



Crown Castle
3 Corporate Park Drive, Suite 101
Clifton Park, NY 12065

May 31, 2022

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

RE: Notice of Exempt Modification for T-Mobile: CTNH541A
Crown Site ID# 841293
136 Bulls Ridge Road, South Kent, CT 06785
Latitude: 41° 40' 53.85" / Longitude: -73° 29' 11.80"

Dear Ms. Bachman:

T-Mobile currently maintains eight (8) antennas at the 170-foot mount on the existing 180-foot monopole tower located at 136 Bulls Ridge Road, South Kent, CT. The property is owned by South Kent School and the tower is owned by Crown Castle. T-Mobile now intends to replace four (4) antennas and ancillary equipment at the 170ft level. This modification/proposal includes hardware that is both 4G (LTE) and 5G capable through remote software configuration and either or both services may be turned on or off at various times.

Panned Modification:

Tower:

Installed New:

- (4) RFS APXVAALL24_43_U-NA20 Antennas
- (4) Ericsson-Radio 4480 B71+ B85 RRU
- (1) Hybrid Cable 6x24

Remove:

- (4) Andrew – LNX-6515DS-A1M Antennas
- (4) Ericsson RRUS-11-B12

Ground:

Install New:

- (1) BB6648 IN E Cabinet
- (1.) PSU 4813 Voltage Booster

The facility was approved by the Connecticut Siting Council on February 24, 1994, Docket Number 162. This approval was given with Conditions which this exempt modification follows.

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 Jean C. Speck, First Selectman, Town of Kent, Donna Hayes, Land Use Administrator, Town of Kent. South Kent School, property owner and Crown Castle is the tower owner.

1. The proposed modifications will not result in an increase in the height of the existing tower.
2. The proposed modifications will not require the extension of the site boundary.
3. The proposed modification 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 Communication Commission safety standard.
5. The proposed modifications 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, T-Mobile respectfully submits that the proposed modifications to the above-reference telecommunications facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2). Please send approval/rejection letter to Attn: Jeffrey Barbadora.

Sincerely,



Jeffrey Barbadora
Site Acquisition Specialist
1800 W. Park Drive
Westborough, MA 01581
(781) 970-0053
Jeff.Barbadora@crowncastle.com

Melanie A. Bachman

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Attachments

cc:

Jean C. Speck, First Selectman
Kent Town Hall
41 Kent green Blvd
Kent, CT 06757
860-927-4627

Donna Hayes, Land Use Administrator
Kent Town Hall
41 Kent green Blvd
Kent, CT 06757
860-927-4625

South Kent School – Property Owner
40 Bulls Bridge Road
Kent, CT 06785

Crown Castle - Tower Owner

DOCKET NO. 162 - An application of Springwich Cellular Limited Partnership for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a cellular telecommunications facility located on the grounds of South Kent School off Bulls Bridge Road in Kent, Connecticut.

: Connecticut ORIGINAL
: Siting
: Council
: February 24, 1994

DECISION AND ORDER

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a cellular telecommunications tower at the proposed site in Kent, Connecticut, including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate either alone or cumulatively with other effects when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application and therefore directs that a Certificate of Environmental Compatibility and Public Need as provided by section 16-50k of the Connecticut General Statutes (CGS), be issued to Springwich Cellular Limited Partnership (Springwich), for the construction, operation, and maintenance of a cellular telecommunications tower at the proposed site on property owned by the South Kent School, off Bulls Bridge Road, Kent, Connecticut.

The facility shall be constructed, operated, and maintained substantially as specified in the Council's record in this matter, and subject to the following conditions:

1. The self-supporting monopole tower shall be no taller than necessary to provide the proposed cellular communications service and in no event shall the tower structure exceed a total height of 197 feet above ground level with antennas and appurtenances.
2. Prior to the commencement of construction, the Certificate holder shall prepare a Development and Management (D&M) Plan for this site in compliance with sections 16-50j-75 through 16-50j-77 of the Regulations of State Agencies. The D&M Plan shall include detailed plans for the tower and tower foundation; the locations of all antennas to be attached to this tower to ensure maximum sharing of the tower; detailed plans for an accessway from a public roadway, including all improvements and gates installed in the accessway; utility line installation; equipment building plans including elevations; detailed plans for site clearing and tree trimming; detailed plans for erosion and sedimentation control; and plans for the installation of the security fence. The D&M Plan shall be submitted to the Council for approval prior to the commencement of tower construction.

3. The Certificate holder shall comply with any existing and future radio frequency (RF) standard promulgated by State or federal regulatory agencies. Upon the establishment of any new governmental RF standards, the facility granted herein shall be brought into compliance with such standards.
4. The Certificate holder shall provide the Council a recalculated report of electromagnetic radio frequency power density if and when circumstances in operation cause a change in power density above the levels originally calculated and provided in the application.
5. The Certificate holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing. Should any agreement, including sharing of this tower, be reached prior to construction of the tower, detailed plans for the third party's equipment shall be included in the D&M Plan.
6. If the facility does not initially provide, or permanently ceases to provide, cellular or other services following completion of construction, this Decision and Order shall be void, and the tower and all associated equipment shall be dismantled and removed or re-application for any continued or new use shall be made to the Council before any such use is made.
7. Unless otherwise approved by the Council, this Decision and Order shall be void if all construction authorized herein is not completed within three years of the effective date of this Decision and Order or within three years after all appeals to this Decision and Order have been resolved.

Pursuant to CGS section 16-50p, we hereby direct that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below, and notice of issuance shall be published in the Litchfield County Times, the Kent Good Times Dispatch, and the Waterbury Republican-American.

By this Decision and Order, the Council disposes of the legal rights, duties, and privileges of each party named or admitted to the proceeding in accordance with section 16-50j-17 of the Regulations of State Agencies.

The parties and intervenors to this proceeding are:

| APPLICANT | ITS REPRESENTATIVE |
|--|---|
| Springwich Cellular Limited Partnership | Peter J. Tyrrell, Esq. Senior Attorney Springwich Cellular Limited Partnership 227 Church Street-Room 1021 New Haven, CT 06506 (203) 771-7381 |

PARTY

Litchfield County Cellular Inc.

ITS REPRESENTATIVE

Andrew N. Davis, Esq.
John J. Russotto, Esq.
Brown, Rudnick, Freed &
Gesmer, P.C.
90 State House Square
Hartford, CT 06103
(203) 525-8008

INTERVENOR



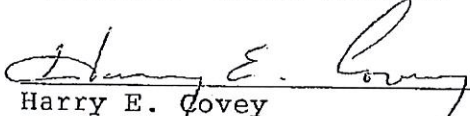
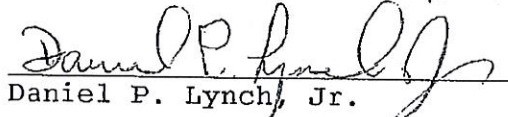
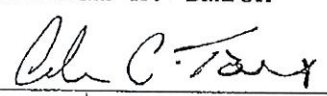
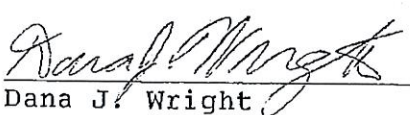
Bell Atlantic Metro Mobile

ITS REPRESENTATIVE

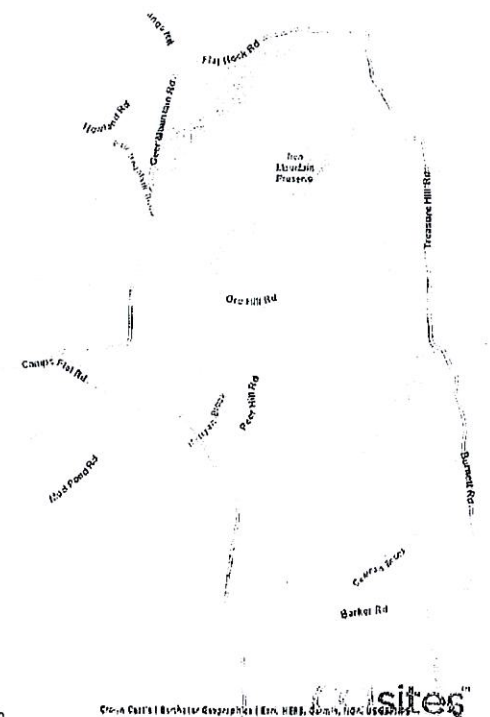
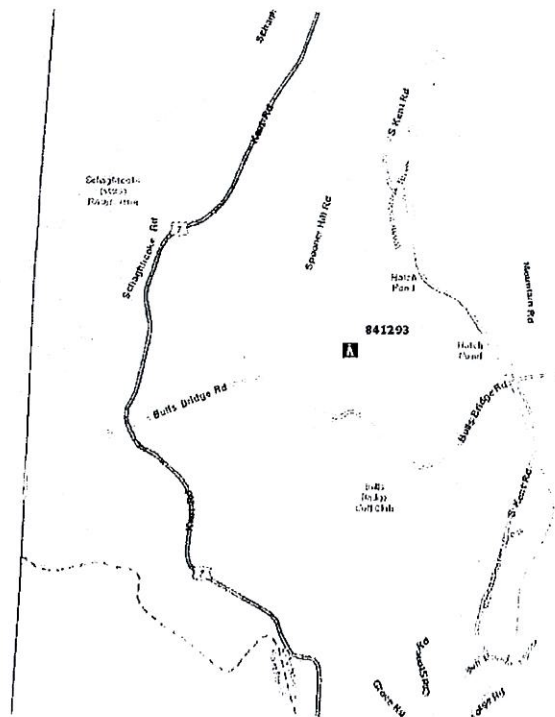
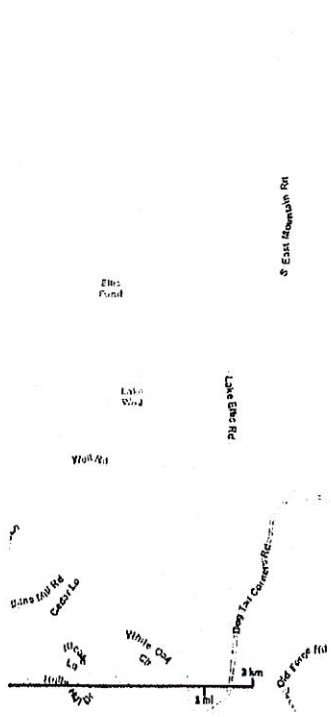
Steven R. Humphrey, Esq.
Brian C.S. Freeman, Esq.
Robinson & Cole
One Commercial Plaza
Hartford, CT 06103-3597
(203) 275-8200

CERTIFICATION

The undersigned members of the Connecticut Siting Council (Council) hereby certify that they have heard this case, or read the record thereof, in Docket No. 162, and voted as follows to approve the facility located on the grounds of South Kent School off Bulls Bridge Road in Kent, Connecticut:

| <u>Council Members</u> | <u>Vote Cast</u> |
|---|------------------|
|  Mortimer A. Gelston Chairman | Yes |
|  Commissioner Reginald J. Smith Designee: Richard G. Patterson | Abstain |
| Commissioner Timothy R.E. Keeney Designee: Brian Emerick | Absent |
|  Harry E. Covey | Yes |
|  Daniel P. Lynch, Jr. | Yes |
| Gloria Dibble Pond | Absent |
| William H. Smith | Absent |
|  Colin C. Tait | Yes |
|  Dana J. Wright | Yes |

Dated at New Britain, Connecticut, February 24, 1994.





Summary

Account Number 00019000
 Parcel ID 580
 Property Address 40 BULLS BRIDGE RD
 Use Class/Description 930C Exempt MDL94
 Map/Block/Lot/Unit 6/39/9/
 NBHD Code 5A
 Acres 117
 Utilities
 Is Homesteaded False

Map Not Available

Owner

[SOUTH KENT SCHOOL CORP](#)
 40 BULLS BRIDGE RD
 SOUTH KENT, CT 06785

Current Appraised Value

| Assessed Year | 2020 | 2019 | 2018 |
|------------------------------|------------------------|------------------------|------------------------|
| Appraised Building Value | \$13,305,700.00 | \$13,288,300.00 | \$13,288,300.00 |
| Appraised XF/OB Value | \$571,500.00 | \$571,000.00 | \$571,000.00 |
| Appraised Land Value | \$2,052,100.00 | \$2,052,100.00 | \$2,052,100.00 |
| Appraised Total Value | \$15,929,300.00 | \$15,911,400.00 | \$15,911,400.00 |
| Assessed Building Value | \$9,314,100.00 | \$9,301,900.00 | \$9,301,900.00 |
| Assessed XF/OB Value | \$400,500.00 | \$400,100.00 | \$400,100.00 |
| Assessed Land Value | \$1,436,500.00 | \$1,436,500.00 | \$1,436,500.00 |
| Assessed Total Value | \$11,151,100.00 | \$11,138,500.00 | \$11,138,500.00 |

Assessment History

| Assessed Year | 2020 | 2019 | 2018 |
|------------------------------|------------------------|------------------------|------------------------|
| Appraised Building Value | \$13,305,700.00 | \$13,288,300.00 | \$13,288,300.00 |
| Appraised XF/OB Value | \$571,500.00 | \$571,000.00 | \$571,000.00 |
| Appraised Land Value | \$2,052,100.00 | \$2,052,100.00 | \$2,052,100.00 |
| Appraised Total Value | \$15,929,300.00 | \$15,911,400.00 | \$15,911,400.00 |
| Assessed Building Value | \$9,314,100.00 | \$9,301,900.00 | \$9,301,900.00 |
| Assessed XF/OB Value | \$400,500.00 | \$400,100.00 | \$400,100.00 |
| Assessed Land Value | \$1,436,500.00 | \$1,436,500.00 | \$1,436,500.00 |
| Assessed Total Value | \$11,151,100.00 | \$11,138,500.00 | \$11,138,500.00 |

Land

| | |
|--|------------------------------------|
| Building Number 1 Land Use 930R - Exempt MDL01 | Land Units 100 AC Value 924,000 |
| Building Number 1 Land Use 930R - Exempt MDL01 | Land Units 15 AC Value 820,100 |
| Building Number 1 Land Use 930R - Exempt MDL01 | Land Units 2 AC Value 308,000 |
| Building Number 10 Land Use 930C - Exempt MDL94 | Land Units 0 AC Value 0 |
| Building Number 11 Land Use 930C - Exempt MDL94 | Land Units 0 AC Value 0 |
| Building Number 12 Land Use 930C - Exempt MDL94 | Land Units 0 AC Value 0 |
| Building Number 13 | Land Units 0 AC |

| | | | |
|-----------------|---------------------|------------|------|
| Land Use | 930C - Exempt MDL94 | Value | 0 |
| Building Number | 14 | Land Units | 0 AC |
| Land Use | 930C - Exempt MDL94 | Value | 0 |
| Building Number | 15 | Land Units | 0 AC |
| Land Use | 930C - Exempt MDL94 | Value | 0 |
| Building Number | 16 | Land Units | 0 AC |
| Land Use | 930C - Exempt MDL94 | Value | 0 |
| Building Number | 17 | Land Units | 0 AC |
| Land Use | 930C - Exempt MDL94 | Value | 0 |
| Building Number | 18 | Land Units | 0 AC |
| Land Use | 930C - Exempt MDL94 | Value | 0 |
| Building Number | 19 | Land Units | 0 AC |
| Land Use | 930C - Exempt MDL94 | Value | 0 |
| Building Number | 2 | Land Units | 0 AC |
| Land Use | 930R - Exempt MDL01 | Value | 0 |
| Building Number | 20 | Land Units | 0 AC |
| Land Use | 930C - Exempt MDL94 | Value | 0 |
| Building Number | 21 | Land Units | 0 AC |
| Land Use | 930C - Exempt MDL94 | Value | 0 |
| Building Number | 22 | Land Units | 0 AC |
| Land Use | 930C - Exempt MDL94 | Value | 0 |
| Building Number | 23 | Land Units | 0 AC |
| Land Use | 930C - Exempt MDL94 | Value | 0 |
| Building Number | 24 | Land Units | 0 AC |
| Land Use | 930C - Exempt MDL94 | Value | 0 |
| Building Number | 25 | Land Units | 0 AC |
| Land Use | 930R - Exempt MDL01 | Value | 0 |
| Building Number | 26 | Land Units | 0 AC |
| Land Use | 930R - Exempt MDL01 | Value | 0 |
| Building Number | 27 | Land Units | 0 AC |
| Land Use | 930R - Exempt MDL01 | Value | 0 |
| Building Number | 28 | Land Units | 0 AC |
| Land Use | 930R - Exempt MDL01 | Value | 0 |
| Building Number | 29 | Land Units | 0 AC |
| Land Use | 930R - Exempt MDL01 | Value | 0 |
| Building Number | 3 | Land Units | 0 AC |

| | | | |
|-----------------|-----------------------|------------|------|
| Land Use | 930C - Exempt MDL94 | Value | 0 |
| Building Number | 30 | Land Units | 0 AC |
| Land Use | 930R - Exempt MDL01 | Value | 0 |
| Building Number | 31 | Land Units | 0 AC |
| Land Use | 930R - Exempt MDL01 | Value | 0 |
| Building Number | 32 | Land Units | 0 AC |
| Land Use | 930R - Exempt MDL01 | Value | 0 |
| Building Number | 33 | Land Units | 0 AC |
| Land Use | 930R - Exempt MDL01 | Value | 0 |
| Building Number | 34 | Land Units | 0 AC |
| Land Use | 930R - Exempt MDL01 | Value | 0 |
| Building Number | 4 | Land Units | 0 AC |
| Land Use | 100 - Res Vacant Land | Value | 0 |
| Building Number | 5 | Land Units | 0 AC |
| Land Use | 930C - Exempt MDL94 | Value | 0 |
| Building Number | 6 | Land Units | 0 AC |
| Land Use | 930C - Exempt MDL94 | Value | 0 |
| Building Number | 7 | Land Units | 0 AC |
| Land Use | 930C - Exempt MDL94 | Value | 0 |
| Building Number | 8 | Land Units | 0 AC |
| Land Use | 930C - Exempt MDL94 | Value | 0 |
| Building Number | 9 | Land Units | 0 AC |
| Land Use | 930C - Exempt MDL94 | Value | 0 |

Building Information

| | | | |
|----------------------|-----------------------------|-------------------------------|--------------|
| Building # | 1 | Fireplaces | |
| Style | Cape Cod | Roof Cover | Wood Shingle |
| Occupancy | 1 | Roof Structure | Gable/Hip |
| Actual Year Built | 1941 | Floor Type | Hardwood |
| Effective Year Built | 1990 | Heat Type | Steam |
| Living Area | 689 | Fuel Type | Gas |
| Stories | 1 | AC | None |
| Grade | 03 | Bdrms/Full Bth/Hlf Bth/Ttl Rm | 00/0/0/7 |
| Condition | A | Basement Finished Area | |
| Exterior Wall | Clapboard | Basement Sq. Ft. | 448 |
| Interior Wall | Drywall | | |
| Code | Description | Living Area | Gross Area |
| BAS | First Floor | 532 | 532 |
| EAF | Attic, Expansion, Finished | 157 | 448 |
| UBM | Basement, Unfinished | 0 | 448 |
| UEP | Porch, Enclosed, Unfinished | 0 | 72 |
| | Totals | 689 | 1,500 |
| | | | 801 |

| | | | |
|----------------------|-----------|-------------------------------|----------------|
| Building # | 2 | Fireplaces | |
| Style | Old Style | Roof Cover | Asph/F Gls/Cmp |
| Occupancy | 1 | Roof Structure | Gable/Hip |
| Actual Year Built | 1945 | Floor Type | Hardwood |
| Effective Year Built | 2000 | Heat Type | Forced Air-Duc |
| Living Area | 2,401 | Fuel Type | Oil |
| Stories | 2 | AC | Central |
| Grade | 03 | Bdrms/Full Bth/Hlf Bth/Ttl Rm | 02/2/1/8 |
| Condition | G | Basement Finished Area | |

| Exterior Wall | Wood Shingle | Basement Sq. Ft. | 912 | |
|---------------|-------------------------|------------------|--------------|----------------|
| Interior Wall | Drywall | | | |
| Code | Description | Living Area | Gross Area | Effective Area |
| BAS | First Floor | 1,489 | 1,489 | 1,489 |
| FOP | Porch, Open, Finished | 0 | 32 | 6 |
| FSP | Porch, Screen, Finished | 0 | 304 | 61 |
| FUS | Upper Story, Finished | 912 | 912 | 912 |
| SLB | Slab | 0 | 577 | 0 |
| UBM | Basement, Unfinished | 0 | 912 | 182 |
| WDK | Deck, Wood | 0 | 316 | 32 |
| Totals | | 2,401 | 4,542 | 2,682 |

| Building # | 3 | Fireplaces | | |
|----------------------|----------------|-------------------------------|----------------|----------------|
| Style | Quonset Bldg | Roof Cover | Metal/Tin | |
| Occupancy | 0 | Roof Structure | Gable/Hip | |
| Actual Year Built | 1950 | Floor Type | Concr-Finished | |
| Effective Year Built | 1980 | Heat Type | None | |
| Living Area | 1,820 | Fuel Type | Coal or Wood | |
| Stories | 1 | AC | None | |
| Grade | 03 Average | Bdrms/Full Bth/Hlf Bth/Ttl Rm | | |
| Condition | F | Basement Finished Area | | |
| Exterior Wall | Board & Batten | Basement Sq. Ft. | | |
| Interior Wall | Wall Brd/Wood | | | |
| Code | Description | Living Area | Gross Area | Effective Area |
| BAS | First Floor | 1,820 | 1,820 | 1,820 |
| Totals | | 1,820 | 1,820 | 1,820 |

| Building # | 4 | Fireplaces | | |
|----------------------|--------------|-------------------------------|------------|----------------|
| Style | Outbuildings | Roof Cover | | |
| Occupancy | 0 | Roof Structure | | |
| Actual Year Built | 0 | Floor Type | | |
| Effective Year Built | 0 | Heat Type | | |
| Living Area | 0 | Fuel Type | | |
| Stories | | AC | | |
| Grade | | Bdrms/Full Bth/Hlf Bth/Ttl Rm | | |
| Condition | P | Basement Finished Area | | |
| Exterior Wall | | Basement Sq. Ft. | | |
| Interior Wall | | | | |
| Code | Description | Living Area | Gross Area | Effective Area |
| Totals | | | | |

| Building # | 5 | Fireplaces | | |
|----------------------|---------------------------|-------------------------------|----------------|----------------|
| Style | Dormitory | Roof Cover | Metal/Tin | |
| Occupancy | 0 | Roof Structure | Gable/Hip | |
| Actual Year Built | 1950 | Floor Type | Concr-Finished | |
| Effective Year Built | 2000 | Heat Type | Hot Water | |
| Living Area | 3,660 | Fuel Type | Oil | |
| Stories | 1 | AC | None | |
| Grade | 03 Average | Bdrms/Full Bth/Hlf Bth/Ttl Rm | | |
| Condition | G | Basement Finished Area | 1,830 | |
| Exterior Wall | Brick/Masonry | Basement Sq. Ft. | 1,830 | |
| Interior Wall | Drywall/Sheet | | | |
| Code | Description | Living Area | Gross Area | Effective Area |
| BAS | First Floor | 1,830 | 1,830 | 1,830 |
| FBM | Basement, Finished | 1,830 | 1,830 | 1,098 |
| FEP | Porch, Enclosed, Finished | 0 | 64 | 42 |
| Totals | | 3,660 | 3,724 | 2,970 |

| Building # | 6 | Fireplaces | | |
|----------------------|---------------------------|-------------------------------|----------------|----------------|
| Style | Dormitory | Roof Cover | Asph/F Gls/Cmp | |
| Occupancy | 0 | Roof Structure | Gable/Hip | |
| Actual Year Built | 1935 | Floor Type | Hardwood | |
| Effective Year Built | 1990 | Heat Type | Hot Water | |
| Living Area | 2,544 | Fuel Type | Oil | |
| Stories | 1 | AC | None | |
| Grade | 03 Average | Bdrms/Full Bth/Hlf Bth/Ttl Rm | | |
| Condition | A | Basement Finished Area | | |
| Exterior Wall | Clapboard | Basement Sq. Ft. | 1,976 | |
| Interior Wall | Plastered | | | |
| Code | Description | Living Area | Gross Area | Effective Area |
| BAS | First Floor | 2,544 | 2,544 | 2,544 |
| FEP | Porch, Enclosed, Finished | 0 | 64 | 42 |
| PTO | Patio | 0 | 356 | 36 |
| UBM | Basement, Unfinished | 0 | 1,976 | 395 |

| | | | | |
|-----------------------------|-----------------------|--------------------|--------------------------------------|-----------------------|
| Totals | | 2,544 | 4,940 | 3,017 |
| Building # | 7 | | Fireplaces | |
| Style | Auditorium | | Roof Cover | Asph/F Gls/Cmp |
| Occupancy | 2 | | Roof Structure | Gable/Hip |
| Actual Year Built | 1966 | | Floor Type | Carpet Concr-Finished |
| Effective Year Built | 1994 | | Heat Type | Hot Water |
| Living Area | 5,888 | | Fuel Type | Oil |
| Stories | 1 | | AC | None |
| Grade | 03 Average | | Bdrms/Full Bth/Hlf Bth/Ttl Rm | |
| Condition | A | | Basement Finished Area | 2,394 |
| Exterior Wall | Clapboard | | Basement Sq. Ft. | 2,394 |
| Interior Wall | Drywall/Sheet | | | |
| Code | Description | Living Area | Gross Area | Effective Area |
| APT | Apartment | 1,100 | 1,100 | 1,100 |
| BAS | First Floor | 2,394 | 2,394 | 2,394 |
| FBM | Basement, Finished | 2,394 | 2,394 | 1,436 |
| FOP | Porch, Open, Finished | 0 | 864 | 173 |
| PTO | Patio | 0 | 276 | 28 |
| UGR | Bsmt Garage | 0 | 1,100 | 385 |
| | Totals | 5,888 | 8,128 | 5,516 |

| | | | | |
|-----------------------------|-----------------------------|--------------------|--------------------------------------|-----------------------|
| Building # | 8 | | Fireplaces | |
| Style | Dormitory | | Roof Cover | Asph/F Gls/Cmp |
| Occupancy | 6 | | Roof Structure | Gable/Hip |
| Actual Year Built | 1966 | | Floor Type | Carpet Concr-Finished |
| Effective Year Built | 1994 | | Heat Type | Hot Water |
| Living Area | 1,001 | | Fuel Type | Oil |
| Stories | 1 | | AC | None |
| Grade | 03 Average | | Bdrms/Full Bth/Hlf Bth/Ttl Rm | |
| Condition | A | | Basement Finished Area | |
| Exterior Wall | Brick/Masonry | | Basement Sq. Ft. | |
| Interior Wall | Drywall/Sheet Minim/Masonry | | | |
| Code | Description | Living Area | Gross Area | Effective Area |
| BAS | First Floor | 1,001 | 1,001 | 1,001 |
| | Totals | 1,001 | 1,001 | 1,001 |

| | | | | |
|-----------------------------|-----------------------------|--------------------|--------------------------------------|-----------------------|
| Building # | 9 | | Fireplaces | |
| Style | Dormitory | | Roof Cover | Asph/F Gls/Cmp |
| Occupancy | 6 | | Roof Structure | Gable/Hip |
| Actual Year Built | 1966 | | Floor Type | Carpet Concr-Finished |
| Effective Year Built | 1994 | | Heat Type | Hot Water |
| Living Area | 945 | | Fuel Type | Oil |
| Stories | 1 | | AC | None |
| Grade | 03 Average | | Bdrms/Full Bth/Hlf Bth/Ttl Rm | |
| Condition | A | | Basement Finished Area | |
| Exterior Wall | Brick/Masonry | | Basement Sq. Ft. | |
| Interior Wall | Drywall/Sheet Minim/Masonry | | | |
| Code | Description | Living Area | Gross Area | Effective Area |
| BAS | First Floor | 945 | 945 | 945 |
| | Totals | 945 | 945 | 945 |

| | | | | |
|-----------------------------|-----------------------------|--------------------|--------------------------------------|-----------------------|
| Building # | 10 | | Fireplaces | |
| Style | Dormitory | | Roof Cover | Asph/F Gls/Cmp |
| Occupancy | 6 | | Roof Structure | Gable/Hip |
| Actual Year Built | 1966 | | Floor Type | Carpet Concr-Finished |
| Effective Year Built | 1994 | | Heat Type | Hot Water |
| Living Area | 945 | | Fuel Type | Oil |
| Stories | 1 | | AC | None |
| Grade | 03 Average | | Bdrms/Full Bth/Hlf Bth/Ttl Rm | |
| Condition | A | | Basement Finished Area | |
| Exterior Wall | Brick/Masonry | | Basement Sq. Ft. | |
| Interior Wall | Drywall/Sheet Minim/Masonry | | | |
| Code | Description | Living Area | Gross Area | Effective Area |
| BAS | First Floor | 945 | 945 | 945 |
| | Totals | 945 | 945 | 945 |

| | | | | |
|--------------------------|-----------|--|-----------------------|-----------------------|
| Building # | 11 | | Fireplaces | |
| Style | Dormitory | | Roof Cover | Asph/F Gls/Cmp |
| Occupancy | 0 | | Roof Structure | Gable/Hip |
| Actual Year Built | 2006 | | Floor Type | Carpet Concr-Finished |

| | | | |
|----------------------|---------------------------|-------------------------------|-----------|
| Effective Year Built | 2007 | Heat Type | Hot Water |
| Living Area | 14,882 | Fuel Type | Gas |
| Stories | 2 | AC | None |
| Grade | 03 Average | Bdrms/Full Bth/Hlf Bth/Ttl Rm | |
| Condition | A | Basement Finished Area | |
| Exterior Wall | Clapboard | Basement Sq. Ft. | 2,929 |
| Interior Wall | Drywall/Sheet K PINE/A WD | | |

| Code | Description | Living Area | Gross Area | Effective Area |
|---------------|-----------------------|---------------|---------------|----------------|
| BAS | First Floor | 7,504 | 7,504 | 7,504 |
| FOP | Porch, Open, Finished | 0 | 292 | 58 |
| FUS | Upper Story, Finished | 7,378 | 7,378 | 7,378 |
| UBM | Basement, Unfinished | 0 | 2,929 | 586 |
| Totals | | 14,882 | 18,103 | 15,526 |

| | | | |
|----------------------|---------------|-------------------------------|-----------------------|
| Building # | 12 | Fireplaces | |
| Style | Dormitory | Roof Cover | Asph/F Gls/Cmp |
| Occupancy | 0 | Roof Structure | Gable/Hip |
| Actual Year Built | 1959 | Floor Type | Concr-Finished Carpet |
| Effective Year Built | 1992 | Heat Type | Hot Water |
| Living Area | 5,040 | Fuel Type | Oil |
| Stories | 1 | AC | None |
| Grade | 03 Average | Bdrms/Full Bth/Hlf Bth/Ttl Rm | |
| Condition | A | Basement Finished Area | 2,520 |
| Exterior Wall | Concr/Cinder | Basement Sq. Ft. | 2,520 |
| Interior Wall | Drywall/Sheet | | |

| Code | Description | Living Area | Gross Area | Effective Area |
|---------------|------------------------------|--------------|--------------|----------------|
| BAS | First Floor | 2,520 | 2,520 | 2,520 |
| CAN | Canopy | 0 | 156 | 31 |
| FBM | Basement, Finished | 2,520 | 2,520 | 1,512 |
| UST | Utility, Storage, Unfinished | 0 | 60 | 18 |
| Totals | | 5,040 | 5,256 | 4,081 |

| | | | |
|----------------------|---------------|-------------------------------|-----------------------|
| Building # | 13 | Fireplaces | |
| Style | Dormitory | Roof Cover | Asph/F Gls/Cmp |
| Occupancy | 0 | Roof Structure | Gable/Hip |
| Actual Year Built | 1930 | Floor Type | Carpet Concr-Finished |
| Effective Year Built | 2004 | Heat Type | Hot Water |
| Living Area | 11,118 | Fuel Type | Oil |
| Stories | 2 | AC | None |
| Grade | 03 Average | Bdrms/Full Bth/Hlf Bth/Ttl Rm | |
| Condition | VG | Basement Finished Area | 3,901 |
| Exterior Wall | Clapboard | Basement Sq. Ft. | 3,901 |
| Interior Wall | Drywall/Sheet | | |

| Code | Description | Living Area | Gross Area | Effective Area |
|---------------|-----------------------|---------------|---------------|----------------|
| BAS | First Floor | 3,685 | 3,685 | 3,685 |
| FBM | Basement, Finished | 3,901 | 3,901 | 2,341 |
| FOP | Porch, Open, Finished | 0 | 160 | 32 |
| FUS | Upper Story, Finished | 3,532 | 3,532 | 3,532 |
| Totals | | 11,118 | 11,278 | 9,590 |

| | | | |
|----------------------|---------------|-------------------------------|----------------|
| Building # | 14 | Fireplaces | |
| Style | Library | Roof Cover | Asph/F Gls/Cmp |
| Occupancy | 0 | Roof Structure | Gable/Hip |
| Actual Year Built | 1964 | Floor Type | Concr-Finished |
| Effective Year Built | 2003 | Heat Type | Forced Air-Duc |
| Living Area | 5,044 | Fuel Type | Oil |
| Stories | 1 | AC | None |
| Grade | 03 Average | Bdrms/Full Bth/Hlf Bth/Ttl Rm | |
| Condition | G | Basement Finished Area | 2,522 |
| Exterior Wall | Brick/Masonry | Basement Sq. Ft. | 2,522 |
| Interior Wall | Drywall/Sheet | | |

| Code | Description | Living Area | Gross Area | Effective Area |
|---------------|---------------------------|--------------|--------------|----------------|
| BAS | First Floor | 2,522 | 2,522 | 2,522 |
| FBM | Basement, Finished | 2,522 | 2,522 | 1,513 |
| FEP | Porch, Enclosed, Finished | 0 | 48 | 31 |
| FOP | Porch, Open, Finished | 0 | 48 | 10 |
| Totals | | 5,044 | 5,140 | 4,076 |

| | | | |
|----------------------|----------------|----------------|----------------|
| Building # | 15 | Fireplaces | |
| Style | School/College | Roof Cover | Asph/F Gls/Cmp |
| Occupancy | 0 | Roof Structure | Gable/Hip |
| Actual Year Built | 1920 | Floor Type | Hardwood |
| Effective Year Built | 1988 | Heat Type | Steam |

| | | | | |
|---------------|------------------------------|-------------------------------|-------------------|-----------------------|
| Living Area | 14,306 | Fuel Type | Oil | |
| Stories | 2 | AC | None | |
| Grade | 03 Average | Bdrms/Full Bth/Hlf Bth/Ttl Rm | | |
| Condition | A | Basement Finished Area | | |
| Exterior Wall | Clapboard | Basement Sq. Ft. | 7,690 | |
| Interior Wall | Plastered | | | |
| Code | Description | Living Area | Gross Area | Effective Area |
| BAS | First Floor | 7,738 | 7,738 | 7,738 |
| FOP | Porch, Open, Finished | 0 | 404 | 81 |
| FUS | Upper Story, Finished | 6,568 | 6,568 | 6,568 |
| UAT | Attic, Unfinished | 0 | 3,754 | 375 |
| UBM | Basement, Unfinished | 0 | 7,690 | 1,538 |
| ULP | Loading Platform, Unfinished | 0 | 210 | 42 |
| Totals | | 14,306 | 26,364 | 16,342 |

| | | | | |
|----------------------|-----------------------------|-------------------------------|-------------------|-----------------------|
| Building # | 16 | Fireplaces | | |
| Style | Dormitory | Roof Cover | Asph/F Gls/Cmp | |
| Occupancy | 0 | Roof Structure | Gable/Hip | |
| Actual Year Built | 1968 | Floor Type | Vinyl/Asphalt | |
| Effective Year Built | 2003 | Heat Type | Hot Water | |
| Living Area | 3,692 | Fuel Type | Oil | |
| Stories | 2 | AC | None | |
| Grade | 03 Average | Bdrms/Full Bth/Hlf Bth/Ttl Rm | | |
| Condition | G | Basement Finished Area | | |
| Exterior Wall | Brick/Masonry Clapboard | Basement Sq. Ft. | | |
| Interior Wall | Drywall/Sheet Minim/Masonry | | | |
| Code | Description | Living Area | Gross Area | Effective Area |
| BAS | First Floor | 2,392 | 2,392 | 2,392 |
| FOP | Porch, Open, Finished | 0 | 116 | 23 |
| FUS | Upper Story, Finished | 1,300 | 1,300 | 1,300 |
| Totals | | 3,692 | 3,808 | 3,715 |

| | | | | |
|----------------------|-----------------------|-------------------------------|-------------------------|-----------------------|
| Building # | 17 | Fireplaces | | |
| Style | School/College | Roof Cover | Asph/F Gls/Cmp | |
| Occupancy | 0 | Roof Structure | Gable/Hip | |
| Actual Year Built | 1945 | Floor Type | Hardwood Concr-Finished | |
| Effective Year Built | 2000 | Heat Type | Hot Water | |
| Living Area | 15,792 | Fuel Type | Oil | |
| Stories | 2.5 | AC | Central | |
| Grade | 03 Average | Bdrms/Full Bth/Hlf Bth/Ttl Rm | | |
| Condition | G | Basement Finished Area | 4,908 | |
| Exterior Wall | Brick/Masonry | Basement Sq. Ft. | 5,268 | |
| Interior Wall | Plastered | | | |
| Code | Description | Living Area | Gross Area | Effective Area |
| BAS | First Floor | 5,268 | 5,268 | 5,268 |
| FBM | Basement, Finished | 4,908 | 4,908 | 2,945 |
| FHS | Half Story, Finished | 1,824 | 3,648 | 1,824 |
| FOP | Porch, Open, Finished | 0 | 284 | 57 |
| FUS | Upper Story, Finished | 3,792 | 3,792 | 3,792 |
| UBM | Basement, Unfinished | 0 | 360 | 72 |
| Totals | | 15,792 | 18,260 | 13,958 |

| | | | | |
|----------------------|----------------------------|-------------------------------|-------------------------|-----------------------|
| Building # | 18 | Fireplaces | | |
| Style | Churches | Roof Cover | Slate | |
| Occupancy | 0 | Roof Structure | Gable/Hip | |
| Actual Year Built | 1939 | Floor Type | Hardwood Concr-Finished | |
| Effective Year Built | 2005 | Heat Type | Hot Water | |
| Living Area | 2,805 | Fuel Type | Oil | |
| Stories | 1 | AC | None | |
| Grade | 03 Average | Bdrms/Full Bth/Hlf Bth/Ttl Rm | | |
| Condition | VG | Basement Finished Area | | |
| Exterior Wall | Brick/Masonry | Basement Sq. Ft. | | |
| Interior Wall | Plastered | | | |
| Code | Description | Living Area | Gross Area | Effective Area |
| BAS | First Floor | 2,701 | 2,701 | 2,701 |
| EAF | Attic, Expansion, Finished | 104 | 297 | 104 |
| FOP | Porch, Open, Finished | 0 | 297 | 59 |
| Totals | | 2,805 | 3,295 | 2,864 |

| | | | |
|------------|----------|----------------|----------------|
| Building # | 19 | Fireplaces | |
| Style | Hospital | Roof Cover | Asph/F Gls/Cmp |
| Occupancy | 0 | Roof Structure | Gable/Hip |

| | | | | |
|----------------------|-----------------------|-------------------------------|--------------|----------------|
| Actual Year Built | 1940 | Floor Type | Hardwood | |
| Effective Year Built | 1990 | Heat Type | Steam | |
| Living Area | 2,733 | Fuel Type | Oil | |
| Stories | 2 | AC | None | |
| Grade | 03 Average | Bdrms/Full Bth/Hlf Bth/Ttl Rm | | |
| Condition | A | Basement Finished Area | | |
| Exterior Wall | Brick/Masonry | Basement Sq. Ft. | 1,629 | |
| Interior Wall | Plastered | | | |
| Code | Description | Living Area | Gross Area | Effective Area |
| BAS | First Floor | 1,629 | 1,629 | 1,629 |
| FOP | Porch, Open, Finished | 0 | 30 | 6 |
| FUS | Upper Story, Finished | 1,104 | 1,104 | 1,104 |
| UBM | Basement, Unfinished | 0 | 1,629 | 326 |
| | Totals | 2,733 | 4,392 | 3,065 |

| | | | | |
|----------------------|-----------------------|-------------------------------|------------------------|----------------|
| Building # | 20 | Fireplaces | | |
| Style | Commercial | Roof Cover | Asph/F Gls/Cmp | |
| Occupancy | 0 | Roof Structure | Shed | |
| Actual Year Built | 1975 | Floor Type | Hardwood Vinyl/Asphalt | |
| Effective Year Built | 1996 | Heat Type | Forced Air-Duc | |
| Living Area | 16,030 | Fuel Type | Oil | |
| Stories | 1 | AC | None | |
| Grade | 03 Average | Bdrms/Full Bth/Hlf Bth/Ttl Rm | | |
| Condition | A | Basement Finished Area | 4,092 | |
| Exterior Wall | Stucco on Wood | Basement Sq. Ft. | 4,092 | |
| Interior Wall | Minim/Masonry | | | |
| Code | Description | Living Area | Gross Area | Effective Area |
| BAS | First Floor | 11,938 | 11,938 | 11,938 |
| FBM | Basement, Finished | 4,092 | 4,092 | 2,455 |
| FOP | Porch, Open, Finished | 0 | 494 | 99 |
| | Totals | 16,030 | 16,524 | 14,492 |

| | | | | |
|----------------------|-----------------------|-------------------------------|----------------|----------------|
| Building # | 21 | Fireplaces | | |
| Style | School/College | Roof Cover | Asph/F Gls/Cmp | |
| Occupancy | 0 | Roof Structure | Gable/Hip | |
| Actual Year Built | 1965 | Floor Type | Vinyl/Asphalt | |
| Effective Year Built | 1994 | Heat Type | Hot Water | |
| Living Area | 6,106 | Fuel Type | Oil | |
| Stories | 2 | AC | None | |
| Grade | 03 Average | Bdrms/Full Bth/Hlf Bth/Ttl Rm | | |
| Condition | A | Basement Finished Area | | |
| Exterior Wall | Brick/Masonry | Basement Sq. Ft. | | |
| Interior Wall | Minim/Masonry | | | |
| Code | Description | Living Area | Gross Area | Effective Area |
| BAS | First Floor | 3,003 | 3,003 | 3,003 |
| FOP | Porch, Open, Finished | 0 | 30 | 6 |
| FUS | Upper Story, Finished | 3,103 | 3,103 | 3,103 |
| PTO | Patio | 0 | 1,308 | 131 |
| | Totals | 6,106 | 7,444 | 6,243 |

| | | | | |
|----------------------|-----------------|-------------------------------|-----------------------|----------------|
| Building # | 22 | Fireplaces | | |
| Style | School/College | Roof Cover | Metal/Tin | |
| Occupancy | 0 | Roof Structure | Gable/Hip | |
| Actual Year Built | 1963 | Floor Type | Concr-Finished Carpet | |
| Effective Year Built | 2007 | Heat Type | None | |
| Living Area | 37,467 | Fuel Type | Coal or Wood | |
| Stories | 1 | AC | None | |
| Grade | 03 Average | Bdrms/Full Bth/Hlf Bth/Ttl Rm | | |
| Condition | VG | Basement Finished Area | | |
| Exterior Wall | Pre-finish Metl | Basement Sq. Ft. | | |
| Interior Wall | Minim/Masonry | | | |
| Code | Description | Living Area | Gross Area | Effective Area |
| BAS | First Floor | 37,467 | 37,467 | 37,467 |
| CAN | Canopy | 0 | 110 | 22 |
| | Totals | 37,467 | 37,577 | 37,489 |

| | | | |
|----------------------|-----------|----------------|-----------------|
| Building # | 23 | Fireplaces | |
| Style | Dormitory | Roof Cover | Asph/F Gls/Cmp |
| Occupancy | 0 | Roof Structure | Gable/Hip |
| Actual Year Built | 1940 | Floor Type | Hardwood Carpet |
| Effective Year Built | 1990 | Heat Type | Hot Water |
| Living Area | 3,689 | Fuel Type | Oil |
| Stories | 2 | AC | None |

| | | | |
|---------------|-----------------------|-------------------------------|--------------|
| Grade | 03 Average | Bdrms/Full Bth/Hlf Bth/Ttl Rm | |
| Condition | A | Basement Finished Area | |
| Exterior Wall | Clapboard | Basement Sq. Ft. | |
| Interior Wall | Drywall/Sheet | | |
| Code | Description | Living Area | Gross Area |
| BAS | First Floor | 2,372 | 2,372 |
| FHS | Half Story, Finished | 650 | 1,300 |
| FUS | Upper Story, Finished | 667 | 667 |
| Totals | | 3,689 | 4,339 |

| | | | |
|----------------------|-----------------------|-------------------------------|--------------|
| Building # | 24 | Fireplaces | |
| Style | School/College | Roof Cover | |
| Occupancy | 1 | Roof Structure | |
| Actual Year Built | 1970 | Floor Type | |
| Effective Year Built | 1994 | Heat Type | |
| Living Area | 6,702 | Fuel Type | |
| Stories | 2 | AC | |
| Grade | 03 Average | Bdrms/Full Bth/Hlf Bth/Ttl Rm | |
| Condition | A | Basement Finished Area | |
| Exterior Wall | Concr/Cinder | Basement Sq. Ft. | |
| Interior Wall | Minim/Masonry | | |
| Code | Description | Living Area | Gross Area |
| BAS | First Floor | 3,450 | 3,450 |
| FBM | Basement, Finished | 3,252 | 3,252 |
| FOP | Porch, Open, Finished | 0 | 396 |
| Totals | | 6,702 | 7,098 |

| | | | |
|----------------------|---------------------------|-------------------------------|--------------|
| Building # | 25 | Fireplaces | |
| Style | Colonial | Roof Cover | |
| Occupancy | 1 | Roof Structure | |
| Actual Year Built | 1820 | Floor Type | |
| Effective Year Built | 2003 | Heat Type | |
| Living Area | 2,004 | Fuel Type | |
| Stories | 2 | AC | |
| Grade | 04 | Bdrms/Full Bth/Hlf Bth/Ttl Rm | |
| Condition | VG | Basement Finished Area | |
| Exterior Wall | Clapboard | Basement Sq. Ft. | |
| Interior Wall | Plastered | | |
| Code | Description | Living Area | Gross Area |
| BAS | First Floor | 1,284 | 1,284 |
| FEP | Porch, Enclosed, Finished | 0 | 368 |
| FOP | Porch, Open, Finished | 0 | 9 |
| FUS | Upper Story, Finished | 720 | 720 |
| PTO | Patio | 0 | 308 |
| UAT | Attic, Unfinished | 0 | 480 |
| UBM | Basement, Unfinished | 0 | 720 |
| Totals | | 2,004 | 3,889 |

| | | | |
|----------------------|-------------------------|-------------------------------|--------------|
| Building # | 26 | Fireplaces | |
| Style | Colonial | Roof Cover | |
| Occupancy | 2 | Roof Structure | |
| Actual Year Built | 1920 | Floor Type | |
| Effective Year Built | 1998 | Heat Type | |
| Living Area | 3,428 | Fuel Type | |
| Stories | 2 | AC | |
| Grade | 04 | Bdrms/Full Bth/Hlf Bth/Ttl Rm | |
| Condition | G | Basement Finished Area | |
| Exterior Wall | Clapboard | Basement Sq. Ft. | |
| Interior Wall | Plastered | | |
| Code | Description | Living Area | Gross Area |
| BAS | First Floor | 1,853 | 1,853 |
| FOP | Porch, Open, Finished | 0 | 305 |
| FSP | Porch, Screen, Finished | 0 | 170 |
| FUS | Upper Story, Finished | 1,575 | 1,575 |
| UAT | Attic, Unfinished | 0 | 800 |
| UBM | Basement, Unfinished | 0 | 1,575 |
| WDK | Deck, Wood | 0 | 280 |
| Totals | | 3,428 | 6,558 |

| | | | |
|------------|--------------|----------------|--|
| Building # | 27 | Fireplaces | |
| Style | Conventional | Roof Cover | |
| | | Asph/F Gls/Cmp | |

| | | | | |
|----------------------|---------------------------|-------------------------------|-------------------|-----------------------|
| Occupancy | 1 | Roof Structure | Gable/Hip | |
| Actual Year Built | 1940 | Floor Type | Hardwood | |
| Effective Year Built | 2000 | Heat Type | Hot Water | |
| Living Area | 1,463 | Fuel Type | Oil | |
| Stories | 1.75 | AC | None | |
| Grade | 03 | Bdrms/Full Bth/Hlf Bth/Ttl Rm | 04/1/1/7 | |
| Condition | G | Basement Finished Area | | |
| Exterior Wall | Clapboard | Basement Sq. Ft. | 836 | |
| Interior Wall | Plastered | | | |
| Code | Description | Living Area | Gross Area | Effective Area |
| BAS | First Floor | 836 | 836 | 836 |
| FEP | Porch, Enclosed, Finished | 0 | 108 | 70 |
| TQS | Three Quarter Story | 627 | 836 | 627 |
| UBM | Basement, Unfinished | 0 | 836 | 167 |
| | Totals | 1,463 | 2,616 | 1,700 |

| | | | | |
|----------------------|---------------------------|-------------------------------|-------------------|-----------------------|
| Building # | 28 | Fireplaces | | |
| Style | Colonial | Roof Cover | Asph/F Gls/Cmp | |
| Occupancy | 1 | Roof Structure | Gable/Hip | |
| Actual Year Built | 1930 | Floor Type | Hardwood | |
| Effective Year Built | 1988 | Heat Type | Forced Air-Duc | |
| Living Area | 1,469 | Fuel Type | Oil | |
| Stories | 2 | AC | None | |
| Grade | 04 | Bdrms/Full Bth/Hlf Bth/Ttl Rm | 03/1/0/8 | |
| Condition | A | Basement Finished Area | | |
| Exterior Wall | Clapboard | Basement Sq. Ft. | 399 | |
| Interior Wall | Plastered | | | |
| Code | Description | Living Area | Gross Area | Effective Area |
| BAS | First Floor | 853 | 853 | 853 |
| FEP | Porch, Enclosed, Finished | 0 | 16 | 10 |
| FOP | Porch, Open, Finished | 0 | 108 | 22 |
| FUS | Upper Story, Finished | 616 | 616 | 616 |
| UBM | Basement, Unfinished | 0 | 399 | 80 |
| | Totals | 1,469 | 1,992 | 1,581 |

| | | | | |
|----------------------|----------------------|-------------------------------|-------------------|-----------------------|
| Building # | 29 | Fireplaces | | |
| Style | Ranch | Roof Cover | Asph/F Gls/Cmp | |
| Occupancy | 1 | Roof Structure | Gable/Hip | |
| Actual Year Built | 1945 | Floor Type | Hardwood | |
| Effective Year Built | 2000 | Heat Type | Hot Water | |
| Living Area | 1,400 | Fuel Type | Oil | |
| Stories | 1 | AC | None | |
| Grade | 03 | Bdrms/Full Bth/Hlf Bth/Ttl Rm | 03/1/1/6 | |
| Condition | G | Basement Finished Area | | |
| Exterior Wall | Wood Shingle | Basement Sq. Ft. | 1,400 | |
| Interior Wall | Drywall | | | |
| Code | Description | Living Area | Gross Area | Effective Area |
| BAS | First Floor | 1,400 | 1,400 | 1,400 |
| UBM | Basement, Unfinished | 0 | 1,400 | 280 |
| | Totals | 1,400 | 2,800 | 1,680 |

| | | | | |
|----------------------|----------------------------|-------------------------------|-------------------|-----------------------|
| Building # | 30 | Fireplaces | | |
| Style | Conventional | Roof Cover | Asph/F Gls/Cmp | |
| Occupancy | 1 | Roof Structure | Gable/Hip | |
| Actual Year Built | 1950 | Floor Type | Hardwood | |
| Effective Year Built | 2000 | Heat Type | Hot Water | |
| Living Area | 1,686 | Fuel Type | Oil | |
| Stories | 1.5 | AC | None | |
| Grade | 04 | Bdrms/Full Bth/Hlf Bth/Ttl Rm | 03/2/0/6 | |
| Condition | G | Basement Finished Area | | |
| Exterior Wall | Concr/Cinder | Basement Sq. Ft. | 720 | |
| Interior Wall | Drywall | | | |
| Code | Description | Living Area | Gross Area | Effective Area |
| BAS | First Floor | 1,169 | 1,169 | 1,169 |
| EAF | Attic, Expansion, Finished | 157 | 449 | 157 |
| FHS | Half Story, Finished | 360 | 720 | 360 |
| FOP | Porch, Open, Finished | 0 | 53 | 11 |
| UBM | Basement, Unfinished | 0 | 720 | 144 |
| | Totals | 1,686 | 3,111 | 1,841 |

| | | | |
|------------|----------|----------------|----------------|
| Building # | 31 | Fireplaces | |
| Style | Colonial | Roof Cover | Asph/F Gls/Cmp |
| Occupancy | 1 | Roof Structure | Gable/Hip |

| | | | | |
|----------------------|---------------------------|-------------------------------|-------------------|-----------------------|
| Actual Year Built | 1750 | Floor Type | Pine/Soft Wood | |
| Effective Year Built | 1988 | Heat Type | Steam | |
| Living Area | 1,603 | Fuel Type | Oil | |
| Stories | 1.75 | AC | None | |
| Grade | 04 | Bdrms/Full Bth/Hlf Bth/Ttl Rm | 04/1/1/8 | |
| Condition | A | Basement Finished Area | | |
| Exterior Wall | Wood Shingle | Basement Sq. Ft. | 682 | |
| Interior Wall | Plastered | | | |
| Code | Description | Living Area | Gross Area | Effective Area |
| BAS | First Floor | 911 | 911 | 911 |
| FEP | Porch, Enclosed, Finished | 0 | 88 | 57 |
| FUS | Upper Story, Finished | 180 | 180 | 180 |
| TQS | Three Quarter Story | 512 | 682 | 512 |
| UBM | Basement, Unfinished | 0 | 682 | 136 |
| | Totals | 1,603 | 2,543 | 1,796 |

| | | | | |
|----------------------|----------------------|-------------------------------|-------------------|-----------------------|
| Building # | 32 | Fireplaces | | |
| Style | Cape Cod | Roof Cover | Asph/F Gls/Cmp | |
| Occupancy | 1 | Roof Structure | Gable/Hip | |
| Actual Year Built | 1935 | Floor Type | Hardwood | |
| Effective Year Built | 1990 | Heat Type | Hot Water | |
| Living Area | 1,680 | Fuel Type | Oil | |
| Stories | 1.5 | AC | None | |
| Grade | 04 | Bdrms/Full Bth/Hlf Bth/Ttl Rm | 04/2/0/7 | |
| Condition | A | Basement Finished Area | | |
| Exterior Wall | Concr/Cinder | Basement Sq. Ft. | 1,120 | |
| Interior Wall | Drywall | | | |
| Code | Description | Living Area | Gross Area | Effective Area |
| BAS | First Floor | 1,120 | 1,120 | 1,120 |
| FHS | Half Story, Finished | 560 | 1,120 | 560 |
| UBM | Basement, Unfinished | 0 | 1,120 | 224 |
| | Totals | 1,680 | 3,360 | 1,904 |

| | | | | |
|----------------------|-----------------------|-------------------------------|-------------------|-----------------------|
| Building # | 33 | Fireplaces | | |
| Style | Family Duplex | Roof Cover | Asph/F Gls/Cmp | |
| Occupancy | 2 | Roof Structure | Gable/Hip | |
| Actual Year Built | 2013 | Floor Type | Hardwood Carpet | |
| Effective Year Built | 2013 | Heat Type | Hot Water | |
| Living Area | 2,065 | Fuel Type | Gas | |
| Stories | 1 | AC | Central | |
| Grade | 05 | Bdrms/Full Bth/Hlf Bth/Ttl Rm | 04/2/0/9 | |
| Condition | A | Basement Finished Area | | |
| Exterior Wall | Vinyl Siding | Basement Sq. Ft. | 2,065 | |
| Interior Wall | Drywall | | | |
| Code | Description | Living Area | Gross Area | Effective Area |
| BAS | First Floor | 2,065 | 2,065 | 2,065 |
| FOP | Porch, Open, Finished | 0 | 65 | 13 |
| UBM | Basement, Unfinished | 0 | 2,065 | 413 |
| | Totals | 2,065 | 4,195 | 2,491 |

| | | | | |
|----------------------|-----------------------|-------------------------------|-------------------|-----------------------|
| Building # | 34 | Fireplaces | | |
| Style | Family Duplex | Roof Cover | Asph/F Gls/Cmp | |
| Occupancy | 2 | Roof Structure | Gable/Hip | |
| Actual Year Built | 2013 | Floor Type | Hardwood Carpet | |
| Effective Year Built | 2013 | Heat Type | Hot Water | |
| Living Area | 2,884 | Fuel Type | Gas | |
| Stories | 1.75 | AC | Central | |
| Grade | 05 | Bdrms/Full Bth/Hlf Bth/Ttl Rm | 04/3/1/9 | |
| Condition | A | Basement Finished Area | | |
| Exterior Wall | Vinyl Siding | Basement Sq. Ft. | 1,820 | |
| Interior Wall | Drywall | | | |
| Code | Description | Living Area | Gross Area | Effective Area |
| BAS | First Floor | 1,820 | 1,820 | 1,820 |
| FHS | Half Story, Finished | 350 | 700 | 350 |
| FOP | Porch, Open, Finished | 0 | 96 | 19 |
| TQS | Three Quarter Story | 714 | 952 | 714 |
| UBM | Basement, Unfinished | 0 | 1,820 | 364 |
| | Totals | 2,884 | 5,388 | 3,267 |

Out Buildings\Extra Features

| | | | |
|-----------------|---------------|------------|-----|
| Description | PUMP-SING HSE | Year Built | 0 |
| Sub Description | | Value | \$0 |
| Area | 180 UNITS | | |

| | | | |
|-----------------|----------------|------------|----------|
| Description | FIREPLACE 1 ST | Year Built | 1990 |
| Sub Description | | Value | \$3,600 |
| Area | 1 UNITS | | |
| Description | FIREPLACE 1 ST | Year Built | 2000 |
| Sub Description | | Value | \$4,100 |
| Area | 1 UNITS | | |
| Description | FIREPLACE 1 ST | Year Built | 1990 |
| Sub Description | | Value | \$3,600 |
| Area | 1 UNITS | | |
| Description | FIREPLACE 1 ST | Year Built | 1994 |
| Sub Description | | Value | \$3,800 |
| Area | 1 UNITS | | |
| Description | FIREPLACE 1 ST | Year Built | 1994 |
| Sub Description | | Value | \$3,800 |
| Area | 1 UNITS | | |
| Description | Solar Panel | Year Built | 1994 |
| Sub Description | | Value | \$0 |
| Area | 25 UNITS | | |
| Description | 2 STORY CHIM | Year Built | 2007 |
| Sub Description | | Value | \$13,400 |
| Area | 3 UNITS | | |
| Description | TENNIS COURT | Year Built | 0 |
| Sub Description | | Value | \$90,000 |
| Area | 4 UNITS | | |
| Description | CARPORT | Year Built | 0 |
| Sub Description | | Value | \$7,900 |
| Area | 880 S.F. | | |
| Description | 2 STORY CHIM | Year Built | 2000 |
| Sub Description | | Value | \$4,100 |
| Area | 1 UNITS | | |
| Description | TENNIS COURT | Year Built | 1980 |
| Sub Description | | Value | \$90,000 |
| Area | 4 UNITS | | |
| Description | PAVING-ASPHALT | Year Built | 2017 |
| Sub Description | | Value | \$15,700 |
| Area | 10000 S.F. | | |
| Description | 2 STORY CHIM | Year Built | 1990 |
| Sub Description | | Value | \$7,200 |
| Area | 2 UNITS | | |
| Description | Solar Panel | Year Built | 1994 |
| Sub Description | | Value | \$0 |
| Area | 55 UNITS | | |
| Description | FIREPLACE 1 ST | Year Built | 2003 |
| Sub Description | | Value | \$8,500 |
| Area | 2 UNITS | | |

| | | | |
|-----------------|----------------|------------|----------|
| Description | BARN 1ST WL/B | Year Built | 1900 |
| Sub Description | | Value | \$5,000 |
| Area | 480 S.F. | | |
| | | | |
| Description | 1.5 STORY CHIM | Year Built | 2000 |
| Sub Description | | Value | \$4,100 |
| Area | 1 UNITS | | |
| | | | |
| Description | GARAGE-AVE | Year Built | 0 |
| Sub Description | | Value | \$4,900 |
| Area | 560 S.F. | | |
| | | | |
| Description | BASEMENT GARAG | Year Built | 2000 |
| Sub Description | | Value | \$2,500 |
| Area | 1 UNITS | | |
| | | | |
| Description | 1.5 STORY CHIM | Year Built | 2000 |
| Sub Description | | Value | \$4,100 |
| Area | 1 UNITS | | |
| | | | |
| Description | 2 STORY CHIM | Year Built | 1988 |
| Sub Description | | Value | \$3,500 |
| Area | 1 UNITS | | |
| | | | |
| Description | SHED FRAME | Year Built | 2008 |
| Sub Description | | Value | \$800 |
| Area | 120 S.F. | | |
| | | | |
| Description | 1.5 STORY CHIM | Year Built | 1990 |
| Sub Description | | Value | \$3,600 |
| Area | 1 UNITS | | |
| | | | |
| Description | 2 STORY CHIM | Year Built | 1990 |
| Sub Description | | Value | \$4,100 |
| Area | 1 UNITS | | |
| | | | |
| Description | 2 STORY CHIM | Year Built | 1988 |
| Sub Description | | Value | \$3,500 |
| Area | 1 UNITS | | |
| | | | |
| Description | SPRINKLERS-WET | Year Built | 1988 |
| Sub Description | | Value | \$33,600 |
| Area | 11996 S.F. | | |
| | | | |
| Description | CARPORT | Year Built | 0 |
| Sub Description | | Value | \$3,200 |
| Area | 360 S.F. | | |
| | | | |
| Description | 2 STORY CHIM | Year Built | 1998 |
| Sub Description | | Value | \$8,000 |
| Area | 2 UNITS | | |
| | | | |
| Description | Light w/Pole | Year Built | 2017 |
| Sub Description | | Value | \$30,900 |
| Area | 10 UNITS | | |
| | | | |
| Description | 2 STORY CHIM | Year Built | 2004 |
| Sub Description | | Value | \$4,300 |
| Area | 1 UNITS | | |

| | | | |
|-----------------|----------------|------------|----------|
| Description | FIREPLACE 1 ST | Year Built | 1992 |
| Sub Description | | Value | \$3,700 |
| Area | 1 UNITS | | |
| | | | |
| Description | Solar Panel | Year Built | 2007 |
| Sub Description | | Value | \$0 |
| Area | 64 UNITS | | |
| | | | |
| Description | PAVING-ASPHALT | Year Built | 2008 |
| Sub Description | | Value | \$30,900 |
| Area | 25000 S.F. | | |
| | | | |
| Description | BARN - 1 STORY | Year Built | 0 |
| Sub Description | | Value | \$3,600 |
| Area | 264 S.F. | | |
| | | | |
| Description | SHED FRAME | Year Built | 0 |
| Sub Description | | Value | \$1,900 |
| Area | 140 S.F. | | |
| | | | |
| Description | BARN - 1 STORY | Year Built | 2013 |
| Sub Description | | Value | \$75,800 |
| Area | 5616 S.F. | | |
| | | | |
| Description | POOL-INGR CONC | Year Built | 0 |
| Sub Description | | Value | \$37,500 |
| Area | 1250 S.F. | | |
| | | | |
| Description | EXTRA FPL OPEN | Year Built | 1988 |
| Sub Description | | Value | \$1,800 |
| Area | 1 UNITS | | |
| | | | |
| Description | GENERATOR | Year Built | 2013 |
| Sub Description | | Value | \$14,300 |
| Area | 2 UNITS | | |
| | | | |
| Description | SHED FRAME | Year Built | 0 |
| Sub Description | | Value | \$2,700 |
| Area | 200 S.F. | | |
| | | | |
| Description | IMPLEMENT SHED | Year Built | 0 |
| Sub Description | | Value | \$6,500 |
| Area | 1440 S.F. | | |
| | | | |
| Description | GENERATOR | Year Built | 2014 |
| Sub Description | | Value | \$6,400 |
| Area | 1 UNITS | | |
| | | | |
| Description | IMPLEMENT SHED | Year Built | 0 |
| Sub Description | | Value | \$4,500 |
| Area | 1000 S.F. | | |
| | | | |
| Description | IMPLEMENT SHED | Year Built | 0 |
| Sub Description | | Value | \$4,100 |
| Area | 920 S.F. | | |
| | | | |
| Description | SILO-WD OR CNC | Year Built | 0 |
| Sub Description | | Value | \$6,000 |
| Area | 576 DIAxHT | | |

Sales History

| Sales Date | Instrument Type | Grantor | Grantee | Book/Page |
|------------|-----------------|---------|------------------------|-----------|
| | | | SOUTH KENT SCHOOL CORP | -0 |

Recent Sales In Area

Sale date range:

From:

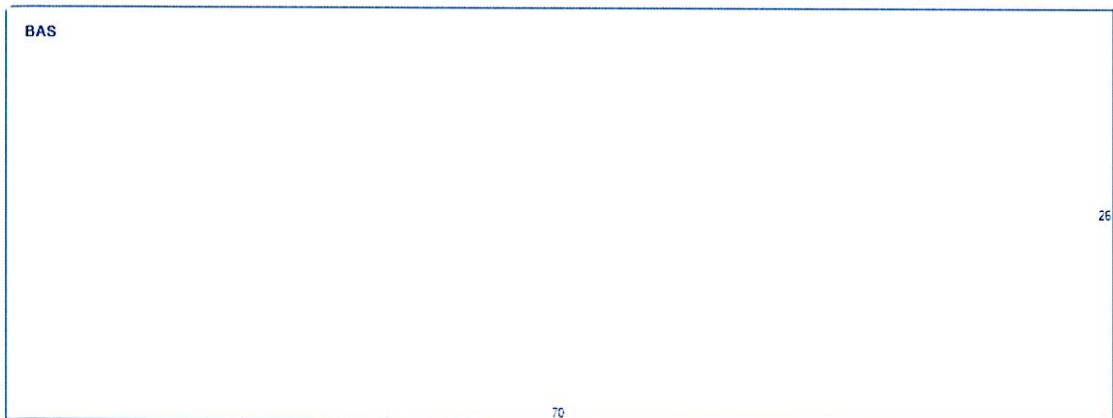
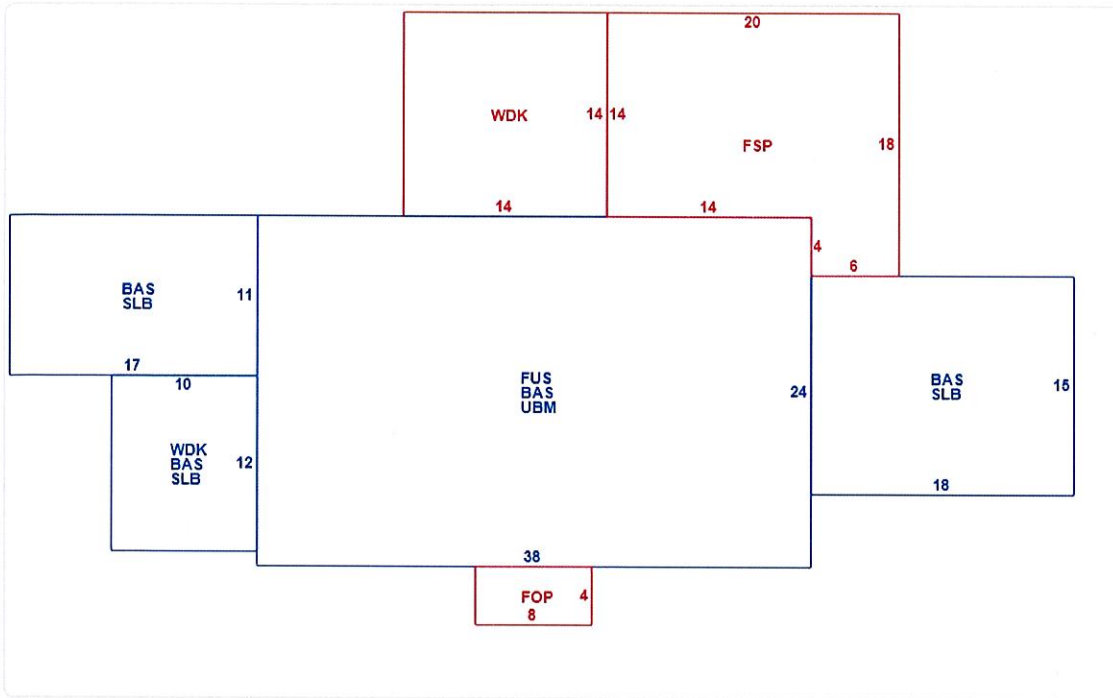
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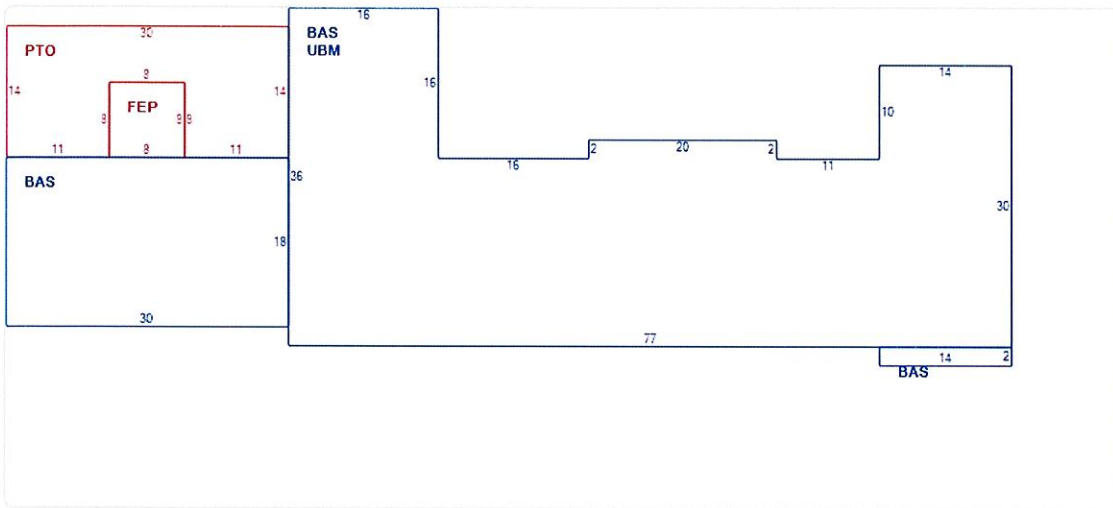
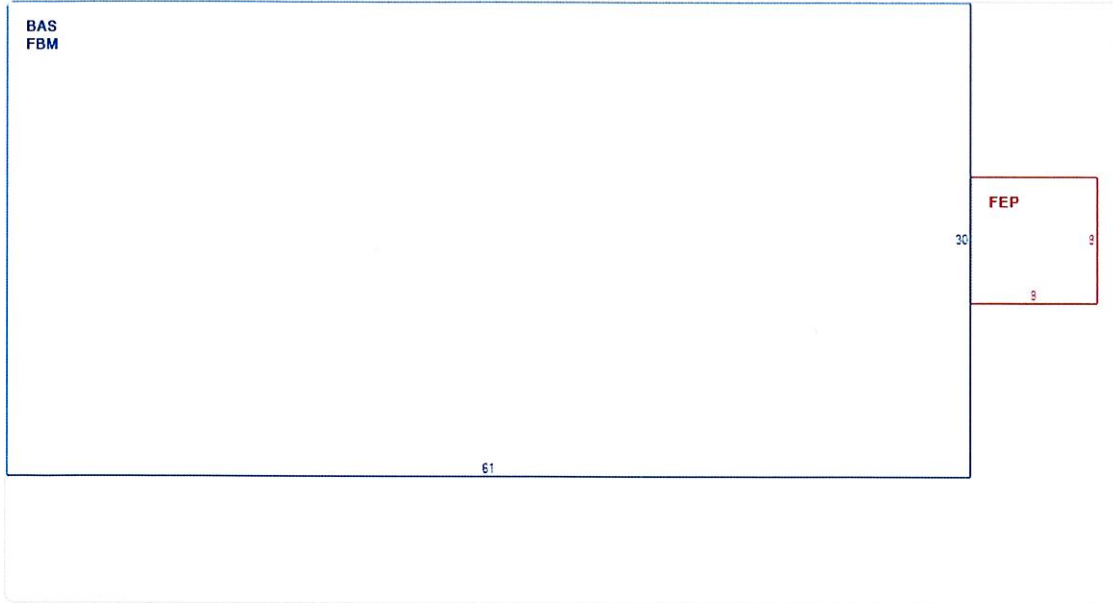
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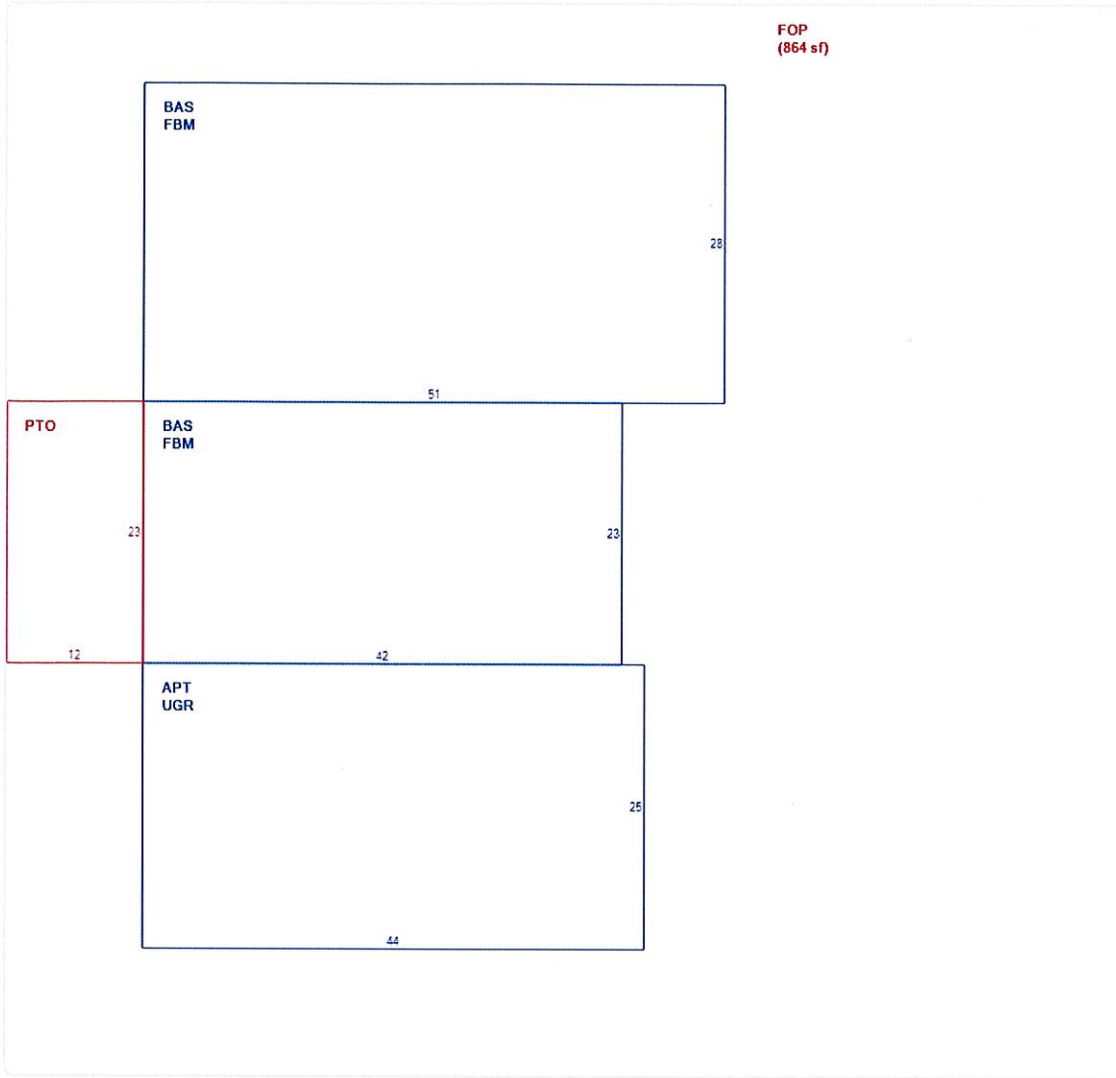
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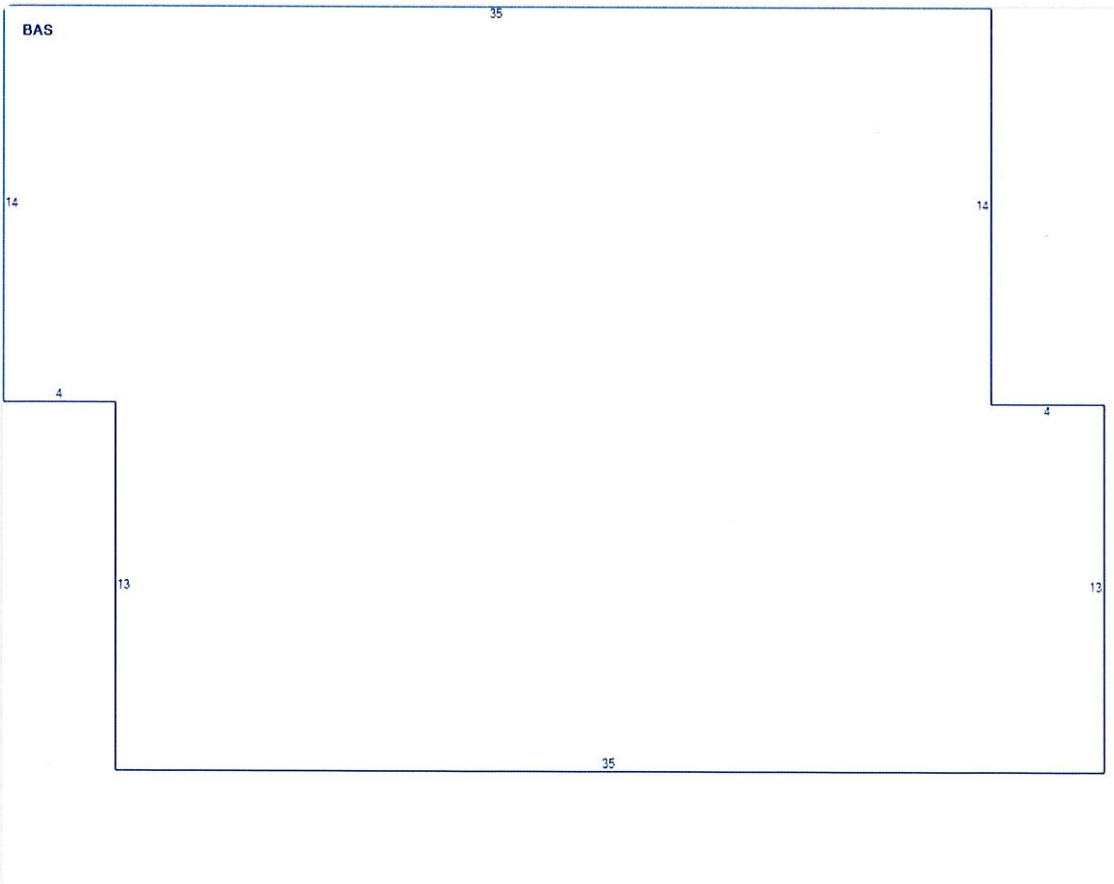
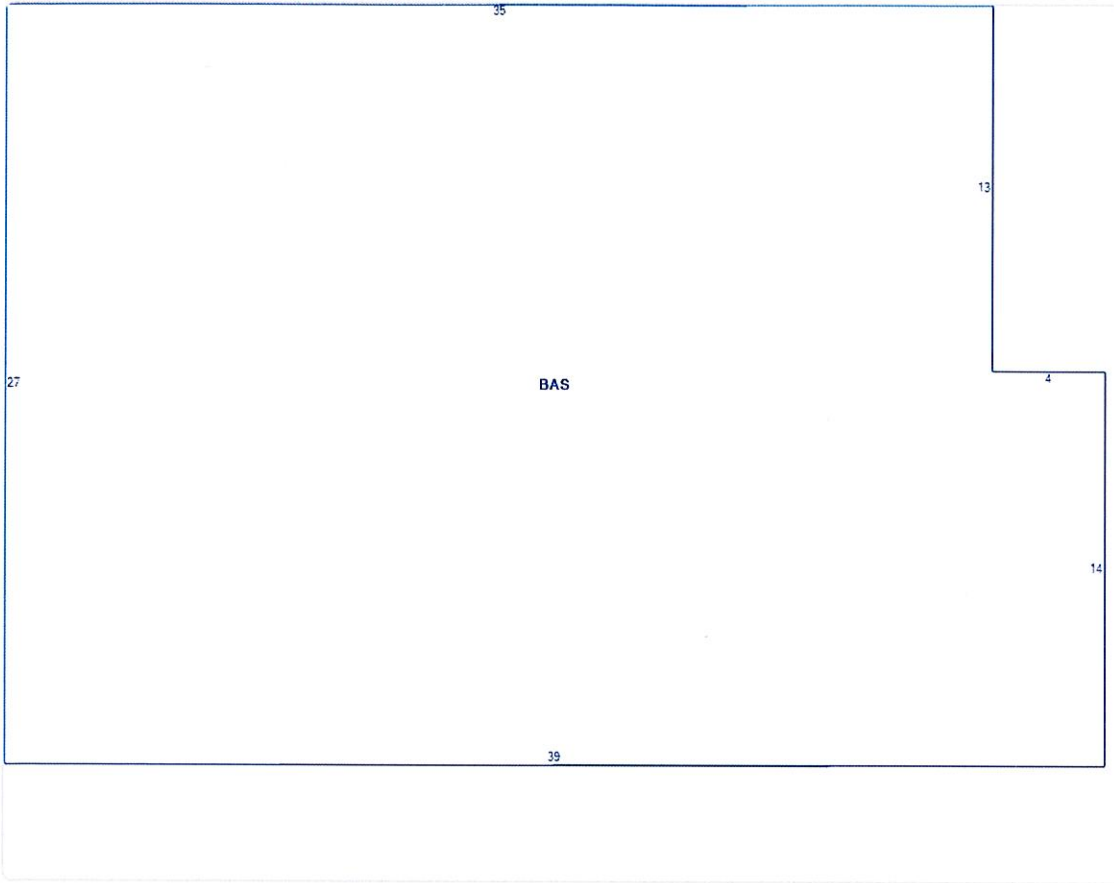
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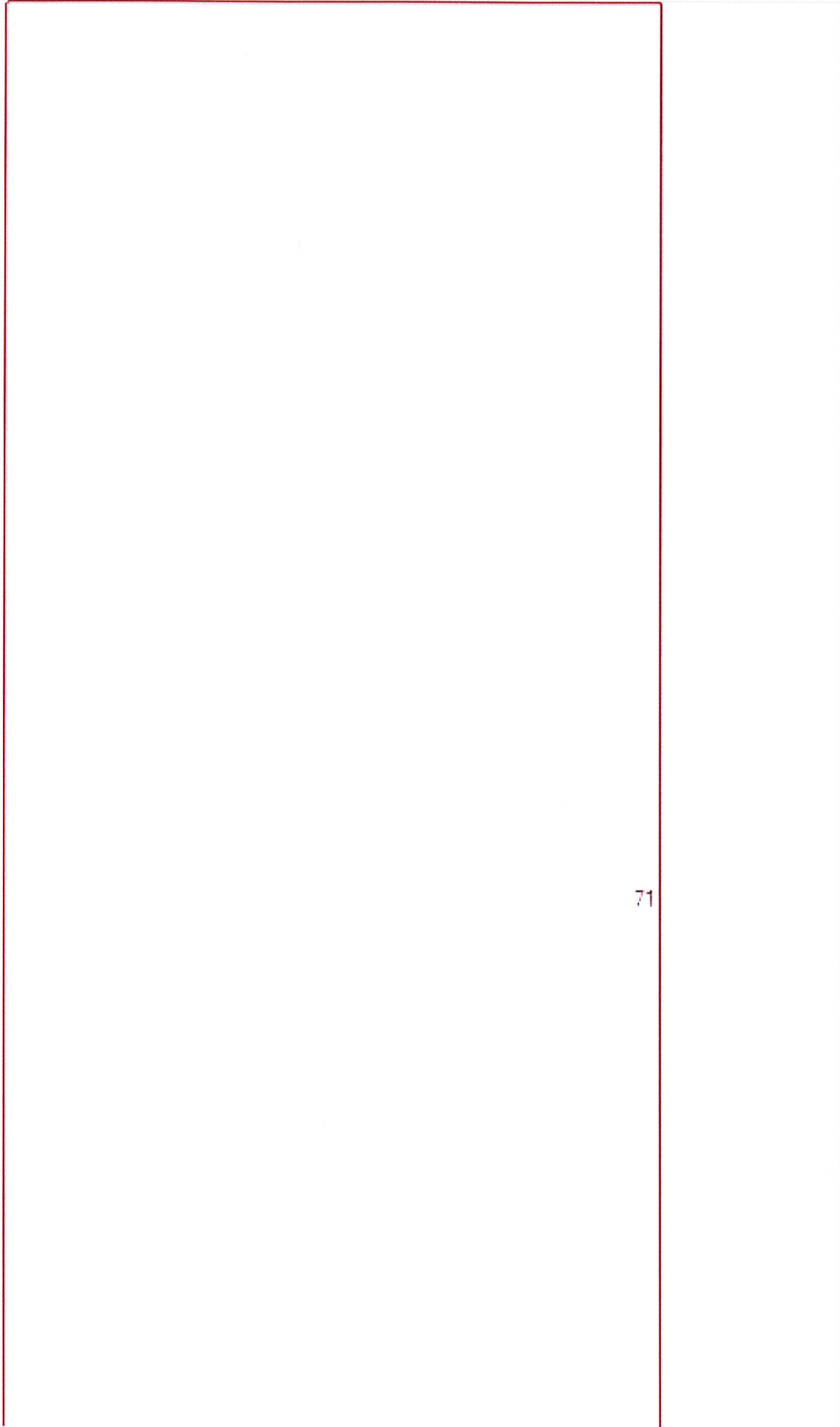
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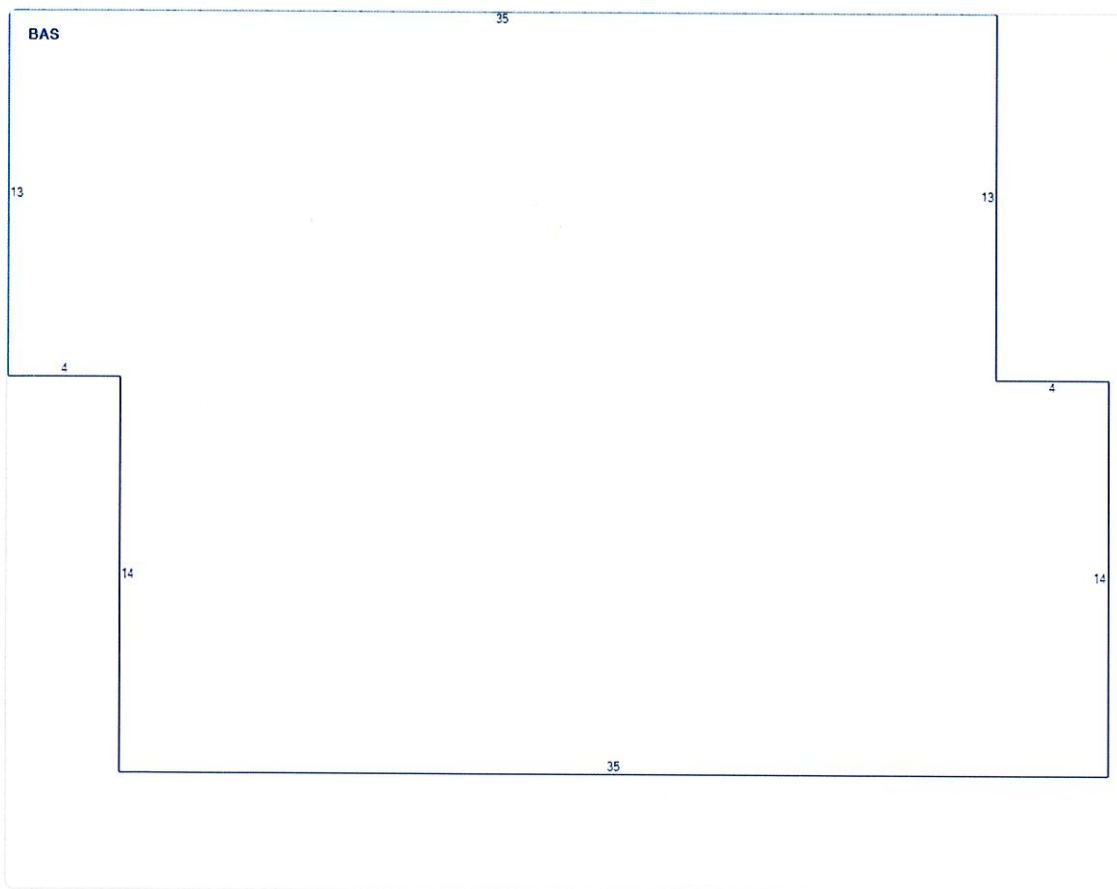
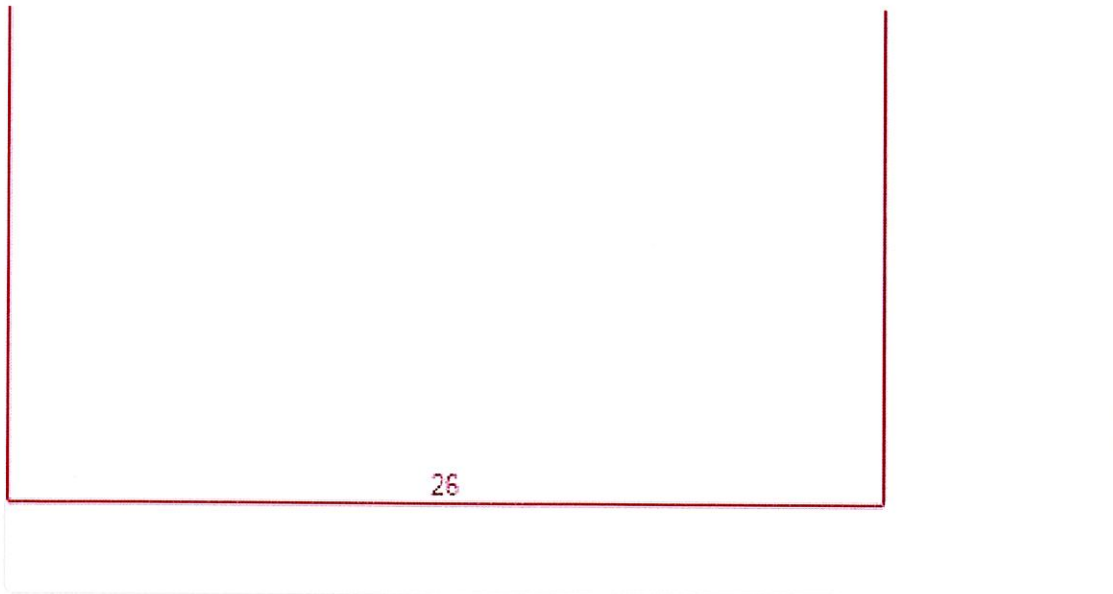


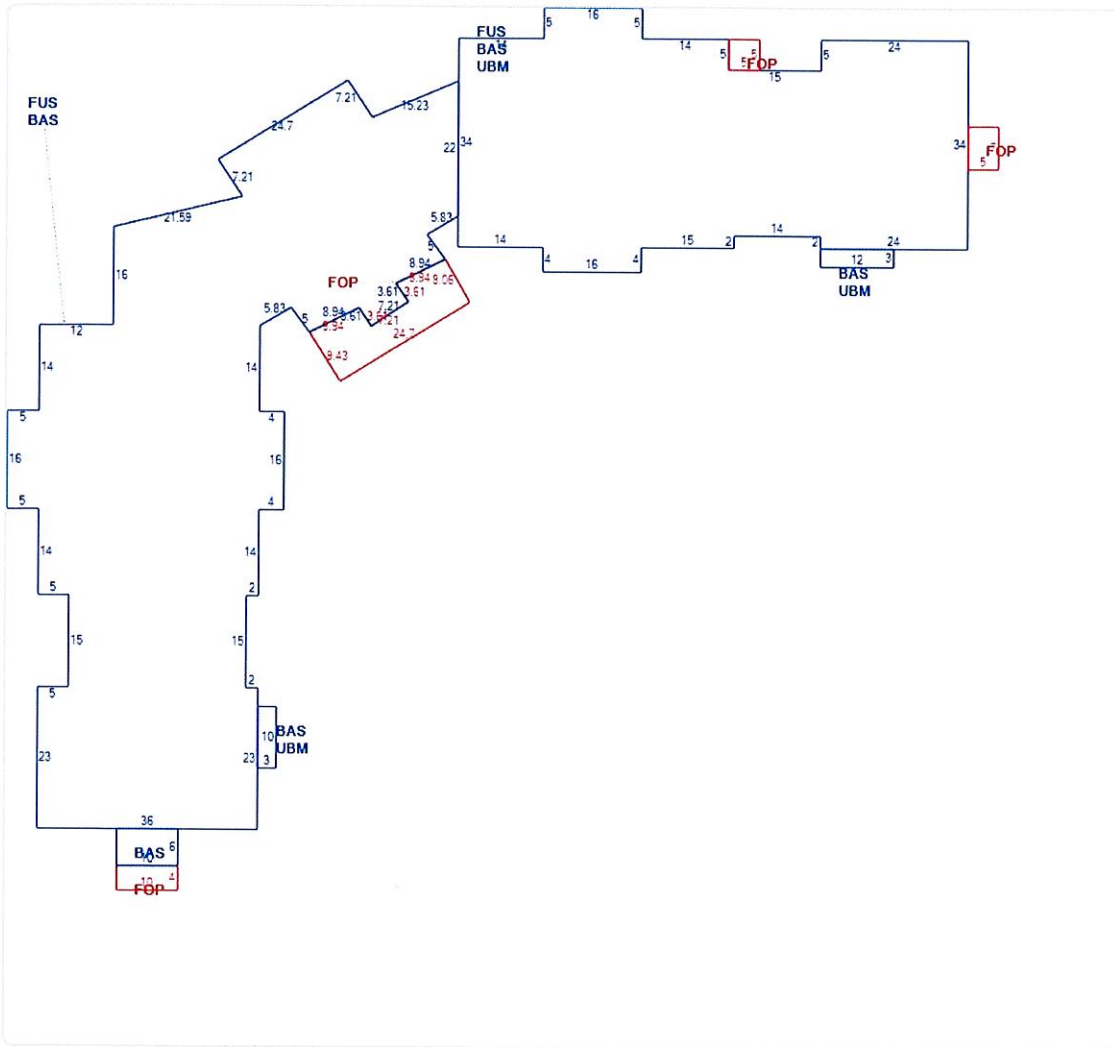




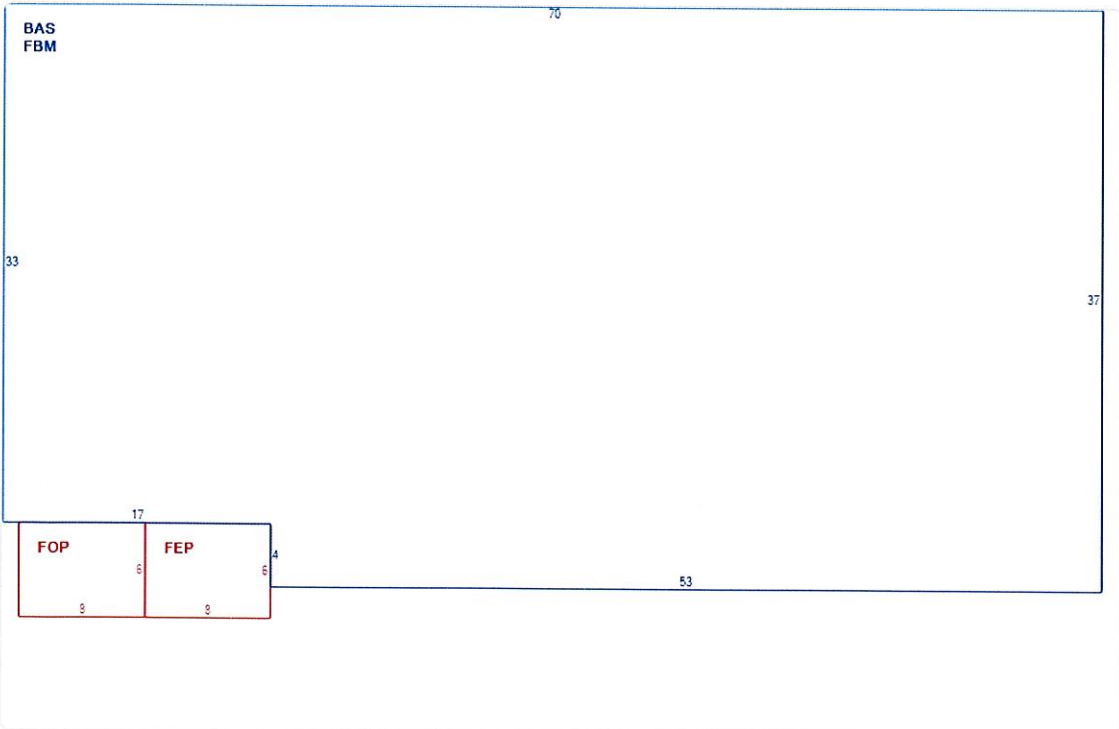
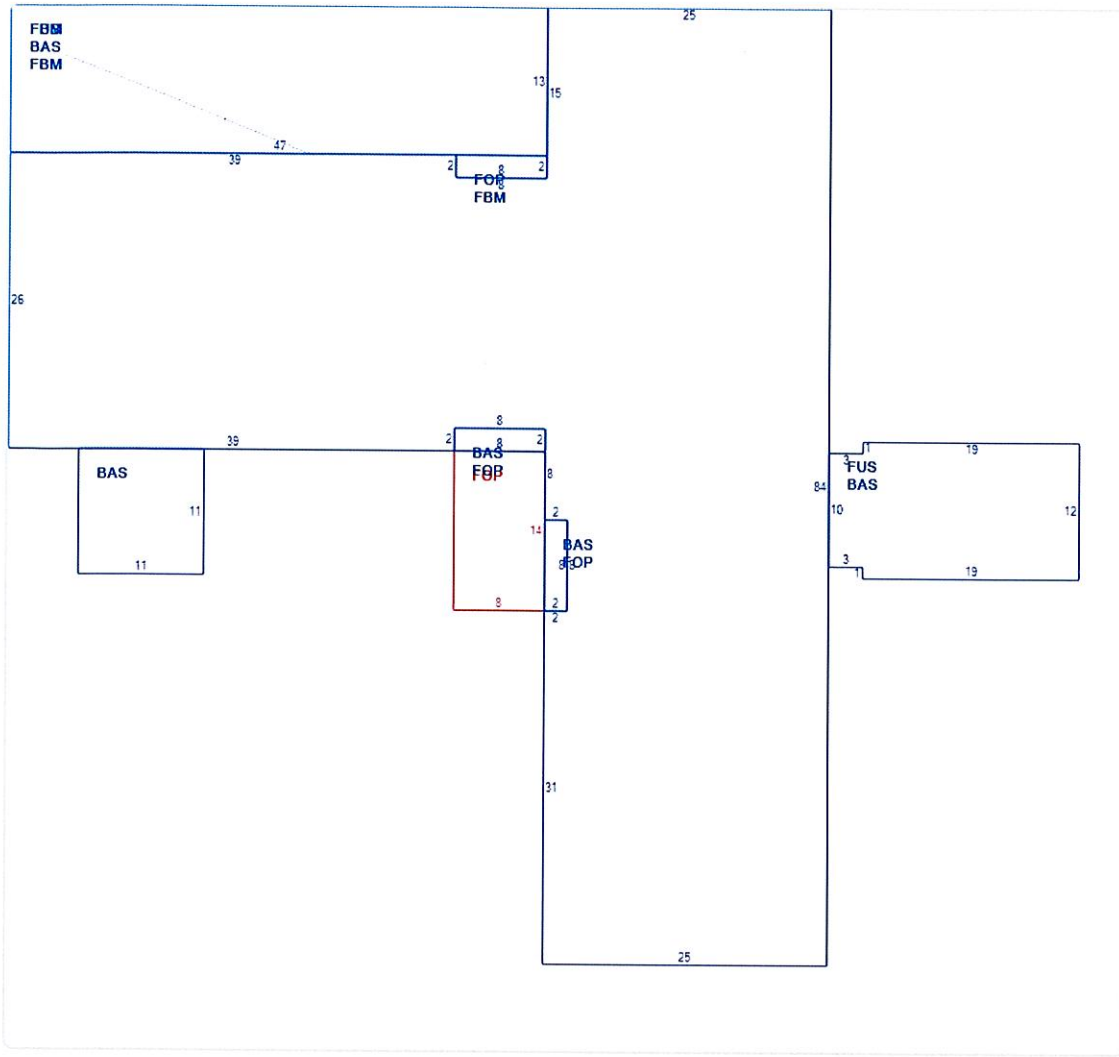


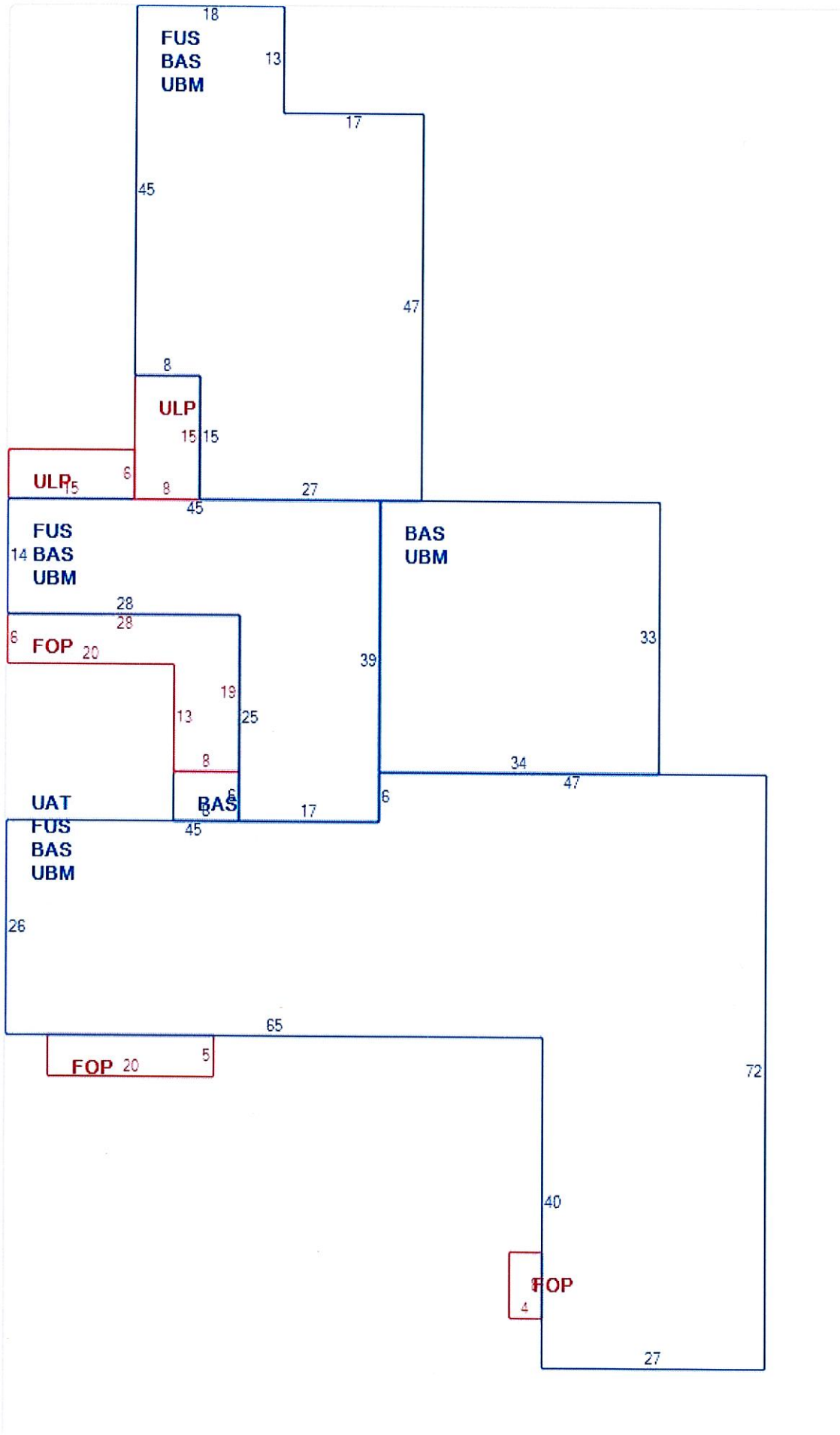
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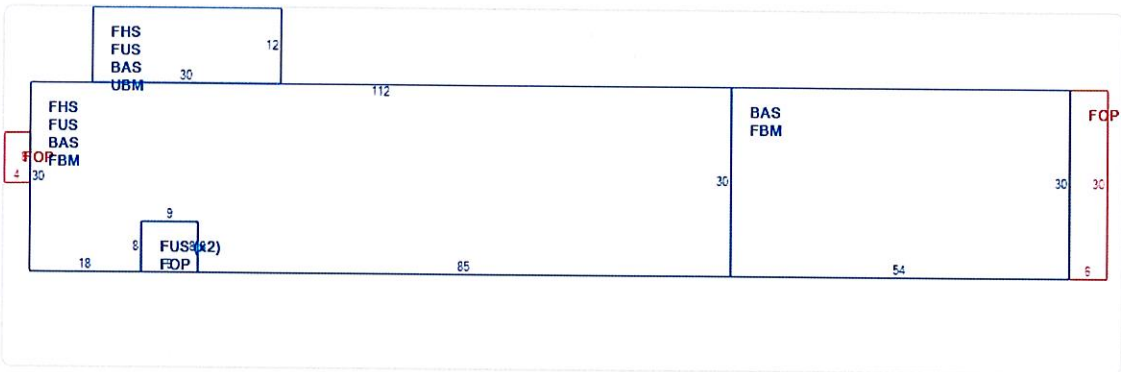
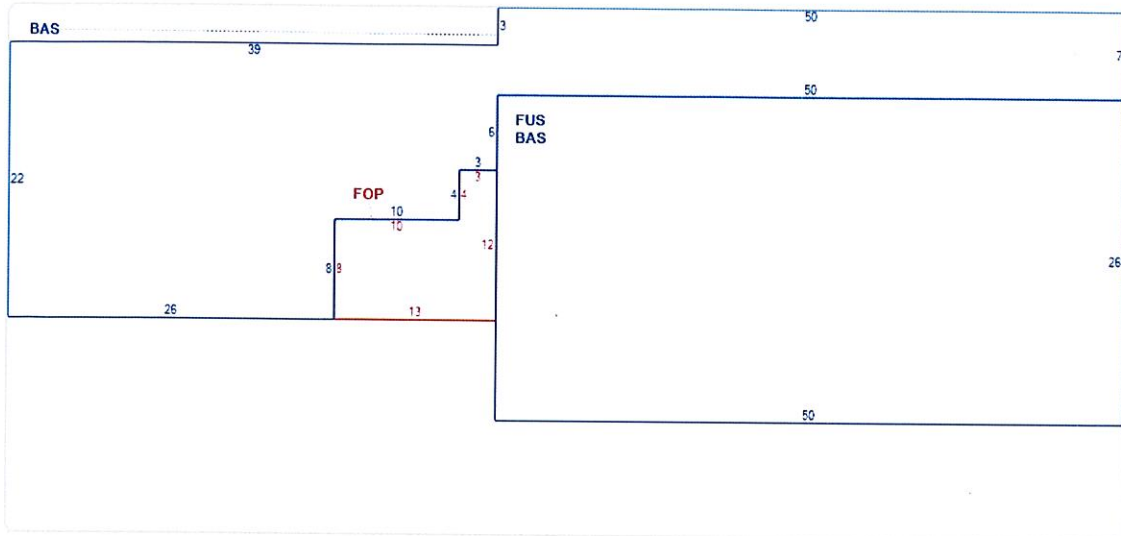


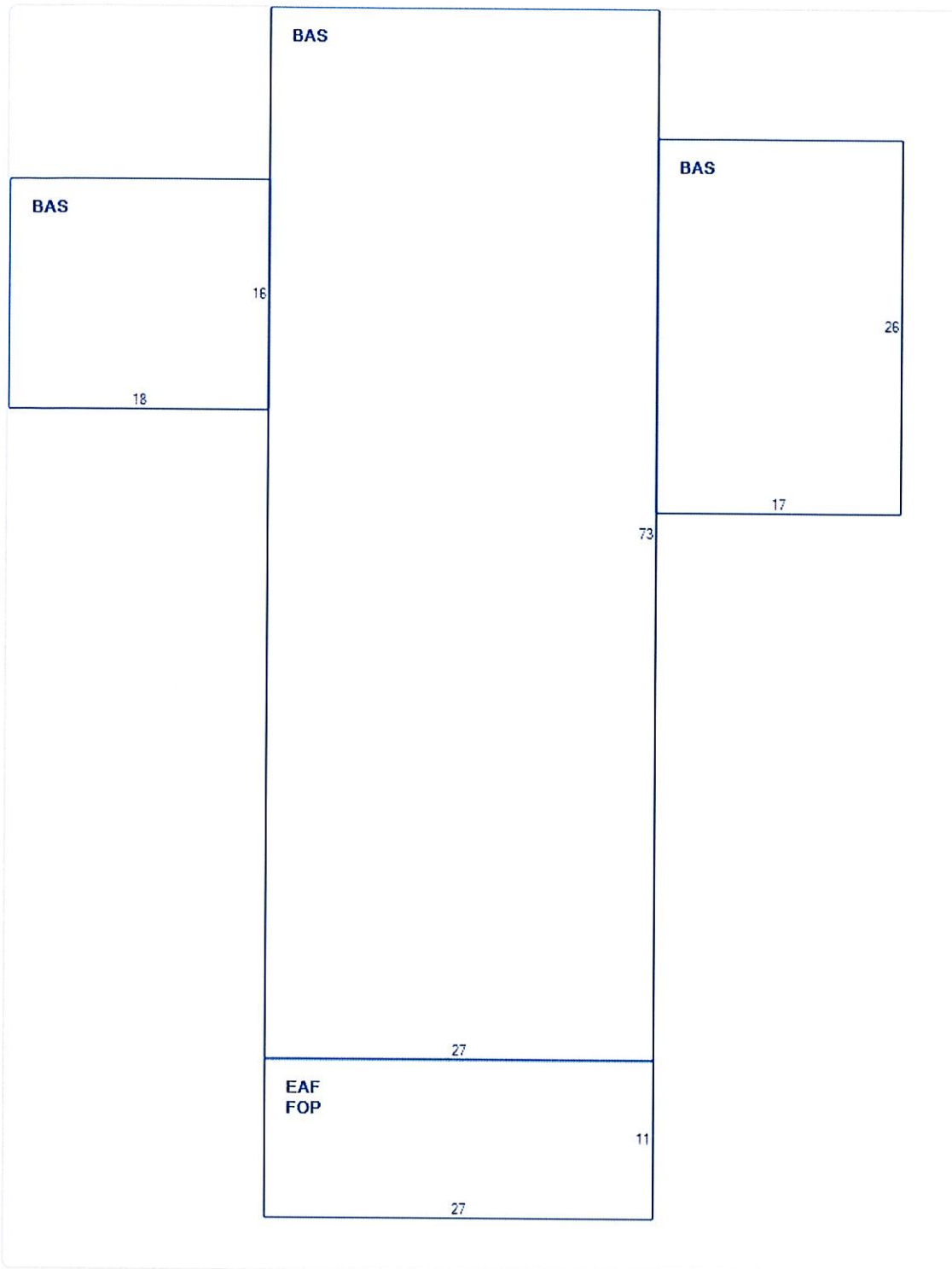


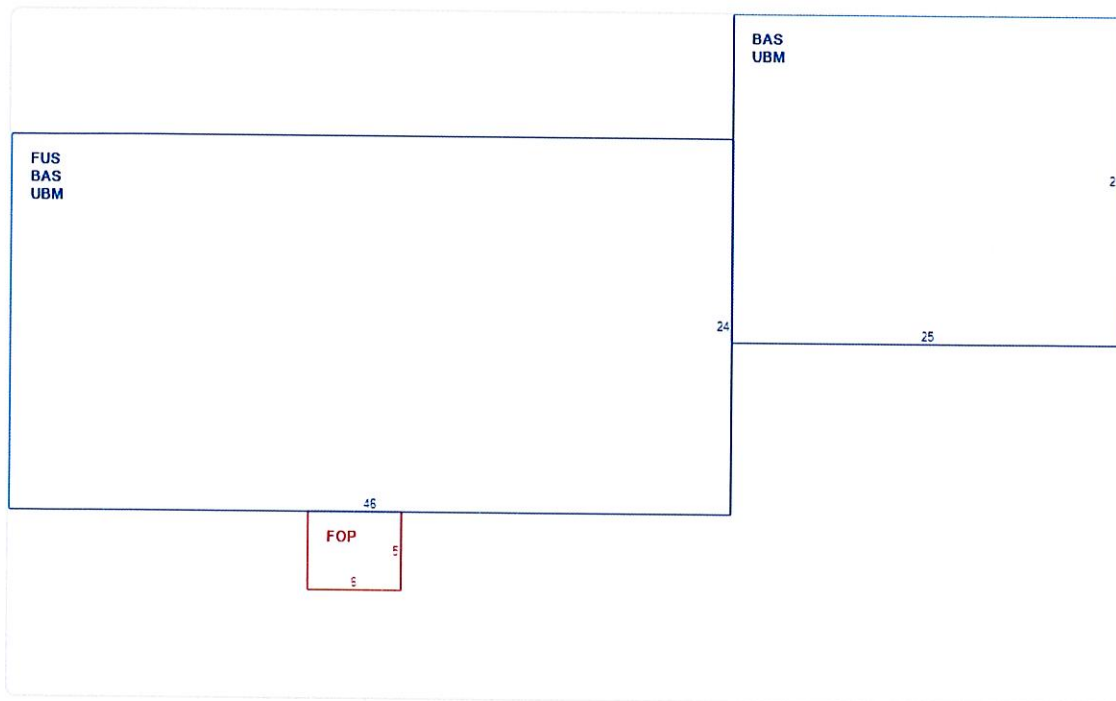
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| | 10 |
| | 6 |
| | CAN |
| 36 | |
| 26 | |
| 70 | |
| 6 | |

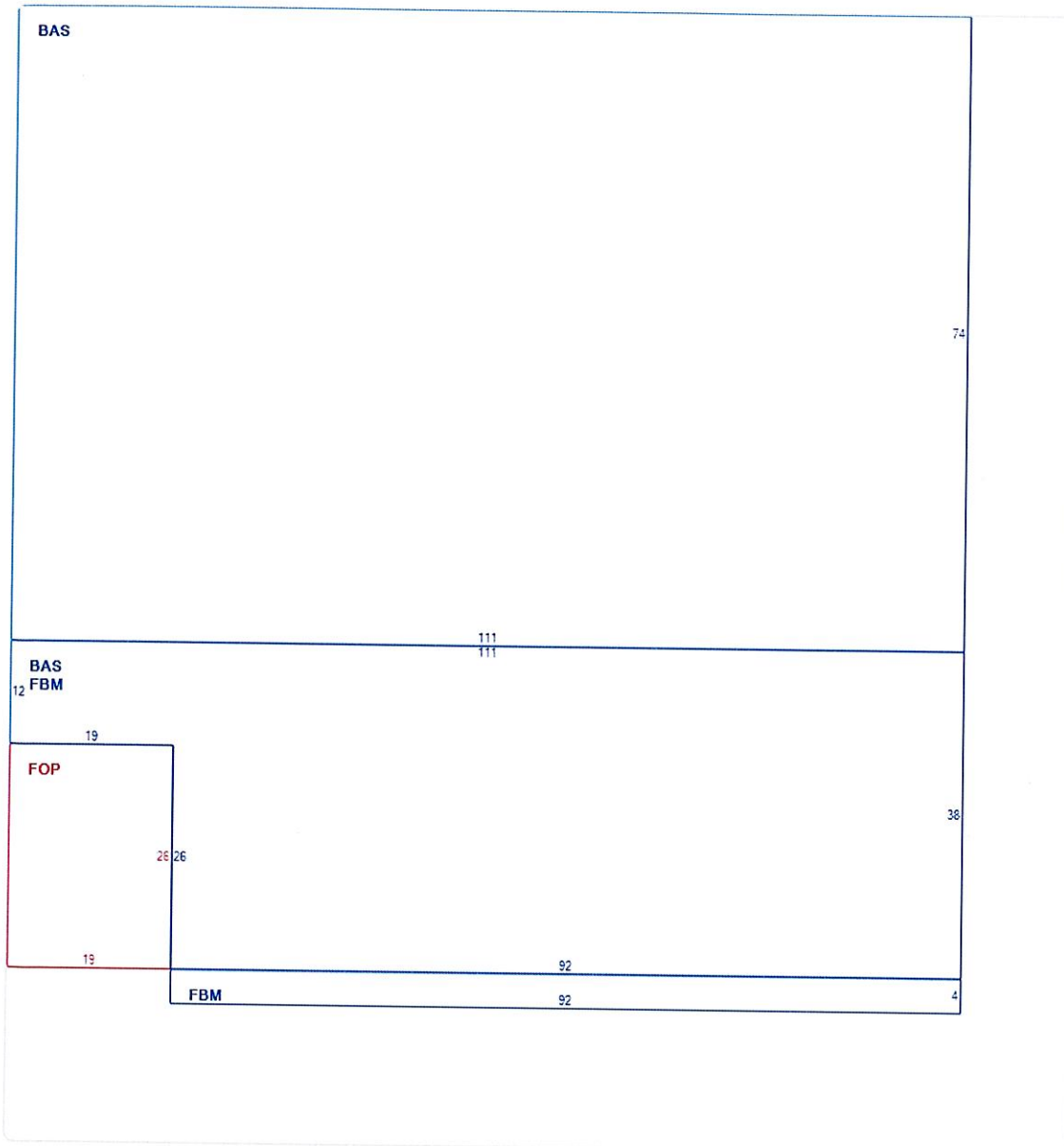


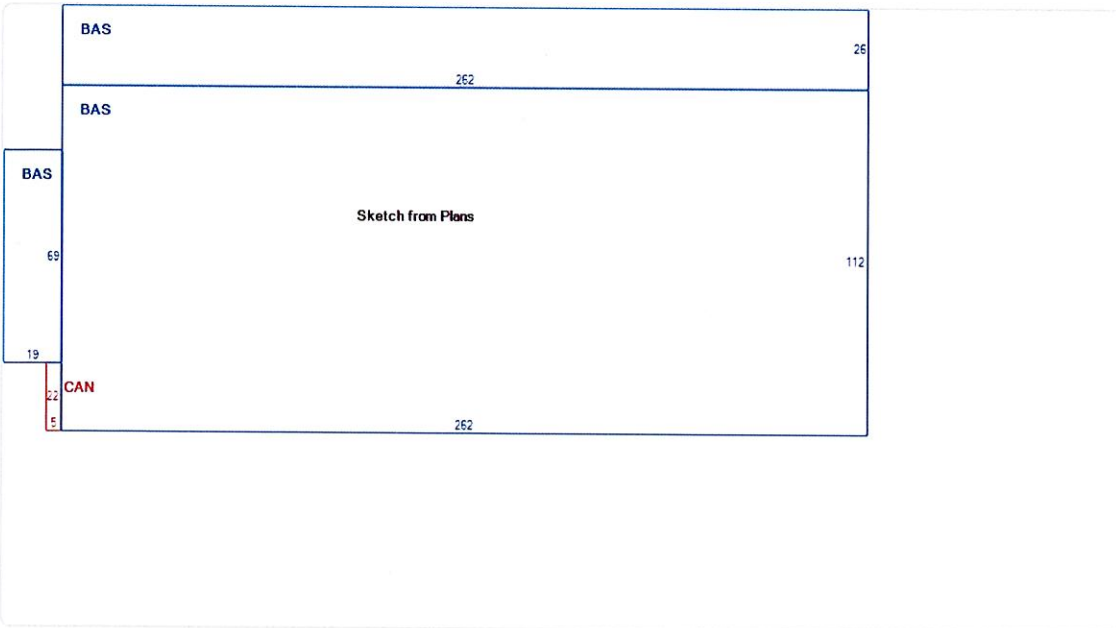
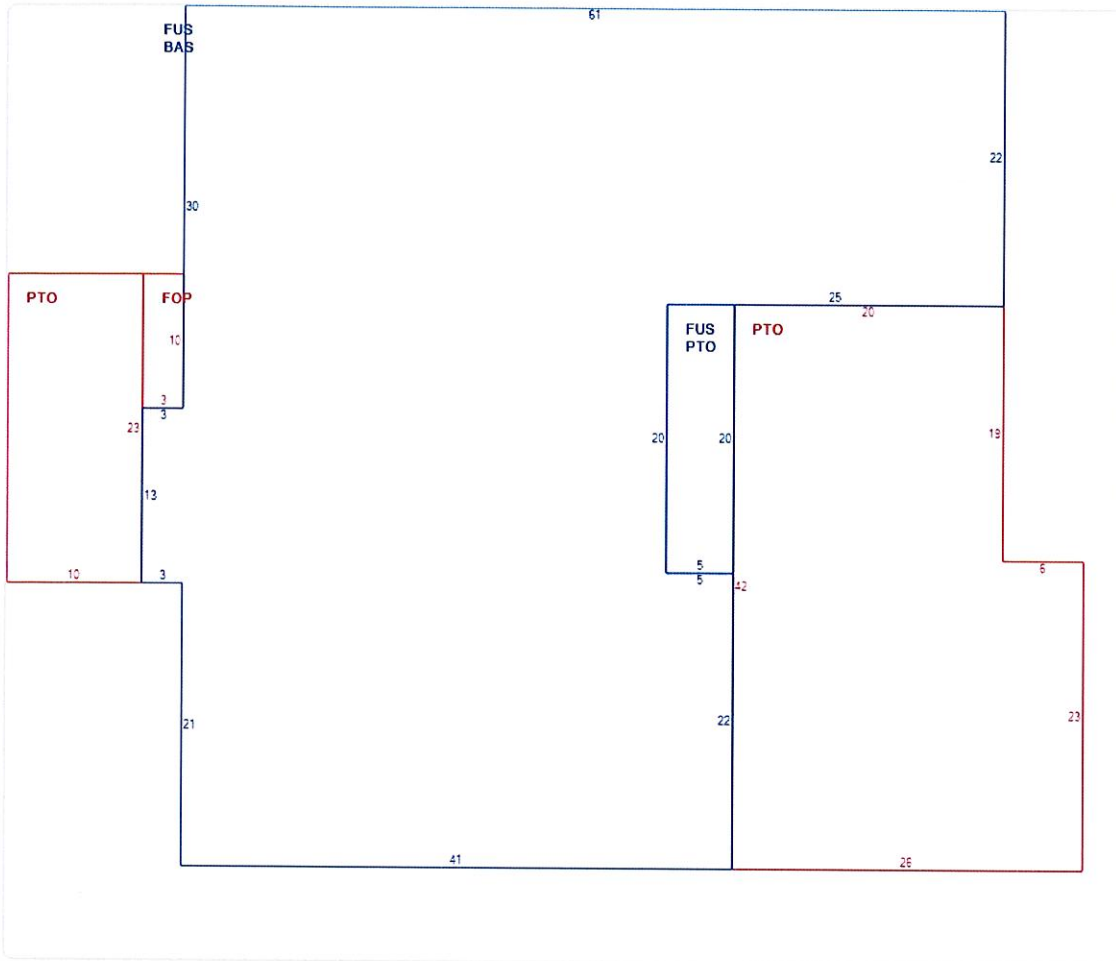


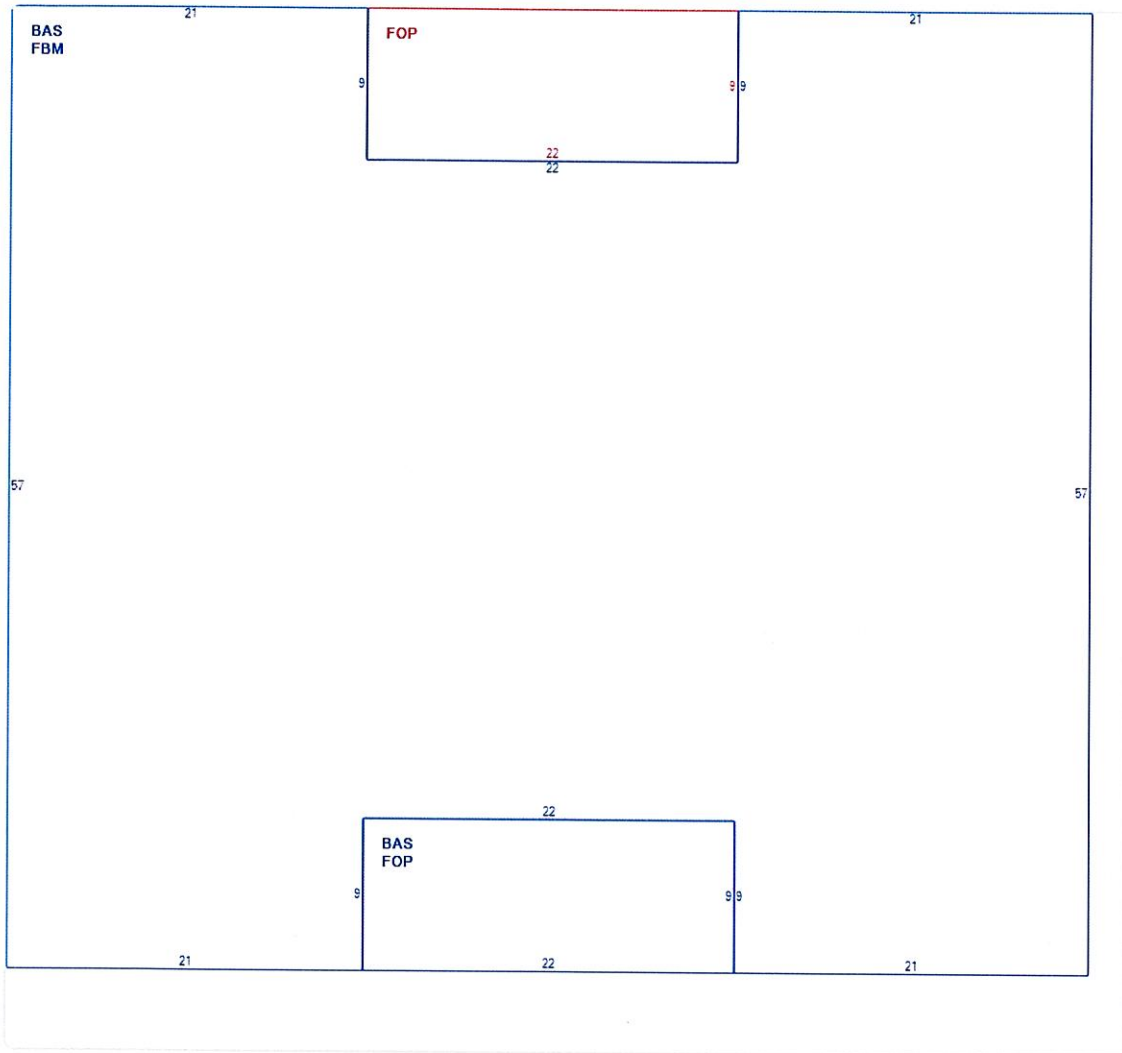
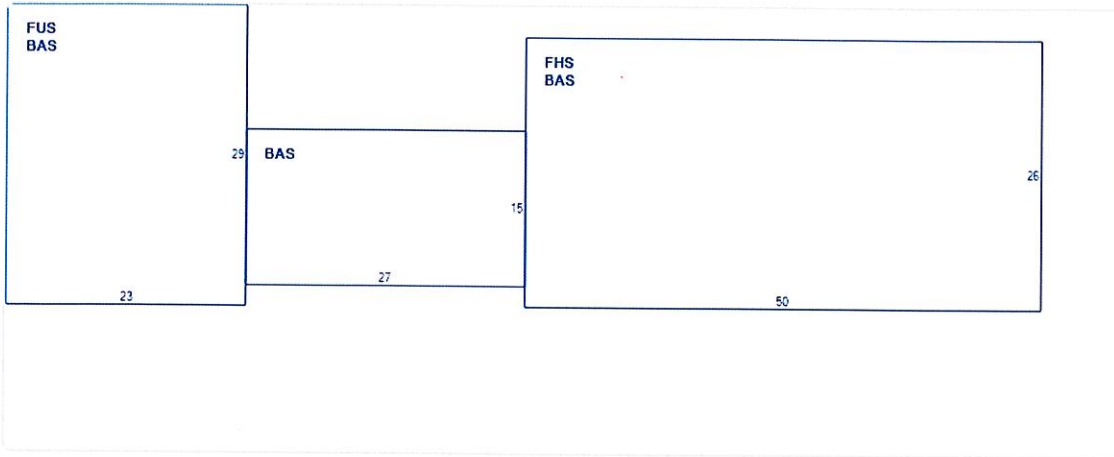


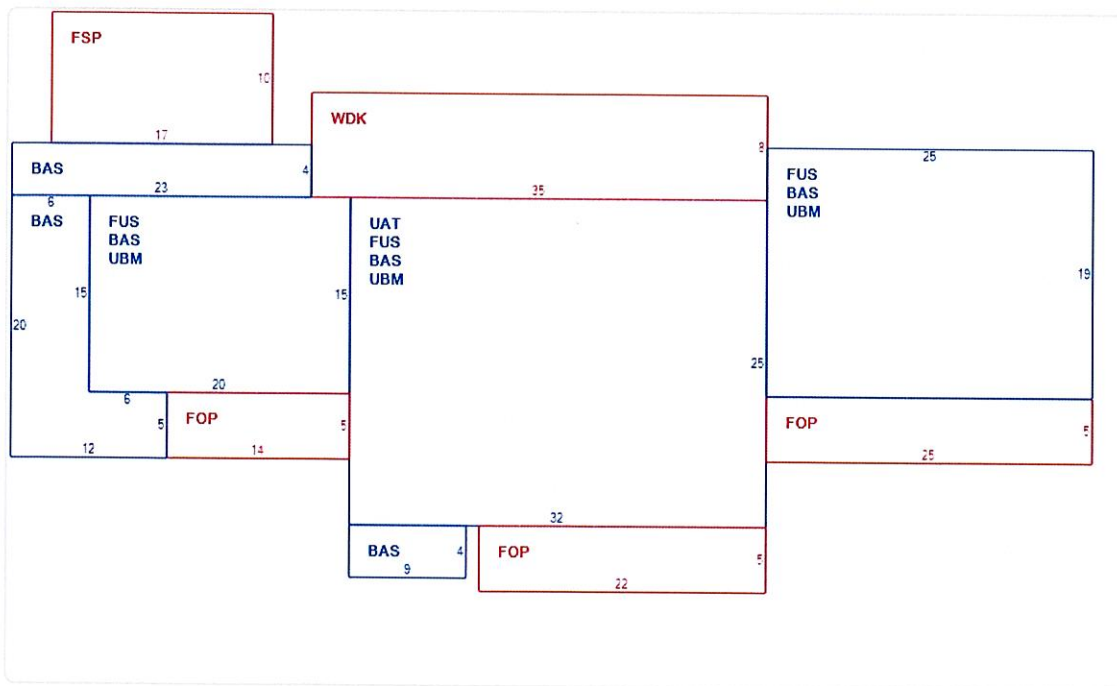
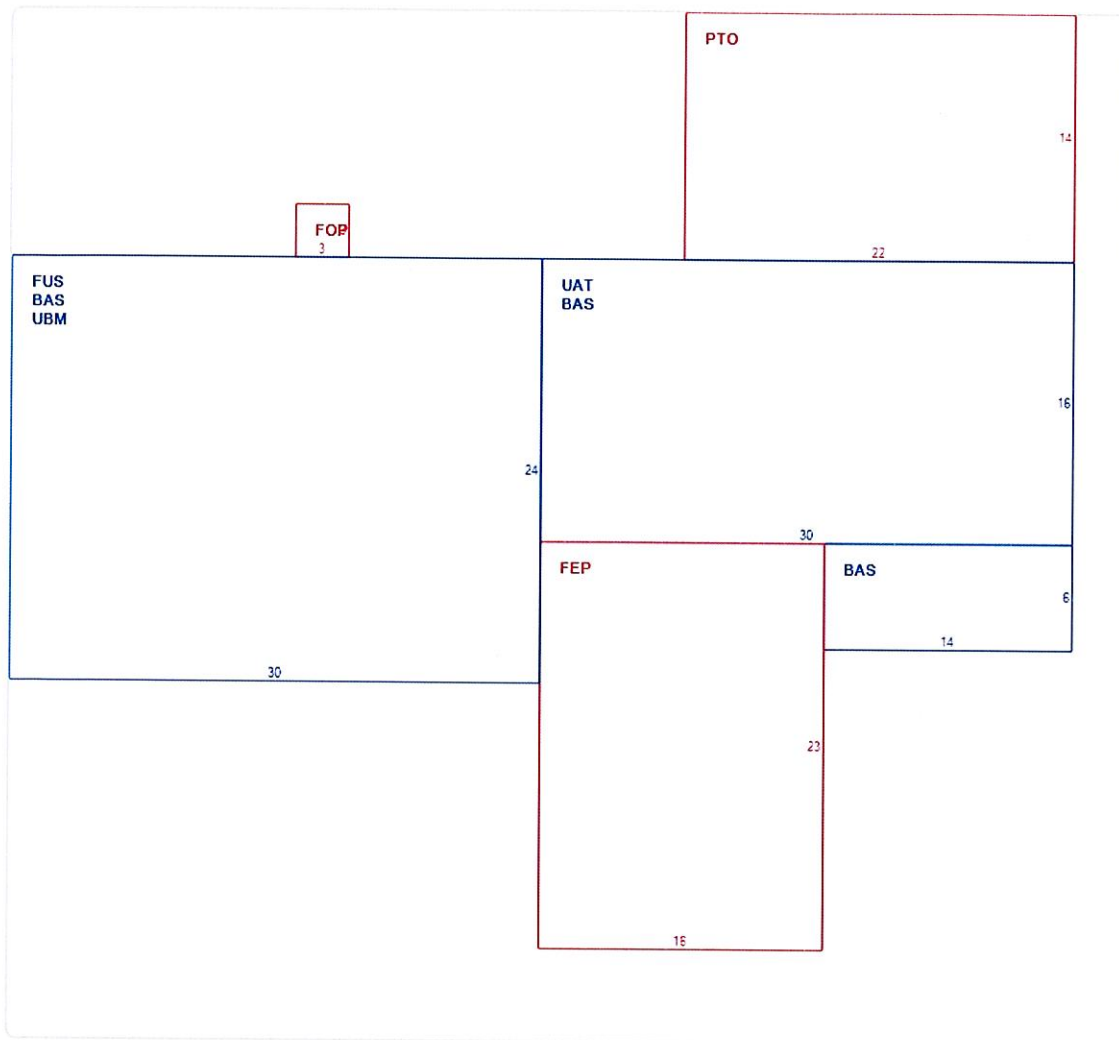


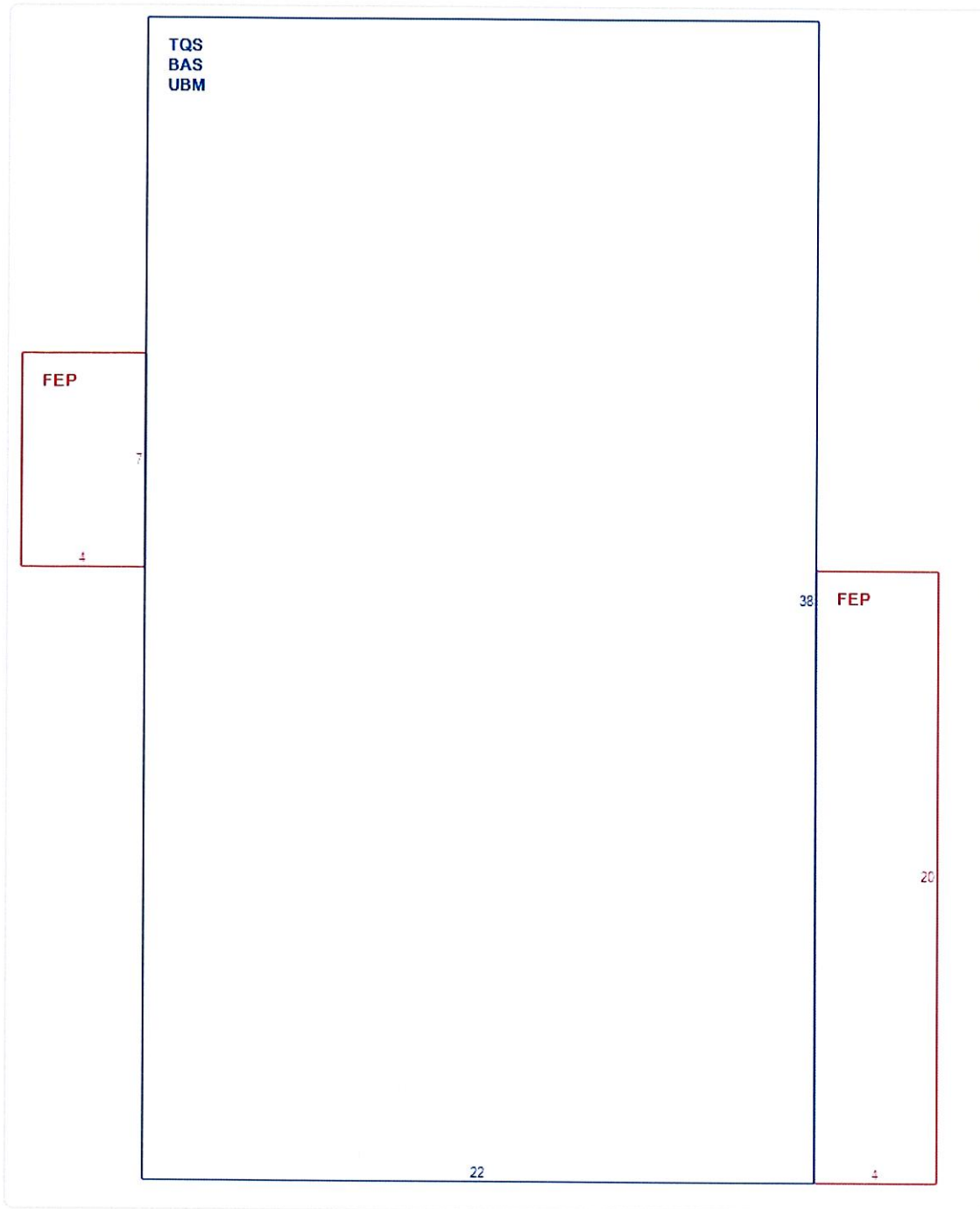


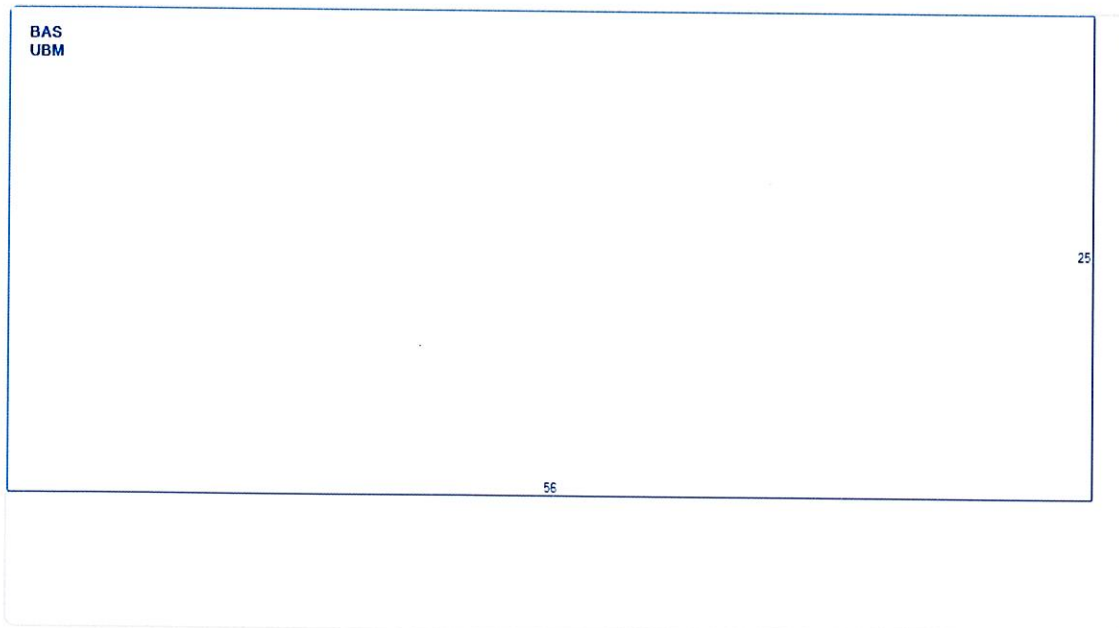
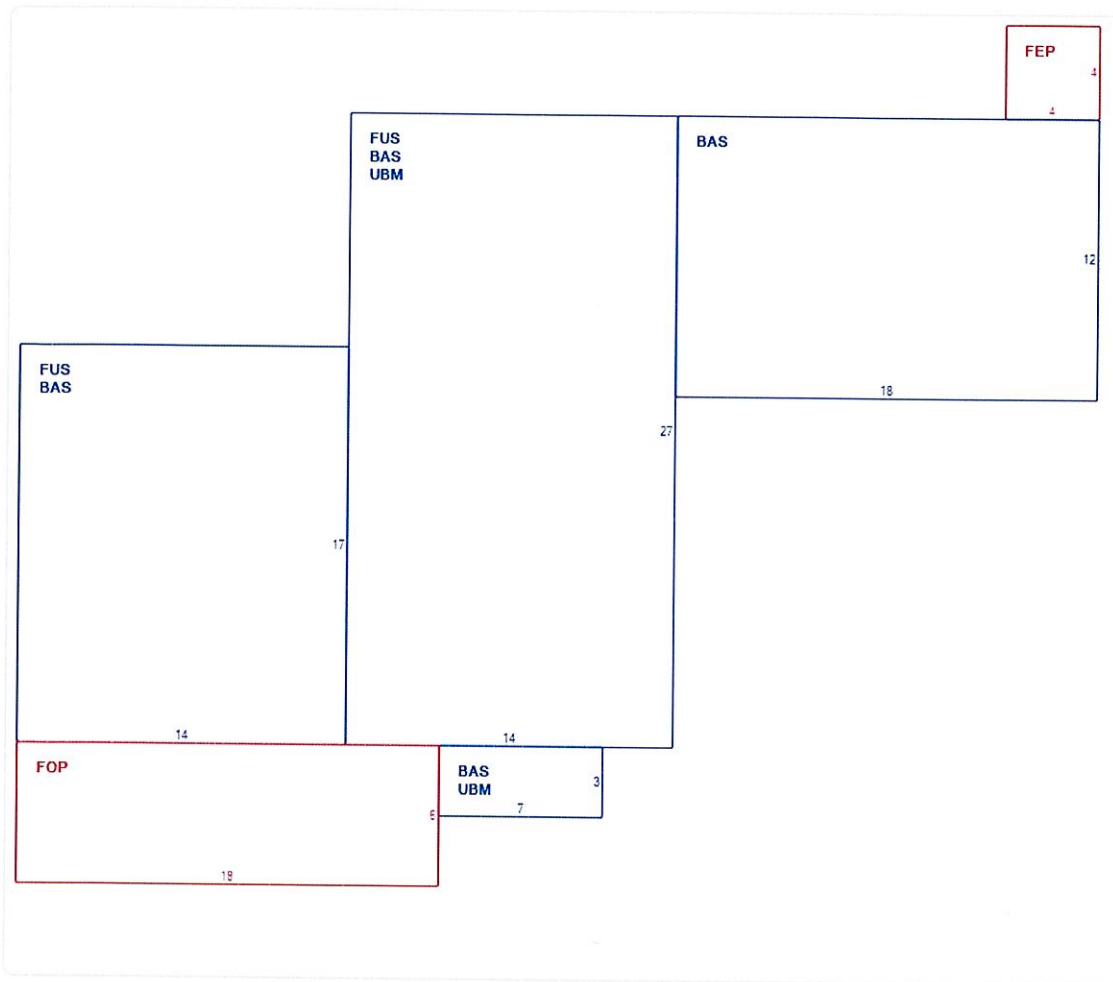


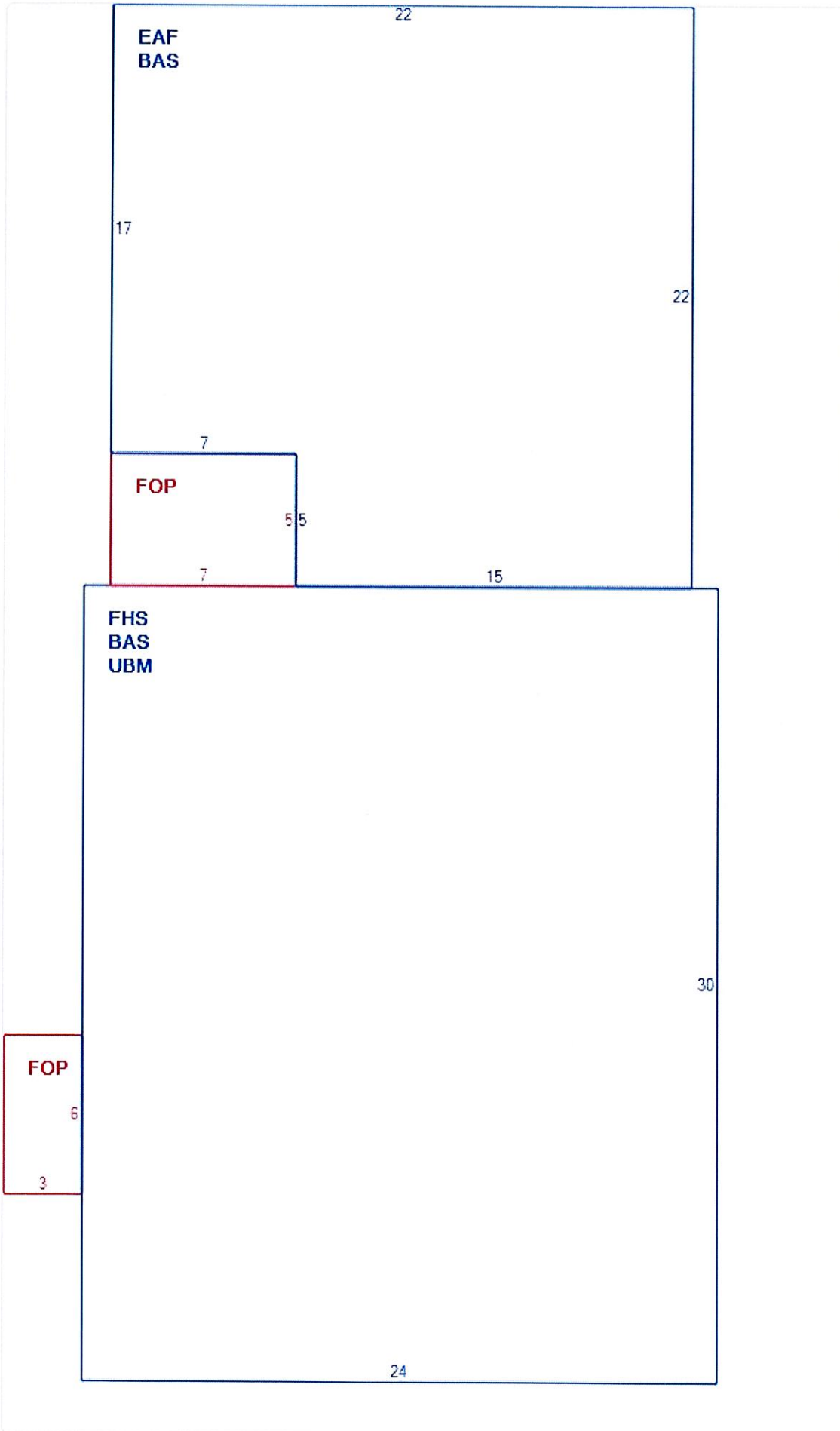


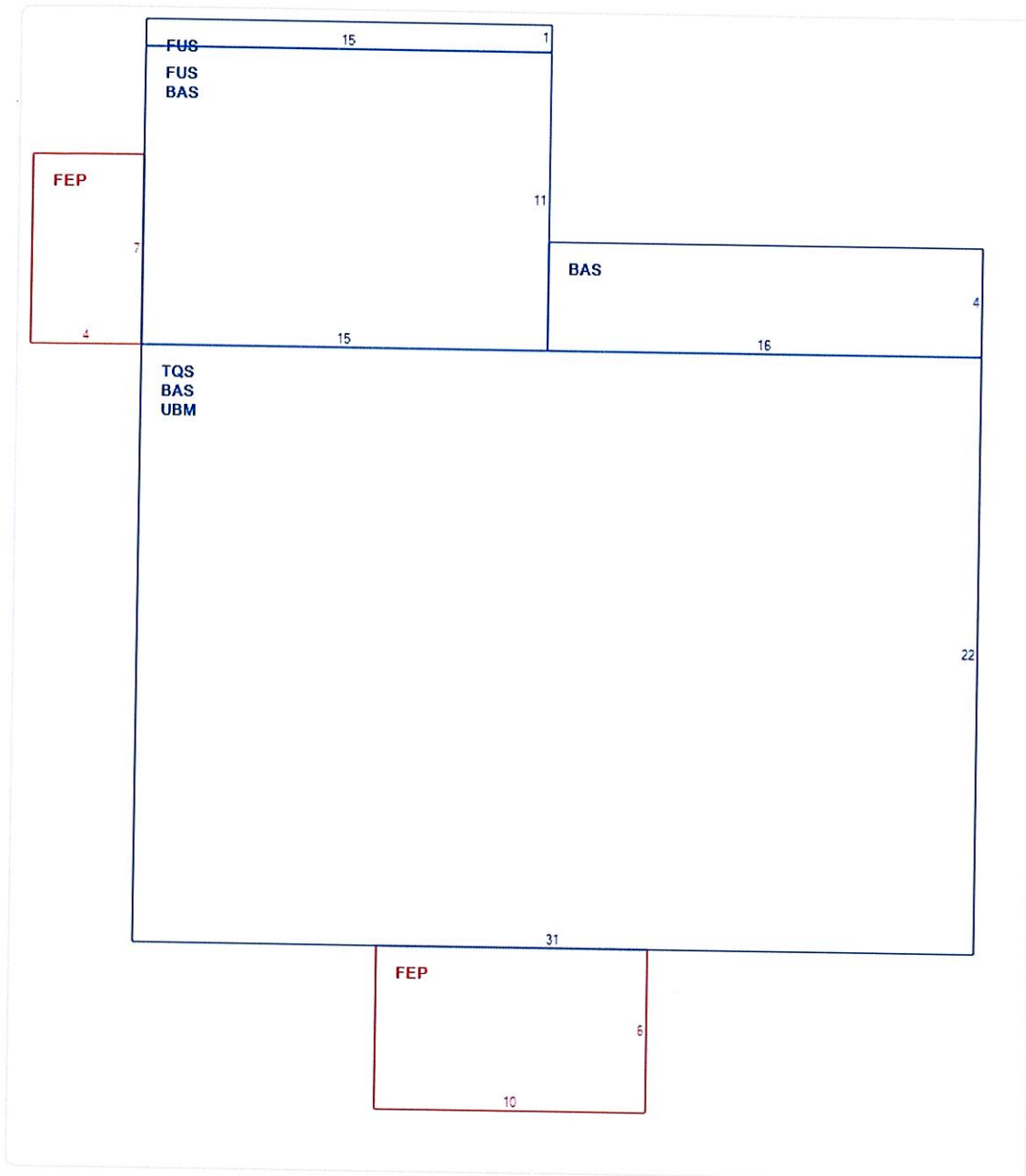


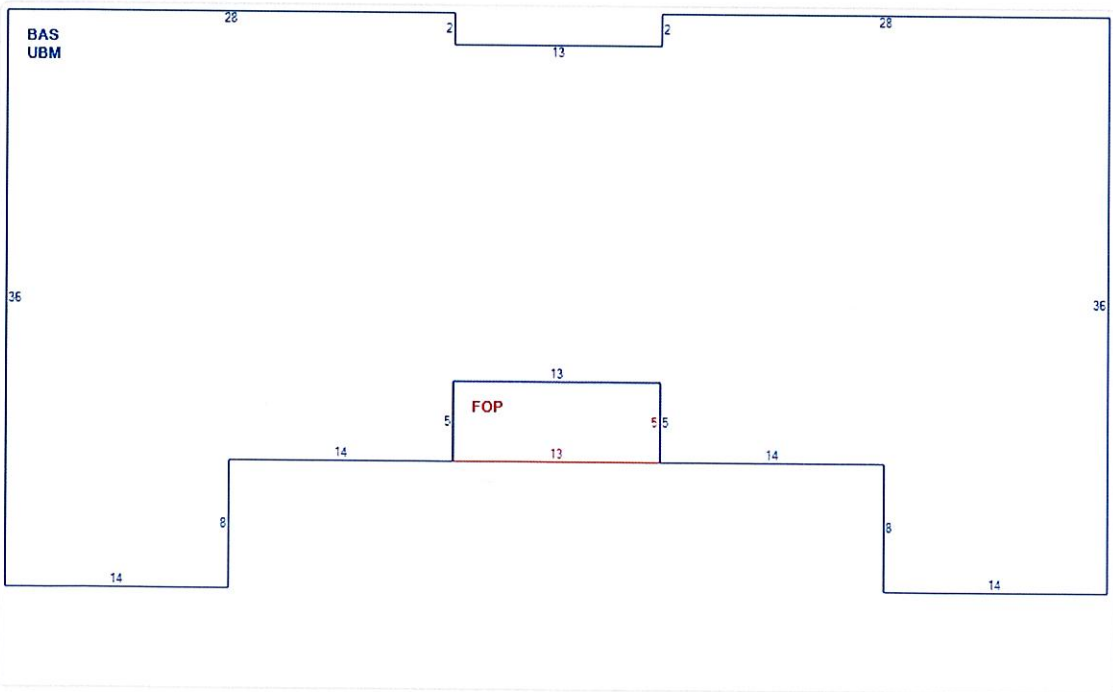
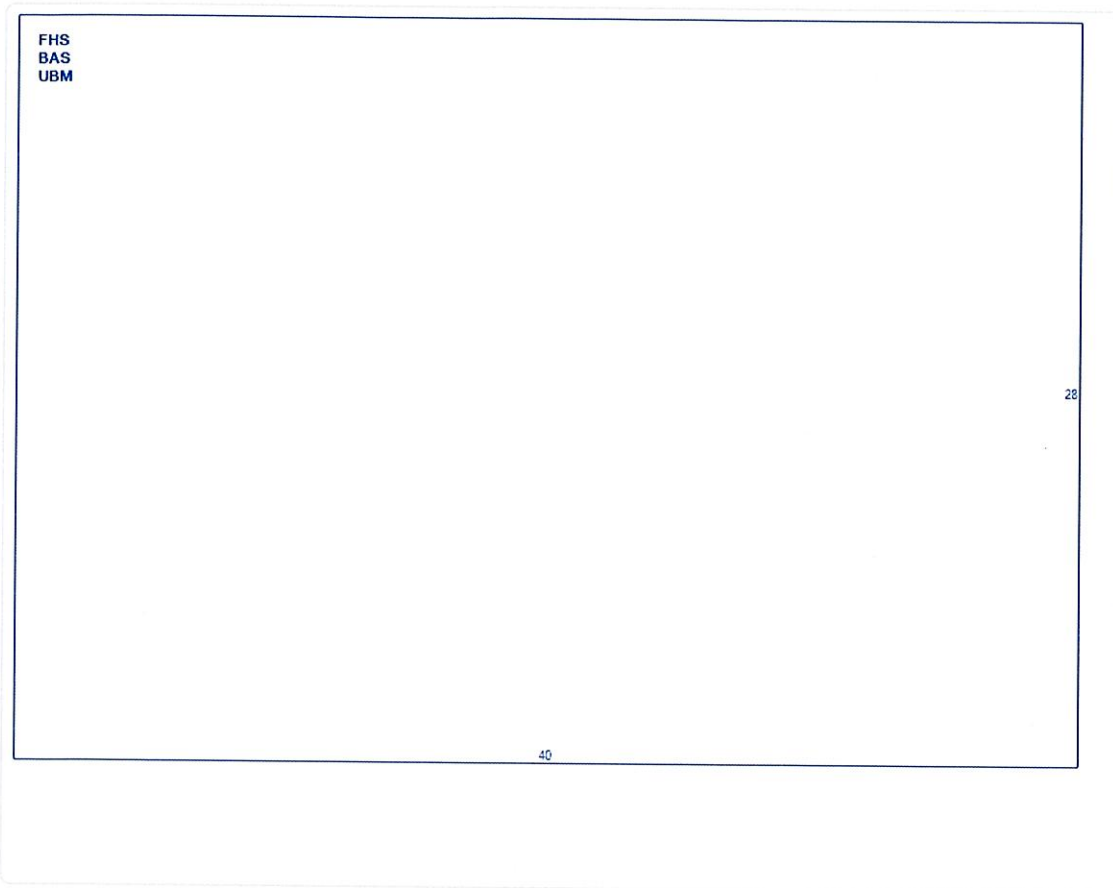


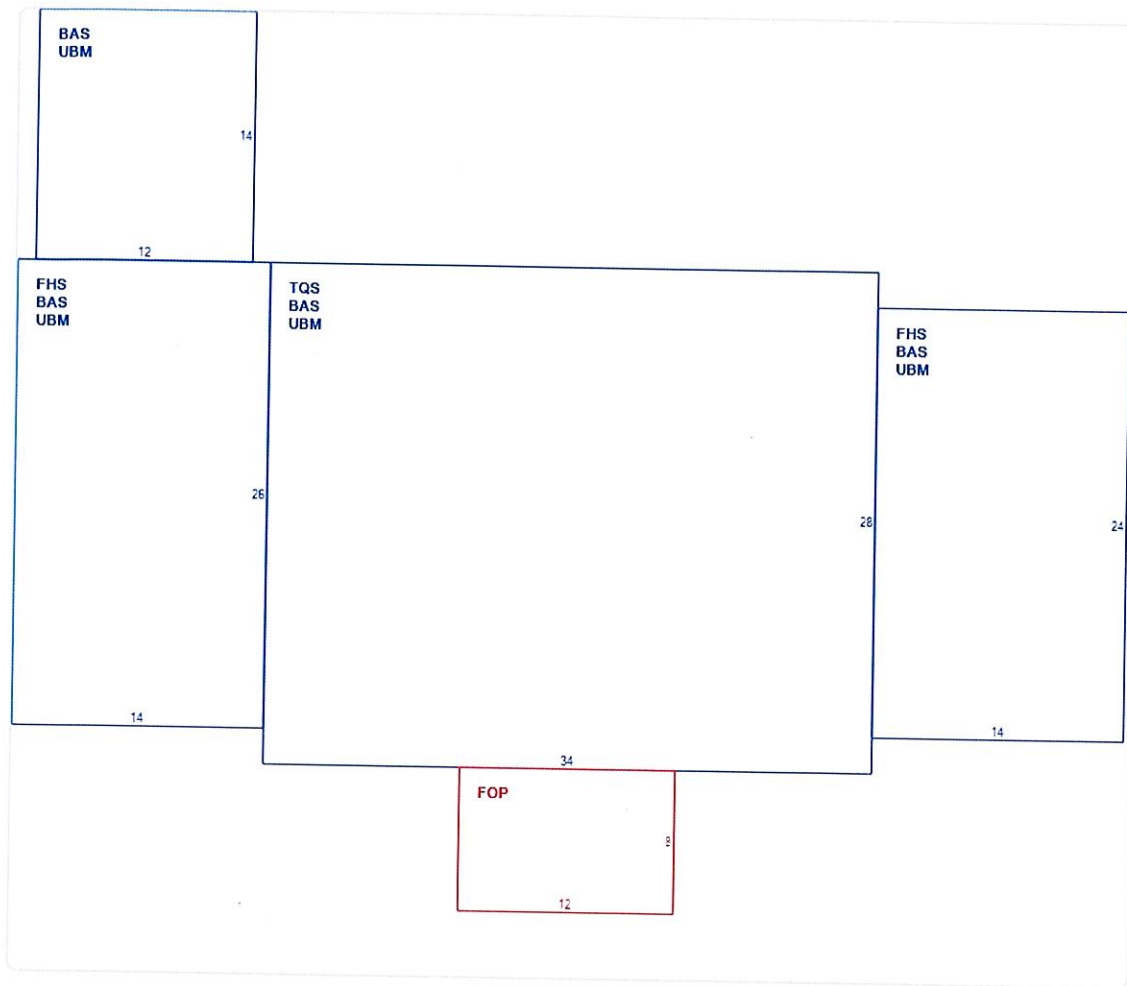


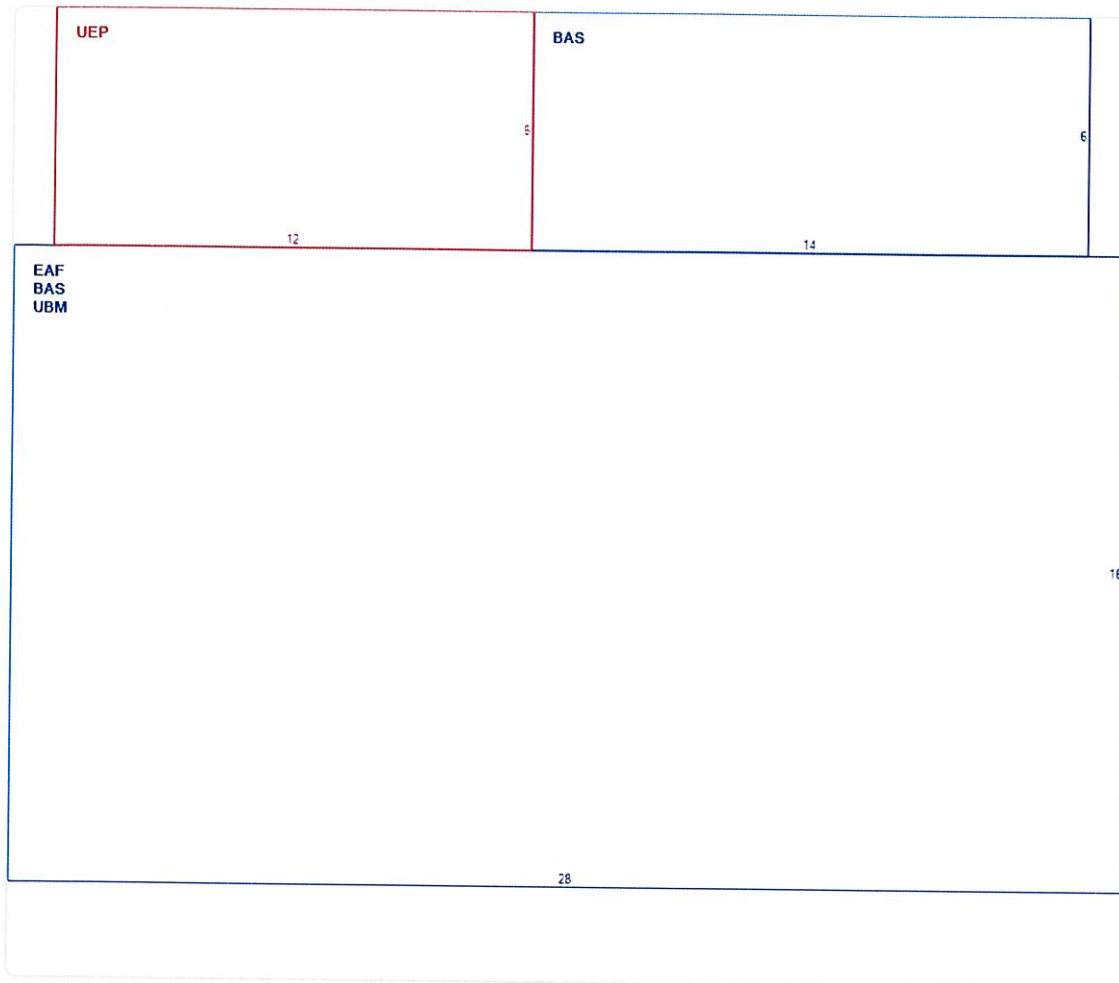












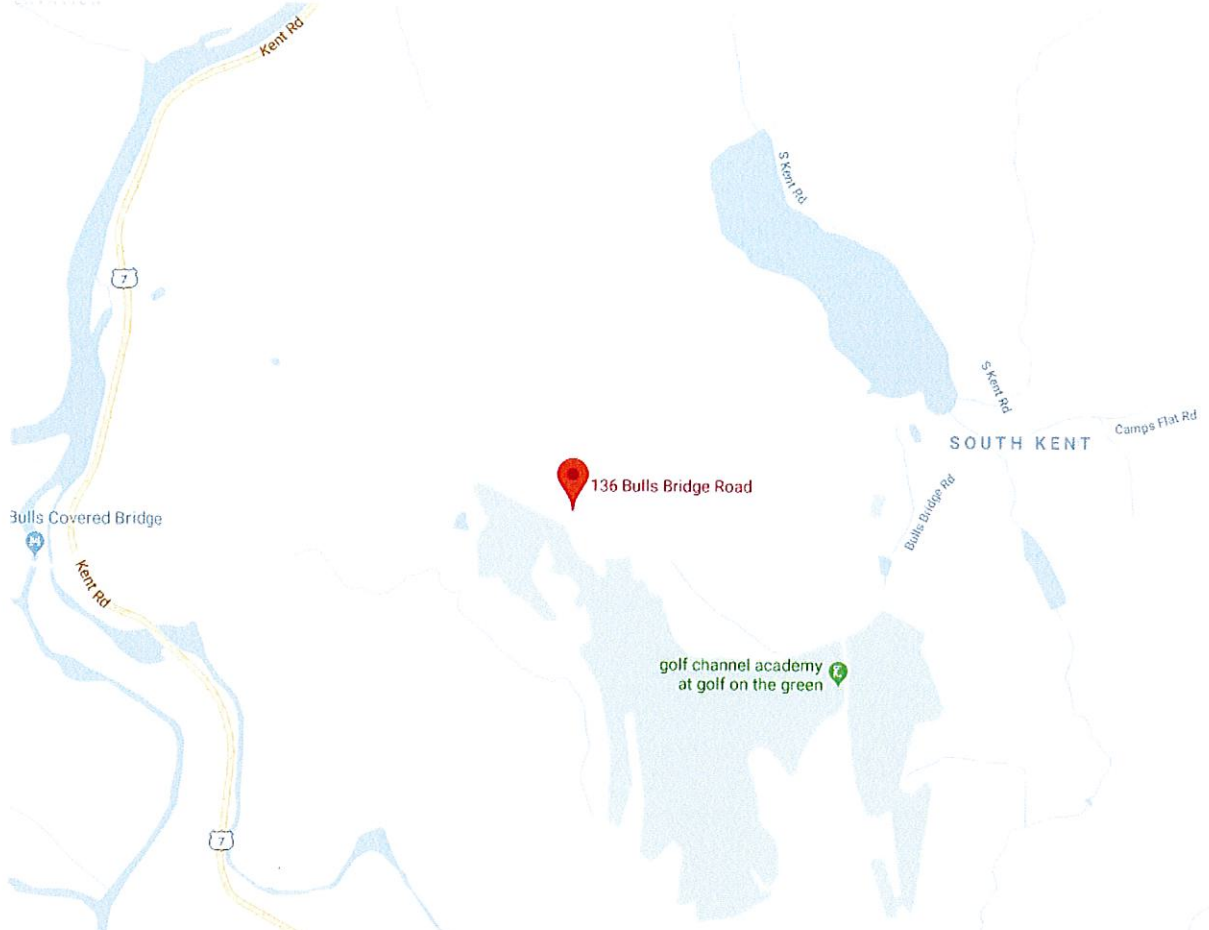
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Barbadora, Jeff

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Delivered to 41 KENT GREEN BLVD, KENT, CT 06757
Received by J.SPECK

OBTAIN PROOF OF DELIVERY

TRACKING NUMBER [777001293282](#)

FROM Jeff Barbadora
1800 W. Park Drive
WESTBOROUGH, MA, US, 01581

TO Kent Town Hall
Jean C. Speck, First Selectman
41 Kent Green Blvd
KENT, CT, US, 06757

REFERENCE 799001.7680

SHIPPER REFERENCE 799001.7680

SHIP DATE Tue 5/31/2022 05:13 PM

DELIVERED TO Receptionist/Front Desk

PACKAGING TYPE FedEx Envelope

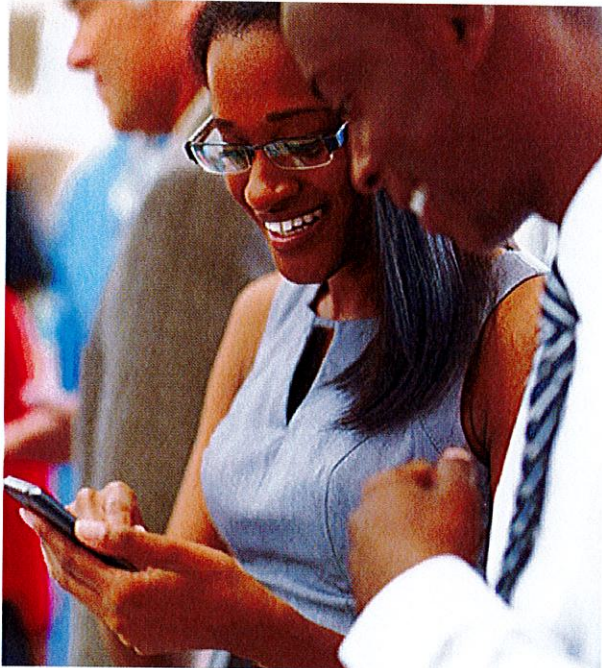
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DESTINATION KENT, CT, US, 06757

NUMBER OF PIECES 1

TOTAL SHIPMENT WEIGHT 0.50 LB

SERVICE TYPE FedEx Priority Overnight



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Delivered to 41 KENT GREEN BLVD, KENT, CT 06757
Received by D.HAYES

OBTAIN PROOF OF DELIVERY

TRACKING NUMBER [777001317835](#)

FROM Jeff Barbadora
1800 W. Park Drive
WESTBOROUGH, MA, US, 01581

TO Kent Town Hall
Donna Hayes, Land Use Administrator
41 Kent Green Blvd
KENT, CT, US, 06757

REFERENCE 799001.7680

SHIPPER REFERENCE 799001.7680

SHIP DATE Tue 5/31/2022 05:13 PM

DELIVERED TO Receptionist/Front Desk

PACKAGING TYPE FedEx Envelope

ORIGIN WESTBOROUGH, MA, US, 01581

DESTINATION KENT, CT, US, 06757

SPECIAL HANDLING Deliver Weekday

NUMBER OF PIECES 1

TOTAL SHIPMENT WEIGHT 1.00 LB

SERVICE TYPE FedEx Priority Overnight

Barbadora, Jeff

From: TrackingUpdates@fedex.com
Sent: Wednesday, June 1, 2022 11:00 AM
To: Barbadora, Jeff
Subject: FedEx Shipment 777001370744: Your package has been delivered

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Hi. Your package was
delivered Wed, 06/01/2022 at
10:58am.



Delivered to 40 BULLS BRIDGE RD, SOUTH KENT, CT 06785

OBTAIN PROOF OF DELIVERY

TRACKING NUMBER [777001370744](#)

| | |
|------------------------------|--|
| FROM | Jeff Barbadora 1800 W. Park Drive WESTBOROUGH, MA, US, 01581 |
| TO | South Kent School Property Owner 40 Bulls Bridge Road SOUTH KENT, CT, US, 06785 |
| REFERENCE | 799001.7680 |
| SHIPPER REFERENCE | 799001.7680 |
| SHIP DATE | Tue 5/31/2022 05:13 PM |
| DELIVERED TO | Residence |
| PACKAGING TYPE | FedEx Pak |
| ORIGIN | WESTBOROUGH, MA, US, 01581 |
| DESTINATION | SOUTH KENT, CT, US, 06785 |
| SPECIAL HANDLING | Deliver Weekday |
| NUMBER OF PIECES | 1 |
| TOTAL SHIPMENT WEIGHT | 1.00 LB |
| SERVICE TYPE | FedEx Priority Overnight |

Date: **April 15, 2022**



Black & Veatch Corp.
11401 Lamar Avenue
Overland Park, KS 66211
(913) 458-6909

Subject: **Structural Analysis Report**

Carrier Designation: **T-Mobile Co-Locate**
Site Number: CTNH541A
Site Name: CTNH541A

Crown Castle Designation: **BU Number:** 841293
Site Name: KENT-BULLS BRIDGE ROAD
JDE Job Number: 707866
Work Order Number: 2100730
Order Number: 607122 Rev. 0

Engineering Firm Designation: **Black & Veatch Corp. Project Number:** 406642

Site Data: **136 Bulls Bridge Road, South Kent, Litchfield County, CT**
Latitude 41° 40' 53.85", Longitude -73° 29' 11.8"
179.813 Foot - Monopole Tower

Black & Veatch Corp. is pleased to submit this “**Structural Analysis Report**” to determine the structural integrity of the above-mentioned tower.

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

LC7: Proposed Equipment Configuration

Sufficient Capacity - 93.5%

This analysis utilizes an ultimate 3-second gust wind speed of 114 mph as required by the 2018 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Structural analysis prepared by: Sirada Jaritreab

Respectfully submitted by:

Ping Jiang, P.E.
Professional Engineer



Apr 16, 2022

Digitally signed by Ping Jiang
Date: 2022.04.16
09:13:07-05'00'

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1) INTRODUCTION

This tower is a 179.813 ft Monopole tower designed by Engineered Endeavors, Inc.

The tower has been modified per reinforcement drawings prepared by GPD Group, in December of 2012. Reinforcement consists of installing of additional anchor rods. Refer to Post Modification Observation by GPD Group, in August of 2013. This modification has been considered effective in this analysis.

2) ANALYSIS CRITERIA

| | |
|-----------------------------|---|
| TIA-222 Revision: | TIA-222-H |
| Risk Category: | II |
| Wind Speed: | 114 mph |
| Exposure Category: | C |
| Topographic Factor: | 1 |
| Ice Thickness: | 1.000 in |
| Wind Speed with Ice: | 40 mph |
| Seismic Ss: | 0.189 |
| Seismic S1: | 0.054 |
| Service Wind Speed: | 60 mph |
| Seismic Loading: | Does not control per engineering judgment |

Table 1 - Proposed Equipment Configuration

| Mounting Level (ft) | Center Line Elevation (ft) | Number of Antennas | Antenna Manufacturer | Antenna Model | Number of Feed Lines | Feed Line Size (in) |
|---------------------|----------------------------|--------------------|-------------------------|--|----------------------|---------------------|
| 170.0 | 170.0 | 1 | cci tower mounts (v2.1) | Platform Mount [LP 303-1_HR-1] | 4 | 1-5/8 |
| | | 1 | ericsson | RADIO 2217 B2 | | |
| | | 4 | ericsson | RRUS 11 B2 | | |
| | | 3 | ericsson | RRUS 11 B4 | | |
| | | 4 | ericsson | Radio 4480_TMOV2 | | |
| | | 4 | rfs celwave | APX16DWV-16DWV-S-E-A20 w/ Mount Pipe | | |
| | | 4 | rfs celwave | APXVAALL24_43-U-NA20_TMO w/ Mount Pipe | | |

Table 2 - Other Considered Equipment

| Mounting Level (ft) | Center Line Elevation (ft) | Number of Antennas | Antenna Manufacturer | Antenna Model | Number of Feed Lines | Feed Line Size (in) | | |
|---------------------|----------------------------|--------------------|------------------------|---------------------------|----------------------|---------------------|---|---------|
| 180.0 | 185.0 | 3 | decibel | ASP-952 | 15 | 1-5/8 | | |
| | | 2 | raycap | DC6-48-60-0-8C-EV | | | | |
| | | 1 | raycap | DC6-48-60-18-8F | | | | |
| | 183.0 | 2 | cci antennas | DMP65R-BU4D w/ Mount Pipe | | | 2 | 3/8 |
| | | 1 | ericsson | RRUS 4449 B5/B12 | | | 2 | 3/4 |
| | | 1 | ericsson | RRUS 4478 B14 | | | 4 | 7/8 |
| | | 1 | ericsson | RRUS 8843 B2/B66A | | | 1 | conduit |
| | | 3 | powerwave technologies | 7770.00 w/ Mount Pipe | | | | |
| | | 6 | powerwave technologies | LGP21401 | | | | |

| Mounting Level (ft) | Center Line Elevation (ft) | Number of Antennas | Antenna Manufacturer | Antenna Model | Number of Feed Lines | Feed Line Size (in) |
|---------------------|----------------------------|-------------------------|-------------------------------|----------------------------------|----------------------|---------------------|
| | 182.0 | 1 | cci tower mounts (v2.1) | Miscellaneous [10' NA 507-1] | | |
| | 181.0 | 4 | cci antennas | DMP65R-BU6D w/ Mount Pipe | | |
| | | 2 | ericsson | RRUS 4449 B5/B12 | | |
| | | 2 | ericsson | RRUS 4478 B14 | | |
| | 2 | ericsson | RRUS 8843 B2/B66A | | | |
| 180.0 | 1 | cci tower mounts (v2.1) | Platform Mount [10' LP 601-1] | | | |
| 160.0 | 160.0 | 1 | cci tower mounts (v2.1) | Platform Mount [10' LP 601-1] | 8 | 1-5/8 |
| | | 3 | antel | LPA-80080-6CF-EDIN w/ Mount Pipe | | |
| | | 6 | jma wireless | MX06FRO660-03 w/ Mount Pipe | | |
| | | 1 | raycap | RRFDC-3315-PF-48 | | |
| | | 1 | rfs celwave | DB-T1-6Z-8AB-0Z | | |
| | | 3 | samsung telecommunications | MT6407-77A w/ Mount Pipe | | |
| | | 3 | samsung telecommunications | RFV01U-D1A | | |
| 3 | samsung telecommunications | RFV01U-D2A | | | | |
| 134.0 | 144.0 | 2 | sinclair | SC442D-HF2LDF | 6 2 | 1-5/8 1/2 |
| | 141.0 | 1 | bird technologies group | 432E-83I-01-T | | |
| | | 1 | sinclair | SC479-HF1LDF | | |
| | 139.0 | 2 | decibel | DB809DK-Y | | |
| | 134.0 | 1 | amphenol | WPA-700102-4CF-EDIN-9 | | |
| | | 1 | cci tower mounts (v2.1) | T-Arm Mount [TA 702-3] | | |
| | | 1 | tx rx systems | 422-86A-99575-18BW | | |
| 124.0 | 124.0 | 3 | alcatel lucent | 800MHZ RRH | 4 | 1-1/4 |
| | | 3 | alcatel lucent | TD-RRH8X20-25 | | |
| | | 1 | cci tower mounts (v2.1) | Platform Mount [LP 601-1] | | |
| | | 3 | rfs celwave | APXVSPP18-C-A20 w/ Mount Pipe | | |
| | | 3 | rfs celwave | APXVTM14-ALU-I20 w/ Mount Pipe | | |
| 120.0 | 120.0 | 1 | cci tower mounts (v2.1) | Platform Mount [LP 601-1] | 1 | 7/8 |
| | | 1 | eri | 100-1 | | |
| 63.0 | 63.0 | 1 | cci tower mounts (v2.1) | Side Arm Mount [SO 701-1] | 1 | 1/2 |
| | | 1 | gps | GPS_A | | |

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

| Document | Reference | Source |
|--|-----------|----------|
| 4-GEOTECHNICAL REPORTS | 4456627 | CCISITES |
| 4-POST-MODIFICATION INSPECTION | 4456621 | CCISITES |
| 4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS | 4797649 | CCISITES |
| 4-TOWER MANUFACTURER DRAWINGS | 4456613 | CCISITES |
| 4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA | 4456597 | CCISITES |

3.1) Analysis Method

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

3.2) Assumptions

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

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

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary) (Monopole Tower)

| Section No. | Elevation (ft) | Component Type | Size | Critical Element | P (K) | SF*P _{allow} (K) | % Capacity | Pass / Fail |
|-------------|-------------------|----------------|--------------------------|------------------|--------|---------------------------|------------|-------------|
| L1 | 179.813 - 132.966 | Pole | TP25.5375x15x0.25 | 1 | -12.05 | 1192.04 | 92.9 | Pass |
| L2 | 132.966 - 87.3645 | Pole | TP35.1887x24.2069x0.375 | 2 | -26.99 | 2465.48 | 91.8 | Pass |
| L3 | 87.3645 - 42.7915 | Pole | TP44.3577x33.3474x0.4375 | 3 | -41.64 | 3631.49 | 87.2 | Pass |
| L4 | 42.7915 - 0 | Pole | TP53x42.1375x0.5 | 4 | -45.34 | 4189.94 | 79.2 | Pass |
| | | | | | | | Summary | |
| | | | | | | Pole (L1) | 92.9 | Pass |
| | | | | | | Rating = | 92.9 | Pass |

Table 5 - Tower Component Stresses vs. Capacity (Monopole Tower) - LC7

| Notes | Component | Elevation (ft) | % Capacity | Pass / Fail |
|-------|-------------------------------------|----------------|------------|-------------|
| 1 | Anchor Rods (Original) | 0 | 67.5 | Pass |
| 1,2 | Anchor Rods (Existing Modification) | | 63.0 | Pass |
| 1 | Base Plate | | 79.0 | Pass |
| 1 | Base Foundation (Structure) | 0 | 89.0 | Pass |
| | Base Foundation (Soil Interaction) | | 93.5 | Pass |

| | |
|---|--------------|
| Structure Rating (max from all components) = | 93.5% |
|---|--------------|

Notes:

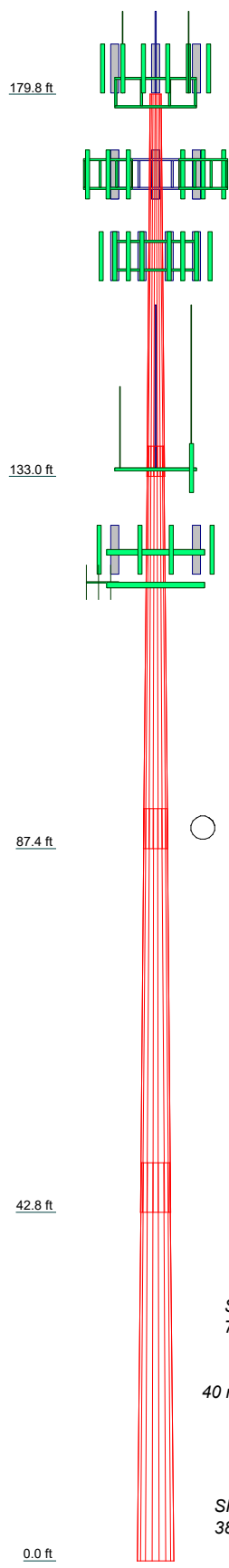
- 1) See additional documentation in "Appendix C – Additional Calculations" for calculations supporting the % capacity. Rating per TIA-222-H Section 15.5.
- 2) The anchor rod brackets were analyzed previously and found not govern the design. The anchor rods will control the design.

4.1) Recommendations

The tower and its foundation have sufficient capacity to carry the proposed load configuration. No modifications are required at this time.

APPENDIX A
TNXTOWER OUTPUT

| | | | | | |
|--------------------|---------|---------|---------|---------|------|
| Section | 1 | 2 | 3 | 4 | |
| Length (ft) | 46.85 | 49.29 | 49.47 | 48.84 | |
| Number of Sides | 18 | 18 | 18 | 18 | |
| Thickness (in) | 0.2500 | 0.3750 | 0.4375 | 0.5000 | |
| Socket Length (ft) | 3.69 | 4.90 | 6.04 | 42.1375 | |
| Top Dia (in) | 15.0000 | 24.2069 | 33.3474 | 42.1375 | |
| Bot Dia (in) | 25.5375 | 35.1887 | 44.3577 | 53.0000 | |
| Grade | | A572-65 | | | |
| Weight (K) | 2.5 | 5.9 | 9.0 | 12.4 | 29.8 |



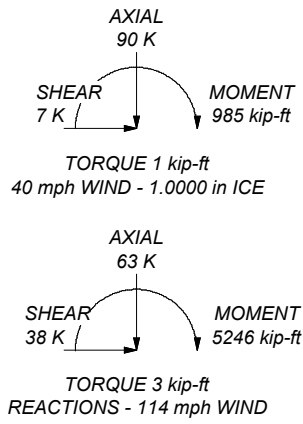
MATERIAL STRENGTH

| GRADE | Fy | Fu | GRADE | Fy | Fu |
|---------|--------|--------|-------|----|----|
| A572-65 | 65 ksi | 80 ksi | | | |

TOWER DESIGN NOTES

1. Tower is located in Litchfield County, Connecticut.
2. Tower designed for Exposure C to the TIA-222-H Standard.
3. Tower designed for a 114 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 40 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Risk Category II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. TOWER RATING: 92.9%

ALL REACTIONS ARE FACTORED



| | | | |
|--|--|--|--|
| <p>BLACK & VEATCH Building a world of difference.</p> | <p>Black & Veatch Corp. 11401 Lamar Avenue Overland Park, KS 66211 Phone: (913) 458-6909 FAX:</p> | | <p>Job: KENT-BULLS BRIDGE ROAD (BU# 841293)</p> |
| | <p>Project: 406642 (841293.2100730)</p> | | <p>Client: Crown Castle</p> |
| | <p>Code: TIA-222-H</p> | | <p>Drawn by: jar98096</p> |
| | <p>Path:</p> | | <p>Date: 04/15/22</p> |
| | <p>Scale: NTS</p> | | <p>App'd:</p> |
| <p>Dwg No. E-1</p> | | | |

Tower Input Data

The tower is a monopole.
 This tower is designed using the TIA-222-H standard.
 The following design criteria apply:

- Tower is located in Litchfield County, Connecticut.
- Tower base elevation above sea level: 781.00 ft.
- Basic wind speed of 114 mph.
- Risk Category II.
- Exposure Category C.
- Simplified Topographic Factor Procedure for wind speed-up calculations is used.
- Topographic Category: 1.
- Crest Height: 0.00 ft.
- Nominal ice thickness of 1.0000 in.
- Ice thickness is considered to increase with height.
- Ice density of 56 pcf.
- A wind speed of 40 mph is used in combination with ice.
- Temperature drop of 50 °F.
- Deflections calculated using a wind speed of 60 mph.
- A non-linear (P-delta) analysis was used.
- Pressures are calculated at each section.
- Stress ratio used in pole design is 1.
- Tower analysis based on target reliabilities in accordance with Annex S.
- Load Modification Factors used: $K_{es}(F_w) = 0.95$, $K_{es}(t_i) = 0.85$.
- Maximum demand-capacity ratio is: 1.05.
- Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

| | | |
|--|---|---|
| Consider Moments - Legs Consider Moments - Horizontals Consider Moments - Diagonals Use Moment Magnification ✓ Use Code Stress Ratios ✓ Use Code Safety Factors - Guys Escalate Ice Always Use Max Kz Use Special Wind Profile Include Bolts In Member Capacity Leg Bolts Are At Top Of Section Secondary Horizontal Braces Leg Use Diamond Inner Bracing (4 Sided) SR Members Have Cut Ends SR Members Are Concentric | Distribute Leg Loads As Uniform Assume Legs Pinned ✓ Assume Rigid Index Plate ✓ Use Clear Spans For Wind Area Use Clear Spans For KL/r Retension Guys To Initial Tension ✓ Bypass Mast Stability Checks ✓ Use Azimuth Dish Coefficients ✓ Project Wind Area of Appurt. Autocalc Torque Arm Areas Add IBC .6D+W Combination Sort Capacity Reports By Component Triangulate Diamond Inner Bracing Treat Feed Line Bundles As Cylinder Ignore KL/ry For 60 Deg. Angle Legs | Use ASCE 10 X-Brace Ly Rules Calculate Redundant Bracing Forces Ignore Redundant Members in FEA SR Leg Bolts Resist Compression All Leg Panels Have Same Allowable Offset Girt At Foundation ✓ Consider Feed Line Torque Include Angle Block Shear Check Use TIA-222-H Bracing Resist. Exemption Use TIA-222-H Tension Splice Exemption <div style="text-align: center; background-color: #e0e0e0; padding: 2px;">Poles</div> ✓ Include Shear-Torsion Interaction Always Use Sub-Critical Flow Use Top Mounted Sockets Pole Without Linear Attachments Pole With Shroud Or No Appurtenances Outside and Inside Corner Radii Are Known |
|--|---|---|

Tapered Pole Section Geometry

| Section | Elevation ft | Section Length ft | Splice Length ft | Number of Sides | Top Diameter in | Bottom Diameter in | Wall Thickness in | Bend Radius in | Pole Grade |
|---------|-----------------|----------------------|---------------------|-----------------|--------------------|-----------------------|----------------------|-------------------|---------------------|
| L1 | 179.81-132.97 | 46.85 | 3.69 | 18 | 15.0000 | 25.5375 | 0.2500 | 1.0000 | A572-65 (65 ksi) |
| L2 | 132.97-87.36 | 49.29 | 4.90 | 18 | 24.2069 | 35.1887 | 0.3750 | 1.5000 | A572-65 (65 ksi) |
| L3 | 87.36-42.79 | 49.47 | 6.04 | 18 | 33.3474 | 44.3577 | 0.4375 | 1.7500 | A572-65 (65 ksi) |
| L4 | 42.79-0.00 | 48.84 | | 18 | 42.1375 | 53.0000 | 0.5000 | 2.0000 | A572-65 (65 ksi) |

Tapered Pole Properties

| Section | Tip Dia. in | Area in ² | I in ⁴ | r in | C in | I/C in ³ | J in ⁴ | I/Q in ² | w in | w/t |
|---------|----------------|-------------------------|----------------------|---------|---------|------------------------|----------------------|------------------------|---------|--------|
| L1 | 15.1928 | 11.7041 | 321.7069 | 5.2363 | 7.6200 | 42.2188 | 643.8372 | 5.8532 | 2.2000 | 8.8 |
| | 25.8929 | 20.0656 | 1621.0711 | 8.9771 | 12.9731 | 124.9568 | 3244.2753 | 10.0347 | 4.0546 | 16.218 |
| L2 | 25.3578 | 28.3659 | 2035.4021 | 8.4603 | 12.2971 | 165.5190 | 4073.4825 | 14.1856 | 3.6004 | 9.601 |
| | 35.6737 | 41.4370 | 6344.9205 | 12.3589 | 17.8759 | 354.9435 | 12698.189 | 20.7224 | 5.5332 | 14.755 |
| L3 | 34.9014 | 45.6996 | 6253.2142 | 11.6830 | 16.9405 | 369.1282 | 12514.656 | 22.8541 | 5.0991 | 11.655 |
| | 44.9745 | 60.9887 | 14863.303 | 15.5917 | 22.5337 | 659.6030 | 29746.165 | 30.5001 | 7.0370 | 16.084 |
| L4 | 44.0756 | 66.0787 | 14473.315 | 14.7813 | 21.4058 | 676.1385 | 28965.675 | 33.0456 | 6.5362 | 13.072 |
| | 53.7405 | 83.3175 | 29012.976 | 18.6375 | 26.9240 | 1077.5879 | 58064.129 | 41.6667 | 8.4480 | 16.896 |

| Tower Elevation ft | Gusset Area (per face) ft ² | Gusset Thickness in | Gusset Grade | Adjust. Factor A _r | Adjust. Factor A _r | Weight Mult. | Double Angle Stitch Bolt Spacing Diagonals in | Double Angle Stitch Bolt Spacing Horizontal in | Double Angle Stitch Bolt Spacing Redundants in |
|-----------------------|--|------------------------|--------------|----------------------------------|----------------------------------|--------------|---|--|--|
| L1 179.81-132.97 | | | | 1 | 1 | 1 | | | |
| L2 132.97-87.36 | | | | 1 | 1 | 1 | | | |
| L3 87.36-42.79 | | | | 1 | 1 | 1 | | | |
| L4 42.79-0.00 | | | | 1 | 1 | 1 | | | |

Feed Line/Linear Appurtenances - Entered As Round Or Flat

| Description | Sector | Exclude From Torque Calculation | Component Type | Placement ft | Total Number | Number Per Row | Start/End Position | Width or Diameter r in | Perimeter r in | Weight plf |
|--|--------|---------------------------------|-------------------|-----------------|--------------|----------------|--------------------|------------------------------|----------------------|---------------|
| Safety Line 3/8 | C | No | Surface Ar (CaAa) | 179.81 - 10.00 | 1 | 1 | -0.090 -0.080 | 0.3750 | | 0.22 |
| LDF7-50A(1-5/8) | B | No | Surface Ar (CaAa) | 179.81 - 160.00 | 3 | 3 | -0.400 -0.070 | 1.9800 | | 0.82 |
| *** | | | | | | | | | | |
| (1P)HB158-21U6S24-xxM_TMO(1-5/8)+(3P)HCS 6X12 4WG(1-5/8) | A | No | Surface Ar (CaAa) | 170.00 - 5.00 | 4 | 4 | 0.130 0.350 | 1.9960 | | 2.50 |
| (1E)HB158-1-08U8-S8F18(1- | B | No | Surface Ar (CaAa) | 160.00 - 0.00 | 7 | 5 | -0.400 -0.140 | 1.9800 | | 1.70 |

| Description | Sector | Exclude From Torque Calculation | Component Type | Placement ft | Total Number | Number Per Row | Start/End Position | Width or Diameter in | Perimeter in | Weight plf |
|---|--------|---------------------------------|-------------------|--------------|--------------|----------------|--------------------|----------------------|--------------|------------|
| 5/8)+(1E)HB158-1-08U8-S8J(1-5/8)+(5E)LDF7-50A(1-5/8) *** | | | | | | | | | | |
| LDF4-50A(1/2) *** | C | No | Surface Ar (CaAa) | 63.00 - 0.00 | 1 | 1 | -0.360 -0.350 | 0.6250 | | 0.15 |

Feed Line/Linear Appurtenances - Entered As Area

| Description | Face or Leg | Allow Shield | Exclude From Torque Calculation | Component Type | Placement ft | Total Number | | C _A A _A ft ² /ft | Weight plf |
|---------------------------|-------------|--------------|---------------------------------|----------------|---------------|--------------|------------------------------|---|----------------------|
| *** | | | | | | | | | |
| LDF7-50A(1-5/8) | C | No | No | Inside Pole | 179.81 - 0.00 | 12 | No Ice 1/2" Ice 1" Ice | 0.00 0.00 0.00 | 0.82 0.82 0.82 |
| WR-VG86ST-BRD(3/4) | C | No | No | Inside Pole | 179.81 - 0.00 | 2 | No Ice 1/2" Ice 1" Ice | 0.00 0.00 0.00 | 0.58 0.58 0.58 |
| FB-L98B-034-XXX(3/8) | C | No | No | Inside Pole | 179.81 - 0.00 | 2 | No Ice 1/2" Ice 1" Ice | 0.00 0.00 0.00 | 0.06 0.06 0.06 |
| 2" innerduct conduit | C | No | No | Inside Pole | 179.81 - 0.00 | 1 | No Ice 1/2" Ice 1" Ice | 0.00 0.00 0.00 | 0.20 0.20 0.20 |
| WR-VG66ST-BRD(7/8) | C | No | No | Inside Pole | 179.81 - 0.00 | 4 | No Ice 1/2" Ice 1" Ice | 0.00 0.00 0.00 | 0.91 0.91 0.91 |
| *** | | | | | | | | | |
| LDF7-50A(1-5/8) | C | No | No | Inside Pole | 160.00 - 0.00 | 4 | No Ice 1/2" Ice 1" Ice | 0.00 0.00 0.00 | 0.82 0.82 0.82 |
| *** | | | | | | | | | |
| AVA7-50(1-5/8) | C | No | No | Inside Pole | 134.00 - 0.00 | 2 | No Ice 1/2" Ice 1" Ice | 0.00 0.00 0.00 | 0.70 0.70 0.70 |
| LDF4-50A(1/2) | C | No | No | Inside Pole | 134.00 - 0.00 | 2 | No Ice 1/2" Ice 1" Ice | 0.00 0.00 0.00 | 0.15 0.15 0.15 |
| LDF7-50A(1-5/8) | C | No | No | Inside Pole | 134.00 - 0.00 | 4 | No Ice 1/2" Ice 1" Ice | 0.00 0.00 0.00 | 0.82 0.82 0.82 |
| *** | | | | | | | | | |
| HB114-1-08U4-M5J(1-1/4) | C | No | No | Inside Pole | 124.00 - 0.00 | 3 | No Ice 1/2" Ice 1" Ice | 0.00 0.00 0.00 | 1.08 1.08 1.08 |
| HB114-21U3M12-XXXF(1-1/4) | C | No | No | Inside Pole | 124.00 - 0.00 | 1 | No Ice 1/2" Ice 1" Ice | 0.00 0.00 0.00 | 1.22 1.22 1.22 |
| *** | | | | | | | | | |
| LDF5-50A(7/8) | C | No | No | Inside Pole | 120.00 - 0.00 | 1 | No Ice 1/2" Ice 1" Ice | 0.00 0.00 0.00 | 0.33 0.33 0.33 |
| *** | | | | | | | | | |

Feed Line/Linear Appurtenances Section Areas

| Tower Section | Tower Elevation ft | Face | A _R ft ² | A _F ft ² | C _A A _A In Face ft ² | C _A A _A Out Face ft ² | Weight K |
|---------------|--------------------|------|-----------------------------------|-----------------------------------|---|--|-------------|
| L1 | 179.81-132.97 | A | 0.000 | 0.000 | 29.568 | 0.000 | 0.37 |
| | | B | 0.000 | 0.000 | 38.532 | 0.000 | 0.37 |
| | | C | 0.000 | 0.000 | 1.757 | 0.000 | 0.81 |
| L2 | 132.97-87.36 | A | 0.000 | 0.000 | 36.408 | 0.000 | 0.46 |
| | | B | 0.000 | 0.000 | 45.146 | 0.000 | 0.54 |
| | | C | 0.000 | 0.000 | 1.710 | 0.000 | 1.24 |
| L3 | 87.36-42.79 | A | 0.000 | 0.000 | 35.587 | 0.000 | 0.45 |
| | | B | 0.000 | 0.000 | 44.127 | 0.000 | 0.53 |
| | | C | 0.000 | 0.000 | 2.935 | 0.000 | 1.26 |
| L4 | 42.79-0.00 | A | 0.000 | 0.000 | 30.173 | 0.000 | 0.38 |
| | | B | 0.000 | 0.000 | 42.364 | 0.000 | 0.51 |
| | | C | 0.000 | 0.000 | 3.904 | 0.000 | 1.21 |

Feed Line/Linear Appurtenances Section Areas - With Ice

| Tower Section | Tower Elevation ft | Face or Leg | Ice Thickness in | A _R ft ² | A _F ft ² | C _A A _A In Face ft ² | C _A A _A Out Face ft ² | Weight K |
|---------------|--------------------|-------------|------------------|-----------------------------------|-----------------------------------|---|--|-------------|
| L1 | 179.81-132.97 | A | 0.992 | 0.000 | 0.000 | 46.143 | 0.000 | 0.71 |
| | | B | | 0.000 | 0.000 | 59.782 | 0.000 | 0.86 |
| | | C | | 0.000 | 0.000 | 11.050 | 0.000 | 0.88 |
| L2 | 132.97-87.36 | A | 0.958 | 0.000 | 0.000 | 56.819 | 0.000 | 0.88 |
| | | B | | 0.000 | 0.000 | 67.740 | 0.000 | 1.13 |
| | | C | | 0.000 | 0.000 | 10.757 | 0.000 | 1.32 |
| L3 | 87.36-42.79 | A | 0.909 | 0.000 | 0.000 | 55.159 | 0.000 | 0.84 |
| | | B | | 0.000 | 0.000 | 65.834 | 0.000 | 1.09 |
| | | C | | 0.000 | 0.000 | 15.347 | 0.000 | 1.37 |
| L4 | 42.79-0.00 | A | 0.814 | 0.000 | 0.000 | 46.304 | 0.000 | 0.70 |
| | | B | | 0.000 | 0.000 | 62.679 | 0.000 | 1.02 |
| | | C | | 0.000 | 0.000 | 17.645 | 0.000 | 1.33 |

Feed Line Center of Pressure

| Section | Elevation ft | CP _X in | CP _Z in | CP _X Ice in | CP _Z Ice in |
|---------|---------------|-----------------------|-----------------------|------------------------------|------------------------------|
| L1 | 179.81-132.97 | 0.3725 | -5.3542 | 0.3269 | -3.7097 |
| L2 | 132.97-87.36 | 0.3463 | -6.8830 | 0.2775 | -4.9969 |
| L3 | 87.36-42.79 | 0.4494 | -7.4640 | 0.4920 | -5.3576 |
| L4 | 42.79-0.00 | 0.8511 | -7.5784 | 0.9580 | -5.4497 |

Note: For pole sections, center of pressure calculations do not consider feed line shielding.

Shielding Factor Ka

| Tower Section | Feed Line Record No. | Description | Feed Line Segment Elev. | K _a No Ice | K _a Ice |
|---------------|----------------------|--|-------------------------|--------------------------|-----------------------|
| L1 | 1 | Safety Line 3/8 | 132.97 - 179.81 | 1.0000 | 1.0000 |
| L1 | 7 | LDF7-50A(1-5/8) | 160.00 - 179.81 | 1.0000 | 1.0000 |
| L1 | 10 | (1P)HB158-21U6S24-xxM_TMO(1-5/8)+(3P)HCS 6X12 4WG(1-5/8) | 132.97 - 170.00 | 1.0000 | 1.0000 |

| Tower Section | Feed Line Record No. | Description | Feed Line Segment Elev. | K _a No Ice | K _a Ice |
|---------------|----------------------|---|-------------------------|-----------------------|--------------------|
| L1 | 18 | (1E)HB158-1-08U8-S8F18(1-5/8)+(1E)HB158-1-08U8-S8J(1-5/8)+(5E)LDF7-50A(1-5/8) | 132.97 - 160.00 | 1.0000 | 1.0000 |
| L2 | 1 | Safety Line 3/8 | 87.36 - 132.97 | 1.0000 | 1.0000 |
| L2 | 10 | (1P)HB158-21U6S24-xxM_TMO(1-5/8)+(3P)HCS 6X12 4WG(1-5/8) | 87.36 - 132.97 | 1.0000 | 1.0000 |
| L2 | 18 | (1E)HB158-1-08U8-S8F18(1-5/8)+(1E)HB158-1-08U8-S8J(1-5/8)+(5E)LDF7-50A(1-5/8) | 87.36 - 132.97 | 1.0000 | 1.0000 |
| L3 | 1 | Safety Line 3/8 | 42.79 - 87.36 | 1.0000 | 1.0000 |
| L3 | 10 | (1P)HB158-21U6S24-xxM_TMO(1-5/8)+(3P)HCS 6X12 4WG(1-5/8) | 42.79 - 87.36 | 1.0000 | 1.0000 |
| L3 | 18 | (1E)HB158-1-08U8-S8F18(1-5/8)+(1E)HB158-1-08U8-S8J(1-5/8)+(5E)LDF7-50A(1-5/8) | 42.79 - 87.36 | 1.0000 | 1.0000 |
| L3 | 29 | LDF4-50A(1/2) | 42.79 - 63.00 | 1.0000 | 1.0000 |
| L4 | 1 | Safety Line 3/8 | 10.00 - 42.79 | 1.0000 | 1.0000 |
| L4 | 10 | (1P)HB158-21U6S24-xxM_TMO(1-5/8)+(3P)HCS 6X12 4WG(1-5/8) | 5.00 - 42.79 | 1.0000 | 1.0000 |
| L4 | 18 | (1E)HB158-1-08U8-S8F18(1-5/8)+(1E)HB158-1-08U8-S8J(1-5/8)+(5E)LDF7-50A(1-5/8) | 0.00 - 42.79 | 1.0000 | 1.0000 |
| L4 | 29 | LDF4-50A(1/2) | 0.00 - 42.79 | 1.0000 | 1.0000 |

Discrete Tower Loads

| Description | Face or Leg | Offset Type | Offsets: Horz Lateral Vert ft ft ft | Azimuth Adjustment t ° | Placement ft | C _{AA} Front ft ² | C _{AA} Side ft ² | Weight K |
|-------------------------------|-------------|-------------|--|------------------------------|-----------------|--|---|-------------|
| *Level 180* | | | | | | | | |
| Platform Mount [10' LP 601-1] | C | None | | 0.0000 | 180.00 | No Ice | 23.75 | 0.94 |
| | | | | | | 1/2" Ice | 26.41 | 1.40 |
| | | | | | | 1" Ice | 29.06 | 1.90 |
| Miscellaneous [10' NA 507-1] | C | From Leg | 0.00 0.00 2.00 | 0.0000 | 180.00 | No Ice | 3.80 | 0.20 |
| | | | | | | 1/2" Ice | 5.33 | 0.26 |
| | | | | | | Ice | 6.82 | 0.33 |
| | | | | | | 1" Ice | | |
| Transition Ladder | A | From Leg | 2.00 0.00 -4.00 | 0.0000 | 180.00 | No Ice | 6.00 | 0.16 |
| | | | | | | 1/2" Ice | 8.00 | 0.24 |
| | | | | | | Ice | 10.00 | 0.32 |
| | | | | | | 1" Ice | | |
| 8'6"x2.5" Mount Pipe | A | From Leg | 4.00 0.00 0.00 | 0.0000 | 180.00 | No Ice | 2.44 | 0.05 |
| | | | | | | 1/2" Ice | 3.32 | 0.07 |
| | | | | | | Ice | 4.20 | 0.09 |
| | | | | | | 1" Ice | | |
| 8'6"x2.5" Mount Pipe | B | From Leg | 4.00 | 0.0000 | 180.00 | No Ice | 2.44 | 0.05 |

| Description | Face or Leg | Offset Type | Offsets: | | Azimuth Adjustment | Placement | C _A A _A Front | C _A A _A Side | Weight |
|-------------------------------|-------------|-------------|----------|---------|--------------------|-----------|-------------------------------------|------------------------------------|--------|
| | | | Horz | Lateral | | | | | |
| | | | ft | ft | ° | ft | ft ² | ft ² | K |
| | | | 0.00 | | | 1/2" | 3.32 | 3.32 | 0.07 |
| | | | 0.00 | | | Ice | 4.20 | 4.20 | 0.09 |
| | | | | | | 1" Ice | | | |
| 8'6"x2.5" Mount Pipe | C | From Leg | 4.00 | 0.0000 | 180.00 | No Ice | 2.44 | 2.44 | 0.05 |
| | | | 0.00 | | | 1/2" | 3.32 | 3.32 | 0.07 |
| | | | 0.00 | | | Ice | 4.20 | 4.20 | 0.09 |
| | | | | | | 1" Ice | | | |
| 2'x2" Mount Pipe | A | From Leg | 3.00 | 0.0000 | 180.00 | No Ice | 0.34 | 0.34 | 0.01 |
| | | | 0.00 | | | 1/2" | 0.47 | 0.47 | 0.01 |
| | | | 2.00 | | | Ice | 0.61 | 0.61 | 0.02 |
| | | | | | | 1" Ice | | | |
| 2'x2" Mount Pipe | B | From Leg | 3.00 | 0.0000 | 180.00 | No Ice | 0.34 | 0.34 | 0.01 |
| | | | 0.00 | | | 1/2" | 0.47 | 0.47 | 0.01 |
| | | | 2.00 | | | Ice | 0.61 | 0.61 | 0.02 |
| | | | | | | 1" Ice | | | |
| 2'x2" Mount Pipe | B | From Leg | 3.00 | 0.0000 | 180.00 | No Ice | 0.34 | 0.34 | 0.01 |
| | | | 0.00 | | | 1/2" | 0.47 | 0.47 | 0.01 |
| | | | 2.00 | | | Ice | 0.61 | 0.61 | 0.02 |
| | | | | | | 1" Ice | | | |
| 2'x2" Mount Pipe | C | From Leg | 4.00 | 0.0000 | 180.00 | No Ice | 0.34 | 0.34 | 0.01 |
| | | | 0.00 | | | 1/2" | 0.47 | 0.47 | 0.01 |
| | | | 2.00 | | | Ice | 0.61 | 0.61 | 0.02 |
| | | | | | | 1" Ice | | | |
| (2) DMP65R-BU6D w/ Mount Pipe | A | From Leg | 4.00 | 0.0000 | 180.00 | No Ice | 11.96 | 5.97 | 0.11 |
| | | | 0.00 | | | 1/2" | 12.70 | 6.63 | 0.20 |
| | | | 1.00 | | | Ice | 13.46 | 7.30 | 0.30 |
| | | | | | | 1" Ice | | | |
| (2) DMP65R-BU6D w/ Mount Pipe | B | From Leg | 4.00 | 0.0000 | 180.00 | No Ice | 11.96 | 5.97 | 0.11 |
| | | | 0.00 | | | 1/2" | 12.70 | 6.63 | 0.20 |
| | | | 1.00 | | | Ice | 13.46 | 7.30 | 0.30 |
| | | | | | | 1" Ice | | | |
| (2) DMP65R-BU4D w/ Mount Pipe | C | From Leg | 4.00 | 0.0000 | 180.00 | No Ice | 7.53 | 3.79 | 0.09 |
| | | | 0.00 | | | 1/2" | 8.04 | 4.23 | 0.16 |
| | | | 3.00 | | | Ice | 8.57 | 4.68 | 0.22 |
| | | | | | | 1" Ice | | | |
| 7770.00 w/ Mount Pipe | A | From Leg | 4.00 | 0.0000 | 180.00 | No Ice | 3.39 | 2.32 | 0.06 |
| | | | 0.00 | | | 1/2" | 3.75 | 2.66 | 0.10 |
| | | | 3.00 | | | Ice | 4.12 | 3.02 | 0.15 |
| | | | | | | 1" Ice | | | |
| 7770.00 w/ Mount Pipe | B | From Leg | 4.00 | 0.0000 | 180.00 | No Ice | 3.39 | 2.32 | 0.06 |
| | | | 0.00 | | | 1/2" | 3.75 | 2.66 | 0.10 |
| | | | 3.00 | | | Ice | 4.12 | 3.02 | 0.15 |
| | | | | | | 1" Ice | | | |
| 7770.00 w/ Mount Pipe | C | From Leg | 4.00 | 0.0000 | 180.00 | No Ice | 3.39 | 2.32 | 0.06 |
| | | | 0.00 | | | 1/2" | 3.75 | 2.66 | 0.10 |
| | | | 3.00 | | | Ice | 4.12 | 3.02 | 0.15 |
| | | | | | | 1" Ice | | | |
| ASP-952 | A | From Leg | 4.00 | 0.0000 | 180.00 | No Ice | 3.02 | 3.02 | 0.02 |
| | | | 0.00 | | | 1/2" | 4.16 | 4.16 | 0.04 |
| | | | 5.00 | | | Ice | 5.30 | 5.30 | 0.07 |
| | | | | | | 1" Ice | | | |
| ASP-952 | B | From Leg | 4.00 | 0.0000 | 180.00 | No Ice | 3.02 | 3.02 | 0.02 |
| | | | 0.00 | | | 1/2" | 4.16 | 4.16 | 0.04 |
| | | | 5.00 | | | Ice | 5.30 | 5.30 | 0.07 |
| | | | | | | 1" Ice | | | |
| ASP-952 | C | From Leg | 4.00 | 0.0000 | 180.00 | No Ice | 3.02 | 3.02 | 0.02 |
| | | | 0.00 | | | 1/2" | 4.16 | 4.16 | 0.04 |
| | | | 5.00 | | | Ice | 5.30 | 5.30 | 0.07 |
| | | | | | | 1" Ice | | | |
| RRUS 4478 B14 | A | From Leg | 4.00 | 0.0000 | 180.00 | No Ice | 1.84 | 1.06 | 0.06 |
| | | | 0.00 | | | 1/2" | 2.01 | 1.20 | 0.08 |
| | | | 1.00 | | | Ice | 2.19 | 1.34 | 0.09 |
| | | | | | | 1" Ice | | | |
| RRUS 4478 B14 | B | From Leg | 4.00 | 0.0000 | 180.00 | No Ice | 1.84 | 1.06 | 0.06 |
| | | | 0.00 | | | 1/2" | 2.01 | 1.20 | 0.08 |

| Description | Face or Leg | Offset Type | Offsets: Horz Lateral Vert ft ft ft | Azimuth Adjustment t ° | Placement ft | C _A A _A Front ft ² | C _A A _A Side ft ² | Weight K | |
|---|-------------|-------------|---|------------------------------|-----------------|---|--|-------------|------|
| | | | 1.00 | | | Ice 2.19 | 1.34 | 0.09 | |
| RRUS 4478 B14 | C | From Leg | 4.00 | 0.0000 | 180.00 | 1" Ice | 1.84 | 1.06 | 0.06 |
| | | | 0.00 | | | No Ice | 2.01 | 1.20 | 0.08 |
| | | | 3.00 | | | 1/2" | 2.19 | 1.34 | 0.09 |
| | | | | | | Ice | | | |
| RRUS 8843 B2/B66A | A | From Leg | 4.00 | 0.0000 | 180.00 | 1" Ice | 1.64 | 1.35 | 0.07 |
| | | | 0.00 | | | No Ice | 1.80 | 1.50 | 0.09 |
| | | | 1.00 | | | 1/2" | 1.97 | 1.65 | 0.11 |
| | | | | | | Ice | | | |
| RRUS 8843 B2/B66A | B | From Leg | 4.00 | 0.0000 | 180.00 | 1" Ice | 1.64 | 1.35 | 0.07 |
| | | | 0.00 | | | No Ice | 1.80 | 1.50 | 0.09 |
| | | | 1.00 | | | 1/2" | 1.97 | 1.65 | 0.11 |
| | | | | | | Ice | | | |
| RRUS 8843 B2/B66A | C | From Leg | 4.00 | 0.0000 | 180.00 | 1" Ice | 1.64 | 1.35 | 0.07 |
| | | | 0.00 | | | No Ice | 1.80 | 1.50 | 0.09 |
| | | | 3.00 | | | 1/2" | 1.97 | 1.65 | 0.11 |
| | | | | | | Ice | | | |
| RRUS 4449 B5/B12 | A | From Leg | 4.00 | 0.0000 | 180.00 | 1" Ice | 1.97 | 1.41 | 0.07 |
| | | | 0.00 | | | No Ice | 2.14 | 1.56 | 0.09 |
| | | | 1.00 | | | 1/2" | 2.33 | 1.73 | 0.11 |
| | | | | | | Ice | | | |
| RRUS 4449 B5/B12 | B | From Leg | 4.00 | 0.0000 | 180.00 | 1" Ice | 1.97 | 1.41 | 0.07 |
| | | | 0.00 | | | No Ice | 2.14 | 1.56 | 0.09 |
| | | | 1.00 | | | 1/2" | 2.33 | 1.73 | 0.11 |
| | | | | | | Ice | | | |
| RRUS 4449 B5/B12 | C | From Leg | 4.00 | 0.0000 | 180.00 | 1" Ice | 1.97 | 1.41 | 0.07 |
| | | | 0.00 | | | No Ice | 2.14 | 1.56 | 0.09 |
| | | | 3.00 | | | 1/2" | 2.33 | 1.73 | 0.11 |
| | | | | | | Ice | | | |
| (2) LGP21401 | A | From Leg | 4.00 | 0.0000 | 180.00 | 1" Ice | 1.10 | 0.35 | 0.01 |
| | | | 0.00 | | | No Ice | 1.24 | 0.44 | 0.02 |
| | | | 3.00 | | | 1/2" | 1.38 | 0.54 | 0.03 |
| | | | | | | Ice | | | |
| (2) LGP21401 | B | From Leg | 4.00 | 0.0000 | 180.00 | 1" Ice | 1.10 | 0.35 | 0.01 |
| | | | 0.00 | | | No Ice | 1.24 | 0.44 | 0.02 |
| | | | 3.00 | | | 1/2" | 1.38 | 0.54 | 0.03 |
| | | | | | | Ice | | | |
| (2) LGP21401 | C | From Leg | 4.00 | 0.0000 | 180.00 | 1" Ice | 1.10 | 0.35 | 0.01 |
| | | | 0.00 | | | No Ice | 1.24 | 0.44 | 0.02 |
| | | | 3.00 | | | 1/2" | 1.38 | 0.54 | 0.03 |
| | | | | | | Ice | | | |
| DC6-48-60-18-8F | A | From Leg | 1.00 | 0.0000 | 180.00 | 1" Ice | 0.92 | 0.92 | 0.02 |
| | | | 0.00 | | | No Ice | 1.46 | 1.46 | 0.04 |
| | | | 5.00 | | | 1/2" | 1.64 | 1.64 | 0.06 |
| | | | | | | Ice | | | |
| DC6-48-60-0-8C-EV | B | From Leg | 1.00 | 0.0000 | 180.00 | 1" Ice | 2.74 | 4.78 | 0.03 |
| | | | 0.00 | | | No Ice | 2.96 | 5.06 | 0.06 |
| | | | 5.00 | | | 1/2" | 3.20 | 5.35 | 0.10 |
| | | | | | | Ice | | | |
| DC6-48-60-0-8C-EV | C | From Leg | 1.00 | 0.0000 | 180.00 | 1" Ice | 2.74 | 4.78 | 0.03 |
| | | | 0.00 | | | No Ice | 2.96 | 5.06 | 0.06 |
| | | | 5.00 | | | 1/2" | 3.20 | 5.35 | 0.10 |
| | | | | | | Ice | | | |
| *Level 170* Platform Mount [LP 303-1_HR-1] | C | None | | 0.0000 | 170.00 | 1" Ice | 17.09 | 17.09 | 1.50 |
| | | | | | | No Ice | 21.47 | 21.47 | 1.88 |
| | | | | | | 1/2" | 25.72 | 25.72 | 2.35 |
| | | | | | | Ice | | | |
| 8'x2" Mount Pipe | A | From Leg | 3.00 | 0.0000 | 170.00 | 1" Ice | 1.90 | 1.90 | 0.03 |
| | | | 0.00 | | | No Ice | 2.73 | 2.73 | 0.04 |
| | | | 0.00 | | | 1/2" | 3.40 | 3.40 | 0.06 |
| | | | | | | Ice | | | |
| 8'x2" Mount Pipe | B | From Leg | 3.00 | 0.0000 | 170.00 | 1" Ice | 1.90 | 1.90 | 0.03 |
| | | | 0.00 | | | No Ice | 2.73 | 2.73 | 0.04 |

| Description | Face or Leg | Offset Type | Offsets: | | Azimuth Adjustment | Placement | C _{AA} Front | C _{AA} Side | Weight | |
|--|-------------|-------------|----------|---------|--------------------|-----------|-----------------------|----------------------|--------|------|
| | | | Horz | Lateral | | | | | | ft |
| | | | ft | ft | ° | ft | ft ² | ft ² | K | |
| | | | | 0.00 | | | Ice | 3.40 | 3.40 | 0.06 |
| (2) 8'x2" Mount Pipe | C | From Leg | | 3.00 | 0.0000 | 170.00 | 1" Ice | | | |
| | | | | 0.00 | | | No Ice | 1.90 | 1.90 | 0.03 |
| | | | | 0.00 | | | 1/2" | 2.73 | 2.73 | 0.04 |
| | | | | 0.00 | | | Ice | 3.40 | 3.40 | 0.06 |
| (2) APXVAALL24_43-U-NA20_TMO w/ Mount Pipe | A | From Leg | | 4.00 | 0.0000 | 170.00 | 1" Ice | | | |
| | | | | 0.00 | | | No Ice | 14.69 | 6.87 | 0.18 |
| | | | | 0.00 | | | 1/2" | 15.46 | 7.55 | 0.31 |
| | | | | 0.00 | | | Ice | 16.23 | 8.25 | 0.45 |
| APXVAALL24_43-U-NA20_TMO w/ Mount Pipe | B | From Leg | | 4.00 | 0.0000 | 170.00 | 1" Ice | | | |
| | | | | 0.00 | | | No Ice | 14.69 | 6.87 | 0.18 |
| | | | | 0.00 | | | 1/2" | 15.46 | 7.55 | 0.31 |
| | | | | 0.00 | | | Ice | 16.23 | 8.25 | 0.45 |
| APXVAALL24_43-U-NA20_TMO w/ Mount Pipe | C | From Leg | | 4.00 | 0.0000 | 170.00 | 1" Ice | | | |
| | | | | 0.00 | | | No Ice | 14.69 | 6.87 | 0.18 |
| | | | | 0.00 | | | 1/2" | 15.46 | 7.55 | 0.31 |
| | | | | 0.00 | | | Ice | 16.23 | 8.25 | 0.45 |
| APX16DWV-16DWV-S-E-A20 w/ Mount Pipe | A | From Leg | | 4.00 | 0.0000 | 170.00 | 1" Ice | | | |
| | | | | 0.00 | | | No Ice | 6.29 | 2.76 | 0.06 |
| | | | | 0.00 | | | 1/2" | 6.86 | 3.27 | 0.11 |
| | | | | 0.00 | | | Ice | 7.45 | 3.79 | 0.16 |
| APX16DWV-16DWV-S-E-A20 w/ Mount Pipe | B | From Leg | | 4.00 | 0.0000 | 170.00 | 1" Ice | | | |
| | | | | 0.00 | | | No Ice | 6.29 | 2.76 | 0.06 |
| | | | | 0.00 | | | 1/2" | 6.86 | 3.27 | 0.11 |
| | | | | 0.00 | | | Ice | 7.45 | 3.79 | 0.16 |
| (2) APX16DWV-16DWV-S-E-A20 w/ Mount Pipe | C | From Leg | | 4.00 | 0.0000 | 170.00 | 1" Ice | | | |
| | | | | 0.00 | | | No Ice | 6.29 | 2.76 | 0.06 |
| | | | | 0.00 | | | 1/2" | 6.86 | 3.27 | 0.11 |
| | | | | 0.00 | | | Ice | 7.45 | 3.79 | 0.16 |
| RRUS 11 B4 | B | From Leg | | 4.00 | 0.0000 | 170.00 | 1" Ice | | | |
| | | | | 0.00 | | | No Ice | 2.83 | 1.18 | 0.05 |
| | | | | 0.00 | | | 1/2" | 3.04 | 1.33 | 0.07 |
| | | | | 0.00 | | | Ice | 3.26 | 1.48 | 0.10 |
| (2) RRUS 11 B4 | A | From Leg | | 4.00 | 0.0000 | 170.00 | 1" Ice | | | |
| | | | | 0.00 | | | No Ice | 2.83 | 1.18 | 0.05 |
| | | | | 0.00 | | | 1/2" | 3.04 | 1.33 | 0.07 |
| | | | | 0.00 | | | Ice | 3.26 | 1.48 | 0.10 |
| (2) Radio 4480_TMOV2 | A | From Leg | | 4.00 | 0.0000 | 170.00 | 1" Ice | | | |
| | | | | 0.00 | | | No Ice | 2.88 | 1.40 | 0.08 |
| | | | | 0.00 | | | 1/2" | 3.09 | 1.56 | 0.10 |
| | | | | 0.00 | | | Ice | 3.31 | 1.73 | 0.13 |
| Radio 4480_TMOV2 | B | From Leg | | 4.00 | 0.0000 | 170.00 | 1" Ice | | | |
| | | | | 0.00 | | | No Ice | 2.88 | 1.40 | 0.08 |
| | | | | 0.00 | | | 1/2" | 3.09 | 1.56 | 0.10 |
| | | | | 0.00 | | | Ice | 3.31 | 1.73 | 0.13 |
| Radio 4480_TMOV2 | C | From Leg | | 4.00 | 0.0000 | 170.00 | 1" Ice | | | |
| | | | | 0.00 | | | No Ice | 2.88 | 1.40 | 0.08 |
| | | | | 0.00 | | | 1/2" | 3.09 | 1.56 | 0.10 |
| | | | | 0.00 | | | Ice | 3.31 | 1.73 | 0.13 |
| RRUS 11 B2 | A | From Leg | | 4.00 | 0.0000 | 170.00 | 1" Ice | | | |
| | | | | 0.00 | | | No Ice | 2.83 | 1.18 | 0.05 |
| | | | | 0.00 | | | 1/2" | 3.04 | 1.33 | 0.07 |
| | | | | 0.00 | | | Ice | 3.26 | 1.48 | 0.10 |
| RRUS 11 B2 | B | From Leg | | 4.00 | 0.0000 | 170.00 | 1" Ice | | | |
| | | | | 0.00 | | | No Ice | 2.83 | 1.18 | 0.05 |
| | | | | 0.00 | | | 1/2" | 3.04 | 1.33 | 0.07 |
| | | | | 0.00 | | | Ice | 3.26 | 1.48 | 0.10 |
| (2) RRUS 11 B2 | C | From Leg | | 4.00 | 0.0000 | 170.00 | 1" Ice | | | |
| | | | | 0.00 | | | No Ice | 2.83 | 1.18 | 0.05 |
| | | | | 0.00 | | | 1/2" | 3.04 | 1.33 | 0.07 |
| | | | | 0.00 | | | Ice | 3.26 | 1.48 | 0.10 |
| RADIO 2217 B2 | B | From Leg | | 4.00 | 0.0000 | 170.00 | 1" Ice | | | |
| | | | | 0.00 | | | No Ice | 1.35 | 0.59 | 0.03 |
| | | | | 0.00 | | | 1/2" | 1.50 | 0.69 | 0.04 |
| | | | | 0.00 | | | Ice | 1.65 | 0.80 | 0.05 |

| Description | Face or Leg | Offset Type | Offsets: Horz Lateral Vert ft ft ft | Azimuth Adjustment t ° | Placement ft | | C _{AA} Front ft ² | C _{AA} Side ft ² | Weight K |
|------------------------------------|-------------|-------------|---|------------------------------|-----------------|----------|---|--|-------------|
| | | | | | | 1" Ice | | | |
| *Level 160* | | | | | | No Ice | 23.75 | 23.75 | 0.94 |
| Platform Mount [10' LP 601-1] | C | None | | 0.0000 | 160.00 | 1/2" Ice | 26.41 | 26.41 | 1.40 |
| | | | | | | Ice | 29.06 | 29.06 | 1.90 |
| | | | | | | 1" Ice | | | |
| Mount Reinforcement Specifications | C | None | | 0.0000 | 160.00 | No Ice | 28.63 | 28.63 | 0.28 |
| | | | | | | 1/2" Ice | 37.31 | 37.31 | 0.67 |
| | | | | | | Ice | 45.80 | 45.80 | 0.94 |
| | | | | | | 1" Ice | | | |
| Transition Ladder | A | From Leg | 2.00 | 0.0000 | 160.00 | No Ice | 6.00 | 6.00 | 0.16 |
| | | | 0.00 | | | 1/2" Ice | 8.00 | 8.00 | 0.24 |
| | | | -4.00 | | | Ice | 10.00 | 10.00 | 0.32 |
| | | | | | | 1" Ice | | | |
| LPA-80080-6CF-EDIN w/ Mount Pipe | A | From Leg | 4.00 | 0.0000 | 160.00 | No Ice | 4.56 | 10.64 | 0.05 |
| | | | 0.00 | | | 1/2" Ice | 5.11 | 11.81 | 0.11 |
| | | | 0.00 | | | Ice | 5.61 | 12.70 | 0.19 |
| | | | | | | 1" Ice | | | |
| LPA-80080-6CF-EDIN w/ Mount Pipe | B | From Leg | 4.00 | 0.0000 | 160.00 | No Ice | 4.56 | 10.64 | 0.05 |
| | | | 0.00 | | | 1/2" Ice | 5.11 | 11.81 | 0.11 |
| | | | 0.00 | | | Ice | 5.61 | 12.70 | 0.19 |
| | | | | | | 1" Ice | | | |
| LPA-80080-6CF-EDIN w/ Mount Pipe | C | From Leg | 4.00 | 0.0000 | 160.00 | No Ice | 4.56 | 10.64 | 0.05 |
| | | | 0.00 | | | 1/2" Ice | 5.11 | 11.81 | 0.11 |
| | | | 0.00 | | | Ice | 5.61 | 12.70 | 0.19 |
| | | | | | | 1" Ice | | | |
| (2) MX06FRO660-03 w/ Mount Pipe | A | From Leg | 4.00 | 0.0000 | 160.00 | No Ice | 6.54 | 5.55 | 0.10 |
| | | | 0.00 | | | 1/2" Ice | 7.06 | 6.05 | 0.18 |
| | | | 0.00 | | | Ice | 7.60 | 6.57 | 0.28 |
| | | | | | | 1" Ice | | | |
| (2) MX06FRO660-03 w/ Mount Pipe | B | From Leg | 4.00 | 0.0000 | 160.00 | No Ice | 6.54 | 5.55 | 0.10 |
| | | | 0.00 | | | 1/2" Ice | 7.06 | 6.05 | 0.18 |
| | | | 0.00 | | | Ice | 7.60 | 6.57 | 0.28 |
| | | | | | | 1" Ice | | | |
| (2) MX06FRO660-03 w/ Mount Pipe | C | From Leg | 4.00 | 0.0000 | 160.00 | No Ice | 6.54 | 5.55 | 0.10 |
| | | | 0.00 | | | 1/2" Ice | 7.06 | 6.05 | 0.18 |
| | | | 0.00 | | | Ice | 7.60 | 6.57 | 0.28 |
| | | | | | | 1" Ice | | | |
| MT6407-77A w/ Mount Pipe | A | From Leg | 4.00 | 0.0000 | 160.00 | No Ice | 4.91 | 2.68 | 0.10 |
| | | | 0.00 | | | 1/2" Ice | 5.26 | 3.14 | 0.14 |
| | | | 0.00 | | | Ice | 5.61 | 3.62 | 0.18 |
| | | | | | | 1" Ice | | | |
| MT6407-77A w/ Mount Pipe | B | From Leg | 4.00 | 0.0000 | 160.00 | No Ice | 4.91 | 2.68 | 0.10 |
| | | | 0.00 | | | 1/2" Ice | 5.26 | 3.14 | 0.14 |
| | | | 0.00 | | | Ice | 5.61 | 3.62 | 0.18 |
| | | | | | | 1" Ice | | | |
| MT6407-77A w/ Mount Pipe | C | From Leg | 4.00 | 0.0000 | 160.00 | No Ice | 4.91 | 2.68 | 0.10 |
| | | | 0.00 | | | 1/2" Ice | 5.26 | 3.14 | 0.14 |
| | | | 0.00 | | | Ice | 5.61 | 3.62 | 0.18 |
| | | | | | | 1" Ice | | | |
| RRFDC-3315-PF-48 | A | From Leg | 4.00 | 0.0000 | 160.00 | No Ice | 3.71 | 2.19 | 0.02 |
| | | | 0.00 | | | 1/2" Ice | 3.95 | 2.39 | 0.05 |
| | | | 0.00 | | | Ice | 4.20 | 2.61 | 0.09 |
| | | | | | | 1" Ice | | | |
| RFV01U-D1A | A | From Leg | 4.00 | 0.0000 | 160.00 | No Ice | 1.88 | 1.25 | 0.08 |
| | | | 0.00 | | | 1/2" Ice | 2.05 | 1.39 | 0.10 |
| | | | 0.00 | | | Ice | 2.22 | 1.54 | 0.12 |
| | | | | | | 1" Ice | | | |
| RFV01U-D1A | B | From Leg | 4.00 | 0.0000 | 160.00 | No Ice | 1.88 | 1.25 | 0.08 |
| | | | 0.00 | | | 1/2" Ice | 2.05 | 1.39 | 0.10 |
| | | | 0.00 | | | Ice | 2.22 | 1.54 | 0.12 |
| | | | | | | 1" Ice | | | |
| RFV01U-D1A | C | From Leg | 4.00 | 0.0000 | 160.00 | No Ice | 1.88 | 1.25 | 0.08 |
| | | | 0.00 | | | 1/2" Ice | 2.05 | 1.39 | 0.10 |
| | | | 0.00 | | | Ice | 2.22 | 1.54 | 0.12 |

| Description | Face or Leg | Offset Type | Offsets: Horz Lateral Vert ft ft ft | Azimuth Adjustment t ° | Placement ft | | C _{AA} Front ft ² | C _{AA} Side ft ² | Weight K |
|---------------------------------------|-------------|-------------|---|------------------------------|-----------------|--------|---|--|-------------|
| RFV01U-D2A | A | From Leg | 4.00 0.00 0.00 | 0.0000 | 160.00 | 1" Ice | | | |
| | | | | | | No Ice | 1.88 | 1.01 | 0.07 |
| | | | | | | 1/2" | 2.05 | 1.14 | 0.09 |
| RFV01U-D2A | B | From Leg | 4.00 0.00 0.00 | 0.0000 | 160.00 | Ice | 2.22 | 1.28 | 0.11 |
| | | | | | | 1" Ice | | | |
| | | | | | | No Ice | 1.88 | 1.01 | 0.07 |
| RFV01U-D2A | C | From Leg | 4.00 0.00 0.00 | 0.0000 | 160.00 | 1/2" | 2.05 | 1.14 | 0.09 |
| | | | | | | Ice | 2.22 | 1.28 | 0.11 |
| | | | | | | 1" Ice | | | |
| DB-T1-6Z-8AB-0Z | C | From Leg | 4.00 0.00 0.00 | 0.0000 | 160.00 | No Ice | 4.80 | 2.00 | 0.04 |
| | | | | | | 1/2" | 5.07 | 2.19 | 0.08 |
| | | | | | | Ice | 5.35 | 2.39 | 0.12 |
| *Level 134* T-Arm Mount [TA 702-3] | C | None | | 0.0000 | 134.00 | 1" Ice | | | |
| | | | | | | No Ice | 4.75 | 4.75 | 0.34 |
| | | | | | | 1/2" | 5.82 | 5.82 | 0.43 |
| 3.5' Hor 2.5x2.5 Angle | A | From Leg | 3.00 0.00 0.00 | 90.0000 | 131.00 | Ice | 6.98 | 6.98 | 0.55 |
| | | | | | | 1" Ice | | | |
| | | | | | | No Ice | 1.26 | 0.02 | 0.01 |
| 3.5' Hor 2.5x2.5 Angle | B | From Leg | 3.00 0.00 0.00 | 90.0000 | 131.00 | 1/2" | 1.44 | 0.07 | 0.02 |
| | | | | | | Ice | 1.64 | 0.13 | 0.03 |
| | | | | | | 1" Ice | | | |
| 3.5' Hor 2.5x2.5 Angle | C | From Leg | 3.00 0.00 0.00 | 90.0000 | 131.00 | No Ice | 1.26 | 0.02 | 0.01 |
| | | | | | | 1/2" | 1.44 | 0.07 | 0.02 |
| | | | | | | Ice | 1.64 | 0.13 | 0.03 |
| 3.5' Hor 2.5x2.5 Angle | A | From Leg | 3.00 0.00 0.00 | 0.0000 | 131.00 | 1" Ice | | | |
| | | | | | | No Ice | 1.26 | 0.02 | 0.01 |
| | | | | | | 1/2" | 1.44 | 0.07 | 0.02 |
| 3.5' Hor 2.5x2.5 Angle | B | From Leg | 3.00 0.00 0.00 | 0.0000 | 131.00 | Ice | 1.64 | 0.13 | 0.03 |
| | | | | | | 1" Ice | | | |
| | | | | | | No Ice | 1.26 | 0.02 | 0.01 |
| 3.5' Hor 2.5x2.5 Angle | C | From Leg | 3.00 0.00 0.00 | 0.0000 | 131.00 | 1/2" | 1.44 | 0.07 | 0.02 |
| | | | | | | Ice | 1.64 | 0.13 | 0.03 |
| | | | | | | 1" Ice | | | |
| (2) 6'x2" Mount Pipe | A | From Leg | 3.00 0.00 0.00 | 0.0000 | 134.00 | No Ice | 1.43 | 1.43 | 0.02 |
| | | | | | | 1/2" | 1.92 | 1.92 | 0.03 |
| | | | | | | Ice | 2.29 | 2.29 | 0.05 |
| (2) 6'x2" Mount Pipe | B | From Leg | 3.00 0.00 0.00 | 0.0000 | 134.00 | 1" Ice | | | |
| | | | | | | No Ice | 1.43 | 1.43 | 0.02 |
| | | | | | | 1/2" | 1.92 | 1.92 | 0.03 |
| (2) 6'x2" Mount Pipe | C | From Leg | 3.00 0.00 0.00 | 0.0000 | 134.00 | Ice | 2.29 | 2.29 | 0.05 |
| | | | | | | 1" Ice | | | |
| | | | | | | No Ice | 1.43 | 1.43 | 0.02 |
| (2) DB809DK-Y | C | From Leg | 4.00 0.00 5.00 | 0.0000 | 134.00 | 1/2" | 4.55 | 4.55 | 0.06 |
| | | | | | | Ice | 5.73 | 5.73 | 0.09 |
| | | | | | | 1" Ice | | | |
| SC442D-HF2LDF | A | From Leg | 4.00 0.00 10.00 | 0.0000 | 134.00 | No Ice | 7.27 | 7.27 | 0.08 |
| | | | | | | 1/2" | 12.20 | 12.20 | 0.15 |
| | | | | | | Ice | 14.29 | 14.29 | 0.23 |

| Description | Face or Leg | Offset Type | Offsets: Horz Lateral Vert ft ft ft | Azimuth Adjustment t ° | Placement ft | | C _{AA} Front ft ² | C _{AA} Side ft ² | Weight K |
|--|-------------|-------------|---|------------------------------|-----------------|--------|---|--|-------------|
| SC442D-HF2LDF | B | From Leg | 4.00 | 0.0000 | 134.00 | 1" Ice | | | |
| | | | 0.00 | | | No Ice | 7.27 | 7.27 | 0.08 |
| | | | 10.00 | | | 1/2" | 12.20 | 12.20 | 0.15 |
| SC479-HF1LDF | A | From Leg | 4.00 | 0.0000 | 134.00 | Ice | 14.29 | 14.29 | 0.23 |
| | | | 0.00 | | | 1" Ice | | | |
| | | | 7.00 | | | No Ice | 5.06 | 5.06 | 0.03 |
| WPA-700102-4CF-EDIN-9 | B | From Leg | 4.00 | 0.0000 | 134.00 | 1/2" | 6.54 | 6.54 | 0.07 |
| | | | 0.00 | | | Ice | 8.04 | 8.04 | 0.11 |
| | | | 0.00 | | | 1" Ice | | | |
| 432E-831-01-T | A | From Leg | 4.00 | 0.0000 | 134.00 | No Ice | 3.57 | 2.79 | 0.01 |
| | | | 0.00 | | | 1/2" | 3.87 | 3.10 | 0.04 |
| | | | 7.00 | | | Ice | 4.18 | 3.41 | 0.07 |
| 422-86A-99575-18BW | B | From Leg | 4.00 | 0.0000 | 134.00 | 1" Ice | | | |
| | | | 0.00 | | | No Ice | 1.42 | 0.87 | 0.03 |
| | | | 0.00 | | | 1/2" | 1.57 | 0.99 | 0.04 |
| *Level 124* Platform Mount [LP 601-1] | C | None | | 0.0000 | 124.00 | Ice | 1.73 | 1.12 | 0.05 |
| | | | | | | No Ice | 2.96 | 1.20 | 0.05 |
| | | | | | | 1/2" | 3.17 | 1.35 | 0.07 |
| Transition Ladder | C | From Leg | 2.00 | 0.0000 | 124.00 | Ice | 3.39 | 1.51 | 0.09 |
| | | | 0.00 | | | 1" Ice | | | |
| | | | -4.00 | | | No Ice | 28.50 | 28.50 | 1.12 |
| 6'x2" Mount Pipe | A | From Leg | 4.00 | 0.0000 | 124.00 | 1/2" | 31.69 | 31.69 | 1.68 |
| | | | 0.00 | | | Ice | 34.87 | 34.87 | 2.28 |
| | | | 0.00 | | | 1" Ice | | | |
| 6'x2" Mount Pipe | B | From Leg | 4.00 | 0.0000 | 124.00 | No Ice | 6.00 | 6.00 | 0.16 |
| | | | 0.00 | | | 1/2" | 8.00 | 8.00 | 0.24 |
| | | | 0.00 | | | Ice | 10.00 | 10.00 | 0.32 |
| (2) 6'x2" Mount Pipe | C | From Leg | 4.00 | 0.0000 | 124.00 | 1" Ice | | | |
| | | | 0.00 | | | No Ice | 1.43 | 1.43 | 0.02 |
| | | | 0.00 | | | 1/2" | 1.92 | 1.92 | 0.03 |
| APXVSP18-C-A20 w/ Mount Pipe | A | From Leg | 4.00 | 0.0000 | 124.00 | Ice | 2.29 | 2.29 | 0.05 |
| | | | 0.00 | | | 1" Ice | | | |
| | | | 0.00 | | | No Ice | 4.60 | 4.01 | 0.10 |
| APXVSP18-C-A20 w/ Mount Pipe | B | From Leg | 4.00 | 0.0000 | 124.00 | 1/2" | 5.05 | 4.45 | 0.16 |
| | | | 0.00 | | | Ice | 5.50 | 4.89 | 0.23 |
| | | | 0.00 | | | 1" Ice | | | |
| APXVSP18-C-A20 w/ Mount Pipe | C | From Leg | 4.00 | 0.0000 | 124.00 | No Ice | 4.60 | 4.01 | 0.10 |
| | | | 0.00 | | | 1/2" | 5.05 | 4.45 | 0.16 |
| | | | 0.00 | | | Ice | 5.50 | 4.89 | 0.23 |
| APXVTM14-ALU-I20 w/ Mount Pipe | A | From Leg | 4.00 | 0.0000 | 124.00 | 1" Ice | | | |
| | | | 0.00 | | | No Ice | 4.09 | 2.86 | 0.08 |
| | | | 0.00 | | | 1/2" | 4.48 | 3.23 | 0.13 |
| APXVTM14-ALU-I20 w/ Mount Pipe | B | From Leg | 4.00 | 0.0000 | 124.00 | Ice | 4.88 | 3.61 | 0.19 |
| | | | 0.00 | | | 1" Ice | | | |
| | | | 0.00 | | | No Ice | 4.09 | 2.86 | 0.08 |
| APXVTM14-ALU-I20 w/ Mount Pipe | C | From Leg | 4.00 | 0.0000 | 124.00 | 1/2" | 4.48 | 3.23 | 0.13 |
| | | | 0.00 | | | Ice | 4.88 | 3.61 | 0.19 |
| | | | 0.00 | | | 1" Ice | | | |

| Description | Face or Leg | Offset Type | Offsets: Horz Lateral Vert ft ft ft | Azimuth Adjustment t ° | Placement ft | | C _{AA} Front ft ² | C _{AA} Side ft ² | Weight K |
|--|-------------|-------------|---|------------------------------|-----------------|--------|---|--|-------------|
| 800MHZ RRH | A | From Leg | 4.00 | 0.0000 | 124.00 | 1" Ice | | | |
| | | | 0.00 | | | No Ice | 2.13 | 1.77 | 0.05 |
| | | | 0.00 | | | 1/2" | 2.32 | 1.95 | 0.07 |
| 800MHZ RRH | B | From Leg | 4.00 | 0.0000 | 124.00 | Ice | 2.51 | 2.13 | 0.10 |
| | | | 0.00 | | | 1" Ice | | | |
| | | | 0.00 | | | No Ice | 2.13 | 1.77 | 0.05 |
| 800MHZ RRH | C | From Leg | 4.00 | 0.0000 | 124.00 | 1/2" | 2.32 | 1.95 | 0.07 |
| | | | 0.00 | | | Ice | 2.51 | 2.13 | 0.10 |
| | | | 0.00 | | | 1" Ice | | | |
| TD-RRH8X20-25 | A | From Leg | 4.00 | 0.0000 | 124.00 | No Ice | 2.13 | 1.77 | 0.05 |
| | | | 0.00 | | | 1/2" | 2.32 | 1.95 | 0.07 |
| | | | 0.00 | | | Ice | 2.51 | 2.13 | 0.10 |
| TD-RRH8X20-25 | B | From Leg | 4.00 | 0.0000 | 124.00 | 1" Ice | | | |
| | | | 0.00 | | | No Ice | 4.05 | 1.53 | 0.07 |
| | | | 0.00 | | | 1/2" | 4.30 | 1.71 | 0.10 |
| TD-RRH8X20-25 | C | From Leg | 4.00 | 0.0000 | 124.00 | Ice | 4.56 | 1.90 | 0.13 |
| | | | 0.00 | | | 1" Ice | | | |
| | | | 0.00 | | | No Ice | 4.05 | 1.53 | 0.07 |
| *Level 120* Platform Mount [LP 601-1] | B | None | | 0.0000 | 120.00 | 1/2" | 31.69 | 31.69 | 1.68 |
| | | | | | | Ice | 34.87 | 34.87 | 2.28 |
| | | | | | | 1" Ice | | | |
| Transition Ladder | C | From Leg | 2.00 | 0.0000 | 120.00 | No Ice | 6.00 | 6.00 | 0.16 |
| | | | 0.00 | | | 1/2" | 8.00 | 8.00 | 0.24 |
| | | | -4.00 | | | Ice | 10.00 | 10.00 | 0.32 |
| (2) 8'x2" Mount Pipe | A | From Leg | 3.00 | 0.0000 | 120.00 | 1" Ice | | | |
| | | | 0.00 | | | No Ice | 1.90 | 1.90 | 0.03 |
| | | | 0.00 | | | 1/2" | 2.73 | 2.73 | 0.04 |
| (2) 8'x2" Mount Pipe | B | From Leg | 3.00 | 0.0000 | 120.00 | Ice | 3.40 | 3.40 | 0.06 |
| | | | 0.00 | | | 1" Ice | | | |
| | | | 0.00 | | | No Ice | 1.90 | 1.90 | 0.03 |
| (2) 8'x2" Mount Pipe | C | From Leg | 3.00 | 0.0000 | 120.00 | 1/2" | 2.73 | 2.73 | 0.04 |
| | | | 0.00 | | | Ice | 3.40 | 3.40 | 0.06 |
| | | | 0.00 | | | 1" Ice | | | |
| (2) Side Arm Mount [SO 301-1] | C | From Leg | 3.00 | 0.0000 | 120.00 | No Ice | 0.46 | 0.91 | 0.02 |
| | | | 0.00 | | | 1/2" | 0.65 | 1.30 | 0.03 |
| | | | 0.00 | | | Ice | 0.87 | 1.71 | 0.05 |
| 100-1 | C | From Leg | 4.00 | 0.0000 | 120.00 | 1" Ice | | | |
| | | | 0.00 | | | No Ice | 4.80 | 6.00 | 0.02 |
| | | | 0.00 | | | 1/2" | 5.07 | 6.30 | 0.08 |
| *Level 80* Pipe Mount [PM 601-3] | C | None | | 0.0000 | 80.00 | Ice | 5.35 | 6.61 | 0.16 |
| | | | | | | 1" Ice | | | |
| | | | | | | No Ice | 3.17 | 3.17 | 0.20 |
| *Level 63* Side Arm Mount [SO 701-1] | C | From Leg | 0.00 | 0.0000 | 63.00 | 1/2" | 3.79 | 3.79 | 0.23 |
| | | | 0.00 | | | Ice | 4.42 | 4.42 | 0.28 |
| | | | 0.00 | | | 1" Ice | | | |
| GPS_A | C | From Leg | 4.00 | 0.0000 | 63.00 | No Ice | 0.26 | 0.26 | 0.00 |

| Description | Face or Leg | Offset Type | Offsets: Horz Lateral Vert ft ft ft | Azimuth Adjustment t ° | Placement ft | C _A A _A Front ft ² | C _A A _A Side ft ² | Weight K |
|-------------|-------------|-------------|---|------------------------------|-----------------|---|--|-------------|
| | | | 0.00 | | 1/2" | 0.32 | 0.32 | 0.00 |
| | | | 0.00 | | Ice | 0.39 | 0.39 | 0.01 |
| | | | | | 1" Ice | | | |
| *** | | | | | | | | |

Load Combinations

| Comb. No. | Description |
|-----------|--|
| 1 | Dead Only |
| 2 | 1.2 Dead+1.0 Wind 0 deg - No Ice |
| 3 | 0.9 Dead+1.0 Wind 0 deg - No Ice |
| 4 | 1.2 Dead+1.0 Wind 30 deg - No Ice |
| 5 | 0.9 Dead+1.0 Wind 30 deg - No Ice |
| 6 | 1.2 Dead+1.0 Wind 60 deg - No Ice |
| 7 | 0.9 Dead+1.0 Wind 60 deg - No Ice |
| 8 | 1.2 Dead+1.0 Wind 90 deg - No Ice |
| 9 | 0.9 Dead+1.0 Wind 90 deg - No Ice |
| 10 | 1.2 Dead+1.0 Wind 120 deg - No Ice |
| 11 | 0.9 Dead+1.0 Wind 120 deg - No Ice |
| 12 | 1.2 Dead+1.0 Wind 150 deg - No Ice |
| 13 | 0.9 Dead+1.0 Wind 150 deg - No Ice |
| 14 | 1.2 Dead+1.0 Wind 180 deg - No Ice |
| 15 | 0.9 Dead+1.0 Wind 180 deg - No Ice |
| 16 | 1.2 Dead+1.0 Wind 210 deg - No Ice |
| 17 | 0.9 Dead+1.0 Wind 210 deg - No Ice |
| 18 | 1.2 Dead+1.0 Wind 240 deg - No Ice |
| 19 | 0.9 Dead+1.0 Wind 240 deg - No Ice |
| 20 | 1.2 Dead+1.0 Wind 270 deg - No Ice |
| 21 | 0.9 Dead+1.0 Wind 270 deg - No Ice |
| 22 | 1.2 Dead+1.0 Wind 300 deg - No Ice |
| 23 | 0.9 Dead+1.0 Wind 300 deg - No Ice |
| 24 | 1.2 Dead+1.0 Wind 330 deg - No Ice |
| 25 | 0.9 Dead+1.0 Wind 330 deg - No Ice |
| 26 | 1.2 Dead+1.0 Ice+1.0 Temp |
| 27 | 1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp |
| 28 | 1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp |
| 29 | 1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp |
| 30 | 1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp |
| 31 | 1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp |
| 32 | 1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp |
| 33 | 1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp |
| 34 | 1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp |
| 35 | 1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp |
| 36 | 1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp |
| 37 | 1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp |
| 38 | 1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp |
| 39 | Dead+Wind 0 deg - Service |
| 40 | Dead+Wind 30 deg - Service |
| 41 | Dead+Wind 60 deg - Service |
| 42 | Dead+Wind 90 deg - Service |
| 43 | Dead+Wind 120 deg - Service |
| 44 | Dead+Wind 150 deg - Service |
| 45 | Dead+Wind 180 deg - Service |
| 46 | Dead+Wind 210 deg - Service |
| 47 | Dead+Wind 240 deg - Service |
| 48 | Dead+Wind 270 deg - Service |
| 49 | Dead+Wind 300 deg - Service |
| 50 | Dead+Wind 330 deg - Service |

Maximum Member Forces

| Section No. | Elevation ft | Component Type | Condition | Gov. Load Comb. | Axial K | Major Axis Moment kip-ft | Minor Axis Moment kip-ft |
|-------------|-------------------|----------------|------------------|-----------------|---------|--------------------------|--------------------------|
| L1 | 179.813 - 132.966 | Pole | Max Tension | 1 | 0.00 | 0.00 | 0.00 |
| | | | Max. Compression | 26 | -27.98 | 0.80 | 6.77 |
| | | | Max. Mx | 20 | -12.03 | 679.95 | 4.03 |
| | | | Max. My | 2 | -12.05 | 1.81 | 690.40 |
| | | | Max. Vy | 20 | -21.17 | 679.95 | 4.03 |
| | | | Max. Vx | 2 | -21.12 | 1.81 | 690.40 |
| | | | Max. Torque | 9 | | | 2.94 |
| L2 | 132.966 - 87.3645 | Pole | Max Tension | 1 | 0.00 | 0.00 | 0.00 |
| | | | Max. Compression | 26 | -50.53 | 2.91 | 7.78 |
| | | | Max. Mx | 20 | -26.99 | 1959.22 | 7.56 |
| | | | Max. My | 2 | -27.09 | 5.51 | 1954.40 |
| | | | Max. Vy | 20 | -32.37 | 1959.22 | 7.56 |
| | | | Max. Vx | 2 | -31.77 | 5.51 | 1954.40 |
| | | | Max. Torque | 9 | | | 3.63 |
| L3 | 87.3645 - 42.7915 | Pole | Max Tension | 1 | 0.00 | 0.00 | 0.00 |
| | | | Max. Compression | 26 | -66.85 | 2.79 | 9.79 |
| | | | Max. Mx | 20 | -41.64 | 3440.31 | 12.31 |
| | | | Max. My | 2 | -41.70 | 9.19 | 3404.66 |
| | | | Max. Vy | 20 | -35.62 | 3440.31 | 12.31 |
| | | | Max. Vx | 2 | -34.80 | 9.19 | 3404.66 |
| | | | Max. Torque | 17 | | | -2.93 |
| L4 | 42.7915 - 0 | Pole | Max Tension | 1 | 0.00 | 0.00 | 0.00 |
| | | | Max. Compression | 26 | -89.89 | 2.02 | 11.82 |
| | | | Max. Mx | 20 | -62.54 | 5245.62 | 18.01 |
| | | | Max. My | 2 | -62.54 | 13.23 | 5170.68 |
| | | | Max. Vy | 20 | -37.99 | 5245.62 | 18.01 |
| | | | Max. Vx | 2 | -37.17 | 13.23 | 5170.68 |
| | | | Max. Torque | 17 | | | -2.93 |

Maximum Reactions

| Location | Condition | Gov. Load Comb. | Vertical K | Horizontal, X K | Horizontal, Z K |
|----------|---------------------|-----------------|------------|-----------------|-----------------|
| Pole | Max. Vert | 27 | 89.89 | 0.01 | 6.76 |
| | Max. H _x | 20 | 62.58 | 37.93 | 0.09 |
| | Max. H _z | 2 | 62.58 | 0.09 | 37.11 |
| | Max. M _x | 2 | 5170.68 | 0.09 | 37.11 |
| | Max. M _z | 8 | 5243.74 | -37.93 | -0.09 |
| | Max. Torsion | 5 | 2.84 | -18.20 | 32.09 |
| | Min. Vert | 23 | 46.93 | 32.32 | 18.99 |
| | Min. H _x | 8 | 62.58 | -37.93 | -0.09 |
| | Min. H _z | 14 | 62.58 | -0.09 | -37.11 |
| | Min. M _x | 14 | -5159.34 | -0.09 | -37.11 |
| | Min. M _z | 20 | -5245.62 | 37.93 | 0.09 |
| | Min. Torsion | 17 | -2.92 | 18.20 | -32.09 |

Tower Mast Reaction Summary

| Load Combination | Vertical K | Shear _x K | Shear _z K | Overturning Moment, M _x kip-ft | Overturning Moment, M _z kip-ft | Torque kip-ft |
|------------------|------------|----------------------|----------------------|---|---|---------------|
| Dead Only | 52.15 | -0.00 | -0.00 | -4.70 | 0.78 | 0.00 |

| Load Combination | Vertical K | Shear _x K | Shear _z K | Overturning Moment, M _x kip-ft | Overturning Moment, M _z kip-ft | Torque kip-ft |
|--|---------------|-------------------------|-------------------------|--|--|------------------|
| 1.2 Dead+1.0 Wind 0 deg - No Ice | 62.58 | -0.09 | -37.11 | -5170.68 | 13.23 | -2.20 |
| 0.9 Dead+1.0 Wind 0 deg - No Ice | 46.93 | -0.09 | -37.11 | -5056.62 | 12.71 | -2.20 |
| 1.2 Dead+1.0 Wind 30 deg - No Ice | 62.58 | 18.20 | -32.09 | -4473.03 | -2520.08 | -2.83 |
| 0.9 Dead+1.0 Wind 30 deg - No Ice | 46.93 | 18.20 | -32.09 | -4374.10 | -2465.56 | -2.84 |
| 1.2 Dead+1.0 Wind 60 deg - No Ice | 62.58 | 31.61 | -18.48 | -2578.21 | -4378.59 | -2.73 |
| 0.9 Dead+1.0 Wind 60 deg - No Ice | 46.93 | 31.61 | -18.48 | -2520.54 | -4283.64 | -2.75 |
| 1.2 Dead+1.0 Wind 90 deg - No Ice | 62.58 | 37.93 | 0.09 | 6.64 | -5243.74 | -1.88 |
| 0.9 Dead+1.0 Wind 90 deg - No Ice | 46.93 | 37.93 | 0.09 | 7.94 | -5130.56 | -1.90 |
| 1.2 Dead+1.0 Wind 120 deg - No Ice | 62.58 | 32.32 | 18.99 | 2639.63 | -4480.06 | -0.48 |
| 0.9 Dead+1.0 Wind 120 deg - No Ice | 46.93 | 32.32 | 18.99 | 2583.64 | -4383.13 | -0.50 |
| 1.2 Dead+1.0 Wind 150 deg - No Ice | 62.58 | 18.44 | 32.34 | 4499.87 | -2556.37 | 1.08 |
| 0.9 Dead+1.0 Wind 150 deg - No Ice | 46.93 | 18.44 | 32.34 | 4403.24 | -2501.09 | 1.06 |
| 1.2 Dead+1.0 Wind 180 deg - No Ice | 62.58 | 0.09 | 37.11 | 5159.34 | -11.42 | 2.33 |
| 0.9 Dead+1.0 Wind 180 deg - No Ice | 46.93 | 0.09 | 37.11 | 5048.38 | -11.42 | 2.32 |
| 1.2 Dead+1.0 Wind 210 deg - No Ice | 62.58 | -18.20 | 32.09 | 4461.72 | 2521.92 | 2.91 |
| 0.9 Dead+1.0 Wind 210 deg - No Ice | 46.93 | -18.20 | 32.09 | 4365.88 | 2466.87 | 2.92 |
| 1.2 Dead+1.0 Wind 240 deg - No Ice | 62.58 | -31.61 | 18.48 | 2566.87 | 4380.47 | 2.69 |
| 0.9 Dead+1.0 Wind 240 deg - No Ice | 46.93 | -31.61 | 18.48 | 2512.31 | 4284.97 | 2.71 |
| 1.2 Dead+1.0 Wind 270 deg - No Ice | 62.58 | -37.93 | -0.09 | -18.01 | 5245.62 | 1.75 |
| 0.9 Dead+1.0 Wind 270 deg - No Ice | 46.93 | -37.93 | -0.09 | -16.19 | 5131.91 | 1.78 |
| 1.2 Dead+1.0 Wind 300 deg - No Ice | 62.58 | -32.32 | -18.99 | -2651.03 | 4481.92 | 0.40 |
| 0.9 Dead+1.0 Wind 300 deg - No Ice | 46.93 | -32.32 | -18.99 | -2591.91 | 4384.46 | 0.42 |
| 1.2 Dead+1.0 Wind 330 deg - No Ice | 62.58 | -18.44 | -32.34 | -4511.24 | 2558.19 | -1.03 |
| 0.9 Dead+1.0 Wind 330 deg - No Ice | 46.93 | -18.44 | -32.34 | -4411.50 | 2502.39 | -1.02 |
| 1.2 Dead+1.0 Ice+1.0 Temp | 89.89 | -0.00 | -0.00 | -11.82 | 2.02 | 0.00 |
| 1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp | 89.89 | -0.01 | -6.76 | -985.13 | 3.99 | -0.41 |
| 1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp | 89.89 | 3.33 | -5.85 | -853.79 | -475.58 | -0.54 |
| 1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp | 89.89 | 5.78 | -3.37 | -496.88 | -827.17 | -0.52 |
| 1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp | 89.89 | 6.69 | 0.01 | -10.04 | -956.57 | -0.36 |
| 1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp | 89.89 | 5.80 | 3.39 | 476.29 | -829.11 | -0.11 |
| 1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp | 89.89 | 3.36 | 5.86 | 831.78 | -478.94 | 0.18 |
| 1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp | 89.89 | 0.01 | 6.76 | 961.19 | 0.10 | 0.42 |
| 1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp | 89.89 | -3.33 | 5.85 | 829.84 | 479.67 | 0.54 |
| 1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp | 89.89 | -5.78 | 3.37 | 472.93 | 831.27 | 0.52 |
| 1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp | 89.89 | -6.69 | -0.01 | -13.92 | 960.67 | 0.36 |

| Load Combination | Vertical | Shear _x | Shear _z | Overturning Moment, M _x | Overturning Moment, M _z | Torque |
|--|----------|--------------------|--------------------|------------------------------------|------------------------------------|--------|
| | K | K | K | kip-ft | kip-ft | kip-ft |
| 1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp | 89.89 | -5.80 | -3.39 | -500.24 | 833.20 | 0.11 |
| 1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp | 89.89 | -3.36 | -5.86 | -855.73 | 483.03 | -0.18 |
| Dead+Wind 0 deg - Service | 52.15 | -0.02 | -9.73 | -1348.79 | 3.99 | -0.49 |
| Dead+Wind 30 deg - Service | 52.15 | 4.78 | -8.42 | -1167.15 | -655.22 | -0.72 |
| Dead+Wind 60 deg - Service | 52.15 | 8.29 | -4.85 | -674.05 | -1138.67 | -0.75 |
| Dead+Wind 90 deg - Service | 52.15 | 9.95 | 0.02 | -1.62 | -1363.89 | -0.59 |
| Dead+Wind 120 deg - Service | 52.15 | 8.48 | 4.98 | 683.45 | -1165.21 | -0.26 |
| Dead+Wind 150 deg - Service | 52.15 | 4.84 | 8.48 | 1167.55 | -664.69 | 0.14 |
| Dead+Wind 180 deg - Service | 52.15 | 0.02 | 9.73 | 1339.18 | -2.39 | 0.50 |
| Dead+Wind 210 deg - Service | 52.15 | -4.78 | 8.42 | 1157.54 | 656.83 | 0.72 |
| Dead+Wind 240 deg - Service | 52.15 | -8.29 | 4.85 | 664.44 | 1140.27 | 0.75 |
| Dead+Wind 270 deg - Service | 52.15 | -9.95 | -0.02 | -8.00 | 1365.50 | 0.58 |
| Dead+Wind 300 deg - Service | 52.15 | -8.48 | -4.98 | -693.06 | 1166.82 | 0.25 |
| Dead+Wind 330 deg - Service | 52.15 | -4.84 | -8.48 | -1177.17 | 666.29 | -0.14 |

Solution Summary

| Load Comb. | Sum of Applied Forces | | | Sum of Reactions | | | % Error |
|------------|-----------------------|---------|---------|------------------|---------|---------|---------|
| | PX K | PY K | PZ K | PX K | PY K | PZ K | |
| 1 | 0.00 | -52.15 | 0.00 | 0.00 | 52.15 | 0.00 | 0.000% |
| 2 | -0.09 | -62.58 | -37.11 | 0.09 | 62.58 | 37.11 | 0.000% |
| 3 | -0.09 | -46.93 | -37.11 | 0.09 | 46.93 | 37.11 | 0.000% |
| 4 | 18.20 | -62.58 | -32.09 | -18.20 | 62.58 | 32.09 | 0.000% |
| 5 | 18.20 | -46.93 | -32.09 | -18.20 | 46.93 | 32.09 | 0.000% |
| 6 | 31.61 | -62.58 | -18.48 | -31.61 | 62.58 | 18.48 | 0.000% |
| 7 | 31.61 | -46.93 | -18.48 | -31.61 | 46.93 | 18.48 | 0.000% |
| 8 | 37.93 | -62.58 | 0.09 | -37.93 | 62.58 | -0.09 | 0.000% |
| 9 | 37.93 | -46.93 | 0.09 | -37.93 | 46.93 | -0.09 | 0.000% |
| 10 | 32.32 | -62.58 | 18.99 | -32.32 | 62.58 | -18.99 | 0.000% |
| 11 | 32.32 | -46.93 | 18.99 | -32.32 | 46.93 | -18.99 | 0.000% |
| 12 | 18.44 | -62.58 | 32.34 | -18.44 | 62.58 | -32.34 | 0.000% |
| 13 | 18.44 | -46.93 | 32.34 | -18.44 | 46.93 | -32.34 | 0.000% |
| 14 | 0.09 | -62.58 | 37.11 | -0.09 | 62.58 | -37.11 | 0.000% |
| 15 | 0.09 | -46.93 | 37.11 | -0.09 | 46.93 | -37.11 | 0.000% |
| 16 | -18.20 | -62.58 | 32.09 | 18.20 | 62.58 | -32.09 | 0.000% |
| 17 | -18.20 | -46.93 | 32.09 | 18.20 | 46.93 | -32.09 | 0.000% |
| 18 | -31.61 | -62.58 | 18.48 | 31.61 | 62.58 | -18.48 | 0.000% |
| 19 | -31.61 | -46.93 | 18.48 | 31.61 | 46.93 | -18.48 | 0.000% |
| 20 | -37.93 | -62.58 | -0.09 | 37.93 | 62.58 | 0.09 | 0.000% |
| 21 | -37.93 | -46.93 | -0.09 | 37.93 | 46.93 | 0.09 | 0.000% |
| 22 | -32.32 | -62.58 | -18.99 | 32.32 | 62.58 | 18.99 | 0.000% |
| 23 | -32.32 | -46.93 | -18.99 | 32.32 | 46.93 | 18.99 | 0.000% |
| 24 | -18.44 | -62.58 | -32.34 | 18.44 | 62.58 | 32.34 | 0.000% |
| 25 | -18.44 | -46.93 | -32.34 | 18.44 | 46.93 | 32.34 | 0.000% |
| 26 | 0.00 | -89.89 | 0.00 | 0.00 | 89.89 | 0.00 | 0.000% |
| 27 | -0.01 | -89.89 | -6.76 | 0.01 | 89.89 | 6.76 | 0.000% |
| 28 | 3.33 | -89.89 | -5.85 | -3.33 | 89.89 | 5.85 | 0.000% |
| 29 | 5.78 | -89.89 | -3.37 | -5.78 | 89.89 | 3.37 | 0.000% |
| 30 | 6.69 | -89.89 | 0.01 | -6.69 | 89.89 | -0.01 | 0.000% |
| 31 | 5.80 | -89.89 | 3.39 | -5.80 | 89.89 | -3.39 | 0.000% |
| 32 | 3.36 | -89.89 | 5.86 | -3.36 | 89.89 | -5.86 | 0.000% |
| 33 | 0.01 | -89.89 | 6.76 | -0.01 | 89.89 | -6.76 | 0.000% |
| 34 | -3.33 | -89.89 | 5.85 | 3.33 | 89.89 | -5.85 | 0.000% |
| 35 | -5.78 | -89.89 | 3.37 | 5.78 | 89.89 | -3.37 | 0.000% |
| 36 | -6.69 | -89.89 | -0.01 | 6.69 | 89.89 | 0.01 | 0.000% |

| Load Comb. | Sum of Applied Forces | | | Sum of Reactions | | | % Error |
|------------|-----------------------|--------|-------|------------------|-------|-------|---------|
| | PX K | PY K | PZ K | PX K | PY K | PZ K | |
| 37 | -5.80 | -89.89 | -3.39 | 5.80 | 89.89 | 3.39 | 0.000% |
| 38 | -3.36 | -89.89 | -5.86 | 3.36 | 89.89 | 5.86 | 0.000% |
| 39 | -0.02 | -52.15 | -9.73 | 0.02 | 52.15 | 9.73 | 0.000% |
| 40 | 4.78 | -52.15 | -8.42 | -4.78 | 52.15 | 8.42 | 0.000% |
| 41 | 8.29 | -52.15 | -4.85 | -8.29 | 52.15 | 4.85 | 0.000% |
| 42 | 9.95 | -52.15 | 0.02 | -9.95 | 52.15 | -0.02 | 0.000% |
| 43 | 8.48 | -52.15 | 4.98 | -8.48 | 52.15 | -4.98 | 0.000% |
| 44 | 4.84 | -52.15 | 8.48 | -4.84 | 52.15 | -8.48 | 0.000% |
| 45 | 0.02 | -52.15 | 9.73 | -0.02 | 52.15 | -9.73 | 0.000% |
| 46 | -4.78 | -52.15 | 8.42 | 4.78 | 52.15 | -8.42 | 0.000% |
| 47 | -8.29 | -52.15 | 4.85 | 8.29 | 52.15 | -4.85 | 0.000% |
| 48 | -9.95 | -52.15 | -0.02 | 9.95 | 52.15 | 0.02 | 0.000% |
| 49 | -8.48 | -52.15 | -4.98 | 8.48 | 52.15 | 4.98 | 0.000% |
| 50 | -4.84 | -52.15 | -8.48 | 4.84 | 52.15 | 8.48 | 0.000% |

Non-Linear Convergence Results

| Load Combination | Converged? | Number of Cycles | Displacement Tolerance | Force Tolerance |
|------------------|------------|------------------|------------------------|-----------------|
| 1 | Yes | 4 | 0.00000001 | 0.00000001 |
| 2 | Yes | 5 | 0.00000001 | 0.00048330 |
| 3 | Yes | 5 | 0.00000001 | 0.00020368 |
| 4 | Yes | 7 | 0.00000001 | 0.00013156 |
| 5 | Yes | 6 | 0.00000001 | 0.00041050 |
| 6 | Yes | 7 | 0.00000001 | 0.00013886 |
| 7 | Yes | 6 | 0.00000001 | 0.00043672 |
| 8 | Yes | 5 | 0.00000001 | 0.00050210 |
| 9 | Yes | 5 | 0.00000001 | 0.00020867 |
| 10 | Yes | 7 | 0.00000001 | 0.00013358 |
| 11 | Yes | 6 | 0.00000001 | 0.00041548 |
| 12 | Yes | 7 | 0.00000001 | 0.00013544 |
| 13 | Yes | 6 | 0.00000001 | 0.00042305 |
| 14 | Yes | 5 | 0.00000001 | 0.00028920 |
| 15 | Yes | 5 | 0.00000001 | 0.00012245 |
| 16 | Yes | 7 | 0.00000001 | 0.00013947 |
| 17 | Yes | 6 | 0.00000001 | 0.00043801 |
| 18 | Yes | 7 | 0.00000001 | 0.00013099 |
| 19 | Yes | 6 | 0.00000001 | 0.00040856 |
| 20 | Yes | 5 | 0.00000001 | 0.00069921 |
| 21 | Yes | 5 | 0.00000001 | 0.00028958 |
| 22 | Yes | 7 | 0.00000001 | 0.00013691 |
| 23 | Yes | 6 | 0.00000001 | 0.00042791 |
| 24 | Yes | 7 | 0.00000001 | 0.00013540 |
| 25 | Yes | 6 | 0.00000001 | 0.00042315 |
| 26 | Yes | 4 | 0.00000001 | 0.00015753 |
| 27 | Yes | 6 | 0.00000001 | 0.00026100 |
| 28 | Yes | 6 | 0.00000001 | 0.00038589 |
| 29 | Yes | 6 | 0.00000001 | 0.00039589 |
| 30 | Yes | 6 | 0.00000001 | 0.00025048 |
| 31 | Yes | 6 | 0.00000001 | 0.00036645 |
| 32 | Yes | 6 | 0.00000001 | 0.00037183 |
| 33 | Yes | 6 | 0.00000001 | 0.00024906 |
| 34 | Yes | 6 | 0.00000001 | 0.00038030 |
| 35 | Yes | 6 | 0.00000001 | 0.00036640 |
| 36 | Yes | 6 | 0.00000001 | 0.00025352 |
| 37 | Yes | 6 | 0.00000001 | 0.00040092 |
| 38 | Yes | 6 | 0.00000001 | 0.00039968 |
| 39 | Yes | 5 | 0.00000001 | 0.00003417 |
| 40 | Yes | 5 | 0.00000001 | 0.00050003 |
| 41 | Yes | 5 | 0.00000001 | 0.00054671 |
| 42 | Yes | 5 | 0.00000001 | 0.00006120 |
| 43 | Yes | 5 | 0.00000001 | 0.00052106 |
| 44 | Yes | 5 | 0.00000001 | 0.00052882 |
| 45 | Yes | 5 | 0.00000001 | 0.00002976 |
| 46 | Yes | 5 | 0.00000001 | 0.00053896 |

| | | | | |
|----|-----|---|------------|------------|
| 47 | Yes | 5 | 0.00000001 | 0.00048080 |
| 48 | Yes | 5 | 0.00000001 | 0.00006603 |
| 49 | Yes | 5 | 0.00000001 | 0.00057252 |
| 50 | Yes | 5 | 0.00000001 | 0.00054082 |

Maximum Tower Deflections - Service Wind

| Section No. | Elevation ft | Horz. Deflection in | Gov. Load Comb. | Tilt ° | Twist ° |
|-------------|----------------------|---------------------------|-----------------------|-----------|------------|
| L1 | 179.813 - 132.966 | 63.334 | 50 | 3.6634 | 0.0154 |
| L2 | 136.659 - 87.3645 | 33.789 | 48 | 2.6659 | 0.0052 |
| L3 | 92.2629 - 42.7915 | 13.986 | 48 | 1.5598 | 0.0018 |
| L4 | 48.8358 - 0 | 3.635 | 48 | 0.7004 | 0.0006 |

Critical Deflections and Radius of Curvature - Service Wind

| Elevation ft | Appurtenance | Gov. Load Comb. | Deflection in | Tilt ° | Twist ° | Radius of Curvature ft |
|-----------------|--------------------------------|-----------------------|------------------|-----------|------------|------------------------------|
| 180.00 | Platform Mount [10' LP 601-1] | 50 | 63.334 | 3.6634 | 0.0158 | 14370 |
| 170.00 | Platform Mount [LP 303-1_HR-1] | 50 | 56.104 | 3.4441 | 0.0129 | 7322 |
| 160.00 | Platform Mount [10' LP 601-1] | 48 | 48.928 | 3.2180 | 0.0101 | 3625 |
| 134.00 | T-Arm Mount [TA 702-3] | 48 | 32.268 | 2.5998 | 0.0048 | 1709 |
| 131.00 | 3.5' Hor 2.5x2.5 Angle | 48 | 30.610 | 2.5244 | 0.0045 | 1754 |
| 124.00 | Platform Mount [LP 601-1] | 48 | 26.971 | 2.3479 | 0.0037 | 1885 |
| 120.00 | Platform Mount [LP 601-1] | 48 | 25.030 | 2.2466 | 0.0034 | 1969 |
| 80.00 | Pipe Mount [PM 601-3] | 48 | 10.244 | 1.2872 | 0.0014 | 2810 |
| 63.00 | Side Arm Mount [SO 701-1] | 48 | 6.121 | 0.9492 | 0.0009 | 2790 |

Maximum Tower Deflections - Design Wind

| Section No. | Elevation ft | Horz. Deflection in | Gov. Load Comb. | Tilt ° | Twist ° |
|-------------|----------------------|---------------------------|-----------------------|-----------|------------|
| L1 | 179.813 - 132.966 | 241.825 | 20 | 13.9729 | 0.0538 |
| L2 | 136.659 - 87.3645 | 129.565 | 20 | 10.2247 | 0.0200 |
| L3 | 92.2629 - 42.7915 | 53.724 | 20 | 5.9967 | 0.0072 |
| L4 | 48.8358 - 0 | 13.971 | 20 | 2.6928 | 0.0024 |

Critical Deflections and Radius of Curvature - Design Wind

| Elevation ft | Appurtenance | Gov. Load Comb. | Deflection in | Tilt ° | Twist ° | Radius of Curvature ft |
|-----------------|--------------------------------|-----------------------|------------------|-----------|------------|------------------------------|
| 180.00 | Platform Mount [10' LP 601-1] | 20 | 241.825 | 13.9729 | 0.0595 | 4151 |
| 170.00 | Platform Mount [LP 303-1_HR-1] | 20 | 214.527 | 13.1481 | 0.0479 | 2113 |
| 160.00 | Platform Mount [10' LP 601-1] | 20 | 187.307 | 12.2971 | 0.0367 | 1041 |
| 134.00 | T-Arm Mount [TA 702-3] | 20 | 123.754 | 9.9770 | 0.0186 | 479 |
| 131.00 | 3.5' Hor 2.5x2.5 Angle | 20 | 117.416 | 9.6939 | 0.0172 | 489 |

| Elevation ft | Appurtenance | Gov. Load Comb. | Deflection in | Tilt ° | Twist ° | Radius of Curvature ft |
|-----------------|---------------------------|-----------------------|------------------|-----------|------------|------------------------------|
| 124.00 | Platform Mount [LP 601-1] | 20 | 103.499 | 9.0217 | 0.0143 | 521 |
| 120.00 | Platform Mount [LP 601-1] | 20 | 96.070 | 8.6330 | 0.0130 | 541 |
| 80.00 | Pipe Mount [PM 601-3] | 20 | 39.359 | 4.9492 | 0.0054 | 741 |
| 63.00 | Side Arm Mount [SO 701-1] | 20 | 23.523 | 3.6496 | 0.0035 | 731 |

Compression Checks

Pole Design Data

| Section No. | Elevation ft | Size | L ft | L_u ft | KI/r | A in^2 | P_u K | ϕP_n K | Ratio $\frac{P_u}{\phi P_n}$ |
|----------------|--------------------------|------------------------------|---------|-------------|--------|-------------|------------|-----------------|---------------------------------|
| L1 | 179.813 - 132.966 (1) | TP25.5375x15x0.25 | 46.85 | 0.00 | 0.0 | 19.406 5 | -12.05 | 1135.28 | 0.011 |
| L2 | 132.966 - 87.3645 (2) | TP35.1887x24.2069x0.37 5 | 49.29 | 0.00 | 0.0 | 40.138 1 | -26.99 | 2348.08 | 0.011 |
| L3 | 87.3645 - 42.7915 (3) | TP44.3577x33.3474x0.43 75 | 49.47 | 0.00 | 0.0 | 59.120 7 | -41.64 | 3458.56 | 0.012 |
| L4 | 42.7915 - 0 (4) | TP53x42.1375x0.5 | 48.84 | 0.00 | 0.0 | 68.212 3 | -45.34 | 3990.42 | 0.011 |

Pole Bending Design Data

| Section No. | Elevation ft | Size | M_{ux} kip-ft | ϕM_{nx} kip-ft | Ratio $\frac{M_{ux}}{\phi M_{nx}}$ | M_{uy} kip-ft | ϕM_{ny} kip-ft | Ratio $\frac{M_{uy}}{\phi M_{ny}}$ |
|----------------|--------------------------|------------------------------|--------------------|-------------------------|---------------------------------------|--------------------|-------------------------|---------------------------------------|
| L1 | 179.813 - 132.966 (1) | TP25.5375x15x0.25 | 690.40 | 718.39 | 0.961 | 0.00 | 718.39 | 0.000 |
| L2 | 132.966 - 87.3645 (2) | TP35.1887x24.2069x0.37 5 | 1959.23 | 2061.22 | 0.951 | 0.00 | 2061.22 | 0.000 |
| L3 | 87.3645 - 42.7915 (3) | TP44.3577x33.3474x0.43 75 | 3440.33 | 3814.57 | 0.902 | 0.00 | 3814.57 | 0.000 |
| L4 | 42.7915 - 0 (4) | TP53x42.1375x0.5 | 3657.13 | 4462.49 | 0.820 | 0.00 | 4462.49 | 0.000 |

Pole Shear Design Data

| Section No. | Elevation ft | Size | Actual V_u K | ϕV_n K | Ratio $\frac{V_u}{\phi V_n}$ | Actual T_u kip-ft | ϕT_n kip-ft | Ratio $\frac{T_u}{\phi T_n}$ |
|----------------|--------------------------|------------------------------|----------------------|-----------------|---------------------------------|---------------------------|----------------------|---------------------------------|
| L1 | 179.813 - 132.966 (1) | TP25.5375x15x0.25 | 21.12 | 340.58 | 0.062 | 0.02 | 729.47 | 0.000 |
| L2 | 132.966 - 87.3645 (2) | TP35.1887x24.2069x0.37 5 | 32.37 | 704.42 | 0.046 | 1.85 | 2080.33 | 0.001 |
| L3 | 87.3645 - 42.7915 (3) | TP44.3577x33.3474x0.43 75 | 35.62 | 1037.57 | 0.034 | 1.76 | 3868.57 | 0.000 |
| L4 | 42.7915 - 0 (4) | TP53x42.1375x0.5 | 36.35 | 1211.08 | 0.030 | 1.76 | 4506.15 | 0.000 |

Pole Interaction Design Data

| Section No. | Elevation ft | Ratio P_u | Ratio M_{ux} | Ratio M_{uy} | Ratio V_u | Ratio T_u | Comb. Stress Ratio | Allow. Stress Ratio | Criteria |
|-------------|--------------------------|----------------|-------------------|-------------------|----------------|----------------|--------------------------|---------------------------|----------|
| | | ϕP_n | ϕM_{nx} | ϕM_{ny} | ϕV_n | ϕT_n | | | |
| L1 | 179.813 - 132.966 (1) | 0.011 | 0.961 | 0.000 | 0.062 | 0.000 | 0.975 | 1.050 | 4.8.2 |
| L2 | 132.966 - 87.3645 (2) | 0.011 | 0.951 | 0.000 | 0.046 | 0.001 | 0.964 | 1.050 | 4.8.2 |
| L3 | 87.3645 - 42.7915 (3) | 0.012 | 0.902 | 0.000 | 0.034 | 0.000 | 0.915 | 1.050 | 4.8.2 |
| L4 | 42.7915 - 0 (4) | 0.011 | 0.820 | 0.000 | 0.030 | 0.000 | 0.832 | 1.050 | 4.8.2 |

Section Capacity Table

| Section No. | Elevation ft | Component Type | Size | Critical Element | P K | ϕP_{allow} K | % Capacity | Pass Fail | |
|-------------|----------------------|-------------------|--------------------------|---------------------|--------|-----------------------|-----------------|--------------|-------------|
| L1 | 179.813 - 132.966 | Pole | TP25.5375x15x0.25 | 1 | -12.05 | 1192.04 | 92.9 | Pass | |
| L2 | 132.966 - 87.3645 | Pole | TP35.1887x24.2069x0.375 | 2 | -26.99 | 2465.48 | 91.8 | Pass | |
| L3 | 87.3645 - 42.7915 | Pole | TP44.3577x33.3474x0.4375 | 3 | -41.64 | 3631.49 | 87.2 | Pass | |
| L4 | 42.7915 - 0 | Pole | TP53x42.1375x0.5 | 4 | -45.34 | 4189.94 | 79.2 | Pass | |
| | | | | | | | Summary | | |
| | | | | | | | Pole (L1) | 92.9 | Pass |
| | | | | | | | RATING = | 92.9 | Pass |

APPENDIX B
BASE LEVEL DRAWING



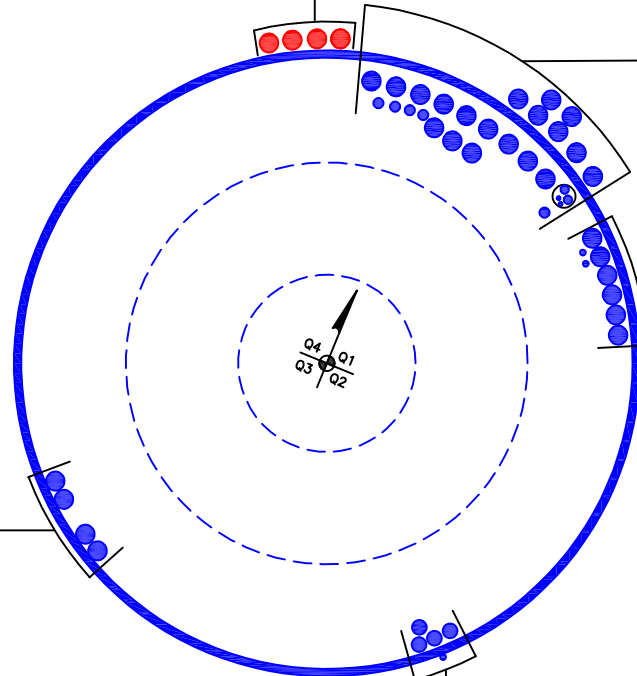
(PROPOSED EQUIPMENT CONFIGURATION)
(4) 1-5/8" TO 170 FT LEVEL

(OTHER CONSIDERED EQUIPMENT--IN 2" CONDUIT)
(2) 3/8" TO 182 FT LEVEL
(2) 3/4" TO 182 FT LEVEL
(OTHER CONSIDERED EQUIPMENT)
(4) 7/8" TO 182 FT LEVEL
(15) 1-5/8" TO 182 FT LEVEL
(4) 1-5/8" TO 160 FT LEVEL
(1) 7/8" TO 120 FT LEVEL

(OTHER CONSIDERED EQUIPMENT)
(2) 1/2" TO 134 FT LEVEL
(6) 1-5/8" TO 134 FT LEVEL

(OTHER CONSIDERED EQUIPMENT)
(4) 1-5/8" TO 160 FT LEVEL

(OTHER CONSIDERED EQUIPMENT)
(1) 1/2" TO 63 FT LEVEL
(4) 1-1/4" TO 124 FT LEVEL



APPENDIX C
ADDITIONAL CALCULATIONS

Monopole Base Plate Connection

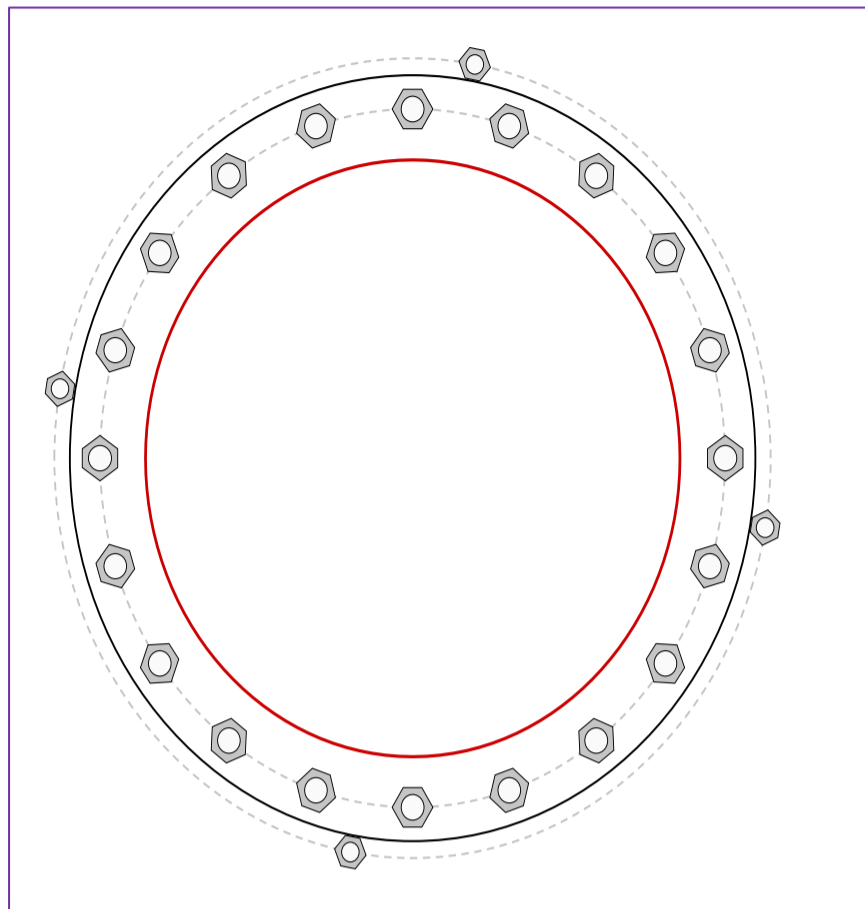


| Site Info | |
|-----------|----------------------|
| BU # | 841293 |
| Site Name | NT-BULLS BRIDGE ROAD |
| Order # | 607122 Rev. 0 |

| Analysis Considerations | |
|-------------------------|------------------|
| TIA-222 Revision | H |
| Grout Considered: | See Custom Sheet |
| I_{ar} (in) | See Custom Sheet |

| Applied Loads | |
|--------------------|---------|
| Moment (kip-ft) | 5245.65 |
| Axial Force (kips) | 62.54 |
| Shear Force (kips) | 37.99 |

*TIA-222-H Section 15.5 Applied



| Connection Properties | Analysis Results |
|-----------------------|------------------|
|-----------------------|------------------|

| Anchor Rod Data |
|--|
| GROUP 1: (20) 2-1/4" ϕ bolts (A615-75 N; $F_y=75$ ksi, $F_u=100$ ksi) on 62" BC |
| GROUP 2: (4) 1-3/4" ϕ bolts (F1554-105 N; $F_y=105$ ksi, $F_u=125$ ksi) on 71" BC |
| Base Plate Data |
| 68" OD x 2.25" Plate (A572-60; $F_y=60$ ksi, $F_u=75$ ksi) |
| Stiffener Data |
| N/A |
| Pole Data |
| 53" x 0.5" 18-sided pole (A572-65; $F_y=65$ ksi, $F_u=80$ ksi) |

| Anchor Rod Summary | | | <i>(units of kips, kip-in)</i> |
|-------------------------|-------------------------|----------------------|--------------------------------|
| GROUP 1: | | | |
| $P_{u,t} = 172.85$ | $\phi P_{n,t} = 243.75$ | Stress Rating | |
| $V_u = 1.9$ | $\phi V_n = 149.1$ | | 67.5% |
| $M_u = n/a$ | $\phi M_n = n/a$ | | Pass |
| GROUP 2: | | | |
| $P_{u,t} = 117.81$ | $\phi P_{n,t} = 178.13$ | Stress Rating | |
| $V_u = 0$ | $\phi V_n = 112.75$ | | 63.0% |
| $M_u = 0$ | $\phi M_n = 84.41$ | | Pass |
| Base Plate Summary | | | |
| Max Stress (ksi): | 44.77 | | (Flexural) |
| Allowable Stress (ksi): | 54 | | |
| Stress Rating: | 79.0% | | Pass |

CCIplate

Elevation (ft) 0 (Base)

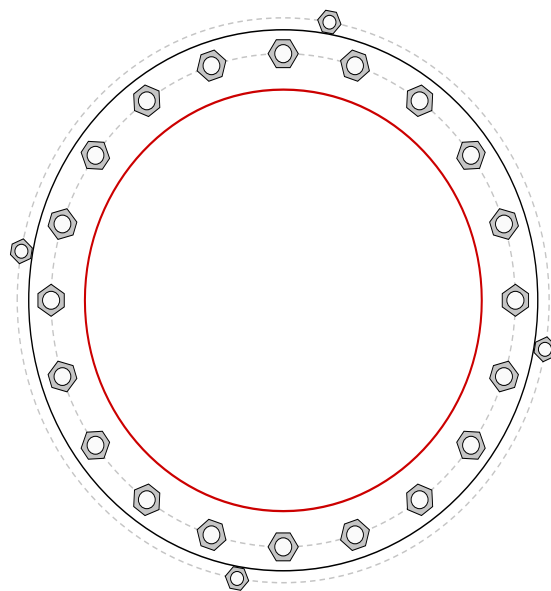
note: Bending interaction not considered when Grout Considered = "Yes"

| Bolt Group | Resist Axial | Resist Shear | Induce Plate Bending | Grout Considered | Apply at BARB Elevation | BARB CL Elevation (ft) |
|------------|--------------|--------------|----------------------|------------------|-------------------------|------------------------|
| 1 | Yes | Yes | Yes | No | No | |
| 2 | No | No | No | No | No | |

Custom Bolt Connection

| Bolt | Bolt Group ID | Location (deg.) | Diameter (in) | Material | Bolt Circle (in) | Eta Factor, η : | I_{ar} (in): | Thread Type | Area Override, in ² | Tension Only |
|------|---------------|-----------------|---------------|-----------|------------------|----------------------|----------------|-------------|--------------------------------|--------------|
| 1 | 1 | 0 | 2.25 | A615-75 | 62 | 0.5 | 0.8125 | N-Included | | No |
| 2 | 1 | 18 | 2.25 | A615-75 | 62 | 0.5 | 0.8125 | N-Included | | No |
| 3 | 1 | 36 | 2.25 | A615-75 | 62 | 0.5 | 0.8125 | N-Included | | No |
| 4 | 1 | 54 | 2.25 | A615-75 | 62 | 0.5 | 0.8125 | N-Included | | No |
| 5 | 1 | 72 | 2.25 | A615-75 | 62 | 0.5 | 0.8125 | N-Included | | No |
| 6 | 1 | 90 | 2.25 | A615-75 | 62 | 0.5 | 0.8125 | N-Included | | No |
| 7 | 1 | 108 | 2.25 | A615-75 | 62 | 0.5 | 0.8125 | N-Included | | No |
| 8 | 1 | 126 | 2.25 | A615-75 | 62 | 0.5 | 0.8125 | N-Included | | No |
| 9 | 1 | 144 | 2.25 | A615-75 | 62 | 0.5 | 0.8125 | N-Included | | No |
| 10 | 1 | 162 | 2.25 | A615-75 | 62 | 0.5 | 0.8125 | N-Included | | No |
| 11 | 1 | 180 | 2.25 | A615-75 | 62 | 0.5 | 0.8125 | N-Included | | No |
| 12 | 1 | 198 | 2.25 | A615-75 | 62 | 0.5 | 0.8125 | N-Included | | No |
| 13 | 1 | 216 | 2.25 | A615-75 | 62 | 0.5 | 0.8125 | N-Included | | No |
| 14 | 1 | 234 | 2.25 | A615-75 | 62 | 0.5 | 0.8125 | N-Included | | No |
| 15 | 1 | 252 | 2.25 | A615-75 | 62 | 0.5 | 0.8125 | N-Included | | No |
| 16 | 1 | 270 | 2.25 | A615-75 | 62 | 0.5 | 0.8125 | N-Included | | No |
| 17 | 1 | 288 | 2.25 | A615-75 | 62 | 0.5 | 0.8125 | N-Included | | No |
| 18 | 1 | 306 | 2.25 | A615-75 | 62 | 0.5 | 0.8125 | N-Included | | No |
| 19 | 1 | 324 | 2.25 | A615-75 | 62 | 0.5 | 0.8125 | N-Included | | No |
| 20 | 1 | 342 | 2.25 | A615-75 | 62 | 0.5 | 0.8125 | N-Included | | No |
| 21 | 2 | 80 | 1.75 | F1554-105 | 71 | 0.5 | 2.75 | N-Included | | No |
| 22 | 2 | 170 | 1.75 | F1554-105 | 71 | 0.5 | 2.75 | N-Included | | No |
| 23 | 2 | 260 | 1.75 | F1554-105 | 71 | 0.5 | 2.75 | N-Included | | No |
| 24 | 2 | 350 | 1.75 | F1554-105 | 71 | 0.5 | 2.75 | N-Included | | No |

Plot Graphic



Drilled Pier Foundation

| | |
|-------------------|------------------------|
| BU # : | 841293 |
| Site Name: | KENT-BULLS BRIDGE ROAD |
| Order Number: | 607122 Rev. 0 |
| TIA-222 Revision: | H |
| Tower Type: | Monopole |



| Applied Loads | | |
|--------------------|---------|--------|
| | Comp. | Uplift |
| Moment (kip-ft) | 5245.65 | |
| Axial Force (kips) | 62.58 | |
| Shear Force (kips) | 37.93 | |

| Material Properties | | |
|--------------------------|----|-----|
| Concrete Strength, f'c: | 3 | ksi |
| Rebar Strength, Fy: | 60 | ksi |
| Tie Yield Strength, Fyt: | 40 | ksi |

| Pier Design Data | | |
|---|------|----|
| Depth | 19 | ft |
| Ext. Above Grade | 1 | ft |
| Pier Section 1 | | |
| <i>From 1' above grade to 19' below grade</i> | | |
| Pier Diameter | 7.5 | ft |
| Rebar Quantity | 42 | |
| Rebar Size | 11 | |
| Clear Cover to Ties | 5.75 | in |
| Tie Size | 5 | |
| Tie Spacing | | in |

Rebar & Pier Options
Embedded Pole Inputs
Belled Pier Inputs

| Analysis Results | | |
|--------------------------------|-------------|--------|
| Soil Lateral Check | | |
| | Compression | Uplift |
| D _{v=0} (ft from TOC) | 5.67 | - |
| Soil Safety Factor | 1.35 | - |
| Max Moment (kip-ft) | 5448.70 | - |
| Rating* | 93.5% | - |
| Soil Vertical Check | | |
| | Compression | Uplift |
| Skin Friction (kips) | 0.00 | - |
| End Bearing (kips) | 1062.06 | - |
| Weight of Concrete (kips) | 129.27 | - |
| Total Capacity (kips) | 1062.06 | - |
| Axial (kips) | 191.85 | - |
| Rating* | 17.2% | - |
| Reinforced Concrete Flexure | | |
| | Compression | Uplift |
| Critical Depth (ft from TOC) | 5.53 | - |
| Critical Moment (kip-ft) | 5448.24 | - |
| Critical Moment Capacity | 10191.10 | - |
| Rating* | 50.9% | - |
| Reinforced Concrete Shear | | |
| | Compression | Uplift |
| Critical Depth (ft from TOC) | 14.96 | - |
| Critical Shear (kip) | 770.98 | - |
| Critical Shear Capacity | 824.66 | - |
| Rating* | 89.0% | - |

Shear-Friction Methodology is Applied

| | |
|-------------------------------|-------|
| Structural Foundation Rating* | 89.0% |
| Soil Interaction Rating* | 93.5% |

*Rating per TIA-222-H Section 15.5

| Check Limitation | |
|---------------------------------------|-------------------------------------|
| Apply TIA-222-H Section 15.5: | <input checked="" type="checkbox"/> |
| N/A | <input type="checkbox"/> |
| Additional Longitudinal Rebar | |
| Input Effective Depths (else Actual): | <input type="checkbox"/> |
| Shear Design Options | |
| Check Shear along Depth of Pier: | <input checked="" type="checkbox"/> |
| Utilize Shear-Friction Methodology: | <input checked="" type="checkbox"/> |
| Override Critical Depth: | <input type="checkbox"/> |

[Go to Soil Calculations](#)

| Soil Profile | | | | | |
|-------------------|----|-------------|---|--|--|
| Groundwater Depth | 10 | # of Layers | 6 | | |

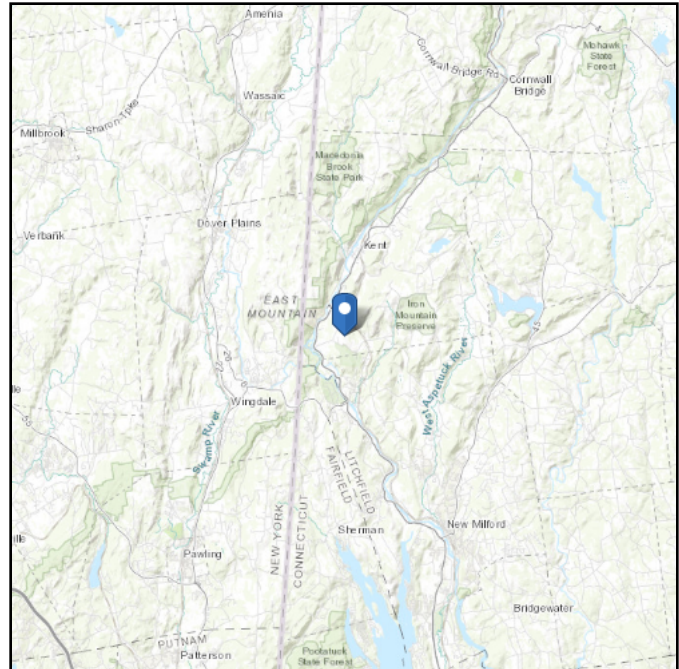
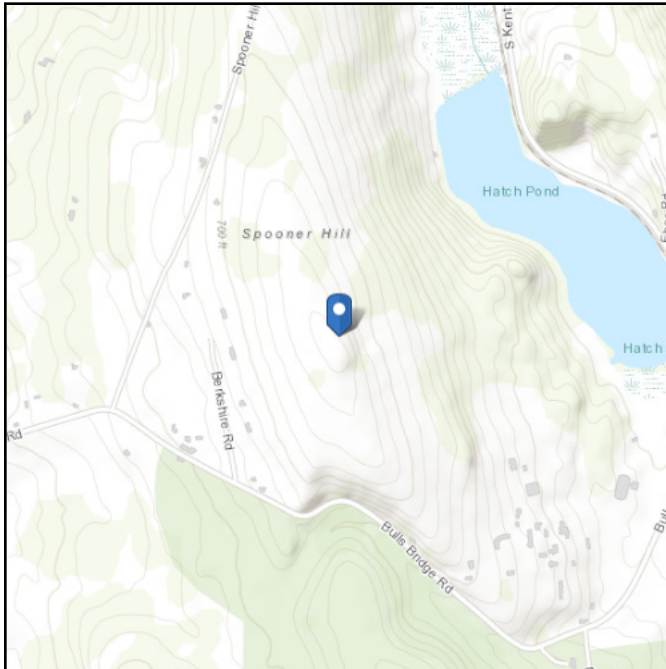
| Layer | Top (ft) | Bottom (ft) | Thickness (ft) | γ _{soil} (pcf) | γ _{concrete} (pcf) | Cohesion (ksf) | Angle of Friction (degrees) | Calculated Ultimate Skin Friction Comp (ksf) | Calculated Ultimate Skin Friction Uplift (ksf) | Ultimate Skin Friction Comp Override (ksf) | Ultimate Skin Friction Uplift Override (ksf) | Ult. Net Bearing Capacity (ksf) | SPT Blow Count | Soil Type |
|-------|----------|-------------|----------------|-------------------------|-----------------------------|----------------|-----------------------------|--|--|--|--|---------------------------------|----------------|--------------|
| 1 | 0 | 3 | 3 | 130 | 150 | 0 | 0 | 0.000 | 0.000 | 0.00 | 0.00 | | | Cohesionless |
| 2 | 3 | 3.75 | 0.75 | 135 | 150 | 0 | 0 | 0.000 | 0.000 | 0.00 | 0.00 | | | Cohesionless |
| 3 | 3.75 | 10 | 6.25 | 135 | 150 | 0 | 40 | 0.000 | 0.000 | 0.00 | 0.00 | | | Cohesionless |
| 4 | 10 | 14 | 4 | 72.6 | 87.6 | 0 | 40 | 0.000 | 0.000 | 0.00 | 0.00 | | | Cohesionless |
| 5 | 14 | 18 | 4 | 82.6 | 87.6 | 0 | 42 | 0.000 | 0.000 | 0.00 | 0.00 | | | Cohesionless |
| 6 | 18 | 19 | 1 | 97.6 | 87.6 | 0 | 44 | 0.000 | 0.000 | 0.00 | 0.00 | 30 | | Cohesionless |

ASCE 7 Hazards Report

Address:
No Address at This Location

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

Elevation: 780.6 ft (NAVD 88)
Latitude: 41.681625
Longitude: -73.486611



Wind

Results:

| | |
|--------------|----------|
| Wind Speed | 114 Vmph |
| 10-year MRI | 75 Vmph |
| 25-year MRI | 84 Vmph |
| 50-year MRI | 89 Vmph |
| 100-year MRI | 95 Vmph |

Data Source: ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2
Date Accessed: Fri Apr 15 2022

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

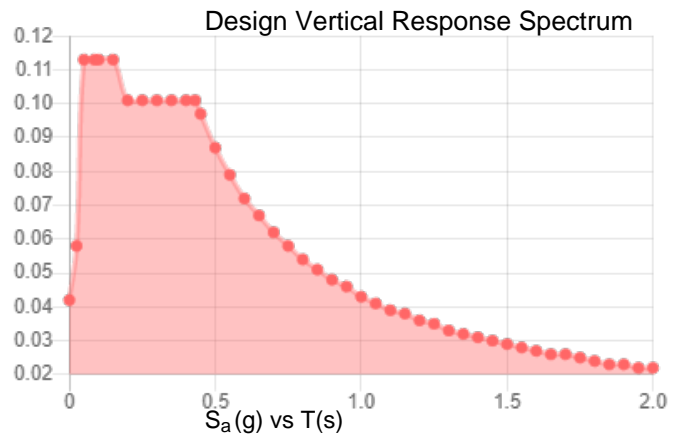
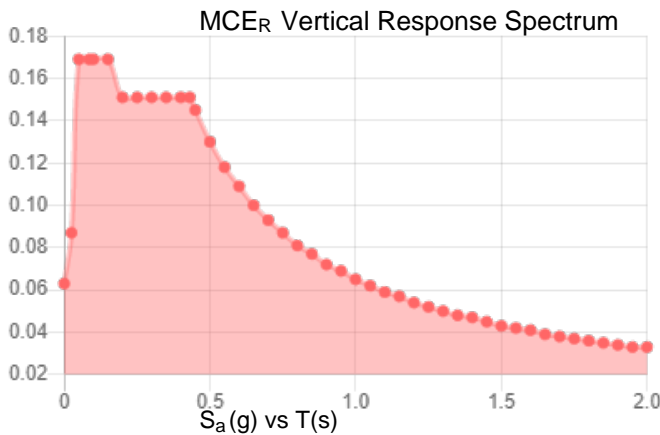
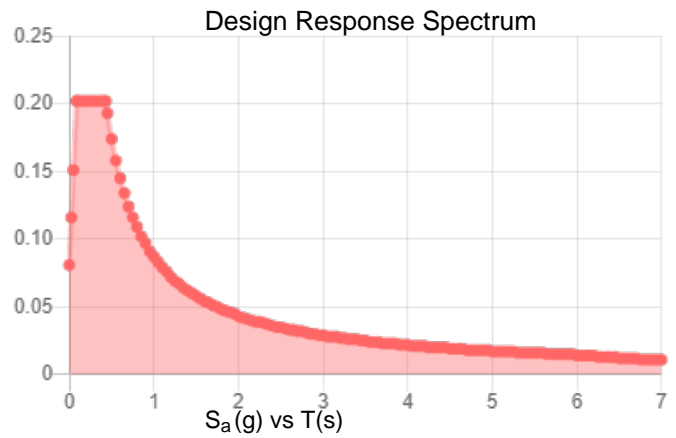
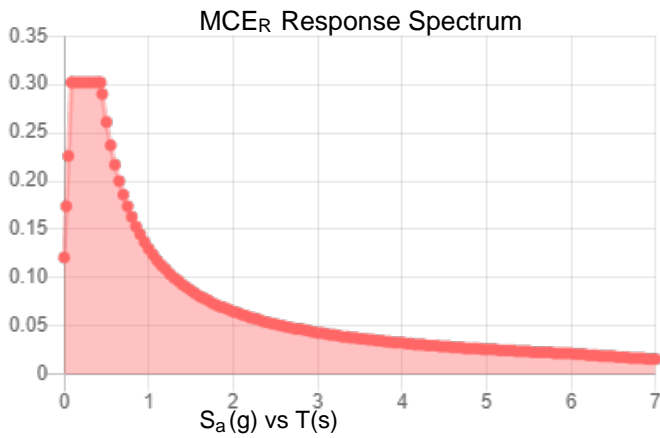
Site is not in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2.

Site Soil Class: D - Default (see Section 11.4.3)

Results:

| | | | |
|------------|-------|--------------------|-------|
| S_s : | 0.189 | S_{D1} : | 0.087 |
| S_1 : | 0.054 | T_L : | 6 |
| F_a : | 1.6 | PGA : | 0.103 |
| F_v : | 2.4 | PGA _M : | 0.165 |
| S_{MS} : | 0.302 | F_{PGA} : | 1.593 |
| S_{M1} : | 0.13 | I_e : | 1 |
| S_{DS} : | 0.202 | C_v : | 0.7 |

Seismic Design Category B



Data Accessed: Fri Apr 15 2022

Date Source:

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

Ice

Results:

Ice Thickness: 1.00 in.
Concurrent Temperature: 15 F
Gust Speed 40 mph

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

Date Accessed: Fri Apr 15 2022

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

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

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

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In using this Tool, you expressly assume all risks associated with your use. Under no circumstances shall ASCE or its officers, directors, employees, members, affiliates, or agents be liable to you or any other person for any direct, indirect, special, incidental, or consequential damages arising from or related to your use of, or reliance on, the Tool or any information obtained therein. To the fullest extent permitted by law, you agree to release and hold harmless ASCE from any and all liability of any nature arising out of or resulting from any use of data provided by the ASCE 7 Hazard Tool.

Date: **April 12, 2022**



Trylon
1825 W. Walnut Hill Lane,
Suite 302
Irving, TX 75038
214-930-1730

Subject: **Mount Analysis Report**

Carrier Designation: **T-Mobile Equipment Change-Out**
Carrier Site Number: CTNH541A
Carrier Site Name: CTNH541A

Crown Castle Designation: **BU Number:** 841293
Site Name: Kent-Bulls Bridge Road
JDE Job Number: 707866
Order Number: 607122 Rev. 0

Engineering Firm Designation: **Trylon Report Designation:** 206944

Site Data: **136 Bulls Bridge Road, South Kent, Litchfield County, CT, 06785**
Latitude 41°40'53.85" Longitude -73°29'11.80"

Structure Information: **Tower Height & Type:** **179.8 ft Monopole**
Mount Elevation: **170.0 ft**
Mount Width & Type: **12.5 ft Platform**

Trylon is pleased to submit this “**Mount Analysis Report**” to determine the structural integrity of T-Mobile’s antenna mounting system with the proposed appurtenance and equipment addition on the abovementioned supporting tower structure. Analysis of the existing supporting tower structure is to be completed by others and therefore is not part of this analysis. Analysis of the antenna mounting system as a tie-off point for fall protection or rigging is not part of this document.

The purpose of the analysis is to determine acceptability of the mount stress level. Based on our analysis we have determined the mount stress level to be:

Platform

Sufficient

This analysis utilizes an ultimate 3-second gust wind speed of 114 mph as required by the 2018 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Mount analysis prepared by: Ioana Gurgu

Respectfully Submitted by:
Cliff Abernathy, P.E.

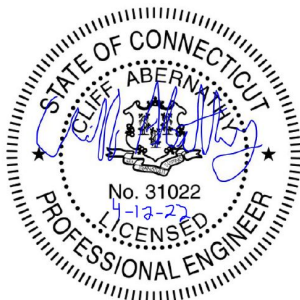


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8) APPENDIX D

Additional Calculations

1) INTRODUCTION

This is an existing 3 sector 12.5 ft Platform, designed by Site Pro 1.

2) ANALYSIS CRITERIA

| | |
|---|-----------|
| Building Code: | 2018 IBC |
| TIA-222 Revision: | TIA-222-H |
| Risk Category: | II |
| Ultimate Wind Speed: | 114 mph |
| Exposure Category: | C |
| Topographic Factor at Base: | 1.00 |
| Topographic Factor at Mount: | 1.00 |
| Ice Thickness: | 1.00 in |
| Wind Speed with Ice: | 40 mph |
| Seismic S_s: | 0.189 |
| Seismic S₁: | 0.054 |
| Live Loading Wind Speed: | 30 mph |
| Man Live Load at Mid/End-Points: | 250 lb |
| Man Live Load at Mount Pipes: | 500 lb |

Table 1 - Proposed Equipment Configuration

| Mount Centerline (ft) | Antenna Centerline (ft) | Number of Antennas | Antenna Manufacturer | Antenna Model | Mount / Modification Details |
|-----------------------|-------------------------|--------------------|----------------------|--------------------------|------------------------------|
| 170.0 | 170.0 | 4 | RFS/Celwave | APX16DWV-16DWV-S-E-A20 | 12.5 ft Platform |
| | | 4 | RFS/Celwave | APXVAALL24_43-U-NA20_TMO | |
| | | 4 | Ericsson | RRUS 11 B2 | |
| | | 4 | Ericsson | Radio 4480 TMOV2 | |
| | | 3 | Ericsson | RRUS 11 B4 | |
| | | 1 | Ericsson | RADIO 2217 B2 | |

3) ANALYSIS PROCEDURE

Table 2 - Documents Provided

| Document | Remarks | Reference | Source |
|-----------------------------|----------------------|----------------|-----------|
| Crown Application | T-Mobile Application | 607122, Rev. 0 | CCI Sites |
| Structural Analysis Report | Black & Veatch Corp. | 9997865 | CCI Sites |
| Mount Manufacturer Drawings | Site Pro 1 | RMQP-396 | Trylon |

3.1) Analysis Method

RISA-3D (Version 17.0.4), a commercially available analysis software package, was used to create a three-dimensional model of the antenna mounting system and calculate member stresses for various loading cases.

A tool internally developed, using Microsoft Excel, by Tylon was used to calculate wind loading on all appurtenances, dishes, and mount members for various load cases. Selected output from the analysis is included in Appendix B.

This analysis was performed in accordance with Crown Castle’s ENG-SOW-10208 *Tower Mount Analysis* (Revision B).

3.2) Assumptions

- 1) The antenna mounting system was properly fabricated, installed and maintained in good condition in accordance with its original design and manufacturer’s specifications.
- 2) The configuration of antennas, mounts, and other appurtenances are as specified in Table 1 and the referenced drawings.
- 3) All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.
- 4) The analysis will be required to be revised if the existing conditions in the field differ from those shown in the above-referenced documents or assumed in this analysis. No allowance was made for any damaged, missing, or rusted members.
- 5) Prior structural modifications to the tower mounting system are assumed to be installed as shown per available data.
- 6) Steel grades have been assumed as follows, unless noted otherwise:

| | |
|------------------------------------|---------------------|
| Channel, Solid Round, Angle, Plate | ASTM A36 (GR 36) |
| HSS (Rectangular) | ASTM A500 (GR B-46) |
| Pipe | ASTM A53 (GR 35) |
| Connection Bolts | ASTM A325 |

This analysis may be affected if any assumptions are not valid or have been made in error. Tylon should be notified to determine the effect on the structural integrity of the antenna mounting system.

4) ANALYSIS RESULTS

Table 3 - Mount Component Stresses vs. Capacity (Platform, All Sectors)

| Notes | Component | Critical Member | Centerline (ft) | % Capacity | Pass / Fail |
|---------|---------------------|-----------------|-----------------|------------|-------------|
| 1, 2, 3 | Mount Pipe(s) | MP5 | 170.0 | 63.5 | Pass |
| | Horizontal(s) | H1 | | 21.6 | Pass |
| | Standoff(s) | M29 | | 53.2 | Pass |
| | Bracing(s) | M31 | | 23.5 | Pass |
| | Handrail(s) | M46 | | 47.6 | Pass |
| | Threaded Rod(s) | M124 | | 52.4 | Pass |
| | Plate(s) | M28 | | 39.8 | Pass |
| | Mount Connection(s) | - | | 34.1 | Pass |

| | |
|---|--------------|
| Structure Rating (max from all components) = | 63.5% |
|---|--------------|

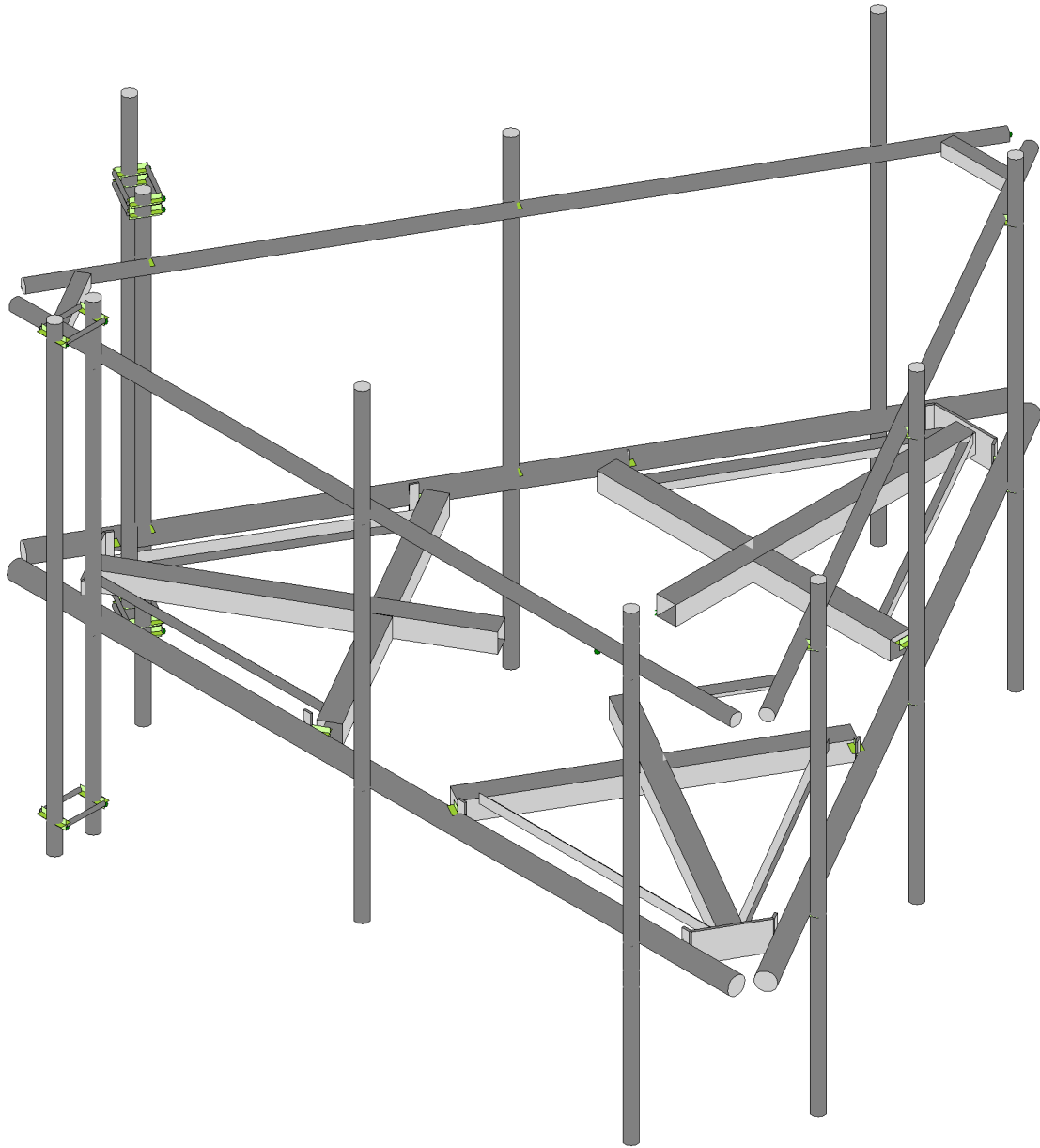
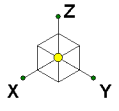
Notes:

- 1) See additional documentation in "Appendix C - Software Analysis Output" for calculations supporting the % capacity consumed.
- 2) See additional documentation in "Appendix D – Additional Calculations" for detailed mount connection calculations.
- 3) Rating per TIA-222-H, Section 15.5

4.1) Recommendations

The mount has sufficient capacity to carry the proposed loading configuration. No modifications are required at this time.

APPENDIX A
WIRE FRAME AND RENDERED MODELS



Envelope Only Solution

Trylon

IG

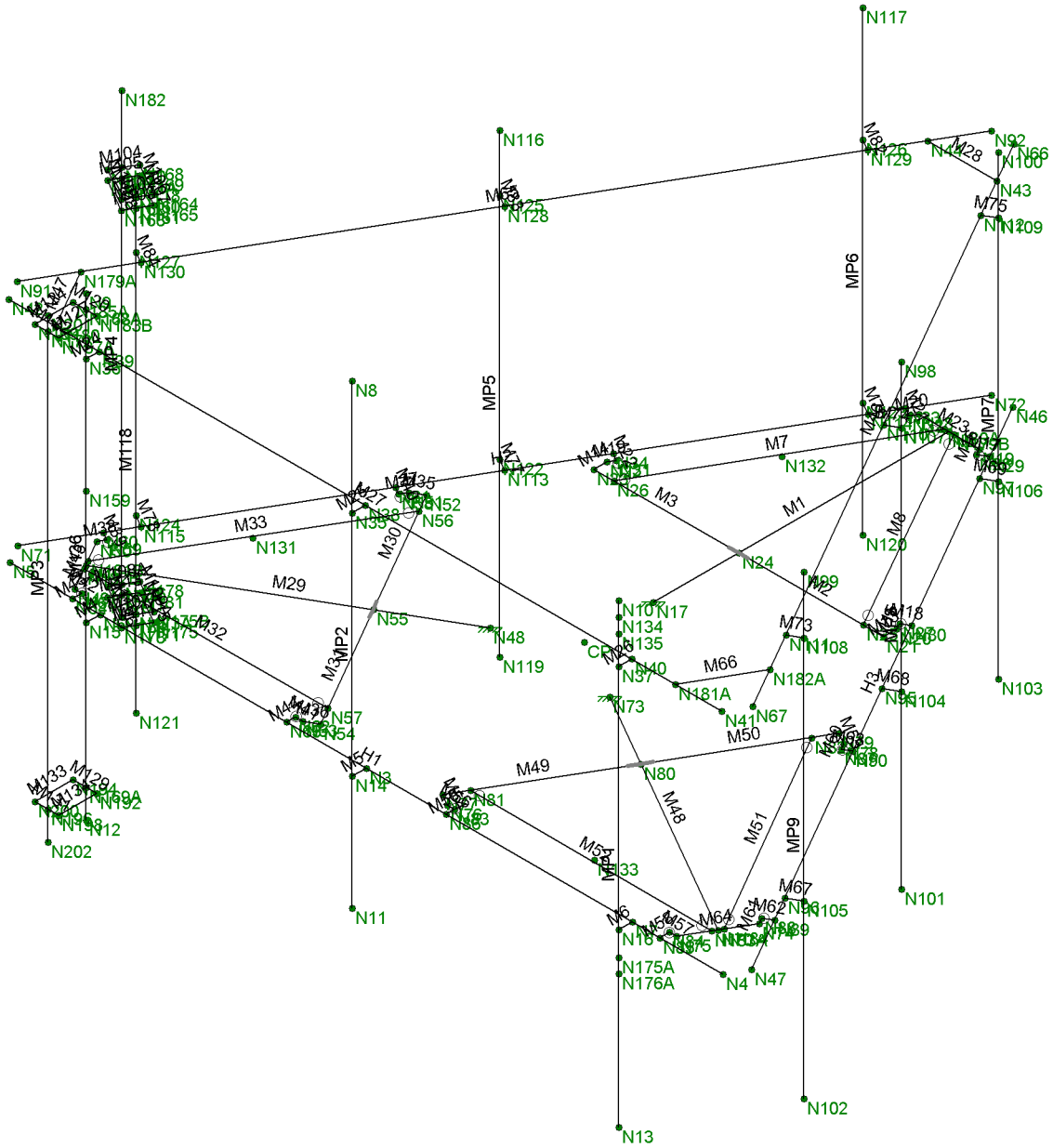
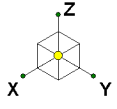
206944

841293

SK - 1

Apr 12, 2022 at 1:51 PM

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Envelope Only Solution

| |
|--------|
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841293

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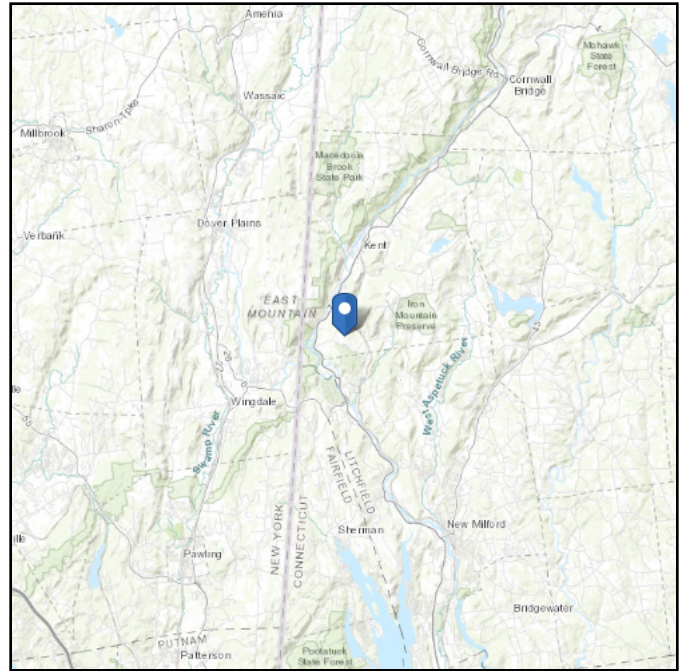
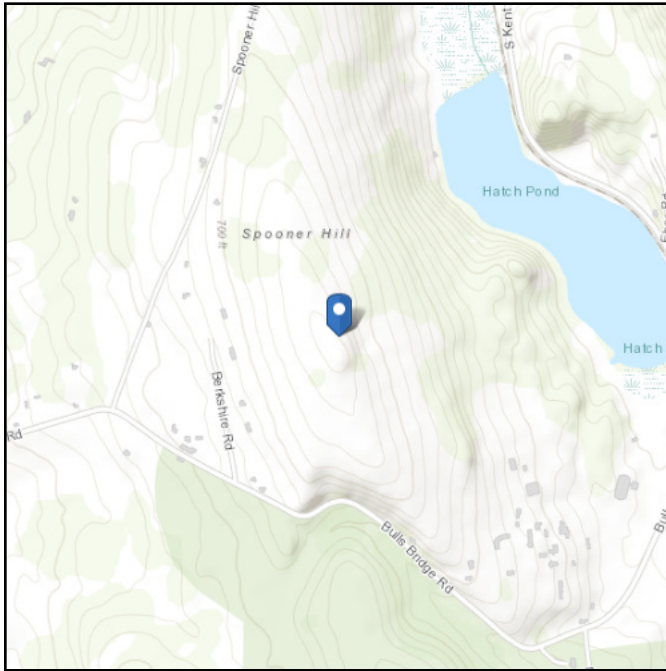
APPENDIX B
SOFTWARE INPUT CALCULATIONS

ASCE 7 Hazards Report

Address:
No Address at This Location

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

Elevation: 780.6 ft (NAVD 88)
Latitude: 41.681625
Longitude: -73.486611



Wind

Results:

| | |
|--------------|----------|
| Wind Speed | 114 Vmph |
| 10-year MRI | 75 Vmph |
| 25-year MRI | 84 Vmph |
| 50-year MRI | 89 Vmph |
| 100-year MRI | 95 Vmph |

Data Source: ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2
Date Accessed: Tue Apr 12 2022

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

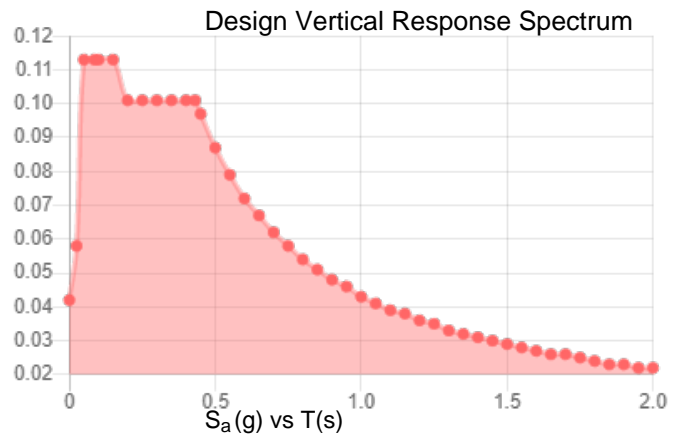
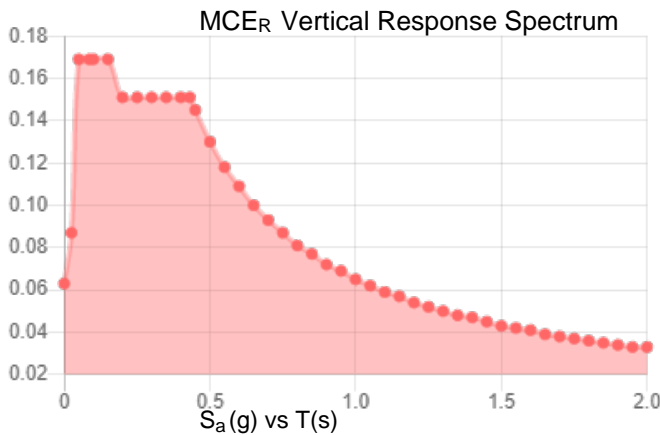
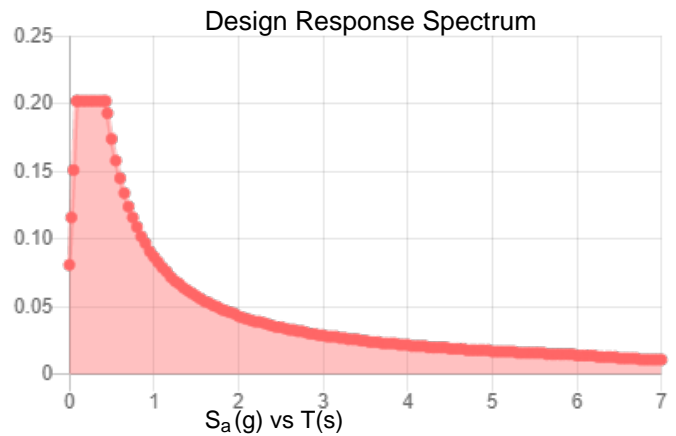
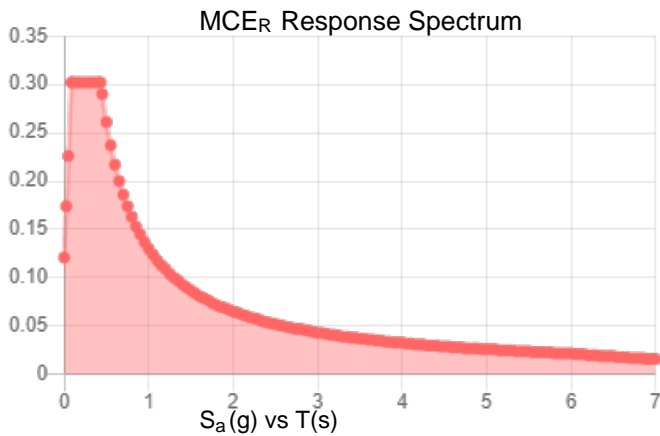
Site is not in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2.

Site Soil Class: D - Default (see Section 11.4.3)

Results:

| | | | |
|------------|-------|--------------------|-------|
| S_s : | 0.189 | S_{D1} : | 0.087 |
| S_1 : | 0.054 | T_L : | 6 |
| F_a : | 1.6 | PGA : | 0.103 |
| F_v : | 2.4 | PGA _M : | 0.165 |
| S_{MS} : | 0.302 | F_{PGA} : | 1.593 |
| S_{M1} : | 0.13 | I_e : | 1 |
| S_{DS} : | 0.202 | C_v : | 0.7 |

Seismic Design Category B



Data Accessed: Tue Apr 12 2022

Date Source:

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

Ice

Results:

Ice Thickness: 1.00 in.

Concurrent Temperature: 15 F

Gust Speed 40 mph

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

Date Accessed: Tue Apr 12 2022

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

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

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Trylon

1825 W. Walnut Hill Lane Suite 120
Irving, TX 75038

TIA LOAD CALCULATOR 2.2

| PROJECT DATA | |
|--------------------|----------|
| Job Code: | 206944 |
| Carrier Site ID: | CTNH541A |
| Carrier Site Name: | CTNH541A |

| CODES AND STANDARDS | |
|----------------------|----------------------------|
| Building Code: | 2018 IBC |
| Local Building Code: | Connecticut State Building |
| Design Standard: | TIA-222-H |

| STRUCTURE DETAILS | | |
|--------------------|----------|-----|
| Mount Type: | Platform | -- |
| Mount Elevation: | 170.0 | ft. |
| Number of Sectors: | 3 | -- |
| Structure Type: | Monopole | -- |
| Structure Height: | 179.8 | ft. |

| ANALYSIS CRITERIA | | |
|--------------------------|----------------|-----|
| Structure Risk Category: | II | -- |
| Exposure Category: | C | -- |
| Site Class: | D - Stiff Soil | -- |
| Ground Elevation: | 780.6 | ft. |

| TOPOGRAPHIC DATA | | |
|---------------------------------|------|-----|
| Topographic Category: | 1.00 | -- |
| Topographic Feature: | N/A | -- |
| Crest Point Elevation: | 0.00 | ft. |
| Base Point Elevation: | 0.00 | ft. |
| Crest to Mid-Height (L/2): | 0.00 | ft. |
| Distance from Crest (x): | 0.00 | ft. |
| Base Topo Factor (K_{zt}): | 1.00 | -- |
| Mount Topo Factor (K_{zt}): | 1.00 | -- |

| WIND PARAMETERS | | |
|------------------------------------|-------|-----|
| Design Wind Speed: | 114 | mph |
| Wind Escalation Factor (K_s): | 1.00 | -- |
| Velocity Coefficient (K_z): | 1.42 | -- |
| Directionality Factor (K_d): | 0.95 | -- |
| Gust Effect Factor (G_h): | 1.00 | -- |
| Shielding Factor (K_a): | 0.90 | -- |
| Velocity Pressure (q_z): | 43.48 | psf |
| Ground Elevation Factor (K_e): | 0.97 | -- |

| ICE PARAMETERS | | |
|-------------------------------------|------|-----|
| Design Ice Wind Speed: | 40 | mph |
| Design Ice Thickness (t_i): | 1.00 | in |
| Importance Factor (I_i): | 1.00 | -- |
| Ice Velocity Pressure (q_{zi}): | 4.46 | psf |
| Mount Ice Thickness (t_{iz}): | 1.18 | in |

| WIND STRUCTURE CALCULATIONS | | |
|-----------------------------|-------|-----|
| Flat Member Pressure: | 78.27 | psf |
| Round Member Pressure: | 46.96 | psf |
| Ice Wind Pressure: | 4.81 | psf |

| SEISMIC PARAMETERS | | |
|---------------------------------|-------|----|
| Importance Factor (I_e): | 1.00 | -- |
| Short Period Accel. (S_s): | 0.189 | g |
| 1 Second Accel. (S_1): | 0.054 | g |
| Short Period Des. (S_{DS}): | 0.20 | g |
| 1 Second Des. (S_{D1}): | 0.09 | g |
| Short Period Coeff. (F_a): | 1.60 | -- |
| 1 Second Coeff. (F_v): | 2.40 | -- |
| Response Coefficient (C_s): | 0.10 | -- |
| Amplification Factor (A_s): | 1.20 | -- |

LOAD COMBINATIONS [LRFD]

| # | Description |
|----|-----------------------------|
| 1 | 1.4DL |
| 2 | 1.2DL + 1WL 0 AZI |
| 3 | 1.2DL + 1WL 30 AZI |
| 4 | 1.2DL + 1WL 45 AZI |
| 5 | 1.2DL + 1WL 60 AZI |
| 6 | 1.2DL + 1WL 90 AZI |
| 7 | 1.2DL + 1WL 120 AZI |
| 8 | 1.2DL + 1WL 135 AZI |
| 9 | 1.2DL + 1WL 150 AZI |
| 10 | 1.2DL + 1WL 180 AZI |
| 11 | 1.2DL + 1WL 210 AZI |
| 12 | 1.2DL + 1WL 225 AZI |
| 13 | 1.2DL + 1WL 240 AZI |
| 14 | 1.2DL + 1WL 270 AZI |
| 15 | 1.2DL + 1WL 300 AZI |
| 16 | 1.2DL + 1WL 315 AZI |
| 17 | 1.2DL + 1WL 330 AZI |
| 18 | 0.9DL + 1WL 0 AZI |
| 19 | 0.9DL + 1WL 30 AZI |
| 20 | 0.9DL + 1WL 45 AZI |
| 21 | 0.9DL + 1WL 60 AZI |
| 22 | 0.9DL + 1WL 90 AZI |
| 23 | 0.9DL + 1WL 120 AZI |
| 24 | 0.9DL + 1WL 135 AZI |
| 25 | 0.9DL + 1WL 150 AZI |
| 26 | 0.9DL + 1WL 180 AZI |
| 27 | 0.9DL + 1WL 210 AZI |
| 28 | 0.9DL + 1WL 225 AZI |
| 29 | 0.9DL + 1WL 240 AZI |
| 30 | 0.9DL + 1WL 270 AZI |
| 31 | 0.9DL + 1WL 300 AZI |
| 32 | 0.9DL + 1WL 315 AZI |
| 33 | 0.9DL + 1WL 330 AZI |
| 34 | 1.2DL + 1DLi + 1WLi 0 AZI |
| 35 | 1.2DL + 1DLi + 1WLi 30 AZI |
| 36 | 1.2DL + 1DLi + 1WLi 45 AZI |
| 37 | 1.2DL + 1DLi + 1WLi 60 AZI |
| 38 | 1.2DL + 1DLi + 1WLi 90 AZI |
| 39 | 1.2DL + 1DLi + 1WLi 120 AZI |
| 40 | 1.2DL + 1DLi + 1WLi 135 AZI |
| 41 | 1.2DL + 1DLi + 1WLi 150 AZI |

| # | Description |
|-------|-----------------------------|
| 42 | 1.2DL + 1DLi + 1WLi 180 AZI |
| 43 | 1.2DL + 1DLi + 1WLi 210 AZI |
| 44 | 1.2DL + 1DLi + 1WLi 225 AZI |
| 45 | 1.2DL + 1DLi + 1WLi 240 AZI |
| 46 | 1.2DL + 1DLi + 1WLi 270 AZI |
| 47 | 1.2DL + 1DLi + 1WLi 300 AZI |
| 48 | 1.2DL + 1DLi + 1WLi 315 AZI |
| 49 | 1.2DL + 1DLi + 1WLi 330 AZI |
| 50 | (1.2+0.2Sds) + 1.0E 0 AZI |
| 51 | (1.2+0.2Sds) + 1.0E 30 AZI |
| 52 | (1.2+0.2Sds) + 1.0E 45 AZI |
| 53 | (1.2+0.2Sds) + 1.0E 60 AZI |
| 54 | (1.2+0.2Sds) + 1.0E 90 AZI |
| 55 | (1.2+0.2Sds) + 1.0E 120 AZI |
| 56 | (1.2+0.2Sds) + 1.0E 135 AZI |
| 57 | (1.2+0.2Sds) + 1.0E 150 AZI |
| 58 | (1.2+0.2Sds) + 1.0E 180 AZI |
| 59 | (1.2+0.2Sds) + 1.0E 210 AZI |
| 60 | (1.2+0.2Sds) + 1.0E 225 AZI |
| 61 | (1.2+0.2Sds) + 1.0E 240 AZI |
| 62 | (1.2+0.2Sds) + 1.0E 270 AZI |
| 63 | (1.2+0.2Sds) + 1.0E 300 AZI |
| 64 | (1.2+0.2Sds) + 1.0E 315 AZI |
| 65 | (1.2+0.2Sds) + 1.0E 330 AZI |
| 66 | (0.9-0.2Sds) + 1.0E 0 AZI |
| 67 | (0.9-0.2Sds) + 1.0E 30 AZI |
| 68 | (0.9-0.2Sds) + 1.0E 45 AZI |
| 69 | (0.9-0.2Sds) + 1.0E 60 AZI |
| 70 | (0.9-0.2Sds) + 1.0E 90 AZI |
| 71 | (0.9-0.2Sds) + 1.0E 120 AZI |
| 72 | (0.9-0.2Sds) + 1.0E 135 AZI |
| 73 | (0.9-0.2Sds) + 1.0E 150 AZI |
| 74 | (0.9-0.2Sds) + 1.0E 180 AZI |
| 75 | (0.9-0.2Sds) + 1.0E 210 AZI |
| 76 | (0.9-0.2Sds) + 1.0E 225 AZI |
| 77 | (0.9-0.2Sds) + 1.0E 240 AZI |
| 78 | (0.9-0.2Sds) + 1.0E 270 AZI |
| 79 | (0.9-0.2Sds) + 1.0E 300 AZI |
| 80 | (0.9-0.2Sds) + 1.0E 315 AZI |
| 81 | (0.9-0.2Sds) + 1.0E 330 AZI |
| 82-88 | 1.2D + 1.5 Lv1 |

| # | Description |
|-----|------------------------------------|
| 89 | 1.2D + 1.5Lm + 1.0Wm 0 AZI - MP1 |
| 90 | 1.2D + 1.5Lm + 1.0Wm 30 AZI - MP1 |
| 91 | 1.2D + 1.5Lm + 1.0Wm 45 AZI - MP1 |
| 92 | 1.2D + 1.5Lm + 1.0Wm 60 AZI - MP1 |
| 93 | 1.2D + 1.5Lm + 1.0Wm 90 AZI - MP1 |
| 94 | 1.2D + 1.5Lm + 1.0Wm 120 AZI - MP1 |
| 95 | 1.2D + 1.5Lm + 1.0Wm 135 AZI - MP1 |
| 96 | 1.2D + 1.5Lm + 1.0Wm 150 AZI - MP1 |
| 97 | 1.2D + 1.5Lm + 1.0Wm 180 AZI - MP1 |
| 98 | 1.2D + 1.5Lm + 1.0Wm 210 AZI - MP1 |
| 99 | 1.2D + 1.5Lm + 1.0Wm 225 AZI - MP1 |
| 100 | 1.2D + 1.5Lm + 1.0Wm 240 AZI - MP1 |
| 101 | 1.2D + 1.5Lm + 1.0Wm 270 AZI - MP1 |
| 102 | 1.2D + 1.5Lm + 1.0Wm 300 AZI - MP1 |
| 103 | 1.2D + 1.5Lm + 1.0Wm 315 AZI - MP1 |
| 104 | 1.2D + 1.5Lm + 1.0Wm 330 AZI - MP1 |
| 105 | 1.2D + 1.5Lm + 1.0Wm 0 AZI - MP2 |
| 106 | 1.2D + 1.5Lm + 1.0Wm 30 AZI - MP2 |
| 107 | 1.2D + 1.5Lm + 1.0Wm 45 AZI - MP2 |
| 108 | 1.2D + 1.5Lm + 1.0Wm 60 AZI - MP2 |
| 109 | 1.2D + 1.5Lm + 1.0Wm 90 AZI - MP2 |
| 110 | 1.2D + 1.5Lm + 1.0Wm 120 AZI - MP2 |
| 111 | 1.2D + 1.5Lm + 1.0Wm 135 AZI - MP2 |
| 112 | 1.2D + 1.5Lm + 1.0Wm 150 AZI - MP2 |
| 113 | 1.2D + 1.5Lm + 1.0Wm 180 AZI - MP2 |
| 114 | 1.2D + 1.5Lm + 1.0Wm 210 AZI - MP2 |
| 115 | 1.2D + 1.5Lm + 1.0Wm 225 AZI - MP2 |
| 116 | 1.2D + 1.5Lm + 1.0Wm 240 AZI - MP2 |
| 117 | 1.2D + 1.5Lm + 1.0Wm 270 AZI - MP2 |
| 118 | 1.2D + 1.5Lm + 1.0Wm 300 AZI - MP2 |
| 119 | 1.2D + 1.5Lm + 1.0Wm 315 AZI - MP2 |
| 120 | 1.2D + 1.5Lm + 1.0Wm 330 AZI - MP2 |

| # | Description |
|-----|------------------------------------|
| 121 | 1.2D + 1.5Lm + 1.0Wm 0 AZI - MP3 |
| 122 | 1.2D + 1.5Lm + 1.0Wm 30 AZI - MP3 |
| 123 | 1.2D + 1.5Lm + 1.0Wm 45 AZI - MP3 |
| 124 | 1.2D + 1.5Lm + 1.0Wm 60 AZI - MP3 |
| 125 | 1.2D + 1.5Lm + 1.0Wm 90 AZI - MP3 |
| 126 | 1.2D + 1.5Lm + 1.0Wm 120 AZI - MP3 |
| 127 | 1.2D + 1.5Lm + 1.0Wm 135 AZI - MP3 |
| 128 | 1.2D + 1.5Lm + 1.0Wm 150 AZI - MP3 |
| 129 | 1.2D + 1.5Lm + 1.0Wm 180 AZI - MP3 |
| 130 | 1.2D + 1.5Lm + 1.0Wm 210 AZI - MP3 |
| 131 | 1.2D + 1.5Lm + 1.0Wm 225 AZI - MP3 |
| 132 | 1.2D + 1.5Lm + 1.0Wm 240 AZI - MP3 |
| 133 | 1.2D + 1.5Lm + 1.0Wm 270 AZI - MP3 |
| 134 | 1.2D + 1.5Lm + 1.0Wm 300 AZI - MP3 |
| 135 | 1.2D + 1.5Lm + 1.0Wm 315 AZI - MP3 |
| 136 | 1.2D + 1.5Lm + 1.0Wm 330 AZI - MP3 |
| 137 | 1.2D + 1.5Lm + 1.0Wm 0 AZI - MP4 |
| 138 | 1.2D + 1.5Lm + 1.0Wm 30 AZI - MP4 |
| 139 | 1.2D + 1.5Lm + 1.0Wm 45 AZI - MP4 |
| 140 | 1.2D + 1.5Lm + 1.0Wm 60 AZI - MP4 |
| 141 | 1.2D + 1.5Lm + 1.0Wm 90 AZI - MP4 |
| 142 | 1.2D + 1.5Lm + 1.0Wm 120 AZI - MP4 |
| 143 | 1.2D + 1.5Lm + 1.0Wm 135 AZI - MP4 |
| 144 | 1.2D + 1.5Lm + 1.0Wm 150 AZI - MP4 |
| 145 | 1.2D + 1.5Lm + 1.0Wm 180 AZI - MP4 |
| 146 | 1.2D + 1.5Lm + 1.0Wm 210 AZI - MP4 |
| 147 | 1.2D + 1.5Lm + 1.0Wm 225 AZI - MP4 |
| 148 | 1.2D + 1.5Lm + 1.0Wm 240 AZI - MP4 |
| 149 | 1.2D + 1.5Lm + 1.0Wm 270 AZI - MP4 |
| 150 | 1.2D + 1.5Lm + 1.0Wm 300 AZI - MP4 |
| 151 | 1.2D + 1.5Lm + 1.0Wm 315 AZI - MP4 |
| 152 | 1.2D + 1.5Lm + 1.0Wm 330 AZI - MP4 |

*This page shows an example of maintenance loads for (4) pipes, the number of mount pipe LCs may vary per site

EQUIPMENT LOADING

| <i>Appurtenance Name</i> | <i>Qty.</i> | <i>Elevation [ft]</i> | <i>--</i> | <i>EPA_N (ft²)</i> | <i>EPA_T (ft²)</i> | <i>Weight (lbs)</i> |
|--------------------------|-------------|-----------------------|-----------|---|---|---------------------|
| APX16DWV-16DWV'-S-E-A20 | 3 | 170 | No Ice | 6.26 | 1.5 | 40.70 |
| -- | -- | -- | w/ Ice | 7.47 | 2.53 | 92.60 |
| APX16DWV-16DWV'-S-E-A20 | 1 | 170 | No Ice | 6.26 | 1.5 | 40.70 |
| -- | -- | -- | w/ Ice | 7.47 | 2.53 | 92.60 |
| APXVAALL24_43-U-NA20_TMO | 3 | 170 | No Ice | 14.67 | 5.32 | 149.90 |
| -- | -- | -- | w/ Ice | 16.22 | 6.68 | 277.10 |
| APXVAALL24_43-U-NA20_TMO | 1 | 170 | No Ice | 14.67 | 5.32 | 149.90 |
| -- | -- | -- | w/ Ice | 16.22 | 6.68 | 277.10 |
| RADIO 2217 B2 | 1 | 170 | No Ice | 1.35 | 0.59 | 26.45 |
| -- | -- | -- | w/ Ice | 1.59 | 0.77 | 28.14 |
| RRUS 11 B2 | 3 | 170 | No Ice | 2.83 | 1.18 | 50.70 |
| -- | -- | -- | w/ Ice | 3.17 | 1.44 | 54.08 |
| RRUS 11 B2 | 1 | 170 | No Ice | 2.83 | 1.18 | 50.70 |
| -- | -- | -- | w/ Ice | 3.17 | 1.44 | 54.08 |
| RRUS 11 B4 | 3 | 170 | No Ice | 2.79 | 1.19 | 50.70 |
| -- | -- | -- | w/ Ice | 3.12 | 1.44 | 54.07 |
| Radio 4480_TMOV2 | 3 | 170 | No Ice | 2.88 | 1.40 | 81.00 |
| -- | -- | -- | w/ Ice | 3.22 | 1.67 | 56.52 |
| Radio 4480_TMOV2 | 1 | 170 | No Ice | 2.88 | 1.40 | 81.00 |
| -- | -- | -- | w/ Ice | 3.22 | 1.67 | 56.52 |
| -- | -- | -- | No Ice | | | |
| -- | -- | -- | w/ Ice | | | |
| -- | -- | -- | No Ice | | | |
| -- | -- | -- | w/ Ice | | | |
| -- | -- | -- | No Ice | | | |
| -- | -- | -- | w/ Ice | | | |
| -- | -- | -- | No Ice | | | |
| -- | -- | -- | w/ Ice | | | |
| -- | -- | -- | No Ice | | | |
| -- | -- | -- | w/ Ice | | | |
| -- | -- | -- | No Ice | | | |
| -- | -- | -- | w/ Ice | | | |
| -- | -- | -- | No Ice | | | |
| -- | -- | -- | w/ Ice | | | |
| -- | -- | -- | No Ice | | | |
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| -- | -- | -- | No Ice | | | |
| -- | -- | -- | w/ Ice | | | |
| -- | -- | -- | No Ice | | | |
| -- | -- | -- | w/ Ice | | | |
| -- | -- | -- | No Ice | | | |
| -- | -- | -- | w/ Ice | | | |
| -- | -- | -- | No Ice | | | |
| -- | -- | -- | w/ Ice | | | |
| -- | -- | -- | No Ice | | | |
| -- | -- | -- | w/ Ice | | | |

EQUIPMENT LOADING [CONT.]

| <i>Appurtenance Name</i> | <i>Qty.</i> | <i>Elevation [ft]</i> | <i>--</i> | <i>EPA_N (ft2)</i> | <i>EPA_T (ft2)</i> | <i>Weight (lbs)</i> |
|--------------------------|-------------|-----------------------|-----------|------------------------------|------------------------------|---------------------|
| | | | No Ice | | | |
| -- | -- | -- | w/ Ice | | | |
| | | | No Ice | | | |
| -- | -- | -- | w/ Ice | | | |
| | | | No Ice | | | |
| -- | -- | -- | w/ Ice | | | |
| | | | No Ice | | | |
| -- | -- | -- | w/ Ice | | | |
| | | | No Ice | | | |
| -- | -- | -- | w/ Ice | | | |
| | | | No Ice | | | |
| -- | -- | -- | w/ Ice | | | |
| | | | No Ice | | | |
| -- | -- | -- | w/ Ice | | | |
| | | | No Ice | | | |
| -- | -- | -- | w/ Ice | | | |
| | | | No Ice | | | |
| -- | -- | -- | w/ Ice | | | |
| | | | No Ice | | | |
| -- | -- | -- | w/ Ice | | | |
| | | | No Ice | | | |
| -- | -- | -- | w/ Ice | | | |
| | | | No Ice | | | |
| -- | -- | -- | w/ Ice | | | |
| | | | No Ice | | | |
| -- | -- | -- | w/ Ice | | | |
| | | | No Ice | | | |
| -- | -- | -- | w/ Ice | | | |
| | | | No Ice | | | |
| -- | -- | -- | w/ Ice | | | |
| | | | No Ice | | | |
| -- | -- | -- | w/ Ice | | | |
| | | | No Ice | | | |
| -- | -- | -- | w/ Ice | | | |
| | | | No Ice | | | |
| -- | -- | -- | w/ Ice | | | |

EQUIPMENT WIND CALCULATIONS

| Appurtenance Name | Qty. | Elevation [ft] | K_{zt} | K_z | K_d | t_d | q_z [psf] | q_{zi} [psf] |
|----------------------|------|----------------|----------|-------|-------|-------|----------------|-------------------|
| PX16DWV-16DWV'-S-E-A | 3 | 170 | 1.00 | 1.42 | 0.95 | 1.18 | 43.48 | 5.35 |
| PX16DWV-16DWV'-S-E-A | 1 | 170 | 1.00 | 1.42 | 0.95 | 1.18 | 43.48 | 5.35 |
| XVAALL24_43-U-NA20_T | 3 | 170 | 1.00 | 1.42 | 0.95 | 1.18 | 43.48 | 5.35 |
| XVAALL24_43-U-NA20_T | 1 | 170 | 1.00 | 1.42 | 0.95 | 1.18 | 43.48 | 5.35 |
| RADIO 2217 B2 | 1 | 170 | 1.00 | 1.42 | 0.95 | 1.18 | 43.48 | 5.35 |
| RRUS 11 B2 | 3 | 170 | 1.00 | 1.42 | 0.95 | 1.18 | 43.48 | 5.35 |
| RRUS 11 B2 | 1 | 170 | 1.00 | 1.42 | 0.95 | 1.18 | 43.48 | 5.35 |
| RRUS 11 B4 | 3 | 170 | 1.00 | 1.42 | 0.95 | 1.18 | 43.48 | 5.35 |
| Radio 4480_TMOV2 | 3 | 170 | 1.00 | 1.42 | 0.95 | 1.18 | 43.48 | 5.35 |
| Radio 4480_TMOV2 | 1 | 170 | 1.00 | 1.42 | 0.95 | 1.18 | 43.48 | 5.35 |
| | | | | | | | | |
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EQUIPMENT LATERAL WIND FORCE CALCULATIONS

| <i>Appurtenance Name</i> | <i>Qty.</i> | <i>--</i> | <i>0° 180°</i> | <i>30° 210°</i> | <i>60° 240°</i> | <i>90° 270°</i> | <i>120° 300°</i> | <i>150° 330°</i> |
|--------------------------|-------------|-----------|--------------------|---------------------|---------------------|---------------------|----------------------|----------------------|
| APX16DWV-16DWV^-S-E-A20 | 3 | No Ice | 244.98 | 105.27 | 198.41 | 58.70 | 198.41 | 105.27 |
| -- | -- | w/ Ice | 35.97 | 18.14 | 30.03 | 12.19 | 30.03 | 18.14 |
| APX16DWV-16DWV^-S-E-A20 | 1 | No Ice | 244.98 | 105.27 | 198.41 | 58.70 | 198.41 | 105.27 |
| -- | -- | w/ Ice | 35.97 | 18.14 | 30.03 | 12.19 | 30.03 | 18.14 |
| APXVAALL24_43-U-NA20_TMC | 3 | No Ice | 574.11 | 299.67 | 482.63 | 208.20 | 482.63 | 299.67 |
| -- | -- | w/ Ice | 78.13 | 43.68 | 66.65 | 32.20 | 66.65 | 43.68 |
| APXVAALL24_43-U-NA20_TMC | 1 | No Ice | 574.11 | 299.67 | 482.63 | 208.20 | 482.63 | 299.67 |
| -- | -- | w/ Ice | 78.13 | 43.68 | 66.65 | 32.20 | 66.65 | 43.68 |
| RADIO 2217 B2 | 1 | No Ice | 52.87 | 30.41 | 45.38 | 22.92 | 45.38 | 30.41 |
| -- | -- | w/ Ice | 7.65 | 4.69 | 6.66 | 3.70 | 6.66 | 4.69 |
| RRUS 11 B2 | 3 | No Ice | 110.88 | 62.42 | 94.73 | 46.26 | 94.73 | 62.42 |
| -- | -- | w/ Ice | 15.26 | 9.00 | 13.17 | 6.92 | 13.17 | 9.00 |
| RRUS 11 B2 | 1 | No Ice | 110.88 | 62.42 | 94.73 | 46.26 | 94.73 | 62.42 |
| -- | -- | w/ Ice | 15.26 | 9.00 | 13.17 | 6.92 | 13.17 | 9.00 |
| RRUS 11 B4 | 3 | No Ice | 109.22 | 62.30 | 93.58 | 46.66 | 93.58 | 62.30 |
| -- | -- | w/ Ice | 15.04 | 8.98 | 13.02 | 6.96 | 13.02 | 8.98 |
| Radio 4480_TMOV2 | 3 | No Ice | 112.64 | 69.17 | 98.15 | 54.67 | 98.15 | 69.17 |
| -- | -- | w/ Ice | 15.51 | 9.92 | 13.65 | 8.06 | 13.65 | 9.92 |
| Radio 4480_TMOV2 | 1 | No Ice | 112.64 | 69.17 | 98.15 | 54.67 | 98.15 | 69.17 |
| -- | -- | w/ Ice | 15.51 | 9.92 | 13.65 | 8.06 | 13.65 | 9.92 |
| -- | -- | No Ice | | | | | | |
| -- | -- | w/ Ice | | | | | | |
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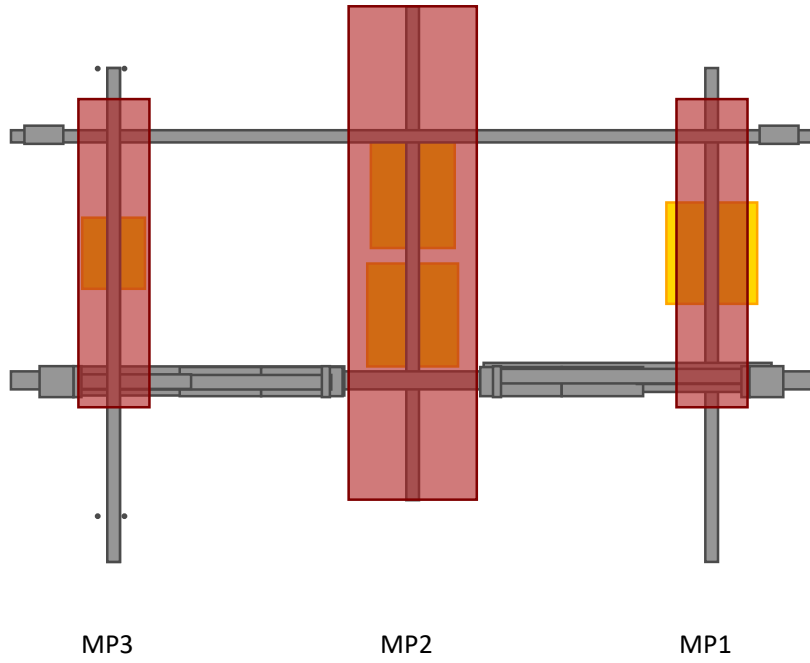
EQUIPMENT LATERAL WIND FORCE CALCULATIONS [CONT.]

| <i>Appurtenance Name</i> | <i>Qty.</i> | -- | 0° 180° | 30° 210° | 60° 240° | 90° 270° | 120° 300° | 150° 330° |
|--------------------------|-------------|--------|------------|-------------|-------------|-------------|--------------|--------------|
| | | No Ice | | | | | | |
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EQUIPMENT SEISMIC FORCE CALCULATIONS

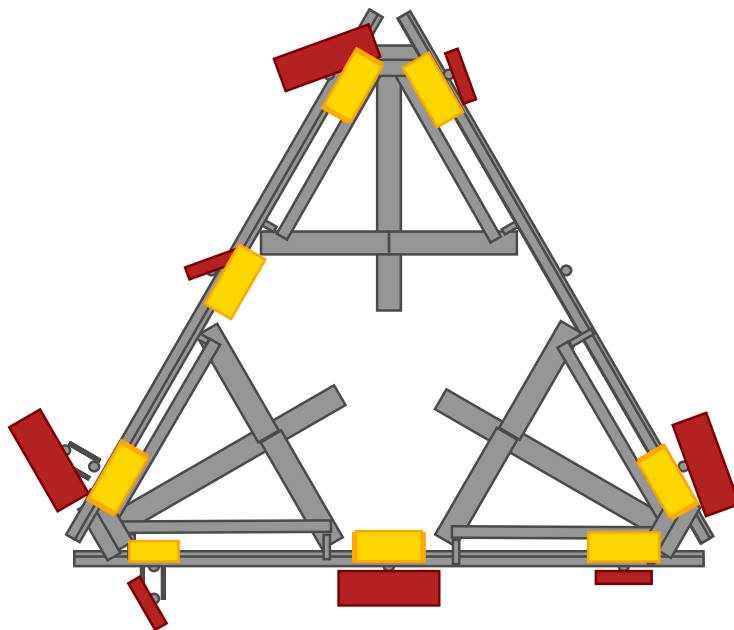
| <i>Appurtenance Name</i> | <i>Qty.</i> | <i>Elevation [ft]</i> | <i>Weight [lbs]</i> | <i>F_p [lbs]</i> |
|--------------------------|-------------|-----------------------|---------------------|----------------------------|
| APX16DWV-16DWV-S-E-A20 | 3 | 170 | 40.7 | 4.92 |
| APX16DWV-16DWV-S-E-A20 | 1 | 170 | 40.7 | 4.92 |
| APXVAALL24_43-U-NA20_TMO | 3 | 170 | 149.9 | 18.13 |
| APXVAALL24_43-U-NA20_TMO | 1 | 170 | 149.9 | 18.13 |
| RADIO 2217 B2 | 1 | 170 | 26.45 | 3.20 |
| RRUS 11 B2 | 3 | 170 | 50.7 | 6.13 |
| RRUS 11 B2 | 1 | 170 | 50.7 | 6.13 |
| RRUS 11 B4 | 3 | 170 | 50.7 | 6.13 |
| Radio 4480_TMOV2 | 3 | 170 | 81 | 9.80 |
| Radio 4480_TMOV2 | 1 | 170 | 81 | 9.80 |
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ELEVATION VIEW



*Elevation View Shows Only One Sector

PLAN VIEW



| Equipment Name | Total Quantity | Antenna Centerline | Mount Pipe Positions | Equipment Azimuths |
|--------------------------|----------------|--------------------|----------------------|--------------------|
| APX16DWV-16DWV`-S-E-A20 | 3 | 170 | MP1/MP5/MP7 | 20/180/270 |
| APX16DWV-16DWV`-S-E-A20 | 1 | 170 | MP3 | 80 |
| APXVAALL24_43-U-NA20_TMO | 3 | 170 | MP2/MP4/MP9 | 20/80/270 |
| APXVAALL24_43-U-NA20_TMO | 1 | 170 | MP6 | 180 |
| RADIO 2217 B2 | 1 | 170 | M136 | 20 |
| RRUS 11 B2 | 3 | 170 | MP2/M118/MP9 | 20/140/260 |
| RRUS 11 B2 | 1 | 170 | MP6 | 140 |
| RRUS 11 B4 | 3 | 170 | MP1/MP5/MP7 | 20/140/260 |
| Radio 4480_TMOV2 | 3 | 170 | MP2/M118/MP9 | 20/140/260 |
| Radio 4480_TMOV2 | 1 | 170 | MP6 | 140 |
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APPENDIX C
SOFTWARE ANALYSIS OUTPUT

APPENDIX D
ADDITIONAL CALCULATIONS

BOLT TOOL 1.5.2

| Project Data | |
|--------------------|----------|
| Job Code: | 206944 |
| Carrier Site ID: | CTNH541A |
| Carrier Site Name: | CTNH541A |

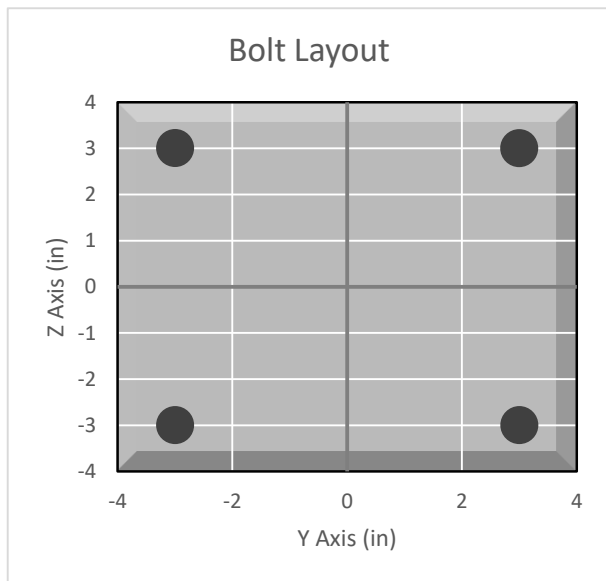
| Code | |
|----------------------|-----------|
| Design Standard: | TIA-222-H |
| Slip Check: | No |
| Pretension Standard: | AISC |

| Bolt Properties | | |
|--------------------------------------|-------|-----|
| Connection Type: | Bolt | |
| Diameter: | 0.625 | in |
| Grade: | A325 | -- |
| Yield Strength (F _y): | 92 | ksi |
| Ultimate Strength (F _u): | 120 | ksi |
| Number of Bolts: | 4 | -- |
| Threads Included: | Yes | -- |
| Double Shear: | No | -- |
| Connection Pipe Size: | - | in |

| Connection Description |
|------------------------|
| Standoff to Tower |

| Bolt Check* | | |
|----------------------------------|---------|------|
| Tensile Capacity (ϕT_n): | 20340.1 | lbs |
| Shear Capacity (ϕV_n): | 13805.8 | lbs |
| Tension Force (T _u): | 7292.3 | lbs |
| Shear Force (V _u): | 408.0 | lbs |
| Tension Usage: | 34.1% | -- |
| Shear Usage: | 2.8% | -- |
| Interaction: | 34.1% | Pass |
| Controlling Member: | M29 | -- |
| Controlling LC: | 9 | -- |

*Rating per TIA-222-H Section 15.5



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

T-Mobile Existing Facility

Site ID: CTNH541A

136 Bulls Bridge Road
South Kent, Connecticut 06785

May 30, 2022

EBI Project Number: 6222003450

| Site Compliance Summary | |
|---|------------------|
| Compliance Status: | COMPLIANT |
| Site total MPE% of FCC general population allowable limit: | 27.10% |

May 30, 2022

T-Mobile

Attn: Jason Overbey, RF Manager
35 Griffin Road South
Bloomfield, Connecticut 06002

Emissions Analysis for Site: CTNH541A

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **136 Bulls Bridge Road** in **South Kent, Connecticut** for the purpose of determining whether the emissions from the Proposed T-Mobile 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.

Public 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 600 MHz and 700 MHz frequency bands are approximately $400 \mu\text{W}/\text{cm}^2$ and $467 \mu\text{W}/\text{cm}^2$, respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 11 GHz frequency 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 T-Mobile Wireless antenna facility located at 136 Bulls Bridge Road in South Kent, Connecticut using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile 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 manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, 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) 2 LTE channels (600 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 2) 1 NR channel (600 MHz Band) was considered for each sector of the proposed installation. This Channel has a transmit power of 80 Watts.
- 3) 2 LTE channels (700 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 4) 2 UMTS channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 5) 2 LTE channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 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 manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, 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 RFS APX16DWV-16DWV-S-E-A20 for the 1900 MHz / 2100 MHz channel(s), the RFS APXVAALL24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz channel(s) in Sector A, the RFS APX16DWV-16DWV-S-E-A20 for the 1900 MHz / 2100 MHz channel(s), the RFS APXVAALL24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz channel(s) in Sector B, the RFS APX16DWV-16DWV-S-E-A20 for the 1900 MHz / 2100 MHz channel(s), the RFS APXVAALL24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz channel(s) in Sector C, the RFS APX16DWV-16DWV-S-E-A20 for the 1900 MHz / 2100 MHz channel(s), the RFS APXVAALL24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz channel(s) in Sector D. This is based on feedback from the carrier with regard to anticipated antenna selection. All Antenna gain values and associated transmit power levels are shown in the Site Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, 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 centerline of the proposed antennas is 170 feet above ground level (AGL).
 - 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.
 - 11) All calculations were done with respect to uncontrolled / general population threshold limits.

T-Mobile Site Inventory and Power Data

| Sector: | A | Sector: | B | Sector: | C | Sector: | D |
|---------------------|-----------------------------------|---------------------|-----------------------------------|---------------------|-----------------------------------|---------------------|-----------------------------------|
| Antenna #: | I | Antenna #: | I | Antenna #: | I | Antenna #: | I |
| Make / Model: | RFS APX16DWV-16DWV-S-E-A20 | Make / Model: | RFS APX16DWV-16DWV-S-E-A20 | Make / Model: | RFS APX16DWV-16DWV-S-E-A20 | Make / Model: | RFS APX16DWV-16DWV-S-E-A20 |
| Frequency Bands: | 1900 MHz / 2100 MHz | Frequency Bands: | 1900 MHz / 2100 MHz | Frequency Bands: | 1900 MHz / 2100 MHz | Frequency Bands: | 1900 MHz / 2100 MHz |
| Gain: | 15.9 dBd / 15.9 dBd | Gain: | 15.9 dBd / 15.9 dBd | Gain: | 15.9 dBd / 15.9 dBd | Gain: | 15.9 dBd / 15.9 dBd |
| Height (AGL): | 170 feet | Height (AGL): | 170 feet | Height (AGL): | 170 feet | Height (AGL): | 170 feet |
| Channel Count: | 4 | Channel Count: | 4 | Channel Count: | 4 | Channel Count: | 4 |
| Total TX Power (W): | 180.00 Watts | Total TX Power (W): | 180.00 Watts | Total TX Power (W): | 180.00 Watts | Total TX Power (W): | 180.00 Watts |
| ERP (W): | 7,002.81 | ERP (W): | 7,002.81 | ERP (W): | 7,002.81 | ERP (W): | 7,002.81 |
| Antenna A1 MPE %: | 0.94% | Antenna B1 MPE %: | 0.94% | Antenna C1 MPE %: | 0.94% | Antenna D1 MPE %: | 0.94% |
| Antenna #: | 2 | Antenna #: | 2 | Antenna #: | 2 | Antenna #: | 2 |
| Make / Model: | RFS APXVAALL24_43-U-NA20 | Make / Model: | RFS APXVAALL24_43-U-NA20 | Make / Model: | RFS APXVAALL24_43-U-NA20 | Make / Model: | RFS APXVAALL24_43-U-NA20 |
| Frequency Bands: | 600 MHz / 600 MHz / 700 MHz | Frequency Bands: | 600 MHz / 600 MHz / 700 MHz | Frequency Bands: | 600 MHz / 600 MHz / 700 MHz | Frequency Bands: | 600 MHz / 600 MHz / 700 MHz |
| Gain: | 12.95 dBd / 12.95 dBd / 13.65 dBd | Gain: | 12.95 dBd / 12.95 dBd / 13.65 dBd | Gain: | 12.95 dBd / 12.95 dBd / 13.65 dBd | Gain: | 12.95 dBd / 12.95 dBd / 13.65 dBd |
| Height (AGL): | 170 feet | Height (AGL): | 170 feet | Height (AGL): | 170 feet | Height (AGL): | 170 feet |
| Channel Count: | 5 | Channel Count: | 5 | Channel Count: | 5 | Channel Count: | 5 |
| Total TX Power (W): | 200.00 Watts | Total TX Power (W): | 200.00 Watts | Total TX Power (W): | 200.00 Watts | Total TX Power (W): | 200.00 Watts |
| ERP (W): | 4,151.83 | ERP (W): | 4,151.83 | ERP (W): | 4,151.83 | ERP (W): | 4,151.83 |
| Antenna A2 MPE %: | 1.32% | Antenna B2 MPE %: | 1.32% | Antenna C2 MPE %: | 1.32% | Antenna D2 MPE %: | 1.32% |

| Site Composite MPE % | |
|-----------------------------|---------------|
| Carrier | MPE % |
| T-Mobile (Max at Sector A): | 2.26% |
| AT&T | 3.03% |
| Nextel | 1.41% |
| CT State Police | 4.03% |
| WMNR | 0.05% |
| Sprint | 3.22% |
| Verizon | 13.1% |
| Site Total MPE % : | 27.10% |

| T-Mobile MPE % Per Sector | |
|---------------------------|---------------|
| T-Mobile Sector A Total: | 2.26% |
| T-Mobile Sector B Total: | 2.26% |
| T-Mobile Sector C Total: | 2.26% |
| T-Mobile Sector D Total: | 2.26% |
| | |
| Site Total MPE % : | 27.10% |

| T-Mobile Maximum MPE Power Values (Sector A) | | | | | | | |
|---|------------|-------------------------|---------------|---|-----------------|---|------------------|
| T-Mobile Frequency Band / Technology (Sector A) | # 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 |
| T-Mobile 1900 MHz UMTS | 2 | 1167.14 | 170.0 | 3.12 | 1900 MHz UMTS | 1000 | 0.31% |
| T-Mobile 2100 MHz LTE | 2 | 2334.27 | 170.0 | 6.24 | 2100 MHz LTE | 1000 | 0.62% |
| T-Mobile 600 MHz LTE | 2 | 591.73 | 170.0 | 1.58 | 600 MHz LTE | 400 | 0.40% |
| T-Mobile 600 MHz NR | 1 | 1577.94 | 170.0 | 2.11 | 600 MHz NR | 400 | 0.53% |
| T-Mobile 700 MHz LTE | 2 | 695.22 | 170.0 | 1.86 | 700 MHz LTE | 467 | 0.40% |
| | | | | | | Total: | 2.26% |

• NOTE: Totals may vary by approximately 0.01% due to summation of remainders in calculations.

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 T-Mobile 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:

| T-Mobile Sector | Power Density Value (%) |
|------------------------------------|-------------------------|
| Sector A: | 2.26% |
| Sector B: | 2.26% |
| Sector C: | 2.26% |
| Sector D: | 2.26% |
| T-Mobile Maximum MPE % (Sector A): | 2.26% |
| | |
| Site Total: | 27.10% |
| | |
| Site Compliance Status: | COMPLIANT |

The anticipated composite MPE value for this site assuming all carriers present is **27.10%** 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.

308588

CROWN CASTLE - STA PROPERTY

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[Signature]

⑆ 308588 ⑆ ⑆ 111000614 ⑆

464638126⑆



T-MOBILE SITE NUMBER: CTNH541A
T-MOBILE SITE NAME: CTNH541A
SITE TYPE: MONOPOLE
TOWER HEIGHT: 179'-8"

BUSINESS UNIT #: 841293
SITE ADDRESS: 136 BULLS BRIDGE ROAD
 SOUTH KENT, CT 06785
COUNTY: LITCHFIELD
JURISDICTION: KENT COUNTY

T-MOBILE L600 SITE CONFIGURATION: 4SEC-67E04A_1QP+1OP

T-Mobile
 12920 SE 38TH STREET
 BELLEVUE, WA 98006

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T-MOBILE SITE NUMBER:
 CTNH541A
BU #: 841293
KENT-BULLS BRIDGE ROAD
 136 BULLS BRIDGE ROAD
 SOUTH KENT, CT 06785
 EXISTING 179'-8" MONOPOLE

ISSUED FOR:

| REV | DATE | DRWN | DESCRIPTION | DES./QA |
|-----|------------|------|-------------|---------|
| A | 04/28/2022 | RCD | PRELIMINARY | SS |
| 0 | 05/16/2022 | CB | 100% FINALS | SS |

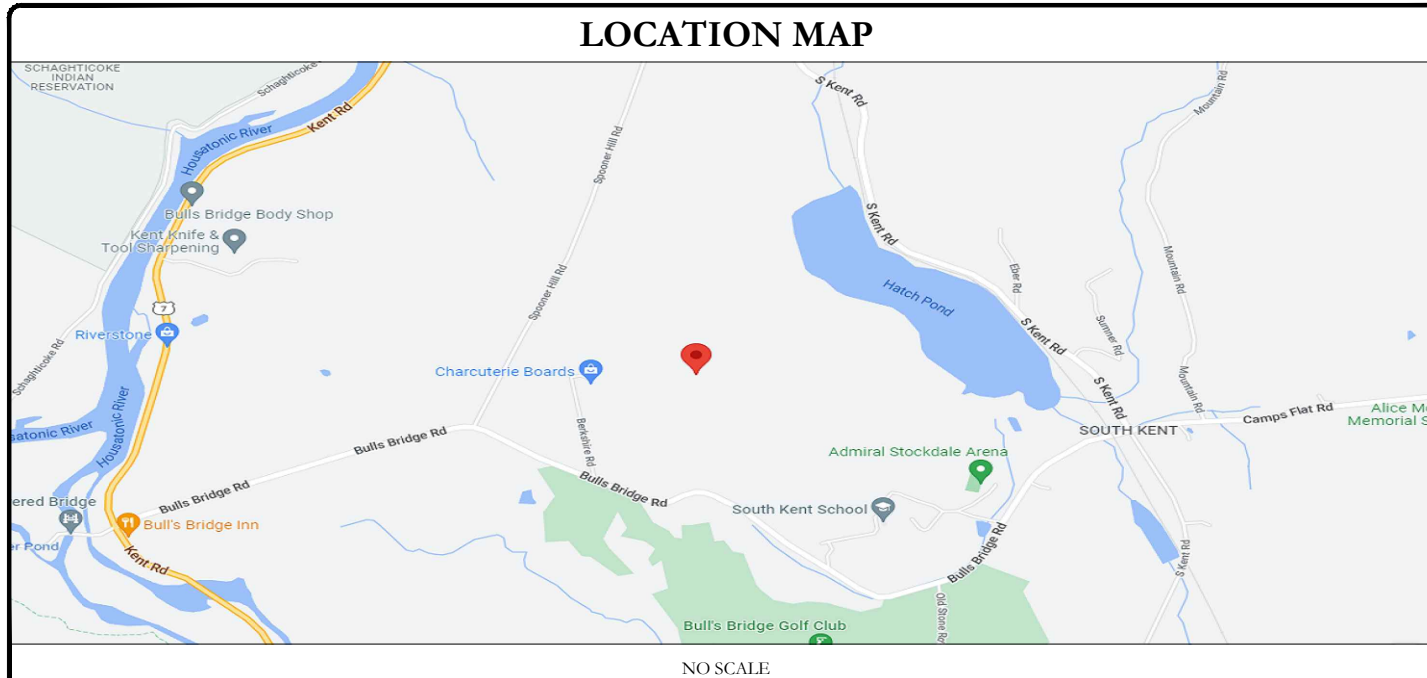
SITE INFORMATION

| | |
|-------------------------------------|--|
| CROWN CASTLE USA INC. SITE NAME: | KENT-BULLS BRIDGE ROAD |
| SITE ADDRESS: | 136 BULLS BRIDGE ROAD SOUTH KENT, CT 06785 |
| COUNTY: | LITCHFIELD |
| MAP/PARCEL #: | VERIFY |
| AREA OF CONSTRUCTION: | EXISTING |
| LATITUDE: | 41.681625° (41° 40' 53.90") |
| LONGITUDE: | -73.486611° (-73° 29' 11.80") |
| LAT/LONG TYPE: | NAD83 |
| GROUND ELEVATION: | ±784 FT |
| CURRENT ZONING: | TBD |
| JURISDICTION: | KENT COUNTY |
| OCCUPANCY CLASSIFICATION: | U |
| TYPE OF CONSTRUCTION: | IIB |
| A.D.A. COMPLIANCE: | FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION |
| PROPERTY OWNER: | TBD |
| TOWER OWNER: | CROWN CASTLE 2000 CORPORATE DRIVE CANONSBURG, PA 15317 |
| CARRIER/APPLICANT: | T-MOBILE 12920 SE 38TH STREET BELLEVUE, WA 98006 |
| ELECTRIC PROVIDER: | TBD |
| TELCO PROVIDER: | TBD |

DRAWING INDEX

| SHEET # | SHEET DESCRIPTION |
|---------|---------------------------------------|
| T-1 | TITLE SHEET |
| T-2 | GENERAL NOTES |
| C-1 | SITE PLAN & ENLARGED SITE PLAN |
| C-2 | FINAL ELEVATION & ANTENNA PLANS |
| C-3 | ANTENNA & CABLE SCHEDULE |
| C-4 | PLUMBING DIAGRAM |
| C-5 | EQUIPMENT SPECS |
| E-1 | AC PANEL SCHEDULES & ONE LINE DIAGRAM |
| G-1 | ANTENNA GROUNDING DIAGRAM |
| G-2 | GROUNDING DETAILS |

ALL DRAWINGS CONTAINED HEREIN ARE FORMATTED FOR 11X17. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.



PROJECT TEAM

| | |
|--|--|
| A&E FIRM: | INFINIGY 500 WEST OFFICE CENTER DR. SUITE 150, FORT WASHINGTON, PA 19034 |
| CROWN CASTLE USA INC. DISTRICT CONTACTS: | 3 CORPORATE PARK DRIVE, SUITE 101 CLIFTON PARK, NY 12065 |
| | PATRICIA PELON - PROJECT MANAGER TRICIA.PELON@CROWNCastle.COM |
| | JASON D'AMICO - CONSTRUCTION MANAGER JASON.DAMICO@CROWNCastle.COM |

PROJECT DESCRIPTION

THE PURPOSE OF THIS PROJECT IS TO ENHANCE BROADBAND CONNECTIVITY AND CAPACITY TO THE EXISTING ELIGIBLE WIRELESS FACILITY.

TOWER SCOPE OF WORK:

- REMOVE (4) ANTENNAS
- REMOVE (4) RRHS
- INSTALL (4) ANTENNAS
- INSTALL (4) RRHS
- INSTALL (1) HYBRID CABLE

GROUND SCOPE OF WORK:

- INSTALL (1) BB6648 IN (E) CABINET
- INSTALL (1) PSU 4813 VOLTAGE BOOSTER IN (E) CABINET

NOTE:
PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE CROWN NOC AT (800) 788-7011 & CROWN CONSTRUCTION MANAGER.

APPLICABLE CODES/REFERENCE DOCUMENTS

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. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES:

| CODE TYPE | CODE |
|------------|-----------------------------|
| BUILDING | 2018 CT STATE BUILDING CODE |
| MECHANICAL | 2015 IMC |
| ELECTRICAL | 2017 NEC |

REFERENCE DOCUMENTS:

| | |
|----------------------|----------------|
| STRUCTURAL ANALYSIS: | BLACK & VEATCH |
| DATED: | 04/15/2022 |
| MOUNT ANALYSIS: | TRYLON |
| DATED: | 04/12/2022 |
| RFDS REVISION: | 3 |
| DATED: | 03/09/2022 |
| ORDER ID: | 607122 |
| REVISION: | 0 |

CALL CONNECTICUT ONE CALL (800) 922-4455 CBYD.COM CALL 2 WORKING DAYS BEFORE YOU DIG!

APPROVALS

| APPROVAL | SIGNATURE | DATE |
|------------------------|-----------|-------|
| PROPERTY OWNER OR REP. | _____ | _____ |
| LAND USE PLANNER | _____ | _____ |
| T-MOBILE | _____ | _____ |
| OPERATIONS | _____ | _____ |
| RF | _____ | _____ |
| NETWORK | _____ | _____ |
| BACKHAUL | _____ | _____ |
| CONSTRUCTION MANAGER | _____ | _____ |

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

05/16/2022

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| | |
|-----------------------------|-----------------------|
| SHEET NUMBER: T-1 | REVISION: 0 |
|-----------------------------|-----------------------|

CROWN CASTLE USA INC. SITE ACTIVITY REQUIREMENTS:

- 1. NOTICE TO PROCEED- NO WORK SHALL COMMENCE PRIOR TO CROWN CASTLE USA INC. WRITTEN NOTICE TO PROCEED (NTP) AND THE ISSUANCE OF A PURCHASE ORDER. PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE CROWN CASTLE USA INC. NOC AT 800-788-7011 & THE CROWN CASTLE USA INC. CONSTRUCTION MANAGER.
- 2. "LOOK UP" - CROWN CASTLE USA INC. SAFETY CLIMB REQUIREMENT: THE INTEGRITY OF THE SAFETY CLIMB AND ALL COMPONENTS OF THE CLIMBING FACILITY SHALL BE CONSIDERED DURING ALL STAGES OF DESIGN, INSTALLATION, AND INSPECTION.

GREENFIELD GROUNDING NOTES:

- 1. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION AND AC POWER GES'S) SHALL BE BONDED TOGETHER AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
- 2. THE CONTRACTOR SHALL PERFORM IEEE FALL-OFF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS, THE CONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.

GENERAL NOTES:

- 1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY: CONTRACTOR: GENERAL CONTRACTOR RESPONSIBLE FOR CONSTRUCTION CARRIER: T-MOBILE TOWER OWNER: CROWN CASTLE USA INC.
- 2. THESE DRAWINGS HAVE BEEN PREPARED USING STANDARDS OF PROFESSIONAL CARE AND COMPLETENESS NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE ENGINEERS IN THIS OR SIMILAR LOCALITIES.

CONCRETE, FOUNDATIONS, AND REINFORCING STEEL:

- 1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
- 2. UNLESS NOTED OTHERWISE, SOIL BEARING PRESSURE USED FOR DESIGN OF SLABS AND FOUNDATIONS IS ASSUMED TO BE 1000 psf.

ELECTRICAL INSTALLATION NOTES:

- 1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES/ORDINANCES.
- 2. CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED AND TRIP HAZARDS ARE ELIMINATED.

Table with columns: SYSTEM, CONDUCTOR, COLOR. Lists conductor color codes for various systems like 120/240V, 10, 120/208V, 30, 277/480V, 30, and DC VOLTAGE.

APWA UNIFORM COLOR CODE:

- WHITE PROPOSED EXCAVATION
- PINK TEMPORARY SURVEY MARKINGS
- RED ELECTRIC POWER LINES, CABLES, CONDUIT, AND LIGHTING CABLES
- YELLOW GAS, OIL, STEAM, PETROLEUM, OR GASEOUS MATERIALS

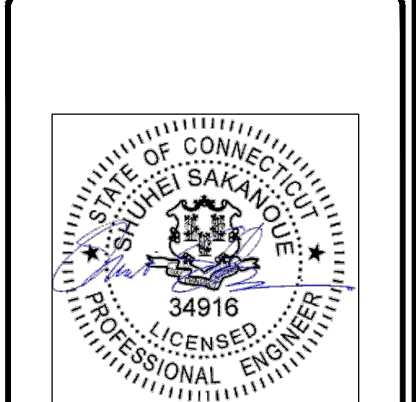
ABBREVIATIONS:

- ANT ANTENNA
- (E) EXISTING
- FIF FACILITY INTERFACE FRAME
- GEN GENERATOR
- GPS GLOBAL POSITIONING SYSTEM



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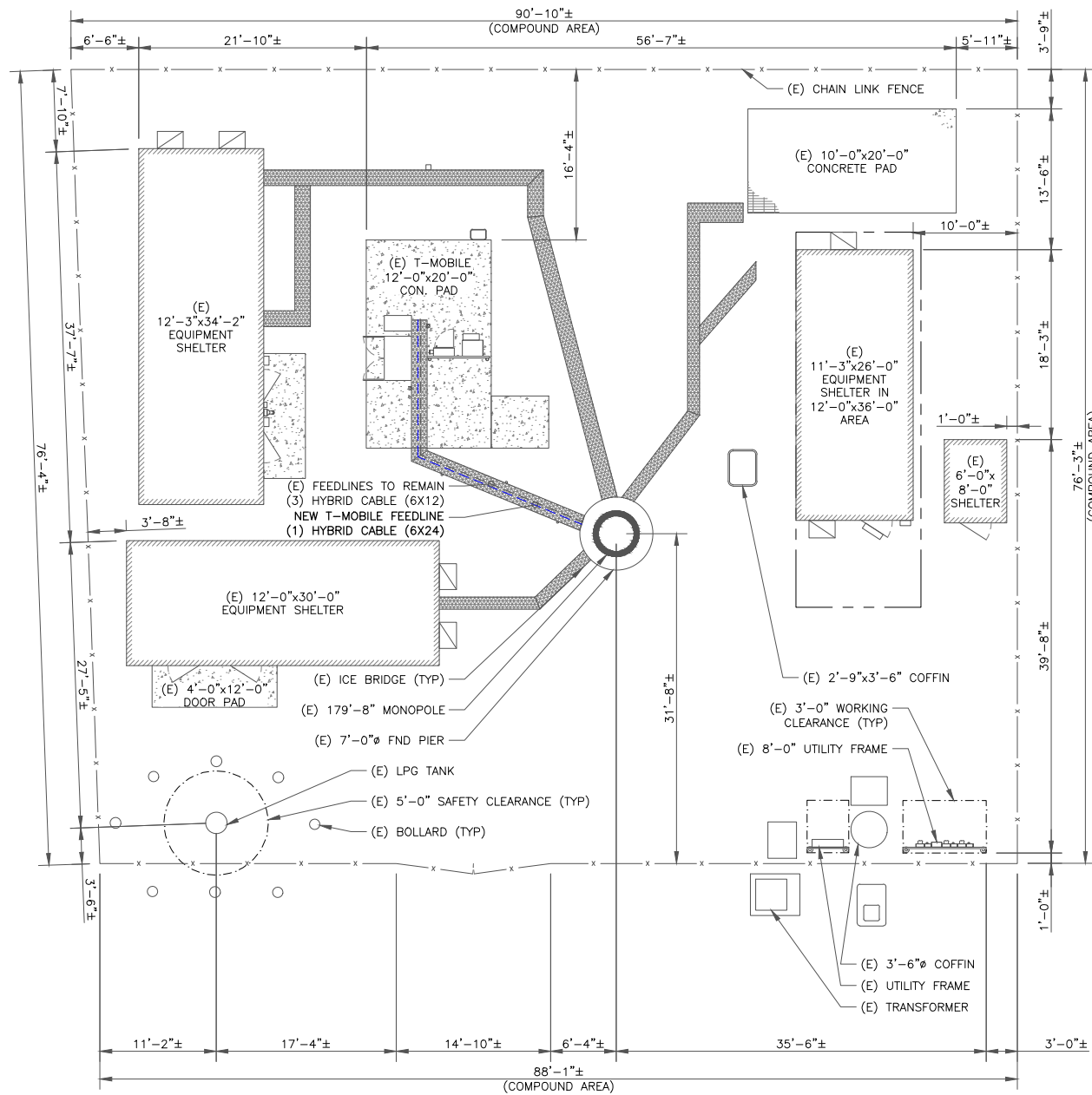
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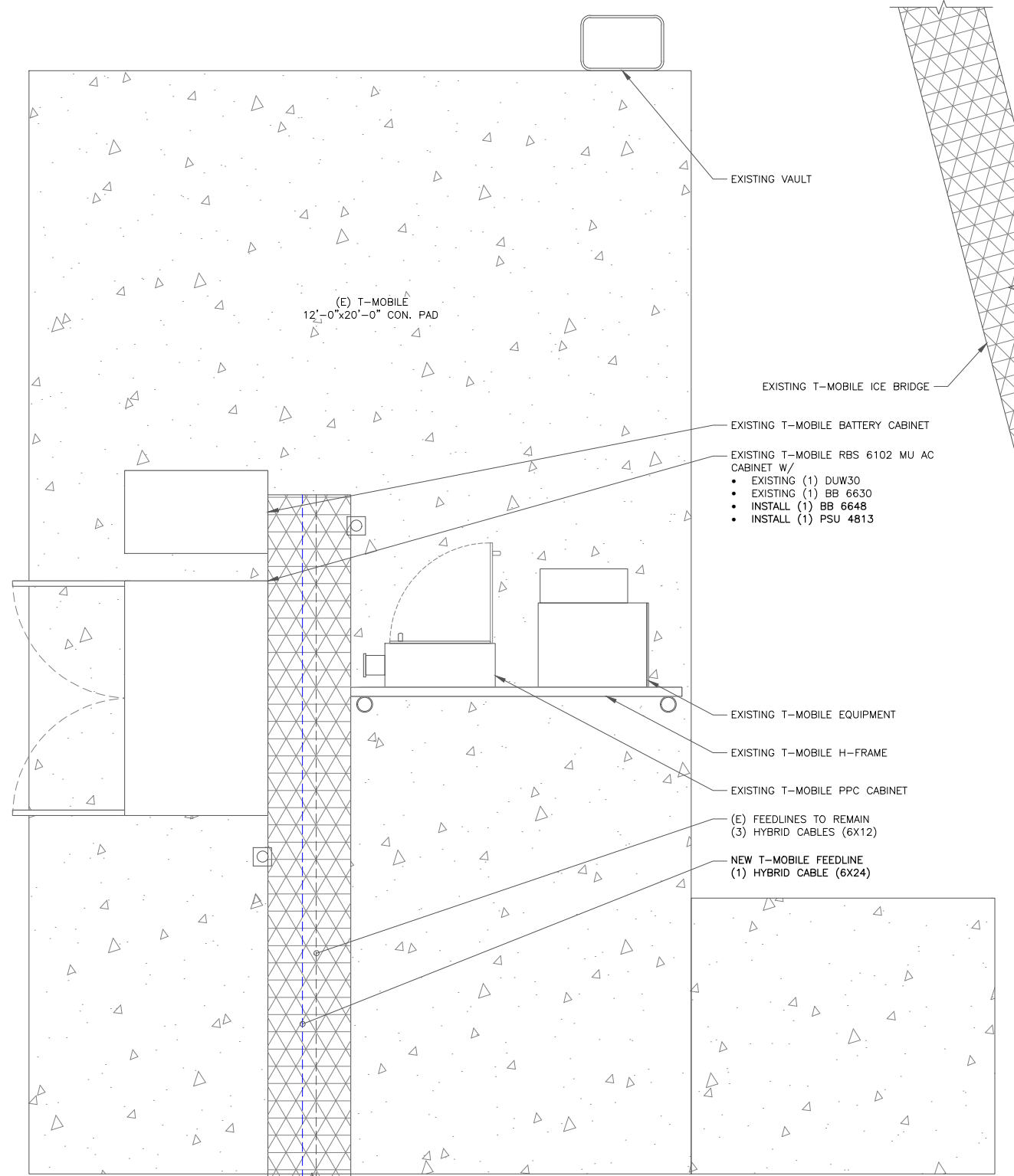
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SHEET NUMBER: T-2 REVISION: 0

NOTE:
 1. PLANS BASED ON SITE PLAN PROVIDED BY TOWER OWNER AND SITE VISIT PERFORMED BY INFINIGY. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND LOCATION/ORIENTATION OF EXISTING T-MOBILE EQUIPMENT.



1 SITE PLAN
 SCALE: 1/8"=1'-0" (FULL SIZE)
 1/16"=1'-0" (11x17)



2 ENLARGED SITE PLAN
 SCALE: 3/4"=1'-0" (FULL SIZE)
 3/8"=1'-0" (11x17)



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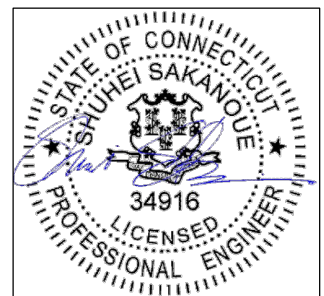
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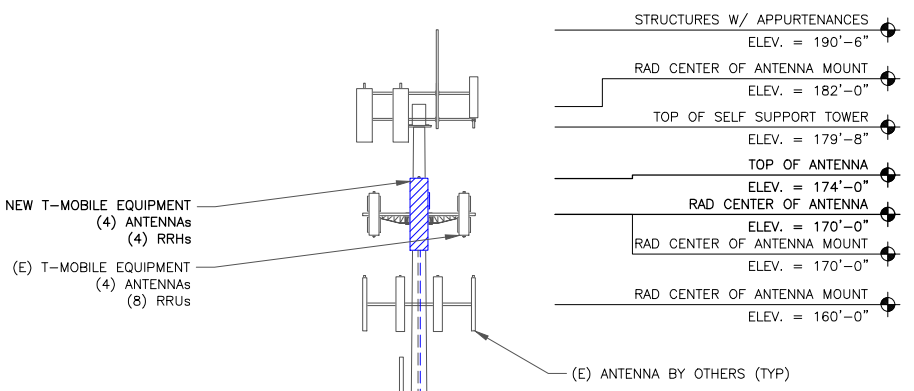
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SHEET NUMBER:

C-1

REVISION:

0



NOTES:

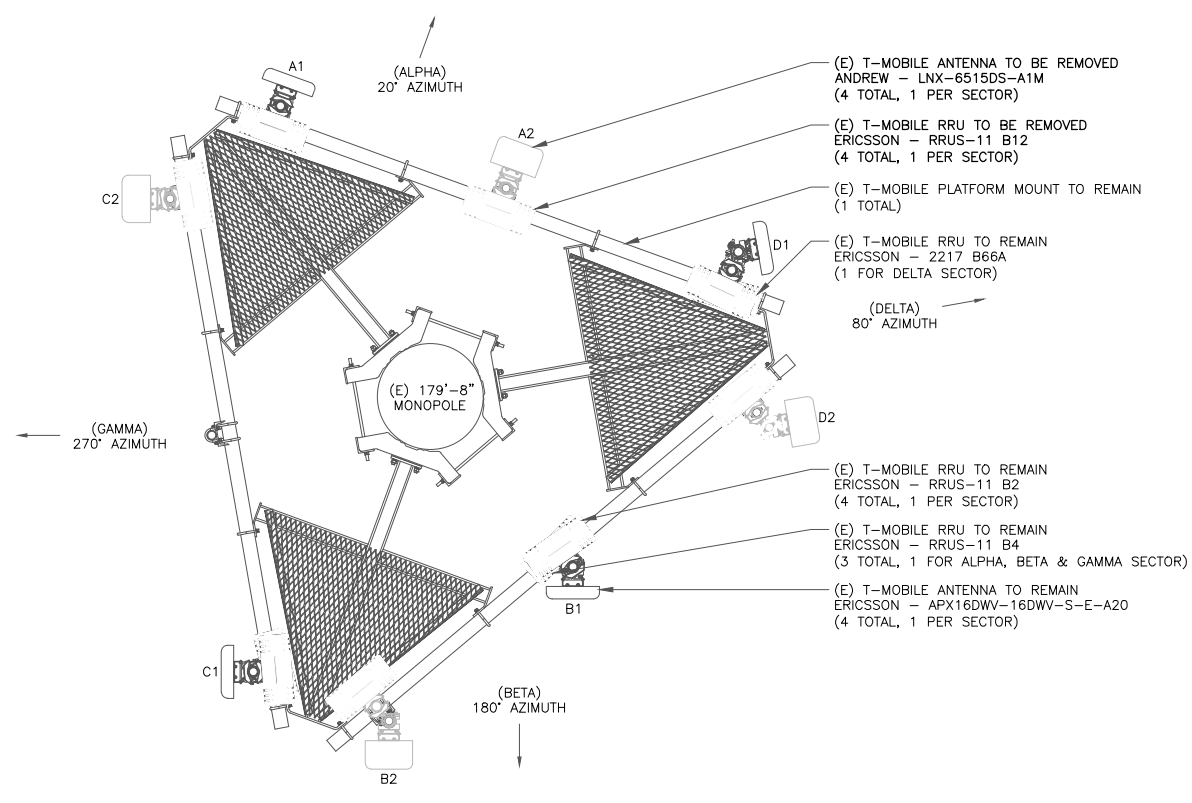
- ELEVATION BASED ON DRAWING PROVIDED BY TOWER OWNER. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND LOCATION/ORIENTATION OF EXISTING EQUIPMENT.
- INFINIGY HAS NOT EVALUATED THE TOWER OR MOUNT STRUCTURE AND ASSUMES NO RESPONSIBILITY FOR THEIR STRUCTURAL INTEGRITY REGARDING PROPOSED LOADINGS. FINAL INSTALLATION SHALL COMPLY WITH RESULTS OF PASSING STRUCTURAL ANALYSES PERFORMED BY OTHERS.

T-MOBILE EQUIPMENT

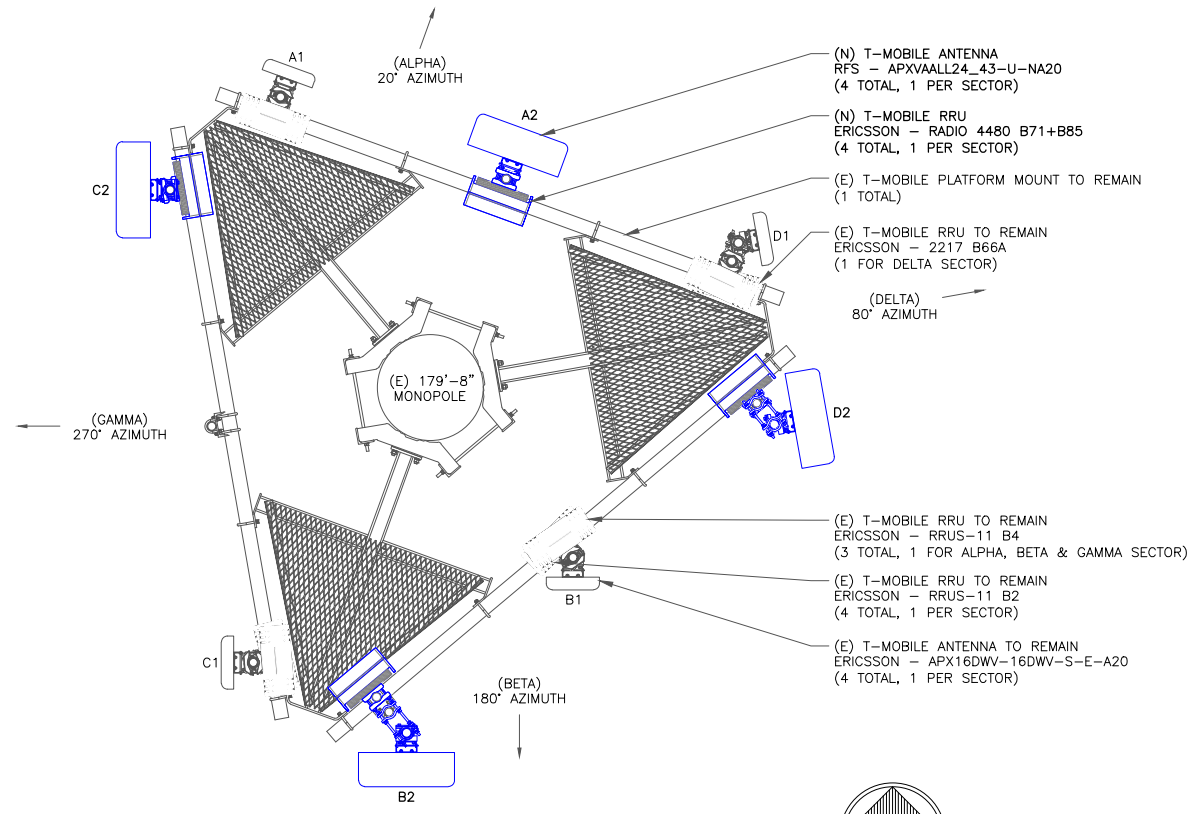
ANTENNA CL: 170'-0"
MOUNT CL: 170'-0"

ANY AND ALL TOWER MOUNTED EQUIPMENT MUST NOT TRAP OR INTERFERE W/ EXISTING SAFETY CLIMB

1 FINAL ELEVATION
SCALE: 3/16"=1'-0" (FULL SIZE)
3/32"=1'-0" (11x17)



2 EXISTING ANTENNA LAYOUT
SCALE: 1"=1'-0" (FULL SIZE)
1/2"=1'-0" (11x17)



3 FINAL ANTENNA LAYOUT
SCALE: 1"=1'-0" (FULL SIZE)
1/2"=1'-0" (11x17)

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STATE OF CONNECTICUT
SHUHEI SAKANOU
34916
LICENSED PROFESSIONAL ENGINEER

05/16/2022

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SHEET NUMBER: **C-2**

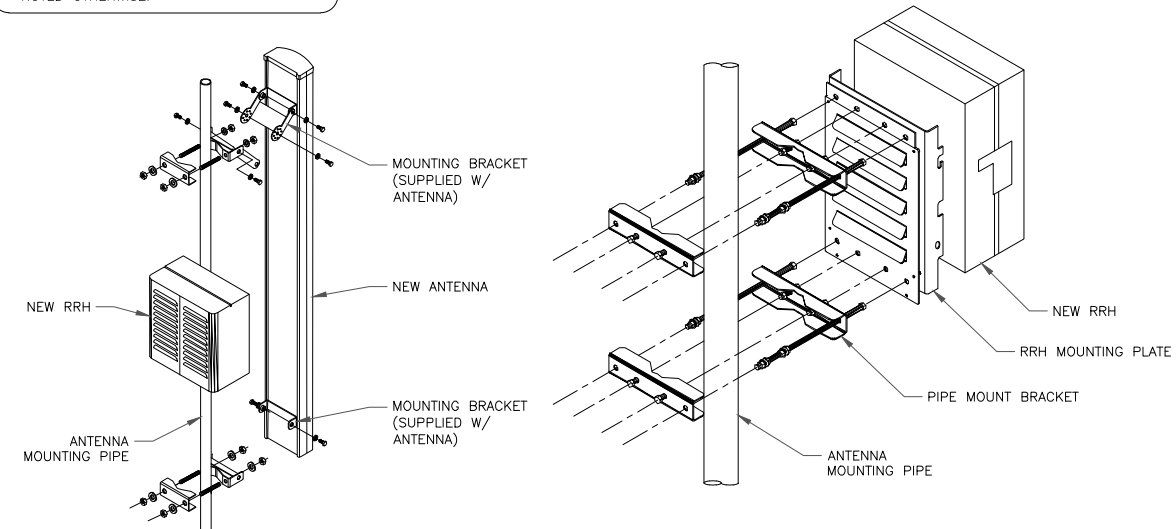
REVISION: **0**

| ANTENNA SCHEDULE | | | | | | | | | | |
|------------------|------|------------------|------------|---------|----------------------|------------------------|------------|-------------|--|----------------------------------|
| SECTOR | POS. | TECHNOLOGY | RAD CENTER | AZIMUTH | ANTENNA MANUFACTURER | ANTENNA MODEL | MECH. TILT | ELECT. TILT | TOWER MOUNTED EQUIPMENT | FEEDLINE TYPE |
| ALPHA | A1 | U1900, L2100 | 170'-0" | 20° | RFS | APX16DWV-16DWV-S-E-A20 | - | - | (1) ERICSSON - RRUS 11 B2 (1) ERICSSON - RRUS 11 B4 | (1) 6X12 HYBRID |
| ALPHA | A2 | L600, L700, N600 | 170'-0" | 20° | RFS | APXVAALL24_43-U-NA20 | - | - | (1) ERICSSON - RRUS 4480 B71+B85 | - |
| BETA | B1 | U1900, L2100 | 170'-0" | 180° | RFS | APX16DWV-16DWV-S-E-A20 | - | - | (1) ERICSSON - RRUS 11 B2 (1) ERICSSON - RRUS 11 B4 | (1) 6X12 HYBRID |
| BETA | B2 | L600, L700, N600 | 170'-0" | 180° | RFS | APXVAALL24_43-U-NA20 | - | - | (1) ERICSSON - RRUS 4480 B71+B85 | - |
| GAMMA | C1 | U1900, L2100 | 170'-0" | 270° | RFS | APX16DWV-16DWV-S-E-A20 | - | - | (1) ERICSSON - RRUS 11 B2 (1) ERICSSON - RRUS 11 B4 | (1) 6X12 HYBRID |
| GAMMA | C2 | L600, L700, N600 | 170'-0" | 270° | RFS | APXVAALL24_43-U-NA20 | - | - | (1) ERICSSON - RRUS 4480 B71+B85 | - |
| DELTA | D1 | U1900, L2100 | 170'-0" | 80° | RFS | APX16DWV-16DWV-S-E-A20 | - | - | (1) ERICSSON - RRUS 11 B2 (1) ERICSSON - 2217 B66A | (1) 6X24 HYBRID 70M IN LENGTH |
| DELTA | D2 | L600, L700, N600 | 170'-0" | 80° | RFS | APXVAALL24_43-U-NA20 | - | - | (1) ERICSSON - RRUS 4480 B71+B85 | - |

1 ANTENNA AND CABLE SCHEDULE
SCALE: NOT TO SCALE

INSTALLER NOTES:

1. COMPLY WITH MANUFACTURERS INSTRUCTIONS TO ENSURE THAT ALL RRHs RECEIVE ELECTRICAL POWER WITHIN 24 HOURS OF BEING REMOVED FROM THE MANUFACTURER'S PACKAGING.
2. DO NOT OPEN RRH PACKAGES IN THE RAIN.
3. ALL PIPES, BRACKETS, AND MISCELLANEOUS HARDWARE TO BE GALVANIZED UNLESS NOTED OTHERWISE.



NOTE:

1. CONTRACTOR SHALL INSTALL 3RD DUAL RRH MOUNT TO ACCOMMODATE ALL RRH BRACKETS HOLES IF NECESSARY.

2 ANTENNA WITH RRH MOUNTING DETAIL
SCALE: NOT TO SCALE

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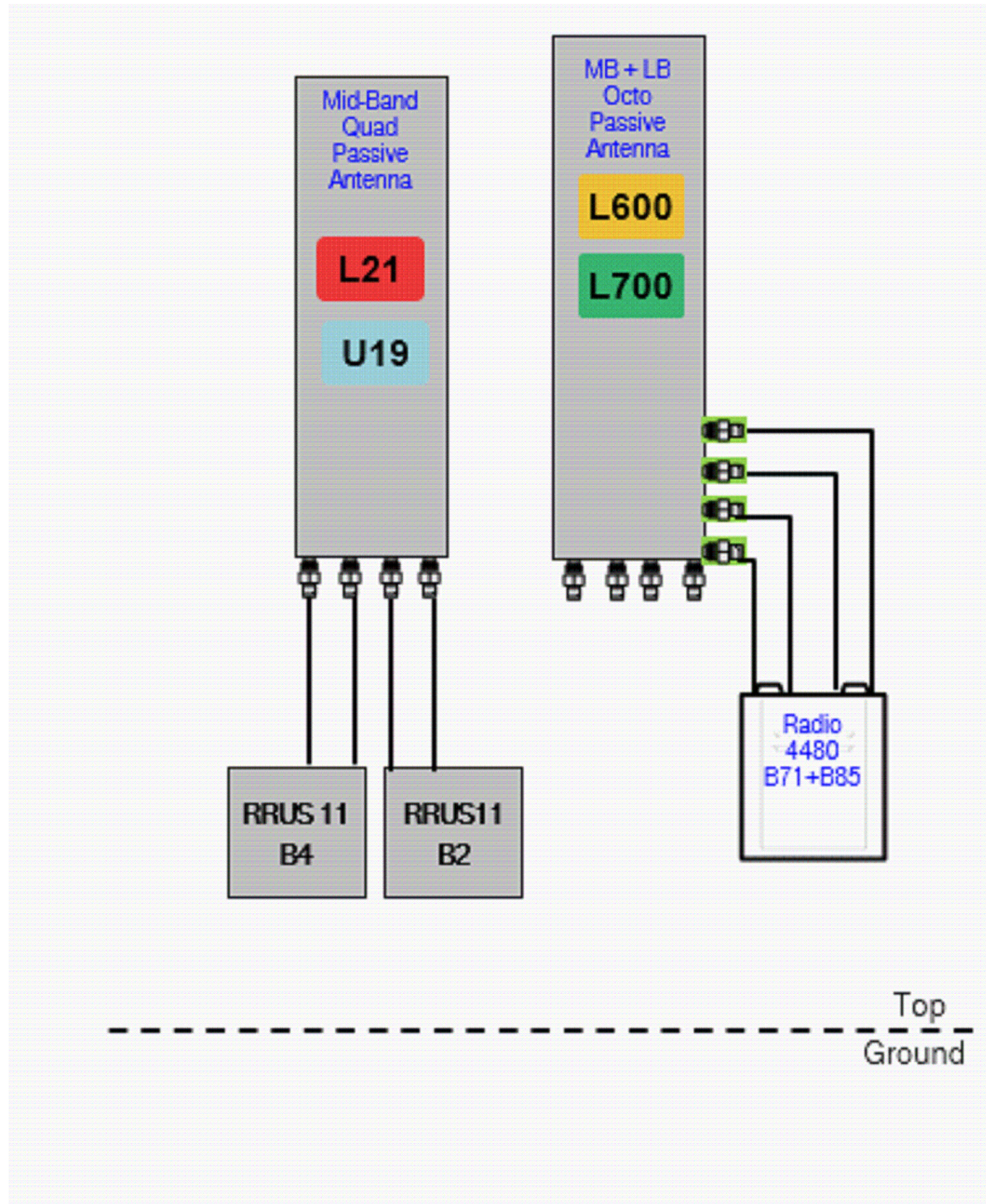
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STATE OF CONNECTICUT
SHUHEI SAKANOU
34916
LICENSED PROFESSIONAL ENGINEER

05/16/2022

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SHEET NUMBER: **C-3** REVISION: **0**



1 PLUMBING DIAGRAM
SCALE: NOT TO SCALE

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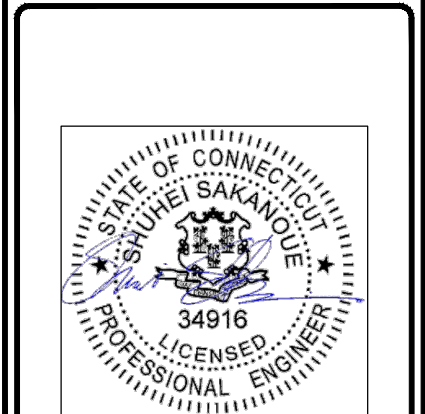
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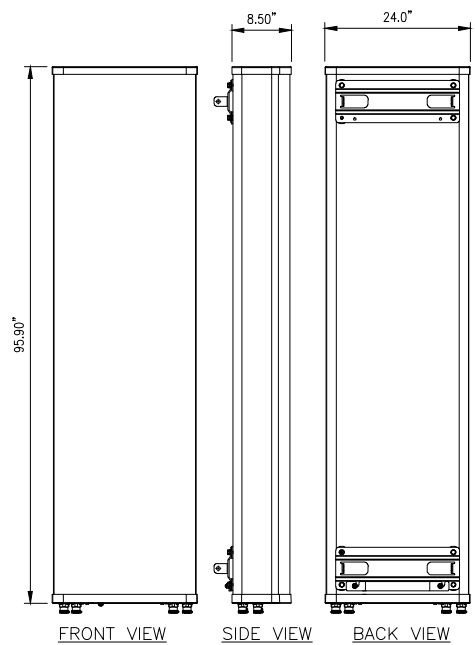
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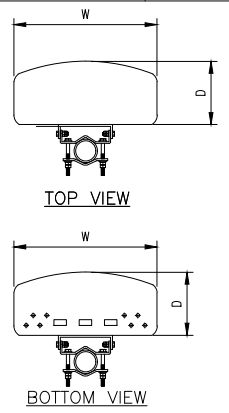
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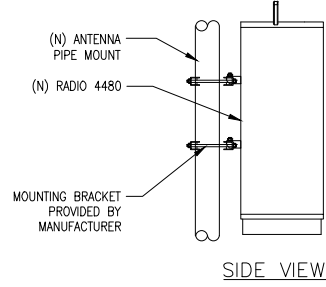
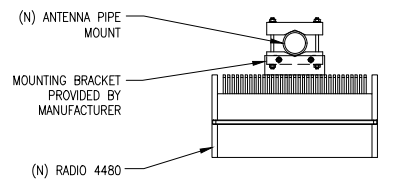
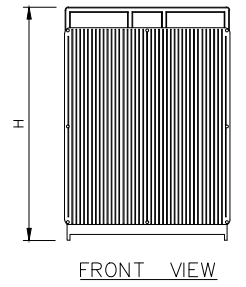
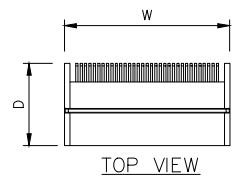
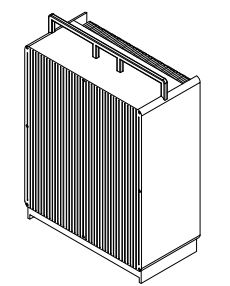


| 700MHz RFS ANTENNAS | |
|----------------------------------|-------------|
| MODEL | WEIGHT (lb) |
| (8') APXVAALL24_43-U-NA20 | 149.90 |
| WEIGHT W/ MOUNTING BRACKET (lb): | 154 |

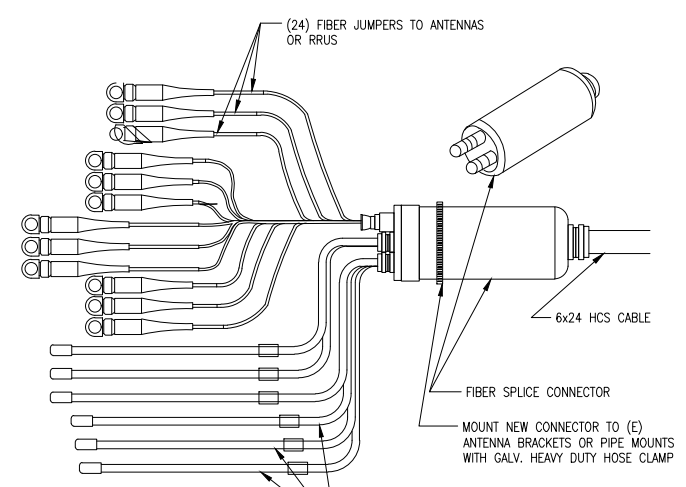


1 (N) APXVAALL24_43-U-NA20 ANTENNA SPEC
SCALE: NOT TO SCALE

ERICSSON RADIO-4480 B71 B85
 DIMENSIONS, WxDxH: 21.8"x15.7"x7.5"
 MAX OUTPUT POWER: 4x80W (2x(2x80W))
 TOTAL WEIGHT: 93 lbs
 TEMPERATURE: -40° TO 55° C



2 (N) RADIO 4480 SPEC
SCALE: NOT TO SCALE



NOTE:
 NUMBER OF LINES SHOWN FOR REFERENCE ONLY.
 ACTUAL # OF DC AND FIBER LINES SPECIFIC TO
 MODEL OF HCS CABLES

3 (N) 6X24 HCS CABLE DETAIL
SCALE: NOT TO SCALE

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 BELLEVUE, WA 98006

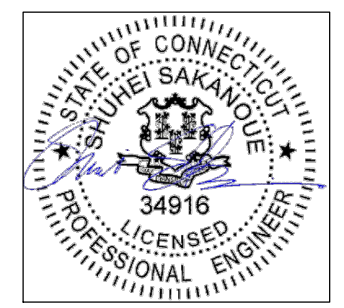
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05/16/2022

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 OF A LICENSED PROFESSIONAL ENGINEER,
 TO ALTER THIS DOCUMENT.

4 NOT USED
SCALE: NOT TO SCALE

5 NOT USED
SCALE: NOT TO SCALE

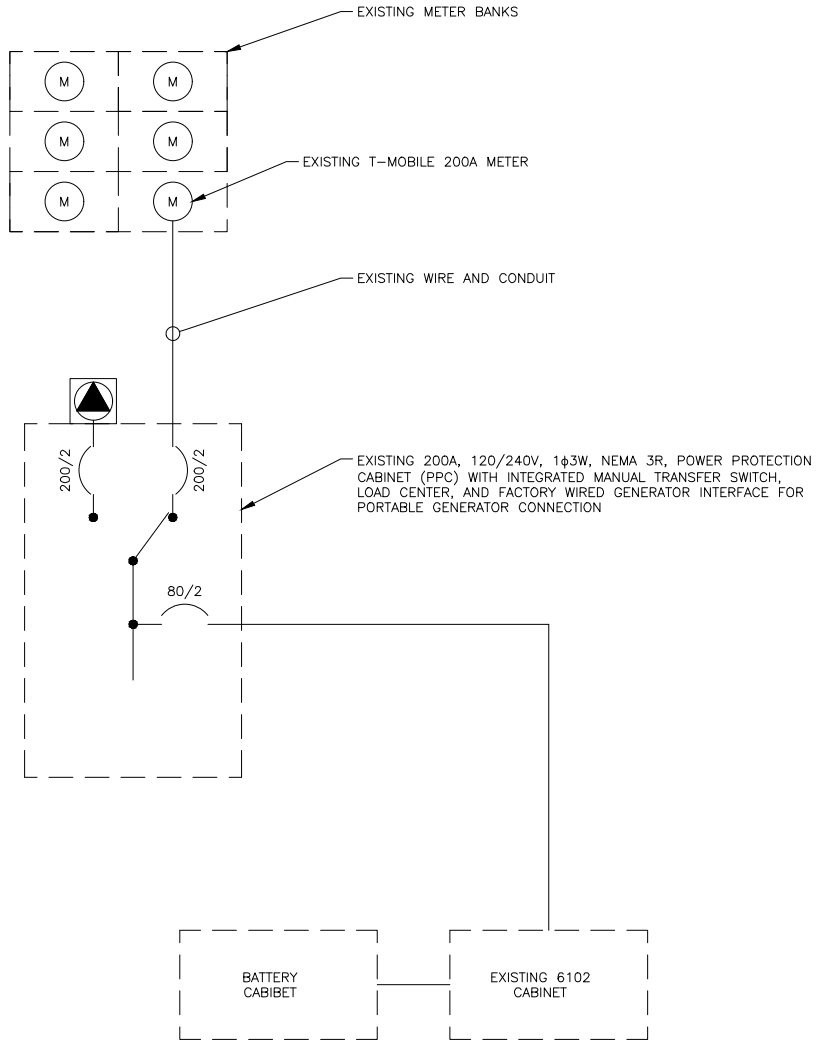
6 NOT USED
SCALE: NOT TO SCALE

SHEET NUMBER: **C-5** REVISION: **0**

| T-MOBILE PANEL SCHEDULE | | | | | | | | | | | |
|--------------------------------|-----------|---------|---|---------|------------------|------|----------------------------------|-----|---------|-----------|-------------|
| MAIN: 200A MAIN BREAKER | | | VOTAGE/PHASE: 120/240V, 1-PHASE, 3-WIRE | | | | SHORT CIRCUIT CURRENT RATING: -- | | | | |
| MOUNTING: INSIDE PPC ENCLOSURE | | | ENCLOSURE: NEMA 3R | | | | SURGE PROTECTION DEVICE: YES | | | | |
| DESCRIPTION | LOAD (VA) | C or NC | C/B | CIR No. | PHASE LOADS (VA) | | CIR No. | C/B | C or NC | LOAD (VA) | DESCRIPTION |
| | | | | | A | B | | | | | |
| TVSS | 1 | NC | 60 | 1 | 181 | | 2 | 20 | C | 180 | GFI |
| | 1 | NC | | 3 | | 3001 | 4 | 80 | C | 3000 | BTS CABINET |
| FIBER | 300 | C | 20 | 5 | 3300 | | 6 | | C | 3000 | LIGHT |
| | | | | 7 | | 1000 | 8 | 20 | C | 1000 | |
| | | | | 9 | 0 | | 10 | | | | |
| | | | | 11 | 0 | | 12 | | | | |
| | | | | 13 | 0 | | 14 | | | | |
| | | | | 15 | 0 | | 16 | | | | |
| | | | | 17 | 0 | | 18 | | | | |
| | | | | 19 | 0 | | 20 | | | | |
| | | | | 21 | 0 | | 22 | | | | |
| | | | | 23 | 0 | | 24 | | | | |
| BASE LOAD (VA) = | | | | | 3481 | 4001 | | | | | |
| 25% OF CONTINUOUS LOAD (VA) = | | | | | 1750 | 1800 | | | | | |
| TOTAL LOAD (VA) = | | | | | 5231 | 5801 | | | | | |
| TOTAL LOAD (A) = | | | | | 44 | 48 | | | | | |

C = CONTINUOUS LOAD; NC = NON-CONTINUOUS LOAD
 NEW BREAKER TO BE SAME TYPE AND HAVE SAME AIC RATING AS EXISTING.
 CUSTOMER HAS NOT PROVIDED LOADS FOR EQUIPMENT CABINETS
 THEREFORE THE CABINET LOADS SHOWN ARE ESTIMATED VALUES.

- NOTES:
- ALL NEW CONDUCTORS TO BE INSTALLED SHALL BE COPPER. ALL CONDUCTORS SHALL BE THHW, THWN, THWN-2, XHHW, OR XHHW-2 UNLESS NOTED OTHERWISE.
 - CONTRACTOR IS TO FIELD VERIFY ALL EXISTING ITEMS SHOWN ON THE ELECTRICAL ONE-LINE DIAGRAM AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
 - ALL GROUNDING AND BONDING PER THE NEC.



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 12920 SE 38TH STREET
 BELLEVUE, WA 98006

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T-MOBILE SITE NUMBER:
CTNH541A
 BU #: 841293
KENT-BULLS BRIDGE ROAD
 136 BULLS BRIDGE ROAD
 SOUTH KENT, CT 06785
 EXISTING 179'-8" MONOPOLE

ISSUED FOR:

| REV | DATE | DRWN | DESCRIPTION | DES/QA |
|-----|------------|------|-------------|--------|
| A | 04/28/2022 | RCD | PRELIMINARY | SS |
| 0 | 05/16/2022 | CB | 100% FINALS | SS |

STATE OF CONNECTICUT
 SHUHEI SAKANQUE
 34916
 LICENSED PROFESSIONAL ENGINEER
 05/16/2022

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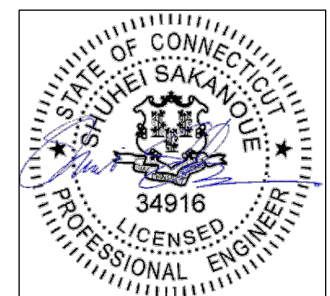
BU #: 841293
KENT-BULLS BRIDGE ROAD

136 BULLS BRIDGE ROAD
SOUTH KENT, CT 06785

EXISTING 179'-8" MONOPOLE

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05/16/2022

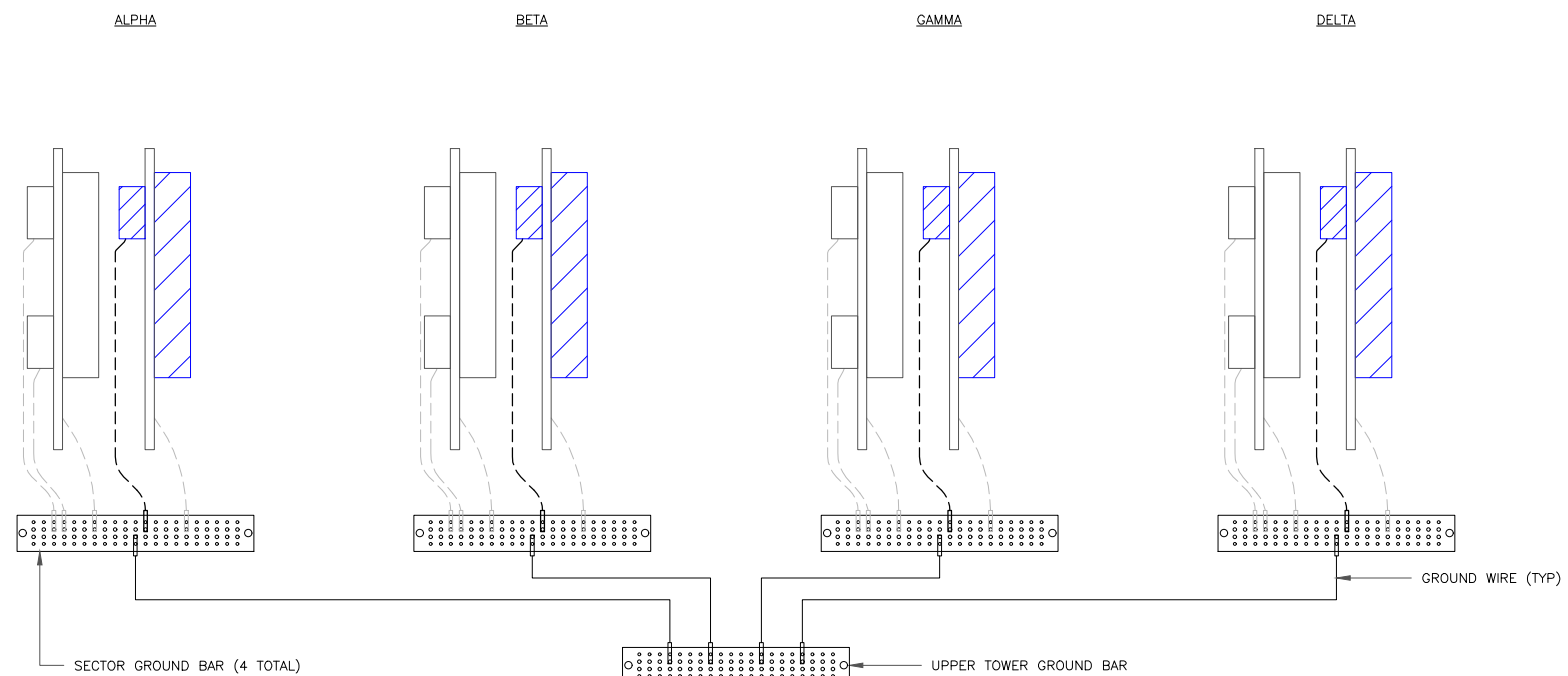
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SHEET NUMBER:

G-1

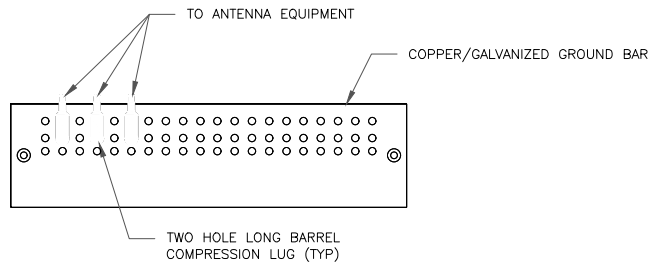
REVISION:

0



NOTE:
ALL NEW GROUNDS TO BE #6 STRANDED
COPPER WITH GREEN INSULATION UNLESS
NOTED OTHERWISE.

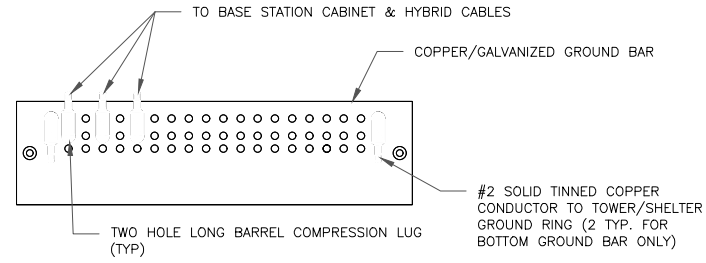
1 ANTENNA GROUNDING DIAGRAM
SCALE: NOT TO SCALE



NOTES:

1. DOUBLING UP "OR STACKING" OF CONNECTIONS IS NOT PERMITTED.
2. EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
3. GROUND BAR SHALL NOT BE ISOLATED FROM TOWER. MOUNT DIRECTLY TO ANTENNA MOUNT STEEL.

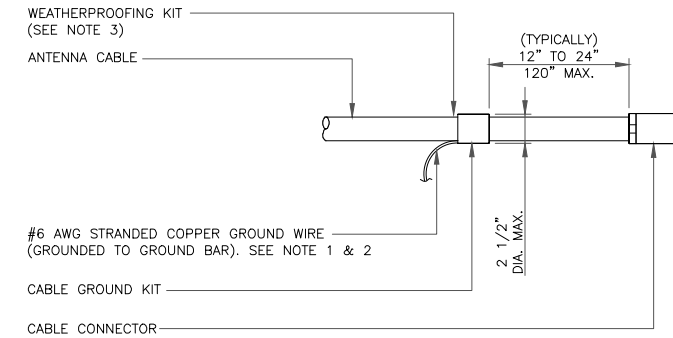
1 ANTENNA SECTOR GROUND BAR DETAIL
SCALE: NOT TO SCALE



NOTES:

1. EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
2. GROUND BAR SHALL NOT BE ISOLATED FROM TOWER. MOUNT DIRECTLY TO TOWER STEEL (TOWER ONLY).
3. GROUND BAR SHALL BE ISOLATED FROM BUILDING OR SHELTER.

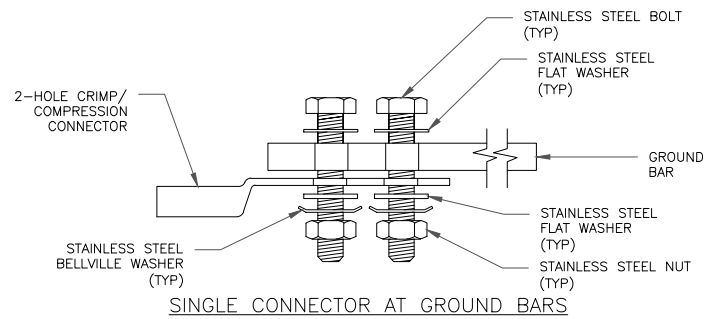
2 TOWER/SHELTER GROUND BAR DETAIL
SCALE: NOT TO SCALE



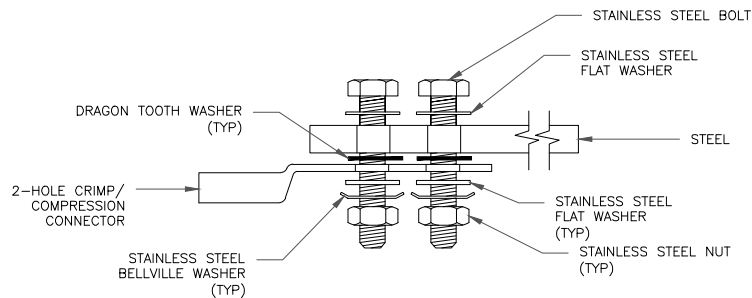
NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
3. WEATHER PROOFING SHALL BE TWO-PART TAPE KIT, COLD SHRINK SHALL NOT BE USED.

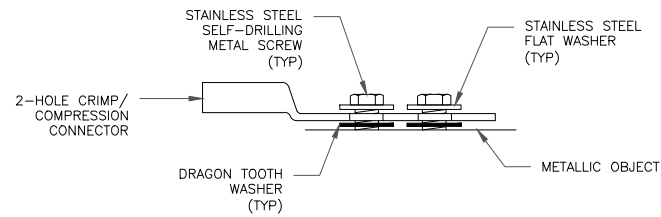
3 CABLE GROUND KIT CONNECTION
SCALE: NOT TO SCALE



SINGLE CONNECTOR AT GROUND BARS



SINGLE CONNECTOR AT STEEL OBJECTS



SINGLE CONNECTOR AT METALLIC/STEEL OBJECTS

4 HARDWARE DETAIL FOR EXTERIOR CONNECTIONS
SCALE: NOT TO SCALE

5 NOT USED
SCALE: NOT TO SCALE

6 NOT USED
SCALE: NOT TO SCALE

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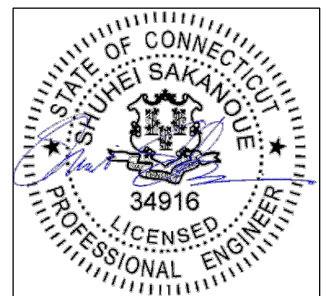
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SHEET NUMBER:

G-2

REVISION:

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