult} = 130.0$ mph (3-Sec. Gust)/ Nominal Design Wind Speed $V_{asd} = 101.0$ mph (3-Sec. Gust)
Wind Speed with Ice:	50 mph (3-Sec. Gust) with 1" radial ice concurrent
Operational Wind Speed:	60 mph + 0" Radial ice
Standard/Codes:	ANSI/TIA/EIA 222-G / 2012 IBC / 2016 Connecticut State Building Code
Exposure Category:	C
Structure Class:	II
Topographic Category:	1
Crest Height:	0 ft
Seismic Parameters:	$S_S = 0.172$, $S_1 = 0.063$

This structural analysis is based upon the tower being classified as a Structure Class II; however, if a different classification is required subsequent to the date hereof, the tower classification will be changed to meet such requirement and a new structural analysis will be run.

Existing Antennas, Mounts and Transmission Lines

The table below summarizes the antennas, mounts and transmission lines that were considered in the analysis as existing on the tower.

Items	Elevation (ft.)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	167.0	6	Decibel DB908H90E-M w/ Mount Pipe	Low Profile Platform	(6) 1 5/8"	Sprint
2	157.0	3	Commscope LNX-6514DS-AIM - Panel	(1) Low Profile Platform	(11) 1 5/8" (1) 1 5/8" Fiber	Verizon
3		6	Commscope HBXX-6517DS-A2M - Panel			
4		3	Amphenol QUAD656COOOOx - Panel			
5		3	ALU RRH2x60-AWS - RRH			
6		3	ALU RRH2x60-700 - RRH			
7		1	RFS DB-T1-6Z-8AB-OZ - ODU			
8		147.0	3			
9	3		Commscope LNX-6515DS-VTM - Panel			
10	3		Allen Telecom FE15501P77/75			
11	3		Ericsson KRY 112 144/1			
12	3		Kathrein 782 11056			

Proposed Carrier’s Final Configuration of Antennas, Mounts and Transmission Lines

Information pertaining to the proposed carrier’s final configuration of antennas and transmission lines was provided by SBA Communications Corp. The proposed antennas and lines are listed below.

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	167.0	3	RFS - APXVTM14-C-I20 - Panel	Modified Low Profile Platform with Sitepro PRK-1245L, Sitepro PRK-SFS-H-L and pipes	(4) 1-1/4" fiber	Sprint Nextel
2		3	CommScope - NNVV-65B-R4 - Panel			
3		3	ALU 1900 Mhz RRUs			
4		6	ALU 800 Mhz			
5		3	ALU TD-RRH8x20-25			

See the attached coax layout for the line placement considered in the analysis.

Analysis Results

The results of the structural analysis, performed for the wind and ice loading and antenna equipment as defined above, are summarized as the following:

	Pole shafts	Anchor Bolts	Base Plate
Max. Usage:	65.7%	61.3%	58.1%
Pass/Fail	Pass	Pass	Pass

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	4170.1	34.7	84.3

The foundation has been investigated using the supplied documents and soils report and was found adequate. Therefore, no modification to the foundation will be required.

Operational Condition (Rigidity):

Operational characteristics of the tower are found to be within the limits prescribed by ANSI/TIA/EIA 222-G for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 1.3332 degrees under the operational wind speed as specified in the Analysis Criteria.

Conclusions

Based on the analysis results, the existing structure and its foundation were found to be adequate to safely support the existing and proposed equipment and meet the minimum requirements per the ANSI/TIA/EIA 222-G Standard under the design basic wind speed as specified in the Analysis Criteria.

Standard Conditions

1. This analysis was performed based on the information supplied to **(TES) Tower Engineering Solutions, LLC**. Verification of the information provided was not included in the Scope of Work for **TES**. The accuracy of the analysis is dependent on the accuracy of the information provided.
2. The analysis is based on the presumption that the tower members and components along with any existing reinforcement items have been correctly and properly designed, manufactured, installed and maintained.
3. All the existing structural members were assumed to be in good condition with no physical damage or deterioration associated with corrosion.
4. An initial tension of 10% of the break strength on all the existing guy wires was assumed in all the structural analyses of guyed towers unless different values were provided by the client. **TES** cannot take responsibility for the deviations in the analysis results because of differences in the initial tension forces of the existing guy wires.
5. Secondary component or connection secondary components, welds and bolts are assumed to be able to carry their intended original design loads. **TES** cannot take responsibility for verification of the adequacy on the connections, bolts and welds present in the structure.
6. The analyses will be performed based on the codes as specified by the client or based on the best knowledge of the engineering staff of **TES**. In the absence of information to the contrary, all work will be performed in accordance with the latest relevant revision of ANSI/TIA-222. If wind speed and/or ice loads are different from the minimum values recommended by the EIA/TIA-222 standard or other codes, **TES** should be notified in writing and the applicable minimum values provided by the client.
7. The configuration of the existing mounts, antennas, coax and other appurtenances were supplied by the customer for the current structural analysis. **TES** has not visited the tower site to verify the adequacy of the information provided. If there is any discrepancy found in the report regarding the existing conditions, **TES** should be notified immediately to evaluate the effect of the discrepancy on the analysis results.
8. The client will assume responsibility for rework associated with the differences in initially provided information, including tower and foundation information, existing and/or proposed equipment and transmission lines.
9. If a feasibility analysis was performed, final acceptance of changed conditions shall be based upon a rigorous structural analysis.

Usage Diagram - Max Ratio 65.74% at 49.0ft

Structure: CT02217-S-SBA
Site Name: Pomfret School
Height: 168.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-G
Exposure: C
Gh: 1.1

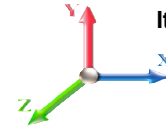
5/21/2018



Page: 1

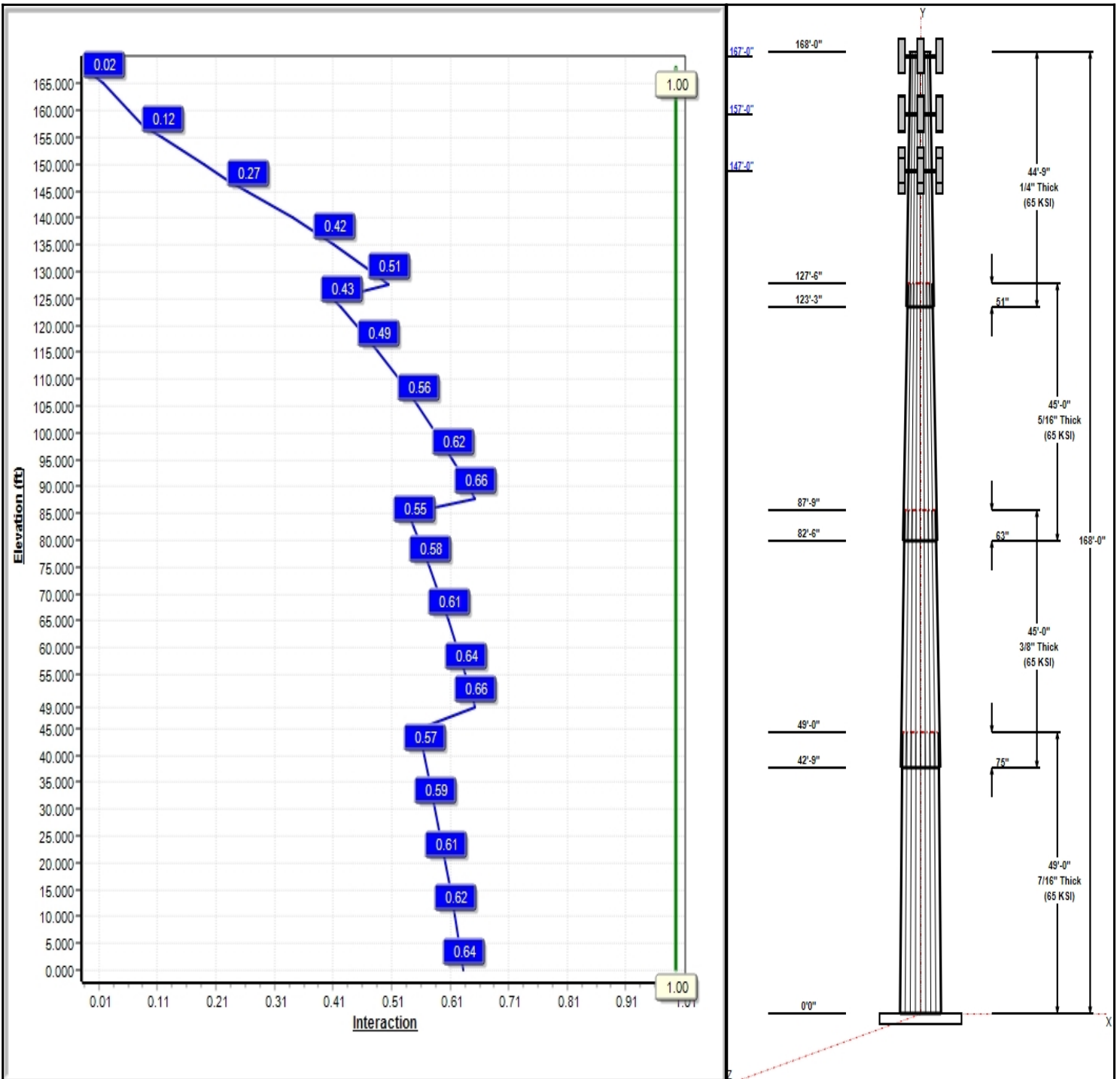
Dead Load Factor: 1.20
 Wind Load Factor: 1.60

Load Case : 1.2D + 1.6W 101 mph Wind



Iterations: 25

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Structure: CT02217-S-SBA

Type: Tapered
Site Name: Pomfret School
Height: 168.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.22003

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Shaft Properties

Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	49.00	48.31	59.09	0.438		0.22003	65
2	45.00	40.53	50.43	0.375	Slip	0.22003	65
3	45.00	32.41	42.31	0.313	Slip	0.22003	65
4	44.75	24.00	33.85	0.250	Slip	0.22003	65

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
168.00	170.50	1	Lightning Rod	---
167.00	167.00	1	Low Profile Platform	Sprint Nextel
167.00	167.00	3	APXVTM14-C-I20	Sprint Nextel
167.00	167.00	3	NNVV-65B-R4	Sprint Nextel
167.00	167.00	3	ALU 1900 Mhz RRUs	Sprint Nextel
167.00	167.00	6	ALU 800 Mhz	Sprint Nextel
167.00	167.00	3	ALU TD-RRH8x20-25	Sprint Nextel
167.00	167.00	1	PRK-1245	Sprint Nextel
157.00	157.00	3	Amphenol	Verizon
157.00	157.00	6	Commscope	Verizon
157.00	157.00	3	Commscope	Verizon
157.00	157.00	3	ALU RRH2x60-700	Verizon
157.00	157.00	3	ALU RRH2x60-AWS	Verizon
157.00	157.00	1	RFS DB-T1-6Z-8AB-0Z	Verizon
157.00	157.00	1	Low Profile Platform	Verizon
147.00	147.00	3	RFS	T-Mobile
147.00	147.00	3	Commscope	T-Mobile
147.00	147.00	3	Allen Telecom	T-Mobile
147.00	147.00	3	Ericsson KRY 112 144/1	T-Mobile
147.00	147.00	3	Kathrein 782 11056	T-Mobile
147.00	147.00	1	Low Profile Platform w/	T-Mobile

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
3.00	168.00	Outside	Safety Cable	
3.00	168.00	Outside	Step bolts (ladder)	
3.00	167.00	Inside	1-1/4" fiber	Sprint Nextel
3.00	157.00	Inside	1 5/8" Coax	Verizon
3.00	157.00	Inside	1 5/8" Fiber	Verizon
3.00	147.00	Inside	1 5/8" Coax	T-Mobile

Anchor Bolts

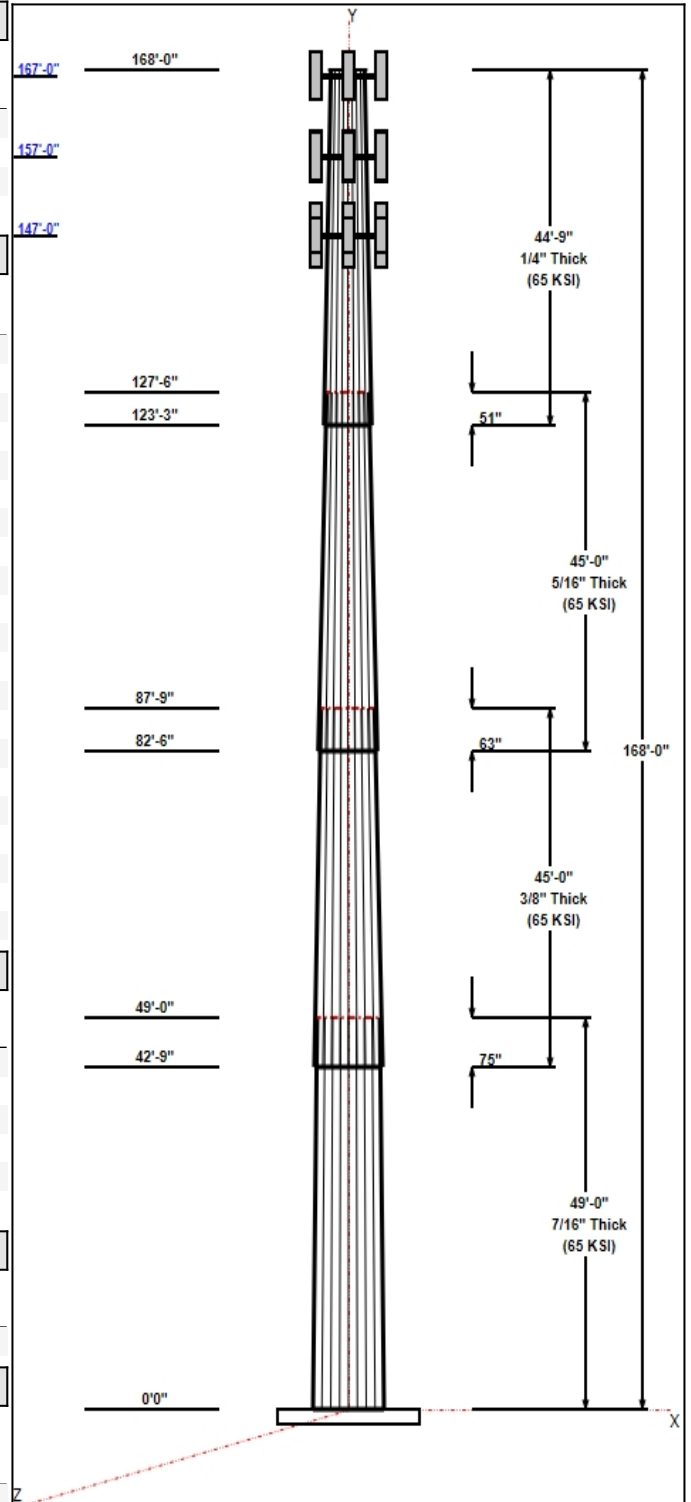
Qty	Specifications	Grade (ksi)	Arrangement
20	2.25" 18J	75.0	Cluster

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
3.0000	65.0	50.0	Clipped

Reactions

Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 101 mph Wind	4170.1	34.7	49.9



Structure: CT02217-S-SBA

Type: Tapered
Site Name: Pomfret School
Height: 168.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.22003

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0.9D + 1.6W 101 mph Wind	4127.6	34.7	37.4
1.2D + 1.0Di + 1.0Wi 50 mph Wind	1222.7	10.0	84.3
1.2D + 1.0E	271.9	2.0	50.0
0.9D + 1.0E	268.8	2.0	37.5
1.0D + 1.0W 60 mph Wind	914.7	7.7	41.7

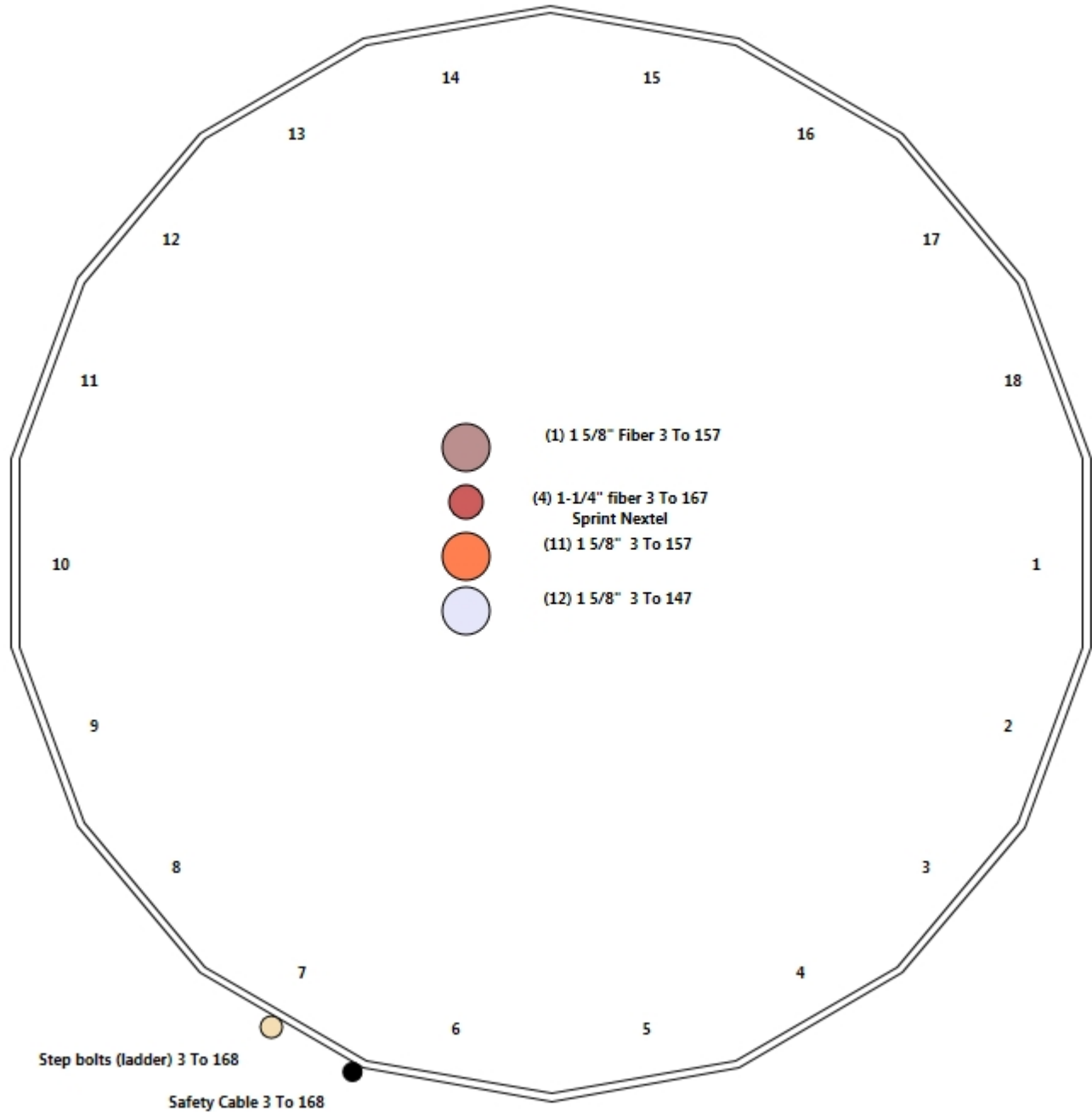
Structure: CT02217-S-SBA - Coax Line Placement

Type: Monopole
Site Name: Pomfret School
Height: 168.00 (ft)

5/21/2018



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Shaft Properties

Structure: CT02217-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Pomfret School	Exposure: C	
Height: 168.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	49.000	0.4375	65		0.00	12,331
2	18	45.000	0.3750	65	Slip	75.00	8,221
3	18	45.000	0.3125	65	Slip	63.00	5,627
4	18	44.750	0.2500	65	Slip	51.00	3,464
Total Shaft Weight:							29,644

Bottom

Top

Sec. No.	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Taper
1	59.09	0.00	81.44	35398.27	22.40	135.06	48.31	49.00	66.47	19246.0	18.06	110.4	0.220030
2	50.43	42.75	59.58	18863.19	22.30	134.49	40.53	87.75	47.80	9738.05	17.65	108.0	0.220030
3	42.31	82.50	41.66	9284.18	22.46	135.40	32.41	127.50	31.84	4144.35	16.88	103.7	0.220030
4	33.85	123.2	26.66	3801.54	22.46	135.39	24.00	168.00	18.84	1343.00	15.52	96.00	0.220030

Load Summary

Structure: CT02217-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Pomfret School	Exposure: C	
Height: 168.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice			Ice			Hor. Ecc. (ft)	Vert Ecc (ft)
				Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor		
1	168.00	Lightning Rod	1	35.00	1.05	1.00	77.36	4.251	1.00	0.00	2.50
2	167.00	Low Profile Platform	1	1500.00	22.00	1.00	3264.05	45.803	1.00	0.00	0.00
3	167.00	APXVTM14-C-I20	3	56.20	6.34	0.77	287.82	7.874	0.77	0.00	0.00
4	167.00	NNVV-65B-R4	3	77.40	12.27	0.74	462.25	14.232	0.74	0.00	0.00
5	167.00	ALU 1900 Mhz RRUs	3	60.00	2.77	0.67	172.45	4.480	0.67	0.00	0.00
6	167.00	ALU 800 Mhz	6	53.00	2.49	0.67	152.68	4.032	0.67	0.00	0.00
7	167.00	ALU TD-RRH8x20-25	3	70.00	4.05	0.67	229.90	5.175	0.67	0.00	0.00
8	167.00	PRK-1245	1	464.91	15.00	1.00	902.31	36.169	1.00	0.00	0.00
9	157.00	Amphenol QUAD656COOOOx	3	54.00	8.17	0.83	382.65	11.951	0.84	0.00	0.00
10	157.00	Commscope HBXX-6517DS-A2M	6	40.80	8.55	0.77	277.44	12.459	0.78	0.00	0.00
11	157.00	Commscope LNX-6514DS-AIM	3	38.80	8.17	0.83	274.94	11.951	0.84	0.00	0.00
12	157.00	ALU RRH2x60-700	3	60.00	2.23	0.67	153.19	3.652	0.68	0.00	0.00
13	157.00	ALU RRH2x60-AWS	3	60.00	3.50	0.67	176.92	4.557	0.68	0.00	0.00
14	157.00	RFS DB-T1-6Z-8AB-OZ	1	44.00	4.80	1.00	248.39	5.997	1.00	0.00	0.00
15	157.00	Low Profile Platform	1	1500.00	22.00	1.00	3253.19	45.656	1.00	0.00	0.00
16	147.00	RFS APXV18-206516S-C-A20	3	18.70	3.61	0.73	111.94	6.081	0.74	0.00	0.00
17	147.00	Commscope LNX-6515DS-VTM	3	50.30	11.47	0.80	359.28	15.796	0.81	0.00	0.00
18	147.00	Allen Telecom FE15501P77/75	3	17.50	0.54	0.67	48.82	1.311	0.68	0.00	0.00
19	147.00	Ericsson KRY 112 144/1	3	11.00	0.41	0.67	25.35	1.042	0.68	0.00	0.00
20	147.00	Kathrein 782 11056	3	1.80	0.28	0.67	7.82	0.814	0.68	0.00	0.00
21	147.00	Low Profile Platform w/ Reinf. Kit	1	1800.00	25.00	1.00	3890.03	52.867	1.00	0.00	0.00
Totals:			57	7,633.81			22,296.07				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
3.00	168.00	(1) Safety Cable	0.38	Outside
3.00	168.00	(1) Step bolts (ladder)	0.00	Outside
3.00	167.00	(4) 1-1/4" fiber	0.00	Inside
3.00	157.00	(11) 1 5/8" Coax	0.00	Inside
3.00	157.00	(1) 1 5/8" Fiber	0.00	Inside
3.00	147.00	(12) 1 5/8" Coax	0.00	Inside

Shaft Section Properties

Structure: CT02217-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Pomfret School	Exposure: C	
Height: 168.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Increment Length: 5 (ft)

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in ³)	Weight (lb)
0.00		0.4375	59.090	81.443	35398.3	22.40	135.06	75.0	1179.	0.0
5.00		0.4375	57.990	79.916	33443.5	21.96	132.55	75.6	1135.	1372.7
10.00		0.4375	56.890	78.388	31562.0	21.52	130.03	76.1	1092.	1346.7
15.00		0.4375	55.790	76.860	29752.5	21.07	127.52	76.6	1050.	1320.7
20.00		0.4375	54.689	75.333	28013.5	20.63	125.00	77.1	1008.	1294.7
25.00		0.4375	53.589	73.805	26343.6	20.19	122.49	77.7	968.2	1268.7
30.00		0.4375	52.489	72.278	24741.4	19.74	119.98	78.2	928.4	1242.7
35.00		0.4375	51.389	70.750	23205.6	19.30	117.46	78.7	889.4	1216.7
40.00		0.4375	50.289	69.222	21734.6	18.86	114.95	79.2	851.3	1190.7
42.75	Bot - Section 2	0.4375	49.684	68.382	20952.8	18.61	113.56	79.5	830.6	643.8
45.00		0.4375	49.189	67.695	20327.2	18.41	112.43	79.7	813.9	974.8
49.00	Top - Section 1	0.3750	49.059	57.943	17350.9	21.66	130.82	0.0	0.0	1708.9
50.00		0.3750	48.839	57.682	17116.7	21.55	130.24	76.0	690.3	196.7
55.00		0.3750	47.738	56.372	15977.3	21.04	127.30	76.7	659.2	970.2
60.00		0.3750	46.638	55.063	14889.6	20.52	124.37	77.3	628.8	948.0
65.00		0.3750	45.538	53.753	13852.4	20.00	121.43	77.9	599.1	925.7
70.00		0.3750	44.438	52.444	12864.6	19.48	118.50	78.5	570.2	903.4
75.00		0.3750	43.338	51.135	11924.8	18.97	115.57	79.1	542.0	881.1
80.00		0.3750	42.238	49.825	11032.0	18.45	112.63	79.7	514.4	858.9
82.50	Bot - Section 3	0.3750	41.688	49.170	10602.8	18.19	111.17	80.0	501.0	421.1
85.00		0.3750	41.137	48.516	10184.9	17.93	109.70	80.3	487.6	767.6
87.75	Top - Section 2	0.3125	41.157	40.512	8539.0	21.81	131.70	0.0	0.0	832.5
90.00		0.3125	40.662	40.021	8232.3	21.53	130.12	76.1	398.8	308.3
95.00		0.3125	39.562	38.929	7577.1	20.91	126.60	76.8	377.2	671.6
100.00		0.3125	38.462	37.838	6957.6	20.29	123.08	77.5	356.3	653.1
105.00		0.3125	37.362	36.747	6372.9	19.67	119.56	78.3	336.0	634.5
110.00		0.3125	36.262	35.656	5821.9	19.05	116.04	79.0	316.2	615.9
115.00		0.3125	35.162	34.565	5303.6	18.43	112.52	79.7	297.1	597.4
120.00		0.3125	34.061	33.474	4817.0	17.81	109.00	80.5	278.5	578.8
123.25	Bot - Section 4	0.3125	33.346	32.764	4517.2	17.40	106.71	80.9	266.8	366.3
125.00		0.3125	32.961	32.382	4361.1	17.19	105.48	81.2	260.6	351.8
127.50	Top - Section 3	0.2500	32.911	25.916	3492.9	21.80	131.64	0.0	0.0	495.5
130.00		0.2500	32.361	25.479	3319.3	21.41	129.44	76.2	202.0	218.6
135.00		0.2500	31.261	24.606	2989.7	20.64	125.04	77.1	188.4	426.1
140.00		0.2500	30.161	23.733	2682.7	19.86	120.64	78.0	175.2	411.2
145.00		0.2500	29.061	22.860	2397.4	19.09	116.24	79.0	162.5	396.4
147.00		0.2500	28.621	22.511	2289.2	18.78	114.48	79.3	157.5	154.4
150.00		0.2500	27.961	21.988	2133.1	18.31	111.84	79.9	150.3	227.1
155.00		0.2500	26.860	21.115	1889.0	17.53	107.44	80.8	138.5	366.7
157.00		0.2500	26.420	20.765	1796.9	17.22	105.68	81.1	134.0	142.5
160.00		0.2500	25.760	20.242	1664.3	16.76	103.04	81.7	127.3	209.3
165.00		0.2500	24.660	19.369	1458.1	15.98	98.64	82.5	116.5	337.0
167.00		0.2500	24.220	19.020	1380.7	15.67	96.88	82.5	112.3	130.6
168.00		0.2500	24.000	18.845	1343.0	15.52	96.00	82.5	110.2	64.4

29643.8

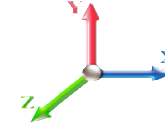
Wind Loading - Shaft

Structure: CT02217-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Pomfret School	Exposure: C	
Height: 168.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 25

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	21.088	23.20	465.60	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	21.088	23.20	456.93	0.650	0.000	5.00	24.768	16.10	597.5	0.0	1647.2
10.00		1.00	0.85	21.088	23.20	448.26	0.650	0.000	5.00	24.302	15.80	586.3	0.0	1616.0
15.00		1.00	0.85	21.088	23.20	439.59	0.650	0.000	5.00	23.837	15.49	575.0	0.0	1584.8
20.00		1.00	0.90	22.375	24.61	443.88	0.650	0.000	5.00	23.372	15.19	598.2	0.0	1553.6
25.00		1.00	0.95	23.451	25.80	445.29	0.650	0.000	5.00	22.906	14.89	614.5	0.0	1522.5
30.00		1.00	0.98	24.369	26.81	444.60	0.650	0.000	5.00	22.441	14.59	625.6	0.0	1491.3
35.00		1.00	1.01	25.172	27.69	442.40	0.650	0.000	5.00	21.975	14.28	632.8	0.0	1460.1
40.00		1.00	1.04	25.890	28.48	439.06	0.650	0.000	5.00	21.510	13.98	637.1	0.0	1428.9
42.75	Bot - Section 2	1.00	1.06	26.255	28.88	436.82	0.650	0.000	2.75	11.632	7.56	349.4	0.0	772.6
45.00		1.00	1.07	26.540	29.19	434.81	0.650	0.000	2.25	9.555	6.21	290.1	0.0	1169.8
49.00	Top - Section 1	1.00	1.09	27.020	29.72	430.88	0.650	0.000	4.00	16.754	10.89	517.9	0.0	2050.7
50.00		1.00	1.09	27.135	29.85	436.53	0.650	0.000	1.00	4.142	2.69	128.6	0.0	236.1
55.00		1.00	1.12	27.685	30.45	431.00	0.650	0.000	5.00	20.431	13.28	647.1	0.0	1164.3
60.00		1.00	1.14	28.197	31.02	424.94	0.650	0.000	5.00	19.965	12.98	644.0	0.0	1137.6
65.00		1.00	1.16	28.676	31.54	418.43	0.650	0.000	5.00	19.500	12.67	639.7	0.0	1110.8
70.00		1.00	1.17	29.127	32.04	411.52	0.650	0.000	5.00	19.034	12.37	634.2	0.0	1084.1
75.00		1.00	1.19	29.553	32.51	404.25	0.650	0.000	5.00	18.569	12.07	627.8	0.0	1057.4
80.00		1.00	1.21	29.958	32.95	396.68	0.650	0.000	5.00	18.103	11.77	620.4	0.0	1030.6
82.50	Bot - Section 3	1.00	1.22	30.152	33.17	392.78	0.650	0.000	2.50	8.877	5.77	306.2	0.0	505.3
85.00		1.00	1.22	30.342	33.38	388.82	0.650	0.000	2.50	8.893	5.78	308.7	0.0	921.1
87.75	Top - Section 2	1.00	1.23	30.546	33.60	384.39	0.650	0.000	2.75	9.648	6.27	337.1	0.0	999.0
90.00		1.00	1.24	30.710	33.78	386.65	0.650	0.000	2.25	7.789	5.06	273.6	0.0	369.9
95.00		1.00	1.25	31.061	34.17	378.33	0.650	0.000	5.00	16.971	11.03	603.1	0.0	805.9
100.00		1.00	1.27	31.399	34.54	369.80	0.650	0.000	5.00	16.506	10.73	592.9	0.0	783.7
105.00		1.00	1.28	31.723	34.89	361.08	0.650	0.000	5.00	16.040	10.43	582.1	0.0	761.4
110.00		1.00	1.29	32.035	35.24	352.16	0.650	0.000	5.00	15.575	10.12	570.8	0.0	739.1
115.00		1.00	1.30	32.336	35.57	343.08	0.650	0.000	5.00	15.109	9.82	558.9	0.0	716.8
120.00		1.00	1.32	32.627	35.89	333.84	0.650	0.000	5.00	14.644	9.52	546.6	0.0	694.6
123.25	Bot - Section 4	1.00	1.32	32.811	36.09	327.75	0.650	0.000	3.25	9.269	6.02	347.9	0.0	439.5
125.00		1.00	1.33	32.909	36.20	324.45	0.650	0.000	1.75	4.984	3.24	187.6	0.0	422.2
127.50	Top - Section 3	1.00	1.33	33.046	36.35	319.70	0.650	0.000	2.50	7.020	4.56	265.4	0.0	594.6
130.00		1.00	1.34	33.182	36.50	319.86	0.650	0.000	2.50	6.904	4.49	262.1	0.0	262.3
135.00		1.00	1.35	33.446	36.79	310.21	0.650	0.000	5.00	13.459	8.75	515.0	0.0	511.3
140.00		1.00	1.36	33.703	37.07	300.45	0.650	0.000	5.00	12.994	8.45	501.0	0.0	493.5
145.00		1.00	1.37	33.953	37.35	290.56	0.650	0.000	5.00	12.528	8.14	486.6	0.0	475.6
147.00	Appurtenance(s)	1.00	1.37	34.051	37.46	286.57	0.650	0.000	2.00	4.881	3.17	190.1	0.0	185.3
150.00		1.00	1.38	34.196	37.62	280.56	0.650	0.000	3.00	7.182	4.67	281.0	0.0	272.6
155.00		1.00	1.39	34.433	37.88	270.45	0.650	0.000	5.00	11.597	7.54	456.8	0.0	440.0
157.00	Appurtenance(s)	1.00	1.39	34.526	37.98	266.38	0.650	0.000	2.00	4.509	2.93	178.1	0.0	171.0
160.00		1.00	1.40	34.664	38.13	260.24	0.650	0.000	3.00	6.623	4.31	262.6	0.0	251.2
165.00		1.00	1.41	34.890	38.38	249.94	0.650	0.000	5.00	10.666	6.93	425.7	0.0	404.4
167.00	Appurtenance(s)	1.00	1.41	34.978	38.48	245.79	0.650	0.000	2.00	4.136	2.69	165.5	0.0	156.8
168.00	Appurtenance(s)	1.00	1.41	35.022	38.52	243.71	0.650	0.000	1.00	2.040	1.33	81.7	0.0	77.3
Totals:									168.00			19,253.6		35,572.5

Discrete Appurtenance Forces

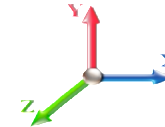
Structure: CT02217-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Pomfret School	Exposure: C	
Height: 168.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 25

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	168.00	Lightning Rod	1	35.131	38.644	1.00	1.00	1.05	42.00	0.000	2.500	64.92	0.00	162.31
2	167.00	PRK-1245	1	34.978	38.476	1.00	1.00	15.00	557.89	0.000	0.000	923.42	0.00	0.00
3	167.00	ALU TD-RRH8x20-25	3	34.978	38.476	0.60	0.90	7.33	252.00	0.000	0.000	451.03	0.00	0.00
4	167.00	ALU 800 Mhz	6	34.978	38.476	0.60	0.90	9.01	381.60	0.000	0.000	554.60	0.00	0.00
5	167.00	ALU 1900 Mhz RRUs	3	34.978	38.476	0.60	0.90	5.01	216.00	0.000	0.000	308.48	0.00	0.00
6	167.00	NNVV-65B-R4	3	34.978	38.476	0.67	0.90	24.52	278.64	0.000	0.000	1509.21	0.00	0.00
7	167.00	APXVTM14-C-I20	3	34.978	38.476	0.69	0.90	13.18	202.32	0.000	0.000	811.43	0.00	0.00
8	167.00	Low Profile Platform	1	34.978	38.476	1.00	1.00	22.00	1800.00	0.000	0.000	1354.35	0.00	0.00
9	157.00	Low Profile Platform	1	34.526	37.979	1.00	1.00	22.00	1800.00	0.000	0.000	1336.86	0.00	0.00
10	157.00	RFS DB-T1-6Z-8AB-0Z	1	34.526	37.979	1.00	1.00	4.80	52.80	0.000	0.000	291.68	0.00	0.00
11	157.00	ALU RRH2x60-AWS	3	34.526	37.979	0.54	0.80	5.63	216.00	0.000	0.000	341.99	0.00	0.00
12	157.00	ALU RRH2x60-700	3	34.526	37.979	0.54	0.80	3.59	216.00	0.000	0.000	217.90	0.00	0.00
13	157.00	Commscope	3	34.526	37.979	0.66	0.80	16.27	139.68	0.000	0.000	988.95	0.00	0.00
14	157.00	Commscope	6	34.526	37.979	0.62	0.80	31.60	293.76	0.000	0.000	1920.27	0.00	0.00
15	157.00	Amphenol	3	34.526	37.979	0.66	0.80	16.27	194.40	0.000	0.000	988.95	0.00	0.00
16	147.00	Low Profile Platform w/	1	34.051	37.456	1.00	1.00	25.00	2160.00	0.000	0.000	1498.26	0.00	0.00
17	147.00	Kathrein 782 11056	3	34.051	37.456	0.54	0.80	0.45	6.48	0.000	0.000	26.98	0.00	0.00
18	147.00	Ericsson KRY 112 144/1	3	34.051	37.456	0.54	0.80	0.66	39.60	0.000	0.000	39.51	0.00	0.00
19	147.00	Allen Telecom	3	34.051	37.456	0.54	0.80	0.87	63.00	0.000	0.000	52.04	0.00	0.00
20	147.00	Commscope	3	34.051	37.456	0.64	0.80	22.02	181.08	0.000	0.000	1319.81	0.00	0.00
21	147.00	RFS	3	34.051	37.456	0.58	0.80	6.32	67.32	0.000	0.000	379.04	0.00	0.00

Totals: **9,160.57** **15,379.70**

Total Applied Force Summary

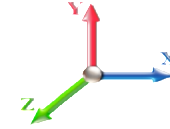
Structure: CT02217-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Pomfret School	Exposure: C	
Height: 168.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 25

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		597.50	1716.74	0.00	0.00
10.00		586.27	1789.86	0.00	0.00
15.00		575.05	1758.67	0.00	0.00
20.00		598.23	1727.48	0.00	0.00
25.00		614.52	1696.29	0.00	0.00
30.00		625.59	1665.10	0.00	0.00
35.00		632.82	1633.91	0.00	0.00
40.00		637.08	1602.72	0.00	0.00
42.75		349.37	868.20	0.00	0.00
45.00		290.11	1248.02	0.00	0.00
49.00		517.89	2189.73	0.00	0.00
50.00		128.58	270.84	0.00	0.00
55.00		647.08	1338.14	0.00	0.00
60.00		644.02	1311.40	0.00	0.00
65.00		639.70	1284.67	0.00	0.00
70.00		634.25	1257.94	0.00	0.00
75.00		627.79	1231.20	0.00	0.00
80.00		620.43	1204.47	0.00	0.00
82.50		306.21	592.21	0.00	0.00
85.00		308.69	1007.99	0.00	0.00
87.75		337.14	1094.64	0.00	0.00
90.00		273.64	448.17	0.00	0.00
95.00		603.06	979.78	0.00	0.00
100.00		592.89	957.51	0.00	0.00
105.00		582.12	935.23	0.00	0.00
110.00		570.79	912.95	0.00	0.00
115.00		558.93	890.67	0.00	0.00
120.00		546.59	868.39	0.00	0.00
123.25		347.92	552.51	0.00	0.00
125.00		187.62	483.01	0.00	0.00
127.50		265.41	681.49	0.00	0.00
130.00		262.08	349.25	0.00	0.00
135.00		514.98	685.13	0.00	0.00
140.00		500.99	667.31	0.00	0.00
145.00		486.62	649.48	0.00	0.00
147.00	(16) attachments	3505.78	2772.28	0.00	0.00
150.00		280.96	331.93	0.00	0.00
155.00		456.83	538.96	0.00	0.00
157.00	(20) attachments	6264.69	3123.23	0.00	0.00
160.00		262.65	265.40	0.00	0.00
165.00		425.73	428.07	0.00	0.00
167.00	(20) attachments	6078.04	3854.69	0.00	0.00
168.00	(1) attachments	146.66	120.88	0.00	162.31
Totals:		34,633.27	49,986.55	0.00	162.31

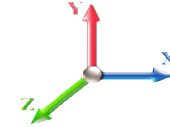
Linear Appurtenance Segment Forces (Factored)

Structure: CT02217-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Pomfret School	Exposure: C	
Height: 168.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 25

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.003	0.000	21.088	0.00	0.66
5.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.003	0.000	21.088	0.00	2.50
10.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	21.088	0.00	1.64
10.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	21.088	0.00	6.24
15.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	21.088	0.00	1.64
15.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	21.088	0.00	6.24
20.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	22.375	0.00	1.64
20.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	22.375	0.00	6.24
25.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	23.451	0.00	1.64
25.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	23.451	0.00	6.24
30.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	24.369	0.00	1.64
30.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	24.369	0.00	6.24
35.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	25.172	0.00	1.64
35.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	25.172	0.00	6.24
40.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	25.890	0.00	1.64
40.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	25.890	0.00	6.24
42.75	Safety Cable	Yes	2.75	0.000	0.38	0.09	0.00	0.007	0.000	26.255	0.00	0.90
42.75	Step bolts (ladder)	Yes	2.75	0.000	0.00	0.00	0.00	0.007	0.000	26.255	0.00	3.43
45.00	Safety Cable	Yes	2.25	0.000	0.38	0.07	0.00	0.008	0.000	26.540	0.00	0.74
45.00	Step bolts (ladder)	Yes	2.25	0.000	0.00	0.00	0.00	0.008	0.000	26.540	0.00	2.81
49.00	Safety Cable	Yes	4.00	0.000	0.38	0.13	0.00	0.008	0.000	27.020	0.00	1.31
49.00	Step bolts (ladder)	Yes	4.00	0.000	0.00	0.00	0.00	0.008	0.000	27.020	0.00	4.99
50.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.008	0.000	27.135	0.00	0.33
50.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.008	0.000	27.135	0.00	1.25
55.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.008	0.000	27.685	0.00	1.64
55.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.008	0.000	27.685	0.00	6.24
60.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.008	0.000	28.197	0.00	1.64
60.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.008	0.000	28.197	0.00	6.24
65.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.008	0.000	28.676	0.00	1.64
65.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.008	0.000	28.676	0.00	6.24
70.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.008	0.000	29.127	0.00	1.64
70.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.008	0.000	29.127	0.00	6.24
75.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.009	0.000	29.553	0.00	1.64
75.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.009	0.000	29.553	0.00	6.24
80.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.009	0.000	29.958	0.00	1.64
80.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.009	0.000	29.958	0.00	6.24
82.50	Safety Cable	Yes	2.50	0.000	0.38	0.08	0.00	0.009	0.000	30.152	0.00	0.82
82.50	Step bolts (ladder)	Yes	2.50	0.000	0.00	0.00	0.00	0.009	0.000	30.152	0.00	3.12
85.00	Safety Cable	Yes	2.50	0.000	0.38	0.08	0.00	0.009	0.000	30.342	0.00	0.82
85.00	Step bolts (ladder)	Yes	2.50	0.000	0.00	0.00	0.00	0.009	0.000	30.342	0.00	3.12
87.75	Safety Cable	Yes	2.75	0.000	0.38	0.09	0.00	0.009	0.000	30.546	0.00	0.90
87.75	Step bolts (ladder)	Yes	2.75	0.000	0.00	0.00	0.00	0.009	0.000	30.546	0.00	3.43
90.00	Safety Cable	Yes	2.25	0.000	0.38	0.07	0.00	0.009	0.000	30.710	0.00	0.74
90.00	Step bolts (ladder)	Yes	2.25	0.000	0.00	0.00	0.00	0.009	0.000	30.710	0.00	2.81
95.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.009	0.000	31.061	0.00	1.64
95.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.009	0.000	31.061	0.00	6.24
100.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.010	0.000	31.399	0.00	1.64

Linear Appurtenance Segment Forces (Factored)

Structure: CT02217-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Pomfret School	Exposure: C	
Height: 168.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 25

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
100.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.010	0.000	31.399	0.00	6.24
105.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.010	0.000	31.723	0.00	1.64
105.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.010	0.000	31.723	0.00	6.24
110.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.010	0.000	32.035	0.00	1.64
110.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.010	0.000	32.035	0.00	6.24
115.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.010	0.000	32.336	0.00	1.64
115.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.010	0.000	32.336	0.00	6.24
120.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.011	0.000	32.627	0.00	1.64
120.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.011	0.000	32.627	0.00	6.24
123.25	Safety Cable	Yes	3.25	0.000	0.38	0.10	0.00	0.011	0.000	32.811	0.00	1.06
123.25	Step bolts (ladder)	Yes	3.25	0.000	0.00	0.00	0.00	0.011	0.000	32.811	0.00	4.06
125.00	Safety Cable	Yes	1.75	0.000	0.38	0.06	0.00	0.011	0.000	32.909	0.00	0.57
125.00	Step bolts (ladder)	Yes	1.75	0.000	0.00	0.00	0.00	0.011	0.000	32.909	0.00	2.18
127.50	Safety Cable	Yes	2.50	0.000	0.38	0.08	0.00	0.011	0.000	33.046	0.00	0.82
127.50	Step bolts (ladder)	Yes	2.50	0.000	0.00	0.00	0.00	0.011	0.000	33.046	0.00	3.12
130.00	Safety Cable	Yes	2.50	0.000	0.38	0.08	0.00	0.011	0.000	33.182	0.00	0.82
130.00	Step bolts (ladder)	Yes	2.50	0.000	0.00	0.00	0.00	0.011	0.000	33.182	0.00	3.12
135.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.012	0.000	33.446	0.00	1.64
135.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.012	0.000	33.446	0.00	6.24
140.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.012	0.000	33.703	0.00	1.64
140.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.012	0.000	33.703	0.00	6.24
145.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.013	0.000	33.953	0.00	1.64
145.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.013	0.000	33.953	0.00	6.24
147.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.013	0.000	34.051	0.00	0.66
147.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.013	0.000	34.051	0.00	2.50
150.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.013	0.000	34.196	0.00	0.98
150.00	Step bolts (ladder)	Yes	3.00	0.000	0.00	0.00	0.00	0.013	0.000	34.196	0.00	3.74
155.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.014	0.000	34.433	0.00	1.64
155.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.014	0.000	34.433	0.00	6.24
157.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.014	0.000	34.526	0.00	0.66
157.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.014	0.000	34.526	0.00	2.50
160.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.014	0.000	34.664	0.00	0.98
160.00	Step bolts (ladder)	Yes	3.00	0.000	0.00	0.00	0.00	0.014	0.000	34.664	0.00	3.74
165.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.015	0.000	34.890	0.00	1.64
165.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.015	0.000	34.890	0.00	6.24
167.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.015	0.000	34.978	0.00	0.66
167.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.015	0.000	34.978	0.00	2.50
168.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.016	0.000	35.022	0.00	0.33
168.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.016	0.000	35.022	0.00	1.25
Totals:											0.0	260.0

Calculated Forces

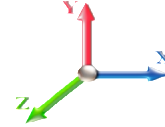
Structure: CT02217-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Pomfret School	Exposure: C	
Height: 168.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.2D + 1.6W 101 mph Wind

Iterations 25

Dead Load Factor 1.20
Wind Load Factor 1.60



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 Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-49.94	-34.71	0.00	-4170.0	0.00	4170.05	5501.01	2750.51	13262.9	6641.33	0.00	0.000	0.000	0.637
5.00	-48.12	-34.25	0.00	-3996.5	0.00	3996.52	5435.34	2717.67	12856.9	6438.04	0.09	-0.164	0.000	0.630
10.00	-46.24	-33.79	0.00	-3825.3	0.00	3825.30	5368.23	2684.11	12453.6	6236.09	0.35	-0.330	0.000	0.622
15.00	-44.38	-33.33	0.00	-3656.3	0.00	3656.37	5299.69	2649.84	12053.2	6035.57	0.79	-0.499	0.000	0.614
20.00	-42.56	-32.84	0.00	-3489.7	0.00	3489.73	5229.71	2614.86	11655.8	5836.57	1.40	-0.670	0.000	0.606
25.00	-40.78	-32.33	0.00	-3325.5	0.00	3325.52	5158.30	2579.15	11261.6	5639.20	2.20	-0.843	0.000	0.598
30.00	-39.02	-31.80	0.00	-3163.8	0.00	3163.88	5085.46	2542.73	10870.9	5443.55	3.17	-1.018	0.000	0.589
35.00	-37.31	-31.25	0.00	-3004.8	0.00	3004.89	5011.18	2505.59	10483.8	5249.72	4.33	-1.195	0.000	0.580
40.00	-35.64	-30.66	0.00	-2848.6	0.00	2848.65	4935.46	2467.73	10100.6	5057.82	5.68	-1.375	0.000	0.571
42.75	-34.74	-30.35	0.00	-2764.3	0.00	2764.33	4893.21	2446.61	9891.54	4953.12	6.50	-1.476	0.000	0.565
45.00	-33.43	-30.09	0.00	-2696.0	0.00	2696.05	4858.32	2429.16	9721.41	4867.93	7.22	-1.559	0.000	0.561
49.00	-31.21	-29.56	0.00	-2575.6	0.00	2575.68	4959.59	1979.80	7922.06	3966.92	8.59	-1.707	0.000	0.657
50.00	-30.88	-29.49	0.00	-2546.1	0.00	2546.12	3948.01	1974.01	7862.92	3937.31	8.95	-1.745	0.000	0.655
55.00	-29.46	-28.91	0.00	-2398.6	0.00	2398.66	3889.26	1944.63	7568.72	3789.99	10.89	-1.950	0.000	0.641
60.00	-28.07	-28.32	0.00	-2254.1	0.00	2254.12	3829.07	1914.54	7277.15	3643.98	13.04	-2.157	0.000	0.626
65.00	-26.71	-27.73	0.00	-2112.5	0.00	2112.52	3767.45	1883.72	6988.40	3499.39	15.41	-2.366	0.000	0.611
70.00	-25.38	-27.13	0.00	-1973.8	0.00	1973.88	3704.39	1852.20	6702.67	3356.32	18.00	-2.576	0.000	0.595
75.00	-24.09	-26.54	0.00	-1838.2	0.00	1838.22	3639.90	1819.95	6420.16	3214.85	20.81	-2.787	0.000	0.579
80.00	-22.84	-25.92	0.00	-1705.5	0.00	1705.53	3573.98	1786.99	6141.06	3075.10	23.84	-2.998	0.000	0.561
82.50	-22.22	-25.62	0.00	-1640.7	0.00	1640.74	3540.48	1770.24	6002.85	3005.89	25.44	-3.106	0.000	0.552
85.00	-21.18	-25.30	0.00	-1576.6	0.00	1576.67	3506.62	1753.31	5865.57	2937.15	27.10	-3.214	0.000	0.543
87.75	-20.06	-24.94	0.00	-1507.0	0.00	1507.09	2761.71	1380.86	4636.01	2321.45	28.98	-3.332	0.000	0.657
90.00	-19.55	-24.70	0.00	-1450.9	0.00	1450.97	2740.07	1370.04	4543.51	2275.13	30.58	-3.429	0.000	0.645
95.00	-18.51	-24.12	0.00	-1327.4	0.00	1327.47	2690.94	1345.47	4339.45	2172.95	34.30	-3.669	0.000	0.618
100.00	-17.50	-23.53	0.00	-1206.9	0.00	1206.90	2640.38	1320.19	4137.62	2071.89	38.26	-3.907	0.000	0.589
105.00	-16.52	-22.95	0.00	-1089.2	0.00	1089.24	2588.38	1294.19	3938.22	1972.04	42.48	-4.142	0.000	0.559
110.00	-15.56	-22.38	0.00	-974.47	0.00	974.47	2534.95	1267.48	3741.44	1873.50	46.94	-4.372	0.000	0.527
115.00	-14.63	-21.81	0.00	-862.58	0.00	862.58	2480.09	1240.04	3547.48	1776.38	51.64	-4.597	0.000	0.492
120.00	-13.74	-21.23	0.00	-753.54	0.00	753.54	2423.79	1211.90	3356.53	1680.76	56.56	-4.814	0.000	0.454
123.25	-13.19	-20.86	0.00	-684.53	0.00	684.53	2386.43	1193.21	3234.12	1619.46	59.88	-4.952	0.000	0.429
125.00	-12.69	-20.66	0.00	-648.02	0.00	648.02	2366.06	1183.03	3168.79	1586.75	61.71	-5.025	0.000	0.414
127.50	-12.00	-20.35	0.00	-596.38	0.00	596.38	1766.99	883.49	2371.88	1187.70	64.37	-5.126	0.000	0.509
130.00	-11.62	-20.09	0.00	-545.50	0.00	545.50	1747.69	873.85	2306.16	1154.80	67.07	-5.224	0.000	0.480
135.00	-10.92	-19.55	0.00	-445.05	0.00	445.05	1708.02	854.01	2176.01	1089.62	72.66	-5.437	0.000	0.415
140.00	-10.24	-19.02	0.00	-347.28	0.00	347.28	1666.92	833.46	2047.71	1025.37	78.45	-5.625	0.000	0.345
145.00	-9.61	-18.49	0.00	-252.18	0.00	252.18	1624.39	812.19	1921.45	962.15	84.42	-5.784	0.000	0.269
147.00	-7.19	-14.73	0.00	-215.20	0.00	215.20	1606.97	803.49	1871.57	937.18	86.85	-5.840	0.000	0.234
150.00	-6.87	-14.43	0.00	-171.01	0.00	171.01	1580.42	790.21	1797.44	900.06	90.54	-5.912	0.000	0.195
155.00	-6.37	-13.92	0.00	-98.88	0.00	98.88	1535.02	767.51	1675.88	839.18	96.77	-6.002	0.000	0.122
157.00	-3.92	-7.37	0.00	-71.04	0.00	71.04	1516.46	758.23	1627.98	815.20	99.29	-6.027	0.000	0.090
160.00	-3.68	-7.08	0.00	-48.94	0.00	48.94	1488.18	744.09	1556.95	779.63	103.08	-6.056	0.000	0.065
165.00	-3.29	-6.61	0.00	-13.54	0.00	13.54	1439.00	719.50	1439.93	721.04	109.42	-6.082	0.000	0.021
167.00	-0.10	-0.16	0.00	-0.32	0.00	0.32	1413.06	706.53	1388.23	695.14	111.97	-6.085	0.000	0.001
168.00	0.00	-0.15	0.00	-0.16	0.00	0.16	1400.09	700.04	1362.73	682.38	113.24	-6.085	0.000	0.000

Wind Loading - Shaft

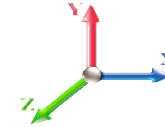
Structure: CT02217-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Pomfret School	Exposure: C	
Height: 168.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 25

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	21.088	23.20	465.60	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	21.088	23.20	456.93	0.650	0.000	5.00	24.768	16.10	597.5	0.0	1235.4
10.00		1.00	0.85	21.088	23.20	448.26	0.650	0.000	5.00	24.302	15.80	586.3	0.0	1212.0
15.00		1.00	0.85	21.088	23.20	439.59	0.650	0.000	5.00	23.837	15.49	575.0	0.0	1188.6
20.00		1.00	0.90	22.375	24.61	443.88	0.650	0.000	5.00	23.372	15.19	598.2	0.0	1165.2
25.00		1.00	0.95	23.451	25.80	445.29	0.650	0.000	5.00	22.906	14.89	614.5	0.0	1141.8
30.00		1.00	0.98	24.369	26.81	444.60	0.650	0.000	5.00	22.441	14.59	625.6	0.0	1118.4
35.00		1.00	1.01	25.172	27.69	442.40	0.650	0.000	5.00	21.975	14.28	632.8	0.0	1095.1
40.00		1.00	1.04	25.890	28.48	439.06	0.650	0.000	5.00	21.510	13.98	637.1	0.0	1071.7
42.75	Bot - Section 2	1.00	1.06	26.255	28.88	436.82	0.650	0.000	2.75	11.632	7.56	349.4	0.0	579.4
45.00		1.00	1.07	26.540	29.19	434.81	0.650	0.000	2.25	9.555	6.21	290.1	0.0	877.3
49.00	Top - Section 1	1.00	1.09	27.020	29.72	430.88	0.650	0.000	4.00	16.754	10.89	517.9	0.0	1538.0
50.00		1.00	1.09	27.135	29.85	436.53	0.650	0.000	1.00	4.142	2.69	128.6	0.0	177.1
55.00		1.00	1.12	27.685	30.45	431.00	0.650	0.000	5.00	20.431	13.28	647.1	0.0	873.2
60.00		1.00	1.14	28.197	31.02	424.94	0.650	0.000	5.00	19.965	12.98	644.0	0.0	853.2
65.00		1.00	1.16	28.676	31.54	418.43	0.650	0.000	5.00	19.500	12.67	639.7	0.0	833.1
70.00		1.00	1.17	29.127	32.04	411.52	0.650	0.000	5.00	19.034	12.37	634.2	0.0	813.1
75.00		1.00	1.19	29.553	32.51	404.25	0.650	0.000	5.00	18.569	12.07	627.8	0.0	793.0
80.00		1.00	1.21	29.958	32.95	396.68	0.650	0.000	5.00	18.103	11.77	620.4	0.0	773.0
82.50	Bot - Section 3	1.00	1.22	30.152	33.17	392.78	0.650	0.000	2.50	8.877	5.77	306.2	0.0	379.0
85.00		1.00	1.22	30.342	33.38	388.82	0.650	0.000	2.50	8.893	5.78	308.7	0.0	690.8
87.75	Top - Section 2	1.00	1.23	30.546	33.60	384.39	0.650	0.000	2.75	9.648	6.27	337.1	0.0	749.3
90.00		1.00	1.24	30.710	33.78	386.65	0.650	0.000	2.25	7.789	5.06	273.6	0.0	277.5
95.00		1.00	1.25	31.061	34.17	378.33	0.650	0.000	5.00	16.971	11.03	603.1	0.0	604.5
100.00		1.00	1.27	31.399	34.54	369.80	0.650	0.000	5.00	16.506	10.73	592.9	0.0	587.8
105.00		1.00	1.28	31.723	34.89	361.08	0.650	0.000	5.00	16.040	10.43	582.1	0.0	571.0
110.00		1.00	1.29	32.035	35.24	352.16	0.650	0.000	5.00	15.575	10.12	570.8	0.0	554.3
115.00		1.00	1.30	32.336	35.57	343.08	0.650	0.000	5.00	15.109	9.82	558.9	0.0	537.6
120.00		1.00	1.32	32.627	35.89	333.84	0.650	0.000	5.00	14.644	9.52	546.6	0.0	520.9
123.25	Bot - Section 4	1.00	1.32	32.811	36.09	327.75	0.650	0.000	3.25	9.269	6.02	347.9	0.0	329.6
125.00		1.00	1.33	32.909	36.20	324.45	0.650	0.000	1.75	4.984	3.24	187.6	0.0	316.6
127.50	Top - Section 3	1.00	1.33	33.046	36.35	319.70	0.650	0.000	2.50	7.020	4.56	265.4	0.0	445.9
130.00		1.00	1.34	33.182	36.50	319.86	0.650	0.000	2.50	6.904	4.49	262.1	0.0	196.7
135.00		1.00	1.35	33.446	36.79	310.21	0.650	0.000	5.00	13.459	8.75	515.0	0.0	383.5
140.00		1.00	1.36	33.703	37.07	300.45	0.650	0.000	5.00	12.994	8.45	501.0	0.0	370.1
145.00		1.00	1.37	33.953	37.35	290.56	0.650	0.000	5.00	12.528	8.14	486.6	0.0	356.7
147.00	Appurtenance(s)	1.00	1.37	34.051	37.46	286.57	0.650	0.000	2.00	4.881	3.17	190.1	0.0	139.0
150.00		1.00	1.38	34.196	37.62	280.56	0.650	0.000	3.00	7.182	4.67	281.0	0.0	204.4
155.00		1.00	1.39	34.433	37.88	270.45	0.650	0.000	5.00	11.597	7.54	456.8	0.0	330.0
157.00	Appurtenance(s)	1.00	1.39	34.526	37.98	266.38	0.650	0.000	2.00	4.509	2.93	178.1	0.0	128.3
160.00		1.00	1.40	34.664	38.13	260.24	0.650	0.000	3.00	6.623	4.31	262.6	0.0	188.4
165.00		1.00	1.41	34.890	38.38	249.94	0.650	0.000	5.00	10.666	6.93	425.7	0.0	303.3
167.00	Appurtenance(s)	1.00	1.41	34.978	38.48	245.79	0.650	0.000	2.00	4.136	2.69	165.5	0.0	117.6
168.00	Appurtenance(s)	1.00	1.41	35.022	38.52	243.71	0.650	0.000	1.00	2.040	1.33	81.7	0.0	58.0
Totals:									168.00			19,253.6		26,679.4

Discrete Appurtenance Forces

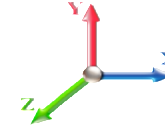
Structure: CT02217-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Pomfret School	Exposure: C	
Height: 168.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 25

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	168.00	Lightning Rod	1	35.131	38.644	1.00	1.00	1.05	31.50	0.000	2.500	64.92	0.00	162.31
2	167.00	PRK-1245	1	34.978	38.476	1.00	1.00	15.00	418.42	0.000	0.000	923.42	0.00	0.00
3	167.00	ALU TD-RRH8x20-25	3	34.978	38.476	0.60	0.90	7.33	189.00	0.000	0.000	451.03	0.00	0.00
4	167.00	ALU 800 Mhz	6	34.978	38.476	0.60	0.90	9.01	286.20	0.000	0.000	554.60	0.00	0.00
5	167.00	ALU 1900 Mhz RRUs	3	34.978	38.476	0.60	0.90	5.01	162.00	0.000	0.000	308.48	0.00	0.00
6	167.00	NNVV-65B-R4	3	34.978	38.476	0.67	0.90	24.52	208.98	0.000	0.000	1509.21	0.00	0.00
7	167.00	APXVTM14-C-I20	3	34.978	38.476	0.69	0.90	13.18	151.74	0.000	0.000	811.43	0.00	0.00
8	167.00	Low Profile Platform	1	34.978	38.476	1.00	1.00	22.00	1350.00	0.000	0.000	1354.35	0.00	0.00
9	157.00	Low Profile Platform	1	34.526	37.979	1.00	1.00	22.00	1350.00	0.000	0.000	1336.86	0.00	0.00
10	157.00	RFS DB-T1-6Z-8AB-0Z	1	34.526	37.979	1.00	1.00	4.80	39.60	0.000	0.000	291.68	0.00	0.00
11	157.00	ALU RRH2x60-AWS	3	34.526	37.979	0.54	0.80	5.63	162.00	0.000	0.000	341.99	0.00	0.00
12	157.00	ALU RRH2x60-700	3	34.526	37.979	0.54	0.80	3.59	162.00	0.000	0.000	217.90	0.00	0.00
13	157.00	Commscope	3	34.526	37.979	0.66	0.80	16.27	104.76	0.000	0.000	988.95	0.00	0.00
14	157.00	Commscope	6	34.526	37.979	0.62	0.80	31.60	220.32	0.000	0.000	1920.27	0.00	0.00
15	157.00	Amphenol	3	34.526	37.979	0.66	0.80	16.27	145.80	0.000	0.000	988.95	0.00	0.00
16	147.00	Low Profile Platform w/	1	34.051	37.456	1.00	1.00	25.00	1620.00	0.000	0.000	1498.26	0.00	0.00
17	147.00	Kathrein 782 11056	3	34.051	37.456	0.54	0.80	0.45	4.86	0.000	0.000	26.98	0.00	0.00
18	147.00	Ericsson KRY 112 144/1	3	34.051	37.456	0.54	0.80	0.66	29.70	0.000	0.000	39.51	0.00	0.00
19	147.00	Allen Telecom	3	34.051	37.456	0.54	0.80	0.87	47.25	0.000	0.000	52.04	0.00	0.00
20	147.00	Commscope	3	34.051	37.456	0.64	0.80	22.02	135.81	0.000	0.000	1319.81	0.00	0.00
21	147.00	RFS	3	34.051	37.456	0.58	0.80	6.32	50.49	0.000	0.000	379.04	0.00	0.00
Totals:									6,870.43			15,379.70		

Total Applied Force Summary

Structure: CT02217-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Pomfret School	Exposure: C	
Height: 168.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 25

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		597.50	1287.56	0.00	0.00
10.00		586.27	1342.39	0.00	0.00
15.00		575.05	1319.00	0.00	0.00
20.00		598.23	1295.61	0.00	0.00
25.00		614.52	1272.22	0.00	0.00
30.00		625.59	1248.82	0.00	0.00
35.00		632.82	1225.43	0.00	0.00
40.00		637.08	1202.04	0.00	0.00
42.75		349.37	651.15	0.00	0.00
45.00		290.11	936.01	0.00	0.00
49.00		517.89	1642.30	0.00	0.00
50.00		128.58	203.13	0.00	0.00
55.00		647.08	1003.60	0.00	0.00
60.00		644.02	983.55	0.00	0.00
65.00		639.70	963.50	0.00	0.00
70.00		634.25	943.45	0.00	0.00
75.00		627.79	923.40	0.00	0.00
80.00		620.43	903.35	0.00	0.00
82.50		306.21	444.16	0.00	0.00
85.00		308.69	755.99	0.00	0.00
87.75		337.14	820.98	0.00	0.00
90.00		273.64	336.13	0.00	0.00
95.00		603.06	734.84	0.00	0.00
100.00		592.89	718.13	0.00	0.00
105.00		582.12	701.42	0.00	0.00
110.00		570.79	684.71	0.00	0.00
115.00		558.93	668.00	0.00	0.00
120.00		546.59	651.30	0.00	0.00
123.25		347.92	414.38	0.00	0.00
125.00		187.62	362.26	0.00	0.00
127.50		265.41	511.12	0.00	0.00
130.00		262.08	261.94	0.00	0.00
135.00		514.98	513.85	0.00	0.00
140.00		500.99	500.48	0.00	0.00
145.00		486.62	487.11	0.00	0.00
147.00	(16) attachments	3505.78	2079.21	0.00	0.00
150.00		280.96	248.95	0.00	0.00
155.00		456.83	404.22	0.00	0.00
157.00	(20) attachments	6264.69	2342.42	0.00	0.00
160.00		262.65	199.05	0.00	0.00
165.00		425.73	321.06	0.00	0.00
167.00	(20) attachments	6078.04	2891.02	0.00	0.00
168.00	(1) attachments	146.66	90.66	0.00	162.31
	Totals:	34,633.27	37,489.91	0.00	162.31

Linear Appurtenance Segment Forces (Factored)

Structure: CT02217-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Pomfret School	Exposure: C	
Height: 168.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 25

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.003	0.000	21.088	0.00	0.49
5.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.003	0.000	21.088	0.00	1.87
10.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	21.088	0.00	1.23
10.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	21.088	0.00	4.68
15.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	21.088	0.00	1.23
15.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	21.088	0.00	4.68
20.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	22.375	0.00	1.23
20.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	22.375	0.00	4.68
25.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	23.451	0.00	1.23
25.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	23.451	0.00	4.68
30.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	24.369	0.00	1.23
30.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	24.369	0.00	4.68
35.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	25.172	0.00	1.23
35.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	25.172	0.00	4.68
40.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	25.890	0.00	1.23
40.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	25.890	0.00	4.68
42.75	Safety Cable	Yes	2.75	0.000	0.38	0.09	0.00	0.007	0.000	26.255	0.00	0.68
42.75	Step bolts (ladder)	Yes	2.75	0.000	0.00	0.00	0.00	0.007	0.000	26.255	0.00	2.57
45.00	Safety Cable	Yes	2.25	0.000	0.38	0.07	0.00	0.008	0.000	26.540	0.00	0.55
45.00	Step bolts (ladder)	Yes	2.25	0.000	0.00	0.00	0.00	0.008	0.000	26.540	0.00	2.11
49.00	Safety Cable	Yes	4.00	0.000	0.38	0.13	0.00	0.008	0.000	27.020	0.00	0.98
49.00	Step bolts (ladder)	Yes	4.00	0.000	0.00	0.00	0.00	0.008	0.000	27.020	0.00	3.74
50.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.008	0.000	27.135	0.00	0.25
50.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.008	0.000	27.135	0.00	0.94
55.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.008	0.000	27.685	0.00	1.23
55.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.008	0.000	27.685	0.00	4.68
60.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.008	0.000	28.197	0.00	1.23
60.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.008	0.000	28.197	0.00	4.68
65.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.008	0.000	28.676	0.00	1.23
65.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.008	0.000	28.676	0.00	4.68
70.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.008	0.000	29.127	0.00	1.23
70.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.008	0.000	29.127	0.00	4.68
75.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.009	0.000	29.553	0.00	1.23
75.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.009	0.000	29.553	0.00	4.68
80.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.009	0.000	29.958	0.00	1.23
80.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.009	0.000	29.958	0.00	4.68
82.50	Safety Cable	Yes	2.50	0.000	0.38	0.08	0.00	0.009	0.000	30.152	0.00	0.61
82.50	Step bolts (ladder)	Yes	2.50	0.000	0.00	0.00	0.00	0.009	0.000	30.152	0.00	2.34
85.00	Safety Cable	Yes	2.50	0.000	0.38	0.08	0.00	0.009	0.000	30.342	0.00	0.61
85.00	Step bolts (ladder)	Yes	2.50	0.000	0.00	0.00	0.00	0.009	0.000	30.342	0.00	2.34
87.75	Safety Cable	Yes	2.75	0.000	0.38	0.09	0.00	0.009	0.000	30.546	0.00	0.68
87.75	Step bolts (ladder)	Yes	2.75	0.000	0.00	0.00	0.00	0.009	0.000	30.546	0.00	2.57
90.00	Safety Cable	Yes	2.25	0.000	0.38	0.07	0.00	0.009	0.000	30.710	0.00	0.55
90.00	Step bolts (ladder)	Yes	2.25	0.000	0.00	0.00	0.00	0.009	0.000	30.710	0.00	2.11
95.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.009	0.000	31.061	0.00	1.23
95.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.009	0.000	31.061	0.00	4.68
100.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.010	0.000	31.399	0.00	1.23

Linear Appurtenance Segment Forces (Factored)

Structure: CT02217-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Pomfret School	Exposure: C	
Height: 168.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 25

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
100.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.010	0.000	31.399	0.00	4.68
105.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.010	0.000	31.723	0.00	1.23
105.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.010	0.000	31.723	0.00	4.68
110.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.010	0.000	32.035	0.00	1.23
110.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.010	0.000	32.035	0.00	4.68
115.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.010	0.000	32.336	0.00	1.23
115.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.010	0.000	32.336	0.00	4.68
120.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.011	0.000	32.627	0.00	1.23
120.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.011	0.000	32.627	0.00	4.68
123.25	Safety Cable	Yes	3.25	0.000	0.38	0.10	0.00	0.011	0.000	32.811	0.00	0.80
123.25	Step bolts (ladder)	Yes	3.25	0.000	0.00	0.00	0.00	0.011	0.000	32.811	0.00	3.04
125.00	Safety Cable	Yes	1.75	0.000	0.38	0.06	0.00	0.011	0.000	32.909	0.00	0.43
125.00	Step bolts (ladder)	Yes	1.75	0.000	0.00	0.00	0.00	0.011	0.000	32.909	0.00	1.64
127.50	Safety Cable	Yes	2.50	0.000	0.38	0.08	0.00	0.011	0.000	33.046	0.00	0.61
127.50	Step bolts (ladder)	Yes	2.50	0.000	0.00	0.00	0.00	0.011	0.000	33.046	0.00	2.34
130.00	Safety Cable	Yes	2.50	0.000	0.38	0.08	0.00	0.011	0.000	33.182	0.00	0.61
130.00	Step bolts (ladder)	Yes	2.50	0.000	0.00	0.00	0.00	0.011	0.000	33.182	0.00	2.34
135.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.012	0.000	33.446	0.00	1.23
135.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.012	0.000	33.446	0.00	4.68
140.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.012	0.000	33.703	0.00	1.23
140.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.012	0.000	33.703	0.00	4.68
145.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.013	0.000	33.953	0.00	1.23
145.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.013	0.000	33.953	0.00	4.68
147.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.013	0.000	34.051	0.00	0.49
147.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.013	0.000	34.051	0.00	1.87
150.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.013	0.000	34.196	0.00	0.74
150.00	Step bolts (ladder)	Yes	3.00	0.000	0.00	0.00	0.00	0.013	0.000	34.196	0.00	2.81
155.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.014	0.000	34.433	0.00	1.23
155.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.014	0.000	34.433	0.00	4.68
157.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.014	0.000	34.526	0.00	0.49
157.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.014	0.000	34.526	0.00	1.87
160.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.014	0.000	34.664	0.00	0.74
160.00	Step bolts (ladder)	Yes	3.00	0.000	0.00	0.00	0.00	0.014	0.000	34.664	0.00	2.81
165.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.015	0.000	34.890	0.00	1.23
165.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.015	0.000	34.890	0.00	4.68
167.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.015	0.000	34.978	0.00	0.49
167.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.015	0.000	34.978	0.00	1.87
168.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.016	0.000	35.022	0.00	0.25
168.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.016	0.000	35.022	0.00	0.94
Totals:											0.0	195.0

Calculated Forces

Structure: CT02217-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Pomfret School	Exposure: C	
Height: 168.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

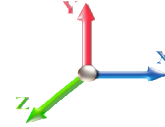


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Load Case: 0.9D + 1.6W 101 mph Wind

Iterations 25

Dead Load Factor 0.90
Wind Load Factor 1.60



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 Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-37.44	-34.69	0.00	-4127.5	0.00	4127.59	5501.01	2750.51	13262.9	6641.33	0.00	0.000	0.000	0.628
5.00	-36.06	-34.19	0.00	-3954.1	0.00	3954.16	5435.34	2717.67	12856.9	6438.04	0.09	-0.162	0.000	0.621
10.00	-34.62	-33.70	0.00	-3783.2	0.00	3783.21	5368.23	2684.11	12453.6	6236.09	0.35	-0.327	0.000	0.613
15.00	-33.21	-33.21	0.00	-3614.7	0.00	3614.71	5299.69	2649.84	12053.2	6035.57	0.78	-0.494	0.000	0.605
20.00	-31.82	-32.70	0.00	-3448.6	0.00	3448.66	5229.71	2614.86	11655.8	5836.57	1.39	-0.663	0.000	0.597
25.00	-30.46	-32.16	0.00	-3285.1	0.00	3285.18	5158.30	2579.15	11261.6	5639.20	2.17	-0.833	0.000	0.589
30.00	-29.12	-31.60	0.00	-3124.4	0.00	3124.41	5085.46	2542.73	10870.9	5443.55	3.14	-1.007	0.000	0.580
35.00	-27.82	-31.03	0.00	-2966.4	0.00	2966.41	5011.18	2505.59	10483.8	5249.72	4.29	-1.182	0.000	0.571
40.00	-26.56	-30.43	0.00	-2811.2	0.00	2811.28	4935.46	2467.73	10100.6	5057.82	5.62	-1.359	0.000	0.561
42.75	-25.87	-30.10	0.00	-2727.6	0.00	2727.60	4893.21	2446.61	9891.54	4953.12	6.43	-1.458	0.000	0.556
45.00	-24.88	-29.84	0.00	-2659.8	0.00	2659.86	4858.32	2429.16	9721.41	4867.93	7.14	-1.541	0.000	0.552
49.00	-23.20	-29.31	0.00	-2540.5	0.00	2540.51	4959.59	1979.80	7922.06	3966.92	8.49	-1.686	0.000	0.647
50.00	-22.94	-29.23	0.00	-2511.2	0.00	2511.20	3948.01	1974.01	7862.92	3937.31	8.85	-1.724	0.000	0.644
55.00	-21.86	-28.63	0.00	-2365.0	0.00	2365.07	3889.26	1944.63	7568.72	3789.99	10.76	-1.926	0.000	0.630
60.00	-20.80	-28.02	0.00	-2221.9	0.00	2221.94	3829.07	1914.54	7277.15	3643.98	12.89	-2.130	0.000	0.615
65.00	-19.76	-27.42	0.00	-2081.8	0.00	2081.83	3767.45	1883.72	6988.40	3499.39	15.23	-2.336	0.000	0.600
70.00	-18.75	-26.81	0.00	-1944.7	0.00	1944.75	3704.39	1852.20	6702.67	3356.32	17.79	-2.543	0.000	0.585
75.00	-17.76	-26.21	0.00	-1810.7	0.00	1810.71	3639.90	1819.95	6420.16	3214.85	20.56	-2.750	0.000	0.568
80.00	-16.82	-25.59	0.00	-1679.6	0.00	1679.68	3573.98	1786.99	6141.06	3075.10	23.55	-2.959	0.000	0.551
82.50	-16.35	-25.29	0.00	-1615.7	0.00	1615.72	3540.48	1770.24	6002.85	3005.89	25.13	-3.065	0.000	0.542
85.00	-15.56	-24.97	0.00	-1552.5	0.00	1552.50	3506.62	1753.31	5865.57	2937.15	26.76	-3.171	0.000	0.533
87.75	-14.71	-24.61	0.00	-1483.8	0.00	1483.84	2761.71	1380.86	4636.01	2321.45	28.62	-3.288	0.000	0.645
90.00	-14.32	-24.36	0.00	-1428.4	0.00	1428.46	2740.07	1370.04	4543.51	2275.13	30.20	-3.383	0.000	0.633
95.00	-13.53	-23.77	0.00	-1306.6	0.00	1306.65	2690.94	1345.47	4339.45	2172.95	33.87	-3.620	0.000	0.607
100.00	-12.76	-23.18	0.00	-1187.7	0.00	1187.79	2640.38	1320.19	4137.62	2071.89	37.78	-3.854	0.000	0.578
105.00	-12.01	-22.60	0.00	-1071.8	0.00	1071.87	2588.38	1294.19	3938.22	1972.04	41.94	-4.085	0.000	0.548
110.00	-11.28	-22.03	0.00	-958.85	0.00	958.85	2534.95	1267.48	3741.44	1873.50	46.34	-4.312	0.000	0.517
115.00	-10.58	-21.46	0.00	-848.71	0.00	848.71	2480.09	1240.04	3547.48	1776.38	50.97	-4.532	0.000	0.482
120.00	-9.91	-20.89	0.00	-741.41	0.00	741.41	2423.79	1211.90	3356.53	1680.76	55.82	-4.746	0.000	0.446
123.25	-9.49	-20.53	0.00	-673.51	0.00	673.51	2386.43	1193.21	3234.12	1619.46	59.10	-4.881	0.000	0.420
125.00	-9.11	-20.32	0.00	-637.59	0.00	637.59	2366.06	1183.03	3168.79	1586.75	60.90	-4.954	0.000	0.406
127.50	-8.59	-20.03	0.00	-586.78	0.00	586.78	1766.99	883.49	2371.88	1187.70	63.52	-5.054	0.000	0.499
130.00	-8.30	-19.77	0.00	-536.71	0.00	536.71	1747.69	873.85	2306.16	1154.80	66.19	-5.150	0.000	0.470
135.00	-7.77	-19.23	0.00	-437.87	0.00	437.87	1708.02	854.01	2176.01	1089.62	71.69	-5.359	0.000	0.407
140.00	-7.26	-18.71	0.00	-341.70	0.00	341.70	1666.92	833.46	2047.71	1025.37	77.40	-5.544	0.000	0.338
145.00	-6.79	-18.19	0.00	-248.15	0.00	248.15	1624.39	812.19	1921.45	962.15	83.28	-5.701	0.000	0.263
147.00	-5.06	-14.50	0.00	-211.76	0.00	211.76	1606.97	803.49	1871.57	937.18	85.68	-5.755	0.000	0.229
150.00	-4.82	-14.20	0.00	-168.26	0.00	168.26	1580.42	790.21	1797.44	900.06	89.31	-5.826	0.000	0.190
155.00	-4.45	-13.71	0.00	-97.25	0.00	97.25	1535.02	767.51	1675.88	839.18	95.46	-5.915	0.000	0.119
157.00	-2.77	-7.24	0.00	-69.83	0.00	69.83	1516.46	758.23	1627.98	815.20	97.94	-5.940	0.000	0.088
160.00	-2.59	-6.96	0.00	-48.11	0.00	48.11	1488.18	744.09	1556.95	779.63	101.67	-5.968	0.000	0.064
165.00	-2.32	-6.50	0.00	-13.32	0.00	13.32	1439.00	719.50	1439.93	721.04	107.93	-5.994	0.000	0.020
167.00	-0.07	-0.16	0.00	-0.32	0.00	0.32	1413.06	706.53	1388.23	695.14	110.43	-5.997	0.000	0.001
168.00	0.00	-0.15	0.00	-0.16	0.00	0.16	1400.09	700.04	1362.73	682.38	111.69	-5.997	0.000	0.000

Wind Loading - Shaft

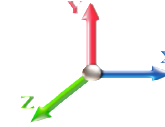
Structure: CT02217-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Pomfret School	Exposure: C	
Height: 168.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 24

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	5.168	5.68	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	5.168	5.68	0.00	1.200	1.656	5.00	26.148	31.38	178.4	618.7	2265.9
10.00		1.00	0.85	5.168	5.68	0.00	1.200	1.775	5.00	25.782	30.94	175.9	652.2	2268.2
15.00		1.00	0.85	5.168	5.68	0.00	1.200	1.848	5.00	25.377	30.45	173.1	667.3	2252.1
20.00		1.00	0.90	5.483	6.03	0.00	1.200	1.902	5.00	24.957	29.95	180.6	674.3	2227.9
25.00		1.00	0.95	5.747	6.32	0.00	1.200	1.945	5.00	24.527	29.43	186.1	676.6	2199.1
30.00		1.00	0.98	5.972	6.57	0.00	1.200	1.981	5.00	24.091	28.91	189.9	675.8	2167.1
35.00		1.00	1.01	6.169	6.79	0.00	1.200	2.012	5.00	23.652	28.38	192.6	672.9	2132.9
40.00		1.00	1.04	6.345	6.98	0.00	1.200	2.039	5.00	23.209	27.85	194.4	668.2	2097.1
42.75	Bot - Section 2	1.00	1.06	6.434	7.08	0.00	1.200	2.052	2.75	12.573	15.09	106.8	365.8	1138.4
45.00		1.00	1.07	6.504	7.15	0.00	1.200	2.063	2.25	10.329	12.39	88.7	302.3	1472.1
49.00	Top - Section 1	1.00	1.09	6.622	7.28	0.00	1.200	2.081	4.00	18.141	21.77	158.6	533.1	2583.8
50.00		1.00	1.09	6.650	7.32	0.00	1.200	2.085	1.00	4.489	5.39	39.4	133.0	369.0
55.00		1.00	1.12	6.785	7.46	0.00	1.200	2.105	5.00	22.185	26.62	198.7	657.0	1821.3
60.00		1.00	1.14	6.910	7.60	0.00	1.200	2.123	5.00	21.734	26.08	198.3	648.4	1785.9
65.00		1.00	1.16	7.028	7.73	0.00	1.200	2.140	5.00	21.283	25.54	197.4	639.0	1749.9
70.00		1.00	1.17	7.138	7.85	0.00	1.200	2.156	5.00	20.831	25.00	196.3	629.1	1713.2
75.00		1.00	1.19	7.243	7.97	0.00	1.200	2.171	5.00	20.378	24.45	194.8	618.7	1676.1
80.00		1.00	1.21	7.342	8.08	0.00	1.200	2.185	5.00	19.924	23.91	193.1	607.9	1638.5
82.50	Bot - Section 3	1.00	1.22	7.390	8.13	0.00	1.200	2.192	2.50	9.790	11.75	95.5	301.1	806.4
85.00		1.00	1.22	7.436	8.18	0.00	1.200	2.198	2.50	9.809	11.77	96.3	302.6	1223.7
87.75	Top - Section 2	1.00	1.23	7.486	8.23	0.00	1.200	2.205	2.75	10.659	12.79	105.3	329.4	1328.4
90.00		1.00	1.24	7.526	8.28	0.00	1.200	2.211	2.25	8.618	10.34	85.6	267.1	637.1
95.00		1.00	1.25	7.612	8.37	0.00	1.200	2.223	5.00	18.824	22.59	189.1	581.6	1387.6
100.00		1.00	1.27	7.695	8.46	0.00	1.200	2.234	5.00	18.368	22.04	186.6	569.4	1353.1
105.00		1.00	1.28	7.774	8.55	0.00	1.200	2.245	5.00	17.912	21.49	183.8	556.8	1318.2
110.00		1.00	1.29	7.851	8.64	0.00	1.200	2.256	5.00	17.455	20.95	180.9	544.0	1283.1
115.00		1.00	1.30	7.925	8.72	0.00	1.200	2.266	5.00	16.998	20.40	177.8	531.0	1247.8
120.00		1.00	1.32	7.996	8.80	0.00	1.200	2.276	5.00	16.540	19.85	174.6	517.7	1212.2
123.25	Bot - Section 4	1.00	1.32	8.041	8.85	0.00	1.200	2.282	3.25	10.505	12.61	111.5	330.8	770.3
125.00		1.00	1.33	8.065	8.87	0.00	1.200	2.285	1.75	5.650	6.78	60.1	179.0	601.1
127.50	Top - Section 3	1.00	1.33	8.099	8.91	0.00	1.200	2.289	2.50	7.974	9.57	85.2	252.3	846.8
130.00		1.00	1.34	8.132	8.95	0.00	1.200	2.294	2.50	7.860	9.43	84.4	248.8	511.2
135.00		1.00	1.35	8.197	9.02	0.00	1.200	2.303	5.00	15.378	18.45	166.4	483.8	995.1
140.00		1.00	1.36	8.260	9.09	0.00	1.200	2.311	5.00	14.919	17.90	162.7	469.7	963.2
145.00		1.00	1.37	8.321	9.15	0.00	1.200	2.319	5.00	14.461	17.35	158.8	455.5	931.2
147.00	Appurtenance(s)	1.00	1.37	8.345	9.18	0.00	1.200	2.322	2.00	5.655	6.79	62.3	179.9	365.2
150.00		1.00	1.38	8.381	9.22	0.00	1.200	2.327	3.00	8.345	10.01	92.3	264.7	537.2
155.00		1.00	1.39	8.439	9.28	0.00	1.200	2.335	5.00	13.543	16.25	150.9	426.6	866.6
157.00	Appurtenance(s)	1.00	1.39	8.462	9.31	0.00	1.200	2.338	2.00	5.288	6.35	59.1	168.3	339.3
160.00		1.00	1.40	8.495	9.34	0.00	1.200	2.342	3.00	7.794	9.35	87.4	247.2	498.3
165.00		1.00	1.41	8.551	9.41	0.00	1.200	2.349	5.00	12.624	15.15	142.5	397.1	801.5
167.00	Appurtenance(s)	1.00	1.41	8.572	9.43	0.00	1.200	2.352	2.00	4.920	5.90	55.7	156.5	313.2
168.00	Appurtenance(s)	1.00	1.41	8.583	9.44	0.00	1.200	2.353	1.00	2.432	2.92	27.6	77.6	154.9
Totals:									168.00			6,025.3	54,851.5	

Discrete Appurtenance Forces

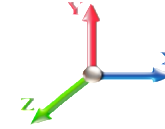
Structure: CT02217-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Pomfret School	Exposure: C	
Height: 168.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 24

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	168.00	Lightning Rod	1	8.610	9.471	1.00	1.00	4.25	75.36	0.000	2.500	40.26	0.00	100.64
2	167.00	PRK-1245	1	8.572	9.429	1.00	1.00	36.17	900.20	0.000	0.000	341.05	0.00	0.00
3	167.00	ALU TD-RRH8x20-25	3	8.572	9.429	0.60	0.90	9.36	731.70	0.000	0.000	88.28	0.00	0.00
4	167.00	ALU 800 Mhz	6	8.572	9.429	0.60	0.90	14.59	853.07	0.000	0.000	137.54	0.00	0.00
5	167.00	ALU 1900 Mhz RRUs	3	8.572	9.429	0.60	0.90	8.10	481.64	0.000	0.000	76.41	0.00	0.00
6	167.00	NNVV-65B-R4	3	8.572	9.429	0.67	0.90	28.44	1235.80	0.000	0.000	268.14	0.00	0.00
7	167.00	APXVTM14-C-I20	3	8.572	9.429	0.69	0.90	16.37	897.18	0.000	0.000	154.36	0.00	0.00
8	167.00	Low Profile Platform	1	8.572	9.429	1.00	1.00	45.80	3264.05	0.000	0.000	431.90	0.00	0.00
9	157.00	Low Profile Platform	1	8.462	9.308	1.00	1.00	45.66	3253.19	0.000	0.000	424.96	0.00	0.00
10	157.00	RFS DB-T1-6Z-8AB-0Z	1	8.462	9.308	1.00	1.00	6.00	257.19	0.000	0.000	55.82	0.00	0.00
11	157.00	ALU RRH2x60-AWS	3	8.462	9.308	0.54	0.80	7.44	506.45	0.000	0.000	69.22	0.00	0.00
12	157.00	ALU RRH2x60-700	3	8.462	9.308	0.54	0.80	5.96	473.06	0.000	0.000	55.48	0.00	0.00
13	157.00	Commscope	3	8.462	9.308	0.67	0.80	24.09	696.61	0.000	0.000	224.26	0.00	0.00
14	157.00	Commscope	6	8.462	9.308	0.62	0.80	46.65	1407.01	0.000	0.000	434.18	0.00	0.00
15	157.00	Amphenol	3	8.462	9.308	0.67	0.80	24.09	974.32	0.000	0.000	224.26	0.00	0.00
16	147.00	Low Profile Platform w/	1	8.345	9.180	1.00	1.00	52.87	4550.03	0.000	0.000	485.30	0.00	0.00
17	147.00	Kathrein 782 11056	3	8.345	9.180	0.54	0.80	1.33	16.43	0.000	0.000	12.19	0.00	0.00
18	147.00	Ericsson KRY 112 144/1	3	8.345	9.180	0.54	0.80	1.70	73.34	0.000	0.000	15.61	0.00	0.00
19	147.00	Allen Telecom	3	8.345	9.180	0.54	0.80	2.14	158.17	0.000	0.000	19.64	0.00	0.00
20	147.00	Commscope	3	8.345	9.180	0.65	0.80	30.71	911.83	0.000	0.000	281.88	0.00	0.00
21	147.00	RFS	3	8.345	9.180	0.59	0.80	10.80	287.05	0.000	0.000	99.15	0.00	0.00

Totals: 22,003.70 3,939.88

Total Applied Force Summary

Structure: CT02217-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Pomfret School	Exposure: C	
Height: 168.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 24

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		178.38	2351.55	0.00	0.00
10.00		175.88	2487.68	0.00	0.00
15.00		173.12	2475.11	0.00	0.00
20.00		180.64	2453.60	0.00	0.00
25.00		186.07	2426.92	0.00	0.00
30.00		189.92	2396.81	0.00	0.00
35.00		192.60	2364.26	0.00	0.00
40.00		194.38	2329.84	0.00	0.00
42.75		106.78	1266.79	0.00	0.00
45.00		88.68	1577.47	0.00	0.00
49.00		158.57	2771.80	0.00	0.00
50.00		39.41	416.10	0.00	0.00
55.00		198.69	2057.69	0.00	0.00
60.00		198.25	2023.32	0.00	0.00
65.00		197.44	1988.22	0.00	0.00
70.00		196.28	1952.49	0.00	0.00
75.00		194.82	1916.19	0.00	0.00
80.00		193.09	1879.39	0.00	0.00
82.50		95.50	927.07	0.00	0.00
85.00		96.28	1344.50	0.00	0.00
87.75		105.33	1461.53	0.00	0.00
90.00		85.62	746.13	0.00	0.00
95.00		189.15	1630.67	0.00	0.00
100.00		186.57	1596.81	0.00	0.00
105.00		183.81	1562.63	0.00	0.00
110.00		180.89	1528.15	0.00	0.00
115.00		177.81	1493.41	0.00	0.00
120.00		174.58	1458.42	0.00	0.00
123.25		111.50	930.57	0.00	0.00
125.00		60.15	687.49	0.00	0.00
127.50		85.25	970.33	0.00	0.00
130.00		84.37	634.79	0.00	0.00
135.00		166.39	1242.87	0.00	0.00
140.00		162.67	1211.51	0.00	0.00
145.00		158.83	1179.96	0.00	0.00
147.00	(16) attachments	976.06	6461.64	0.00	0.00
150.00		92.32	641.87	0.00	0.00
155.00		150.85	1041.45	0.00	0.00
157.00	(20) attachments	1547.23	7977.15	0.00	0.00
160.00		87.40	558.36	0.00	0.00
165.00		142.48	901.96	0.00	0.00
167.00	(20) attachments	1553.35	8717.12	0.00	0.00
168.00	(1) attachments	67.82	247.28	0.00	100.64
Totals:		9,965.19	84,288.91	0.00	100.64

Linear Appurtenance Segment Forces (Factored)

Structure: CT02217-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Pomfret School	Exposure: C	
Height: 168.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 24

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	Safety Cable	Yes	2.00	0.000	0.38	0.62	0.00	0.003	0.000	5.168	0.00	8.35
5.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.003	0.000	5.168	0.00	10.87
10.00	Safety Cable	Yes	5.00	0.000	0.38	1.64	0.00	0.007	0.000	5.168	0.00	23.53
10.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	5.168	0.00	29.96
15.00	Safety Cable	Yes	5.00	0.000	0.38	1.70	0.00	0.007	0.000	5.168	0.00	25.26
15.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	5.168	0.00	31.77
20.00	Safety Cable	Yes	5.00	0.000	0.38	1.74	0.00	0.007	0.000	5.483	0.00	26.58
20.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	5.483	0.00	33.13
25.00	Safety Cable	Yes	5.00	0.000	0.38	1.78	0.00	0.007	0.000	5.747	0.00	27.65
25.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	5.747	0.00	34.25
30.00	Safety Cable	Yes	5.00	0.000	0.38	1.81	0.00	0.007	0.000	5.972	0.00	28.56
30.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	5.972	0.00	35.19
35.00	Safety Cable	Yes	5.00	0.000	0.38	1.83	0.00	0.007	0.000	6.169	0.00	29.35
35.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	6.169	0.00	36.02
40.00	Safety Cable	Yes	5.00	0.000	0.38	1.86	0.00	0.007	0.000	6.345	0.00	30.06
40.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	6.345	0.00	36.75
42.75	Safety Cable	Yes	2.75	0.000	0.38	1.03	0.00	0.007	0.000	6.434	0.00	16.73
42.75	Step bolts (ladder)	Yes	2.75	0.000	0.00	0.00	0.00	0.007	0.000	6.434	0.00	20.42
45.00	Safety Cable	Yes	2.25	0.000	0.38	0.84	0.00	0.008	0.000	6.504	0.00	13.82
45.00	Step bolts (ladder)	Yes	2.25	0.000	0.00	0.00	0.00	0.008	0.000	6.504	0.00	16.84
49.00	Safety Cable	Yes	4.00	0.000	0.38	1.51	0.00	0.008	0.000	6.622	0.00	24.94
49.00	Step bolts (ladder)	Yes	4.00	0.000	0.00	0.00	0.00	0.008	0.000	6.622	0.00	30.32
50.00	Safety Cable	Yes	1.00	0.000	0.38	0.38	0.00	0.008	0.000	6.650	0.00	6.26
50.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.008	0.000	6.650	0.00	7.60
55.00	Safety Cable	Yes	5.00	0.000	0.38	1.91	0.00	0.008	0.000	6.785	0.00	31.83
55.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.008	0.000	6.785	0.00	38.58
60.00	Safety Cable	Yes	5.00	0.000	0.38	1.93	0.00	0.008	0.000	6.910	0.00	32.33
60.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.008	0.000	6.910	0.00	39.10
65.00	Safety Cable	Yes	5.00	0.000	0.38	1.94	0.00	0.008	0.000	7.028	0.00	32.80
65.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.008	0.000	7.028	0.00	39.59
70.00	Safety Cable	Yes	5.00	0.000	0.38	1.96	0.00	0.008	0.000	7.138	0.00	33.24
70.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.008	0.000	7.138	0.00	40.04
75.00	Safety Cable	Yes	5.00	0.000	0.38	1.97	0.00	0.009	0.000	7.243	0.00	33.66
75.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.009	0.000	7.243	0.00	40.47
80.00	Safety Cable	Yes	5.00	0.000	0.38	1.98	0.00	0.009	0.000	7.342	0.00	34.05
80.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.009	0.000	7.342	0.00	40.88
82.50	Safety Cable	Yes	2.50	0.000	0.38	0.99	0.00	0.009	0.000	7.390	0.00	17.12
82.50	Step bolts (ladder)	Yes	2.50	0.000	0.00	0.00	0.00	0.009	0.000	7.390	0.00	20.54
85.00	Safety Cable	Yes	2.50	0.000	0.38	1.00	0.00	0.009	0.000	7.436	0.00	17.21
85.00	Step bolts (ladder)	Yes	2.50	0.000	0.00	0.00	0.00	0.009	0.000	7.436	0.00	20.64
87.75	Safety Cable	Yes	2.75	0.000	0.38	1.10	0.00	0.009	0.000	7.486	0.00	19.04
87.75	Step bolts (ladder)	Yes	2.75	0.000	0.00	0.00	0.00	0.009	0.000	7.486	0.00	22.81
90.00	Safety Cable	Yes	2.25	0.000	0.38	0.90	0.00	0.009	0.000	7.526	0.00	15.65
90.00	Step bolts (ladder)	Yes	2.25	0.000	0.00	0.00	0.00	0.009	0.000	7.526	0.00	18.74
95.00	Safety Cable	Yes	5.00	0.000	0.38	2.01	0.00	0.009	0.000	7.612	0.00	35.13
95.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.009	0.000	7.612	0.00	42.00
100.00	Safety Cable	Yes	5.00	0.000	0.38	2.02	0.00	0.010	0.000	7.695	0.00	35.46

Linear Appurtenance Segment Forces (Factored)

Structure: CT02217-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Pomfret School	Exposure: C	
Height: 168.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 24

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
100.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.010	0.000	7.695	0.00	42.33
105.00	Safety Cable	Yes	5.00	0.000	0.38	2.03	0.00	0.010	0.000	7.774	0.00	35.77
105.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.010	0.000	7.774	0.00	42.66
110.00	Safety Cable	Yes	5.00	0.000	0.38	2.04	0.00	0.010	0.000	7.851	0.00	36.07
110.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.010	0.000	7.851	0.00	42.97
115.00	Safety Cable	Yes	5.00	0.000	0.38	2.05	0.00	0.010	0.000	7.925	0.00	36.37
115.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.010	0.000	7.925	0.00	43.28
120.00	Safety Cable	Yes	5.00	0.000	0.38	2.05	0.00	0.011	0.000	7.996	0.00	36.65
120.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.011	0.000	7.996	0.00	43.57
123.25	Safety Cable	Yes	3.25	0.000	0.38	1.34	0.00	0.011	0.000	8.041	0.00	23.94
123.25	Step bolts (ladder)	Yes	3.25	0.000	0.00	0.00	0.00	0.011	0.000	8.041	0.00	28.44
125.00	Safety Cable	Yes	1.75	0.000	0.38	0.72	0.00	0.011	0.000	8.065	0.00	12.92
125.00	Step bolts (ladder)	Yes	1.75	0.000	0.00	0.00	0.00	0.011	0.000	8.065	0.00	15.35
127.50	Safety Cable	Yes	2.50	0.000	0.38	1.03	0.00	0.011	0.000	8.099	0.00	18.53
127.50	Step bolts (ladder)	Yes	2.50	0.000	0.00	0.00	0.00	0.011	0.000	8.099	0.00	21.99
130.00	Safety Cable	Yes	2.50	0.000	0.38	1.03	0.00	0.011	0.000	8.132	0.00	18.59
130.00	Step bolts (ladder)	Yes	2.50	0.000	0.00	0.00	0.00	0.011	0.000	8.132	0.00	22.06
135.00	Safety Cable	Yes	5.00	0.000	0.38	2.08	0.00	0.012	0.000	8.197	0.00	37.44
135.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.012	0.000	8.197	0.00	44.39
140.00	Safety Cable	Yes	5.00	0.000	0.38	2.08	0.00	0.012	0.000	8.260	0.00	37.69
140.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.012	0.000	8.260	0.00	44.64
145.00	Safety Cable	Yes	5.00	0.000	0.38	2.09	0.00	0.013	0.000	8.321	0.00	37.93
145.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.013	0.000	8.321	0.00	44.89
147.00	Safety Cable	Yes	2.00	0.000	0.38	0.84	0.00	0.013	0.000	8.345	0.00	15.21
147.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.013	0.000	8.345	0.00	18.00
150.00	Safety Cable	Yes	3.00	0.000	0.38	1.26	0.00	0.013	0.000	8.381	0.00	22.90
150.00	Step bolts (ladder)	Yes	3.00	0.000	0.00	0.00	0.00	0.013	0.000	8.381	0.00	27.08
155.00	Safety Cable	Yes	5.00	0.000	0.38	2.10	0.00	0.014	0.000	8.439	0.00	38.40
155.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.014	0.000	8.439	0.00	45.37
157.00	Safety Cable	Yes	2.00	0.000	0.38	0.84	0.00	0.014	0.000	8.462	0.00	15.39
157.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.014	0.000	8.462	0.00	18.19
160.00	Safety Cable	Yes	3.00	0.000	0.38	1.27	0.00	0.014	0.000	8.495	0.00	23.17
160.00	Step bolts (ladder)	Yes	3.00	0.000	0.00	0.00	0.00	0.014	0.000	8.495	0.00	27.36
165.00	Safety Cable	Yes	5.00	0.000	0.38	2.12	0.00	0.015	0.000	8.551	0.00	38.84
165.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.015	0.000	8.551	0.00	45.83
167.00	Safety Cable	Yes	2.00	0.000	0.38	0.85	0.00	0.015	0.000	8.572	0.00	15.57
167.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.015	0.000	8.572	0.00	18.37
168.00	Safety Cable	Yes	1.00	0.000	0.38	0.42	0.00	0.016	0.000	8.583	0.00	7.79
168.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.016	0.000	8.583	0.00	9.19
Totals:											0.0	2,440.3

Calculated Forces

Structure: CT02217-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Pomfret School	Exposure: C	
Height: 168.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

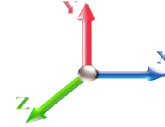


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Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 24

Dead Load Factor 1.20
Wind Load Factor 1.00



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 Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-84.28	-10.00	0.00	-1222.6	0.00	1222.68	5501.01	2750.51	13262.9	6641.33	0.00	0.000	0.000	0.199
5.00	-81.92	-9.89	0.00	-1172.6	0.00	1172.68	5435.34	2717.67	12856.9	6438.04	0.03	-0.048	0.000	0.197
10.00	-79.43	-9.78	0.00	-1123.2	0.00	1123.23	5368.23	2684.11	12453.6	6236.09	0.10	-0.097	0.000	0.195
15.00	-76.95	-9.67	0.00	-1074.3	0.00	1074.33	5299.69	2649.84	12053.2	6035.57	0.23	-0.146	0.000	0.193
20.00	-74.48	-9.55	0.00	-1025.9	0.00	1025.99	5229.71	2614.86	11655.8	5836.57	0.41	-0.197	0.000	0.190
25.00	-72.05	-9.41	0.00	-978.26	0.00	978.26	5158.30	2579.15	11261.6	5639.20	0.64	-0.248	0.000	0.187
30.00	-69.65	-9.28	0.00	-931.19	0.00	931.19	5085.46	2542.73	10870.9	5443.55	0.93	-0.299	0.000	0.185
35.00	-67.27	-9.13	0.00	-884.81	0.00	884.81	5011.18	2505.59	10483.8	5249.72	1.27	-0.351	0.000	0.182
40.00	-64.94	-8.97	0.00	-839.15	0.00	839.15	4935.46	2467.73	10100.6	5057.82	1.67	-0.404	0.000	0.179
42.75	-63.67	-8.88	0.00	-814.48	0.00	814.48	4893.21	2446.61	9891.54	4953.12	1.91	-0.434	0.000	0.177
45.00	-62.09	-8.82	0.00	-794.50	0.00	794.50	4858.32	2429.16	9721.41	4867.93	2.12	-0.459	0.000	0.176
49.00	-59.31	-8.67	0.00	-759.22	0.00	759.22	3959.59	1979.80	7922.06	3966.92	2.52	-0.502	0.000	0.206
50.00	-58.89	-8.66	0.00	-750.56	0.00	750.56	3948.01	1974.01	7862.92	3937.31	2.63	-0.513	0.000	0.206
55.00	-56.83	-8.50	0.00	-707.26	0.00	707.26	3889.26	1944.63	7568.72	3789.99	3.20	-0.574	0.000	0.201
60.00	-54.80	-8.34	0.00	-664.75	0.00	664.75	3829.07	1914.54	7277.15	3643.98	3.83	-0.635	0.000	0.197
65.00	-52.80	-8.18	0.00	-623.05	0.00	623.05	3767.45	1883.72	6988.40	3499.39	4.53	-0.696	0.000	0.192
70.00	-50.84	-8.01	0.00	-582.16	0.00	582.16	3704.39	1852.20	6702.67	3356.32	5.29	-0.758	0.000	0.187
75.00	-48.92	-7.84	0.00	-542.11	0.00	542.11	3639.90	1819.95	6420.16	3214.85	6.12	-0.820	0.000	0.182
80.00	-47.04	-7.66	0.00	-502.89	0.00	502.89	3573.98	1786.99	6141.06	3075.10	7.02	-0.883	0.000	0.177
82.50	-46.11	-7.58	0.00	-483.74	0.00	483.74	3540.48	1770.24	6002.85	3005.89	7.49	-0.915	0.000	0.174
85.00	-44.76	-7.48	0.00	-464.80	0.00	464.80	3506.62	1753.31	5865.57	2937.15	7.97	-0.946	0.000	0.171
87.75	-43.30	-7.38	0.00	-444.22	0.00	444.22	2761.71	1380.86	4636.01	2321.45	8.53	-0.981	0.000	0.207
90.00	-42.55	-7.32	0.00	-427.62	0.00	427.62	2740.07	1370.04	4543.51	2275.13	9.00	-1.010	0.000	0.204
95.00	-40.91	-7.15	0.00	-391.04	0.00	391.04	2690.94	1345.47	4339.45	2172.95	10.09	-1.081	0.000	0.195
100.00	-39.31	-6.98	0.00	-355.29	0.00	355.29	2640.38	1320.19	4137.62	2071.89	11.26	-1.151	0.000	0.186
105.00	-37.74	-6.81	0.00	-320.40	0.00	320.40	2588.38	1294.19	3938.22	1972.04	12.51	-1.220	0.000	0.177
110.00	-36.21	-6.64	0.00	-286.37	0.00	286.37	2534.95	1267.48	3741.44	1873.50	13.82	-1.287	0.000	0.167
115.00	-34.72	-6.46	0.00	-253.19	0.00	253.19	2480.09	1240.04	3547.48	1776.38	15.20	-1.353	0.000	0.157
120.00	-33.26	-6.28	0.00	-220.88	0.00	220.88	2423.79	1211.90	3356.53	1680.76	16.66	-1.417	0.000	0.145
123.25	-32.33	-6.17	0.00	-200.46	0.00	200.46	2386.43	1193.21	3234.12	1619.46	17.64	-1.457	0.000	0.137
125.00	-31.64	-6.10	0.00	-189.67	0.00	189.67	2366.06	1183.03	3168.79	1586.75	18.17	-1.479	0.000	0.133
127.50	-30.67	-6.01	0.00	-174.42	0.00	174.42	1766.99	883.49	2371.88	1187.70	18.96	-1.509	0.000	0.164
130.00	-30.03	-5.93	0.00	-159.40	0.00	159.40	1747.69	873.85	2306.16	1154.80	19.75	-1.537	0.000	0.155
135.00	-28.79	-5.76	0.00	-129.75	0.00	129.75	1708.02	854.01	2176.01	1089.62	21.40	-1.599	0.000	0.136
140.00	-27.57	-5.59	0.00	-100.96	0.00	100.96	1666.92	833.46	2047.71	1025.37	23.10	-1.654	0.000	0.115
145.00	-26.40	-5.41	0.00	-73.03	0.00	73.03	1624.39	812.19	1921.45	962.15	24.86	-1.700	0.000	0.092
147.00	-19.97	-4.25	0.00	-62.21	0.00	62.21	1606.97	803.49	1871.57	937.18	25.58	-1.716	0.000	0.079
150.00	-19.33	-4.14	0.00	-49.48	0.00	49.48	1580.42	790.21	1797.44	900.06	26.66	-1.737	0.000	0.067
155.00	-18.29	-3.96	0.00	-28.77	0.00	28.77	1535.02	767.51	1675.88	839.18	28.50	-1.763	0.000	0.046
157.00	-10.36	-2.17	0.00	-20.84	0.00	20.84	1516.46	758.23	1627.98	815.20	29.24	-1.771	0.000	0.032
160.00	-9.81	-2.07	0.00	-14.32	0.00	14.32	1488.18	744.09	1556.95	779.63	30.35	-1.779	0.000	0.025
165.00	-8.91	-1.90	0.00	-3.98	0.00	3.98	1439.00	719.50	1439.93	721.04	32.22	-1.787	0.000	0.012
167.00	-0.25	-0.08	0.00	-0.18	0.00	0.18	1413.06	706.53	1388.23	695.14	32.97	-1.788	0.000	0.000
168.00	0.00	-0.07	0.00	-0.10	0.00	0.10	1400.09	700.04	1362.73	682.38	33.34	-1.788	0.000	0.000

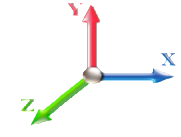
Seismic Segment Forces (Factored)

Structure: CT02217-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Pomfret School	Exposure: C	
Height: 168.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0E					Iterations 23
Gust Response Factor	1.10	Sds	0.18		Ss 0.17
Dead Load Factor	1.20	Seismic Load Factor	1.00	Sd1 0.10	S1 0.06
Wind Load Factor	0.00	Structure Frequency	0.36	SA 0.04	Seismic Importance Factor 1.00



Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1372.6	0.00	0.03	0.02	21.27	
10.00		1346.6	0.01	0.05	0.03	31.29	
15.00		1320.6	0.02	0.06	0.04	36.16	
20.00		1294.7	0.03	0.07	0.04	38.40	
25.00		1268.7	0.04	0.07	0.04	39.31	
30.00		1242.7	0.06	0.07	0.04	39.62	
35.00		1216.7	0.08	0.07	0.04	39.70	
40.00		1190.7	0.11	0.07	0.04	39.71	
42.75	Bot - Section 2	643.83	0.12	0.07	0.03	21.71	
45.00		974.82	0.14	0.07	0.03	33.16	
49.00	Top - Section 1	1708.8	0.16	0.07	0.03	58.85	
50.00		196.72	0.17	0.07	0.03	6.79	
55.00		970.25	0.20	0.06	0.02	33.55	
60.00		947.97	0.24	0.06	0.02	32.10	
65.00		925.69	0.28	0.05	0.01	29.57	
70.00		903.42	0.33	0.04	0.01	25.60	
75.00		881.14	0.38	0.03	0.01	19.97	
80.00		858.86	0.43	0.01	0.01	12.68	
82.50	Bot - Section 3	421.08	0.46	0.00	0.01	4.23	
85.00		767.56	0.48	-0.01	0.01	3.80	
87.75	Top - Section 2	832.52	0.52	-0.02	0.01	-0.78	
90.00		308.29	0.54	-0.03	0.01	-1.80	
95.00		671.62	0.60	-0.05	0.02	-10.89	
100.00		653.06	0.67	-0.08	0.02	-16.18	
105.00		634.49	0.74	-0.10	0.04	-19.27	
110.00		615.93	0.81	-0.11	0.06	-19.95	
115.00		597.36	0.89	-0.12	0.08	-18.24	
120.00		578.80	0.96	-0.12	0.11	-14.32	
123.25	Bot - Section 4	366.26	1.02	-0.11	0.14	-6.92	
125.00		351.80	1.05	-0.10	0.16	-5.30	
127.50	Top - Section 3	495.47	1.09	-0.08	0.18	-4.34	
130.00		218.61	1.13	-0.05	0.21	-0.32	
135.00		426.08	1.22	0.02	0.27	6.80	
140.00		411.22	1.31	0.14	0.35	15.34	
145.00		396.37	1.41	0.30	0.44	24.80	
147.00	Appurtenance(s)	2252.2	1.45	0.38	0.48	166.21	
150.00		227.13	1.51	0.52	0.55	20.86	
155.00		366.67	1.61	0.81	0.68	45.89	
157.00	Appurtenance(s)	2569.7	1.65	0.94	0.74	358.84	
160.00		209.31	1.71	1.18	0.84	34.04	
165.00		336.96	1.82	1.65	1.02	68.84	
167.00	Appurtenance(s)	3204.3	1.87	1.86	1.10	711.88	
168.00	Appurtenance(s)	99.42	1.89	1.98	1.14	23.00	
Totals:		37,277.6				1,925.6	Total Wind: 34,633.3

Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure: CT02217-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Pomfret School	Exposure: C	
Height: 168.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0E							Iterations 23
Gust Response Factor	1.10			Sds	0.18	Ss	0.17
Dead Load Factor	1.20	Seismic Load Factor	1.00	Sd1	0.10	S1	0.06
Wind Load Factor	0.00	Structure Frequency	0.36	SA	0.04	Seismic Importance Factor	1.00

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 Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-49.99	-2.05	0.00	-271.90	0.00	271.90	5501.01	2750.51	13262.9	6641.33	0.00	0.00	0.00	0.050
5.00	-48.27	-2.04	0.00	-261.66	0.00	261.66	5435.34	2717.67	12856.9	6438.04	0.01	-0.01	0.050	
10.00	-46.48	-2.01	0.00	-251.48	0.00	251.48	5368.23	2684.11	12453.6	6236.09	0.02	-0.02	0.049	
15.00	-44.72	-1.98	0.00	-241.41	0.00	241.41	5299.69	2649.84	12053.2	6035.57	0.05	-0.03	0.048	
20.00	-42.99	-1.95	0.00	-231.49	0.00	231.49	5229.71	2614.86	11655.8	5836.57	0.09	-0.04	0.048	
25.00	-41.30	-1.92	0.00	-221.72	0.00	221.72	5158.30	2579.15	11261.6	5639.20	0.14	-0.06	0.047	
30.00	-39.63	-1.89	0.00	-212.11	0.00	212.11	5085.46	2542.73	10870.9	5443.55	0.21	-0.07	0.047	
35.00	-38.00	-1.85	0.00	-202.67	0.00	202.67	5011.18	2505.59	10483.8	5249.72	0.29	-0.08	0.046	
40.00	-36.39	-1.82	0.00	-193.40	0.00	193.40	4935.46	2467.73	10100.6	5057.82	0.37	-0.09	0.046	
42.75	-35.52	-1.80	0.00	-188.40	0.00	188.40	4893.21	2446.61	9891.54	4953.12	0.43	-0.10	0.045	
45.00	-34.28	-1.77	0.00	-184.35	0.00	184.35	4858.32	2429.16	9721.41	4867.93	0.48	-0.10	0.045	
49.00	-32.09	-1.71	0.00	-177.28	0.00	177.28	3959.59	1979.80	7922.06	3966.92	0.57	-0.11	0.053	
50.00	-31.82	-1.71	0.00	-175.57	0.00	175.57	3948.01	1974.01	7862.92	3937.31	0.59	-0.12	0.053	
55.00	-30.48	-1.68	0.00	-167.04	0.00	167.04	3889.26	1944.63	7568.72	3789.99	0.72	-0.13	0.052	
60.00	-29.17	-1.65	0.00	-158.65	0.00	158.65	3829.07	1914.54	7277.15	3643.98	0.87	-0.15	0.051	
65.00	-27.88	-1.62	0.00	-150.40	0.00	150.40	3767.45	1883.72	6988.40	3499.39	1.03	-0.16	0.050	
70.00	-26.62	-1.60	0.00	-142.28	0.00	142.28	3704.39	1852.20	6702.67	3356.32	1.20	-0.18	0.050	
75.00	-25.39	-1.58	0.00	-134.27	0.00	134.27	3639.90	1819.95	6420.16	3214.85	1.39	-0.19	0.049	
80.00	-24.19	-1.57	0.00	-126.35	0.00	126.35	3573.98	1786.99	6141.06	3075.10	1.60	-0.21	0.048	
82.50	-23.59	-1.57	0.00	-122.42	0.00	122.42	3540.48	1770.24	6002.85	3005.89	1.71	-0.21	0.047	
85.00	-22.58	-1.57	0.00	-118.49	0.00	118.49	3506.62	1753.31	5865.57	2937.15	1.83	-0.22	0.047	
87.75	-21.49	-1.56	0.00	-114.19	0.00	114.19	2761.71	1380.86	4636.01	2321.45	1.96	-0.23	0.057	
90.00	-21.04	-1.57	0.00	-110.67	0.00	110.67	2740.07	1370.04	4543.51	2275.13	2.07	-0.24	0.056	
95.00	-20.06	-1.57	0.00	-102.84	0.00	102.84	2690.94	1345.47	4339.45	2172.95	2.33	-0.26	0.055	
100.00	-19.10	-1.57	0.00	-94.99	0.00	94.99	2640.38	1320.19	4137.62	2071.89	2.61	-0.28	0.053	
105.00	-18.17	-1.57	0.00	-87.13	0.00	87.13	2588.38	1294.19	3938.22	1972.04	2.91	-0.29	0.051	
110.00	-17.25	-1.57	0.00	-79.27	0.00	79.27	2534.95	1267.48	3741.44	1873.50	3.22	-0.31	0.049	
115.00	-16.36	-1.57	0.00	-71.41	0.00	71.41	2480.09	1240.04	3547.48	1776.38	3.56	-0.33	0.047	
120.00	-15.49	-1.57	0.00	-63.54	0.00	63.54	2423.79	1211.90	3356.53	1680.76	3.92	-0.35	0.044	
123.25	-14.94	-1.57	0.00	-58.43	0.00	58.43	2386.43	1193.21	3234.12	1619.46	4.16	-0.36	0.042	
125.00	-14.46	-1.57	0.00	-55.68	0.00	55.68	2366.06	1183.03	3168.79	1586.75	4.29	-0.37	0.041	
127.50	-13.78	-1.57	0.00	-51.75	0.00	51.75	1766.99	883.49	2371.88	1187.70	4.49	-0.38	0.051	
130.00	-13.43	-1.57	0.00	-47.84	0.00	47.84	1747.69	873.85	2306.16	1154.80	4.69	-0.38	0.049	
135.00	-12.74	-1.56	0.00	-39.99	0.00	39.99	1708.02	854.01	2176.01	1089.62	5.10	-0.40	0.044	
140.00	-12.07	-1.54	0.00	-32.19	0.00	32.19	1666.92	833.46	2047.71	1025.37	5.53	-0.42	0.039	
145.00	-11.42	-1.52	0.00	-24.46	0.00	24.46	1624.39	812.19	1921.45	962.15	5.98	-0.44	0.032	
147.00	-8.65	-1.33	0.00	-21.43	0.00	21.43	1606.97	803.49	1871.57	937.18	6.16	-0.44	0.028	
150.00	-8.32	-1.31	0.00	-17.44	0.00	17.44	1580.42	790.21	1797.44	900.06	6.44	-0.45	0.025	
155.00	-7.78	-1.26	0.00	-10.90	0.00	10.90	1535.02	767.51	1675.88	839.18	6.92	-0.46	0.018	
157.00	-4.66	-0.88	0.00	-8.38	0.00	8.38	1516.46	758.23	1627.98	815.20	7.11	-0.46	0.013	
160.00	-4.40	-0.84	0.00	-5.76	0.00	5.76	1488.18	744.09	1556.95	779.63	7.40	-0.46	0.010	
165.00	-3.97	-0.77	0.00	-1.56	0.00	1.56	1439.00	719.50	1439.93	721.04	7.89	-0.47	0.005	
167.00	-0.12	-0.02	0.00	-0.02	0.00	0.02	1413.06	706.53	1388.23	695.14	8.08	-0.47	0.000	
168.00	0.00	-0.02	0.00	0.00	0.00	0.00	1400.09	700.04	1362.73	682.38	8.18	-0.47	0.000	

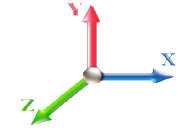
Seismic Segment Forces (Factored)

Structure: CT02217-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Pomfret School	Exposure: C	
Height: 168.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.0E					Iterations 22
Gust Response Factor	1.10	Sds	0.18		Ss 0.17
Dead Load Factor	0.90	Seismic Load Factor	1.00	Sd1 0.10	S1 0.06
Wind Load Factor	0.00	Structure Frequency	0.36	SA 0.04	Seismic Importance Factor 1.00



Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1372.6	0.00	0.03	0.02	21.27	
10.00		1346.6	0.01	0.05	0.03	31.29	
15.00		1320.6	0.02	0.06	0.04	36.16	
20.00		1294.7	0.03	0.07	0.04	38.40	
25.00		1268.7	0.04	0.07	0.04	39.31	
30.00		1242.7	0.06	0.07	0.04	39.62	
35.00		1216.7	0.08	0.07	0.04	39.70	
40.00		1190.7	0.11	0.07	0.04	39.71	
42.75	Bot - Section 2	643.83	0.12	0.07	0.03	21.71	
45.00		974.82	0.14	0.07	0.03	33.16	
49.00	Top - Section 1	1708.8	0.16	0.07	0.03	58.85	
50.00		196.72	0.17	0.07	0.03	6.79	
55.00		970.25	0.20	0.06	0.02	33.55	
60.00		947.97	0.24	0.06	0.02	32.10	
65.00		925.69	0.28	0.05	0.01	29.57	
70.00		903.42	0.33	0.04	0.01	25.60	
75.00		881.14	0.38	0.03	0.01	19.97	
80.00		858.86	0.43	0.01	0.01	12.68	
82.50	Bot - Section 3	421.08	0.46	0.00	0.01	4.23	
85.00		767.56	0.48	-0.01	0.01	3.80	
87.75	Top - Section 2	832.52	0.52	-0.02	0.01	-0.78	
90.00		308.29	0.54	-0.03	0.01	-1.80	
95.00		671.62	0.60	-0.05	0.02	-10.89	
100.00		653.06	0.67	-0.08	0.02	-16.18	
105.00		634.49	0.74	-0.10	0.04	-19.27	
110.00		615.93	0.81	-0.11	0.06	-19.95	
115.00		597.36	0.89	-0.12	0.08	-18.24	
120.00		578.80	0.96	-0.12	0.11	-14.32	
123.25	Bot - Section 4	366.26	1.02	-0.11	0.14	-6.92	
125.00		351.80	1.05	-0.10	0.16	-5.30	
127.50	Top - Section 3	495.47	1.09	-0.08	0.18	-4.34	
130.00		218.61	1.13	-0.05	0.21	-0.32	
135.00		426.08	1.22	0.02	0.27	6.80	
140.00		411.22	1.31	0.14	0.35	15.34	
145.00		396.37	1.41	0.30	0.44	24.80	
147.00	Appurtenance(s)	2252.2	1.45	0.38	0.48	166.21	
150.00		227.13	1.51	0.52	0.55	20.86	
155.00		366.67	1.61	0.81	0.68	45.89	
157.00	Appurtenance(s)	2569.7	1.65	0.94	0.74	358.84	
160.00		209.31	1.71	1.18	0.84	34.04	
165.00		336.96	1.82	1.65	1.02	68.84	
167.00	Appurtenance(s)	3204.3	1.87	1.86	1.10	711.88	
168.00	Appurtenance(s)	99.42	1.89	1.98	1.14	23.00	
Totals:		37,277.6				1,925.6	Total Wind: 34,633.3

Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

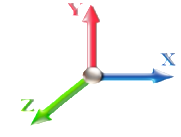
Calculated Forces

Structure: CT02217-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Pomfret School	Exposure: C	
Height: 168.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 29

Load Case: 0.9D + 1.0E										Iterations 22
Gust Response Factor 1.10						Sds 0.18				Ss 0.17
Dead Load Factor 0.90		Seismic Load Factor 1.00				Sd1 0.10				S1 0.06
Wind Load Factor 0.00		Structure Frequency 0.36				SA 0.04		Seismic Importance Factor 1.00		



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 Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-37.49	-2.05	0.00	-268.76	0.00	268.76	5501.01	2750.51	13262.9	6641.33	0.00	0.00	0.00	0.047
5.00	-36.20	-2.03	0.00	-258.53	0.00	258.53	5435.34	2717.67	12856.9	6438.04	0.01	-0.01	0.047	
10.00	-34.86	-2.01	0.00	-248.37	0.00	248.37	5368.23	2684.11	12453.6	6236.09	0.02	-0.02	0.046	
15.00	-33.54	-1.98	0.00	-238.34	0.00	238.34	5299.69	2649.84	12053.2	6035.57	0.05	-0.03	0.046	
20.00	-32.24	-1.94	0.00	-228.46	0.00	228.46	5229.71	2614.86	11655.8	5836.57	0.09	-0.04	0.045	
25.00	-30.97	-1.91	0.00	-218.75	0.00	218.75	5158.30	2579.15	11261.6	5639.20	0.14	-0.05	0.045	
30.00	-29.72	-1.87	0.00	-209.20	0.00	209.20	5085.46	2542.73	10870.9	5443.55	0.21	-0.07	0.044	
35.00	-28.50	-1.84	0.00	-199.83	0.00	199.83	5011.18	2505.59	10483.8	5249.72	0.28	-0.08	0.044	
40.00	-27.29	-1.80	0.00	-190.64	0.00	190.64	4935.46	2467.73	10100.6	5057.82	0.37	-0.09	0.043	
42.75	-26.64	-1.78	0.00	-185.69	0.00	185.69	4893.21	2446.61	9891.54	4953.12	0.42	-0.10	0.043	
45.00	-25.71	-1.75	0.00	-181.68	0.00	181.68	4858.32	2429.16	9721.41	4867.93	0.47	-0.10	0.043	
49.00	-24.06	-1.69	0.00	-174.67	0.00	174.67	3959.59	1979.80	7922.06	3966.92	0.56	-0.11	0.050	
50.00	-23.86	-1.69	0.00	-172.98	0.00	172.98	3948.01	1974.01	7862.92	3937.31	0.59	-0.12	0.050	
55.00	-22.86	-1.66	0.00	-164.55	0.00	164.55	3889.26	1944.63	7568.72	3789.99	0.71	-0.13	0.049	
60.00	-21.87	-1.63	0.00	-156.26	0.00	156.26	3829.07	1914.54	7277.15	3643.98	0.86	-0.14	0.049	
65.00	-20.91	-1.60	0.00	-148.12	0.00	148.12	3767.45	1883.72	6988.40	3499.39	1.01	-0.16	0.048	
70.00	-19.97	-1.58	0.00	-140.11	0.00	140.11	3704.39	1852.20	6702.67	3356.32	1.19	-0.17	0.047	
75.00	-19.04	-1.56	0.00	-132.21	0.00	132.21	3639.90	1819.95	6420.16	3214.85	1.38	-0.19	0.046	
80.00	-18.14	-1.55	0.00	-124.41	0.00	124.41	3573.98	1786.99	6141.06	3075.10	1.58	-0.20	0.046	
82.50	-17.69	-1.55	0.00	-120.54	0.00	120.54	3540.48	1770.24	6002.85	3005.89	1.69	-0.21	0.045	
85.00	-16.94	-1.54	0.00	-116.67	0.00	116.67	3506.62	1753.31	5865.57	2937.15	1.80	-0.22	0.045	
87.75	-16.12	-1.54	0.00	-112.44	0.00	112.44	2761.71	1380.86	4636.01	2321.45	1.93	-0.23	0.054	
90.00	-15.78	-1.54	0.00	-108.97	0.00	108.97	2740.07	1370.04	4543.51	2275.13	2.04	-0.24	0.054	
95.00	-15.04	-1.54	0.00	-101.26	0.00	101.26	2690.94	1345.47	4339.45	2172.95	2.30	-0.25	0.052	
100.00	-14.33	-1.55	0.00	-93.54	0.00	93.54	2640.38	1320.19	4137.62	2071.89	2.57	-0.27	0.051	
105.00	-13.62	-1.55	0.00	-85.81	0.00	85.81	2588.38	1294.19	3938.22	1972.04	2.87	-0.29	0.049	
110.00	-12.94	-1.55	0.00	-78.08	0.00	78.08	2534.95	1267.48	3741.44	1873.50	3.18	-0.31	0.047	
115.00	-12.27	-1.55	0.00	-70.34	0.00	70.34	2480.09	1240.04	3547.48	1776.38	3.51	-0.33	0.045	
120.00	-11.62	-1.55	0.00	-62.60	0.00	62.60	2423.79	1211.90	3356.53	1680.76	3.86	-0.34	0.042	
123.25	-11.20	-1.55	0.00	-57.58	0.00	57.58	2386.43	1193.21	3234.12	1619.46	4.10	-0.36	0.040	
125.00	-10.84	-1.54	0.00	-54.87	0.00	54.87	2366.06	1183.03	3168.79	1586.75	4.23	-0.36	0.039	
127.50	-10.33	-1.54	0.00	-51.01	0.00	51.01	1766.99	883.49	2371.88	1187.70	4.42	-0.37	0.049	
130.00	-10.07	-1.54	0.00	-47.15	0.00	47.15	1747.69	873.85	2306.16	1154.80	4.62	-0.38	0.047	
135.00	-9.55	-1.54	0.00	-39.43	0.00	39.43	1708.02	854.01	2176.01	1089.62	5.03	-0.40	0.042	
140.00	-9.05	-1.52	0.00	-31.75	0.00	31.75	1666.92	833.46	2047.71	1025.37	5.45	-0.41	0.036	
145.00	-8.57	-1.49	0.00	-24.15	0.00	24.15	1624.39	812.19	1921.45	962.15	5.89	-0.43	0.030	
147.00	-6.49	-1.31	0.00	-21.16	0.00	21.16	1606.97	803.49	1871.57	937.18	6.08	-0.43	0.027	
150.00	-6.24	-1.29	0.00	-17.22	0.00	17.22	1580.42	790.21	1797.44	900.06	6.35	-0.44	0.023	
155.00	-5.83	-1.24	0.00	-10.77	0.00	10.77	1535.02	767.51	1675.88	839.18	6.82	-0.45	0.017	
157.00	-3.49	-0.87	0.00	-8.29	0.00	8.29	1516.46	758.23	1627.98	815.20	7.01	-0.45	0.012	
160.00	-3.30	-0.83	0.00	-5.69	0.00	5.69	1488.18	744.09	1556.95	779.63	7.30	-0.46	0.010	
165.00	-2.98	-0.76	0.00	-1.54	0.00	1.54	1439.00	719.50	1439.93	721.04	7.78	-0.46	0.004	
167.00	-0.09	-0.02	0.00	-0.02	0.00	0.02	1413.06	706.53	1388.23	695.14	7.97	-0.46	0.000	
168.00	0.00	-0.02	0.00	0.00	0.00	0.00	1400.09	700.04	1362.73	682.38	8.07	-0.46	0.000	

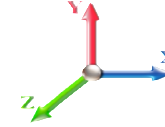
Wind Loading - Shaft

Structure: CT02217-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Pomfret School	Exposure: C	
Height: 168.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 23

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	7.442	8.19	276.59	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	7.442	8.19	271.44	0.650	0.000	5.00	24.768	16.10	131.8	0.0	1372.7
10.00		1.00	0.85	7.442	8.19	266.29	0.650	0.000	5.00	24.302	15.80	129.3	0.0	1346.7
15.00		1.00	0.85	7.442	8.19	261.14	0.650	0.000	5.00	23.837	15.49	126.8	0.0	1320.7
20.00		1.00	0.90	7.896	8.69	263.69	0.650	0.000	5.00	23.372	15.19	132.0	0.0	1294.7
25.00		1.00	0.95	8.276	9.10	264.53	0.650	0.000	5.00	22.906	14.89	135.5	0.0	1268.7
30.00		1.00	0.98	8.600	9.46	264.12	0.650	0.000	5.00	22.441	14.59	138.0	0.0	1242.7
35.00		1.00	1.01	8.883	9.77	262.81	0.650	0.000	5.00	21.975	14.28	139.6	0.0	1216.7
40.00		1.00	1.04	9.137	10.05	260.83	0.650	0.000	5.00	21.510	13.98	140.5	0.0	1190.7
42.75	Bot - Section 2	1.00	1.06	9.266	10.19	259.50	0.650	0.000	2.75	11.632	7.56	77.1	0.0	643.8
45.00		1.00	1.07	9.366	10.30	258.30	0.650	0.000	2.25	9.555	6.21	64.0	0.0	974.8
49.00	Top - Section 1	1.00	1.09	9.536	10.49	255.97	0.650	0.000	4.00	16.754	10.89	114.2	0.0	1708.9
50.00		1.00	1.09	9.576	10.53	259.33	0.650	0.000	1.00	4.142	2.69	28.4	0.0	196.7
55.00		1.00	1.12	9.770	10.75	256.04	0.650	0.000	5.00	20.431	13.28	142.7	0.0	970.2
60.00		1.00	1.14	9.951	10.95	252.44	0.650	0.000	5.00	19.965	12.98	142.1	0.0	948.0
65.00		1.00	1.16	10.120	11.13	248.57	0.650	0.000	5.00	19.500	12.67	141.1	0.0	925.7
70.00		1.00	1.17	10.279	11.31	244.47	0.650	0.000	5.00	19.034	12.37	139.9	0.0	903.4
75.00		1.00	1.19	10.430	11.47	240.15	0.650	0.000	5.00	18.569	12.07	138.5	0.0	881.1
80.00		1.00	1.21	10.572	11.63	235.65	0.650	0.000	5.00	18.103	11.77	136.8	0.0	858.9
82.50	Bot - Section 3	1.00	1.22	10.641	11.71	233.34	0.650	0.000	2.50	8.877	5.77	67.5	0.0	421.1
85.00		1.00	1.22	10.708	11.78	230.98	0.650	0.000	2.50	8.893	5.78	68.1	0.0	767.6
87.75	Top - Section 2	1.00	1.23	10.780	11.86	228.35	0.650	0.000	2.75	9.648	6.27	74.4	0.0	832.5
90.00		1.00	1.24	10.838	11.92	229.69	0.650	0.000	2.25	7.789	5.06	60.4	0.0	308.3
95.00		1.00	1.25	10.962	12.06	224.75	0.650	0.000	5.00	16.971	11.03	133.0	0.0	671.6
100.00		1.00	1.27	11.081	12.19	219.69	0.650	0.000	5.00	16.506	10.73	130.8	0.0	653.1
105.00		1.00	1.28	11.195	12.31	214.50	0.650	0.000	5.00	16.040	10.43	128.4	0.0	634.5
110.00		1.00	1.29	11.305	12.44	209.21	0.650	0.000	5.00	15.575	10.12	125.9	0.0	615.9
115.00		1.00	1.30	11.412	12.55	203.81	0.650	0.000	5.00	15.109	9.82	123.3	0.0	597.4
120.00		1.00	1.32	11.514	12.67	198.32	0.650	0.000	5.00	14.644	9.52	120.6	0.0	578.8
123.25	Bot - Section 4	1.00	1.32	11.579	12.74	194.70	0.650	0.000	3.25	9.269	6.02	76.7	0.0	366.3
125.00		1.00	1.33	11.614	12.78	192.74	0.650	0.000	1.75	4.984	3.24	41.4	0.0	351.8
127.50	Top - Section 3	1.00	1.33	11.662	12.83	189.92	0.650	0.000	2.50	7.020	4.56	58.5	0.0	495.5
130.00		1.00	1.34	11.710	12.88	190.01	0.650	0.000	2.50	6.904	4.49	57.8	0.0	218.6
135.00		1.00	1.35	11.803	12.98	184.29	0.650	0.000	5.00	13.459	8.75	113.6	0.0	426.1
140.00		1.00	1.36	11.894	13.08	178.48	0.650	0.000	5.00	12.994	8.45	110.5	0.0	411.2
145.00		1.00	1.37	11.982	13.18	172.61	0.650	0.000	5.00	12.528	8.14	107.3	0.0	396.4
147.00	Appurtenance(s)	1.00	1.37	12.017	13.22	170.24	0.650	0.000	2.00	4.881	3.17	41.9	0.0	154.4
150.00		1.00	1.38	12.068	13.27	166.67	0.650	0.000	3.00	7.182	4.67	62.0	0.0	227.1
155.00		1.00	1.39	12.152	13.37	160.66	0.650	0.000	5.00	11.597	7.54	100.8	0.0	366.7
157.00	Appurtenance(s)	1.00	1.39	12.185	13.40	158.24	0.650	0.000	2.00	4.509	2.93	39.3	0.0	142.5
160.00		1.00	1.40	12.233	13.46	154.60	0.650	0.000	3.00	6.623	4.31	57.9	0.0	209.3
165.00		1.00	1.41	12.313	13.54	148.48	0.650	0.000	5.00	10.666	6.93	93.9	0.0	337.0
167.00	Appurtenance(s)	1.00	1.41	12.344	13.58	146.01	0.650	0.000	2.00	4.136	2.69	36.5	0.0	130.6
168.00	Appurtenance(s)	1.00	1.41	12.360	13.60	144.78	0.650	0.000	1.00	2.040	1.33	18.0	0.0	64.4
Totals:									168.00			4,246.7		29,643.8

Discrete Appurtenance Forces

Structure: CT02217-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Pomfret School	Exposure: C	
Height: 168.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 23

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	168.00	Lightning Rod	1	12.398	13.638	1.00	1.00	1.05	35.00	0.000	2.500	14.32	0.00	35.80
2	167.00	PRK-1245	1	12.344	13.578	1.00	1.00	15.00	464.91	0.000	0.000	203.68	0.00	0.00
3	167.00	ALU TD-RRH8x20-25	3	12.344	13.578	0.60	0.90	7.33	210.00	0.000	0.000	99.48	0.00	0.00
4	167.00	ALU 800 Mhz	6	12.344	13.578	0.60	0.90	9.01	318.00	0.000	0.000	122.33	0.00	0.00
5	167.00	ALU 1900 Mhz RRUs	3	12.344	13.578	0.60	0.90	5.01	180.00	0.000	0.000	68.04	0.00	0.00
6	167.00	NNVV-65B-R4	3	12.344	13.578	0.67	0.90	24.52	232.20	0.000	0.000	332.88	0.00	0.00
7	167.00	APXVTM14-C-I20	3	12.344	13.578	0.69	0.90	13.18	168.60	0.000	0.000	178.98	0.00	0.00
8	167.00	Low Profile Platform	1	12.344	13.578	1.00	1.00	22.00	1500.00	0.000	0.000	298.73	0.00	0.00
9	157.00	Low Profile Platform	1	12.185	13.403	1.00	1.00	22.00	1500.00	0.000	0.000	294.87	0.00	0.00
10	157.00	RFS DB-T1-6Z-8AB-0Z	1	12.185	13.403	1.00	1.00	4.80	44.00	0.000	0.000	64.33	0.00	0.00
11	157.00	ALU RRH2x60-AWS	3	12.185	13.403	0.54	0.80	5.63	180.00	0.000	0.000	75.43	0.00	0.00
12	157.00	ALU RRH2x60-700	3	12.185	13.403	0.54	0.80	3.59	180.00	0.000	0.000	48.06	0.00	0.00
13	157.00	Commscope	3	12.185	13.403	0.66	0.80	16.27	116.40	0.000	0.000	218.13	0.00	0.00
14	157.00	Commscope	6	12.185	13.403	0.62	0.80	31.60	244.80	0.000	0.000	423.55	0.00	0.00
15	157.00	Amphenol	3	12.185	13.403	0.66	0.80	16.27	162.00	0.000	0.000	218.13	0.00	0.00
16	147.00	Low Profile Platform w/	1	12.017	13.219	1.00	1.00	25.00	1800.00	0.000	0.000	330.47	0.00	0.00
17	147.00	Kathrein 782 11056	3	12.017	13.219	0.54	0.80	0.45	5.40	0.000	0.000	5.95	0.00	0.00
18	147.00	Ericsson KRY 112 144/1	3	12.017	13.219	0.54	0.80	0.66	33.00	0.000	0.000	8.71	0.00	0.00
19	147.00	Allen Telecom	3	12.017	13.219	0.54	0.80	0.87	52.50	0.000	0.000	11.48	0.00	0.00
20	147.00	Commscope	3	12.017	13.219	0.64	0.80	22.02	150.90	0.000	0.000	291.11	0.00	0.00
21	147.00	RFS	3	12.017	13.219	0.58	0.80	6.32	56.10	0.000	0.000	83.60	0.00	0.00

Totals: 7,633.81

3,392.25

Total Applied Force Summary

Structure: CT02217-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Pomfret School	Exposure: C	
Height: 168.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 23

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		131.79	1430.62	0.00	0.00
10.00		129.31	1491.55	0.00	0.00
15.00		126.84	1465.56	0.00	0.00
20.00		131.95	1439.57	0.00	0.00
25.00		135.54	1413.57	0.00	0.00
30.00		137.98	1387.58	0.00	0.00
35.00		139.58	1361.59	0.00	0.00
40.00		140.52	1335.60	0.00	0.00
42.75		77.06	723.50	0.00	0.00
45.00		63.99	1040.01	0.00	0.00
49.00		114.23	1824.78	0.00	0.00
50.00		28.36	225.70	0.00	0.00
55.00		142.72	1115.11	0.00	0.00
60.00		142.05	1092.84	0.00	0.00
65.00		141.10	1070.56	0.00	0.00
70.00		139.89	1048.28	0.00	0.00
75.00		138.47	1026.00	0.00	0.00
80.00		136.85	1003.72	0.00	0.00
82.50		67.54	493.51	0.00	0.00
85.00		68.09	839.99	0.00	0.00
87.75		74.36	912.20	0.00	0.00
90.00		60.36	373.48	0.00	0.00
95.00		133.01	816.49	0.00	0.00
100.00		130.77	797.92	0.00	0.00
105.00		128.40	779.36	0.00	0.00
110.00		125.90	760.79	0.00	0.00
115.00		123.28	742.23	0.00	0.00
120.00		120.56	723.66	0.00	0.00
123.25		76.74	460.42	0.00	0.00
125.00		41.38	402.51	0.00	0.00
127.50		58.54	567.91	0.00	0.00
130.00		57.81	291.04	0.00	0.00
135.00		113.59	570.94	0.00	0.00
140.00		110.50	556.09	0.00	0.00
145.00		107.33	541.24	0.00	0.00
147.00	(16) attachments	773.26	2310.24	0.00	0.00
150.00		61.97	276.61	0.00	0.00
155.00		100.76	449.13	0.00	0.00
157.00	(20) attachments	1381.78	2602.69	0.00	0.00
160.00		57.93	221.17	0.00	0.00
165.00		93.90	356.73	0.00	0.00
167.00	(20) attachments	1340.61	3212.24	0.00	0.00
168.00	(1) attachments	32.35	100.74	0.00	35.80
	Totals:	7,638.94	41,655.45	0.00	35.80

Linear Appurtenance Segment Forces (Factored)

Structure: CT02217-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Pomfret School	Exposure: C	
Height: 168.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 23

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.003	0.000	7.442	0.00	0.55
5.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.003	0.000	7.442	0.00	2.08
10.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	7.442	0.00	1.37
10.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	7.442	0.00	5.20
15.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	7.442	0.00	1.37
15.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	7.442	0.00	5.20
20.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	7.896	0.00	1.37
20.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	7.896	0.00	5.20
25.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	8.276	0.00	1.37
25.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	8.276	0.00	5.20
30.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	8.600	0.00	1.37
30.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	8.600	0.00	5.20
35.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	8.883	0.00	1.37
35.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	8.883	0.00	5.20
40.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.007	0.000	9.137	0.00	1.37
40.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.007	0.000	9.137	0.00	5.20
42.75	Safety Cable	Yes	2.75	0.000	0.38	0.09	0.00	0.007	0.000	9.266	0.00	0.75
42.75	Step bolts (ladder)	Yes	2.75	0.000	0.00	0.00	0.00	0.007	0.000	9.266	0.00	2.86
45.00	Safety Cable	Yes	2.25	0.000	0.38	0.07	0.00	0.008	0.000	9.366	0.00	0.61
45.00	Step bolts (ladder)	Yes	2.25	0.000	0.00	0.00	0.00	0.008	0.000	9.366	0.00	2.34
49.00	Safety Cable	Yes	4.00	0.000	0.38	0.13	0.00	0.008	0.000	9.536	0.00	1.09
49.00	Step bolts (ladder)	Yes	4.00	0.000	0.00	0.00	0.00	0.008	0.000	9.536	0.00	4.16
50.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.008	0.000	9.576	0.00	0.27
50.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.008	0.000	9.576	0.00	1.04
55.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.008	0.000	9.770	0.00	1.37
55.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.008	0.000	9.770	0.00	5.20
60.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.008	0.000	9.951	0.00	1.37
60.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.008	0.000	9.951	0.00	5.20
65.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.008	0.000	10.120	0.00	1.37
65.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.008	0.000	10.120	0.00	5.20
70.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.008	0.000	10.279	0.00	1.37
70.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.008	0.000	10.279	0.00	5.20
75.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.009	0.000	10.430	0.00	1.37
75.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.009	0.000	10.430	0.00	5.20
80.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.009	0.000	10.572	0.00	1.37
80.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.009	0.000	10.572	0.00	5.20
82.50	Safety Cable	Yes	2.50	0.000	0.38	0.08	0.00	0.009	0.000	10.641	0.00	0.68
82.50	Step bolts (ladder)	Yes	2.50	0.000	0.00	0.00	0.00	0.009	0.000	10.641	0.00	2.60
85.00	Safety Cable	Yes	2.50	0.000	0.38	0.08	0.00	0.009	0.000	10.708	0.00	0.68
85.00	Step bolts (ladder)	Yes	2.50	0.000	0.00	0.00	0.00	0.009	0.000	10.708	0.00	2.60
87.75	Safety Cable	Yes	2.75	0.000	0.38	0.09	0.00	0.009	0.000	10.780	0.00	0.75
87.75	Step bolts (ladder)	Yes	2.75	0.000	0.00	0.00	0.00	0.009	0.000	10.780	0.00	2.86
90.00	Safety Cable	Yes	2.25	0.000	0.38	0.07	0.00	0.009	0.000	10.838	0.00	0.61
90.00	Step bolts (ladder)	Yes	2.25	0.000	0.00	0.00	0.00	0.009	0.000	10.838	0.00	2.34
95.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.009	0.000	10.962	0.00	1.37
95.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.009	0.000	10.962	0.00	5.20
100.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.010	0.000	11.081	0.00	1.37

Linear Appurtenance Segment Forces (Factored)

Structure: CT02217-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Pomfret School	Exposure: C	
Height: 168.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 23

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
100.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.010	0.000	11.081	0.00	5.20
105.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.010	0.000	11.195	0.00	1.37
105.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.010	0.000	11.195	0.00	5.20
110.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.010	0.000	11.305	0.00	1.37
110.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.010	0.000	11.305	0.00	5.20
115.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.010	0.000	11.412	0.00	1.37
115.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.010	0.000	11.412	0.00	5.20
120.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.011	0.000	11.514	0.00	1.37
120.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.011	0.000	11.514	0.00	5.20
123.25	Safety Cable	Yes	3.25	0.000	0.38	0.10	0.00	0.011	0.000	11.579	0.00	0.89
123.25	Step bolts (ladder)	Yes	3.25	0.000	0.00	0.00	0.00	0.011	0.000	11.579	0.00	3.38
125.00	Safety Cable	Yes	1.75	0.000	0.38	0.06	0.00	0.011	0.000	11.614	0.00	0.48
125.00	Step bolts (ladder)	Yes	1.75	0.000	0.00	0.00	0.00	0.011	0.000	11.614	0.00	1.82
127.50	Safety Cable	Yes	2.50	0.000	0.38	0.08	0.00	0.011	0.000	11.662	0.00	0.68
127.50	Step bolts (ladder)	Yes	2.50	0.000	0.00	0.00	0.00	0.011	0.000	11.662	0.00	2.60
130.00	Safety Cable	Yes	2.50	0.000	0.38	0.08	0.00	0.011	0.000	11.710	0.00	0.68
130.00	Step bolts (ladder)	Yes	2.50	0.000	0.00	0.00	0.00	0.011	0.000	11.710	0.00	2.60
135.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.012	0.000	11.803	0.00	1.37
135.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.012	0.000	11.803	0.00	5.20
140.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.012	0.000	11.894	0.00	1.37
140.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.012	0.000	11.894	0.00	5.20
145.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.013	0.000	11.982	0.00	1.37
145.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.013	0.000	11.982	0.00	5.20
147.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.013	0.000	12.017	0.00	0.55
147.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.013	0.000	12.017	0.00	2.08
150.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.013	0.000	12.068	0.00	0.82
150.00	Step bolts (ladder)	Yes	3.00	0.000	0.00	0.00	0.00	0.013	0.000	12.068	0.00	3.12
155.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.014	0.000	12.152	0.00	1.37
155.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.014	0.000	12.152	0.00	5.20
157.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.014	0.000	12.185	0.00	0.55
157.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.014	0.000	12.185	0.00	2.08
160.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.014	0.000	12.233	0.00	0.82
160.00	Step bolts (ladder)	Yes	3.00	0.000	0.00	0.00	0.00	0.014	0.000	12.233	0.00	3.12
165.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.015	0.000	12.313	0.00	1.37
165.00	Step bolts (ladder)	Yes	5.00	0.000	0.00	0.00	0.00	0.015	0.000	12.313	0.00	5.20
167.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.015	0.000	12.344	0.00	0.55
167.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.015	0.000	12.344	0.00	2.08
168.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.016	0.000	12.360	0.00	0.27
168.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.016	0.000	12.360	0.00	1.04
Totals:											0.0	216.6

Calculated Forces

Structure: CT02217-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Pomfret School	Exposure: C	
Height: 168.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

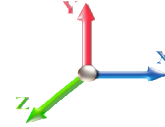


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Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 23

Dead Load Factor 1.00
Wind Load Factor 1.00



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 Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-41.65	-7.65	0.00	-914.71	0.00	914.71	5501.01	2750.51	13262.9	6641.33	0.00	0.000	0.000	0.145
5.00	-40.22	-7.54	0.00	-876.46	0.00	876.46	5435.34	2717.67	12856.9	6438.04	0.02	-0.036	0.000	0.144
10.00	-38.72	-7.44	0.00	-838.74	0.00	838.74	5368.23	2684.11	12453.6	6236.09	0.08	-0.072	0.000	0.142
15.00	-37.25	-7.33	0.00	-801.55	0.00	801.55	5299.69	2649.84	12053.2	6035.57	0.17	-0.109	0.000	0.140
20.00	-35.81	-7.22	0.00	-764.89	0.00	764.89	5229.71	2614.86	11655.8	5836.57	0.31	-0.147	0.000	0.138
25.00	-34.39	-7.10	0.00	-728.78	0.00	728.78	5158.30	2579.15	11261.6	5639.20	0.48	-0.185	0.000	0.136
30.00	-33.00	-6.98	0.00	-693.25	0.00	693.25	5085.46	2542.73	10870.9	5443.55	0.70	-0.223	0.000	0.134
35.00	-31.63	-6.86	0.00	-658.33	0.00	658.33	5011.18	2505.59	10483.8	5249.72	0.95	-0.262	0.000	0.132
40.00	-30.29	-6.73	0.00	-624.03	0.00	624.03	4935.46	2467.73	10100.6	5057.82	1.25	-0.301	0.000	0.130
42.75	-29.57	-6.66	0.00	-605.53	0.00	605.53	4893.21	2446.61	9891.54	4953.12	1.43	-0.323	0.000	0.128
45.00	-28.53	-6.60	0.00	-590.55	0.00	590.55	4858.32	2429.16	9721.41	4867.93	1.58	-0.342	0.000	0.127
49.00	-26.70	-6.49	0.00	-564.14	0.00	564.14	3959.59	1979.80	7922.06	3966.92	1.88	-0.374	0.000	0.149
50.00	-26.47	-6.47	0.00	-557.66	0.00	557.66	3948.01	1974.01	7862.92	3937.31	1.96	-0.382	0.000	0.148
55.00	-25.35	-6.34	0.00	-525.32	0.00	525.32	3889.26	1944.63	7568.72	3789.99	2.39	-0.427	0.000	0.145
60.00	-24.26	-6.21	0.00	-493.63	0.00	493.63	3829.07	1914.54	7277.15	3643.98	2.86	-0.473	0.000	0.142
65.00	-23.18	-6.07	0.00	-462.60	0.00	462.60	3767.45	1883.72	6988.40	3499.39	3.38	-0.518	0.000	0.138
70.00	-22.13	-5.94	0.00	-432.23	0.00	432.23	3704.39	1852.20	6702.67	3356.32	3.95	-0.564	0.000	0.135
75.00	-21.10	-5.81	0.00	-402.52	0.00	402.52	3639.90	1819.95	6420.16	3214.85	4.56	-0.611	0.000	0.131
80.00	-20.09	-5.67	0.00	-373.47	0.00	373.47	3573.98	1786.99	6141.06	3075.10	5.23	-0.657	0.000	0.127
82.50	-19.60	-5.61	0.00	-359.29	0.00	359.29	3540.48	1770.24	6002.85	3005.89	5.58	-0.680	0.000	0.125
85.00	-18.76	-5.54	0.00	-345.26	0.00	345.26	3506.62	1753.31	5865.57	2937.15	5.94	-0.704	0.000	0.123
87.75	-17.84	-5.46	0.00	-330.03	0.00	330.03	2761.71	1380.86	4636.01	2321.45	6.35	-0.730	0.000	0.149
90.00	-17.47	-5.41	0.00	-317.74	0.00	317.74	2740.07	1370.04	4543.51	2275.13	6.70	-0.751	0.000	0.146
95.00	-16.65	-5.28	0.00	-290.71	0.00	290.71	2690.94	1345.47	4339.45	2172.95	7.52	-0.804	0.000	0.140
100.00	-15.85	-5.15	0.00	-264.32	0.00	264.32	2640.38	1320.19	4137.62	2071.89	8.39	-0.856	0.000	0.134
105.00	-15.07	-5.02	0.00	-238.57	0.00	238.57	2588.38	1294.19	3938.22	1972.04	9.31	-0.907	0.000	0.127
110.00	-14.30	-4.90	0.00	-213.46	0.00	213.46	2534.95	1267.48	3741.44	1873.50	10.29	-0.958	0.000	0.120
115.00	-13.56	-4.77	0.00	-188.97	0.00	188.97	2480.09	1240.04	3547.48	1776.38	11.32	-1.007	0.000	0.112
120.00	-12.84	-4.65	0.00	-165.11	0.00	165.11	2423.79	1211.90	3356.53	1680.76	12.40	-1.054	0.000	0.104
123.25	-12.37	-4.57	0.00	-150.00	0.00	150.00	2386.43	1193.21	3234.12	1619.46	13.13	-1.085	0.000	0.098
125.00	-11.97	-4.52	0.00	-142.01	0.00	142.01	2366.06	1183.03	3168.79	1586.75	13.53	-1.101	0.000	0.095
127.50	-11.40	-4.46	0.00	-130.70	0.00	130.70	1766.99	883.49	2371.88	1187.70	14.11	-1.123	0.000	0.117
130.00	-11.11	-4.40	0.00	-119.56	0.00	119.56	1747.69	873.85	2306.16	1154.80	14.71	-1.144	0.000	0.110
135.00	-10.54	-4.28	0.00	-97.55	0.00	97.55	1708.02	854.01	2176.01	1089.62	15.93	-1.191	0.000	0.096
140.00	-9.98	-4.17	0.00	-76.14	0.00	76.14	1666.92	833.46	2047.71	1025.37	17.20	-1.232	0.000	0.080
145.00	-9.44	-4.05	0.00	-55.29	0.00	55.29	1624.39	812.19	1921.45	962.15	18.51	-1.267	0.000	0.063
147.00	-7.15	-3.23	0.00	-47.19	0.00	47.19	1606.97	803.49	1871.57	937.18	19.04	-1.279	0.000	0.055
150.00	-6.87	-3.16	0.00	-37.50	0.00	37.50	1580.42	790.21	1797.44	900.06	19.85	-1.295	0.000	0.046
155.00	-6.42	-3.05	0.00	-21.68	0.00	21.68	1535.02	767.51	1675.88	839.18	21.22	-1.315	0.000	0.030
157.00	-3.85	-1.61	0.00	-15.57	0.00	15.57	1516.46	758.23	1627.98	815.20	21.77	-1.320	0.000	0.022
160.00	-3.63	-1.55	0.00	-10.73	0.00	10.73	1488.18	744.09	1556.95	779.63	22.61	-1.327	0.000	0.016
165.00	-3.28	-1.45	0.00	-2.97	0.00	2.97	1439.00	719.50	1439.93	721.04	24.00	-1.333	0.000	0.006
167.00	-0.10	-0.03	0.00	-0.07	0.00	0.07	1413.06	706.53	1388.23	695.14	24.56	-1.333	0.000	0.000
168.00	0.00	-0.03	0.00	-0.04	0.00	0.04	1400.09	700.04	1362.73	682.38	24.84	-1.333	0.000	0.000

Final Analysis Summary

Structure: CT02217-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Pomfret School	Exposure: C	
Height: 168.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.6W 101 mph Wind	34.7	0.00	49.94	0.00	0.00	4170.05
0.9D + 1.6W 101 mph Wind	34.7	0.00	37.44	0.00	0.00	4127.59
1.2D + 1.0Di + 1.0Wi 50 mph Wind	10.0	0.00	84.28	0.00	0.00	1222.68
1.2D + 1.0E	2.0	0.00	49.99	0.00	0.00	271.90
0.9D + 1.0E	2.0	0.00	37.49	0.00	0.00	268.76
1.0D + 1.0W 60 mph Wind	7.7	0.00	41.65	0.00	0.00	914.71

Max Stresses

Load Case	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)	Elev (ft)	Stress Ratio
1.2D + 1.6W 101 mph Wind	-31.21	-29.56	0.00	-2575.6	0.00	-2575.6	3959.59	1979.8	7922.06	3966.92	49.00	0.657
0.9D + 1.6W 101 mph Wind	-23.20	-29.31	0.00	-2540.5	0.00	-2540.5	3959.59	1979.8	7922.06	3966.92	49.00	0.647
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-43.30	-7.38	0.00	-444.22	0.00	-444.22	2761.71	1380.8	4636.01	2321.45	87.75	0.207
1.2D + 1.0E	-21.49	-1.56	0.00	-114.19	0.00	-114.19	2761.71	1380.8	4636.01	2321.45	87.75	0.057
0.9D + 1.0E	-16.12	-1.54	0.00	-112.44	0.00	-112.44	2761.71	1380.8	4636.01	2321.45	87.75	0.054
1.0D + 1.0W 60 mph Wind	-26.70	-6.49	0.00	-564.14	0.00	-564.14	3959.59	1979.8	7922.06	3966.92	49.00	0.149

Base Plate Summary

Structure: CT02217-S-SB	Code: EIA/TIA-222-G	5/21/2018
Site Name: Pomfret School	Exposure: C	
Height: 168.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
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Reactions	Base Plate	Anchor Bolts
Original Design	Yield (ksi): 50.00	Bolt Circle: 66.00
Moment (kip-ft): 4750.00	Width (in): 65.00	Number Bolts: 20.00
Axial (kip): 38.00	Style: Clipped	Bolt Type: 2.25" 18J
Shear (kip): 37.50	Polygon Sides: 0.00	Bolt Diameter (in): 2.25
Analysis	Clip Length (in): 13.00	Yield (ksi): 75.00
Moment (kip-ft): 4170.05	Effective Len (in): 9.15	Ultimate (ksi): 100.00
Axial (kip): 84.28	Moment (kip-in): 538.47	Arrangement: Clustered
Shear (kip): 34.71	Allow Stress (ksi): 67.50	Cluster Dist (in): 6.00
	Applied Stress (ksi): 0.00	Start Angle (deg): 45.00
Moment Design %: 87.79	Stress Ratio: 0.58	Compression
		Force (kip): 155.85
		Allowable (kip): 260.00
		Ratio: 0.61
		Tension
		Force (kip): 147.42
		Allowable (kip): 260.00
		Ratio: 0.58

Check the capacities of Reinforcing Concrete:

Strength reduction factor (Flexure and axial tension):	0.90	Strength reduction factor (Shear):	0.75
Strength reduction factor (Axial compression):	0.65	Wind Load Factor on Concrete Design:	1.00

Load/
Capacity
Ratio

(1) Concrete Pier:

Vertical Steel Rebar Area (sq. in./each):	1.56	Tie / Stirrup Area (sq. in./each):	0.31		
Calculated Moment Capacity (Mn,Kips-Ft):	12145.2	>	Design Factored Moment (Mu, Kips-Ft)	4336.7	0.36 OK!
Calculated Shear Capacity (Kips):	1136.9	>	Design Factored Shear (Kips):	34.7	0.03 OK!
Calculated Tension Capacity (Tn, Kips):	3032.6	>	Design Factored Tension (Tu Kips):	0.0	0.00 OK!
Calculated Compression Capacity (Pn, Kips):	16097.2	>	Design Factored Axial Load (Pu Kips):	84.3	0.01 OK!
Moment & Axial Strength Combination:	0.36	OK!	Check Tie Spacing (Design/Required):	1	OK!
Pier Reinforcement Ratio:	0.006		Reinforcement Ratio is satisfied per ACI		

(2).Concrete Pad:

One-Way Design Shear Capacity (L-Direction, Kips):	980.6	>	One-Way Factored Shear (L-D. Kips):	217.8	0.22 OK!
One-Way Design Shear Capacity (W-Direction, Kips):	961.3	>	One-Way Factored Shear (W-D., Kips)	207.6	0.22 OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	807.5	>	One-Way Factored Shear (C-C, Kips):	200.2	0.25 OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0034	OK!	Lower Steel Pad Reinf. Ratio (W-Direc	0.0033	
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	5080.9	>	Moment at Bottom (L-Dir. K-Ft):	1115.5	0.22 OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	5084.0	>	Moment at Bottom (W-Dir. K-Ft):	1115.5	0.22 OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	7113.5	>	Moment at Bottom (C-C Dir. K-Ft):	1577.6	0.22 OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0034	OK!	Upper Steel Reinf. Ratio (W-Dir.):	0.0033	
Upper Steel Pad Moment Capacity (L-Direc. Kips-ft):	5080.9	>	Moment at the top (L-Dir K-Ft):	480.4	0.09 OK!
Upper Steel Pad Moment Capacity (W-Direc. Kips-ft):	5084.0	>	Moment at the top (W-Dir K-Ft):	480.4	0.09 OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	7113.5	>	Moment at the top (C-C Dir. K-Ft):	467.8	0.07 OK!

(3).Check Punching Shear Capacity due to Moment in the Pier:

Moment transferred by punching shear:	1668.0	k-ft.	Max. factored shear stress $v_{u,CD}$:	0.0	Psi
Max. factored shear stress $v_{u,AB}$:	9.0	Psi	Factored shear Strength ϕv_n :	189.7	Psi
Max. factored shear stress v_u :	9.0	Psi	Check Usage of Punching Shear Capacity:	0.05	OK!

Antenna Mount Structural Analysis



Source: SBA Date: 12.14.2017

SBA Site: CT02217-S Pomfret School
Sprint Site Number: CT33XC017
Project: Sprint DO Macro Upgrade

Prepared For: Sprint

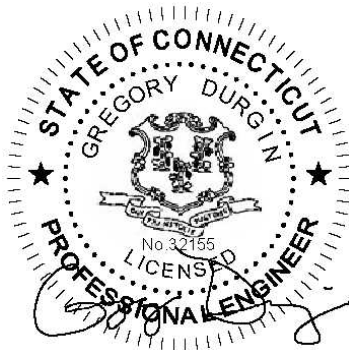
Mount Description: (1) Platform

Site Location: 398 Pomfret St, Pomfret, CT
Windham County
41.89009444°, -71.95498611°

Design Codes: ANSI/TIA-222-G
IBC 2012 w/ 2016 CT State Code

Analysis Load Case: Sprint Final Configuration

Analysis Result: Adequate @ 78% - **Once Augmented**
See Conclusion



Revision 0
March 28, 2018

CT33XC017-PASSING-MOUNT-STRUCTURAL-ANALYSIS-03-28-18

1.0 Introduction

An antenna mount structural analysis has been performed on Sprint's existing mount assembly located at the CT02217-S Pomfret School communications site in Windham County, CT considering the final equipment loading configuration listed in Section 3.0.

2.0 Analysis Criteria

An elastic three-dimensional model of the mount structure has been analyzed pursuant to the following criteria:

- IBC 2012 - International Building Code.
- ANSI/TIA-222-G - Structural Standard for Antenna Supporting Structures and Antennas.
- AISC - Steel Construction Manual.
- ANSI/AWS D1.1 - Structural Welding Code.

Wind w/o ice = 128 mph (3-sec gust Ultimate Wind Speed)	
Wind w/o ice = 99 mph (3-sec gust Equivalent per TIA-222-G Tower Code)	
Wind with ice = 50 mph (3-sec gust, 1" Ice)	Topographic Category 1
Exposure Category C	Structure Class II

The following documents were provided:

<ul style="list-style-type: none"> • <u>Mount and Tower Record Documents</u> SBA • <u>Mount Evaluation</u> Trylon, 12/21/17. • <u>RF Design</u> Sprint DOMU Project
--

The results of the analysis are illustrated in Section 4.0. If any of the existing or proposed conditions reported in this analysis are not properly represented, please contact our office immediately to request an amended report.

3.0 Appurtenance Information

Table 3.1 – Sprint Final Configuration¹

COR	(Quantity) Appurtenance Make/Model	Mount Description
177.0'±	(3) RFS APXVTM14-ALU-I20	(1) Platform
	(3) COMMSCOPE NNVV-65B-R4	
	(6) ALU 800MHz RRH	
	(3) ALU 1900MHz RRH	
	(3) ALU 2500MHz RRH	

1. Refer to antenna installation Construction Drawings (by others, when applicable) for additional information regarding final antenna and equipment orientations.
2. Panel antennas to be installed in Positions 2 and 3 in locations similar to existing. RRH units to be installed on new swivel brackets behind panel antennas in Positions 2 and 3.

4.0 Analysis Results

Table 4.1 – Existing Mount Capacity

Load Case	Governing Mount Component¹	% Capacity²	Result
Final Sprint Configuration	Collar Mount	119%	Inadequate ³
	Connection Plates	>200%	

1. Refer to the Calculations & Software Output portion of this report for mount component and structural information.
2. Listed results are expressed as a percentage of available mount member capacity based upon the assumed material strengths listed in Table 4.3. 105% is an acceptable allowable stress percentage for mount components.
3. Structural augments to the existing mount structure are required to obtain a mount structure capable of supporting the currently proposed final loading configuration in Table 3.1.

Table 4.2 – Augmented Mount Capacity

Load Case	Governing Mount Component ¹	% Capacity ²	Result
Final Sprint Configuration	New PRK Kit Connection Capacity	78%	Adequate Once Augmented³

1. Refer to the Calculations & Software Output portion of this report for mount component and structural information.
2. Listed results are expressed as a percentage of available mount member capacity based upon the assumed material strengths listed in Table 4.3. 105% is an acceptable allowable stress percentage for mount components.
3. Refer to [GeoStructural Mount Augmentation Drawings](#) and Section 5.0 for information regarding required mount augments.

Table 4.3 – Structural Component Material Strengths

Structural Component	Nominal Strength/Material ⁴
Pipe	F _y = 35 ksi (A53, Gr. B)
Tube	F _y = 46 ksi (A500, Gr. B)
Structural Shapes (L, C, W, etc.), Plate / Bar	F _y = 36 ksi (A36)
Uni-Strut	F _y = 33 ksi (A570, Gr. 33)
Connection Bolts	A325
Stainless Steel Bolts	18-8 Stainless, Grade 316/304 F _y = 74 ksi (Yield) & F _u = 29 ksi (Tension)
U-Bolts / Threaded Rod	SAE J429 Grade 2 (Substitution: ASTM A449) F _y = 57 ksi (Yield) & F _u = 74 ksi (Tension)
Welds	E70XX Electrodes

1. Strengths listed were assumed for this analysis and are based upon ASTM, AISC, RCSC, AWS and ACI preferred specification values. Values and materials are consistent with industry standards. Material strengths were taken from original design documents when available.

5.0 Conclusion & Recommendations

Based on Sprint's final equipment loading configuration, the existing mount assembly does not have sufficient capacity to support the loading considered in this analysis pursuant to the listed standards. Structural augments (reinforcements) will be required and are briefly summarized below:

- Install **Platform Reinforcement Kit**; located 4.5' below the existing collar mount and attaching to the existing standoff member 4.5' from collar interface.
 - Sitepro1 PRK-1245L, (1) total.
- Install **V-Brace Kit**; located 3.0' above the existing mount face rail centerline.
 - Sitepro1 PRK-SFS-H-L, (1) total. Attach kit ring mount in kit to monopole shaft.
 - If the PRK-SFS-H-L kit is not available, provide (6) total L2-1/2x2-1/2x3/16 x ~8' long replacement angles, field-cut and drill to suit.
 - Pipe2.0STD x 15.0' Horizontal Rail, (3) total. Attach SFS-H-L kit angles to new horizontal rail.
 - Pipe2.0STD x ~4' long corner braces, (3) total. Attach to new horizontal rail w/ Sitepro1 PUCK brackets, (6) total.
 - Sitepro1 SCX x-K, (12) total. Attach all mount pipes to new rail. (6) new Pipe2.0STD mount pipes may be required to span between existing rail and new rail.
- Panel antennas to be installed in Positions 2 and 3 in locations similar to existing. RRH units to be installed on new swivel brackets behind panel antennas in Positions 2 and 3.

Once the recommended augments are successfully implemented, the **augmented** mount assembly has sufficient capacity to support the loading considered in this analysis pursuant to the listed standards.

Augmentation Requirements:

- **In order to obtain a mount structure capable of supporting the currently proposed final loading configuration, upgrade augments must be installed in accordance with GeoStructural's Mount Augmentation Drawings.**
- **Antennas and equipment shall be installed centered vertically on the mount front face rails. If this assumption is incorrect, the results of this analysis will be affected.**

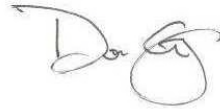
This analysis only encompasses the antenna mount assembly. The tower, overall mount support structure, foundation, etc. are beyond the scope of this analysis. If any of the existing or proposed conditions (appurtenance loading, member sizes, etc.) reported in this analysis are not properly represented, please contact our office immediately to request an amended report.

Prepared by:



Jesse Drennen, PE, MLE
208.761.7986
jesse.drennen@geostructural.com

Reviewed and Approved by:



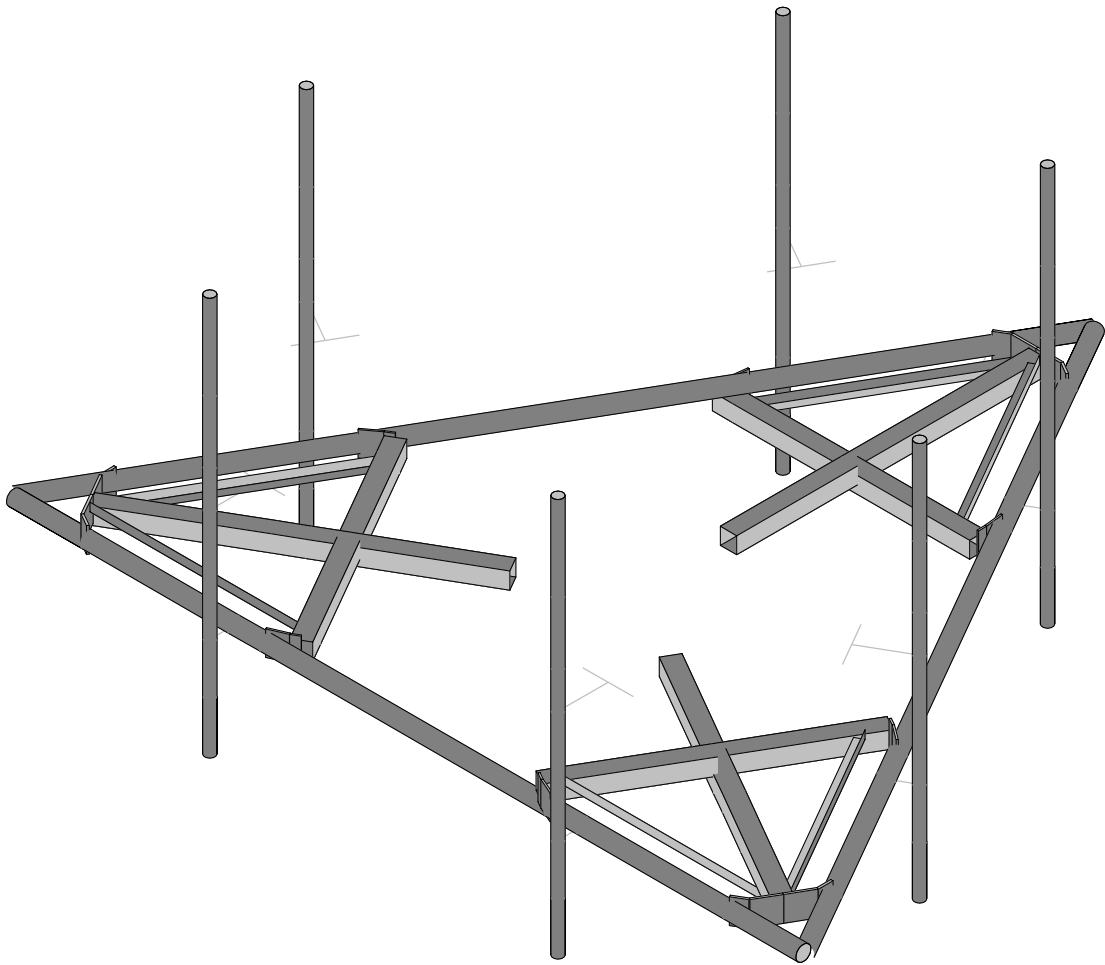
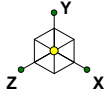
Don George, PE, SE, MLSE
208.602.6569
don.george@geostructural.com

6.0 Standard Conditions

- All data required to complete our structural analysis was furnished by our client and provided record data. GeoStructural has not conducted a site visit or independent study to verify existing conditions and the results of this analysis are based solely on the information provided. It has been assumed that the tower, antenna support structure and foundation have been constructed according to the provided existing drawings, previous structural analysis reports, mapping documents, etc.
- The default Structure Classification is Class II in accordance with ANSI/TIA-222-G §A.2.2 & §A.15.3 and has been assumed for this analysis. The owner shall verify this classification conforms with original or desired reliability criteria.
- This analysis assumes that the structure has been properly installed and maintained in accordance with ANSI/TIA-222-G §15.5 and that no physical deterioration has occurred in any of the components of the structure. Damaged, missing, or rusted members were not considered.
- This analysis verifies the adequacy of the main components of the structure. Not all connections, welds, bolts, plates, etc. were individually detailed and analyzed. Where not specifically analyzed, the existing connection plates, welds, bolts, etc. were assumed adequate to develop the full capacity of the main structural members.
- No consideration has been made for unusual or extreme wind events, rime/in-cloud ice loadings, harmonic or nodal vibration, vortex shedding or other similar conditions.
- It is the owner's responsibility to determine the appropriate design wind speed and amount of ice accumulation beyond code minimum values that should be considered in the analysis.
- This analysis report does not constitute a maintenance and condition assessment. No certifications regarding maintenance and condition are expressed or implied. If desired, GeoStructural can provide these services under a subsequent contract.
- This analysis only encompasses the antenna mount assembly. The tower, overall mount support structure, foundation, etc. are beyond the scope of this analysis. If desired, GeoStructural can provide these services under a subsequent contract.

7.0 Calculations & Software Output

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GeoStructural, LLC

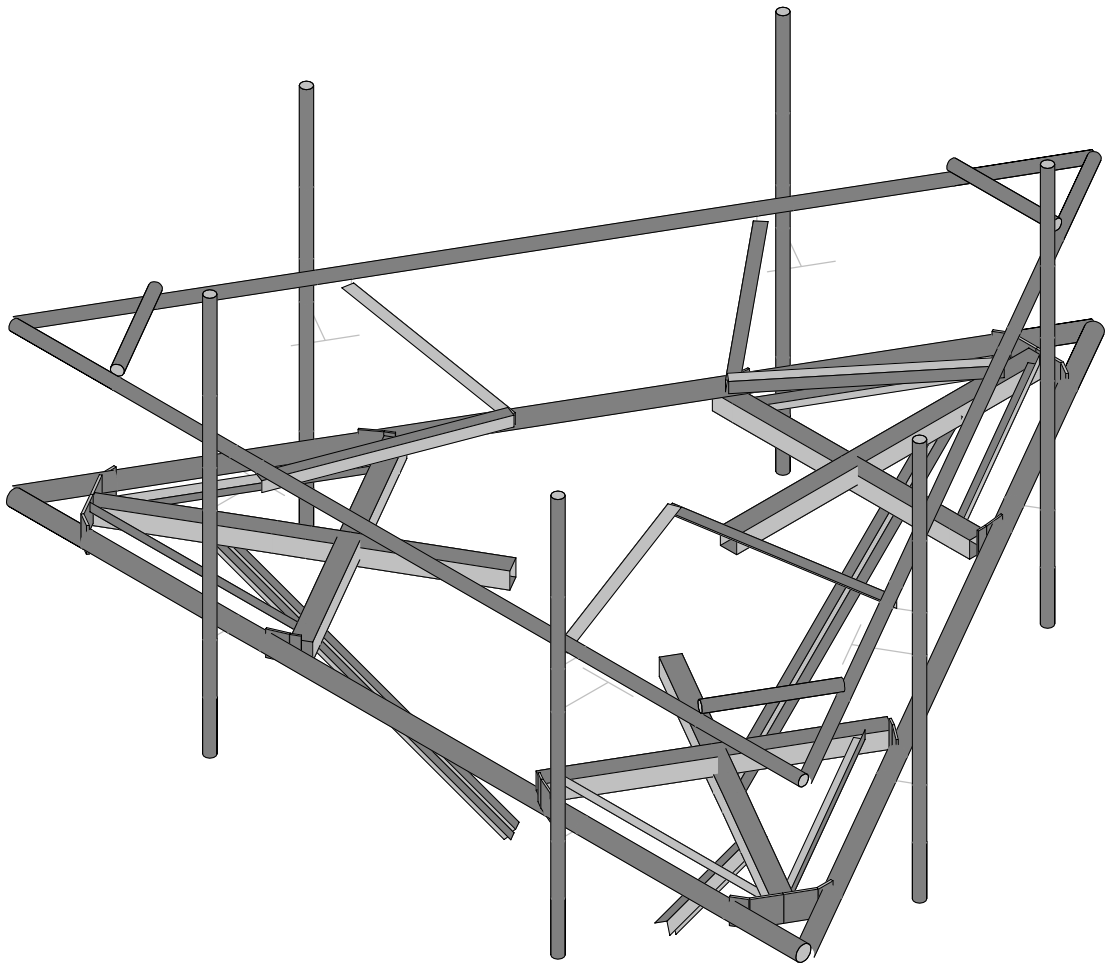
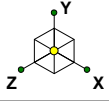
Jesse Drennen, PE

CT33XC017

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CT33XC017_Mount Analysis_R0 1...



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GeoStructural, LLC

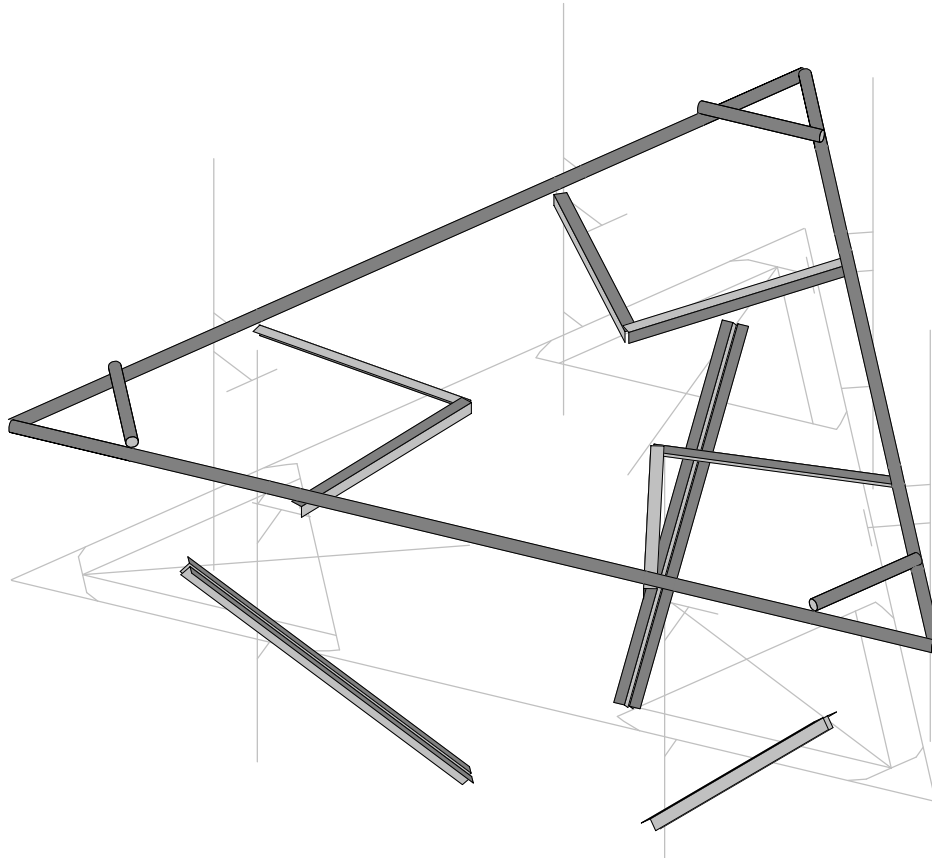
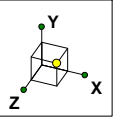
Jesse Drennen, PE

CT33XC017

SK - 1

Mar 28, 2018 at 11:52 AM

CT33XC017_Mount Analysis_R0 1...



Envelope Only Solution

GeoStructural, LLC

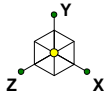
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CT33XC017

SK - 7

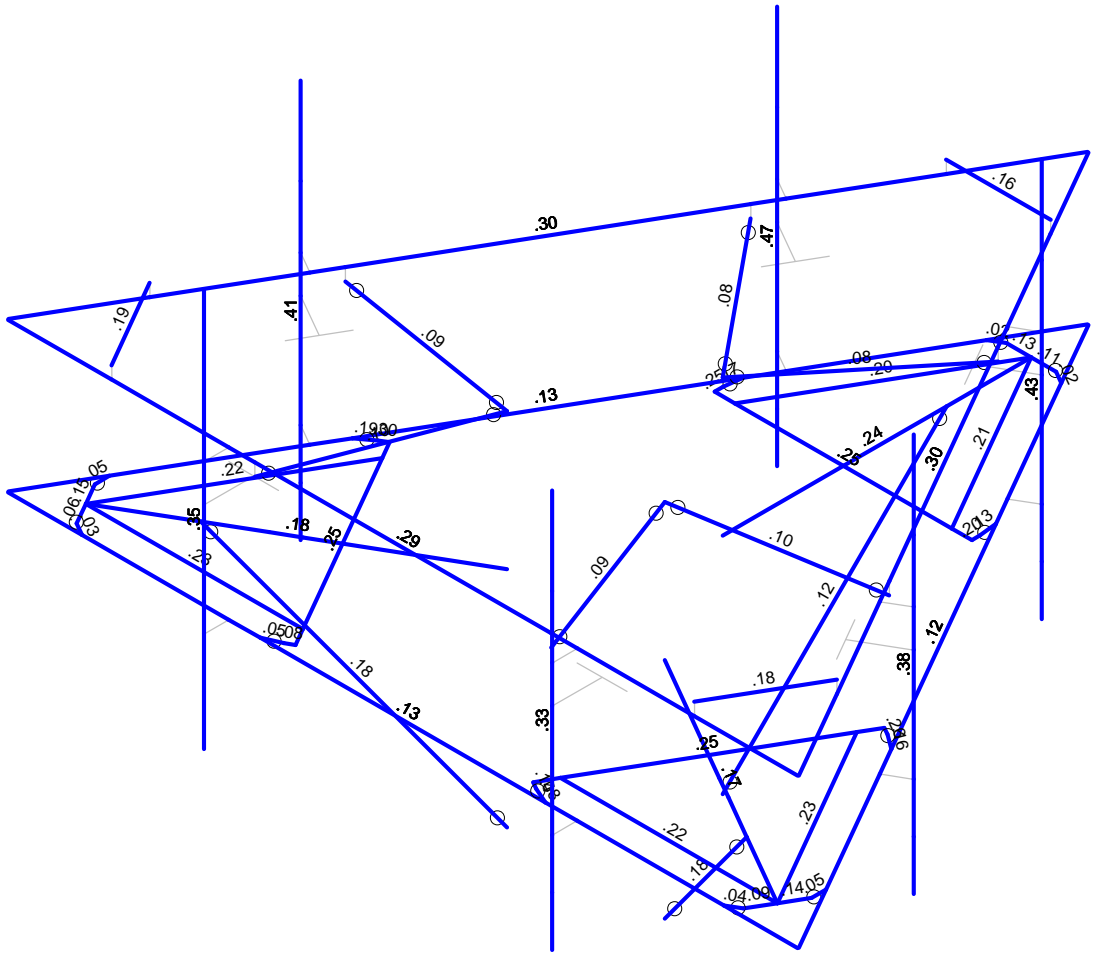
Mar 28, 2018 at 11:53 AM

CT33XC017_Mount Analysis_R0 1...



Code Check
(Env)

- No Calc
- > 1.0
- .90-1.0
- .75-.90
- .50-.75
- 0-.50



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

GeoStructural, LLC	CT33XC017	SK - 2
Jesse Drennen, PE		Mar 28, 2018 at 11:52 AM
		CT33XC017_Mount Analysis_R0 1...

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me...	Surface(P...
1	D	DL		-1		25		9	
2	Di	SL				25		63	
3	Lm [500]	LL				1			
4	Lv [250]	LL				3			
5	Woz	WL				25		60	
6	Wox	WL				25		60	
7	Wiz	WL				25		60	
8	Wix	WL				25		60	
9	Ez	EL				25			
10	Ex	EL				25			

Load Combination Design

	Description	ASIF	CD	Service	Hot Rol...	Cold Form...	Wood	Concrete	Masonry	Aluminum	Stainless	Connection
1	1) 1.4D				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	2) 1.2D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	2) 1.2D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	2) 1.2D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	2) 1.2D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	2) 1.2D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	2) 1.2D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8	2) 1.2D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
9	2) 1.2D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10	2) 1.2D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
11	2) 1.2D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
12	2) 1.2D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
13	2) 1.2D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
14	3) 0.9D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
15	3) 0.9D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
16	3) 0.9D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
17	3) 0.9D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
18	3) 0.9D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
19	3) 0.9D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
20	3) 0.9D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
21	3) 0.9D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
22	3) 0.9D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
23	3) 0.9D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
24	3) 0.9D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
25	3) 0.9D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
26	4) 1.2D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
27	4) 1.2D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
28	4) 1.2D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
29	4) 1.2D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
30	4) 1.2D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
31	4) 1.2D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
32	4) 1.2D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
33	4) 1.2D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
34	4) 1.2D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
35	4) 1.2D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
36	4) 1.2D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
37	4) 1.2D+1.0...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
38	5) 1.2D+1.5L...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
39	5) 1.2D+1.5L...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
40	5) 1.2D+1.5L...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
41	5) 1.2D+1.5L...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Load Combination Design (Continued)

	Description	ASIF	CD	Service	Hot Rol...	Cold Form...	Wood	Concrete	Masonry	Aluminum	Stainless	Connection
42	5) 1.2D+1.5L...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
43	5) 1.2D+1.5L...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
44	5) 1.2D+1.5L...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
45	5) 1.2D+1.5L...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
46	5) 1.2D+1.5L...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
47	5) 1.2D+1.5L...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
48	5) 1.2D+1.5L...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
49	5) 1.2D+1.5L...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
50	6) 1.2D+1.5Lv				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
51	7) (1.2+0.2Sd...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
52	7) (1.2+0.2Sd...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
53	7) (1.2+0.2Sd...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
54	7) (1.2+0.2Sd...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
55	7) (1.2+0.2Sd...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
56	7) (1.2+0.2Sd...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
57	7) (1.2+0.2Sd...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
58	7) (1.2+0.2Sd...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
59	7) (1.2+0.2Sd...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
60	7) (1.2+0.2Sd...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
61	7) (1.2+0.2Sd...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
62	7) (1.2+0.2Sd...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
63	8) (0.9-0.2Sd...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
64	8) (0.9-0.2Sd...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
65	8) (0.9-0.2Sd...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
66	8) (0.9-0.2Sd...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
67	8) (0.9-0.2Sd...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
68	8) (0.9-0.2Sd...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
69	8) (0.9-0.2Sd...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
70	8) (0.9-0.2Sd...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
71	8) (0.9-0.2Sd...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
72	8) (0.9-0.2Sd...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
73	8) (0.9-0.2Sd...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
74	8) (0.9-0.2Sd...				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
75	Dead Only				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Envelope Joint Reactions

	Joint		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N11	max	1.113	17	.966	37	3.132	2	1.375	26	2.37	11	.195	23
2		min	-1.115	11	.21	19	-1.694	20	.276	19	-2.369	17	-.25	5
3	N46	max	2.949	6	.97	30	1.477	25	-.01	50	1.422	13	.104	50
4		min	-1.707	24	-.087	50	-2.199	7	-.845	32	-1.415	19	-1.133	28
5	N60	max	.074	17	2.725	26	-.479	20	0	1	0	11	0	17
6		min	-.074	23	.389	20	-2.572	26	0	1	0	17	0	11
7	N62	max	-.418	25	2.722	30	1.292	29	0	17	0	11	0	11
8		min	-2.226	30	.378	24	.181	22	0	11	0	17	0	17
9	N64	max	.741	5	.086	26	1.017	2	0	13	0	1	0	11
10		min	-.736	23	.009	20	-1.009	20	0	19	0	1	0	17
11	N71	max	1.006	6	.086	30	.937	25	0	14	0	1	0	22
12		min	-1.003	12	.009	24	-.944	7	0	8	0	1	0	4
13	N75	max	1.176	17	.086	34	.702	2	0	14	0	1	0	11
14		min	-1.183	11	.008	16	-.7	20	0	8	0	1	0	17
15	N103	max	2.224	34	2.72	34	1.291	35	0	11	0	11	0	11
16		min	.423	15	.391	16	.189	18	0	41	0	41	0	41
17	N164	max	1.778	16	.972	34	1.312	15	.003	25	.959	9	1.281	35
18		min	-3.018	10	.171	50	-2.035	9	-1.031	43	-.96	15	.177	17

Envelope Joint Reactions (Continued)

Joint		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
19	Totals:	max	8.144	17	11.13	32	7.671	2					
20		min	-8.144	11	2.722	14	-7.671	20					

Envelope Member Section Deflections Service

Member	Sec	x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [r...	LC (n)	L/y' Ratio	LC (n)	L/z' Ratio	LC
No Data to Print ...													

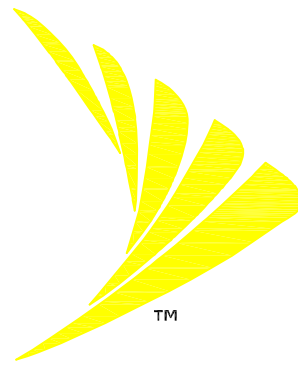
Envelope AISC 14th(360-10): LRFD Steel Code Checks

Member	Shape	Code Check	Loc[ft]	LC	Shear	Loc[ft]	Dir	LC	phi*Pnc...	phi*Pnt...	phi*Mn...	phi*Mn...	Cb	Eqn	
1	M101	PIPE 2.0	.470	2	12	.145	5	5	14.916	32.13	1.872	1.872	1...	H1-1b	
2	M92	PIPE 2.0	.434	2	4	.150	4.25	11	14.916	32.13	1.872	1.872	2...	H1-1b	
3	M105	PIPE 2.0	.408	2	7	.140	2	6	14.916	32.13	1.872	1.872	1...	H1-1b	
4	M88	PIPE 2.0	.377	2	9	.166	4.25	11	14.916	32.13	1.872	1.872	2...	H1-1b	
5	M125A	PIPE 2.0	.354	2	4	.158	4.25	7	14.916	32.13	1.872	1.872	1...	H1-1b	
6	M79A	PIPE 2.0	.332	2	11	.136	2	10	14.916	32.13	1.872	1.872	2...	H1-1b	
7	M21	3/8x6_HRA	.301	0	11	.085	.167	y	11	67.691	68.85	8.606	.538	1...	H1-1b
8	M79	PIPE 2.0	.300	10.9...	6	.197	11.0...	5	3.904	32.13	1.872	1.872	2...	H1-1b	
9	M78	PIPE 2.0	.298	4.961	10	.221	4.795	11	3.904	32.13	1.872	1.872	2...	H1-1b	
10	M76	PIPE 2.0	.293	4.958	6	.207	4.793	7	3.908	32.13	1.872	1.872	2...	H1-1b	
11	M35	3/8x6_HRA	.260	0	5	.103	.167	y	11	67.691	68.85	8.606	.538	1...	H1-1b
12	M51	HSS4x4x4	.254	2.583	35	.094	2.583	y	35	94.949	103.122	11.96	11.96	1...	H1-1b
13	M26	HSS4x4x4	.253	2.583	29	.094	2.583	y	31	94.949	103.122	11.96	11.96	1...	H1-1b
14	M3	3/8x6_HRA	.251	0	7	.067	.167	y	4	67.691	68.85	8.606	.538	1...	H1-1b
15	M52	HSS4x4x4	.250	2.583	27	.094	2.583	y	27	94.949	103.122	11.96	11.96	1...	H1-1b
16	M43A	HSS4x4x4	.242	6.198	11	.064	6.198	z	5	91.568	103.122	11.96	11.96	1...	H1-1b
17	M24	L2x2x4	.230	0	7	.019	0	z	32	11.646	28.886	.653	1.489	2...	H2-1
18	M40	L2x2x4	.226	0	11	.019	0	z	36	11.646	28.886	.653	1.489	2...	H2-1
19	M39	L2x2x4	.219	0	9	.020	0	y	32	11.646	28.886	.653	1.489	2...	H2-1
20	M23	L2x2x4	.216	0	5	.020	0	y	28	11.646	28.886	.653	1.489	2...	H2-1
21	M7	L2x2x4	.210	0	37	.020	0	y	36	11.646	28.886	.653	1.489	2...	H2-1
22	M8	L2x2x4	.205	0	3	.019	0	z	28	11.646	28.886	.653	1.489	2...	H2-1
23	M5	3/8x6_HRA	.198	0	9	.053	.167	y	7	67.691	68.85	8.606	.538	1...	H1-1b
24	M123B	PIPE 2.0	.194	0	5	.061	0	3	30.48	32.13	1.872	1.872	1...	H1-1b	
25	M22	3/8x6_HRA	.189	0	11	.117	.367	y	35	63.399	68.85	8.606	.538	1...	H1-1b
26	M112B	HSS4x4x4	.180	6.198	7	.077	1.679	y	50	91.568	103.122	11.96	11.96	1...	H1-1b
27	M126	PIPE 2.0	.178	2.097	10	.057	0	7	30.48	32.13	1.872	1.872	1...	H1-1b	
28	M111	LL2.5x2.5x...	.177	3.185	5	.010	6.37	y	11	34.469	58.32	3.954	1.593	1...	H1-1b
29	M110	LL2.5x2.5x...	.177	3.185	11	.010	6.37	y	5	34.469	58.32	3.954	1.593	1...	H1-1b
30	M4	3/8x6_HRA	.168	0	6	.094	0	y	34	63.602	68.85	8.606	.538	1...	H1-1b
31	M109A	HSS4x4x4	.167	3.745	35	.093	6.198	y	43	91.568	103.122	11.96	11.96	1...	H1-1b
32	M121B	PIPE 2.0	.165	1.267	2	.074	0	11	30.48	32.13	1.872	1.872	1...	H1-1b	
33	M36	3/8x6_HRA	.158	0	5	.114	.367	y	5	63.399	68.85	8.606	.538	1...	H1-1b
34	M18	1/2 x 6	.153	0	11	.082	0	y	12	84.3	91.8	11.475	.956	1...	H1-1b
35	M37	3/8x6_HRA	.145	0	2	.075	.167	y	2	67.691	68.85	8.606	.538	1...	H1-1b
36	M33	1/2 x 6	.139	0	5	.085	0	y	5	84.3	91.8	11.475	.956	1...	H1-1b
37	M1	1/2 x 6	.132	0	13	.057	0	y	9	84.3	91.8	11.475	.956	1...	H1-1b
38	M57	PIPE 3.0	.131	11.5...	47	.063	4.958	36	17.762	65.205	5.749	5.749	2...	H1-1b	
39	M6	3/8x6_HRA	.128	0	9	.112	.36	y	31	63.601	68.85	8.606	.538	1...	H1-1b
40	M63	PIPE 3.0	.125	4.299	36	.064	4.961	31	17.744	65.205	5.749	5.749	1...	H1-1b	
41	M62	PIPE 3.0	.124	4.299	33	.065	4.961	28	17.744	65.205	5.749	5.749	1...	H1-1b	
42	M91	LL2.5x2.5x...	.122	3.182	27	.006	6.364	y	37	34.504	58.32	3.954	2.55	1...	H1-1b
43	M2	1/2 x 6	.109	0	3	.066	0	y	32	84.3	91.8	11.475	.956	1...	H1-1b
44	M116	L2.5x2.5x3	.100	2.008	24	.012	0	z	4	17.469	29.192	.873	1.757	1...	H2-1
45	M120	L2.5x2.5x3	.096	1.967	7	.012	0	z	8	17.469	29.192	.873	1.757	1...	H2-1

Envelope AISC 14th(360-10): LRFD Steel Code Checks (Continued)

Member	Shape	Code Check	Locftl	LC	Shear ..	Locftl	Dir	LC	phi*Pnc...	phi*Pnt...	phi*Mn ...	phi*Mn ...	Cb	Eqn
46	M117	L2.5x2.5x3	.092	1.967	9	.012	0	y	8	17.469	29.192	.873	1.757	1... H2-1
47	M121	L2.5x2.5x3	.091	2.008	16	.011	3.934	y	11	17.469	29.192	.873	1.757	1... H2-1
48	M34	1/2 x 6	.086	0	3	.068	0	y	27	84.3	91.8	11.475	.956	1... H1-1b
49	M112	L2.5x2.5x3	.085	2.008	11	.013	0	z	12	17.469	29.192	.873	1.757	1... H2-1
50	M38	3/8x6_HRA	.083	0	2	.115	.364	y	26	63.501	68.85	8.606	.538	1... H1-1b
51	M19	3/8x6_HRA	.082	0	36	.090	.167	y	8	67.691	68.85	8.606	.538	1... H1-1b
52	M113	L2.5x2.5x3	.076	2.008	5	.011	3.934	y	4	17.469	29.192	.873	1.757	1... H2-1
53	M17	1/2 x 6	.062	0	12	.072	0	y	13	84.3	91.8	11.475	.956	1... H1-1b
54	M20	3/8x6_HRA	.051	0	35	.104	.364	y	2	63.501	68.85	8.606	.538	1... H1-1b
55	M43	1/2 x 6	.046	0	11	.125	0	y	29	89.201	91.8	11.475	.956	1... H1-1b
56	M28	1/2 x 6	.045	0	5	.130	0	y	35	89.201	91.8	11.475	.956	1... H1-1b
57	M44	1/2 x 6	.035	0	13	.129	0	y	26	89.215	91.8	11.475	.956	1... H1-1b
58	M27	1/2 x 6	.033	0	3	.123	0	y	26	89.215	91.8	11.475	.956	1... H1-1b
59	M11	1/2 x 6	.024	0	2	.121	0	y	34	89.23	91.8	11.475	.956	1... H1-1b
60	M12	1/2 x 6	.019	0	2	.126	0	y	31	89.23	91.8	11.475	.956	1... H1-1b

Sprint®



SITE NAME: POMFRET SCHOOL (SBA)
SITE NUMBER: CT33XC017
AUGMENT ID: CT33XC017Q17.2
SITE ADDRESS: 398 POMFRET STREET
 POMFRET, CT 06258
JURISDICTION: TOWN OF POMFRET/CT SITING COUNCIL
SITE TYPE: EXISTING 168' MONOPOLE
PROGRAM: DO MACRO UPGRADE EQUIPMENT DEPLOYMENT



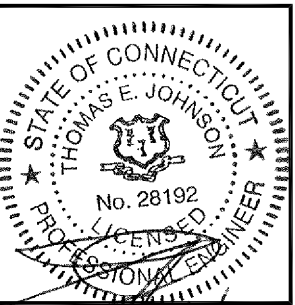
1 INTERNATIONAL BLVD, SUITE 800
 MAHWAH, NJ 07495
 TEL: (800) 357-7641



SBA COMMUNICATIONS CORP.
 134 FLANDERS ROAD, SUITE 125
 WESTBOROUGH, MA 01581 TEL: (508) 251-0720



4 Bay Road, Building A
 Suite 200
 Hadley, MA 01035 Ph: (413) 320-4918



CHECKED BY: *G. J. [Signature]* / TEJ

APPROVED BY: JMM/TEJ

SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
1	06/19/18	CONSTRUCTION REVISED	PN
0	04/04/18	ISSUED FOR CONSTRUCTION	PN

SITE NUMBER:
CT33XC017
 SITE NAME:
POMFRET SCHOOL (SBA)
 SITE ADDRESS:
 398 POMFRET STREET
 POMFRET, CT 06258

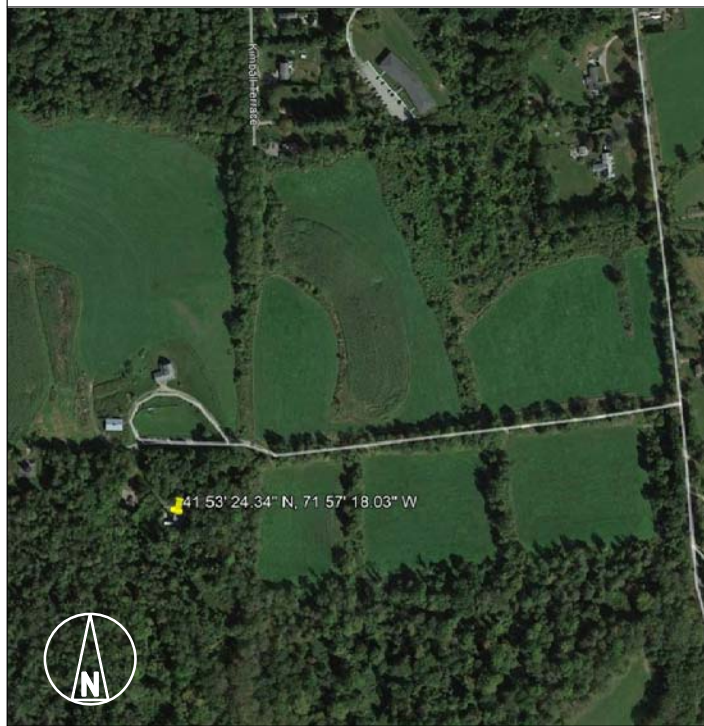
SHEET TITLE
 TITLE SHEET

SHEET NUMBER
 T-1

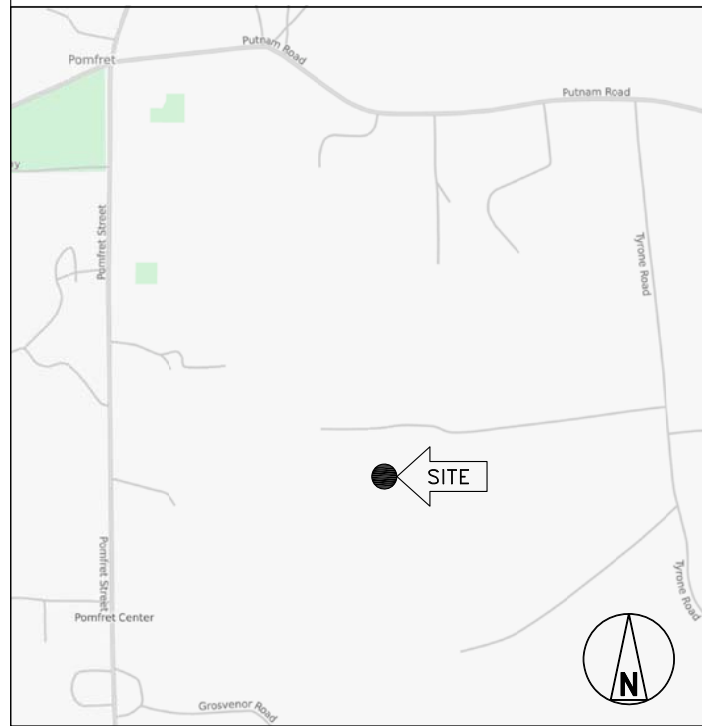
PROJECT INFORMATION

SITE INFORMATION
 LATITUDE: 41° 53' 24.34" N (41.8901°)
 LONGITUDE: 71° 57' 18.03" W (-71.9550°)
 GROUND ELEVATION: 682'± AMSL (PER GOOGLE EARTH)
 STRUCTURE HEIGHT: 168'± AGL (FROM RECORD STRUCTURAL)
 STRUCTURE TYPE: MONOPOLE
 ZONING JURISDICTION: TOWN OF POMFRET/CT SITING COUNCIL
 ZONING DISTRICT/OCCUPANCY: POMFRET STREET RESIDENTIAL
 COUNTY: WINDHAM
APPLICANT
 SPRINT
 1 INTERNATIONAL BLVD. SUITE 800
 MAHWAH, NJ 07495
PROPERTY OWNER:
 N/F POMFRET SCHOOL INC.
 PO BOX 128
 POMFRET, CT 06258
TOWER OWNER:
 SBA PROPERTIES, LLC
 8051 CONGRESS AVENUE
 BOCA RATON, FL 33487
 (561) 995-7670
 SBA SITE ID: CT02217-S
 SBA SITE NAME: POMFRET SCHOOL
SBA CONTACT:
 STEPHEN ROTH
 (860) 539-4920
 SRoth@sbasite.com

LOCATION MAP N.T.S.



AREA MAP N.T.S.



SCOPE OF WORK

- REMOVE AND REPLACE (6) EXISTING SPRINT ANTENNAS AND ANTENNA MOUNTING PIPE MASTS.
- REMOVE ALL EXISTING COAX CABLES.
- FURNISH AND INSTALL ANTENNA MOUNT STRUCTURAL AUGMENTS PER ANTENNA MOUNT STRUCTURAL ANALYSIS, (BY GEOSTRUCTURAL DATED 06/18/18) AND ANTENNA MOUNT CONSTRUCTION MODIFICATION DRAWINGS, (BY GEOSTRUCTURAL DATED 06-19-18).
- INSTALL (4) HYBRID CABLES IN ACCORDANCE WITH THE STRUCTURAL ANALYSIS (BY OTHERS).
- INSTALL (6) NEW SPRINT 800 MHz RRHS.
- RELOCATE (3) EXISTING SPRINT 1900 MHz RRHS FROM GROUND LEVEL TO THE ANTENNA LEVEL.
- INSTALL (3) NEW SPRINT 2500 MHz RRHS.

GENERAL NOTES

- THIS IS AN UNMANNED TELECOMMUNICATION FACILITY AND NOT FOR HUMAN HABITATION:
 - ADA COMPLIANCE NOT REQUIRED.
 - POTABLE WATER OR SANITARY SERVICE IS NOT REQUIRED.
 - NO OUTDOOR STORAGE OR ANY SOLID WASTE RECEPTACLES REQUIRED.
- CONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS, AND CONDITIONS ON JOB SITE. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK. FAILURE TO NOTIFY THE ARCHITECT/ENGINEER PLACE THE RESPONSIBILITY ON THE CONTRACTOR TO CORRECT THE DISCREPANCIES AT THE CONTRACTOR'S EXPENSE.
- THIS DRAWING IS CONTINGENT ON THE COMPLETION OF A GLOBAL STRUCTURAL ANALYSIS OF THE TOWER AND MOUNT ANALYSIS TO BE COMPLETED BY THE TOWER OWNER, SBA PRIOR TO CONSTRUCTION. SEE SPECIAL CONSTRUCTION NOTES ON A-2 AND S-1 HEREIN.
- ALL AUGMENTS AS SPECIFIED IN THE ANTENNA MOUNT STRUCTURAL ANALYSIS FOR THIS SITE BY GEOSTRUCTURAL DATED 06/18/2018 (REV2) SHALL BE COMPLETED PRIOR TO ANTENNA INSTALLATION.

DRAWING INDEX

SHEET NO.	SHEET DESCRIPTION	REV. NO.
T-1	TITLE SHEET	1
SP-1	OUTLINE SPECIFICATIONS	1
SP-2	OUTLINE SPECIFICATIONS	1
SP-3	OUTLINE SPECIFICATIONS	1
A-1	COMPOUND PLAN	1
A-2	ELEVATION AND ANTENNA PLANS	1
A-3	TOWER EQUIPMENT DETAILS	1
A-4	EQUIPMENT DETAILS	1
S-1	ANTENNA AND RRH MOUNTING DETAILS	1
E-1	ELECTRICAL AND GROUNDING DETAILS	1
RF-1	RF DATA SHEET	1
RF-2	PLUMBING DIAGRAM AND RAN WIRING	1

CODE COMPLIANCE

- 2016 CONNECTICUT STATE BUILDING CODE WITH AMENDMENTS.
- 2014 NATIONAL ELECTRICAL CODE WITH AMENDMENTS
- TIA-EIA-222-G

BASED ON INFORMATION PROVIDED BY SPRINT, THIS TELECOMMUNICATIONS EQUIPMENT DEPLOYMENT IS CONSIDERED AN ELIGIBLE FACILITY UNDER THE TAX RELIEF ACT OF 2012, 47 USC 1455(A), AND IS SUBJECT TO AN EXPEDITED ELIGIBLE FACILITIES REQUEST/REVIEW AND ZONING PRE-EMPTION FOR LOCAL DISCRETIONARY PERMITS (VARIANCE, SPECIAL PERMIT, SITE PLAN REVIEW).

APPROVALS

TITLE	SIGNATURE	DATE
PROJECT MANAGER:		
CONSTRUCTION:		
RF ENGINEER:		
ZONING/SITE ACQ:		
OPERATIONS:		
TOWER OWNER:		

THE FOLLOWING PARTIES HEREBY APPROVE AND ACCEPT THESE DOCUMENTS AND AUTHORIZE THE CONTRACTOR TO PROCEED WITH THE CONSTRUCTION DESCRIBED HEREIN. ALL DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL BUILDING DEPARTMENT AND MAY IMPOSE CHANGES OR MODIFICATIONS.

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 (800) 922-4455
 CALL 3 WORKING DAYS
 BEFORE YOU DIG!

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THESE OUTLINE SPECIFICATIONS IN CONJUNCTION WITH THE SPRINT STANDARD CONSTRUCTION SPECIFICATIONS, INCLUDING CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

SECTION 01 100 - SCOPE OF WORK

PART 1 - GENERAL

1.1 **THE WORK:** THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE SPRINT CONSTRUCTION STANDARDS FOR WIRELESS SITES, CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

1.2 **RELATED DOCUMENTS:**

- A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.
- B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.

1.3 **PRECEDENCE:** SHOULD CONFLICTS OCCUR BETWEEN THE STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES INCLUDING THE STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES AND THE CONSTRUCTION DRAWINGS, INFORMATION ON THE CONSTRUCTION DRAWINGS SHALL TAKE PRECEDENCE. NOTIFY SPRINT CONSTRUCTION MANAGER IF THIS OCCURS.

1.4 **NATIONALLY RECOGNIZED CODES AND STANDARDS:**

- A. THE WORK SHALL COMPLY WITH APPLICABLE NATIONAL AND LOCAL CODES AND STANDARDS, LATEST EDITION, AND PORTIONS THEREOF, INCLUDED BUT NOT LIMITED TO THE FOLLOWING:
 1. GR-78-CORE GENERIC REQUIREMENTS FOR THE PHYSICAL DESIGN AND MANUFACTURE OF TELECOMMUNICATIONS EQUIPMENT.
 2. GR-1089 CORE, ELECTROMAGNETIC COMPATIBILITY AND ELECTRICAL SAFETY -GENERIC CRITERIA FOR NETWORK TELECOMMUNICATIONS EQUIPMENT.
 3. NATIONAL FIRE PROTECTION ASSOCIATION CODES AND STANDARDS (NFPA) INCLUDING NFPA 70 (NATIONAL ELECTRICAL CODE - "NEC") AND NFPA 101 (LIFE SAFETY CODE).
 4. AMERICAN SOCIETY FOR TESTING OF MATERIALS (ASTM)
 5. INSTITUTE OF ELECTRONIC AND ELECTRICAL ENGINEERS (IEEE)
 6. AMERICAN CONCRETE INSTITUTE (ACI)
 7. AMERICAN WIRE PRODUCERS ASSOCIATION (AWPA)
 8. CONCRETE REINFORCING STEEL INSTITUTE (CRSI)
 9. AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO)
 10. PORTLAND CEMENT ASSOCIATION (PCA)
 11. NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA)
 12. BRICK INDUSTRY ASSOCIATION (BIA)
 13. AMERICAN WELDING SOCIETY (AWS)
 14. NATIONAL ROOFING CONTRACTORS ASSOCIATION (NRCA)
 15. SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION (SMACNA)
 16. DOOR AND HARDWARE INSTITUTE (DHI)
 17. OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA)
 18. APPLICABLE BUILDING CODES INCLUDING UNIFORM BUILDING CODE, SOUTHERN BUILDING CODE, BOCA, AND THE INTERNATIONAL BUILDING CODE.

1.5 **DEFINITIONS:**

- A. WORK: THE SUM OF TASKS AND RESPONSIBILITIES IDENTIFIED IN THE CONTRACT DOCUMENTS.
- B. COMPANY: SPRINT CORPORATION
- C. ENGINEER: SYNONYMOUS WITH ARCHITECT & ENGINEER AND "A&E". THE DESIGN PROFESSIONAL HAVING PROFESSIONAL RESPONSIBILITY FOR DESIGN OF THE PROJECT.
- D. CONTRACTOR: CONSTRUCTION CONTRACTOR; CONSTRUCTION VENDOR; INDIVIDUAL OR ENTITY WHO AFTER EXECUTION OF A CONTRACT IS BOUND TO ACCOMPLISH THE WORK.
- E. THIRD PARTY VENDOR OR AGENCY: A VENDOR OR AGENCY ENGAGED SEPARATELY BY THE COMPANY, A&E, OR CONTRACTOR TO PROVIDE MATERIALS OR TO ACCOMPLISH SPECIFIC TASKS RELATED TO BUT NOT INCLUDED IN THE WORK.
- F. OFCI: OWNER FURNISHED, CONTRACTOR INSTALLED EQUIPMENT.
- G. CONSTRUCTION MANAGER - ALL PROJECTS RELATED COMMUNICATION TO FLOW THROUGH SPRINT REPRESENTATIVE IN CHARGE OF PROJECT...

1.6 **SITE FAMILIARITY:** CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE SPRINT CONSTRUCTION MANAGER PRIOR TO THE COMMENCEMENT OF WORK. NO COMPENSATION WILL BE AWARDED BASED ON CLAIM OF LACK OF KNOWLEDGE OR FIELD CONDITIONS.

1.7 **POINT OF CONTACT:** COMMUNICATION BETWEEN SPRINT AND THE CONTRACTOR SHALL FLOW THROUGH THE SINGLE SPRINT CONSTRUCTION MANAGER APPOINTED TO MANAGE THE PROJECT FOR SPRINT.

1.8 **ON-SITE SUPERVISION:** THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL EMPLOY A COMPETENT SUPERINTENDENT WHO SHALL BE IN ATTENDANCE AT THE SITE AT ALL TIMES DURING PERFORMANCE OF THE WORK.

1.9 **DRAWINGS, SPECIFICATIONS AND DETAILS REQUIRED AT JOBSITE:** THE CONSTRUCTION CONTRACTOR SHALL MAINTAIN A FULL SET OF THE CONSTRUCTION DRAWINGS, STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES AND THE STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES AT THE JOBSITE FROM MOBILIZATION THROUGH CONSTRUCTION COMPLETION.

- A. THE JOBSITE DRAWINGS, SPECIFICATIONS AND DETAILS SHALL BE CLEARLY MARKED DAILY IN RED PENCIL WITH ANY CHANGES IN CONSTRUCTION OVER WHAT IS DEPICTED IN THE DOCUMENTS. AT CONSTRUCTION COMPLETION, THIS JOBSITE MARKUP SET SHALL BE DELIVERED TO THE COMPANY OR COMPANY'S DESIGNATED REPRESENTATIVE TO BE FORWARDED TO THE COMPANY'S A&E VENDOR FOR PRODUCTION OF "AS-BUILT" DRAWINGS.
- B. DETAILS ARE INTENDED TO SHOW DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK. CONTRACTOR SHALL NOTIFY SPRINT CONSTRUCTION MANAGER OF ANY VARIATIONS PRIOR TO PROCEEDING WITH THE WORK.
- C. DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS NOTED OTHERWISE. SPACING BETWEEN EQUIPMENT IS THE REQUIRED CLEARANCE. SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, EXISTING CONDITIONS AND/OR DESIGN INTENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A CLARIFICATION FROM THE SPRINT CONSTRUCTION MANAGER PRIOR TO PROCEEDING WITH THE WORK.

1.10 **USE OF JOB SITE:** THE CONTRACTOR SHALL CONFINE ALL CONSTRUCTION AND RELATED OPERATIONS INCLUDING STAGING AND STORAGE OF MATERIALS AND EQUIPMENT, PARKING, TEMPORARY FACILITIES, AND WASTE STORAGE TO THE LEASE PARCEL UNLESS OTHERWISE PERMITTED BY THE CONTRACT DOCUMENTS.

1.11 **UTILITIES SERVICES:** WHERE NECESSARY TO CUT EXISTING PIPES, ELECTRICAL WIRES, CONDUITS, CABLES, ETC., OF UTILITY SERVICES, OR OF FIRE PROTECTION OR COMMUNICATIONS SYSTEMS, THEY SHALL BE CUT AND CAPPED AT SUITABLE PLACES OR WHERE SHOWN. ALL SUCH ACTIONS SHALL BE COORDINATED WITH THE UTILITY COMPANY INVOLVED:

1.12 **PERMITS / FEES:** WHEN REQUIRED THAT A PERMIT OR CONNECTION FEE BE PAID TO A PUBLIC UTILITY PROVIDER FOR NEW SERVICE TO THE CONSTRUCTION PROJECT, PAYMENT OF SUCH FEE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

1.13 CONTRACTOR SHALL TAKE ALL MEASURES AND PROVIDE ALL MATERIAL NECESSARY FOR PROTECTING EXISTING EQUIPMENT AND PROPERTY.

1.14 **METHODS OF PROCEDURE (MOPS) FOR CONSTRUCTION:** CONTRACTOR SHALL PERFORM WORK AS DESCRIBED IN THE FOLLOWING INSTALLATION AND COMMISSIONING MOPS.

- A. TOP HAT
- B. HOW TO INSTALL A NEW CABINET
- C. BASE BAND UNIT IN EXISTING UNIT
- D. INSTALLATION OF BATTERIES
- E. INSTALLATION OF HYBRID CABLE
- F. INSTALLATION OF RRH'S
- G. CABLING
- H. TS-0200 REV 4 - ANTENNA LINE ACCEPTANCE STANDARDS
- I. SPRINT CELL SITE ENGINEERING NOTICE - EN 2012-001, REV 1.
- J. COMMISSIONING MOPS
- K. SPRINT CELL SITE ENGINEERING NOTICE - EN-2013-002
- L. SPRINT ENGINEERING LETTER - EL-0504
- M. SPRINT ENGINEERING LETTER - EL-0568
- N. SPRINT TECHNICAL SPECIFICATION - TS-0193

1.15 **USE OF ELECTRONIC PROJECT MANAGEMENT SYSTEMS:**

- A. CONTRACTOR WILL UTILIZE ITS BEST EFFORTS TO WORK WITH SPRINT ELECTRONIC PROJECT MANAGEMENT SYSTEMS. CONTRACTOR UNDERSTANDS THAT SUFFICIENT INTERNET ACCESS, EQUIVALENT TO "BROADBAND" OR BETTER, IS REQUIRED TO TIMELY AND EFFECTIVELY UTILIZE SPRINT DATA AND DOCUMENT MANAGEMENT SYSTEMS AND AGREES TO MAINTAIN APPROPRIATE CONNECTIONS FOR CONTRACTOR'S STAFF AND OFFICES THAT ARE COMPATIBLE WITH SPRINT DATA AND DOCUMENT MANAGEMENT SYSTEMS

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 **TEMPORARY UTILITIES AND FACILITIES:** THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY UTILITIES AND FACILITIES NECESSARY EXCEPT AS OTHERWISE INDICATED IN THE CONSTRUCTION DOCUMENTS. TEMPORARY UTILITIES AND FACILITIES INCLUDE POTABLE WATER, HEAT, HVAC, ELECTRICITY, SANITARY FACILITIES, WASTE DISPOSAL FACILITIES, AND TELEPHONE/COMMUNICATION SERVICES. PROVIDE TEMPORARY UTILITIES AND FACILITIES IN ACCORDANCE WITH OSHA AND THE AUTHORITY HAVING JURISDICTION. CONTRACTOR MAY UTILIZE THE COMPANY ELECTRICAL SERVICE IN THE COMPLETION OF THE WORK WHEN IT BECOMES AVAILABLE. USE OF THE LESSORS OR SITE OWNER'S UTILITIES OR FACILITIES IS EXPRESSLY FORBIDDEN EXCEPT AS OTHERWISE ALLOWED IN THE CONTRACT DOCUMENTS.

3.2 **ACCESS TO WORK:** THE CONTRACTOR SHALL PROVIDE ACCESS TO THE JOB SITE FOR AUTHORIZED COMPANY PERSONNEL AND AUTHORIZED REPRESENTATIVES OF THE ARCHITECT/ENGINEER DURING ALL PHASES OF THE WORK.

3.3 **TESTING: REQUIREMENTS FOR TESTING BY THIS CONTRACTOR SHALL BE AS INDICATED HEREWITH, ON THE CONSTRUCTION DRAWINGS, AND IN THE INDIVIDUAL SECTIONS OF THESE SPECIFICATIONS.** SHOULD COMPANY CHOOSE TO ENGAGE ANY THIRD-PARTY TO CONDUCT ADDITIONAL TESTING, THE CONTRACTOR SHALL COOPERATE WITH AND PROVIDE A WORK AREA FOR COMPANY'S TEST AGENCY.

3.4 **DIMENSIONS:** VERIFY DIMENSIONS INDICATED ON DRAWINGS WITH FIELD DIMENSIONS BEFORE FABRICATION OR ORDERING OF MATERIALS. DO NOT SCALE DRAWINGS.

3.5 **EXISTING CONDITIONS:** NOTIFY THE SPRINT CONSTRUCTION MANAGER OF EXISTING CONDITIONS DIFFERING FROM THOSE INDICATED ON THE DRAWINGS. DO NOT REMOVE OR ALTER STRUCTURAL COMPONENTS WITHOUT PRIOR WRITTEN APPROVAL FROM THE ARCHITECT AND ENGINEER.

SECTION 01 200 - COMPANY FURNISHED MATERIAL AND EQUIPMENT

PART 1 - GENERAL

1.1 **THE WORK:** THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE OTHER CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

1.2 **RELATED DOCUMENTS:**

- A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.
- B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 **RECEIPT OF MATERIAL AND EQUIPMENT:**

- A. COMPANY FURNISHED MATERIAL AND EQUIPMENT IS IDENTIFIED ON THE RF DATA SHEET IN THE CONSTRUCTION DOCUMENTS.
- B. THE CONTRACTOR IS RESPONSIBLE FOR SPRINT PROVIDED MATERIAL AND EQUIPMENT AND UPON RECEIPT SHALL:
 1. ACCEPT DELIVERIES AS SHIPPED AND TAKE RECEIPT.
 2. VERIFY COMPLETENESS AND CONDITION OF ALL DELIVERIES.
 3. TAKE RESPONSIBILITY FOR EQUIPMENT AND PROVIDE INSURANCE PROTECTION AS REQUIRED IN AGREEMENT.
 4. RECORD ANY DEFECTS OR DAMAGES AND WITHIN TWENTY-FOUR HOURS AFTER RECEIPT, REPORT TO SPRINT OR ITS DESIGNATED PROJECT REPRESENTATIVE OF SUCH.
 5. PROVIDE SECURE AND NECESSARY WEATHER PROTECTED WAREHOUSING.
 6. COORDINATE SAFE AND SECURE TRANSPORTATION OF MATERIAL AND EQUIPMENT, DELIVERING AND OFF-LOADING FROM CONTRACTOR'S WAREHOUSE TO SITE.

3.2 **DELIVERABLES:**

- A. COMPLETE SHIPPING AND RECEIPT DOCUMENTATION IN ACCORDANCE WITH COMPANY PRACTICE.
- B. IF APPLICABLE, COMPLETE LOST/STOLEN/DAMAGED DOCUMENTATION REPORT AS NECESSARY IN ACCORDANCE WITH COMPANY PRACTICE, AND AS DIRECTED BY COMPANY.
- C. UPLOAD DOCUMENTATION INTO SPRINT SITE MANAGEMENT SYSTEM (SMS) AND/OR PROVIDE HARD COPY DOCUMENTATION AS REQUESTED.

SECTION 01 300 - CELL SITE CONSTRUCTION

PART 1 - GENERAL

1.1 **THE WORK:** THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE OTHER CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

1.2 **RELATED DOCUMENTS:**

- A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.
- B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.

1.3 **NOTICE TO PROCEED:**

- A. NO WORK SHALL COMMENCE PRIOR TO COMPANY'S WRITTEN NOTICE TO PROCEED AND THE ISSUANCE OF THE WORK ORDER.
- B. UPON RECEIVING NOTICE TO PROCEED, CONTRACTOR SHALL FULLY PERFORM ALL WORK NECESSARY TO PROVIDE SPRINT WITH AN OPERATIONAL WIRELESS FACILITY.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 **FUNCTIONAL REQUIREMENTS:**

- A. THE ACTIVITIES DESCRIBED IN THIS PARAGRAPH REPRESENT MINIMUM ACTIONS AND PROCESSES REQUIRED TO SUCCESSFULLY COMPLETE THE WORK. THE ACTIVITIES DESCRIBED ARE NOT EXHAUSTIVE, AND CONTRACTOR SHALL TAKE ANY AND ALL ACTIONS AS NECESSARY TO SUCCESSFULLY COMPLETE THE CONSTRUCTION OF A FULLY FUNCTIONING WIRELESS FACILITY AT THE SITE IN ACCORDANCE WITH COMPANY PROCESSES.
- B. SUBMIT SPECIFIC DOCUMENTATION AS INDICATED HEREIN, AND OBTAIN REQUIRED APPROVALS WHILE THE WORK IS BEING PERFORMED.
- C. MANAGE AND CONDUCT ALL FIELD CONSTRUCTION SERVICE RELATED ACTIVITIES
- D. PROVIDE CONSTRUCTION ACTIVITIES TO THE EXTENT REQUIRED BY THE CONTRACT DOCUMENTS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

1. PERFORM ANY REQUIRED SITE ENVIRONMENTAL MITIGATION.
2. PREPARE GROUND SITES; PROVIDE DE-GRUBBING; AND ROUGH AND FINAL GRADING, AND COMPOUND SURFACE TREATMENTS.
3. MANAGE AND CONDUCT ALL ACTIVITIES FOR INSTALLATION OF UTILITIES INCLUDING ELECTRICAL AND TELCO BACKHAUL.
4. INSTALL UNDERGROUND FACILITIES INCLUDING UNDERGROUND POWER AND COMMUNICATIONS CONDUITS, AND UNDERGROUND GROUNDING SYSTEM.
5. INSTALL ABOVE GROUND GROUNDING SYSTEMS.
6. PROVIDE NEW HVAC INSTALLATIONS AND MODIFICATIONS.
7. INSTALL "H-FRAMES", CABINETS AND SHELTERS AS INDICATED.
8. INSTALL ROADS, ACCESS WAYS, CURBS AND DRAINS AS INDICATED.
9. ACCOMPLISH REQUIRED MODIFICATION OF EXISTING FACILITIES.
10. PROVIDE ANTENNA SUPPORT STRUCTURE FOUNDATIONS.
11. PROVIDE SLABS AND EQUIPMENT PLATFORMS.
12. INSTALL COMPOUND FENCING, SIGHT SHIELDING, LANDSCAPING AND ACCESS BARRIERS.
13. PERFORM INSPECTION AND MATERIAL TESTING AS REQUIRED HEREINAFTER.
14. CONDUCT SITE RESISTANCE TO EARTH TESTING AS REQUIRED HEREINAFTER
15. INSTALL FIXED GENERATOR SETS AND OTHER STANDBY POWER SOLUTIONS.
16. INSTALL TOWERS, ANTENNA SUPPORT STRUCTURES AND PLATFORMS ON EXISTING TOWERS AS REQUIRED.
17. INSTALL CELL SITE RADIOS, MICROWAVE, GPS, COAXIAL MAINLINE, ANTENNAS, CROSS BAND COUPLERS, TOWER TOP AMPLIFIERS, LOW NOISE AMPLIFIERS AND RELATED EQUIPMENT.
18. PERFORM, DOCUMENT, AND CLOSE OUT ANY CONSTRUCTION CONTROL DOCUMENTS THAT MAY BE REQUIRED BY GOVERNMENT AGENCIES AND LANDLORDS.
19. PERFORM ANTENNA AND COAX SWEEP TESTING AND MAKE ANY AND ALL NECESSARY CORRECTIONS.
20. REMAIN ON SITE MOBILIZED THROUGHOUT HAND-OFF AND INTEGRATION TO ASSIST AS NEEDED UNTIL SITE IS DEEMED SUBSTANTIALLY COMPLETE AND PLACED "ON AIR."

3.2 **GENERAL REQUIREMENTS FOR CIVIL CONSTRUCTION:**

- A. CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH. AT THE COMPLETION OF THE WORK, CONTRACTOR SHALL REMOVE FROM THE SITE ALL REMAINING RUBBISH, IMPLEMENTS, TEMPORARY FACILITIES, AND SURPLUS MATERIALS.
- B. EQUIPMENT ROOMS SHALL AT ALL TIMES BE MAINTAINED "BROOM CLEAN" AND CLEAR OF DEBRIS.
- C. CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO DISCOVER AND LOCATE ANY HAZARDOUS CONDITION.
 1. IN THE EVENT CONTRACTOR ENCOUNTERS ANY HAZARDOUS CONDITION WHICH HAS NOT BEEN ABATED OR OTHERWISE MITIGATED, CONTRACTOR AND ALL OTHER PERSONS SHALL IMMEDIATELY STOP WORK IN THE AFFECTED AREA AND NOTIFY COMPANY IN WRITING. THE WORK IN THE AFFECTED AREA SHALL NOT BE RESUMED EXCEPT BY WRITTEN NOTIFICATION BY COMPANY.
 2. CONTRACTOR AGREES TO USE CARE WHILE ON THE SITE AND SHALL NOT TAKE ANY ACTION THAT WILL OR MAY RESULT IN OR CAUSE THE HAZARDOUS CONDITION TO BE FURTHER RELEASED IN THE ENVIRONMENT, OR TO FURTHER EXPOSE INDIVIDUALS TO THE HAZARD.
- D. CONTRACTOR'S ACTIVITIES SHALL BE RESTRICTED TO THE PROJECT LIMITS. SHOULD AREAS OUTSIDE THE PROJECT LIMITS BE AFFECTED BY CONTRACTOR'S ACTIVITIES, CONTRACTOR SHALL IMMEDIATELY RETURN THEM TO ORIGINAL CONDITION
- E. CONDUCT TESTING AS REQUIRED HEREIN.

3.3 **DELIVERABLES:**

- A. CONTRACTOR SHALL REVIEW, APPROVE, AND SUBMIT TO SPRINT SHOP DRAWINGS, PRODUCT DATA, SAMPLES, AND SIMILAR SUBMITTALS AS REQUIRED HEREINAFTER
- B. PROVIDE DOCUMENTATION INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING. DOCUMENTATION SHALL BE FORWARDED IN ORIGINAL FORMAT AND/OR UPLOADED INTO SMS.
 1. ALL CORRESPONDENCE AND PRELIMINARY CONSTRUCTION REPORTS.
 2. PROJECT PROGRESS REPORTS.
 3. CIVIL CONSTRUCTION START DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
 4. ELECTRICAL SERVICE COMPLETION DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
 5. LINES AND ANTENNA INSTALL DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
 6. POWER INSTALL DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
 7. TELCO READY DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
 8. PPC (OR SHELTER) INSTALL DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
 9. TOWER CONSTRUCTION START DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
 10. TOWER CONSTRUCTION COMPLETE DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
 11. BTS AND RADIO EQUIPMENT DELIVERED AT SITE DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
 12. NETWORK OPERATIONS HANDOFF CHECKLIST (HOC WALK) COMPLETE (UPLOAD FORM IN SMS)
 13. CIVIL CONSTRUCTION COMPLETE DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
 14. SITE CONSTRUCTION PROGRESS PHOTOS UNLOADED INTO SMS.



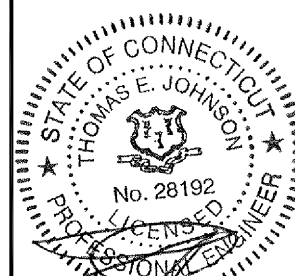
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CHECKED BY: *G. J. J. / TEJ*

APPROVED BY: JMM/TEJ

SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
1	06/19/18	CONSTRUCTION REVISED	PN
0	04/04/18	ISSUED FOR CONSTRUCTION	PN

SITE NUMBER:
CT33XC017
SITE NAME:
POMFRET SCHOOL (SBA)

SITE ADDRESS:
398 POMFRET STREET
POMFRET, CT 06258

SHEET TITLE
OUTLINE SPECIFICATIONS

SHEET NUMBER
SP-1

CONTINUED FROM SP-1:

SECTION 01 400 - SUBMITTALS, TESTS, AND INSPECTIONS

PART 1 - GENERAL

1.1 THE WORK: THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE OTHER CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

1.2 RELATED DOCUMENTS:

- A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.
- B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.

1.3 SUBMITTALS:

- A. THE WORK IN ALL ASPECTS SHALL COMPLY WITH THE CONSTRUCTION DRAWINGS AND THESE SPECIFICATIONS.
- B. SUBMIT THE FOLLOWING TO COMPANY REPRESENTATIVE FOR APPROVAL.
 1. CONCRETE MIX-DESIGNS FOR TOWER FOUNDATIONS, ANCHORS PIERS, AND CONCRETE PAVING.
 2. CONCRETE BREAK TESTS AS SPECIFIED HEREIN.
 3. SPECIAL FINISHES FOR INTERIOR SPACES, IF ANY.
 4. ALL EQUIPMENT AND MATERIALS SO IDENTIFIED ON THE CONSTRUCTION DRAWINGS.
 5. CHEMICAL GROUNDING DESIGN.
- C. ALTERNATES: AT THE COMPANY'S REQUEST, ANY ALTERNATIVES TO THE MATERIALS OR METHODS SPECIFIED SHALL BE SUBMITTED TO SPRINT'S CONSTRUCTION MANAGER FOR APPROVAL PRIOR TO BEING SHIPPED TO SITE. SPRINT WILL REVIEW AND APPROVE ONLY THOSE REQUESTS MADE IN WRITING. NO VERBAL APPROVALS WILL BE CONSIDERED. SUBMITTAL FOR APPROVAL SHALL INCLUDE A STATEMENT OF COST REDUCTION PROPOSED FOR USE OF ALTERNATE PRODUCT.

1.4 TESTS AND INSPECTIONS:

- A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION TESTS, INSPECTIONS AND PROJECT DOCUMENTATION.
- B. CONTRACTOR SHALL ACCOMPLISH TESTING INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
 1. COAX SWEEPS AND FIBER TESTS PER SPRINT TS-0200 CURRENT VERSION ANTENNA LINE ACCEPTANCE STANDARDS.
 2. AGL, AZIMUTH AND DOWNTILT USING ELECTRONIC COMMERCIAL MADE-FOR-THE-PURPOSE ANTENNA ALIGNMENT TOOL.
 3. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL CORRECTIONS TO ANY WORK IDENTIFIED AS UNACCEPTABLE IN SITE INSPECTION ACTIVITIES AND/OR AS A RESULT OF TESTING.
- C. REQUIRED CLOSEOUT DOCUMENTATION INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING:
 1. AZIMUTH, DOWNTILT, AGL - UPLOAD REPORT FROM ANTENNA ALIGNMENT TOOL TO SITERRA TASK 465. INSTALLED AZIMUTH, DOWNTILT, AND AGL MUST CONFORM TO THE RF DATA SHEETS. SWEEP AND FIBER TESTS
 2. SCANABLE BARCODE PHOTOGRAPHS OF TOWER TOP AND INACCESSIBLE SERIALIZED EQUIPMENT
 3. ALL AVAILABLE JURISDICTIONAL INFORMATION
 4. PDF SCAN OF REDLINES PRODUCED IN FIELD
 5. ELECTRONIC AS-BUILT DRAWINGS IN AUTOCAD AND PDF FORMATS. ANY FIELD CHANGE MUST BE REFLECTED BY MODIFYING THE PLANS, ELEVATIONS, AND DETAILS IN THE DRAWING SETS. GENERAL NOTES INDICATING MODIFICATIONS WILL NOT BE ACCEPTED. CHANGES SHALL BE HIGHLIGHTED AS "CLOUDS" IDENTIFIED AS THE "AS-BUILT" CONDITION.
 6. LIEN WAIVERS
 7. FINAL PAYMENT APPLICATION
 8. REQUIRED FINAL CONSTRUCTION PHOTOS
 9. CONSTRUCTION AND COMMISSIONING CHECKLIST COMPLETE WITH NO DEFICIENT ITEMS
 10. ALL POST NTP TASKS INCLUDING DOCUMENT UPLOADS COMPLETED IN SITERRA (SPRINTS DOCUMENT REPOSITORY OF RECORD).

1.5 COMMISSIONING: PERFORM ALL COMMISSIONING AS REQUIRED BY APPLICABLE MOPS

1.6 INTEGRATION: PERFORM ALL INTEGRATION ACTIVITIES AS REQUIRED BY APPLICABLE MOPS

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 REQUIREMENTS FOR TESTING:

- A. THIRD PARTY TESTING AGENCY: WHEN THE USE OF A THIRD PARTY INDEPENDENT TESTING AGENCY IS REQUIRED, THE AGENCY THAT IS SELECTED MUST PERFORM SUCH WORK ON A REGULAR BASIS IN THE STATE WHERE THE PROJECT IS LOCATED AND HAVE A THOROUGH UNDERSTANDING OF LOCAL AVAILABLE MATERIALS, INCLUDING THE SOIL, ROCK, AND GROUNDWATER CONDITIONS.
 1. THE THIRD PARTY TESTING AGENCY IS TO BE FAMILIAR WITH THE APPLICABLE REQUIREMENTS FOR THE TESTS TO BE DONE, EQUIPMENT TO BE USED, AND ASSOCIATED HEALTH AND SAFETY ISSUES.
 2. EXPERIENCE IN SOILS, CONCRETE, MASONRY, AGGREGATE, AND ASPHALT TESTING USING ASTM, AASJTO, AND OTHER METHODS IS NEEDED.
 3. EXPERIENCE IN SOILS, CONCRETE, MASONRY, AGGREGATE, AND ASPHALT TESTING USING ASTM, AASJTO, AND OTHER METHODS IS NEEDED.

3.2 REQUIRED TESTS:

- A. CONTRACTOR SHALL ACCOMPLISH TESTING INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
 1. CONCRETE CYLINDER BREAK TESTS FOR THE TOWER AND ANCHOR FOUNDATIONS AS SPECIFIED IN SECTION: PORTLAND CEMENT CONCRETE PAVING.
 2. ASPHALT ROADWAY COMPACTED THICKNESS, SURFACE SMOOTHNESS, AND COMPACTED DENSITY TESTING AS SPECIFIED IN SECTION: HOT MIX ASPHALT PAVING.
 3. FIELD QUALITY CONTROL TESTING AS SPECIFIED IN SECTION: PORTLAND CEMENT CONCRETE PAVING.
 4. TESTING REQUIRED UNDER SECTION: AGGREGATE BASE FOR ACCESS ROADS, PADS AND ANCHOR LOCATIONS
 5. STRUCTURAL BACKFILL COMPACTION TESTS FOR THE TOWER FOUNDATION.
 6. SITE RESISTANCE TO EARTH TESTING PER EXHIBIT: CELL SITE GROUNDING SYSTEM DESIGN.
 7. ANTENNA AND COAX SWEEP TESTS PER EXHIBIT: ANTENNA TRANSMISSION LINE ACCEPTANCE STANDARDS.
 8. GROUNDING AT ANTENNA MASTS FOR GPS AND ANTENNAS
 9. ALL OTHER TESTS REQUIRED BY COMPANY OR JURISDICTION.

3.3 REQUIRED INSPECTIONS:

- A. SCHEDULE INSPECTIONS WITH COMPANY REPRESENTATIVE.
- B. CONDUCT INSPECTIONS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
 1. GROUNDING SYSTEM INSTALLATION PRIOR TO EARTH CONCEALMENT DOCUMENTED WITH DIGITAL PHOTOGRAPHS BY CONTRACTOR, APPROVED BY A&E OR SPRINT REPRESENTATIVE.
 2. FORMING FOR CONCRETE AND REBAR PLACEMENT PRIOR TO POUR DOCUMENTED WITH DIGITAL PHOTOGRAPHS BY CONTRACTOR, APPROVED BY A&E OR SPRINT REPRESENTATIVE.
 3. COMPACTION OF BACKFILL MATERIALS; AGGREGATE BASE FOR ROADS, PADS, AND ANCHORS; ASPHALT PAVING; AND SHAFT BACKFILL FOR CONCRETE AND WOOD POLES, BY INDEPENDENT THIRD PARTY AGENCY.
 4. PRE- AND POST-CONSTRUCTION ROOFTOP AND STRUCTURAL INSPECTIONS ON EXISTING FACILITIES.
 5. TOWER ERECTION SECTION STACKING AND PLATFORM ATTACHMENT DOCUMENTED BY DIGITAL PHOTOGRAPHS BY THIRD PARTY AGENCY.
 6. ANTENNA AZIMUTH, DOWN TILT AND PER SUNLIGHT TOOL SUNSIGHT INSTRUMENTS - ANTENNALIGN ALIGNMENT TOOL (AAT)
 7. VERIFICATION DOCUMENTED WITH THE ANTENNA CHECKLIST REPORT, BY A&E, SITE DEVELOPMENT REP, OR RF REP.
 8. FINAL INSPECTION CHECKLIST AND HANDOFF WALK (HOC). SIGNED FORM SHOWING ACCEPTANCE BY FIELD OPS IS TO BE UPLOADED INTO SMS.
 9. COAX SWEEP AND FIBER TESTING DOCUMENTS SUBMITTED VIA SMS FOR RF APPROVAL.
 10. SCAN-ABLE BARCODE PHOTOGRAPHS OF TOWER TOP AND INACCESSIBLE SERIALIZED EQUIPMENT
 11. ALL AVAILABLE JURISDICTIONAL INFORMATION
 12. PDF SCAN OF REDLINES PRODUCED IN FIELD
- E. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL CORRECTIONS TO ANY WORK IDENTIFIED AS UNACCEPTABLE IN SITE INSPECTION ACTIVITIES AND/OR AS A RESULT OF TESTING.
- F. CONSTRUCTION INSPECTIONS AND CORRECTIVE MEASURES SHALL BE DOCUMENTED BY THE CONTRACTOR WITH WRITTEN REPORTS AND PHOTOGRAPHS. PHOTOGRAPHS MUST BE DIGITAL AND OF SUFFICIENT QUALITY TO CLEARLY SHOW THE SITE CONSTRUCTION. PHOTOGRAPHS MUST CLEARLY IDENTIFY THE PHOTOGRAPHED ITEM AND BE LABELED WITH THE SITE CASCADE NUMBER, SITE NAME, DESCRIPTION, AND DATE.

3.4 DELIVERABLES: TEST AND INSPECTION REPORTS AND CLOSEOUT DOCUMENTATION SHALL BE UPLOADED TO THE SMS AND/OR FORWARDED TO SPRINT FOR INCLUSION INTO THE PERMANENT SITE FILES.

- A. THE FOLLOWING TEST AND INSPECTION REPORTS SHALL BE PROVIDED AS APPLICABLE.
 1. CONCRETE MIX AND CYLINDER BREAK REPORTS.
 2. STRUCTURAL BACKFILL COMPACTION REPORTS.
 3. SITE RESISTANCE TO EARTH TEST.
 4. ANTENNA AZIMUTH AND DOWN TILT VERIFICATION
 5. TOWER ERECTION INSPECTIONS AND MEASUREMENTS DOCUMENTING TOWER INSTALLED PER SUPPLIER'S REQUIREMENTS AND THE APPLICABLE SECTIONS HEREIN.
 6. COAX CABLE SWEEP TESTS PER COMPANY'S "ANTENNA LINE ACCEPTANCE STANDARDS".
- B. REQUIRED CLOSEOUT DOCUMENTATION INCLUDES THE FOLLOWING:
 1. TEST WELLS AND TRENCHES: PHOTOGRAPHS OF ALL TEST WELLS; PHOTOGRAPHS SHOWING ALL OPEN EXCAVATIONS AND TRENCHING PRIOR TO BACKFILLING SHOWING A TAPE MEASURE VISIBLE IN THE EXCAVATIONS INDICATING DEPTH.
 2. CONDUITS, CONDUCTORS AND GROUNDING: PHOTOGRAPHS SHOWING TYPICAL INSTALLATION OF CONDUCTORS AND CONNECTORS; PHOTOGRAPHS SHOWING TYPICAL BEND RADIUS OF INSTALLED GROUND WIRES AND GROUND ROD SPACING;
 3. CONCRETE FORMS AND REINFORCING: CONCRETE FORMING AT TOWER AND EQUIPMENT/SHELTER PAD/FOUNDATIONS - PHOTOGRAPHS SHOWING ALL REINFORCING STEEL, UTILITY AND CONDUIT STUB OUTS; PHOTOGRAPHS SHOWING CONCRETE POUR OF SHELTER SLAB/FOUNDATION, TOWER FOUNDATION AND GUY ANCHORS WITH VIBRATOR IN USE; PHOTOGRAPHS SHOWING EACH ANCHOR ON GUYED TOWERS, BEFORE CONCRETE POUR.
 4. TOWER, ANTENNAS AND MAINLINE: INSPECTION AND PHOTOGRAPHS OF SECTION STACKING; INSPECTION AND PHOTOGRAPHS OF PLATFORM COMPONENT ATTACHMENT POINTS; PHOTOGRAPHS OF TOWER TOP GROUNDING; PHOTOS OF TOWER COAX LINE COLOR CODING AT THE TOP AND AT GROUND LEVEL; INSPECTION AND PHOTOGRAPHS OF OPERATIONAL OF TOWER LIGHTING, AND PLACEMENT OF FAA REGISTRATION SIGN; PHOTOGRAPHS SHOWING ADDITIONAL GROUNDING POINTS FOR TOWERS GREATER THAN 200 FEET.; PHOTOS OF ANTENNA GROUND BAR, EQUIPMENT GROUND BAR, AND MASTER GROUND BAR; PHOTOS OF GPS ANTENNA(S); PHOTOS OF EACH SECTOR OF ANTENNAS; ONE PHOTOGRAPH LOOKING AT THE SECTOR AND ONE FROM BEHIND SHOWING THE PROJECTED COVERAGE AREA; PHOTOS OF COAX WEATHERPROOFING - TOP AND BOTTOM; PHOTOS OF COAX GROUNDING--TOP AND BOTTOM; PHOTOS OF ANTENNA AND MAST GROUNDING; PHOTOS OF COAX CABLE ENTRY INTO SHELTER; PHOTOS OF PLATFORM MECHANICAL CONNECTIONS TO TOWER/MONOPOLE.
 5. ROOF TOPS: PRE-CONSTRUCTION AND POST-CONSTRUCTION VISUAL INSPECTION AND PHOTOGRAPHS OF THE ROOF AND INTERIOR TO DETERMINE AND DOCUMENT CONDITIONS; ROOF TOP CONSTRUCTION INSPECTIONS AS REQUIRED BY THE JURISDICTION; PHOTOGRAPHS OF CABLE TRAY AND/OR ICE BRIDGE; PHOTOGRAPHS OF DOGHOUSE/CABLE EXIT FROM ROOF;
 6. SITE LAYOUT - PHOTOGRAPHS OF THE OVERALL COMPOUND, INCLUDING EQUIPMENT PLATFORM FROM ALL FOUR CORNERS.
 7. FINISHED UTILITIES: CLOSE-UP PHOTOGRAPHS OF THE PPC BREAKER PANEL; CLOSE-UP PHOTOGRAPH OF THE INSIDE OF THE TELCO PANEL AND NIU; CLOSE-UP PHOTOGRAPH OF THE POWER METER AND DISCONNECT; PHOTOS OF POWER AND TELCO ENTRANCE TO COMPANY ENCLOSURE; PHOTOGRAPHS AT METER BOX AND/OR FACILITY DISTRIBUTION PANEL.
 8. REQUIRED MATERIALS CERTIFICATIONS: CONCRETE MIX DESIGNS; MILL CERTIFICATION FOR ALL REINFORCING AND STRUCTURAL STEEL; AND ASPHALT PAVING MIX DESIGN.
 9. ANY AND ALL SUBMITTALS BY THE JURISDICTION OR COMPANY.

SECTION 01 500 - PROJECT REPORTING

PART 1 - GENERAL

1.1 THE WORK: THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE OTHER CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

1.2 RELATED DOCUMENTS:

- A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.
- B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 WEEKLY REPORTS:

- A. CONTRACTOR SHALL PROVIDE SPRINT WITH WEEKLY REPORTS SHOWING PROJECT STATUS. THIS STATUS REPORT FORMAT WILL BE PROVIDED TO THE CONTRACTOR BY SPRINT. THE REPORT WILL CONTAIN SITE ID NUMBER, THE MILESTONES FOR EACH SITE, INCLUDING THE BASELINE DATE, ESTIMATED COMPLETION DATE AND ACTUAL COMPLETION DATE.

B. REPORT INFORMATION WILL BE TRANSMITTED TO SPRINT VIA ELECTRONIC MEANS AS REQUIRED. THIS INFORMATION WILL PROVIDE A BASIS FOR PROGRESS MONITORING AND PAYMENT.

3.2 PROJECT CONFERENCE CALLS:

- A. SPRINT MAY HOLD WEEKLY PROJECT CONFERENCE CALLS. CONTRACTOR WILL BE REQUIRED TO COMMUNICATE SITE STATUS, MILESTONE COMPLETIONS AND UPCOMING MILESTONE PROJECTIONS, AND ANSWER ANY OTHER SITE STATUS QUESTIONS AS NECESSARY.

3.3 PROJECT TRACKING IN SMS:

- A. CONTRACTOR SHALL PROVIDE SCHEDULE UPDATES AND PROJECTIONS IN THE SMS SYSTEM ON A WEEKLY BASIS.

3.4 ADDITIONAL REPORTING:

- A. ADDITIONAL OR ALTERNATE REPORTING REQUIREMENTS MAY BE ADDED TO THE REPORT AS DETERMINED TO BE REASONABLY NECESSARY BY COMPANY.

3.5 PROJECT PHOTOGRAPHS:

- A. FILE DIGITAL PHOTOGRAPHS OF COMPLETED SITE IN JPEG FORMAT IN THE SMS PHOTO LIBRARY FOR THE RESPECTIVE SITE. PHOTOGRAPHS SHALL BE CLEARLY LABELED WITH SITE NUMBER, NAME AND DESCRIPTION, AND SHALL INCLUDE AT A MINIMUM THE FOLLOWING AS APPLICABLE:
 1. SHELTER AND TOWER OVERVIEW.
 2. TOWER FOUNDATION(S) - FORMS AND STEEL BEFORE POUR (EACH ANCHOR ON GUYED TOWERS).
 3. TOWER FOUNDATION(S) POUR WITH VIBRATOR IN USE (EACH ANCHOR ON GUYED TOWERS).
 4. TOWER STEEL AS BEING INSTALLED INTO HOLE (SHOW ANCHOR STEEL ON GUYED TOWERS).
 5. PHOTOS OF TOWER SECTION STACKING.
 6. CONCRETE TESTING / SAMPLES.
 7. PLACING OF ANCHOR BOLTS IN TOWER FOUNDATION.
 8. BUILDING/WATER TANK FROM ROAD FOR TENANT IMPROVEMENTS OR COMMENTS.
 9. SHELTER FOUNDATION--FORMS AND STEEL BEFORE POURING.
 10. SHELTER FOUNDATION POUR WITH VIBRATOR IN USE.
 11. COAX CABLE ENTRY INTO SHELTER.
 12. PLATFORM MECHANICAL CONNECTIONS TO TOWER/MONOPOLE.
 13. ROOFTOP PRE AND POST CONSTRUCTION PHOTOS TO INCLUDE PENETRATIONS AND INTERIOR CEILING.
 14. PHOTOS OF TOWER TOP COAX LINE COLOR CODING AND COLOR CODING AT GROUND LEVEL.
 15. PHOTOS OF ALL APPROPRIATE COMPANY OR REGULATORY SIGNAGE.
 16. PHOTOS OF EQUIPMENT BOLT DOWN INSIDE SHELTER.
 17. POWER AND TELCO ENTRANCE TO COMPANY ENCLOSURE AND POWER AND TELCO SUPPLY LOCATIONS INCLUDING METER/DISCONNECT.
 18. ELECTRICAL TRENCH(S) WITH ELECTRICAL / CONDUIT BEFORE BACKFILL.
 19. ELECTRICAL TRENCH(S) WITH FOIL-BACKED TAPE BEFORE FURTHER BACKFILL.
 20. TELCO TRENCH WITH TELEPHONE / CONDUIT BEFORE BACKFILL.
 21. TELCO TRENCH WITH FOIL-BACKED TAPE BEFORE FURTHER BACKFILL.
 22. SHELTER GROUND-RING TRENCH WITH GROUND-WIRE BEFORE BACKFILL (SHOW ALL CAD WELDS AND BEND RADI).
 23. TOWER GROUND-RING TRENCH WITH GROUND-WIRE BEFORE BACKFILL (SHOW ALL CAD WELDS AND BEND RADI).
 24. FENCE GROUND-RING TRENCH WITH GROUND-WIRE BEFORE BACKFILL (SHOW ALL CAD WELDS AND BEND RADI).
 25. ALL BTS GROUND CONNECTIONS.
 26. ALL GROUND TEST WELLS.
 27. ANTENNA GROUND BAR AND EQUIPMENT GROUND BAR.
 28. ADDITIONAL GROUNDING POINTS ON TOWERS ABOVE 200'.
 29. HVAC UNITS INCLUDING CONDENSERS ON SPLIT SYSTEMS.
 30. GPS ANTENNAS.
 31. CABLE TRAY AND/OR WAVEGUIDE BRIDGE.
 32. DOGHOUSE/CABLE EXIT FROM ROOF.
 33. EACH SECTOR OF ANTENNAS; ONE PHOTOGRAPH LOOKING AT THE SECTOR AND ONE FROM BEHIND SHOWING THE PROJECTED COVERAGE AREA.
 34. MASTER BUS BAR.
 35. TELCO BOARD AND NIU.
 36. ELECTRICAL DISTRIBUTION WALL.
 37. CABLE ENTRY WITH SURGE SUPPRESSION.
 38. ENTRANCE TO EQUIPMENT ROOM.
 39. COAX WEATHERPROOFING--TOP AND BOTTOM OF TOWER.
 40. COAX GROUNDING --TOP AND BOTTOM OF TOWER.
 41. ANTENNA AND MAST GROUNDING.
 42. LANDSCAPING - WHERE APPLICABLE.
- 3.6 FINAL PROJECT ACCEPTANCE: COMPLETE ALL REQUIRED REPORTING TASKS PER CONTRACT, CONTRACT DOCUMENTS OR THE SPRINT INTEGRATED CONSTRUCTION STANDARDS FOR WIRELESS SITES AND UPLOAD INTO SITERRA.

SECTION 07 500 - ROOF CUTTING, PATCHING AND REPAIR

SUMMARY:

THIS SECTION SPECIFIES CUTTING AND PATCHING EXISTING ROOFING SYSTEMS WHERE CONDUIT OR CABLES EXIT THE BUILDING ONTO THE ROOF OR BUILDING-MOUNTED ANTENNAS, AND AS REQUIRED FOR WATERTIGHT PERFORMANCE. ROOFTOP ENTRY OPENINGS IN MEMBRANE ROOFTOPS SHALL BE CONSTRUCTED TO COMPLY WITH LANDLORD, ANY EXISTING WARRANTY, AND LOCAL JURISDICTIONAL STANDARDS.

1.4 SUBMITTALS:

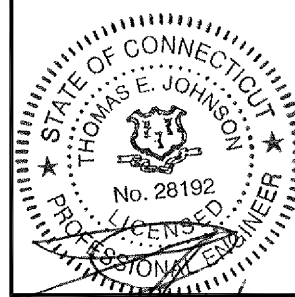
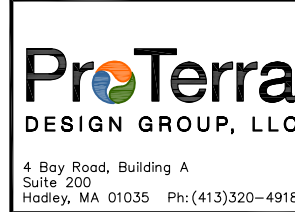
- A. PRE-CONSTRUCTION ROOF PHOTOS: COMPLETE A ROOF INSPECTION PRIOR TO THE INSTALLATION OF SPRINT EQUIPMENT ON ANY ROOFTOP BUILD. AT A MINIMUM INSPECT AND PHOTOGRAPH (MINIMUM 3 EA.) ALL AREAS IMPACTED BY THE ADDITION OF THE SPRINT EQUIPMENT.
- B. PROVIDE SIMILAR PHOTOGRAPHS SHOWING ROOF CONDITIONS AFTER CONSTRUCTION (MINIMUM 3 EA.)
- C. ROOF INSPECTION PHOTOGRAPHS SHOULD BE UPLOADED WITH CLOSEOUT PHOTOGRAPHS.

SECTION 09 900 - PAINTING

QUALITY ASSURANCE:

- A. COMPLY WITH GOVERNING CODES AND REGULATIONS. PROVIDE PRODUCTS OF ACCEPTABLE MANUFACTURERS WHICH HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR THREE YEARS. USE EXPERIENCED INSTALLERS. DELIVER, HANDLE, AND STORE MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- B. COMPLY WITH ALL ENVIRONMENTAL REGULATIONS FOR VOLATILE ORGANIC COMPOUNDS.

CONTINUE SHEET SP-3



CHECKED BY: *G. J. J. / TEJ*

APPROVED BY: JMM/TEJ

SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
1	06/19/18	CONSTRUCTION REVISED	PN
0	04/04/18	ISSUED FOR CONSTRUCTION	PN

SITE NUMBER:
CT33XC017
SITE NAME:
POMFRET SCHOOL (SBA)

SITE ADDRESS:
398 POMFRET STREET
POMFRET, CT 06258

SHEET TITLE
OUTLINE SPECIFICATIONS

SHEET NUMBER
SP-2

CONTINUED FROM SP-2:

MATERIALS:

- A. MANUFACTURERS: BENJAMIN MOORE, ICI DEVOE COATINGS, PPG, SHERWIN WILLIAMS OR APPROVED EQUAL. PROVIDE PREMIUM GRADE, PROFESSIONAL-QUALITY PRODUCTS FOR COATING SYSTEMS.

PAINT SCHEDULE:

- A. EXTERIOR ANTENNAE AND ANTENNA MOUNTING HARDWARE: ONE COAT OF PRIMER AND TWO FINISH COATS. PAINT FOR ANTENNAE SHALL BE NON-METALLIC BASED AND CONTAIN NO METALLIC PARTICLES. PROVIDE COLORS AND PATTERNS AS REQUIRED TO MASK APPEARANCE OF ANTENNAE ON ADJACENT BUILDING SURFACES AND AS ACCEPTABLE TO THE OWNER. REFER TO ANTENNA MANUFACTURER'S INSTRUCTIONS WHENEVER POSSIBLE.
- B. ROOF TOP CONSTRUCTION: TOUCH UP - PREPARE SURFACES TO BE REPAIRED. FOLLOW INDUSTRY STANDARDS AND REQUIREMENTS OF OWNER TO MATCH EXISTING COATING AND FINISH.

PAINTING APPLICATION:

- INSPECT SURFACES, REPORT UNSATISFACTORY CONDITIONS IN WRITING; BEGINNING WORK MEANS ACCEPTANCE OF SUBSTRATE.
- COMPLY WITH MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS FOR PREPARATION, PRIMING AND COATING WORK. COORDINATE WITH WORK OF OTHER SECTIONS.
- MATCH APPROVED MOCK-UPS FOR COLOR, TEXTURE, AND PATTERN. RE-COAT OR REMOVE AND REPLACE WORK WHICH DOES NOT MATCH OR SHOWS LOSS OF ADHESION.
- CLEAN UP, TOUCH UP AND PROTECT WORK.

TOUCHUP PAINTING:

- GALVANIZING DAMAGE AND ALL BOLTS AND NUTS SHALL BE TOUCHED UP AFTER TOWER ERECTION WITH "GALVANOX," "DRY GALV," OR "ZINC-IT."
- FIELD TOUCHUP PAINT SHALL BE DONE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
- ALL METAL COMPONENTS SHALL BE HANDLED WITH CARE TO PREVENT DAMAGE TO THE COMPONENTS, THEIR PRESERVATIVE TREATMENT, OR THEIR PROTECTIVE COATINGS.

SECTION 11 700 - ANTENNA ASSEMBLY, REMOTE RADIO HEADS AND CABLE INSTALLATION

SUMMARY:

THIS SECTION SPECIFIES INSTALLATION OF ANTENNAS, RRH'S, AND CABLE EQUIPMENT, INSTALLATION, AND TESTING OF COAXIAL FIBER CABLE.

ANTENNAS AND RRH'S:

THE NUMBER AND TYPE OF ANTENNAS AND RRH'S TO BE INSTALLED IS DETAILED ON THE CONSTRUCTION DRAWINGS.

HYBRID CABLE:

HYBRID CABLE WILL BE DC/FIBER AND FURNISHED FOR INSTALLATION AT EACH SITE. CABLE SHALL BE INSTALLED PER THE CONSTRUCTION DRAWINGS AND THE APPLICABLE MANUFACTURER'S REQUIREMENTS.

JUMPERS AND CONNECTORS:

FURNISH AND INSTALL 1/2" COAX JUMPER CABLES BETWEEN THE RRH'S AND ANTENNAS. JUMPERS SHALL BE TYPE LDF 4, FLC 12-50, CR 540, OR FXL 540. SUPER-FLEX CABLES ARE NOT ACCEPTABLE. JUMPERS BETWEEN THE RRH'S AND ANTENNAS OR TOWER TOP AMPLIFIERS SHALL CONSIST OF 1/2 INCH FOAM DIELECTRIC, OUTDOOR RATED COAXIAL CABLE. DO NOT USE SUPERFLEX OUTDOORS. JUMPERS SHALL BE FACTORY FABRICATED IN APPROPRIATE LENGTHS WITH A MAXIMUM OF 4 FEET EXCESS PER JUMPER AND HAVE CONNECTORS AT EACH END, MANUFACTURED BY SUPPLIER. IF JUMPERS ARE FIELD FABRICATED, FOLLOW MANUFACTURER'S REQUIREMENTS FOR INSTALLATION OF CONNECTORS

REMOTE ELECTRICAL TILT (RET) CABLES:

MISCELLANEOUS:

INSTALL SPLITTERS, COMBINERS, FILTERS PER RF DATA SHEET, FURNISHED BY SPRINT.

ANTENNA INSTALLATION:

THE CONTRACTOR SHALL ASSEMBLE ALL ANTENNAS ONSITE IN ACCORDANCE WITH THE INSTRUCTIONS SUPPLIED BY THE MANUFACTURER. ANTENNA HEIGHT, AZIMUTH, AND FEED ORIENTATION INFORMATION SHALL BE A DESIGNATED ON THE CONSTRUCTION DRAWINGS.

- A. THE CONTRACTOR SHALL POSITION THE ANTENNA ON TOWER PIPE MOUNTS SO THAT THE BOTTOM STRUT IS LEVEL. THE PIPE MOUNTS SHALL BE PLUMB TO WITHIN 1 DEGREE.
- B. ANTENNA MOUNTING REQUIREMENTS: PROVIDE ANTENNA MOUNTING HARDWARE AS INDICATED ON THE DRAWINGS.

HYBRID CABLES INSTALLATION:

- A. THE CONTRACTOR SHALL ROUTE, TEST, AND INSTALL ALL CABLES AS INDICATED ON THE CONSTRUCTION DRAWINGS AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- B. THE INSTALLED RADIUS OF THE CABLES SHALL NOT BE LESS THAN THE MANUFACTURER'S SPECIFICATIONS FOR BENDING RADIUS.
- C. EXTREME CARE SHALL BE TAKEN TO AVOID DAMAGE TO THE CABLES DURING HANDLING AND INSTALLATION.
 - FASTENING MAIN HYBRID CABLES: ALL CABLES SHALL BE PERMANENTLY FASTENED TO THE COAX LADDER AT 4'-0" OC USING NON-MAGNETIC STAINLESS STEEL CLIPS.
 - FASTENING INDIVIDUAL FIBER AND DC CABLES ABOVE BREAKOUT ENCLOSURE (MEDUSA), WITHIN THE MMBTS CABINET AND ANY INTERMEDIATE DISTRIBUTION BOXES:
 - FIBER: SUPPORT FIBER BUNDLES USING 1/2" VELCRO STRAPS OF THE REQUIRED LENGTH @ 18" OC. STRAPS SHALL BE UV, OIL AND WATER RESISTANT AND SUITABLE FOR INDUSTRIAL INSTALLATIONS AS MANUFACTURED BY TEXTOL OR APPROVED EQUAL.
 - DC: SUPPORT DC BUNDLES WITH ZIP TIES OF THE ADEQUATE LENGTH. ZIP TIES TO BE UV STABILIZED, BLACK NYLON, WITH TENSILE STRENGTH AT 12,000 PSI AS MANUFACTURED BY NELCO PRODUCTS OR EQUAL.
 - FASTENING JUMPERS: SECURE JUMPERS TO THE SIDE ARMS OR HEAD FRAMES USING STAINLESS STEEL TIE WRAPS OR STAINLESS STEEL BUTTERFLY CLIPS.
 - CABLE INSTALLATION:
 - INSPECT CABLE PRIOR TO USE FOR SHIPPING DAMAGE, NOTIFY THE CONSTRUCTION MANAGER.
 - CABLE ROUTING: CABLE INSTALLATION SHALL BE PLANNED TO ENSURE THAT THE LINES WILL BE PROPERLY ROUTED IN THE CABLE ENVELOP AS INDICATED ON THE DRAWINGS. AVOID TWISTING AND CROSSOVERS.
 - HOIST CABLE USING PROPER HOISTING GRIPS. DO NOT EXCEED MANUFACTURERS RECOMMENDED MAXIMUM BEND RADIUS.

- GROUNDING OF TRANSMISSION LINES: ALL TRANSMISSION LINES SHALL BE GROUNDED AS INDICATED ON DRAWINGS.
- HYBRID CABLE COLOR CODING: ALL COLOR CODING SHALL BE AS REQUIRED PER SPRINT TS 0200 CURRENT VERSION.
- HYBRID CABLE LABELING: INDIVIDUAL HYBRID AND DC BUNDLES SHALL BE LABELED ALPHA-NUMERICALLY ACCORDING TO SPRINT CELL SITE ENGINEERING NOTICE-EN 2012-001, REV 1

WEATHERPROOFING EXTERIOR CONNECTORS AND HYBRID CABLE GROUND KITS:

- A. ALL FIBER & COAX CONNECTORS AND GROUND KITS SHALL BE WEATHERPROOFED.
- B. WEATHERPROOFED USING ONE OF THE FOLLOWING METHODS. ALL INSTALLATIONS MUST BE DONE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND INDUSTRY BEST PRACTICES.

- COLD SHRINK: ENCOMPASS CONNECTOR IN COLD SHRINK TUBING AND PROVIDE A DOUBLE WRAP OF 2" ELECTRICAL TAPE EXTENDING 2" BEYOND TUBING. PROVIDE 3M COLD SHRINK CXS SERIES OR EQUAL.
- SELF-AMALGAMATING TAPE: CLEAN SURFACES. APPLY A DOUBLE WRAP OF SELF-AMALGAMATING TAPE 2" BEYOND CONNECTOR. APPLY A SECOND WRAP OF SELF-AMALGAMATING TAPE IN OPPOSITE DIRECTION. APPLY DOUBLE WRAP OF 2" WIDE ELECTRICAL TAPE EXTENDING 2" BEYOND THE SELF-AMALGAMATING TAPE.
- 3M SLIM LOCK CLOSURE 716: SUBSTITUTIONS WILL NOT BE ALLOWED.
- OPEN FLAME ON JOB SITE IS NOT ACCEPTABLE.

SECTION 11 800 - INSTALLATION OF MULTIMODAL BASE STATIONS (MMBTS) AND RELATED EQUIPMENT

SUMMARY:

- A. THIS SECTION SPECIFIES MMBTS CABINETS, POWER CABINETS, AND INTERNAL EQUIPMENT INCLUDING BY NOT LIMITED TO RECTIFIERS, POWER DISTRIBUTION UNITS, BASE BAND UNITS, SURGE ARRESTORS, BATTERIES, AND SIMILAR EQUIPMENT FURNISHED BY THE COMPANY FOR INSTALLATION BY THE CONTRACTOR (OFCI).
- B. CONTRACTOR SHALL PROVIDE AND INSTALL ALL MISCELLANEOUS MATERIALS AND PROVIDE ALL LABOR REQUIRED FOR INSTALLATION EQUIPMENT IN EXISTING CABINET OR NEW CABINET AS SHOWN ON DRAWINGS AND AS REQUIRE BY THE APPLICABLE INSTALLATION MOPS.
- C. COMPLY WITH MANUFACTURERS INSTALLATION AND START-UP REQUIREMENTS

DC CIRCUIT BREAKER LABELING

- A. LABEL CIRCUIT BREAKERS ACCORDING TO SPRINT CELL SITE ENGINEERING NOTICE - EN 2012-001, REV 1.

SECTION 11 800 - INSTALLATION OF MULTIMODAL BASE TRANSCIEVER STATIONS (MMBTS) AND RELATED EQUIPMENT

SUMMARY:

- A. THIS SECTION SPECIFIES MMBTS CABINETS, POWER CABINETS, AND INTERNAL EQUIPMENT INCLUDING BY NOT LIMITED TO RECTIFIERS, POWER DISTRIBUTION UNITS, BASE BAND UNITS, SURGE ARRESTORS, BATTERIES, AND SIMILAR EQUIPMENT FURNISHED BY THE COMPANY FOR INSTALLATION BY THE CONTRACTOR (OFCI).
- B. CONTRACTOR SHALL PROVIDE AND INSTALL ALL MISCELLANEOUS MATERIALS AND PROVIDE ALL LABOR REQUIRED FOR INSTALLATION EQUIPMENT IN EXISTING CABINET OR NEW CABINET AS SHOWN ON DRAWINGS AND AS REQUIRE BY THE APPLICABLE INSTALLATION MOPS.
- C. COMPLY WITH MANUFACTURERS INSTALLATION AND START-UP REQUIREMENTS

SUPPORTING DEVICES:

- A. MANUFACTURED STRUCTURAL SUPPORT MATERIALS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY THE FOLLOWING:
 - ALLIED TUBE AND CONDUIT
 - B-LINE SYSTEM
 - UNISTRUT DIVERSIFIED PRODUCTS
 - THOMAS & BETTS
- B. FASTENERS: TYPES, MATERIALS, AND CONSTRUCTION FEATURES AS FOLLOWS:
 - EXPANSION ANCHORS: CARBON STEEL WEDGE OR SLEEVE TYPE.
 - POWER-DRIVEN THREADED STUDS: HEAT-TREATED STEEL, DESIGNED SPECIFICALLY FOR THE INTENDED SERVICE.
 - FASTEN BY MEANS OF WOOD SCREWS ON WOOD.
 - TOGGLE BOLTS ON HOLLOW MASONRY UNITS.
 - CONCRETE INSERTS OR EXPANSION BOLTS ON CONCRETE OR SOLID MASONRY.
 - MACHINE SCREWS, WELDED THREADED STUDS, OR SPRING-TENSION CLAMPS ON STEEL.
 - EXPLOSIVE DEVICES FOR ATTACHING HANGERS TO STRUCTURE SHALL NOT BE PERMITTED.
 - DO NOT WELD CONDUIT, PIPE STRAPS, OR ITEMS OTHER THAN THREADED STUDS TO STEEL STRUCTURES.
 - IN PARTITIONS OF LIGHT STEEL CONSTRUCTION, USE SHEET METAL SCREWS.

SUPPORTING DEVICES:

- A. INSTALL SUPPORTING DEVICES TO FASTEN ELECTRICAL COMPONENTS SECURELY AND PERMANENTLY IN ACCORDANCE WITH NEC.
- B. COORDINATE WITH THE BUILDING STRUCTURAL SYSTEM AND WITH OTHER TRADES.
- C. UNLESS OTHERWISE INDICATED ON THE DRAWINGS, FASTEN ELECTRICAL ITEMS AND THEIR SUPPORTING HARDWARE SECURELY TO THE STRUCTURE IN ACCORDANCE WITH THE FOLLOWING:
- D. ENSURE THAT THE LOAD APPLIED BY ANY FASTENER DOES NOT EXCEED 25 PERCENT OF THE PROOF TEST LOAD.
- E. USE VIBRATION AND SHOCK-RESISTANT FASTENERS FOR ATTACHMENTS TO CONCRETE SLABS.

ELECTRICAL IDENTIFICATION:

- A. UPDATE AND PROVIDE TYPED CIRCUIT BREAKER SCHEDULES IN THE MOUNTING BRACKET, INSIDE DOORS OF AC PANEL BOARDS WITH ANY CHANGES MADE TO THE AC SYSTEM.
- B. BRANCH CIRCUITS FEEDING AVIATION OBSTRUCTION LIGHTING EQUIPMENT SHALL BE CLEARLY IDENTIFIED AS SUCH AT THE BRANCH CIRCUIT PANELBOARD.

SECTION 26 200 - ELECTRICAL MATERIALS AND EQUIPMENT

CONDUIT:

- A. RIGID GALVANIZED STEEL (RGS) CONDUIT SHALL BE USED FOR EXTERIOR LOCATIONS ABOVE GROUND AND IN UNFINISHED INTERIOR LOCATIONS AND FOR ENCASED RUNS IN CONCRETE. RIGID CONDUIT AND FITTINGS SHALL BE STEEL, COATED WITH ZINC EXTERIOR AND INTERIOR BY THE HOT DIP GALVANIZING PROCESS. CONDUIT SHALL BE PRODUCED TO ANSI SPECIFICATIONS C80.1, FEDERAL SPECIFICATION WW-C-581 AND SHALL BE LISTED WITH THE UNDERWRITERS' LABORATORIES. FITTINGS SHALL BE THREADED - SET SCREW OR COMPRESSION FITTINGS WILL NOT BE ACCEPTABLE. RGS CONDUITS SHALL BE MANUFACTURED BY ALLIED, REPUBLIC OR WHEATLAND.
- B. UNDERGROUND CONDUIT IN CONCRETE SHALL BE POLYVINYLCHLORIDE (PVC) SUITABLE FOR DIRECT BURIAL AS APPLICABLE. JOINTS SHALL BE BELLED, AND FLUSH SOLVENT WELDED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. CONDUIT SHALL BE CARLON ELECTRICAL PRODUCTS OR APPROVED EQUAL.
- C. TRANSITIONS BETWEEN PVC AND RIGID (RGS) SHALL BE MADE WITH PVC COATED METALLIC LONG SWEEP RADIUS ELBOWS.
- D. EMT OR RIGID GALVANIZED STEEL CONDUIT MAY BE USED IN FINISHED SPACES CONCEALED IN WALLS AND CEILINGS. EMT SHALL BE MILD STEEL, ELECTRICALLY WELDED, ELECTRO-GALVANIZED OR HOT-DIPPED GALVANIZED AND PRODUCED TO ANSI SPECIFICATION C80.3, FEDERAL SPECIFICATION WW-C-563, AND SHALL BE UL LISTED. EMT SHALL BE MANUFACTURED BY ALLIED, REPUBLIC OR WHEATLAND, OR APPROVED EQUAL. FITTINGS SHALL BE METALLIC COMPRESSION. SET SCREW CONNECTIONS SHALL NOT BE ACCEPTABLE.
- E. LIQUID TIGHT FLEXIBLE METALLIC CONDUIT SHALL BE USED FOR FINAL CONNECTION TO EQUIPMENT. FITTINGS SHALL BE METALLIC GLAND TYPE COMPRESSION FITTINGS, MAINTAINING THE INTEGRITY OF CONDUIT SYSTEM. SET SCREW CONNECTIONS SHALL NOT BE ACCEPTABLE. MAXIMUM LENGTH OF FLEXIBLE CONDUIT SHALL NOT EXCEED 6- FEET. LFMC SHALL BE PROTECTED AND SUPPORTED AS REQUIRE BY NEC. MANUFACTURERS OF FLEXIBLE CONDUITS SHALL BE CAROL, ANACONDA METAL HOSE OR UNIVERSAL METAL HOSE, OR APPROVED EQUAL.
- F. MINIMUM SIZE CONDUIT SHALL BE 3/4 INCH (21MM).

HUBS AND BOXES:

- A. AT ENTRANCES TO CABINETS OR OTHER EQUIPMENT NOT HAVING INTEGRAL THREADED HUBS PROVIDE METALLIC THREADED HUBS OF THE SIZE AND CONFIGURATION REQUIRED. HUB SHALL INCLUDE LOCKNUT AND NEOPRENE O-RING SEAL. PROVIDE IMPACT RESISTANT 105 DEGREE C PLASTIC BUSHINGS TO PROTECT CABLE INSULATION.
- B. CABLE TERMINATION FITTINGS FOR CONDUIT
 - CABLE TERMINATORS FOR RGS CONDUITS SHALL BE TYPE CRC BY O-Z/GEDNEY OR EQUAL.
 - CABLE TERMINATORS FOR LFMC SHALL BE ETCO - CL2075; OR MADE FOR THE PURPOSE PRODUCTS BY ROXTEC.
- C. EXTERIOR PULL BOXES AND PULL BOXES IN INTERIOR INDUSTRIAL AREAS SHALL BE PLATED CAST ALLOY, HEAVY DUTY, WEATHERPROOF, DUST PROOF, WITH GASKET, PLATED IRON ALLOY COVER AND STAINLESS STEEL COVER SCREWS, CROUSE-HINDS WAB SERIES OR EQUAL.
- D. CONDUIT OUTLET BODIES SHALL BE PLATED CAST ALLOY WITH SIMILAR GASKETED COVERS. OUTLET BODIES SHALL BE OF THE CONFIGURATION AND SIZE SUITABLE FOR THE APPLICATION. PROVIDE CROUSE-HINDS FORM 8 OR EQUAL.
- E. MANUFACTURER FOR BOXES AND COVERS SHALL BE HOFFMAN, SQUARE "D", CROUSE-HINDS, COOPER, ADALET, APPLETON, O-Z GEDNEY, RACO, OR APPROVED EQUAL.

SUPPLEMENTAL GROUNDING SYSTEM

- A. FURNISH AND INSTALL A SUPPLEMENTAL GROUNDING SYSTEM AS INDICATED ON THE DRAWINGS. SUPPORT SYSTEM WITH NON-MAGNETIC STAINLESS STEEL CLIPS WITH RUBBER GROMMETS. GROUNDING CONNECTORS SHALL BE TINNED COPPER WIRE, SIZES AS INDICATED ON THE DRAWINGS. PROVIDE STRANDED OR SOLID BARE OR INSULATED CONDUCTORS AS INDICATED.
- B. SUPPLEMENTAL GROUNDING SYSTEM: ALL CONNECTIONS TO BE MADE WITH CAD WELDS, EXCEPT AT EQUIPMENT USE LUGS OR OTHER AVAILABLE GROUNDING MEANS AS REQUIRED BY MANUFACTURER; AT GROUND BARS USE TWO HOLE SPADES WITH NO OX.
- C. STOLEN GROUND-BARS: IN THE EVENT OF STOLEN GROUND BARS, CONTACT SPRINT CM FOR REPLACEMENT INSTRUCTION USING THREADED ROD KITS.

EXISTING STRUCTURE:

- A. EXISTING EXPOSED WIRING AND ALL EXPOSED OUTLETS, RECEPTACLES, SWITCHES, DEVICES, BOXES, AND OTHER EQUIPMENT THAT ARE NOT TO BE UTILIZED IN THE COMPLETED PROJECT SHALL BE REMOVED OR DE-ENERGIZED AND CAPPED IN THE WALL, CEILING, OR FLOOR SO THAT THEY ARE CONCEALED AND SAFE. WALL, CEILING, OR FLOOR SHALL BE PATCHED TO MATCH THE ADJACENT CONSTRUCTION.

CONDUIT AND CONDUCTOR INSTALLATION:

- A. CONDUITS SHALL BE FASTENED SECURELY IN PLACE WITH APPROVED NON-PERFORATED STRAPS AND HANGERS. EXPLOSIVE DEVICES FOR ATTACHING HANGERS TO STRUCTURE WILL NOT BE PERMITTED. CLOSELY FOLLOW THE LINES OF THE STRUCTURE, MAINTAIN CLOSE PROXIMITY TO THE STRUCTURE AND KEEP CONDUITS IN TIGHT ENVELOPES. CHANGES IN DIRECTION TO ROUTE AROUND OBSTACLES SHALL BE MADE WITH CONDUIT OUTLET BODIES. CONDUIT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER, PARALLEL AND PERPENDICULAR TO STRUCTURE WALL AND CEILING LINES. ALL CONDUIT SHALL BE FISHED TO CLEAR OBSTRUCTIONS. ENDS OF CONDUITS SHALL BE TEMPORARILY CAPPED TO PREVENT CONCRETE, PLASTER OR DIRT FROM ENTERING. CONDUITS SHALL BE RIGIDLY CLAMPED TO BOXES BY GALVANIZED MALLEABLE IRON BUSHING ON INSIDE AND GALVANIZED MALLEABLE IRON LOCKNUT ON OUTSIDE AND INSIDE.
- B. CONDUCTORS SHALL BE PULLED IN ACCORDANCE WITH ACCEPTED GOOD PRACTICE.



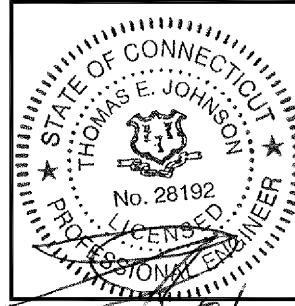
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APPROVED BY: JMM/TEJ

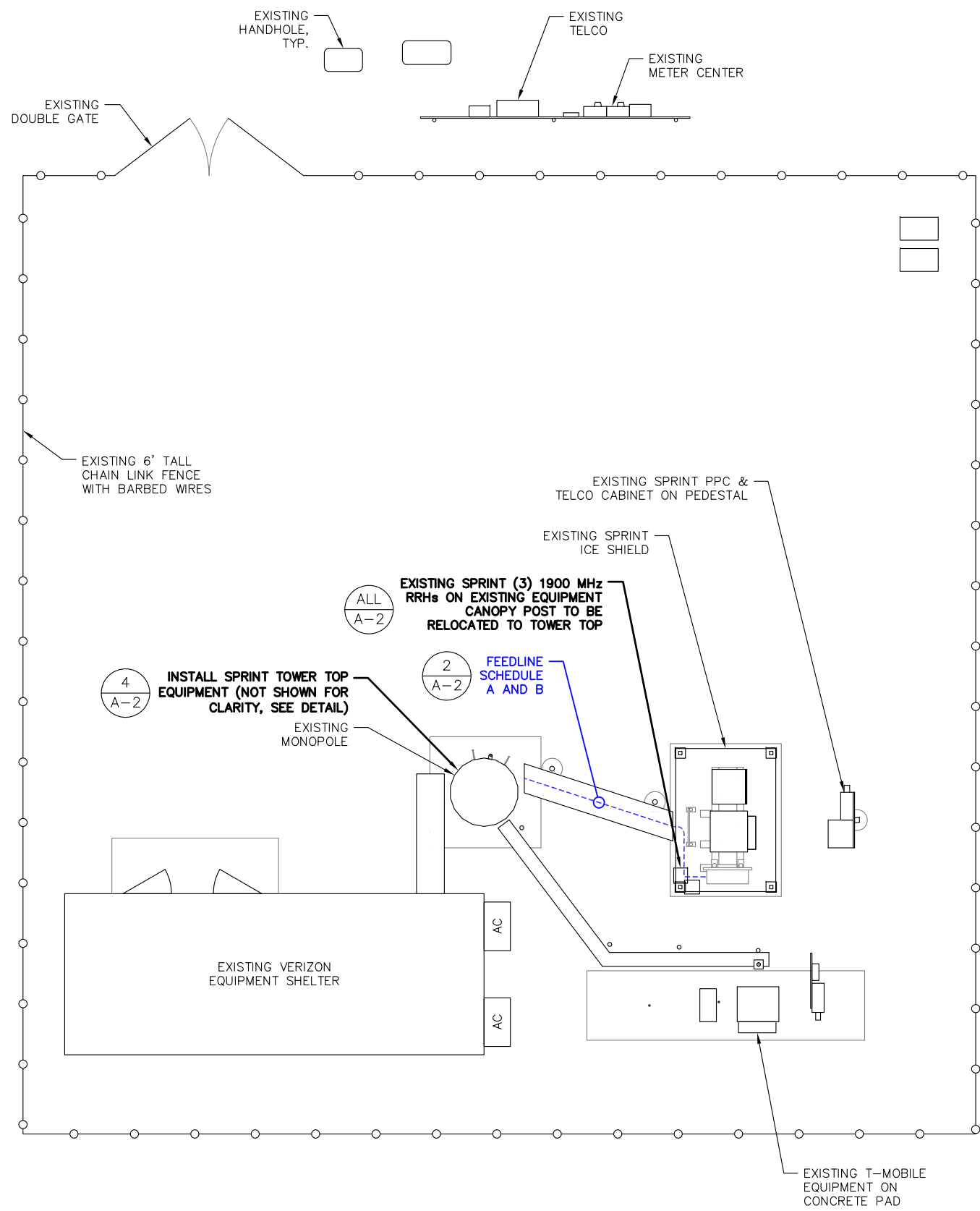
SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
1	06/19/18	CONSTRUCTION REVISED	PN
0	04/04/18	ISSUED FOR CONSTRUCTION	PN

SITE NUMBER:
CT33XC017
SITE NAME:
POMFRET SCHOOL (SBA)

SITE ADDRESS:
398 POMFRET STREET
POMFRET, CT 06258

SHEET TITLE
OUTLINE SPECIFICATIONS

SHEET NUMBER
SP-3



COMPOUND PLAN
SCALE: 1"=10' (11"x17")
1"=5' (22"x34")



EXISTING SPRINT BBU CABINET

EXISTING SPRINT MMBTS CABINET
INSTALL RAN EQUIPMENT IN EXISTING CABINET

EXISTING SPRINT FIBER DISTRIBUTION BOX ON H-FRAME

EXISTING SPRINT (3) 1900 MHZ RRHs ON EXISTING EQUIPMENT CANOPY POST TO BE RELOCATED TO TOWER TOP

EXISTING SPRINT ICE SHIELD

EXISTING SPRINT TELCO CABINET

EXISTING SPRINT PPC



IMAGE SOURCE: PROVIDED BY SBA
(VIEW FROM SOUTHEAST)

EXISTING SPRINT MMBTS CABINET
INSTALL RAN EQUIPMENT IN EXISTING CABINET

EXISTING SPRINT BBU CABINET

EXISTING SPRINT ICE SHIELD

EXISTING SPRINT (3) 1900 MHZ RRHs ON EXISTING EQUIPMENT CANOPY POST TO BE RELOCATED TO TOWER TOP

EXISTING SPRINT ICE BRIDGE

FEEDLINE SCHEDULE A AND B



IMAGE SOURCE: PROVIDED BY SBA
(VIEW FROM NORTHWEST)

EQUIPMENT PLAN PHOTO DETAIL
SCALE: N.T.S.

Sprint

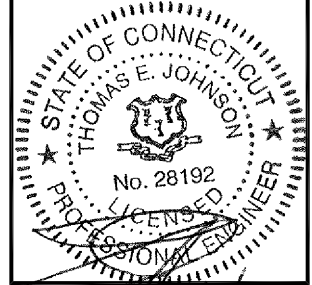
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SBA COMMUNICATIONS CORP.
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WESTBOROUGH, MA 01581
TEL: (508) 251-0720

ProTerra
DESIGN GROUP, LLC

4 Bay Road, Building A
Suite 200
Hadley, MA 01035 Ph: (413)320-4918



CHECKED BY: *G. J. J. / TEJ*

APPROVED BY: JMM/TEJ

SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
1	06/19/18	CONSTRUCTION REVISED	PN
0	04/04/18	ISSUED FOR CONSTRUCTION	PN

SITE NUMBER:
CT33XC017

SITE NAME:
POMFRET SCHOOL (SBA)

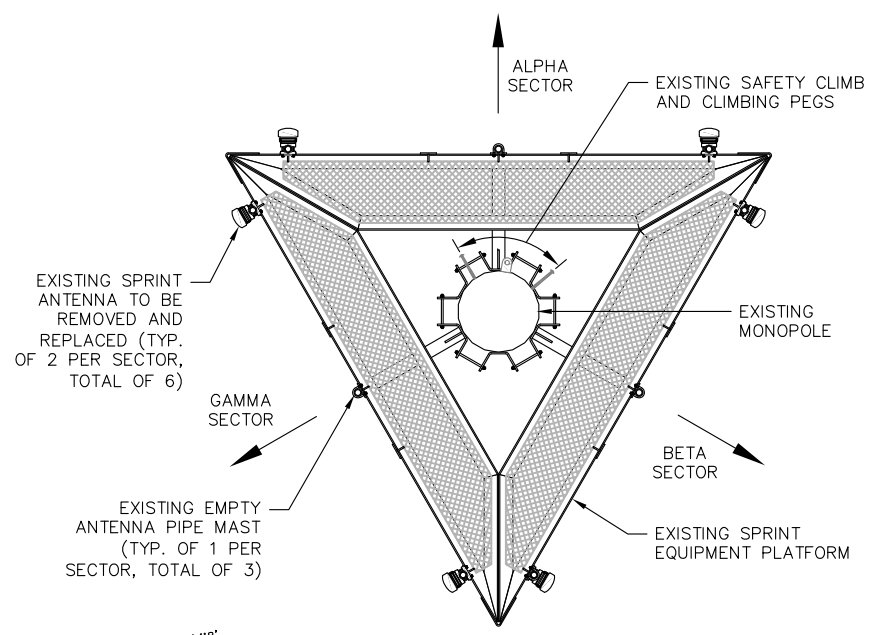
SITE ADDRESS:
398 POMFRET STREET
POMFRET, CT 06258

SHEET TITLE
COMPOUND PLAN

SHEET NUMBER
A-1

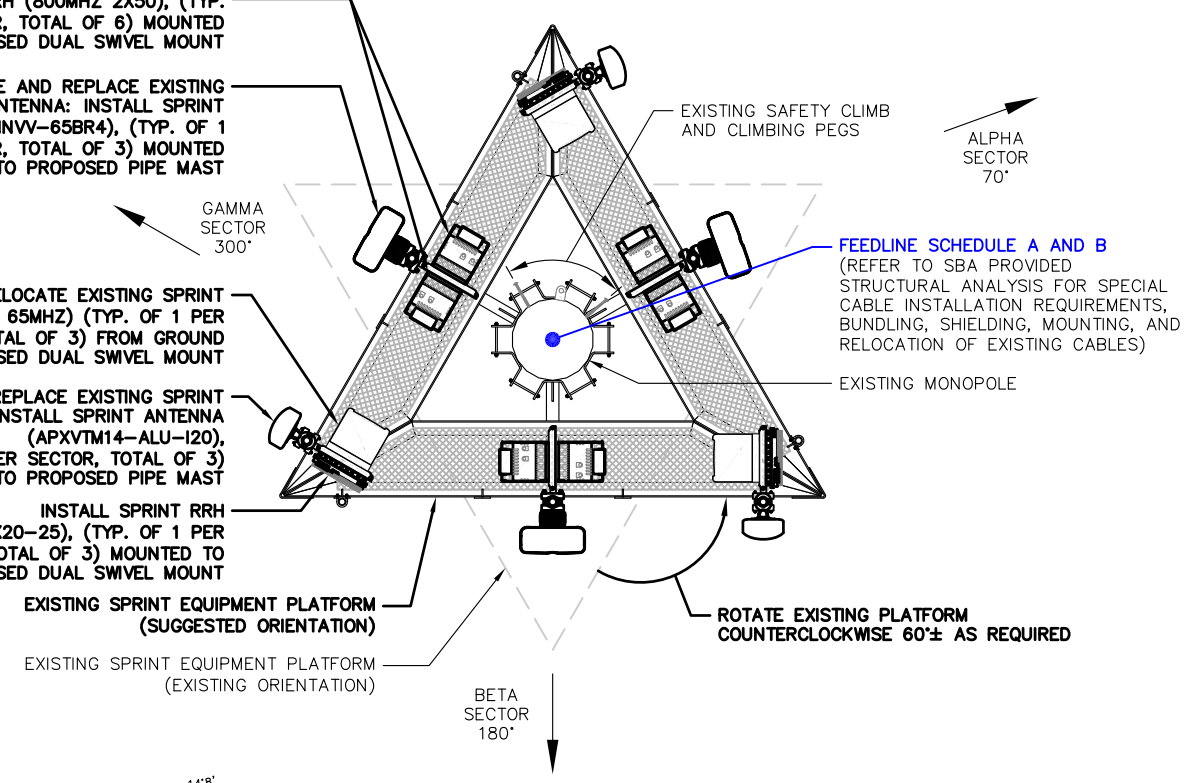
SPECIAL PRE-CONSTRUCTION WORK NOTE (SBA-PROVIDED TOWER STRUCTURAL ANALYSIS SPECIAL EQUIPMENT INSTALLATION REQUIREMENTS):
 GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL SPECIAL OR SUPPLEMENTAL ADDITIONAL TOWER-MOUNTED EQUIPMENT PER RECOMMENDATIONS FROM SBA-PROVIDED TOWER STRUCTURAL ANALYSIS FOR ANY SPECIAL SHIELDING OF TOWER TOP EQUIPMENT AND FOR ANY SPECIAL FEEDLINE BUNDLING OR RELOCATION.

SPECIAL CONSTRUCTION NOTE (SBA-PROVIDED ANTENNA MOUNT STRUCTURAL MOD SPECIAL EQUIPMENT INSTALLATION REQUIREMENTS):
 GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL ANTENNA MOUNT STRUCTURAL AUGMENTS (STRUCTURAL MODIFICATIONS) AT THE SPRINT RAD/VERTICAL EQUIPMENT SPACE PER RECOMMENDATIONS FROM SBA-PROVIDED ANTENNA MOUNT STRUCTURAL ANALYSIS AND ANY SUPPLEMENTAL CONSTRUCTION DRAWINGS (PROVIDED BY GEOSTRUCTURAL DATED 06/18/18).



EXISTING ANTENNA PLAN 3
 SCALE: N.T.S. A-2

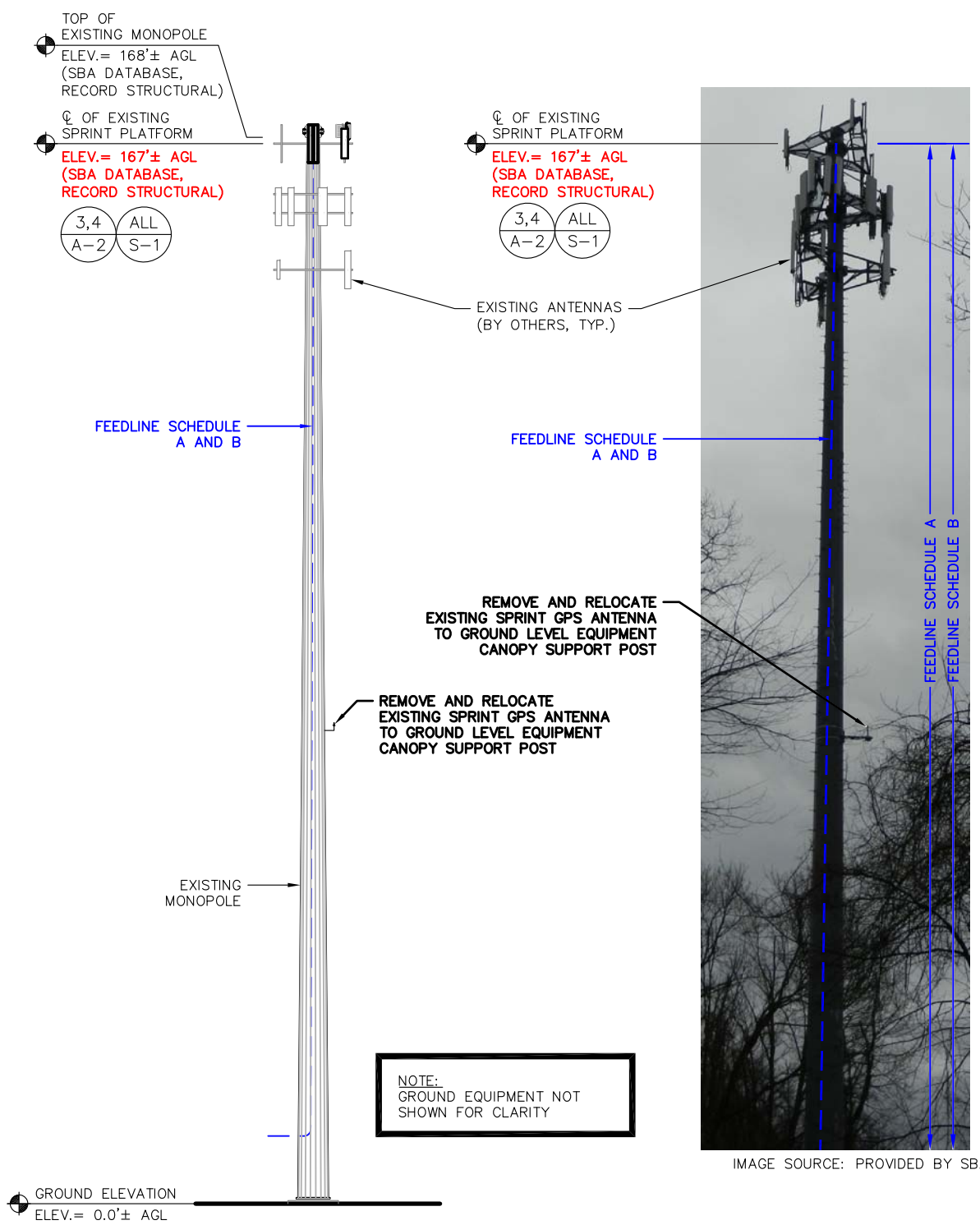
- ALL 3 S-1 A-3 INSTALL SPRINT RRH (800MHZ 2X50), (TYP. OF 2 PER SECTOR, TOTAL OF 6) MOUNTED TO PROPOSED DUAL SWIVEL MOUNT
- ALL 2 S-1 A-3 REMOVE AND REPLACE EXISTING SPRINT ANTENNA: INSTALL SPRINT ANTENNA (NNVV-65BR4), (TYP. OF 1 PER SECTOR, TOTAL OF 3) MOUNTED TO PROPOSED PIPE MAST
- ALL 4 S-1 A-3 REMOVE AND RELOCATE EXISTING SPRINT RRH (1900 4X45 65MHZ) (TYP. OF 1 PER SECTOR, TOTAL OF 3) FROM GROUND LEVEL TO PROPOSED DUAL SWIVEL MOUNT
- ALL 1 S-1 A-3 REMOVE AND REPLACE EXISTING SPRINT ANTENNA: INSTALL SPRINT ANTENNA (APXVTM14-ALU-I20), (TYP. OF 1 PER SECTOR, TOTAL OF 3) MOUNTED TO PROPOSED PIPE MAST
- ALL 5 S-1 A-3 INSTALL SPRINT RRH (TD-RRH8X20-25), (TYP. OF 1 PER SECTOR, TOTAL OF 3) MOUNTED TO PROPOSED DUAL SWIVEL MOUNT



PROPOSED ANTENNA PLAN 4
 SCALE: N.T.S. A-2

SPECIAL INSTALLATION NOTE:
 JUMPERS FROM RRHS TO ANTENNA SHALL NOT EXCEED 15'. NOTIFY SPRINT CONSTRUCTION MANAGER OF ANY DISCREPANCY

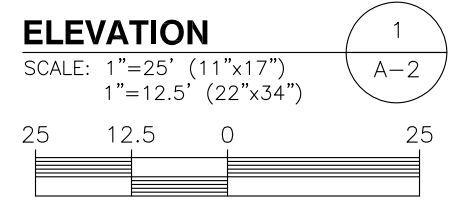
NOTE:
 VERIFY PROPOSED AZIMUTHS WITH RF ENGINEER PRIOR TO INSTALLATION



FEEDLINE SCHEDULE	FEEDLINE DESCRIPTION	LOCATION
A	EXISTING TO BE REMOVED: (6) 1/2" COAX TO 167' RAD & (1) 1/2" GPS CABLE RUN TO APPROXIMATELY 75' AGL.	UP INSIDE MONOPOLE TO RAD
B	PROPOSED: (4) HYBRID TO 167' RAD;	UP INSIDE MONOPOLE TO RAD

NOTE:
 EXISTING SPRINT EQUIPMENT FEEDLINE INVENTORY BASED ON OBSERVED FIELD CONDITIONS. RFDS AND FEEDLINE LEASING ENTITLEMENTS MAY DIFFER

TOWER ELEVATION PHOTO DETAIL 2
 SCALE: N.T.S. A-2



Sprint
 1 INTERNATIONAL BLVD, SUITE 800
 MAHWAH, NJ 07495
 TEL: (800) 357-7641

SBA
 SBA COMMUNICATIONS CORP.
 134 FLANDERS ROAD, SUITE 125
 WESTBOROUGH, MA 01581
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STATE OF CONNECTICUT
 THOMAS E. JOHNSON
 No. 28192
 LICENSED PROFESSIONAL ENGINEER

CHECKED BY: *G. J. [Signature]* / TEJ
 APPROVED BY: JMM/TEJ

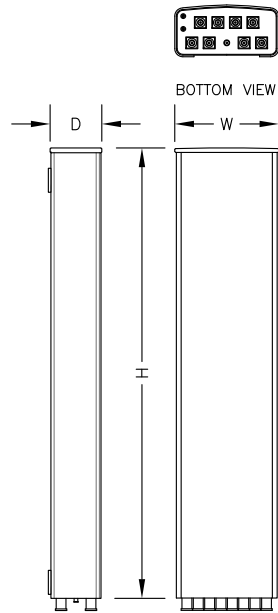
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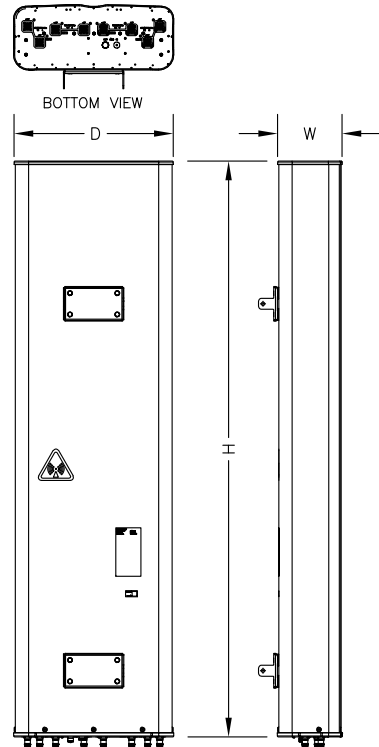
SHEET TITLE
ELEVATION AND ANTENNA PLANS

SHEET NUMBER
A-2



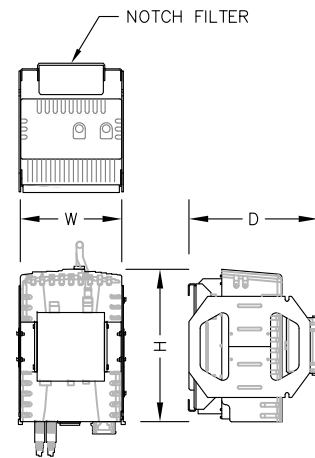
ANTENNA SPECIFICATIONS

MANUF.	RFS
MODEL #	APXVTM14-ALU-I20
HEIGHT	56.3"
WIDTH	12.6"
DEPTH	6.3"
WEIGHT	56.2± LBS.



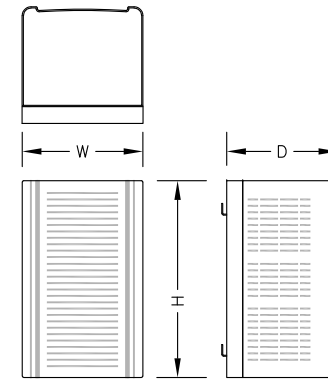
ANTENNA SPECIFICATIONS

MANUF.	COMMSCOPE
MODEL #	NNVV-65B-R4
HEIGHT	72.0"
WIDTH	19.6"
DEPTH	7.8"
WEIGHT	77.4± LBS.



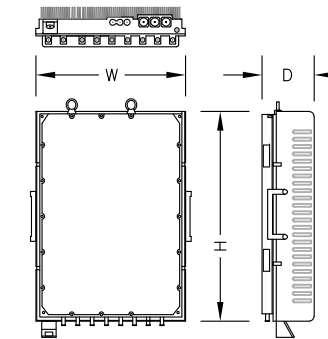
800 MHZ RRH SPECIFICATIONS

MANUF.	NOKIA (ALU)
MODEL #	800MHZ 2X50W
HEIGHT	16"
WIDTH	13"
DEPTH	13.7" (INCLUDING FILTER)
WEIGHT	69.1± LBS (INCLUDING FILTER)



1900 MHZ RRH SPECIFICATIONS

MANUF.	NOKIA (ALU)
MODEL #	1900 4X45 65MHZ
HEIGHT	25"
WIDTH	11.1"
DEPTH	11.4"
WEIGHT	60± LBS



2.5 GHZ RRH SPECIFICATIONS

MANUF.	NOKIA (ALU)
MODEL #	TD-RRH8X20-25
HEIGHT	26.1"
WIDTH	18.6"
DEPTH	6.7"
WEIGHT	70± LBS

2.5 GHz ANTENNA DETAIL

SCALE: N.T.S.

1

A-3

800 MHZ/1900 MHZ ANTENNA DETAIL

SCALE: N.T.S.

2

A-3

800 MHz RRH DETAIL

SCALE: N.T.S.

3

A-3

EXISTING 1900 MHz RRH DETAIL

SCALE: N.T.S.

4

A-3

2.5 GHz RRH DETAIL

SCALE: N.T.S.

5

A-3

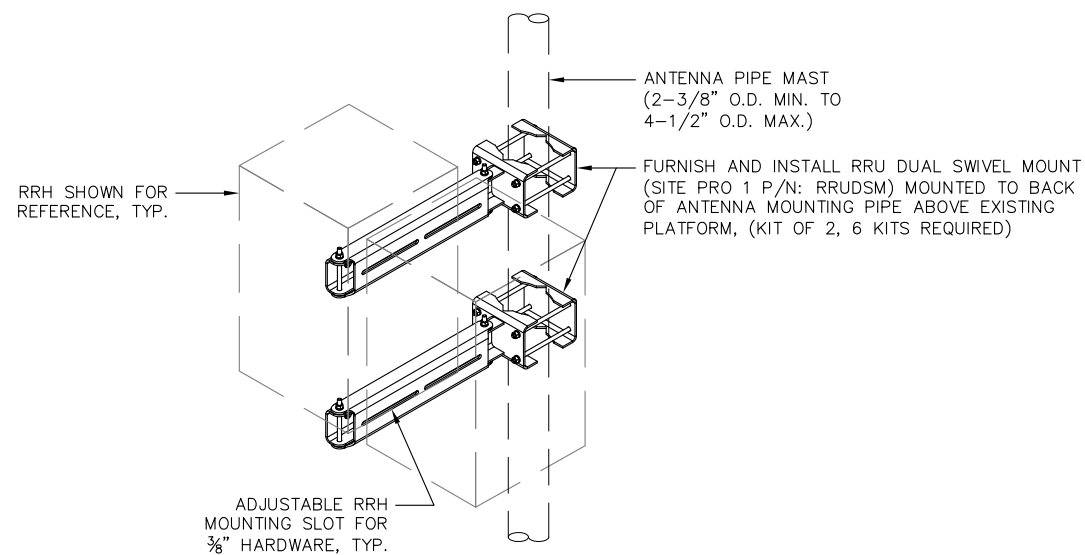
MAJOR RF EQUIPMENT LIST				
(GC SHALL FURNISH AND INSTALL ALL OTHER MATERIALS AND EQUIPMENT NOT SUPPLIED BY SPRINT)				
DESCRIPTION	QUANTITY	UNITS	MAKE/MODEL/MATERIAL	PROVIDED BY
ANTENNA	3	EA	RFS APXVTM14-ALU-i20	SPRINT
ANTENNA	3	EA	COMMSCOPE NNVV-65B-R4	SPRINT
2500 RRH	3	EA	NOKIA (ALU) TD-RRH8x20-25	SPRINT
1900 RRH (RELOCATE EXISTING)	3	EA	NOKIA (ALU) 1900 4X45 65MHZ	SPRINT (EXISTING)
800 RRH	6	EA	NOKIA (ALU) 800MHZ 2x50W	SPRINT
FIBER	4 @ 245'± FROM FIBER CABINET	LINEAR FEET LISTED [INCLUDES (2) 10' COILS]	1-1/4" HYBRIFLEX	SPRINT

SPRINT-PROVIDED EQUIPMENT SCHEDULE

SCALE: N.T.S.

6

A-3



RRH DUAL SWIVEL MOUNT

SCALE: N.T.S.

7

A-3



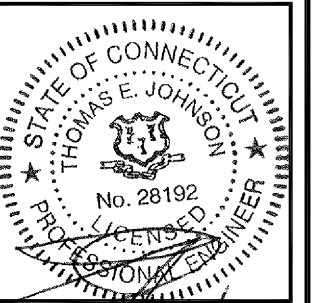
1 INTERNATIONAL BLVD, SUITE 800
MAHWAH, NJ 07495
TEL: (800) 357-7641



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WESTBOROUGH, MA 01581 TEL: (508) 251-0720



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CHECKED BY: *G. J. Johnson* / TEJ

APPROVED BY: JMM/TEJ

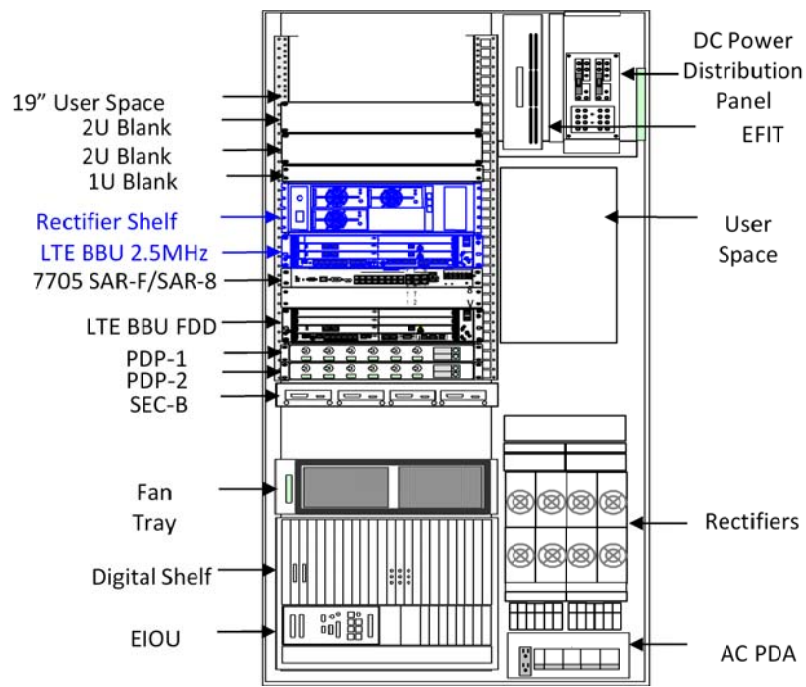
SUBMITTALS			
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1	06/19/18	CONSTRUCTION REVISED	PN
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CT33XC017
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SITE ADDRESS:
398 POMFRET STREET
POMFRET, CT 06258

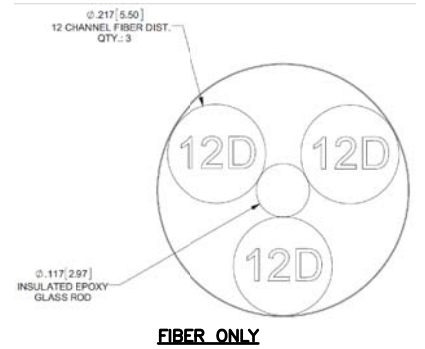
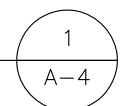
SHEET TITLE
TOWER EQUIPMENT DETAILS

SHEET NUMBER
A-3

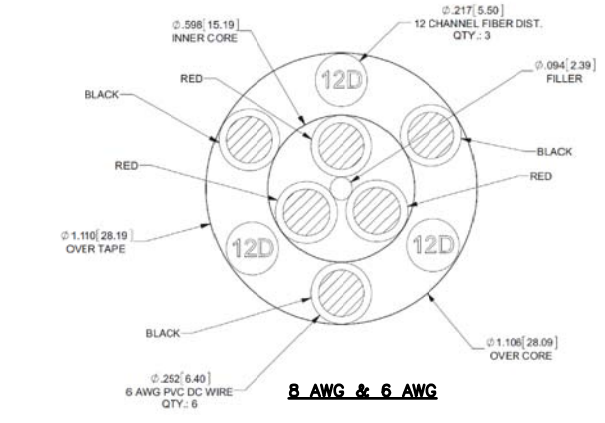


EXISTING MMBTS OUTDOOR CABINET WITH 2.5 EQUIPMENT

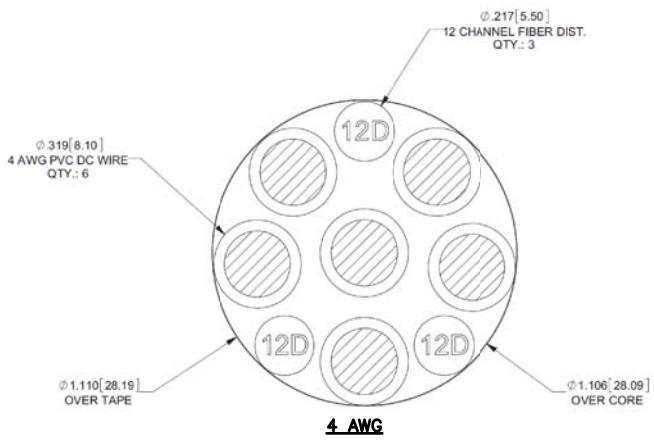
SCALE: N.T.S.



FIBER ONLY



8 AWG & 6 AWG



4 AWG

HYBRID CABLE DC CONDUCTOR SIZE GUIDELINE			
MANUF: RFS			
CABLE	LENGTH	DC CONDUCTOR	CABLE DIAMETER
FIBER ONLY	VARIES	USE NV HYBRIFLEX	7/8"
HYBRIFLEX	<200'	8 AWG	1-1/4"
HYBRIFLEX	225-300'	6 AWG	1-1/4"
HYBRIFLEX	325-375'	4 AWG	1-1/4"

(*)

RFS HYBRIFLEX RISER CABLE SCHEDULE

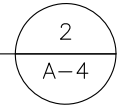
Power	Hybrid cable	Length
Fiber Only (Existing DC Power)	MN: HB058-M12-050F 12x multi-mode fiber pairs, Top: Outdoor protected connectors, Bottom: LC Connectors, 5/8 cable, 50 ft	50 ft
	MN: HB058-M12-075F	75 ft
	MN: HB058-M12-100F	100 ft
	MN: HB058-M12-125F	125 ft
	MN: HB058-M12-150F	150 ft
	MN: HB058-M12-175F	175 ft
8 AWG Power	MN: HB114-08U3M12-050F 3x 8 AWG power pairs, 12x multi-mode fiber pairs, Outdoor rated connectors & LC Connectors, 1 1/4 cable, 50 ft	50 ft
	MN: HB114-08U3M12-075F	75 ft
	MN: HB114-08U3M12-100F	100 ft
	MN: HB114-08U3M12-125F	125 ft
	MN: HB114-08U3M12-150F	150 ft
	MN: HB114-08U3M12-175F	175 ft
6 AWG Power	MN: HB114-13U3M12-225F 3x 6 AWG power pair, 12x multi-mode fiber pairs, Outdoor rated connectors & LC Connectors, 1 1/4 cable, 225 ft	225 ft
	MN: HB114-13U3M12-250F	250 ft
	MN: HB114-13U3M12-275F	275 ft
	MN: HB114-13U3M12-300F	300 ft
4 AWG Power	MN: HB114-21U3M12-325F 3x 4 AWG power pair, 12x multi-mode fiber pairs, Outdoor rated connectors & LC Connectors, 1 1/4 cable, 325 ft	325 ft
	MN: HB114-21U3M12-350F	350 ft
	MN: HB114-21U3M12-375F	375 ft

RFS HYBRIFLEX JUMPER CABLE SCHEDULE

Power	Hybrid Jumper cable	Length
Fiber Only	MN: HBF012-M3-5F1 5 ft, 3x multi-mode fiber pairs, Outdoor & LC connectors, 1/2 cable	5 ft
	MN: HBF012-M3-10F1	10 ft
	MN: HBF012-M3-15F1	15 ft
8 AWG Power	MN: HBF058-08U1M3-5F1 5 ft, 1x 8 AWG power pair, 3x multi-mode fiber pairs, Outdoor & LC Connectors, 5/8 cable	5 ft
	MN: HBF058-08U1M3-10F1	10 ft
	MN: HBF058-08U1M3-15F1	15 ft
6 AWG Power	MN: HBF058-13U1M3-5F1 5 ft, 1x 6 AWG power pair, 3x multi-mode fiber pairs, Outdoor & LC Connectors, 5/8 cable	5 ft
	MN: HBF058-13U1M3-10F1	10 ft
	MN: HBF058-13U1M3-15F1	15 ft
4 AWG Power	MN: HBF078-21U1M3-5F1 5 ft, 1x 4 AWG power pair, 3x multi-mode fiber pairs, Outdoor & LC Connectors, 7/8 cable	5 ft
	MN: HBF078-21U1M3-10F1	10 ft
	MN: HBF078-21U1M3-15F1	15 ft

2.5 HYBRID CABLE X-SECTION AND DATA

SCALE: N.T.S.



* NOTE: SPRINT CM TO CONFIRM HYBRID RISER CABLE AND HYBRID JUMPER CABLE MODEL NUMBERS BEFORE PREPARING BOM.

Sprint
1 INTERNATIONAL BLVD, SUITE 800
MAHWAH, NJ 07495
TEL: (800) 357-7641

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WESTBOROUGH, MA 01581
TEL: (508) 251-0720

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Hadley, MA 01035 Ph: (413)320-4918

STATE OF CONNECTICUT
THOMAS E. JOHNSON
No. 28192
PROFESSIONAL ENGINEER

CHECKED BY: *G. J. [Signature]* / TEJ
APPROVED BY: JMM/TEJ

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POMFRET SCHOOL (SBA)
SITE ADDRESS:
398 POMFRET STREET
POMFRET, CT 06258

SHEET TITLE
EQUIPMENT DETAILS

SHEET NUMBER
A-4

SPECIAL PRE-CONSTRUCTION WORK NOTE (SBA-PROVIDED TOWER STRUCTURAL ANALYSIS SPECIAL EQUIPMENT INSTALLATION REQUIREMENTS):
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SPECIAL CONSTRUCTION NOTE (SBA-PROVIDED ANTENNA MOUNT STRUCTURAL MOD SPECIAL EQUIPMENT INSTALLATION REQUIREMENTS):
 GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL ANTENNA MOUNT STRUCTURAL AUGMENTS (STRUCTURAL MODIFICATIONS) AT THE SPRINT RAD/VERTICAL EQUIPMENT SPACE PER RECOMMENDATIONS FROM SBA-PROVIDED ANTENNA MOUNT STRUCTURAL ANALYSIS AND ANY SUPPLEMENTAL CONSTRUCTION DRAWINGS (PROVIDED BY GEOSTRUCTURAL DATED 06/18/18).

3
A-3
INSTALL SPRINT RRH (800MHZ 2X50), (TYP. OF 2 PER SECTOR, TOTAL OF 6) MOUNTED TO PROPOSED DUAL SWIVEL MOUNT

2
A-3
REMOVE AND REPLACE EXISTING SPRINT ANTENNA: INSTALL SPRINT ANTENNA (NNVV-65BR4), (TYP. OF 1 PER SECTOR, TOTAL OF 3) MOUNTED TO PROPOSED PIPE MAST

EXISTING SPRINT EQUIPMENT PLATFORM (SUBJECT TO MOUNT AUGMENT DETAILS BY OTHERS)

REMOVE AND REPLACE EXISTING PIPE MAST: FURNISH AND INSTALL 2" SCH40 PIPE (2.375" O.D., 0.154" WALL, 8'-0" LONG), (TYP. OF 3 PER SECTOR, TOTAL OF 9)



5
A-3
INSTALL SPRINT RRH (TD-RRH8X20-25), (TYP. OF 1 PER SECTOR, TOTAL OF 3) MOUNTED TO PROPOSED DUAL SWIVEL MOUNT

4
A-3
REMOVE AND RELOCATE EXISTING SPRINT RRH (1900 4X45 65MHZ) (TYP. OF 1 PER SECTOR, TOTAL OF 3) FROM GROUND LEVEL TO PROPOSED DUAL SWIVEL MOUNT

1
A-3
REMOVE AND REPLACE EXISTING SPRINT ANTENNA: INSTALL SPRINT ANTENNA (APXVTM14-ALU-I20), (TYP. OF 1 PER SECTOR, TOTAL OF 3) MOUNTED TO PROPOSED PIPE MAST

IMAGE SOURCE: PROVIDED BY SBA

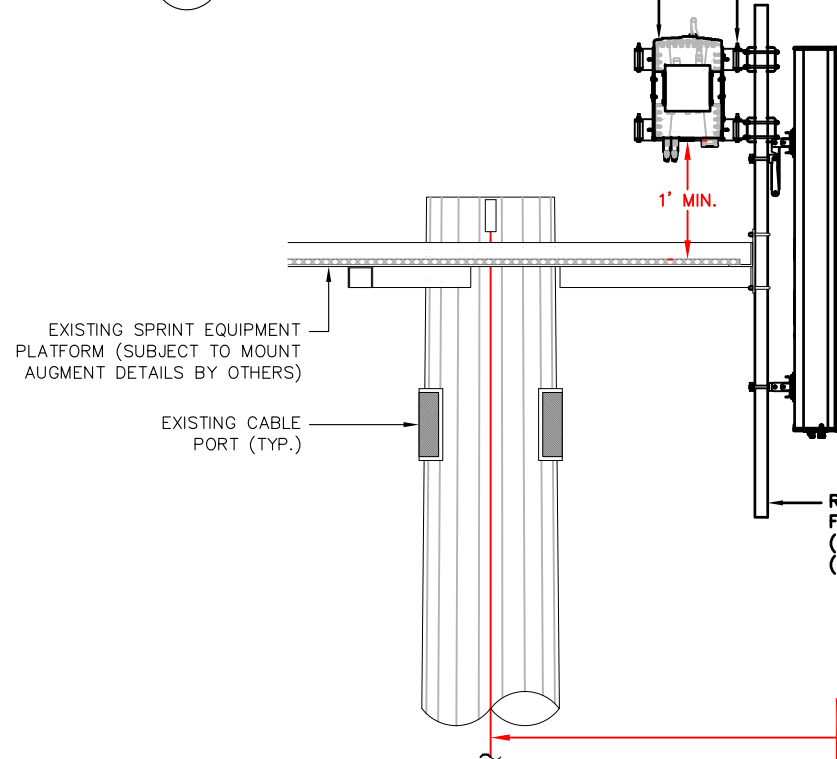
ANTENNA AND RRH MOUNT PHOTO DETAIL

SCALE: N.T.S.

1
S-1

7
A-3
FURNISH AND INSTALL RRU DUAL SWIVEL MOUNT (SITE PRO 1 P/N: RRUSM) MOUNTED TO BACK OF ANTENNA MOUNTING PIPE ABOVE EXISTING PLATFORM, (KIT OF 2, 8 KITS REQUIRED)

3
A-3
INSTALL SPRINT RRH (800MHZ 2X50), (TYP. OF 2 PER SECTOR, TOTAL OF 6) MOUNTED TO PROPOSED DUAL SWIVEL MOUNT



ALIGN ANTENNA TIP HEIGHT AS REQUIRED

3'-4"±

WORKING POINT: ϕ OF EXISTING PLATFORM

2
A-3
REMOVE AND REPLACE EXISTING SPRINT ANTENNA: INSTALL SPRINT ANTENNA (NNVV-65BR4), (TYP. OF 1 PER SECTOR, TOTAL OF 3) MOUNTED TO PROPOSED PIPE MAST

REMOVE AND REPLACE EXISTING PIPE MAST: FURNISH AND INSTALL 2" SCH40 PIPE (2.375" O.D., 0.154" WALL, 8'-0" LONG), (TYP. OF 3 PER SECTOR, TOTAL OF 9)

PROPOSED 800/1900 MHZ ANTENNA AND 800 MHZ RRH MOUNTING DETAIL

SCALE: N.T.S.

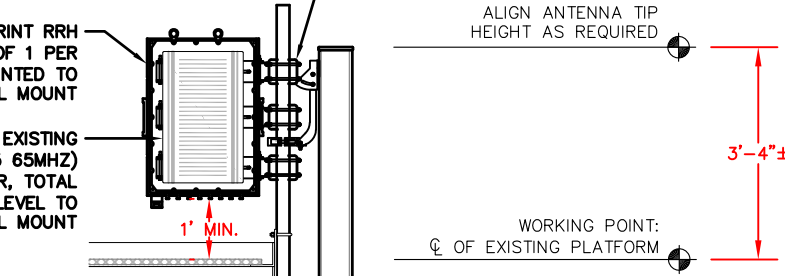
2
S-1

SPECIAL TOWER TOP EQUIPMENT INSTALLATION WORK NOTE (SAFETY-CLIMB ALIGNMENT REQUIREMENTS):
 GENERAL CONTRACTOR SHALL ORIENT PROPOSED SPRINT COLLAR-MOUNTS SO THAT EXISTING SAFETY CLIMB CABLE IS NOT OBSTRUCTED/RE-ROUTED FROM VERTICAL ALIGNMENT AND IS NOT IN PHYSICAL CONTACT WITH EXISTING OR PROPOSED COLLAR-MOUNT HARDWARE. GENERAL CONTRACTOR SHALL INSTALL NEW OR ADDITIONAL SAFETY-CLIMB CABLE GUIDES IF ADDITIONAL CLEARANCE IS REQUIRED. ADDITIONAL CABLE GUIDES SHALL BE ATTACHED SECURELY TO THE POLE USING MECHANICAL FASTENERS OR FIELD WELDED BY A CERTIFIED WELDING TECHNICIAN.

5
A-3
INSTALL SPRINT RRH (TD-RRH8X20-25), (TYP. OF 1 PER SECTOR, TOTAL OF 3) MOUNTED TO PROPOSED DUAL SWIVEL MOUNT

4
A-3
REMOVE AND RELOCATE EXISTING SPRINT RRH (1900 4X45 65MHZ) (TYP. OF 1 PER SECTOR, TOTAL OF 3) FROM GROUND LEVEL TO PROPOSED DUAL SWIVEL MOUNT

EXISTING SPRINT EQUIPMENT PLATFORM (SUBJECT TO MOUNT AUGMENT DETAILS BY OTHERS)



ALIGN ANTENNA TIP HEIGHT AS REQUIRED

3'-4"±

WORKING POINT: ϕ OF EXISTING PLATFORM

1
A-3
REMOVE AND REPLACE EXISTING SPRINT ANTENNA: INSTALL SPRINT ANTENNA (APXVTM14-ALU-I20), (TYP. OF 1 PER SECTOR, TOTAL OF 3) MOUNTED TO PROPOSED PIPE MAST

REMOVE AND REPLACE EXISTING PIPE MAST: FURNISH AND INSTALL 2" SCH40 PIPE (2.375" O.D., 0.154" WALL, 8'-0" LONG), (TYP. OF 3 PER SECTOR, TOTAL OF 9)

PROPOSED 2500 MHZ ANTENNA & 2500/1900 RRH MOUNTING DETAIL

SCALE: N.T.S.

3
S-1



1 INTERNATIONAL BLVD, SUITE 800
 MAHWAH, NJ 07495
 TEL: (800) 357-7641



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 TEL: (508) 251-0720



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 SITE ADDRESS:
 398 POMFRET STREET
 POMFRET, CT 06258

SHEET TITLE
 ANTENNA AND RRH MOUNTING DETAILS

SHEET NUMBER
 S-1

Site Identification	
Cascade	CT33XC017
SMS Schedule ID	1202304
SMS Schedule Name	DO Macro Upgrade
PID	
RRU OEM	ALU
Switch OEM	Alcatel Lucent
RFDS Issue Date	2017-08-15 09:00:00.0
RFDS Revision Date	2017-09-07 12:59:57.0
RFDS Revision	1

Contact Information	
Engineer Email	Bill.M.Hastings@sprint.com
Sprint Badged RF Engineer	Bill Hastings
RF Engineer Email	Bill.M.Hastings@sprint.com
RF Engineer Phone	978-890-9700
RF Manager	Jonathan Hall
RF Manager Email	Jonathan.H.Hall@sprint.com
RF Manager Phone	817-220-2929

Location Details	
Latitude	41.9009444
Longitude	-71.9548611
Market	Northern Connecticut
Region	Northeast
City	Pomfret
State	CT
Zip Code	CT06258
County	Windham

Carrier Count	
2500 LTE	3
1900 LTE	3
1900 EVDO	3
1900 Voice	3
800 LTE	3
800 Voice	3

2500MHz	3
1900MHz	3
800MHz	3

UE Relay Model	
Model Number	
Weight (Lbs.)	
Dimensions (In.)	
UE Relay Azimuth	
Manufacturer	
UE Relay Cl. Height (meters)	

GPS Antenna Model	
Model Number	
Weight (Lbs.)	
Dimensions (In.)	
Manufacturer	
GPS Antenna needed at site	

Battery Backup Cabinet Model	
Model Number	
Weight (Lbs.)	
Dimensions (In.)	
Manufacturer	

ALU Top Hat Model	
Model Number	
Weight (Lbs.)	
Dimensions (In.)	
Manufacturer	
Top Hat Quantity	

Repeater Model	
Model Number	
Weight (Lbs.)	
Dimensions (In.)	
Manufacturer	

BTS #2 Model	
Model Number	
Weight (Lbs.)	
Dimensions (In.)	
Manufacturer	
Needed at site	

Power Protection Cabinet Model	
Model Number	
Weight (Lbs.)	
Dimensions (In.)	
Manufacturer	
Power Protection Cabinet	

Growth Cabinet Model	
Model Number	
Weight (Lbs.)	
Dimensions (In.)	
Manufacturer	

BTS #1 Model	
Model Number	
Weight (Lbs.)	
Dimensions (In.)	
Manufacturer	
Number of BTS #1	

NOTE: VERIFY PROPOSED AZIMUTHS WITH RF ENGINEER PRIOR TO INSTALLATION

Band: 2500	Alpha	Beta	Gamma	Delta	Epsilon	Zeta
Antennat						
Model Number	APXV/TM14-ALU-I20	APXV/TM14-ALU-I20	APXV/TM14-ALU-I20			
Weight (lbs)	56.2	56.2	56.2	N/A	N/A	N/A
Dimensions	56.3 x 12.6 x 6.3	56.3 x 12.6 x 6.3	56.3 x 12.6 x 6.3	N/A	N/A	N/A
Manufacturer	RFS	RFS	RFS	N/A	N/A	N/A
Ant 1 Top Jumper Make/Model/Qty	2.5 Jumper 8	2.5 Jumper 8	2.5 Jumper 8	N/A	N/A	N/A
Ant 1 RF requested Diameter	1/2"	1/2"	1/2"	N/A	N/A	N/A
Ant 1 RF requested Top Jumper Length(ft)	8	8	8	N/A	N/A	N/A
Antenna 1 Azimuth	70	180	300	N/A	N/A	N/A
Antenna 1 Mechanical DT	N/A	N/A	N/A	N/A	N/A	N/A
Antenna 1 Center Line (ft)	169.9803204	169.9803204	169.9803204	N/A	N/A	N/A
Antenna 1 Electrical DT	2	2	2	N/A	N/A	N/A
Antenna 1 Electrical DT 2	N/A	N/A	N/A	N/A	N/A	N/A
Antenna 1 Electrical DT 3	N/A	N/A	N/A	N/A	N/A	N/A
Antenna 1 Twist	N/A	N/A	N/A	N/A	N/A	N/A

Band: 1900	Alpha	Beta	Gamma	Delta	Epsilon	Zeta
Antennat						
Model Number	NNVV-65B-R4	NNVV-65B-R4	NNVV-65B-R4			
Weight (lbs)	84.7	84.7	84.7	N/A	N/A	N/A
Dimensions	72 x 19.6 x 7.8	72 x 19.6 x 7.8	72 x 19.6 x 7.8	N/A	N/A	N/A
Manufacturer	CommScope	CommScope	CommScope	N/A	N/A	N/A
Ant 1 Top Jumper Make/Model/Qty	800/1900 Jumper 4	800/1900 Jumper 4	800/1900 Jumper 4	N/A	N/A	N/A
Ant 1 RF requested Diameter	1/2"	1/2"	1/2"	N/A	N/A	N/A
Ant 1 RF requested Top Jumper Length(ft)	8	8	8	N/A	N/A	N/A
Antenna 1 Azimuth	70	180	300	N/A	N/A	N/A
Antenna 1 Mechanical DT	N/A	N/A	N/A	N/A	N/A	N/A
Antenna 1 Center Line (ft)	169.9803204	169.9803204	169.9803204	N/A	N/A	N/A
Antenna 1 Electrical DT	3	3	3	N/A	N/A	N/A
Antenna 1 Electrical DT 2	N/A	N/A	N/A	N/A	N/A	N/A
Antenna 1 Electrical DT 3	N/A	N/A	N/A	N/A	N/A	N/A
Antenna 1 Twist	N/A	N/A	N/A	N/A	N/A	N/A

Band: 800	Alpha	Beta	Gamma	Delta	Epsilon	Zeta
Antennat						
Model Number	Antenna assigned on a different band	Antenna assigned on a different band	Antenna assigned on a different band			
Weight (lbs)	0	0	0	N/A	N/A	N/A
Dimensions	0 x 0 x 0	0 x 0 x 0	0 x 0 x 0	N/A	N/A	N/A
Manufacturer	-	-	-	N/A	N/A	N/A
Ant 1 Top Jumper Make/Model/Qty	800/1900 Jumper 4	800/1900 Jumper 4	800/1900 Jumper 4	N/A	N/A	N/A
Ant 1 RF requested Diameter	1/2"	1/2"	1/2"	N/A	N/A	N/A
Ant 1 RF requested Top Jumper Length(ft)	8	8	8	N/A	N/A	N/A
Antenna 1 Azimuth	70	180	300	N/A	N/A	N/A
Antenna 1 Mechanical DT	N/A	N/A	N/A	N/A	N/A	N/A
Antenna 1 Center Line (ft)	169.9803204	169.9803204	169.9803204	N/A	N/A	N/A
Antenna 1 Electrical DT	5	5	5	N/A	N/A	N/A
Antenna 1 Electrical DT 2	N/A	N/A	N/A	N/A	N/A	N/A
Antenna 1 Electrical DT 3	N/A	N/A	N/A	N/A	N/A	N/A
Antenna 1 Twist	N/A	N/A	N/A	N/A	N/A	N/A

RF DATA SHEET

SCALE: N.T.S.

SPRINT CONSTRUCTION STANDARDS:

GENERAL CONTRACTOR SHALL ADHERE TO THE FOLLOWING SPRINT CONSTRUCTION STANDARDS.

- CONSTRUCTION STANDARDS: INTEGRATED CONSTRUCTION STANDARDS FOR WIRELESS SITES - CURRENT VERSION, INCLUDING EXHIBITS A-M.
- CONSTRUCTION SPECIFICATIONS: CONSTRUCTION STANDARDS EXHIBIT A - STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES (CURRENT VERSION).
- GROUNDING STANDARDS: EXTERIOR GROUNDING SYSTEM DESIGN. GROUNDING STANDARDS (SUPPLEMENT): ANTI-THEFT UPDATE TO SPRINT GROUNDING 082412 AND SPRINT ENGINEERING LETTER EL-0504 DATED 04.20.12.
- WEATHER PROOFING STANDARDS: EXCERPT FROM CONSTRUCTION STANDARDS EXHIBIT A, SECTION 3.6 WEATHERPROOFING CONNECTORS AND GROUND KITS.
- COLOR CODING: SPRINT NEXTEL ANT AND LINE COLOR CODING PER SPRINT TS-0200 CURRENT VERSION.
- GENERAL CONTRACTOR TO FIELD VERIFY AZIMUTH AND CL HEIGHT AND MECHANICAL DOWNTILT. IF DIFFERENT THAN CALLED OUT IN RFDS, HALT ANTENNA WORK FOR ONE HOUR, CALL SPRINT RF ENGINEER (OR MANAGER IF RF ENGINEER DOES NOT ANSWER, BUT STILL LEAVE A MESSAGE TO RF ENGINEER) USING SPRINT-PROVIDED CONTACT INFORMATION FOR FURTHER INSTRUCTIONS. IF SPRINT DOES NOT RESPOND WITHIN ONE HOUR, PLACE ANTENNA AT SAME CL HEIGHT AS PLAN AND EMAIL CORRECT CL HEIGHT AND AZIMUTH TO SPRINT RF ENGINEER. UPDATE AS-BUILT DRAWING WITH CORRECT CL HEIGHT. ALSO EMAIL CORRECT ANTENNA CL HEIGHT, AZIMUTH AND MECHANICAL DOWNTILT TO RF ENGINEER.
- AISG TESTS TO VERIFY OPERATION IS TO BE PERFORMED AFTER FINAL INSTALLATION OF ANTENNAS AND AISG CABLES HAVE BEEN CONNECTED. VERIFY OPERATION OF ALL EXISTING SPRINT AISG EQUIPMENT INCLUDING 800MHZ, 1.9GHZ AND 2.5G. TEST INCLUDE COMPLETE DOWNTILT, AZIMUTH (IF APPLICABLE) AND BEAMWIDTH SWINGS (IF APPLICABLE). DOCUMENT AISG TEST RESULTS IN COAX SWEEP TEST SPREADSHEET.
- GENERAL CONTRACTOR MUST INSURE THAT NO OBJECT IS LOCATED IN FRONT OF ANTENNA. THIS MEANS NO OBJECT IS TO BE LOCATED 45 DEGREES LEFT AND RIGHT OF FRONT OF ANTENNA OR 7 DEGREES UP AND DOWN FROM CENTER OF ANTENNA. IF THIS IS NOT POSSIBLE, CONTACT RF ENGINEER FOR FURTHER INSTRUCTION.
- GENERAL CONTRACT IS REQUIRED TO USE A DIGITAL ALIGNMENT TOOL TO SET AZIMUTH, ROLL AND DOWNTILT. AZIMUTH ACCURACY IS TO BE WITHIN 1 DEGREE. DOWNTILT AND ROLL (LEFT TO RIGHT TILT) IS TO BE WITHIN 0.1 DEGREES. IF FOR SOME REASON THIS ACCURACY CANNOT BE ACHIEVED, UPDATE AS-BUILT DRAWINGS AND EMAIL SPRINT RF ENGINEER WITH AS-BUILT SETTINGS. USE 3Z RF ALIGNMENT TOOL OR EQUIVALENT TOOL.

HTTP://WWW.3ZTELECOM.COM/ANTENNA-ALIGNMENT-TOOL/.

NOTE: RFDS PROVIDED BY SPRINT DATED 09/07/2017. EXCERPTS TAKEN DEPICT RELEVANT RF DESIGN INFORMATION. A&E VENDOR SCOPE OF WORK LIMITED TO DESIGN OF MECHANICAL/STRUCTURAL EQUIPMENT ATTACHMENTS.

Band: 2500	Alpha	Beta	Gamma	Delta	Epsilon	Zeta
Radio Model						
Model Number	TD-RRHx20-25	TD-RRHx20-25	TD-RRHx20-25	N/A	N/A	N/A
Weight (lbs)	76.2	76.2	76.2	N/A	N/A	N/A
Dimensions	26 x 18.6 x 6.7	26 x 18.6 x 6.7	26 x 18.6 x 6.7	N/A	N/A	N/A
Manufacturer	ALU	ALU	ALU	N/A	N/A	N/A
Number of RRUs needed	1	1	1	0	0	0

Trunk Cable 1						
Model Number	Hybridflex	N/A	N/A	N/A	N/A	N/A
Weight (lbs.)	1	N/A	N/A	N/A	N/A	N/A
Dimensions (in.)	1.54	N/A	N/A	N/A	N/A	N/A
Manufacturer	ALU	N/A	N/A	N/A	N/A	N/A
Trunk Cable 1 Qty						

Band: 1900	Alpha	Beta	Gamma	Delta	Epsilon	Zeta
Radio Model						
Model Number	RRH-4x45-1900	RRH-4x45-1900	RRH-4x45-1900	N/A	N/A	N/A
Weight (lbs)	69.5	69.5	69.5	N/A	N/A	N/A
Dimensions	25 x 12 x 12	25 x 12 x 12	25 x 12 x 12	N/A	N/A	N/A
Manufacturer	ALU	ALU	ALU	N/A	N/A	N/A
Number of RRUs needed	1	1	1	0	0	0

Trunk Cable 1						
Model Number	1900 Hybrid_ALU	1900 Hybrid_ALU	1900 Hybrid_ALU	N/A	N/A	N/A
Weight (lbs.)	1.1	1.1	1.1	N/A	N/A	N/A
Dimensions (in.)	1.25	1.25	1.25	N/A	N/A	N/A
Manufacturer	ALU	ALU	ALU	N/A	N/A	N/A
Trunk Cable 1 Qty						

Band: 800	Alpha	Beta	Gamma	Delta	Epsilon	Zeta
Radio Model						
Model Number	RRH-2x50-800	RRH-2x50-800	RRH-2x50-800	N/A	N/A	N/A
Weight (lbs)	69.1	69.1	69.1	N/A	N/A	N/A
Dimensions	16 x 13 x 10	16 x 13 x 10	16 x 13 x 10	N/A	N/A	N/A
Manufacturer	ALU	ALU	ALU	N/A	N/A	N/A
Number of RRUs needed	2	2	2	0	0	0

Antenna 1 Upper Passive Component Model						
Model Number	1900MHz DIN Combiner					
Weight (lbs)	N/A	N/A	N/A	N/A	N/A	N/A
Dimensions	N/A	N/A	N/A	N/A	N/A	N/A
Manufacturer	RFS	N/A	N/A	N/A	N/A	N/A
Ant 1 Upper Passive Comp Qty needed	1	0	0	0	0	0
Ant 1 Upper Pass Comp band combi with						



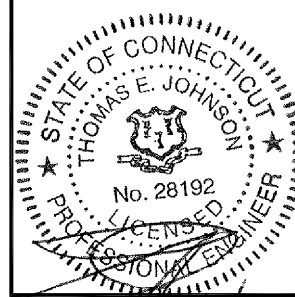
1 INTERNATIONAL BLVD, SUITE 800
MAHWAH, NJ 07495
TEL: (800) 357-7641



SBA COMMUNICATIONS CORP.
134 FLANDERS ROAD, SUITE 125
WESTBOROUGH, MA 01581 TEL: (508) 251-0720



4 Bay Road, Building A
Suite 200
Hadley, MA 01035 Ph: (413)320-4918



CHECKED BY: G/19/10/TEJ

APPROVED BY: JMM/TEJ

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	06/19/18	CONSTRUCTION REVISED	PN
0	04/04/18	ISSUED FOR CONSTRUCTION	PN

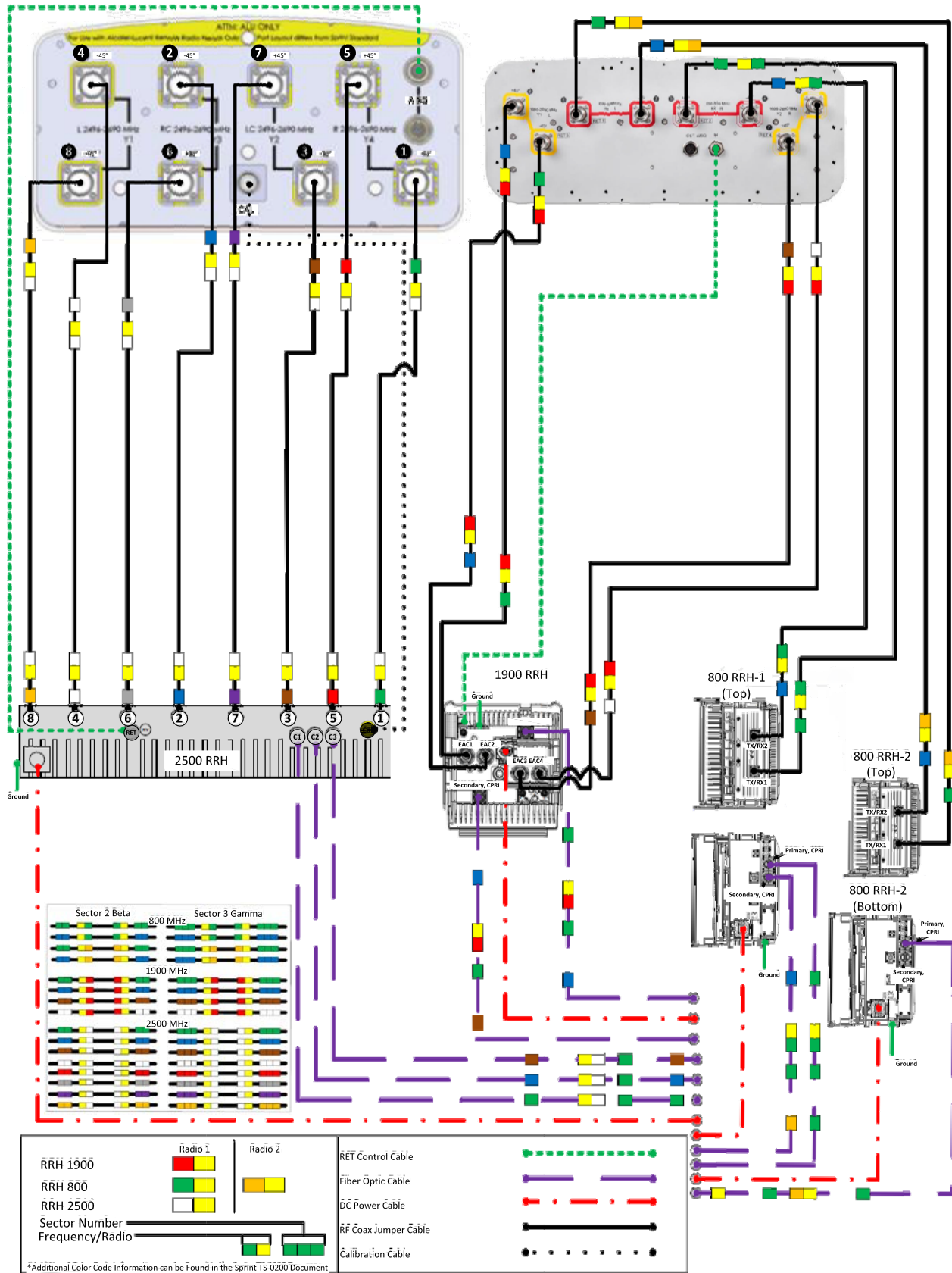
SITE NUMBER:
CT33XC017
SITE NAME:
POMFRET SCHOOL (SBA)

SITE ADDRESS:
398 POMFRET STREET
POMFRET, CT 06258

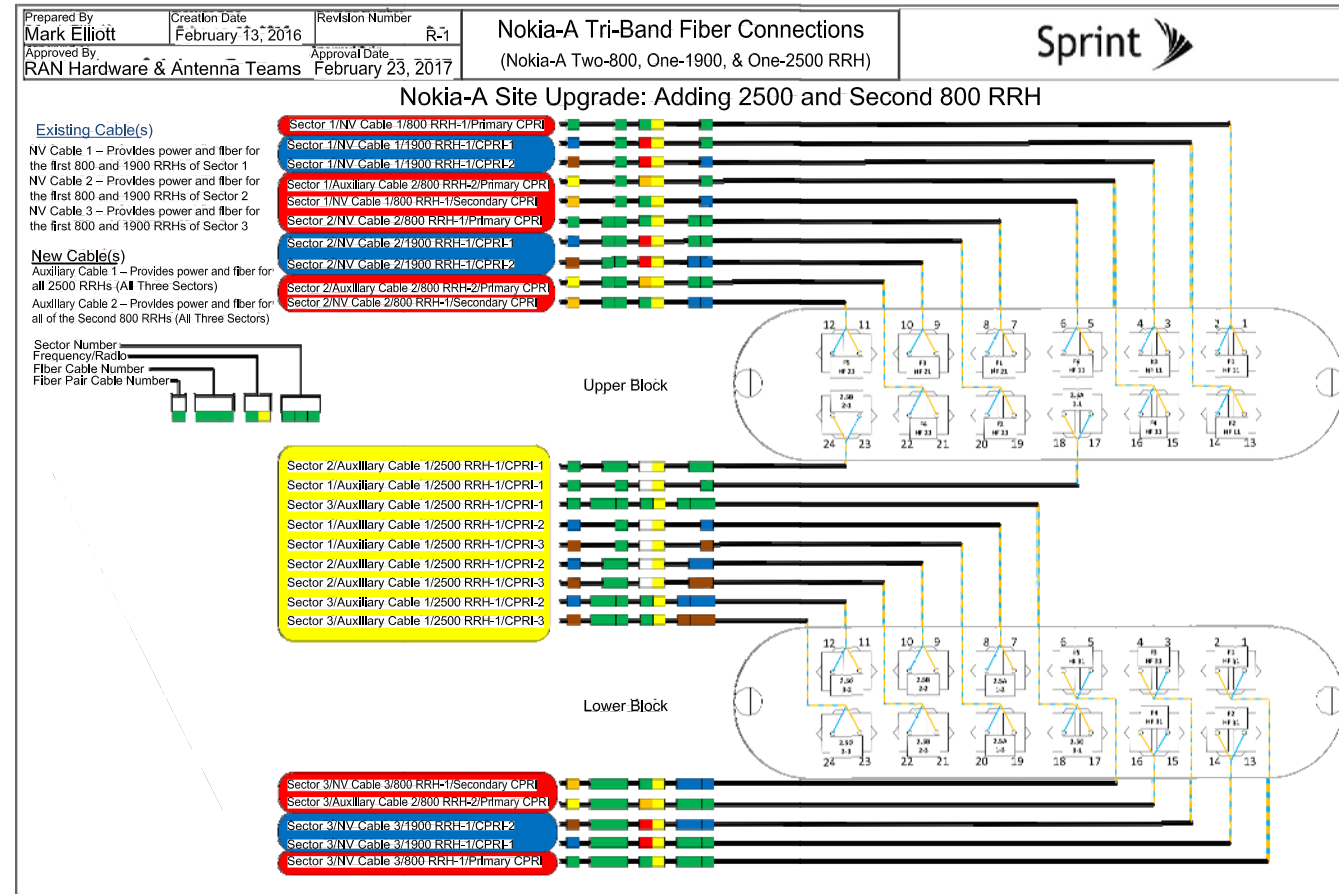
SHEET TITLE
RF DATA SHEET

SHEET NUMBER
RF-1

ALU 211 APXVTM14-ALU-I20 & NNVV-65B-R4 wo Filters



Not to Scale



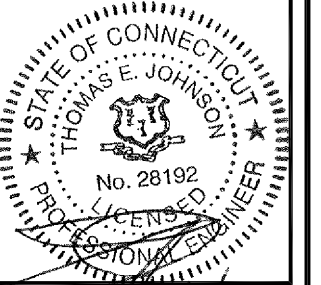
Sector	Cable	First Ring	Second Ring	Third Ring
1 Alpha	1	Green	No Tape	No Tape
1	2	Blue	No Tape	No Tape
1	3	Brown	No Tape	No Tape
1	4	White	No Tape	No Tape
1	5	Red	No Tape	No Tape
1	6	Gray	No Tape	No Tape
1	7	Purple	No Tape	No Tape
1	8	Orange	No Tape	No Tape
2 Beta	1	Green	Green	No Tape
2	2	Blue	Blue	No Tape
2	3	Brown	Brown	No Tape
2	4	White	White	No Tape
2	5	Red	Red	No Tape
2	6	Gray	Gray	No Tape
2	7	Purple	Purple	No Tape
2	8	Orange	Orange	No Tape
3 Gamma	1	Green	Green	Green
3	2	Blue	Blue	Blue
3	3	Brown	Brown	Brown
3	4	White	White	White
3	5	Red	Red	Red
3	6	Gray	Gray	Gray
3	7	Purple	Purple	Purple
3	8	Orange	Orange	Orange

Frequency/Radio	Indicator	ID
800 #1	Yellow	Green
800 #2	Yellow	Orange
1900 #1	Yellow	Red
1900 #2	Yellow	Brown
1900 #3	Yellow	Blue
2500 #1	Yellow	White
2500 #2	Yellow	Purple

1 INTERNATIONAL BLVD, SUITE 800
MAHWAH, NJ 07495
TEL: (800) 357-7641

SBA COMMUNICATIONS CORP.
134 FLANDERS ROAD, SUITE 125
WESTBOROUGH, MA 01581 TEL: (508) 251-0720

4 Bay Road, Building A
Suite 200
Hadley, MA 01035 Ph: (413) 320-4918



CHECKED BY: *G. J. / TEJ*

APPROVED BY: JMM/TEJ

SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
1	06/19/18	CONSTRUCTION REVISED	PN
0	04/04/18	ISSUED FOR CONSTRUCTION	PN

SITE NUMBER:
CT33XC017
SITE NAME:
POMFRET SCHOOL (SBA)
SITE ADDRESS:
398 POMFRET STREET
POMFRET, CT 06258

SHEET TITLE
**PLUMBING DIAGRAM
AND RAN WIRING**

SHEET NUMBER
RF-2

CT33XC017

DO MACRO EQUIPMENT DEPLOYMENT

MOUNT AUGMENTATION @ 177'

MONOPOLE TOWER

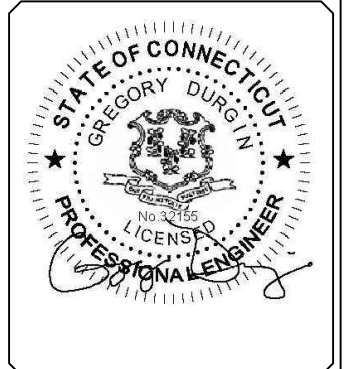
POMFRET, CT
WINDHAM COUNTY



REVISIONS:			
NO.	DATE	DESCRIPTION	BY
2	05/22/18	REVISED PLACEMENT	JAD
1	04/15/18	REVISED LOADING	JAD
0	02/19/18	ISSUE FOR CONSTRUCTION	JAD

CHECKED BY: _____ DWG

THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO THE CLIENT NAMES IS STRICTLY PROHIBITED.



SITE INFORMATION:
MOUNT AUGMENTATION

CT33XC017

POMFRET, CT

LATITUDE: 41.89009444
LONGITUDE: -71.95498611

SHEET TITLE:

TITLE SHEET

SHEET NUMBER:

S1

SITE INFORMATION

STRUCTURE TYPE: MONOPOLE
MOUNT TYPE: PLATFORM
LATITUDE: 41.89009444 (NAD 83)
LONGITUDE: -71.95498611 (NAD 83)
CITY, STATE: POMFRET, CT
COUNTY: WINDHAM
SBA SITE: CT02217-S Pomfret School
COORDINATES ARE FOR NAVIGATIONAL PURPOSES ONLY, NOT TO 1A ACCURACY.

DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS, CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR THE LABOR & MATERIALS FOR THE DISCREPANCIES.

CODE COMPLIANCE

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES.

BUILDING CODE AND DESIGN STANDARD: 2012 IBC / TIA-222-G / 2016 CT

RIGGING PLAN REQUIRED

THIS SET OF PLANS DOES "NOT" CONSTITUTE A RIGGING PLAN.

A PROPER RIGGING PLAN SHALL BE PERFORMED BY A LICENSED PROFESSIONAL ENGINEER PRIOR TO PROCEEDING ON ANY AUGMENTATIONS SHOWN HEREIN.

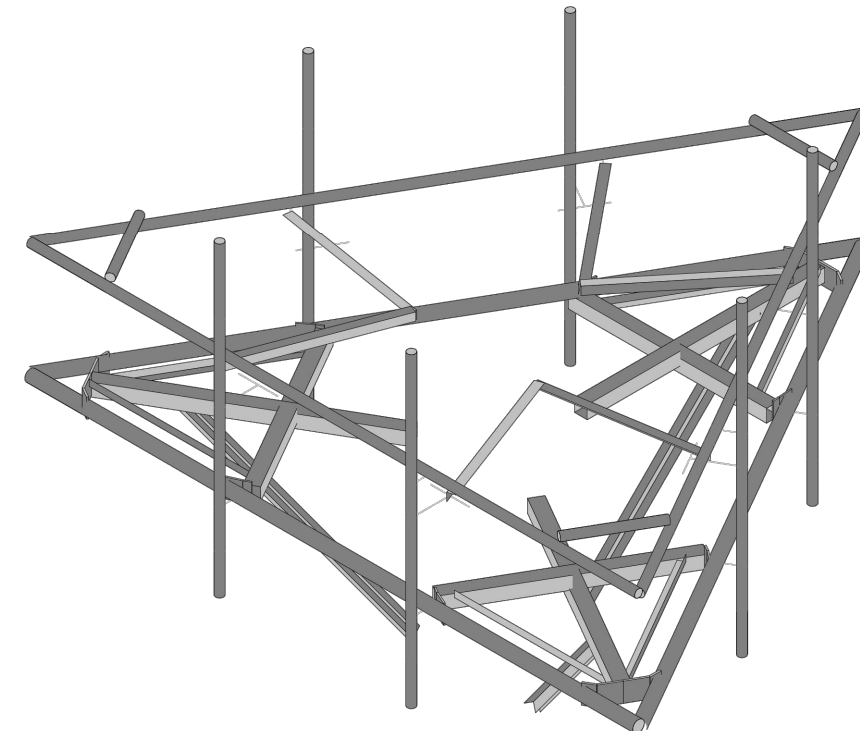
GENERAL DESIGN NOTES

- THIS PLAN HAS BEEN DESIGNED UTILIZING THE CORRESPONDING MOUNT STRUCTURAL ANALYSIS.
- THESE PLANS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE GOVERNING PROVISIONS OF TIA/EIA-222, ASCE 7, AWS, ACI, AND AISC. MATERIALS AND SERVICES PROVIDED BY THE CONTRACTOR SHALL CONFORM TO THE ABOVE-MENTIONED CODES AND THE CONTRACT SPECIFICATIONS.
- ALL STRUCTURE INFORMATION OBTAINED IN THE FORM OF FROM INFORMATION PROVIDED BY THE CLIENT. CONTRACTOR SHALL OBTAIN AND BECOME FAMILIAR WITH THE REFERENCED DOCUMENTS. CONTRACTOR SHALL ISSUE A REQUEST FOR INFORMATION (RFI) IN THE EVENT ANY DISCREPANCIES ARE DISCOVERED BETWEEN THESE DOCUMENTS AND THE AS-BUILT CONDITIONS IN THE FIELD IN A SITE VISIT THAT SHALL BE PERFORMED PRIOR TO STARTING FABRICATION OR CONSTRUCTION.
- ALL MATERIALS UTILIZED FOR THIS PROJECT MUST BE NEW AND FREE OF ANY DEFECTS.
- ALL PRODUCT OR MATERIAL SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE APPROVED IN WRITING BY THE ENGINEER. CONTRACTOR SHALL PROVIDE DOCUMENTATION TO ENGINEER SUITABLE TO DETERMINE IF SUBSTITUTE IS ACCEPTABLE FOR USE AND MEETS THE ORIGINAL DESIGN CRITERIA. DIFFERENCES FROM THE ORIGINAL DESIGN, INCLUDING MAINTENANCE, REPAIR AND REPLACEMENT, SHALL BE NOTED. ESTIMATES OF COSTS/CREDITS ASSOCIATED WITH THE SUBSTITUTION (INCLUDING RE-DESIGN COSTS AND COSTS TO SUB-CONTRACTORS) SHALL BE PROVIDED TO THE ENGINEER. CONTRACTOR SHALL PROVIDE ADDITIONAL DOCUMENTATION AND/OR SPECIFICATIONS TO THE ENGINEER AS REQUESTED.
- PROVIDE STRUCTURAL STEEL SHOP DRAWING(S) TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO FABRICATION (ONLY IF SPECIFICALLY REQUESTED BY ENGINEER).
- UNLESS NOTED OTHERWISE, ALL NEW MEMBERS AND REINFORCING SHALL MAINTAIN THE EXISTING MEMBER WORK LINES AND NOT INTRODUCE ECCENTRICITIES INTO THE STRUCTURE.
- ANY CONTRACTOR-CAUSED DAMAGE TO PROPERTY OF THE LAND OWNER, PROPERTY OF THE STRUCTURE OWNER, PROPERTY OF THE CUSTOMER, SITE FENCING OR GATES, ANY AND ALL UTILITY AND/OR SERVICE LINES, SHOWN OR NOT SHOWN ON THE PLANS, SHALL BE REPAIRED OR REPLACED AT THE SOLE COST OF THE CONTRACTOR AND SHALL BE ACCOMPLISHED BY THE CONTRACTOR OR SUBCONTRACTOR AS APPROVED BY THE ENGINEER OF RECORD AND LAND OWNER. DAMAGE TO EQUIPMENT OR PROPERTY OF ANY KIND BELONGING TO OTHER COMPANIES (BESIDES THE INDICATED CUSTOMER) SHALL BE ADDRESSED BY THE CONTRACTOR WITH THE COMPANIES THAT OWN THE DAMAGED ITEMS.

SHEET INDEX

SHEET	DESCRIPTION
S-1	TITLE SHEET
S-2	NOTES AND SPECIFICATIONS
S-3	AUGMENTATIONS, SECTIONS & DETAILS

MOUNT AUGMENTATION CONFIGURATION



AUGMENTATION SCOPE

AUGMENT ALL SECTORS OF CARRIER'S EXISTING MOUNT INSTALLATION AS REQUIRED (UNLESS NOTED OTHERWISE)

CONTRACTOR NOTES

- PRIOR TO BEGINNING CONSTRUCTION, ALL CONTRACTORS AND SUBCONTRACTORS MUST ACKNOWLEDGE IN WRITING TO TOWER OWNER THAT THEY HAVE OBTAINED, UNDERSTAND, AND WILL FOLLOW STRUCTURE OWNER STANDARDS OF PRACTICE, CONSTRUCTION GUIDELINES, ALL SITE AND STRUCTURE/TOWER SAFETY PROCEDURES, ALL PRODUCT LIMITATIONS AND INSTALLATION PROCEDURES USED ON SITE, AND PROPOSED AUGMENTATIONS DESCRIBED. RECEIPT OF ACKNOWLEDGEMENT MUST OCCUR PRIOR TO BEGINNING CONSTRUCTION OR CLIMBING. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO PROVIDE THIS DOCUMENTATION FOR STRUCTURE OWNER ON COMPANY LETTERHEAD AND THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO OBTAIN THIS DOCUMENTATION FROM ANY SUBCONTRACTORS (ON SUBCONTRACTOR LETTERHEAD) AND DELIVER IT TO THE STRUCTURE OWNER.
- IF THE CONTRACTOR DISCOVERS ANY EXISTING CONDITIONS THAT ARE NOT REPRESENTED ON THESE DRAWINGS, OR ANY CONDITIONS THAT WOULD INTERFERE WITH THE INSTALLATION OF THE AUGMENTATIONS, THE ENGINEER OF RECORD SHALL BE CONTACTED IMMEDIATELY TO EVALUATE THE SIGNIFICANCE OF THE DEVIATION.
- THE CONTRACTOR SHALL SOLICIT AND HIRE THE SERVICES OF A QUALIFIED AUGMENTATION INSPECTOR PRIOR TO BEGINNING CONSTRUCTION. THE AUGMENTATION INSPECTOR MAY BE AN EMPLOYEE OF THE CONTRACTOR'S FIRM, HOWEVER THE INSPECTOR'S ONLY DUTIES SHALL BE INSPECTION, TESTING, AND REPORT CREATION AS REQUIRED ON THE "AUGMENTATION INSPECTION NOTES" SHEET.
- THE CONTRACTOR SHALL NOTIFY THE TOWER OWNER OF THE PLANNED CONSTRUCTION & INSPECTION SCHEDULE, AS WELL AS ANY CHANGES TO THE SCHEDULE, WITHIN TWO BUSINESS DAYS OF THE COMPLETION OF THE SCHEDULE OR SCHEDULE REVISION BOTH PRIOR TO BEGINNING CONSTRUCTION AND DURING CONSTRUCTION AS THE SCHEDULE CHANGES. THE STRUCTURE OWNER WHEN THE WORK HAS BEEN COMPLETED WITHIN 2 BUSINESS DAYS OF THE COMPLETION OF THE WORK AND ASSOCIATED AUGMENTATION INSPECTIONS & TESTING (WHEN APPLICABLE).
- IT IS ASSUMED THAT ANY STRUCTURAL AUGMENTATION WORK SPECIFIED ON THESE PLANS WILL BE ACCOMPLISHED BY KNOWLEDGEABLE WORKMEN WITH TOWER CONSTRUCTION EXPERIENCE. THIS INCLUDES PROVIDING THE NECESSARY CERTIFICATIONS TO THE STRUCTURE OWNER AND ENGINEER INCLUDING BUT NOT LIMITED TO TOWER CLIMBER AND RESCUE CLIMBER CERTIFICATIONS, ET CETERA.
- THESE DRAWINGS DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION METHODS, MEANS, TECHNIQUES, SEQUENCES AND PROCEDURES.
- CONTRACTOR SHALL WORK WITHIN THE LIMITS OF THE STRUCTURE OWNER'S PROPERTY OR LEASE AREA AND APPROVED EASEMENTS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY WORK IS WITHIN THESE BOUNDARIES. CONTRACTOR SHALL EMPLOY A SURVEYOR AS REQUIRED. ANY WORK OUTSIDE THESE BOUNDARIES SHALL BE APPROVED IN WRITING BY THE LAND OWNER PRIOR TO MOBILIZATION. CONSTRUCTION STAKING AND BOUNDARY MARKING IS THE RESPONSIBILITY OF THE CONTRACTOR.

STRUCTURAL ERECTION AND BRACING REQUIREMENTS

- THE STRUCTURAL DRAWINGS ILLUSTRATE THE COMPLETED STRUCTURE WITH ALL ELEMENTS IN THEIR FINAL POSITIONS, PROPERLY SUPPORTED AND BRACED.
- THE CONTRACTOR SHALL PROVIDE SHORING AND BRACING AS REQUIRED DURING CONSTRUCTION TO ENSURE STABILITY. DESIGN AND SEQUENCING OF CONSTRUCTION SHORING AND BRACING IS OUTSIDE THE SCOPE OF THIS WORK.
- THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND EXECUTION OF ALL MISCELLANEOUS SHORING, BRACING, TEMPORARY SUPPORTS, GUYING, ETC. NECESSARY TO PROVIDE A COMPLETE AND STABLE STRUCTURE AS SHOWN ON THESE DRAWINGS.

BOLTS

- ALL CONNECTIONS OF STRUCTURAL STEEL MEMBERS SHALL BE MADE USING SPECIFIED GALVANIZED HIGH STRENGTH ASTM A325 OR A490 BOLTS WITH THREADS EXCLUDED FROM SHEAR PLANE.
- FASTENERS SHALL BE INSTALLED IN PROPERLY ALIGNED HOLES, WITH BOLT HEADS FACING DOWN WHERE APPLICABLE.
- ALL BOLTS AT EVERY CONNECTION SHALL BE INSTALLED SNUG-TIGHT UNTIL THE SECTION IS FULLY COMPACTED AND ALL PLIES ARE JOINED, AND THEN TIGHTENED FURTHER BY AISC - "TURN OF THE NUT" METHOD. TIGHTENING SHALL PROGRESS SYSTEMATICALLY.
- BOLT LENGTHS UP TO AND INCLUDING 4 DIAMETERS SHALL BE TENSIONED 1/3 TURN BEYOND SNUG-TIGHT. BOLT LENGTHS OVER 4 DIAMETERS SHALL BE 1 1/2 TURNS BEYOND SNUG-TIGHT.
- ALL BOLTED CONNECTIONS SHALL USE LOCK WASHERS.

STRUCTURAL STEEL

- STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE CURRENT EDITION OF THE AISC STEEL CONSTRUCTION MANUAL AND SECTION 4 OF THE TIA CODE.
- PRE-QUALIFIED STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING MINIMUM GRADES UNLESS OTHERWISE NOTED:
 - CHANNELS & ANGLES ASTM A36, (Fy = 36 KSI)
 - PLATES ASTM A36, (Fy = 36 KSI)
 - PIPES ASTM A53 GR.B, (Fy = 35 KSI)
 - HSS ROUND ASTM A500 GR.B, (Fy = 42 KSI)
 - HSS RECTANGULAR ASTM A500 GR.B, (Fy = 46 KSI)
 - STRUCTURAL BOLTS ASTM A325
 - U-BOLTS ASTM A307 GR.A
 - NUTS FOR BOLTS ASTM A563 (THREADING TO MATCH BOLT)
 - WASHERS FOR BOLTS ASTM F436
 - SEE TABLE 5-1 OF THE TIA CODE FOR ADDITIONAL SHAPES AND STANDARDS THAT ARE NOT LISTED ABOVE.
- NON PRE-QUALIFIED STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING STANDARDS PER THE TIA CODE:
 - THE CARBON EQUIVALENT OF STEEL SHALL NOT EXCEED 0.65 PER SECTION 5.4.2 OF THE TIA CODE
 - ELONGATION OF STEEL SHALL NOT BE LESS THAN 18%
 - TEST REPORTS SHALL BE IN ACCORDANCE WITH ASTM A6 OR A568
 - TOLERANCES SHALL BE IN ACCORDANCE WITH ASTM A6
- FIELD CUT EDGES, EXCEPT DRILLED HOLES, SHALL BE GROUND SMOOTH AND COLD GALVANIZED.
- ALL WELDING WORK SHALL CONFORM TO THE AWS D1.1 STRUCTURAL WELDING CODE. ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS ONLY. WELDING ELECTRODES SHALL BE E70XX.
- ALL DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO AISC SPECS AND CODES, LATEST EDITION.
- UPON REQUEST, THE CONTRACTOR SHALL SUBMIT DETAILED, ENGINEERED, COORDINATED AND CHECKED SHOP DRAWINGS FOR ALL STRUCTURAL STEEL TO THE ENGINEER OF RECORD TO REVIEW FOR COMPLIANCE WITH DESIGN INTENT PRIOR TO THE START OF FABRICATION AND/OR ERECTION.
- TORCH-CUTTING OF ANY KIND SHALL NOT BE PERMITTED.
- ALL BOLT HOLES SHALL BE STANDARD SIZE BOLT HOLES PER AISC 360, UNLESS OTHERWISE NOTED. ALL HOLES SHALL BE SHOP DRILLED OR SUB-PUNCHED AND REAMED. BURNING OF HOLES IS NOT PERMITTED. WHERE SLOTTED OR OVERSIZE HOLES ARE SPECIFIED ON THE DRAWINGS, EXTRA-THICK ASTM F436 PLATE WASHERS SHALL BE USED (3/16" MINIMUM THICKNESS) WITH A DIAMETER SUITABLE TO COVER THE EXTENTS OF THE SLOT OR HOLE. BOLTS SHALL BE HEAVY-HEX WHERE AVAILABLE IN THE SIZE AND GRADE SPECIFIED, OTHERWISE BOLTS SHALL BE HEX HEAD CAP SCREWS.
- ALL STEEL HARDWARE, INCLUDING ADHESIVE OR EMBEDDED ANCHOR BOLTS AND THEIR ACCESSORIES, SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A153 (EXCEPT BOLTS SMALLER THAN 1/2" SHALL CONFORM TO FE/ZN 3 AT PER ASTM F1941 WHERE HOT-DIP GALVANIZED BOLTS ARE NOT AVAILABLE). ALL STEEL MEMBERS, INCLUDING WELDMENTS, SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A123. REPAIR DAMAGE TO GALVANIZED COATINGS USING ASTM A780 PROCEDURES WITH A ZINC RICH PAINT (SUCH AS ZINC GALVILITE) FOR GALVANIZING DAMAGED BY HANDLING, TRANSPORTING, CUTTING, WELDING, OR BOLTING. DO NOT HEAT SURFACES TO WHICH REPAIR PAINT HAS BEEN APPLIED. CALL OUT HOLES REQUIRED FOR HOT-DIP GALVANIZING ON SHOP DRAWINGS.
- MEMBERS SHALL BE SHOP-FABRICATED AND WELDED TO THE EXTENT PRACTICABLE IN ORDER TO REDUCE FIELD INSTALLATION COSTS.

CONSTRUCTION INSPECTION CHECKLIST

CONSTRUCTION AND/OR INSTALLATION INSPECTIONS REQUIRED FOR REPORT? (CHECK=YES, BLANK=NO)	INSPECTION REPORT ITEM
√	CONSTRUCTION INSPECTIONS
	THIRD-PARTY CERTIFIED WELD INSPECTION (INCLUDING IBC SPECIAL INSPECTIONS)
√	GALVANIZING REPAIR MATERIAL PREPARATION, INSPECTION, & PAINT APPLICATION
√	PRIME CONTRACTOR'S AS-BUILT DOCUMENTS (SIGNED & DATED)
√	FABRICATION INSPECTION
√	MATERIAL TEST REPORT(S) / MILL CERTIFICATE(S)
√	PACKING SLIPS FOR STRUCTURAL MATERIALS

NOMINAL HOLE DIMENSIONS

BOLT Ø	STANDARD HOLE Ø
1/2"Ø	9/16"Ø
5/8"Ø	11/16"Ø
3/4"Ø	13/16"Ø
7/8"Ø	15/16"Ø
1"Ø	1 1/8"Ø

Sprint

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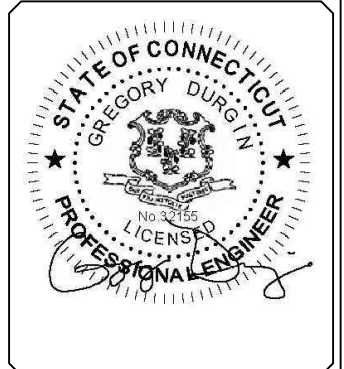
PO BOX 2621, BOISE, ID 83701
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REVISIONS:

NO.	DATE	DESCRIPTION	BY
2	05/22/18	REVISED PLACEMENT	JAD
1	04/15/18	REVISED LOADING	JAD
0	02/19/18	ISSUE FOR CONSTRUCTION	JAD

CHECKED BY: DWG

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SITE INFORMATION:

MOUNT AUGMENTATION

CT33XC017

POMFRET, CT

LATITUDE: 41.89009444
LONGITUDE: -71.95498611

SHEET TITLE:

NOTES AND SPECIFICATIONS

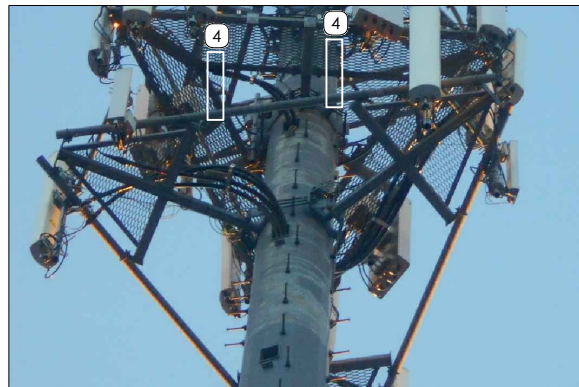
SHEET NUMBER:

S2

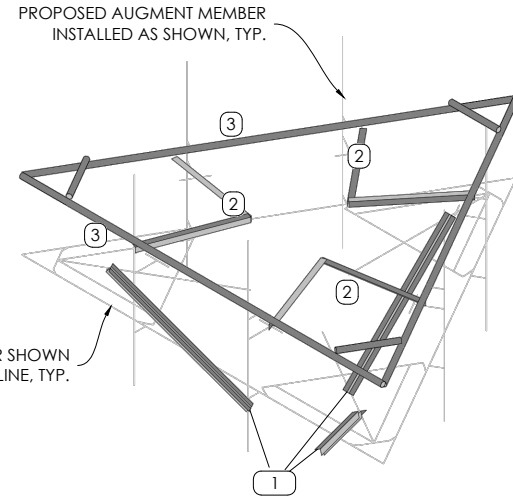
NEW MOUNT AUGMENTATIONS

- 1 PLATFORM REINFORCEMENT KIT
SITEPRO1 PART# PRK-1245L. ATTACH PRK COLLAR TO MONOPOLE SHAFT ~4.5' BELOW EXISTING STANDOFF CENTERLINE AND DOUBLE ANGLE KICKER BRACKET TO STANDOFF MEMBER ~4.5' OUT FROM THE STANDOFF-TO-COLLAR INTERFACE AS SHOWN PER MANUF. SPECS. [(1) KIT TOTAL]
- 2 HANDRAIL COMPONENTS - V-BRACE KIT
SITEPRO1 PART# PRK-SFS-H-L. ATTACH COLLAR MOUNT TO MONOPOLE SHAFT ~3.0' ABOVE EXISTING STANDOFF CENTERLINE. NOTE: IF THE PRK-SFS-H-L KIT IS NOT AVAILABLE, PROVIDE (6) TOTAL L2½x2½x¼ x ~8' LONG REPLACEMENT ANGLES, FIELD-CUT AND DRILL TO SUIT. [(1) KIT TOTAL] ROTATE AND ORIENT SFS ANGLES AS GRAPHICALLY DISPLAYED IN ORDER TO MAINTAIN CLIMBING FACILITY PATHWAY THROUGH MOUNT.
- 3 HANDRAIL COMPONENTS
• PIPE2.0STD X 15.0' HORIZ. RAIL, [(3) TOTAL]. ATTACH SFS-H-L KIT ANGLES TO NEW HORIZ. RAIL.
• PIPE2.0STD X ~4' LONG CORNER BRACE, [(3) TOTAL]. ATTACH TO NEW HORIZ. RAIL W/ (6) SITEPRO1 PART# PUCK BRACKETS.
• PIPE2.0STD MOUNT PIPES, [(6) TOTAL] W/ SITEPRO1 SCX x-K, [(12) TOTAL] CROSS-OVER PLATES. ATTACH ALL MOUNT PIPES TO EXISTING AND NEW HORIZ. RAILS.
- 4 PANEL ANTENNAS TO BE INSTALLED IN POSITIONS 2 AND 3. RRH UNITS TO BE INSTALLED ON NEW SWIVEL BRACKETS BEHIND PANEL ANTENNAS IN POSITIONS 2 AND 3 (MAXIMUM OF 2 RRH PER MOUNT PIPE).

AUGMENTATIONS SHALL BE COMPLETED PRIOR TO THE INSTALLATION OF ANY NEW EQUIPMENT.



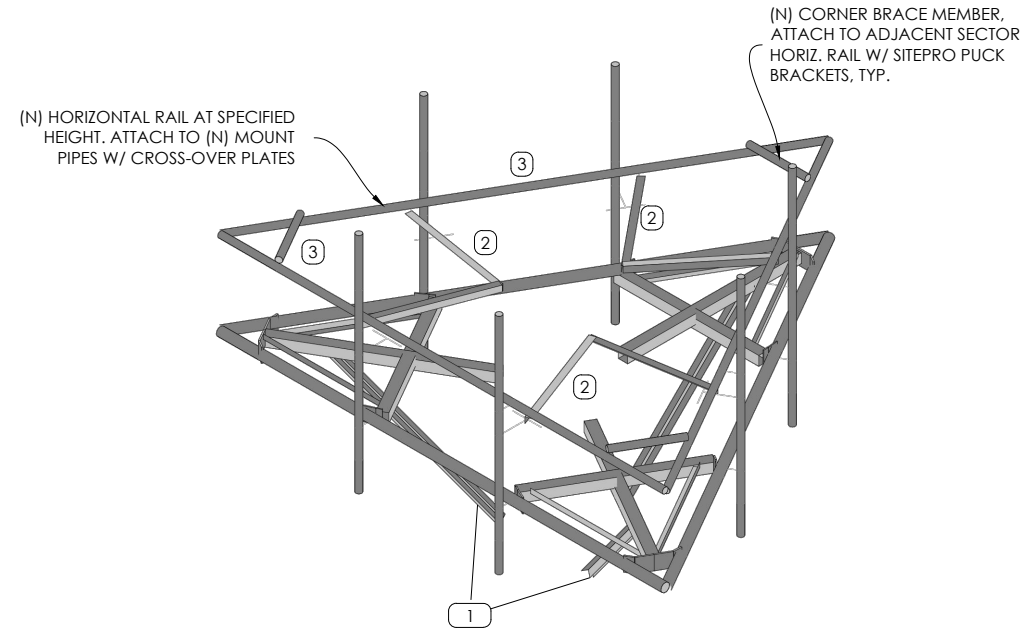
PLATFORM @ 177' AUGMENTATION



MOUNT AUGMENTATION ISOLATION
SCALE: N.T.S.

CONSTRUCTION NOTES

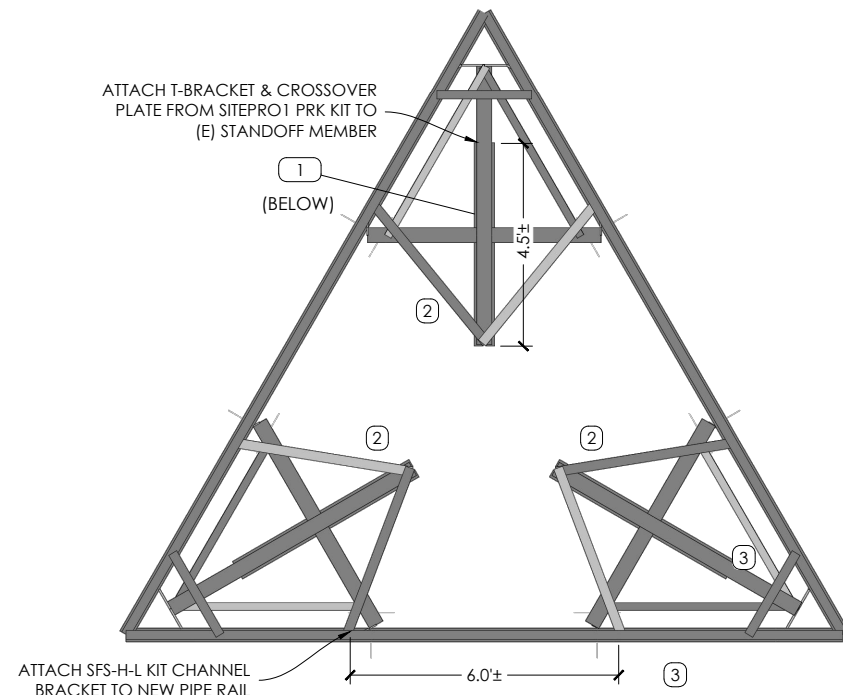
1. SCOPE OF WORK MUST BE COMPLETED AT WIND SPEEDS < 20 MPH.
2. ALL DIMENSIONS ARE APPROXIMATE. CONTRACTOR SHOULD FIELD-VERIFY ALL DIMENSIONS BEFORE FABRICATION OF STEEL AND COMMENCEMENT OF WORK. FIELD CUT MEMBERS AS REQUIRED.
3. CONTRACTOR TO COORDINATE THE TEMPORARY REMOVAL/RELOCATION/REPLACEMENT OF ELEMENTS (E.G. COAX, CLIPS, TMAs, ETC.) CONNECTED TO, OR IN THE DIRECT PATH, OF NEW AUGMENTATION MEMBERS.



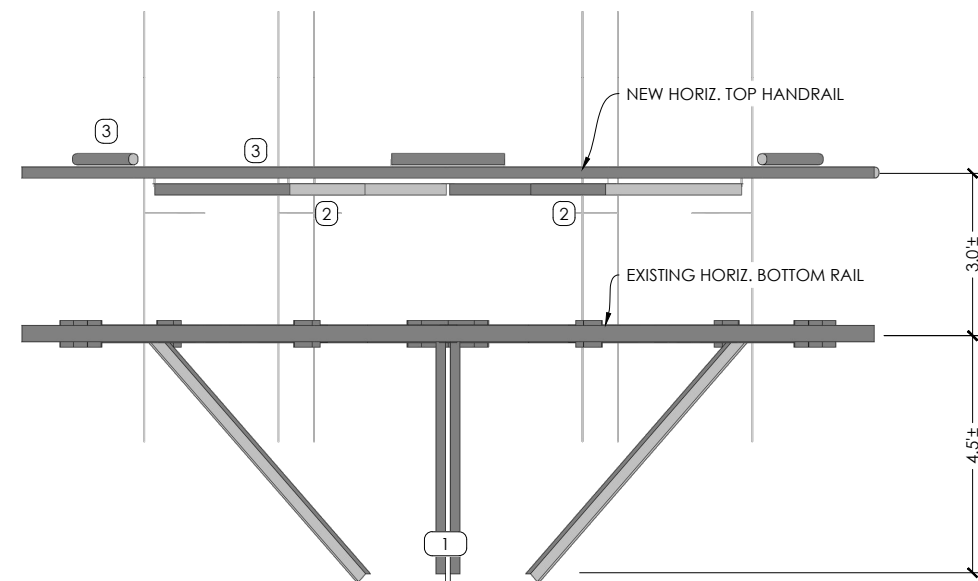
AUGMENTED MOUNT ISOMETRIC
SCALE: N.T.S.

INSTALLATION NOTES

1. AUGMENT MEMBER(S) MAY NEED TO BE FIELD-CUT TO LENGTH TO ACCOMMODATE THIS INSTALLATION. CONTRACTOR TO CUT AND DRILL TO SUIT AS REQUIRED AND APPLY (2) COATS OF COLD-GALV. COMPOUND TO CUT MEMBER ENDS.
2. CONTRACTOR TO CHECK ALL EXISTING MEMBER CONNECTION BOLTS, PARTICULARLY STANDOFF TO TOWER BOLTS, FOR PROPER INSTALLATION AND TIGHTNESS.
3. COORDINATE PLACEMENT OF NEW AUGMENT MEMBERS WITH EXISTING TOWER AND CLIMBING FACILITY ELEMENTS (E.G. STEP PEGS, COAX PORTS, ETC.)
4. REFER TO CONSTRUCTION DRAWINGS (BY OTHERS) AND MOUNT STRUCTURAL ANALYSIS FOR APPROVED INSTALLATION LOCATIONS AND QUANTITIES OF APPURTENANCES.



AUGMENTED MOUNT PLAN
SCALE: N.T.S.



AUGMENTED MOUNT FRONT ELEVATION
SCALE: N.T.S.

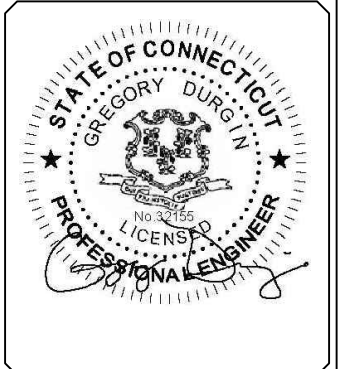


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SHEET TITLE:
AUGMENTATIONS, SECTIONS & DETAILS

SHEET NUMBER:
S3