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

March 14, 2024

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

RE: **Notice of Exempt Modification for Verizon Wireless: 5000243961**
Crown Site ID# 876387
107 Buck Road, Hebron, CT 06248
Latitude: 41° 39′ 16.02″ / Longitude: -72° 24′ 39.11″

Dear Ms. Bachman:

Verizon Wireless currently maintains fifteen (15) antennas at the 97-foot mount on the existing 120-foot monopole tower located at 21 Acorn Road, Branford, CT. The property and Tower are owned by Global Signal/Crown Castle. Verizon now intends to add two (2) interference mitigation filters at the 97ft 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:

Install New:
(2) Kaelus BSF0020F3V1- Interference Mitigation Filters

The facility was approved by the Town of Hebron Planning & Zoning, on February 10, 2000.

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 Andrew J. Tierney, Town Manager, Town of Hebron, Matthew Bordeaux, Town Planner, Town of Hebron. Global Signal/Crown Castle, Land and 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, Verizon Wireless 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
Permitting Specialist
1800 W. Park Drive
Westborough, MA 01581
(781) 970-0053
Jeff.Barbadora@crowncastle.com

Attachments
cc:

Andrew J. Tierney, Town Manager
Town of Hebron
15 Gilead Street
Hebron, CT 06248
(860) 228-5971

Matthew Bordeaux, Town Planner
Town of Hebron
15 Gilead Street
Hebron, CT 06248
(860) 228-5971

Global Signal/Crown Castle, Land and Tower Owner

TOWN OF HEBRON

15 Gilead Street, Hebron, CT 06248
TEL (860) 228-5971 FAX (860) 228-5980

Planning/Zoning Building Health Conservation

February 10, 2000

CERTIFIED MAIL

Spring PCS
9 Barnes Industrial Road
Wallingford, CT 06492

RE: Petition 99-11, Application by Sprint PCS for Telecommunications Facility on Buck Road, R-1 District

Dear Sprint PCS:

Please be advised that at the February 8, 2000 meeting of the Planning and Zoning Commission, the Commission took the following action on the above-referenced application:

Approved with the following conditions:

1. The overall height of the tower shall not exceed 100 (one hundred) feet.
2. The tower shall be modified to be of such design and treated with an architectural material so that it is camouflaged to resemble a woody tree with a single trunk and branches on its upper part, in a manner acceptable to the Commission, unless waived by the Commission
3. The tower shall be permitted to accommodate a single PCS provider, as shown on the plans, plus a GPS antenna. Any other antenna, including a potential co-locator shall require a Special Permit Application to the Commission.
4. The chain link fence surrounding the leased area shall be a green colored vinyl clad mesh material.
5. Evergreen plantings, a minimum of 6 (six) feet in height, shall be planted in double staggered rows along the south, east, and north sides of the fenced area, shown on a plan acceptable to the Commission.
6. This facility shall comply, at all times, with the standards promulgated by the FCC for non-ionizing electromagnetic emissions, as amended. After the facility is operational, the applicant shall submit, within 90 (ninety) days of beginning operations from this site, and annually thereafter, existing and maximum future projected measurements of non-ionizing electromagnetic emissions as well as the Federal standard established for such emissions.
7. Any change from the battery powered emergency generator system, as proposed, shall require application to, and approval from the Commission
8. The property owner and owner(s) of the facility shall execute a statement, to be recorded in the land records of the Town of Hebron, agreeing to the requirements of Subsection 8.23.10.
9. The plans shall incorporate the items contained in the report of the Town Engineer
10. As specified by the applicant, no lighting shall be mounted on the tower; and any lights within the leased area shall be shielded from glare off the property.
11. A Disposal Plan is needed as to how to dismantle the tower, either due to Section 8.23.10, or due to a decision to discontinue use of the tower by Sprint.

CERTIFIED MAIL

2-10-00
Sprint PCS
RE: Petition 99-11, Application by Sprint PCS for Telecommunications Facility (cont.)

Please have the plans revised to include the above conditions and forward one set of mylars and four blueline sets of plans for signature by the Commission. Also, a Special Permit Certification must be filed in the Town Clerk's Office before the approval is effective. We will prepare the Certificate for you. A filing fee will be needed before filing with the Town Clerk.

If you have any questions, please call me.

Very truly yours,

Michael K. O'Leary, Town Planner
for the Planning and Zoning Commission

MKO/l

cc: Petition File #99-11
Thomas J. Regan, Esq., Brown, Rudnick, Freed, & Gesmer, PC
Edward A. and Renee J. Ellis

TOWN OF HEBRON, CONNECTICUT
PLANNING AND ZONING COMMISSION

IN RE: 99-11

APPLICATION OF SPRINT PCS
FOR SPECIAL PERMIT TO CONSTRUCT
A TELECOMMUNICATIONS TOWER
ON A 131 ACRE PARCEL OF LAND ON
BUCK ROAD IN THE TOWN OF HEBRON,
CONNECTICUT.

FINDINGS OF FACT

At its regular meeting on February 8, 2000, pursuant to statutory notice, the Town of Hebron Planning and Zoning Commission considered the above-captioned application and acted upon same. At that time the Commission adopted the following findings in support of their action:

1. Sprint Spectrum, LP, d/b/a Sprint PCS (hereinafter "Sprint" or "Applicant"), is a telecommunications company created to provide wireless communication services known as Personal Communications Service ("PCS"). Sprint is duly authorized to construct, operate and manage a wireless personal communication system using the FCC radio license of its sister company, Wireless Co. LP. Under that agreement, Sprint is authorized to make this application on behalf of Wireless Co. LP.

2. Sprint is, specifically, a provider of PCS service. PCS is digital a digital technology. Although similar to analog cellular service, digital service works on a higher frequency and at a lower power than analog service. While this gives PCS a higher quality, the geographic area covered by a digital facility is smaller than that covered by an analog facility. The result is that a digital network requires more antennae.

3. A PCS network is a grid made up of a continuous series of overlapping cells. A cell is the geographic area serviced by any single antenna facility. The size of any given cell is determined by topography and vegetation. PCS antennae must be located above the height of surrounding trees or structures to be effective. When a PCS user moves from one cell to another the call is automatically transferred to the next cell without interruption. In order for this to work there must be some overlap of cells.

4. Sprint is not provider of analog service. As such, if a Sprint user reaches gap in digital service, the call will not automatically switch to analog service. Once a gap is reached the Sprint user's PCS call will be dropped, regardless of the availability of analog coverage in the area.

5. Sprint maintains that it is charged with the responsibility of providing wireless telephone service throughout Connecticut including the area in and around the Town of Hebron. Sprint further maintains that it has a mandate to provide "seamless" service coverage throughout Connecticut.

6. The cell which Sprint seeks to cover comprises a significant portion of central/eastern Hebron, along with parts of the westerly portion of Marlborough. Within the cell is that portion of Rt. 66 running east from the Rt. 85 intersection, and that portion of Rt. 85 running north of the intersection with Rt. 66

7. Sprint maintains that there is a gap in PCS coverage along Routes 66 and 85, and in the immediate surrounding areas of Hebron

8. With its application Sprint provided a computer-generated map showing gaps in coverage within Hebron and the surrounding area and bearing the description "Holes visible on portions of Rt. 66 & 85." The representation was based on computer modeling and reflected what coverage would be based on surrounding sites, but without the planned Buck Road facility.

9. As to the coverage gaps within the Town of Hebron, the computer-generated map showed a gap in coverage along Rt. 66 from just west of the Marlborough town line to just east of the intersection with Jennifer Drive. The claimed gap extends south of Rt. 66 to the western half of Hope Valley Road, and north of the highway into Gilead. The map also showed gaps along Rt. 85, one near the intersection with Prentice Hill Road, and two others between Martin Road and the intersection with East Street.

10. Virtually the entire gap identified by Sprint falls within residential zoned districts. R-1 north of Rt. 66 and primarily R-2 south of Rt. 66.

11. Virtually all the coverage gaps identified by Sprint within the Town of Hebron encompass substantial portions of the Town's designated inland wetlands and watercourses

12. The Applicant has complied with basic site plan content requirements of Section 8.23.6 in that either with its application or in the course of the hearings it submitted the following documentation:

(1) A plan showing where/how proposed antenna would be affixed to the tower.
(2) Details of proposed antenna including size and color.
(3) Elevations and details of proposed shielding.
(4) Elevations of proposed equipment boxes/buildings and details of landscaping/lighting.
(5) Description of tower co-location capacity, number and type of antennas, positions for co-locators and collapsing design.
(6) Statement that performance standards in Regulation 5.6.3 shall be complied with and site will not interfere with public safety communications.
(7) An analysis of fall zone prepared by licensed engineer
(8) Proof of FFC license.
(9) Maps depicting (a) planned town coverage; (b) future planned sites/towers in Hebron; (c) service area of proposed site; (d) search radius of proposed site (e) all existing, approved and planned towers and structures over 40' in planned area.
(10) Simulation of site to ascertain visual impacts.
(11) Certified letters to similar providers seeking co-location opportunities.

13. The Buck Road site selected by Sprint is situated on the westerly one-third of the gap identified by Sprint in its application.

14. The neighborhood consists of predominantly open and forested, presently vacant, residentially zoned land, with residential development currently averaging two acres or more per household. The area is situated in an R-1 zone. The topography consists of rolling hills ranging from 350 feet to 685 feet above mean sea level. There are 28 property owners located within 200 feet of the Ellis property on which the proposed tower would be built. The areas residences are single-family homes.

15. The Ellis property on which the proposed tower would be located is a 131-acre parcel consisting of mostly wooded land, with some open space dedicated to farming/pasturing.

16. Within the property, the site selected for the tower would be 683 feet from Buck Road. The proposed location would put the tower roughly 450 feet from the three-lot Buck Road Subdivision and roughly 750 feet from the only existing residence pictured on Applicant's plans.

17. The facility proposed by Sprint for the Ellis property would consist of an access drive off of Buck Road, a 100-foot square equipment compound, and a 150-foot-tall "monopole" tower with antennae mounted upon it.

18. The monopole would be constructed of galvanized steel. It would have an antenna platform located at the top. The platform would consist of three sectors forming a horizontally situated triangle. On each of the three sectors there would be mounted up to three panel antennae, for a total of up to nine antennae per platform. Each individual antenna would be five feet high, six inches wide, and two inches thick. The antenna panels would be off-white in color. With additional, potential co-locators, successive arrays of antennae/platform would be added at 10-foot increments along the pole.

19. Section 8.23.7 of Hebron's zoning regulations dictates minimum lot area and setback requirements for proposed telecommunications facilities. These are intended to achieve a minimum level of desired safety in the event of a structural failure and to achieve a sense of land use compatibility between diverse uses. Specifically, the regulations provide that a tower shall be located on a lot of two acres or more. The proposed facility on Buck Road complies with this requirement.

20. Section 8.23.7 of the regulations also dictates that all towers shall be setback from property lines the greater of 100 feet or the distance equal to one and one-half (1 1/2) times the tower height. This requirement includes all equipment/buildings related to the tower. Based on our review of the site plans we conclude that the proposed tower complies with the requirements of Section 8.23.7.3.

21. In addition, the Town's regulations require compliance with a number of general requirements contained within Section 8.23.8. With regard to those requirements we find the following:

(1) The tower is not within 500' of any facilities identified in Section 8.

(2) The proposed tower is not closer than three (3) times the tower height to any residence
(3) The proposed tower, although over 75 feet, is not within 1000' of historic district.
(4) The Applicant has produced evidence that the tower as planned would not require lighting in order to comply with FCC regulations.
(5) The tower as planned would be galvanized and would weather to neutral gray.
(6) The proposed tower is not located in town open space.
(7) The proposed tower will be a monopole and will be designed to collapse upon itself.
(8) Although the Applicant did not present any specific plan for camouflage of the proposed tower it did indicate a willingness to provide such camouflage if requested by the Commission.
(9) The proposed tower at 150 feet will accommodate two additional users.
(10) The site will be served by driveway and will have sufficient parking.
(11) Not applicable.
(12-13) The proposed facility will not include a dish antenna.
(14) The site as designed will not interfere with public safety communications.
(15) The site is not in Flood Hazard Plan.
(16) Applicant has produced evidence that the design of the facility is such that it will comply with FCC standards for non-ionizing electromagnetic emissions.
(17) As designed all utilities leading to the tower will be underground. The compound will be surrounded by a 6-foot-high fence with locked gate and will be landscaped.
(18) As proposed the facility will not include a generator and that no fuel will be stored.
(19) Applicant has stated that Sprint personnel will visit the site at least monthly for maintenance and Sprint will be responsible for upkeep of the site.

22. The Commission is satisfied that there are no existing or approved towers, structures or buildings which would provide potential co-location opportunities.

23. Applicant has produced evidence to support the fact that once in operation the proposed tower facility would meet the following standards:

a) The use will be carried on in such a manner and with such precautions against fire and explosion hazards as to produce no serious exposure hazard to adjacent property, and the storage of all flammable or explosive materials shall be in a manner approved by the Fire Marshall of the town of Hebron.

b) The use will emit no offensive odors perceptible from any property line of the lot on which the operation is located, and shall emit no obnoxious, toxic or corrosive fumes or gases.

c) The use will not exhaust, or waste into the air, dust created by any industrial operation in excess of one cubic centimeter of settled matter per cubic meter of air, or produce heat or glare perceptible from any property line of the lot on which the operation is located for a period exceeding three continuous minutes.

d) Industrial and exterior lighting will not produce glare on public highways or neighboring property, or conflict with any traffic signals.

c) Smoke or other air contaminant will not be discharged into the atmosphere from any single source of emission for a period or periods aggregating more than three minutes in any one hour, which is as dark or darker in shade than as designated on No. 2 on the Ringelman Chart, as published by the United States Bureau of Mines, or which his of such opacity as to obscure an observers' view to a degree equal to or greater than does smoke designated as No. 2 on the Ringleman Chart.

f) The use will be operated in conformance with the following performance standards governing noise, and no sound pressure level shall exceed the decibel levels in the designated octave bands shown in Section 5.6.3 of the Hebron Zoning Regulations, with sound measurements being made in accordance with that section.

24. The site chosen for the proposed tower is in a residential zone, specifically, an R-1 district. Given that the proposed tower is over 75 feet tall the proposed site for this telecommunications facility is clearly the least favored location as defined by the town's zoning regulations.

25. However, the gap in coverage that Sprint seeks to fill falls entirely within residential districts of this town.

26. Based on the evidence presented and our own review of the topography and vegetation in the area, we are satisfied that in order to provide any reasonable degree of coverage along the Rt. 66 corridor the Sprint must locate its antenna facility within a residential area.

27. In the abstract, the Ellis parcel on Buck Road, given its size, its present use, the fact that it is about ¾ wooded and is largely vacant, and given its proximity to Rt. 66 we find that the131-acre parcel in question is a reasonable location for a telecommunications facility, given the restrictions place upon us by the Federal Telecommunications Act of 1996.

28. The average tree height in the area of the proposed site is approximately 75 feet.

29. As for the specific location of the proposed tower and compound within the 131-acre parcel, the neighbors have expressed great concern about the location of the tower in such proximity to their residences.

30. The proposed site is on a large parcel of land (131 acres) that could contain the site further from established residences. The proposed tower is approximately 750' to the closest residence. The Commission asked the applicant if the tower could be moved into the open field (and perhaps camouflaged) further from the established residences. The applicant responded that the tower could be moved slightly in one direction of the other but essentially had to stay very close to the proposed site or coverage would be lost on Rt. 66.

31. Evidence as to the applicant's statement that moving the site into the open field would not work was not provided by the applicant. A 100' propagation map was asked of the applicant for the site in the open field. The applicant responded with the need to fill the cell with a 150' tower and further studies are not necessary.

32. Indeed, the chosen site is much closer to both the public road and to the neighbors than would be necessary simply based on the size of the parcel. In assessing the appropriateness of this specific location there are several factors to consider under our Regulations.

33. We find that given the setbacks and distances from surrounding residences, even at 150-feet the proposed tower, as located, would not pose a risk to the health and safety of the local residents in the event of a structural failure. Moreover, given that the Applicant will not be storing hazardous materials at the site, we find that the equipment in the compound would not present a hazard to neighbors.

34. While the Commission recognizes and understands the concerns of the neighbors about the possible effects of radio frequency radiation, this Commission cannot consider such concerns so long as the facility, as planned, is in compliance with FCC guidelines. We find that the applicant has submitted sufficient documentation to satisfy us that the proposed facility will be well within FCC guidelines.

35. During the public hearing the applicant submitted data from other towns to support their contention that there would be no negative impact on the value of surrounding property in this case. Members of the public opposed to the tower also submitted material suggesting that towers do tend to decrease property values. No evidence was submitted by anyone, however, regarding the value of the properties surrounding this particular site and no direct opinion evidence was submitted as to any potential impact of a tower at this site on neighboring property values.

36. While there are questions about the methodology of the studies provided by the applicant, and questions about the applicability of those studies to this neighborhood in Hebron, the commission concludes for the purpose of this application that there is no credible evidence that the placement of a PROPERLY CAMOUFLAGED telecommunications tower at this site on Buck road would seriously harm the surrounding property values.

37. The commission finds that the proposed tower facility would have an impact on the "appearance and beauty" of the community.

38. However, any tower significantly higher than the tree height would be visible from the surrounding neighborhood.

39. In order to achieve coverage on Rt. 66 it will be necessary to place a tower in such a position that it will rise above the tree height.

40. Based on the evidence presented in the hearings we find that, assuming proper camouflage of a nature acceptable to the Commission, the location of a telecommunications tower of some height at the proposed location would be appropriate, in light of the restrictions place upon us by Federal Telecommunications Act.

41. Hebron's zoning regulations provide "The maximum height of a tower proposed under this regulation shall be 150 feet including the antenna and all other appurtenances and shall not exceed the minimum height necessary to carry out the function of the facility

42. Sprint's radio frequency engineer, Alessandro Ponce, stated that Sprint's main concern was covering Rt. 66 and Rt. 85. He said that most of the cellular traffic comes from people driving on the roads and that Route 66 and Route 85 provide a lot of traffic. In short, Sprints main objective in placing a tower at the Buck Road site is to "cover the main thoroughfares through Town."

43. Sprint does not believe that the cell will be filled at a lower height than 150 feet. To illustrate this point, Mr. Ponce presented at the October 12, 1999 hearing a propagation study showing what the coverage would be if the Buck Road tower were limited to 120-feet. This study was prepared by Sprint not in response to any request by the Commission but because it was aware of subsequent changes in the town's zoning regulations capping tower height at 120 feet. Those revisions in the regulations, however, are inapplicable to this application.

44. At the October 12, 1999 hearing a Commission member specifically questioned whether the amount of coverage shown at 150 feet and the amount shown at 120-feet was significantly different, questioning the value of the higher tower. Sprint's response to this was that it had only generated the 120-foot study because "we know the Town's preference for a tower at that height." The Applicant's spokesman went on to say:

> "... to be honest with you, it probably hurts more than helps showing you that because when you look at a blob of green and a blob of blue, I agree with you. It doesn't look significantly different, but I guess from our perspective, the important point for you to hear is that the tower at 120 feet, in our opinion, doesn't fulfill the coverage need."

45. At the November 9, 1999 hearing Sprint provided each Commission member a packet of propagation studies for the Buck Road site, each reflecting the coverage achieved by a different height tower. The packet was supposed to have included a map again showing the limitations of a 120-foot tower at the proposed site, but for some reason this 120-foot propagation study was not included in the packet of propagation studies provided to the individual commissioners at that hearing. A copy was provided to the Commission staff and the Commission members had an opportunity to review this in detail at a subsequent meeting.

46. The 120-foot study submitted on November 9, 1999 had been prepared on November 4, 1999. This study actually showed worse coverage than had been reflected by the 120-foot study presented at the first hearing, i.e. the one conducted sua sponte by Sprint on October 12, 1999. Specifically, the November 4, 1999 study demonstrated a larger gap in coverage along Rt. 66 west of the Marlborough town line, and it also showed a *new* gap on Rt. 66 in the area of Stone House Lane.

47. On careful comparison of the two studies it is clear that the location of the hypothetical 120-foot tower on the second study was at a different longitude and latitude that had been reflected on the first study.

48. With its application Sprint submitted a propagation study map dated July 19, 1999 purporting to show the coverage that would be achieved by the proposed 150 foot tower (560-02) that map being further identified as "Holes covered on portions of Rt. 66 & 85."

49. That July 19, 1999 propagation study showed that a 150-foot tower would achieve a substantial increase in coverage in the sparsely populated areas north and south of Rt. 66. It also showed that such a tower would eliminate the significant gap along Rt. 66 between the Marlborough town line and Jennifer Drive. However, the study showed that the proposed tower would not close the gap on Rt. 66 west of the town center. Further, the study also showed that the gaps on Rt. 85, while modestly reduced by the 150-foot Buck Road tower, would not be eliminated.

50. Even Sprint's own expert admitted that the 150-foot tower as proposed would still leave gaps along Route 66. Any gap, no matter how small, will cause the traveling caller to drop his call.

51. At the time of the October 12, 1999 hearing a Commission member raised questions about the fact that the 150 foot tower would not be able to achieve the seamless coverage that Sprint was putting forth as justification for the tower. At that time the available propagation study for 150 feet was the one prepared on July 19, 1999 and included in the application materials.

52. The propagation study prepared on November 4, 1999, and entered into the record at the December 7, 1999 hearing, showed greater coverage with a 150-foot tower than had been reflected in the July 1999 study submitted with the application. Specifically, the November version eliminated the gap on Rt. 66 west of the town line completely, eliminated the northernmost gap on Rt. 85 (near Prentice Road), and eliminated a small gap on Rt. 85 near Hills Farm.

53. To help evaluate the technical data the Commission retained the services of a consultant, CompComm, a telecommunications-engineering firm from New Jersey. John W. Sieber, PE, an engineer with CompComm, reviewed the materials provided by the applicant prior to the first pubic hearing. Among other things, CompComm's initial evaluation highlighted the need to request propagation studies from Sprint showing potential coverage at heights less than 150 feet, including 125 feet, 100 feet and 80 feet.

54. After reviewing the additional submissions of Sprint, Mr. Sieber opined that when existing coverage is factored in the proposed 150-tower "covers very little new area" than would be covered by a 120-foot tower. CompComm found no significant difference in coverage within Hebron with a 120-foot tower than with a 150-foot tower.

55. Based on our own review of the propagation studies, the Commission is convinced that a tower of 150 feet at the proposed site would provide no greater coverage on Rt. 66 than would a tower of 120 feet at that same location. The only effect that the placement of a 120-foot tower at the site rather than a 150-foot tower would have on Rt. 85 would be to slightly increase the size of one of the gaps that would exist even with the 150-foot tower.

56. The applicant stated that three candidate sites were evaluated for this tower application. The applicant stated that the other sites were north and south of the selected site on Buck Road. Applicant stated that it chose the Ellis site because it was a large parcel. Applicant did not provide propagation maps for the two sites not selected.

57. On their own initiative, the applicant did not provide the Commission with any alternatives to the proposed site at Buck Road. Only one propagation map with a lower height on the proposed site was provided.

58. From the very first hearing the commission made it clear that it wanted to explore the possibility of obtaining coverage in town through the use of smaller, more numerous towers. On several occasions, including the October 12, 1999 and November 9, 1999 hearings, the Commission asked that Applicant provide propagation maps for two specifically-named alternative sites (Lions' Park and Main Street Firehouse), as well as other potential sites which in combination might provide similar coverage with multiple, shorter towers.

59. Throughout the course of the hearings sprint demonstrated an unwillingness to consider alternative sites involving varying heights of towers at two or more locations on the same map.

60. The applicant ultimately provided the commission with a few maps, namely existing coverage with other proposed towers; coverage from the proposed site with 150', 120' and 100' towers; coverage from the Main St. Firehouse (150') and Lions' Park (150'). When the Commission finally received maps of combined multiple sites, the applicant used only the two alternative sites specifically referenced by the Commission (Lions Park and fire station) and simply used 80' at all three sites.

61. The Commission did not receive propagation maps as requested for multiple sites with varying combinations of heights to determine if alternatives were feasible, nor were any other alternative combination of sites provided by the applicant . In other words, propagation maps requested to determine the applicant's compliance with Section 8.23.8.20 of the regulations were not provided.

62. In response to a request for alternative site propagation studies made at the November 9, 1999, sprint stated that "at some point when you start requiring us to put multiple towers on a site, it becomes economically prohibitive for us to fill the cell." No cost data was ever submitted as evidence to back up this claim of "economic prohibitiveness".

63. When pressed on the issue of the economic factors Sprint responded, "I think at this point, our position is we're prepared to put one tower in this cell."

64. Sprint's representative also stated: "{W}e have submitted to you what we feel we're capable of putting in this area to fill this cell. If the Commission feels that we've not proven the necessity of the tower, then they have the ability to deny the application and we have the ability to pursue whatever remedies are available to us."

65. Accurate propagation maps are critical to determine compliance with the regulations.

66. The map of coverage dated November 4, 1999 produced by applicant to show the extent of coverage from the proposed site with only a 100-foot tower, actually shows results that are virtually identical as those produced by applicant on the same date but designed to reflect coverage from the site with a 120-foot tower. Comparing the 100-foot study and the 120-foot study, it is clear that coverage in the vicinity of Rt. 66 and Rt. 85 is virtually unchanged and coverage in the outlying areas is also quite similar.

67. On 11/9/99 the applicant's representative stated that a 150-foot tower would provide 27.2 sq. mi. of coverage, a 120-foot tower would provide only 9 sq. mi. coverage, and a 100-foot tower would provide a meager 3.5 sq. miles of coverage. Based on our review of the propagation studies we find that this assertion is simply not credible.

68. CompComm analyzed a number of alternative antenna arrangements. CompComm identified two locations, which in combination would allow Sprint to provide the requisite coverage on both Rt.66 and Rt. 85 with lower towers than that proposed for the Buck Road site.

69. CompComm, in its report dated 12/3/99, stated that coverage similar to what Sprint seeks at 150 feet can likely be achieved with multiple lower towers and the studies provided by Sprint do not demonstrate the necessity of a 150' tower. The report states, *"The propagation studies submitted by Sprint do not demonstrate the need for the taller structure."*

70. The CompComm report went on to also make note of the questionable assertion about the amount of decreased coverage that would result for a shorter tower. Specifically, CompComm stated, *"These studies show a major decrease in coverage area when the antenna height is decreased by only 30 feet - from 150' to 120', which is still well above the tree line and most of the surrounding terrain. This difference should not cause a coverage difference this extreme."*

71. The CompComm report went on to state, *"The studies show that coverage on Route 66 and Route 85 in Hebron are similar with the proposed antenna at 150 feet and 120 feet.... When the antenna is lowered to 100 feet, the signal along Route 66 is similar and the signal along Route 85 decreases further. From the simulations, CompComm recommends a maximum height of 120 feet at this location to reduce visual impact."*

72. CompComm undertook an independent analysis of alternative sites in town. Based on their review, CompComm stated, *"Our conclusion is that coverage of the areas of concern could likely be achieved through a combination of smaller towers on certain alternative sites." "The best single site alternative is Site V on the map." (a site southeast of the proposed site, south of Route 66 and west of Route 85). Another approach would be to allow two sites to provide the same coverage. The best combination of sites in this case is Site III and Site VII. These would provide the required coverage to both Route 66 and Route 85 with lower towers than the single site solution demonstrated in the application."*

73. Putting aside momentarily the question of coverage on Rt. 66 and Rt. 85, most of the additional coverage gained by building a 150-foot tower over a 120-foot tower would be in largely uninhabited, sparsely populated and heavily wooded portions of town, most of which fall within wetlands.

74. Sprint conducted a Visual Resource Evaluation study within a two-mile radius of the site. The evaluation was conducted three separate times, September 24, October 2, and October 30, 1999. Between the first and last study deciduous trees had lost some but not all foliage cover. Because not all foliage had dropped by October 30, 1999 visual impact may be greater than estimated, or in places not anticipated, since Sprint could not predictively "remove" leaves in its predictive model."

75. Likewise, Visual Resource Evaluation may be slightly skewed since conflicting testimony was given as to the intensity of the wind. The wind may have lowered the balloon so it did not fly at 150 feet. Therefore, visual simulations may be lower than actual 150 feet.

76. Based on the evidence presented at the hearings, and the statements and testimony of the applicant's representatives, along with a detailed review of the propagation studies and the supporting opinions of the expert retained by the Commission, we find:

a. That the proposed facility is not within a historic district and the provisions of Section 8.23.9.1 are inapplicable.

b. That while the site chosen by the Applicant is not a inappropriate site for some type of telecommunications tower facility, the Applicant has failed to show that it has made diligent efforts to minimize the proximity of the facility to, and its visibility from, residential properties.

c. That the proposed location is not a preference 1 through 2 location, but that the applicant has adequately described the efforts and measure taken to pursue those preferences and why a higher preference location was not technologically, legally or economically feasible.

d. That the applicant has failed to demonstrate to the Commission's satisfaction, the necessity of the height of the proposed telecommunications tower.

e. That the proposed tower of 150 feet exceeds the minimum height necessary to carry out the function of the facility.

f. That the function of the facility, and the coverage goals stated by the applicant, could be carried out and satisfied at the proposed location with a 100 foot tower, and that 100 feet is the minimum antenna height needed to carry out the function of the facility.

g. That the nature of the area and neighborhood is such that any tower at the proposed site, if higher than the tree canopy, could be camouflaged and that camouflage is reasonable and necessary to protect the well being and property values of the neighborhood.

h. That the applicant has failed to provide an abandonment plan.

2/3/01

David W. Schoolcraft
Chairman, Hebron Planning and
Zoning Commission

Unique ID: 4018 Hebron **Card No:** 1 Of 1

Location:	107 BUCK RD	Map Id:	42-3X.A	Zone:	R-1	Date Printed:	3/14/2024
		Neighborhood:	Commercial 3			Last Update:	3/14/2024

Owner Of Record	Volume/Page	Date	Sales Type	Valid	Sale Price
MAPLELEAF FARM LAND TRUST LLC	0568/0605	5/18/2020		No	0
(CT33XC560), C/O GLOBAL SIGNAL ACQ II, PMB 331 4017 WASHINGTON RD, MCMURRAY, PA 15317			Exempt		

Prior Owner History

ELLIS EDWARD A & RENEE (CT33XC560)	0435/0526	4/29/2008		No	0
ELLIS EDWARD A&RENEE(CT33XC560	0134/0493	9/29/1988		No	0

Permit Number	Date	Permit Description
22-10	4/4/2022	ELECTRICAL SERVICE
22-7	3/10/2022	REPLACE 6 EXISTING ANTENNA
2021-0620	11/1/2021	3 NEW ANTENNAS
2021-0328	6/22/2021	CELL TOWER ANTENNAS
27235	9/18/2018	SPRINT TO REPLACE 6 ANTENNAS W/ 9 REMOTE RADIO HEADS
14-188B	1/27/2014	

Supplemental Data

Census/Tract	5261	Historic #	
Dev Map ID		LUC	Cell Tower
GIS ID			
Route			
District			
Utilities			

Appraised Value

Total Land Value	164,000
Total Building Value	0
Total Outbldg Value	20,000
Total Market Value	184,000

Acres

Land Type	Acres	490	Total Value
Commercial Primary Vacant	1.04	0.00	164,000
Total	1.0400	0.00	164,000

State Item Codes

Code	Quantity	Value
52-Commercial Vacant Land	1.04	114,800
55-Vacant Outbuilding	2.00	14,000

Assessment History (Prior Years as of Oct 1)

	2024	2023	2022	2021	2020
Land	114,800	114,800	114,800	114,800	115,500
Building	0	0	0	0	0
Outbuilding	14,000	14,000	0	0	0
Total	**128,800**	**128,800**	**114,800**	**114,800**	**115,500**

490 Appraised Totals

Type	Acres	Value	Type	Acres	Value
			Totals	0.00	0

Application Date: Expiration Date:

Comments

4/20/2012	1.04 AC CELL TOWER SITE, 120` TOWER; CELL TOWER LEASE; 1500X12 CAPED @8%;LEASE VOL 392 PAGE 671;

Revaluation Date: 10/1/2016

Hebron

Unique ID: 4018

Location:	107 BUCK RD	**Unit**	

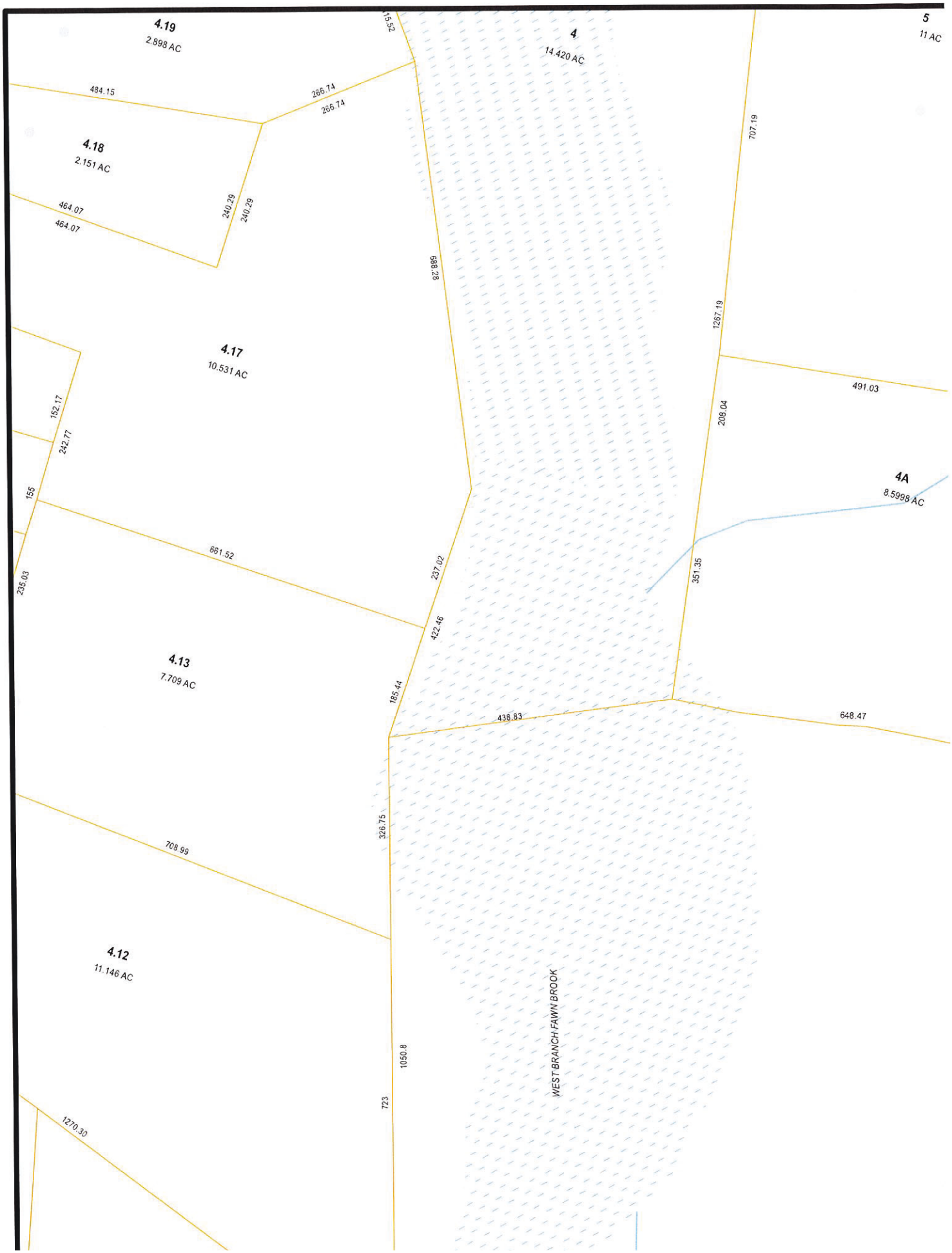
Commercial Building Description	Description	Area/Qty
Building Use		
Class		
Overall Condition		
Construction Quality		
Stories		
Year Built		
Remodel		
Percent Complete		
GLA		
Basement		
Basement Area		
HVAC		
Heating Type		
Fuel Type		
Cooling Type		
Interior		
Floors		
Walls		
Wall Height		
Exterior		
Exterior Walls		
Roof Type		
Roof Cover		
Special Features		

Attached Component Computations

Type	Yr Blt	Area/Qty

Detached Component Computations

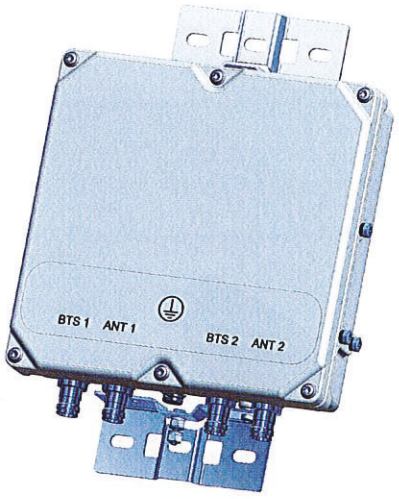
Type	Year	Condition	Area/Qty	Type	Year	Condition	Area/Qty


4.19
2.898 AC
15.52
4
14.420 AC
5
11 AC
484.15
266.74
266.74
4.18
2.151 AC
464.07
464.07
240.29
240.29
688.28
707.19
4.17
10.531 AC
1267.19
491.03
208.04
152.17
242.77
155
4A
8.5998 AC
661.52
235.03
237.02
351.35
422.46
4.13
7.709 AC
185.44
438.83
648.47
326.75
708.99
4.12
11.146 AC
WEST BRANCH FAWN BROOK
1050.8
723
1270.30

BSF0020F3V1-1

TWIN BANDSTOP 900MHZ INTERFERENCE MITIGATION FILTER

The BSF0020 is ideal for co-located 700, 850 and 900 networks. Utilising a 2.6MHz guardband the BSF0020 provides rejection of the 900 UL band while passing 700/850 UL and DL bands. Capable of being used in an outdoor environment the BSF0020 contains two identical bandstop filters, suitable for 2x2 MIMO configuration, offering excellent insertion loss, group delay and rejection.



FEATURES

- Passes full 700 and 850 bands
- Low insertion loss
- Rejection of 900MHz uplink
- DC/AISG pass
- Twin unit
- Dual twin mounting available

TECHNICAL SPECIFICATIONS

BAND NAME	700 PATH / 850 UPLINK PATH	850 DOWNLINK PATH
Passband	698 - 849MHz	869 - 891.5MHz
Insertion loss	0.1dB typical / 0.3dB maximum	0.5dB typical, 1.45dB maximum
Return loss	24dB typical, 18dB minimum	
Maximum input power (Per Port)	100W average	200W average and 66W per 5MHz
Rejection	53dB minimum @ 894.1 - 896.5MHz	

ELECTRICAL	
Impedance	50Ohms
Intermodulation products	-160dBc maximum in UL Band (assuming 20MHz Signal), with 2 x 43dBm carriers -153dBc maximum with 2 x 43dBm

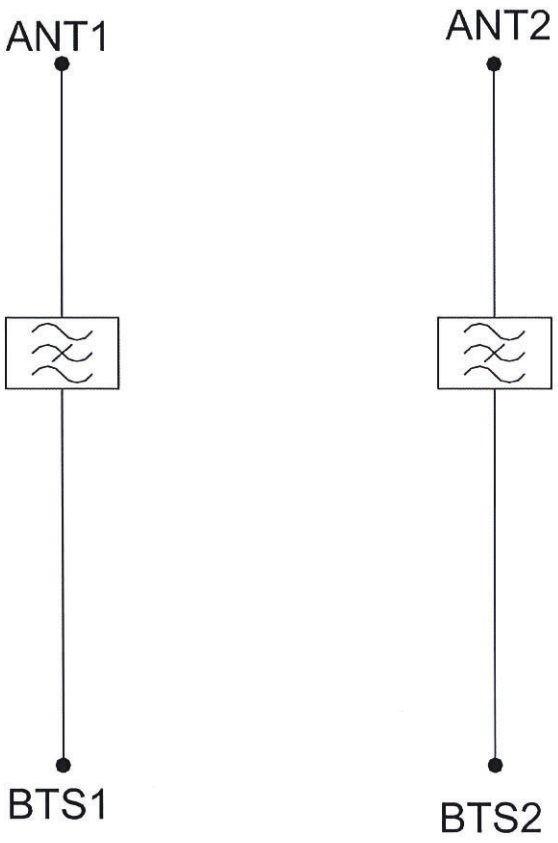
DC / AISG	
Passband	0 - 13MHz
Insertion loss	0.3dB maximum
Return loss	15dB minimum
Input voltage range	± 33V
DC current rating	2A continuous, 4A peak
Compliance	3GPP TS 25.461

ENVIRONMENTAL	
For further details of environmental compliance, please contact Kaelus.	
Temperature range	-20°C to +60°C | -4°F to +140°F
Ingress protection	IP67
Altitude	2600m | 8530ft
Lightning protection	RF port: ±5kA maximum (8/20us), IEC 61000-4-5 – Unit must be terminated with some lightning protection circuits.
MTBF	>1,000,000 hours
Compliance	ETSI EN 300 019 class 4.1H, RoHS, NEBS GR-487-CORE

MECHANICAL	
Dimensions H x D x W	269 x 277 x 80mm | 10.60 x 10.90 x 3.15in (Excluding brackets and connectors)
Weight	8.0 kg | 17.6 lbs (no bracket)
Finish	Powder coated, light grey (RAL7035)
Connectors	RF: 4.3-10 (F) x 4
Mounting	Optional pole/wall bracket supplied with two metal clamps 45-178mm diameter poles or custom bracket. See ordering information.

Contact Us: +1 303 768 8080 | +61 (0) 7 3907 1200 | www.kaelus.com

ELECTRICAL BLOCK DIAGRAM



Contact Us: +1 303 768 8080 | +61 (0) 7 3907 1200 | www.kaelus.com

Barbadora, Jeff

From: TrackingUpdates@fedex.com
Sent: Friday, March 15, 2024 12:35 PM
To: Barbadora, Jeff
Subject: FedEx Shipment 775550912920: Your package has been delivered

FedEx

Hi. Your package was delivered Fri, 03/15/2024 at 12:28pm.

Delivered to 15 GILEAD ST, HEBRON, CT 06248
Received by F.VILLANI

OBTAIN PROOF OF DELIVERY

How was your delivery ?

TRACKING NUMBER	775550912920
FROM	Crown Castle 1800 W. Park Drive WESTBOROUGH, MA, US, 01581
TO	Town of Hebron Andrew Tierney, Town Manager 15 Gilead Street HEBRON, CT, US, 06248
REFERENCE	799001.7680
SHIPPER REFERENCE	799001.7680
SHIP DATE	Thu 3/14/2024 06:46 PM
DELIVERED TO	Receptionist/Front Desk
PACKAGING TYPE	FedEx Envelope
ORIGIN	WESTBOROUGH, MA, US, 01581
DESTINATION	HEBRON, CT, US, 06248
SPECIAL HANDLING	Deliver Weekday
NUMBER OF PIECES	1
TOTAL SHIPMENT WEIGHT	0.50 LB
SERVICE TYPE	FedEx Standard Overnight

Barbadora, Jeff

From: TrackingUpdates@fedex.com
Sent: Friday, March 15, 2024 12:35 PM
To: Barbadora, Jeff
Subject: FedEx Shipment 775550956231: Your package has been delivered

Hi. Your package was delivered Fri, 03/15/2024 at 12:28pm.

Delivered to 15 GILEAD ST, HEBRON, CT 06248
Received by F.VILLANI

OBTAIN PROOF OF DELIVERY

How was your delivery ?

TRACKING NUMBER	775550956231
FROM	Crown Castle 1800 W. Park Drive WESTBOROUGH, MA, US, 01581
TO	Town of Hebron Matthew Bordeaux, Town Planner 15 Gilead Street HEBRON, CT, US, 06248
REFERENCE	799001.7680
SHIPPER REFERENCE	799001.7680
SHIP DATE	Thu 3/14/2024 06:46 PM
DELIVERED TO	Receptionist/Front Desk
PACKAGING TYPE	FedEx Envelope
ORIGIN	WESTBOROUGH, MA, US, 01581
DESTINATION	HEBRON, CT, US, 06248
SPECIAL HANDLING	Deliver Weekday
NUMBER OF PIECES	1
TOTAL SHIPMENT WEIGHT	0.50 LB
SERVICE TYPE	FedEx Standard Overnight

Date: **January 18, 2024**

MORRISON HERSHFIELD

Morrison Hershfield
1455 Lincoln Parkway, Suite 500
Atlanta, GA 30346
(770) 379-8500

Subject:	**Structural Analysis Report**	
Carrier Designation:	***Verizon Wireless* Co-Locate**	
	Site Number:	5000243961
	Site Name:	Hebron West CT
Crown Castle Designation:	**BU Number:**	876387
	Site Name:	South Hebron / Ned Ellis Prop.
	JDE Job Number:	2101358
	Work Order Number:	2278045
	Order Number:	656556 Rev. 0
Engineering Firm Designation:	**Morrison Hershfield Project Number:** CN7-278R1 / 2400001	
Site Data:	**107 Buck Rd., Hebron, Tolland County, CT 06248**	
	Latitude *41° 39' 16.02"*, Longitude *-72° 24' 39.11"*	
	119.5 Foot – EEI Monopole Tower	

Morrison Hershfield 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:

LC5: Proposed Equipment Configuration **Sufficient Capacity – 80.4%**

This analysis utilizes an ultimate 3-second gust wind speed of 120 mph as required by the 2022 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Respectfully submitted by:

STATE OF CONNECTICUT
G. LANCE COOKE
No. 28133
LICENSED PROFESSIONAL ENGINEER
EXP 1/31/25

G. Lance Cooke
2024.01.18
08:03:17-08'00'

G. Lance Cooke, P.E. (CT License No. PEN.0028133)
Senior Engineer

TABLE OF CONTENTS

1) INTRODUCTION

This tower is a 119.5 ft monopole tower designed by Engineered Endeavors, Inc.

The tower was modified per reinforcement drawings prepared by GPD Associates, in December of 2008. Reinforcement consists of addition of base plate stiffeners. Per the post modification inspection completed by GPD Associate, in May of 2009, these modifications have been properly installed and were considered in this analysis.

2) ANALYSIS CRITERIA

TIA-222 Revision:	TIA-222-H
Risk Category:	II
Wind Speed:	120 mph
Exposure Category:	C
Topographic Factor:	1
Ice Thickness:	1 in
Wind Speed with Ice:	50 mph
Service Wind Speed:	60 mph

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)
97.0	97.0	6	antel	LPA-80080-4CF-EDIN-0 w/ Mount Pipe	11	1-5/8
		6	commscope	NHH-65B-R2B w/ Mount Pipe		
		3	samsung telecommunications	MT6407-77A w/ Mount Pipe		
		3	samsung telecommunications	RF4439D-25A		
		3	samsung telecommunications	RF4440D-13A		
		2	kaelus	KA-6030		
		1	raycap	RVZDC-6627-PF-48		
		1	-	T-Arm Mount [TA 602-3]		

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)
117.0	117.0	3	ericsson	AIR6449 B41_T-MOBILE w/ Mount Pipe	4	1-5/8
		3	rfs/celwave	APX16DWV-16DWV-S-E-A20 w/ Mount Pipe		
		3	rfs/celwave	APXVAALL24_43-U-NA20_TMO w/ Mount Pipe		
		3	ericsson	RADIO 4415 B66A		
		3	ericsson	RADIO 4424 B25_TMO		
		3	ericsson	RADIO 4449 B71 B85A_T-MOBILE		
		1	-	Sector Mount [SM 1305-3]		

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
106.0	107.0	3	jma wireless	MX08FRO665-21 w/ Mount Pipe	1	1-1/2
		3	fujitsu	TA08025-B604		
		3	fujitsu	TA08025-B605		
		1	raycap	RDIDC-9181-PF-48		
	106.0	1	tower mounts	Commscope MC-K6MHDX-9-96 (3)		
88.0	90.0	3	ericsson	TME-RRUS-11 w/ Mount Pipe	-	-
		1	raycap	DC6-48-60-18-8F		
	88.0	1	-	Side Arm Mount [SO 102-3]		
87.0	89.0	6	powerwave technologies	7770.00 w/ Mount Pipe	12 2 1 1	7/8 7/16 3/8 2C
		6	powerwave technologies	LGP21401		
		6	powerwave technologies	LGP21901		
	88.0	3	kmw communications	AM-X-CD-16-65-00T-RET w/ Mount Pipe		
	87.0	1	-	T-Arm Mount [TA 602-3]		

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Reference	Source
4-GEOTECHNICAL REPORTS	2157932	CCISITES
4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS	1630217	CCISITES
4-TOWER MANUFACTURER DRAWINGS	1613574	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	2374441	CCISITES
4-POST-MODIFICATION INSPECTION	2431180	CCISITES

3.1) Analysis Method

tnxTower (version 8.2.2.0), 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. Morrison Hershfield should be notified to determine the effect on the structural integrity of the tower.

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
L1	119.5 - 69.67	Pole	TP33.02x19x0.3125	1	-22.39	1912.85	59.4	Pass
L2	69.67 - 42.25	Pole	TP39.99x31.0839x0.375	2	-29.21	2784.66	69.4	Pass
L3	42.25 - 0	Pole	TP51x37.7131x0.4375	3	-45.40	4312.79	69.8	Pass
							Summary	
						Pole (L3)	69.8	Pass
						Rating =	69.8	Pass

Table 5 - Tower Component Stresses vs. Capacity – LC5

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Anchor Rods	0	71.2	Pass
1	Base Plate		69.5	Pass
1	Base Foundation (Structure)	0	80.4	Pass
1	Base Foundation (Soil Interaction)		59.0	Pass

Structure Rating (max from all components) =	80.4%*

Notes:
1) See additional documentation in “Appendix C – Additional Calculations” for calculations supporting the % capacity consumed.
2) *Rating per TIA-222-H, Section 15.5.

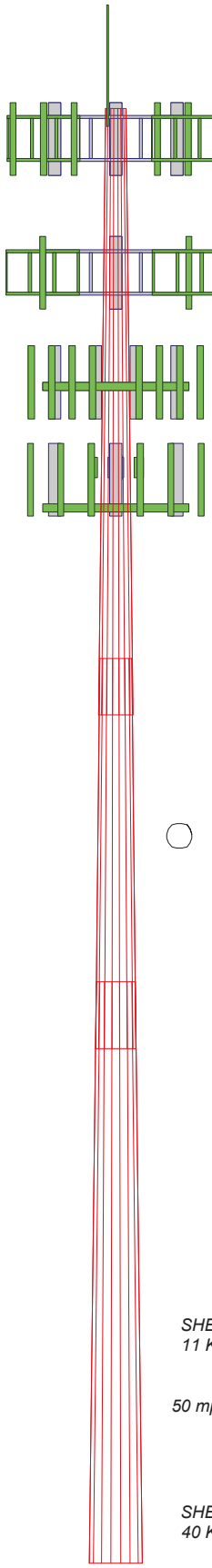
4.1) Recommendations

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	Length (ft)	Number of Sides	Thickness (in)	Socket Length (ft)	Top Dia (in)	Bot Dia (in)	Grade	Weight (K)
1	49.83	18	0.3125	4.66	19.0000	33.0200		4.3
2	32.08	18	0.3750	5.50	31.0839	39.9900	A572-65	4.6
3	47.75	18	0.4375		37.7131	51.0000		9.9
								18.8



MATERIAL STRENGTH

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

TOWER DESIGN NOTES

1. Tower is located in Tolland County, Connecticut.
2. Tower designed for Exposure C to the TIA-222-H Standard.
3. Tower designed for a 120 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 50 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: 69.8%

ALL REACTIONS ARE FACTORED

AXIAL 64 K

SHEAR 11 K *MOMENT 996 kip-ft*

TORQUE 0 kip-ft
50 mph WIND - 1.0000 in ICE

AXIAL 45 K

SHEAR 40 K *MOMENT 3703 kip-ft*

TORQUE 1 kip-ft
REACTIONS - 120 mph WIND

Morrison Hershfield
Consulting Engineers
1455 Lincoln Parkway, Suite 500
Atlanta, GA 30346
Phone: (770) 379-8500
FAX: (770) 379-8501

Job:	***CN7-278R1 / 2400001***		
Project:	***876387 / South Hebron / Ned Ellis Prop.***		
Client: Crown Castle USA	Drawn by: RP		App'd:
Code: TIA-222-H	Date: 01/18/24		Scale: NTS
Path:			Dwg No. E-1

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 Tolland County, Connecticut.
Tower base elevation above sea level: 544.00 ft.
Basic wind speed of 120 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 50 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		Assume Legs Pinned		Calculate Redundant Bracing Forces
	Consider Moments - Horizontals	√	Assume Rigid Index Plate		Ignore Redundant Members in FEA
	Consider Moments - Diagonals	√	Use Clear Spans For Wind Area		SR Leg Bolts Resist Compression
	Use Moment Magnification		Use Clear Spans For KL/r		All Leg Panels Have Same Allowable
√	Use Code Stress Ratios		Retension Guys To Initial Tension		Offset Girt At Foundation
√	Use Code Safety Factors - Guys	√	Bypass Mast Stability Checks	√	Consider Feed Line Torque
	Escalate Ice	√	Use Azimuth Dish Coefficients		Include Angle Block Shear Check
	Always Use Max Kz	√	Project Wind Area of Appurtenances		Use TIA-222-H Bracing Resist. Exemption
	Use Special Wind Profile	√	Alternative Appurt. EPA Calculation		Use TIA-222-H Tension Splice Exemption
	Include Bolts In Member Capacity		Autocalc Torque Arm Areas		Poles
	Leg Bolts Are At Top Of Section		Add IBC .6D+W Combination	√	Include Shear-Torsion Interaction
	Secondary Horizontal Braces Leg		Sort Capacity Reports By Component		Always Use Sub-Critical Flow
	Use Diamond Inner Bracing (4 Sided)		Triangulate Diamond Inner Bracing		Use Top Mounted Sockets
	SR Members Have Cut Ends		Treat Feed Line Bundles As Cylinder		Pole Without Linear Attachments
	SR Members Are Concentric		Ignore KL/ry For 60 Deg. Angle Legs		Pole With Shroud Or No Appurtenances
	Distribute Leg Loads As Uniform		Use ASCE 10 X-Brace Ly Rules		Outside and Inside Corner Radii Are Known

Tapered Pole Section Geometry

Section	*Elevation*	*Section Length*	*Splice Length*	*Number of Sides*	*Top Diameter*	*Bottom Diameter*	*Wall Thickness*	*Bend Radius*	*Pole Grade*
	ft	*ft*	*ft*		*in*	*in*	*in*	*in*	
L1	119.50-69.67	49.83	4.66	18	19.0000	33.0200	0.3125	1.2500	A572-65 (65 ksi)
L2	69.67-42.25	32.08	5.50	18	31.0839	39.9900	0.3750	1.5000	A572-65 (65 ksi)
L3	42.25-0.00	47.75		18	37.7131	51.0000	0.4375	1.7500	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	It/Q in^2	w in	w/t
L1	19.2449	18.5357	817.8017	6.6341	9.6520	84.7287	1636.6795	9.2696	2.7940	8.941
	33.4812	32.4418	4384.6653	11.6112	16.7742	261.3940	8775.1000	16.2240	5.2615	16.837
L2	32.8192	36.5512	4354.7928	10.9017	15.7906	275.7837	8715.3157	18.2791	4.8108	12.829
	40.5491	47.1518	9348.7731	14.0633	20.3149	460.1925	18709.8476	23.5804	6.3782	17.009
L3	39.7814	51.7618	9086.4779	13.2328	19.1582	474.2855	18184.9121	25.8858	5.8675	13.411
	51.7193	70.2124	22678.1721	17.9497	25.9080	875.3347	45386.1847	35.1128	8.2060	18.757

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
L1 119.50-69.67				1	1	1			
L2 69.67-42.25				1	1	1			
L3 42.25-0.00				1	1	1			

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
*******									
HB158-21U6S24-xxM_TMO(1-5/8)	C	No	No	Inside Pole	117.00 - 0.00	4	No Ice	0.00	2.50
							1/2" Ice	0.00	2.50
							1" Ice	0.00	2.50
*******									
CU12PSM9P6XXX (1-1/2)	B	No	No	Inside Pole	106.00 - 0.00	1	No Ice	0.00	2.35
							1/2" Ice	0.00	2.35
							1" Ice	0.00	2.35
*******									
LDF7-50A(1-5/8)	B	No	No	Inside Pole	97.00 - 0.00	10	No Ice	0.00	0.82
							1/2" Ice	0.00	0.82
							1" Ice	0.00	0.82
***									
HB158-U12S24-XXX-LI(1-5/8)	B	No	No	Inside Pole	97.00 - 0.00	1	No Ice	0.00	3.20
							1/2" Ice	0.00	3.20
							1" Ice	0.00	3.20
*******									
LDF5-50A(7/8)	A	No	No	Inside Pole	87.00 - 0.00	12	No Ice	0.00	0.33
							1/2" Ice	0.00	0.33
							1" Ice	0.00	0.33
FB-L98B-002-75000(3/8)	A	No	No	Inside Pole	87.00 - 0.00	1	No Ice	0.00	0.06
							1/2" Ice	0.00	0.06
							1" Ice	0.00	0.06
WR-VG122ST-BRDA(7/16)	A	No	No	Inside Pole	87.00 - 0.00	2	No Ice	0.00	0.14
							1/2" Ice	0.00	0.14
							1" Ice	0.00	0.14
Conduit (2")	A	No	No	Inside Pole	87.00 - 0.00	1	No Ice	0.00	2.80
							1/2" Ice	0.00	2.80
							1" Ice	0.00	2.80
*******									

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	119.50-69.67	A	0.000	0.000	0.000	0.000	0.12
		B	0.000	0.000	0.000	0.000	0.40
		C	0.000	0.000	0.000	0.000	0.47
L2	69.67-42.25	A	0.000	0.000	0.000	0.000	0.19
		B	0.000	0.000	0.000	0.000	0.38
		C	0.000	0.000	0.000	0.000	0.27
L3	42.25-0.00	A	0.000	0.000	0.000	0.000	0.30
		B	0.000	0.000	0.000	0.000	0.58
		C	0.000	0.000	0.000	0.000	0.42

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_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	119.50-69.67	A	0.942	0.000	0.000	0.000	0.000	0.12
		B		0.000	0.000	0.000	0.000	0.40
		C		0.000	0.000	0.000	0.000	0.47
L2	69.67-42.25	A	0.895	0.000	0.000	0.000	0.000	0.19
		B		0.000	0.000	0.000	0.000	0.38
		C		0.000	0.000	0.000	0.000	0.27
L3	42.25-0.00	A	0.813	0.000	0.000	0.000	0.000	0.30
		B		0.000	0.000	0.000	0.000	0.58
		C		0.000	0.000	0.000	0.000	0.42

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
L1	119.50-69.67	0.0000	0.0000	0.0000	0.0000
L2	69.67-42.25	0.0000	0.0000	0.0000	0.0000
L3	42.25-0.00	0.0000	0.0000	0.0000	0.0000

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

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
******									
Lighting Rod 3/4" x 7'	C	From Leg	0.00	0.0000	119.50	No Ice	0.53	0.53	0.03
			0.00			1/2" Ice	1.24	1.24	0.04
			3.50			1" Ice	1.97	1.97	0.05
******									
EEI Branches (Large)	C	None		0.0000	114.00	No Ice	90.00	90.00	1.50
						1/2" Ice	120.00	120.00	1.90
						1" Ice	144.00	144.00	2.47
EEI Branches (Large)	C	None		0.0000	104.00	No Ice	90.00	90.00	1.50
						1/2" Ice	120.00	120.00	1.90
						1" Ice	144.00	144.00	2.47
EEI Branches (Large)	C	None		0.0000	94.00	No Ice	90.00	90.00	1.50
						1/2" Ice	120.00	120.00	1.90

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
						1" Ice	144.00	144.00	2.47
EEI Branches (Large)	C	None		0.0000	84.00	No Ice	90.00	90.00	1.50
						1/2" Ice	120.00	120.00	1.90
						1" Ice	144.00	144.00	2.47
EEI Branches (Small)	C	None		0.0000	77.00	No Ice	45.00	45.00	0.75
						1/2" Ice	60.00	60.00	0.85
						1" Ice	72.00	72.00	0.95
******									
AIR6449 B41_T-MOBILE w/ Mount Pipe	A	From Leg	4.00 0.00 0.00	0.0000	117.00	No Ice 1/2" Ice 1" Ice	5.19 5.59 6.02	2.71 3.04 3.38	0.13 0.17 0.23
AIR6449 B41_T-MOBILE w/ Mount Pipe	B	From Leg	4.00 0.00 0.00	0.0000	117.00	No Ice 1/2" Ice 1" Ice	5.19 5.59 6.02	2.71 3.04 3.38	0.13 0.17 0.23
AIR6449 B41_T-MOBILE w/ Mount Pipe	C	From Leg	4.00 0.00 0.00	0.0000	117.00	No Ice 1/2" Ice 1" Ice	5.19 5.59 6.02	2.71 3.04 3.38	0.13 0.17 0.23
APXVAALL24_43-U-NA20_TMO w/ Mount Pipe	A	From Leg	4.00 0.00 0.00	0.0000	117.00	No Ice 1/2" Ice 1" Ice	14.69 15.46 16.23	6.87 7.55 8.25	0.18 0.31 0.45
APXVAALL24_43-U-NA20_TMO w/ Mount Pipe	B	From Leg	4.00 0.00 0.00	0.0000	117.00	No Ice 1/2" Ice 1" Ice	14.69 15.46 16.23	6.87 7.55 8.25	0.18 0.31 0.45
APXVAALL24_43-U-NA20_TMO w/ Mount Pipe	C	From Leg	4.00 0.00 0.00	0.0000	117.00	No Ice 1/2" Ice 1" Ice	14.69 15.46 16.23	6.87 7.55 8.25	0.18 0.31 0.45
APX16DWV-16DWV-S-E-A20 w/ Mount Pipe	A	From Leg	4.00 0.00 0.00	0.0000	117.00	No Ice 1/2" Ice 1" Ice	6.29 6.86 7.45	2.76 3.27 3.79	0.06 0.11 0.16
APX16DWV-16DWV-S-E-A20 w/ Mount Pipe	B	From Leg	4.00 0.00 0.00	0.0000	117.00	No Ice 1/2" Ice 1" Ice	6.29 6.86 7.45	2.76 3.27 3.79	0.06 0.11 0.16
APX16DWV-16DWV-S-E-A20 w/ Mount Pipe	C	From Leg	4.00 0.00 0.00	0.0000	117.00	No Ice 1/2" Ice 1" Ice	6.29 6.86 7.45	2.76 3.27 3.79	0.06 0.11 0.16
RADIO 4449 B71 B85A_T-MOBILE	A	From Leg	4.00 0.00 0.00	0.0000	117.00	No Ice 1/2" Ice 1" Ice	1.97 2.15 2.33	1.59 1.75 1.92	0.07 0.09 0.12
RADIO 4449 B71 B85A_T-MOBILE	B	From Leg	4.00 0.00 0.00	0.0000	117.00	No Ice 1/2" Ice 1" Ice	1.97 2.15 2.33	1.59 1.75 1.92	0.07 0.09 0.12
RADIO 4449 B71 B85A_T-MOBILE	C	From Leg	4.00 0.00 0.00	0.0000	117.00	No Ice 1/2" Ice 1" Ice	1.97 2.15 2.33	1.59 1.75 1.92	0.07 0.09 0.12
(2) RADIO 4424 B25_TMO	A	From Leg	4.00 0.00 0.00	0.0000	117.00	No Ice 1/2" Ice 1" Ice	2.05 2.23 2.42	1.61 1.77 1.94	0.09 0.11 0.13
RADIO 4424 B25_TMO	B	From Leg	4.00 0.00 0.00	0.0000	117.00	No Ice 1/2" Ice 1" Ice	2.05 2.23 2.42	1.61 1.77 1.94	0.09 0.11 0.13
RADIO 4415 B66A	B	From Leg	4.00 0.00 0.00	0.0000	117.00	No Ice 1/2" Ice 1" Ice	1.86 2.03 2.20	0.87 1.00 1.13	0.05 0.06 0.08
(2) RADIO 4415 B66A	C	From Leg	4.00 0.00 0.00	0.0000	117.00	No Ice 1/2" Ice 1" Ice	1.86 2.03 2.20	0.87 1.00 1.13	0.05 0.06 0.08
8' x 2" Mount Pipe	A	From Leg	4.00 0.00 0.00	0.0000	117.00	No Ice 1/2" Ice 1" Ice	1.90 2.73 3.40	1.90 2.73 3.40	0.03 0.04 0.06
8' x 2" Mount Pipe	B	From Leg	4.00 0.00 0.00	0.0000	117.00	No Ice 1/2" Ice 1" Ice	1.90 2.73 3.40	1.90 2.73 3.40	0.03 0.04 0.06
8' x 2" Mount Pipe	C	From Leg	4.00 0.00 0.00	0.0000	117.00	No Ice 1/2" Ice 1" Ice	1.90 2.73 3.40	1.90 2.73 3.40	0.03 0.04 0.06

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft Vert ft ft	Azimuth Adjustment ° Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
Sector Mount [SM 1305-3]	C	None		0.0000	117.00	No Ice	31.68	31.68	1.25
						1/2" Ice	41.02	41.02	1.94
						1" Ice	50.37	50.37	2.79
******									
MX08FRO665-21 w/ Mount Pipe	A	From Leg	4.00	0.0000	106.00	No Ice	8.01	4.23	0.11
			0.00			1/2" Ice	8.52	4.69	0.19
			1.00			1" Ice	9.04	5.16	0.29
MX08FRO665-21 w/ Mount Pipe	B	From Leg	4.00	0.0000	106.00	No Ice	8.01	4.23	0.11
			0.00			1/2" Ice	8.52	4.69	0.19
			1.00			1" Ice	9.04	5.16	0.29
MX08FRO665-21 w/ Mount Pipe	C	From Leg	4.00	0.0000	106.00	No Ice	8.01	4.23	0.11
			0.00			1/2" Ice	8.52	4.69	0.19
			1.00			1" Ice	9.04	5.16	0.29
TA08025-B604	A	From Leg	4.00	0.0000	106.00	No Ice	1.96	0.98	0.06
			0.00			1/2" Ice	2.14	1.11	0.08
			1.00			1" Ice	2.32	1.25	0.10
TA08025-B604	B	From Leg	4.00	0.0000	106.00	No Ice	1.96	0.98	0.06
			0.00			1/2" Ice	2.14	1.11	0.08
			1.00			1" Ice	2.32	1.25	0.10
TA08025-B604	C	From Leg	4.00	0.0000	106.00	No Ice	1.96	0.98	0.06
			0.00			1/2" Ice	2.14	1.11	0.08
			1.00			1" Ice	2.32	1.25	0.10
TA08025-B605	A	From Leg	4.00	0.0000	106.00	No Ice	1.96	1.13	0.08
			0.00			1/2" Ice	2.14	1.27	0.09
			1.00			1" Ice	2.32	1.41	0.11
TA08025-B605	B	From Leg	4.00	0.0000	106.00	No Ice	1.96	1.13	0.08
			0.00			1/2" Ice	2.14	1.27	0.09
			1.00			1" Ice	2.32	1.41	0.11
TA08025-B605	C	From Leg	4.00	0.0000	106.00	No Ice	1.96	1.13	0.08
			0.00			1/2" Ice	2.14	1.27	0.09
			1.00			1" Ice	2.32	1.41	0.11
RDIDC-9181-PF-48	A	From Leg	2.00	0.0000	106.00	No Ice	2.01	1.17	0.02
			0.00			1/2" Ice	2.19	1.31	0.04
			1.00			1" Ice	2.37	1.46	0.06
(2) 8' x 2" Mount Pipe	A	From Leg	4.00	0.0000	106.00	No Ice	1.90	1.90	0.03
			0.00			1/2" Ice	2.73	2.73	0.04
			0.00			1" Ice	3.40	3.40	0.06
(2) 8' x 2" Mount Pipe	B	From Leg	4.00	0.0000	106.00	No Ice	1.90	1.90	0.03
			0.00			1/2" Ice	2.73	2.73	0.04
			0.00			1" Ice	3.40	3.40	0.06
(2) 8' x 2" Mount Pipe	C	From Leg	4.00	0.0000	106.00	No Ice	1.90	1.90	0.03
			0.00			1/2" Ice	2.73	2.73	0.04
			0.00			1" Ice	3.40	3.40	0.06
Commscope MC-K6MHDX-9-96 (3)	C	None		0.0000	106.00	No Ice	15.30	15.30	1.19
						1/2" Ice	20.48	20.48	1.71
						1" Ice	25.66	25.66	2.22
******									
(2) LPA-80080-4CF-EDIN-0 w/ Mount Pipe	A	From Leg	4.00	0.0000	97.00	No Ice	2.04	5.22	0.04
			0.00			1/2" Ice	2.42	5.67	0.08
			0.00			1" Ice	2.82	6.13	0.13
(2) LPA-80080-4CF-EDIN-0 w/ Mount Pipe	B	From Leg	4.00	0.0000	97.00	No Ice	2.04	5.22	0.04
			0.00			1/2" Ice	2.42	5.67	0.08
			0.00			1" Ice	2.82	6.13	0.13
(2) LPA-80080-4CF-EDIN-0 w/ Mount Pipe	C	From Leg	4.00	0.0000	97.00	No Ice	2.04	5.22	0.04
			0.00			1/2" Ice	2.42	5.67	0.08
			0.00			1" Ice	2.82	6.13	0.13
T-Arm Mount [TA 602-3]	C	None		0.0000	97.00	No Ice	13.40	13.40	0.77
						1/2" Ice	16.44	16.44	1.00
						1" Ice	19.70	19.70	1.29
***									
(2) NHH-65B-R2B w/ Mount Pipe	A	From Leg	4.00	0.0000	97.00	No Ice	4.09	3.29	0.07
			0.00			1/2" Ice	4.48	3.67	0.13
			0.00			1" Ice	4.88	4.06	0.21
(2) NHH-65B-R2B w/ Mount Pipe	B	From Leg	4.00	0.0000	97.00	No Ice	4.09	3.29	0.07
			0.00			1/2" Ice	4.48	3.67	0.13

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.00			1" Ice	4.88	4.06	0.21
(2) NHH-65B-R2B w/ Mount Pipe	C	From Leg	4.00 0.00 0.00	0.0000	97.00	No Ice 1/2" Ice 1" Ice	4.09 4.48 4.88	3.29 3.67 4.06	0.07 0.13 0.21
MT6407-77A w/ Mount Pipe	A	From Leg	4.00 0.00 0.00	0.0000	97.00	No Ice 1/2" Ice 1" Ice	5.94 6.47 7.02	3.10 3.55 4.02	0.10 0.13 0.18
MT6407-77A w/ Mount Pipe	B	From Leg	4.00 0.00 0.00	0.0000	97.00	No Ice 1/2" Ice 1" Ice	5.94 6.47 7.02	3.10 3.55 4.02	0.10 0.13 0.18
MT6407-77A w/ Mount Pipe	C	From Leg	4.00 0.00 0.00	0.0000	97.00	No Ice 1/2" Ice 1" Ice	5.94 6.47 7.02	3.10 3.55 4.02	0.10 0.13 0.18
RF4439D-25A	A	From Leg	4.00 0.00 0.00	0.0000	97.00	No Ice 1/2" Ice 1" Ice	1.87 2.03 2.21	1.25 1.39 1.54	0.07 0.09 0.11
RF4439D-25A	B	From Leg	4.00 0.00 0.00	0.0000	97.00	No Ice 1/2" Ice 1" Ice	1.87 2.03 2.21	1.25 1.39 1.54	0.07 0.09 0.11
RF4439D-25A	C	From Leg	4.00 0.00 0.00	0.0000	97.00	No Ice 1/2" Ice 1" Ice	1.87 2.03 2.21	1.25 1.39 1.54	0.07 0.09 0.11
RF4440D-13A	A	From Leg	4.00 0.00 0.00	0.0000	97.00	No Ice 1/2" Ice 1" Ice	1.87 2.03 2.21	1.13 1.27 1.41	0.07 0.09 0.11
RF4440D-13A	B	From Leg	4.00 0.00 0.00	0.0000	97.00	No Ice 1/2" Ice 1" Ice	1.87 2.03 2.21	1.13 1.27 1.41	0.07 0.09 0.11
RF4440D-13A	C	From Leg	4.00 0.00 0.00	0.0000	97.00	No Ice 1/2" Ice 1" Ice	1.87 2.03 2.21	1.13 1.27 1.41	0.07 0.09 0.11
(2) KA-6030	A	From Leg	4.00 0.00 0.00	0.0000	97.00	No Ice 1/2" Ice 1" Ice	0.96 1.09 1.22	0.29 0.36 0.45	0.02 0.02 0.03
RVZDC-6627-PF-48	A	From Leg	4.00 0.00 0.00	0.0000	97.00	No Ice 1/2" Ice 1" Ice	3.79 4.04 4.30	2.51 2.73 2.95	0.03 0.06 0.10
******									
TME-RRUS-11 w/ Mount Pipe	A	From Leg	1.00 0.00 2.00	0.0000	88.00	No Ice 1/2" Ice 1" Ice	2.97 3.24 3.52	1.68 1.99 2.32	0.06 0.09 0.12
TME-RRUS-11 w/ Mount Pipe	B	From Leg	1.00 0.00 2.00	0.0000	88.00	No Ice 1/2" Ice 1" Ice	2.97 3.24 3.52	1.68 1.99 2.32	0.06 0.09 0.12
TME-RRUS-11 w/ Mount Pipe	C	From Leg	1.00 0.00 2.00	0.0000	88.00	No Ice 1/2" Ice 1" Ice	2.97 3.24 3.52	1.68 1.99 2.32	0.06 0.09 0.12
DC6-48-60-18-8F	A	From Leg	1.00 0.00 2.00	0.0000	88.00	No Ice 1/2" Ice 1" Ice	0.92 1.46 1.64	0.92 1.46 1.64	0.02 0.04 0.06
Side Arm Mount [SO 102-3]	C	None		0.0000	88.00	No Ice 1/2" Ice 1" Ice	3.60 4.18 4.75	3.60 4.18 4.75	0.07 0.10 0.14
******									
(2) 7770.00 w/ Mount Pipe	A	From Leg	4.00 0.00 2.00	0.0000	87.00	No Ice 1/2" Ice 1" Ice	3.39 3.75 4.12	2.32 2.66 3.02	0.06 0.10 0.15
(2) 7770.00 w/ Mount Pipe	B	From Leg	4.00 0.00 2.00	0.0000	87.00	No Ice 1/2" Ice 1" Ice	3.39 3.75 4.12	2.32 2.66 3.02	0.06 0.10 0.15
(2) 7770.00 w/ Mount Pipe	C	From Leg	4.00 0.00 2.00	0.0000	87.00	No Ice 1/2" Ice 1" Ice	3.39 3.75 4.12	2.32 2.66 3.02	0.06 0.10 0.15
AM-X-CD-16-65-00T-RET w/ Mount Pipe	A	From Leg	4.00 0.00	0.0000	87.00	No Ice 1/2" Ice	4.63 5.06	3.27 3.69	0.07 0.13

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			1.00			1" Ice	5.51	4.12	0.20
AM-X-CD-16-65-00T-RET w/ Mount Pipe	B	From Leg	4.00	0.0000	87.00	No Ice	4.63	3.27	0.07
			0.00			1/2" Ice	5.06	3.69	0.13
			1.00			1" Ice	5.51	4.12	0.20
AM-X-CD-16-65-00T-RET w/ Mount Pipe	C	From Leg	4.00	0.0000	87.00	No Ice	4.63	3.27	0.07
			0.00			1/2" Ice	5.06	3.69	0.13
			1.00			1" Ice	5.51	4.12	0.20
(2) LGP21401	A	From Leg	4.00	0.0000	87.00	No Ice	1.10	0.21	0.01
			0.00			1/2" Ice	1.24	0.27	0.02
			2.00			1" Ice	1.38	0.35	0.03
(2) LGP21401	B	From Leg	4.00	0.0000	87.00	No Ice	1.10	0.21	0.01
			0.00			1/2" Ice	1.24	0.27	0.02
			2.00			1" Ice	1.38	0.35	0.03
(2) LGP21401	C	From Leg	4.00	0.0000	87.00	No Ice	1.10	0.21	0.01
			0.00			1/2" Ice	1.24	0.27	0.02
			2.00			1" Ice	1.38	0.35	0.03
(2) LGP21901	A	From Leg	4.00	0.0000	87.00	No Ice	0.23	0.16	0.01
			0.00			1/2" Ice	0.29	0.21	0.01
			2.00			1" Ice	0.36	0.28	0.01
(2) LGP21901	B	From Leg	4.00	0.0000	87.00	No Ice	0.23	0.16	0.01
			0.00			1/2" Ice	0.29	0.21	0.01
			2.00			1" Ice	0.36	0.28	0.01
(2) LGP21901	C	From Leg	4.00	0.0000	87.00	No Ice	0.23	0.16	0.01
			0.00			1/2" Ice	0.29	0.21	0.01
			2.00			1" Ice	0.36	0.28	0.01
T-Arm Mount [TA 602-3]	A	None		0.0000	87.00	No Ice	13.40	13.40	0.77
						1/2" Ice	16.44	16.44	1.00
						1" Ice	19.70	19.70	1.29
******									

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

Comb. No.	Description
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	119.5 - 69.67	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-39.32	-0.21	1.63
			Max. Mx	8	-22.40	-889.53	1.28
			Max. My	2	-22.39	-0.58	892.21
			Max. Vy	8	35.03	-889.53	1.28
			Max. Vx	2	-35.13	-0.58	892.21
			Max. Torque	20			-0.95
L2	69.67 - 42.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-46.53	-0.21	1.63
			Max. Mx	8	-29.22	-1846.92	1.56
			Max. My	2	-29.21	-0.83	1852.24
			Max. Vy	8	36.98	-1846.92	1.56
			Max. Vx	2	-37.08	-0.83	1852.24
			Max. Torque	20			-0.95
L3	42.25 - 0	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-63.65	-0.21	1.63
			Max. Mx	8	-45.40	-3693.29	2.01
			Max. My	2	-45.40	-1.27	3703.25
			Max. Vy	8	40.17	-3693.29	2.01
			Max. Vx	2	-40.26	-1.27	3703.25
			Max. Torque	20			-0.94

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	27	63.65	-0.00	10.73
	Max. H_x	20	45.44	40.12	-0.01
	Max. H_z	2	45.44	-0.01	40.22
	Max. M_x	2	3703.25	-0.01	40.22
	Max. M_z	8	3693.29	-40.12	0.01
	Max. Torsion	8	0.94	-40.12	0.01

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
	Min. Vert	23	34.08	34.74	20.10
	Min. H_x	8	45.44	-40.12	0.01
	Min. H_z	14	45.44	0.01	-40.22
	Min. M_x	14	-3701.39	0.01	-40.22
	Min. M_z	20	-3692.91	40.12	-0.01
	Min. Torsion	20	-0.94	40.12	-0.01

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	37.86	0.00	0.00	-0.73	-0.15	0.00
1.2 Dead+1.0 Wind 0 deg - No Ice	45.44	0.01	-40.22	-3703.25	-1.27	0.11
0.9 Dead+1.0 Wind 0 deg - No Ice	34.08	0.01	-40.22	-3669.96	-1.20	0.11
1.2 Dead+1.0 Wind 30 deg - No Ice	45.44	20.07	-34.84	-3207.79	-1847.66	-0.38
0.9 Dead+1.0 Wind 30 deg - No Ice	34.08	20.07	-34.84	-3178.91	-1831.12	-0.38
1.2 Dead+1.0 Wind 60 deg - No Ice	45.44	34.75	-20.12	-1853.04	-3199.04	-0.76
0.9 Dead+1.0 Wind 60 deg - No Ice	34.08	34.75	-20.12	-1836.26	-3170.43	-0.76
1.2 Dead+1.0 Wind 90 deg - No Ice	45.44	40.12	-0.01	-2.01	-3693.29	-0.94
0.9 Dead+1.0 Wind 90 deg - No Ice	34.08	40.12	-0.01	-1.75	-3660.27	-0.94
1.2 Dead+1.0 Wind 120 deg - No Ice	45.44	34.74	20.10	1849.31	-3197.97	-0.87
0.9 Dead+1.0 Wind 120 deg - No Ice	34.08	34.74	20.10	1833.04	-3169.37	-0.87
1.2 Dead+1.0 Wind 150 deg - No Ice	45.44	20.05	34.83	3204.85	-1845.80	-0.57
0.9 Dead+1.0 Wind 150 deg - No Ice	34.08	20.05	34.83	3176.48	-1829.27	-0.56
1.2 Dead+1.0 Wind 180 deg - No Ice	45.44	-0.01	40.22	3701.39	0.89	-0.11
0.9 Dead+1.0 Wind 180 deg - No Ice	34.08	-0.01	40.22	3668.59	0.93	-0.11
1.2 Dead+1.0 Wind 210 deg - No Ice	45.44	-20.07	34.84	3205.92	1847.29	0.38
0.9 Dead+1.0 Wind 210 deg - No Ice	34.08	-20.07	34.84	3177.54	1830.84	0.38
1.2 Dead+1.0 Wind 240 deg - No Ice	45.44	-34.75	20.12	1851.17	3198.67	0.76
0.9 Dead+1.0 Wind 240 deg - No Ice	34.08	-34.75	20.12	1834.88	3170.16	0.76
1.2 Dead+1.0 Wind 270 deg - No Ice	45.44	-40.12	0.01	0.15	3692.91	0.94
0.9 Dead+1.0 Wind 270 deg - No Ice	34.08	-40.12	0.01	0.38	3660.00	0.94
1.2 Dead+1.0 Wind 300 deg - No Ice	45.44	-34.74	-20.10	-1851.17	3197.60	0.87
0.9 Dead+1.0 Wind 300 deg - No Ice	34.08	-34.74	-20.10	-1834.41	3169.10	0.87
1.2 Dead+1.0 Wind 330 deg - No Ice	45.44	-20.05	-34.83	-3206.71	1845.43	0.57
0.9 Dead+1.0 Wind 330 deg - No Ice	34.08	-20.05	-34.83	-3177.85	1829.00	0.56
1.2 Dead+1.0 Ice+1.0 Temp	63.65	0.00	-0.00	-1.63	-0.21	0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	63.65	0.00	-10.73	-996.13	-0.44	0.01
1.2 Dead+1.0 Wind 30	63.65	5.36	-9.30	-863.01	-496.70	-0.09

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
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	63.65	9.28	-5.37	-499.13	-859.93	-0.16
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	63.65	10.72	-0.00	-1.97	-992.81	-0.20
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	63.65	9.28	5.37	495.24	-859.72	-0.18
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	63.65	5.36	9.29	859.28	-496.34	-0.11
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	63.65	-0.00	10.73	992.61	-0.02	-0.01
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	63.65	-5.36	9.30	859.49	496.24	0.09
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	63.65	-9.28	5.37	495.60	859.48	0.16
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	63.65	-10.72	0.00	-1.55	992.35	0.20
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	63.65	-9.28	-5.37	-498.76	859.27	0.18
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	63.65	-5.36	-9.29	-862.80	495.88	0.11
Dead+Wind 0 deg - Service	37.86	0.00	-9.47	-868.52	-0.41	0.03
Dead+Wind 30 deg - Service	37.86	4.73	-8.20	-752.39	-433.16	-0.09
Dead+Wind 60 deg - Service	37.86	8.18	-4.74	-434.87	-749.90	-0.18
Dead+Wind 90 deg - Service	37.86	9.45	-0.00	-1.03	-865.74	-0.23
Dead+Wind 120 deg - Service	37.86	8.18	4.73	432.88	-749.64	-0.21
Dead+Wind 150 deg - Service	37.86	4.72	8.20	750.59	-432.73	-0.14
Dead+Wind 180 deg - Service	37.86	-0.00	9.47	866.97	0.10	-0.03
Dead+Wind 210 deg - Service	37.86	-4.73	8.20	750.84	432.85	0.09
Dead+Wind 240 deg - Service	37.86	-8.18	4.74	433.32	749.59	0.18
Dead+Wind 270 deg - Service	37.86	-9.45	0.00	-0.52	865.42	0.23
Dead+Wind 300 deg - Service	37.86	-8.18	-4.73	-434.43	749.33	0.21
Dead+Wind 330 deg - Service	37.86	-4.72	-8.20	-752.14	432.42	0.14

Solution Summary

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX	PY	PZ	PX	PY	PZ	% Error
	K	K	K	K	K	K	
1	0.00	-37.86	0.00	0.00	37.86	0.00	0.000%
2	0.01	-45.44	-40.22	-0.01	45.44	40.22	0.000%
3	0.01	-34.08	-40.22	-0.01	34.08	40.22	0.000%
4	20.07	-45.44	-34.84	-20.07	45.44	34.84	0.000%
5	20.07	-34.08	-34.84	-20.07	34.08	34.84	0.000%
6	34.75	-45.44	-20.12	-34.75	45.44	20.12	0.000%
7	34.75	-34.08	-20.12	-34.75	34.08	20.12	0.000%
8	40.12	-45.44	-0.01	-40.12	45.44	0.01	0.000%
9	40.12	-34.08	-0.01	-40.12	34.08	0.01	0.000%
10	34.74	-45.44	20.10	-34.74	45.44	-20.10	0.000%
11	34.74	-34.08	20.10	-34.74	34.08	-20.10	0.000%
12	20.05	-45.44	34.83	-20.05	45.44	-34.83	0.000%
13	20.05	-34.08	34.83	-20.05	34.08	-34.83	0.000%
14	-0.01	-45.44	40.22	0.01	45.44	-40.22	0.000%
15	-0.01	-34.08	40.22	0.01	34.08	-40.22	0.000%
16	-20.07	-45.44	34.84	20.07	45.44	-34.84	0.000%
17	-20.07	-34.08	34.84	20.07	34.08	-34.84	0.000%
18	-34.75	-45.44	20.12	34.75	45.44	-20.12	0.000%
19	-34.75	-34.08	20.12	34.75	34.08	-20.12	0.000%

Load Comb.	Sum of Applied Forces PX K	PY K	PZ K	Sum of Reactions PX K	PY K	PZ K	% Error
20	-40.12	-45.44	0.01	40.12	45.44	-0.01	0.000%
21	-40.12	-34.08	0.01	40.12	34.08	-0.01	0.000%
22	-34.74	-45.44	-20.10	34.74	45.44	20.10	0.000%
23	-34.74	-34.08	-20.10	34.74	34.08	20.10	0.000%
24	-20.05	-45.44	-34.83	20.05	45.44	34.83	0.000%
25	-20.05	-34.08	-34.83	20.05	34.08	34.83	0.000%
26	0.00	-63.65	0.00	0.00	63.65	0.00	0.000%
27	0.00	-63.65	-10.73	-0.00	63.65	10.73	0.000%
28	5.36	-63.65	-9.30	-5.36	63.65	9.30	0.000%
29	9.28	-63.65	-5.37	-9.28	63.65	5.37	0.000%
30	10.72	-63.65	-0.00	-10.72	63.65	0.00	0.000%
31	9.28	-63.65	5.37	-9.28	63.65	-5.37	0.000%
32	5.36	-63.65	9.29	-5.36	63.65	-9.29	0.000%
33	-0.00	-63.65	10.73	0.00	63.65	-10.73	0.000%
34	-5.36	-63.65	9.30	5.36	63.65	-9.30	0.000%
35	-9.28	-63.65	5.37	9.28	63.65	-5.37	0.000%
36	-10.72	-63.65	0.00	10.72	63.65	-0.00	0.000%
37	-9.28	-63.65	-5.37	9.28	63.65	5.37	0.000%
38	-5.36	-63.65	-9.29	5.36	63.65	9.29	0.000%
39	0.00	-37.86	-9.47	-0.00	37.86	9.47	0.000%
40	4.73	-37.86	-8.20	-4.73	37.86	8.20	0.000%
41	8.18	-37.86	-4.74	-8.18	37.86	4.74	0.000%
42	9.45	-37.86	-0.00	-9.45	37.86	0.00	0.000%
43	8.18	-37.86	4.73	-8.18	37.86	-4.73	0.000%
44	4.72	-37.86	8.20	-4.72	37.86	-8.20	0.000%
45	-0.00	-37.86	9.47	0.00	37.86	-9.47	0.000%
46	-4.73	-37.86	8.20	4.73	37.86	-8.20	0.000%
47	-8.18	-37.86	4.74	8.18	37.86	-4.74	0.000%
48	-9.45	-37.86	0.00	9.45	37.86	-0.00	0.000%
49	-8.18	-37.86	-4.73	8.18	37.86	4.73	0.000%
50	-4.72	-37.86	-8.20	4.72	37.86	8.20	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	4	0.00000001	0.00027062
3	Yes	4	0.00000001	0.00011673
4	Yes	5	0.00000001	0.00067076
5	Yes	5	0.00000001	0.00028223
6	Yes	5	0.00000001	0.00068140
7	Yes	5	0.00000001	0.00028725
8	Yes	4	0.00000001	0.00048793
9	Yes	4	0.00000001	0.00027308
10	Yes	5	0.00000001	0.00066426
11	Yes	5	0.00000001	0.00027962
12	Yes	5	0.00000001	0.00067772
13	Yes	5	0.00000001	0.00028576
14	Yes	4	0.00000001	0.00026603
15	Yes	4	0.00000001	0.00011308
16	Yes	5	0.00000001	0.00067660
17	Yes	5	0.00000001	0.00028519
18	Yes	5	0.00000001	0.00066596
19	Yes	5	0.00000001	0.00028033
20	Yes	4	0.00000001	0.00046743
21	Yes	4	0.00000001	0.00025973
22	Yes	5	0.00000001	0.00068129
23	Yes	5	0.00000001	0.00028734
24	Yes	5	0.00000001	0.00066783
25	Yes	5	0.00000001	0.00028105
26	Yes	4	0.00000001	0.00000001
27	Yes	5	0.00000001	0.00023274
28	Yes	5	0.00000001	0.00028589
29	Yes	5	0.00000001	0.00028629
30	Yes	5	0.00000001	0.00023165

31	Yes	5	0.00000001	0.00028327
32	Yes	5	0.00000001	0.00028404
33	Yes	5	0.00000001	0.00023095
34	Yes	5	0.00000001	0.00028389
35	Yes	5	0.00000001	0.00028321
36	Yes	5	0.00000001	0.00023139
37	Yes	5	0.00000001	0.00028584
38	Yes	5	0.00000001	0.00028536
39	Yes	4	0.00000001	0.00006607
40	Yes	4	0.00000001	0.00033623
41	Yes	4	0.00000001	0.00035101
42	Yes	4	0.00000001	0.00007206
43	Yes	4	0.00000001	0.00032748
44	Yes	4	0.00000001	0.00034559
45	Yes	4	0.00000001	0.00006579
46	Yes	4	0.00000001	0.00034318
47	Yes	4	0.00000001	0.00032886
48	Yes	4	0.00000001	0.00007183
49	Yes	4	0.00000001	0.00035143
50	Yes	4	0.00000001	0.00033288

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	119.5 - 69.67	17.922	39	1.2730	0.0015
L2	74.33 - 42.25	6.982	39	0.9130	0.0006
L3	47.75 - 0	2.816	39	0.5536	0.0003

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
119.50	Lighting Rod 3/4" x 7'	39	17.922	1.2730	0.0015	36912
117.00	AIR6449 B41_T-MOBILE w/ Mount Pipe	39	17.261	1.2579	0.0015	36912
114.00	EEI Branches (Large)	39	16.470	1.2396	0.0014	33557
106.00	MX08FRO665-21 w/ Mount Pipe	39	14.380	1.1890	0.0012	13671
104.00	EEI Branches (Large)	39	13.865	1.1757	0.0012	11907
97.00	(2) LPA-80080-4CF-EDIN-0 w/ Mount Pipe	39	12.098	1.1262	0.0010	8202
94.00	EEI Branches (Large)	39	11.361	1.1031	0.0010	7237
88.00	TME-RRUS-11 w/ Mount Pipe	39	9.935	1.0530	0.0008	5858
87.00	(2) 7770.00 w/ Mount Pipe	39	9.704	1.0441	0.0008	5678
84.00	EEI Branches (Large)	39	9.024	1.0161	0.0008	5198
77.00	EEI Branches (Small)	39	7.521	0.9436	0.0006	4348

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	119.5 - 69.67	76.380	2	5.4265	0.0065
L2	74.33 - 42.25	29.779	2	3.8958	0.0024
L3	47.75 - 0	12.011	2	2.3623	0.0011

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
119.50	Lighting Rod 3/4" x 7'	2	76.380	5.4265	0.0065	8799
117.00	AIR6449 B41_T-MOBILE w/ Mount Pipe	2	73.567	5.3623	0.0062	8799
114.00	EEI Branches (Large)	2	70.197	5.2847	0.0059	7999
106.00	MX08FRO665-21 w/ Mount Pipe	2	61.297	5.0702	0.0051	3257
104.00	EEI Branches (Large)	2	59.104	5.0138	0.0049	2836
97.00	(2) LPA-80080-4CF-EDIN-0 w/ Mount Pipe	2	51.578	4.8033	0.0043	1952
94.00	EEI Branches (Large)	2	48.440	4.7054	0.0040	1722
88.00	TME-RRUS-11 w/ Mount Pipe	2	42.362	4.4922	0.0035	1393
87.00	(2) 7770.00 w/ Mount Pipe	2	41.378	4.4542	0.0034	1349
84.00	EEI Branches (Large)	2	38.480	4.3352	0.0032	1235
77.00	EEI Branches (Small)	2	32.076	4.0264	0.0026	1031

Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
L1	119.5 - 69.67 (1)	TP33.02x19x0.3125	49.83	0.00	0.0	31.1413	-22.39	1821.76	0.012
L2	69.67 - 42.25 (2)	TP39.99x31.0839x0.375	32.08	0.00	0.0	45.3343	-29.21	2652.06	0.011
L3	42.25 - 0 (3)	TP51x37.7131x0.4375	47.75	0.00	0.0	70.2123	-45.40	4107.42	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	119.5 - 69.67 (1)	TP33.02x19x0.3125	892.22	1470.41	0.607	0.00	1470.41	0.000
L2	69.67 - 42.25 (2)	TP39.99x31.0839x0.375	1852.24	2589.82	0.715	0.00	2589.82	0.000
L3	42.25 - 0 (3)	TP51x37.7131x0.4375	3703.25	5140.70	0.720	0.00	5140.70	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	119.5 - 69.67 (1)	TP33.02x19x0.3125	35.13	546.53	0.064	0.11	1502.70	0.000
L2	69.67 - 42.25 (2)	TP39.99x31.0839x0.375	37.08	795.62	0.047	0.11	2653.83	0.000
L3	42.25 - 0 (3)	TP51x37.7131x0.4375	40.26	1232.23	0.033	0.11	5456.31	0.000

Pole Interaction Design Data

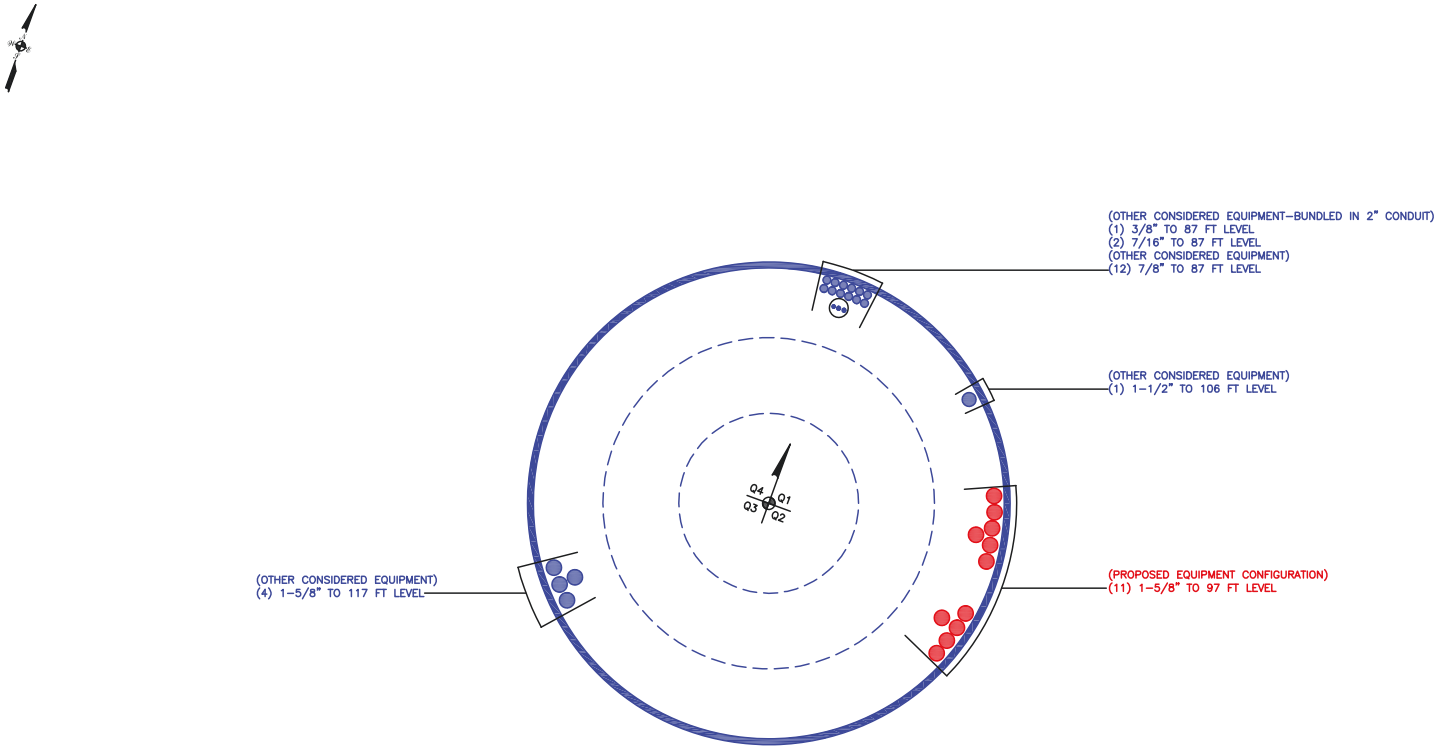
Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	119.5 - 69.67 (1)	0.012	0.607	0.000	0.064	0.000	0.623	1.050	
L2	69.67 - 42.25 (2)	0.011	0.715	0.000	0.047	0.000	0.728	1.050	
L3	42.25 - 0 (3)	0.011	0.720	0.000	0.033	0.000	0.733	1.050	

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	119.5 - 69.67	Pole	TP33.02x19x0.3125	1	-22.39	1912.85	59.4	Pass
L2	69.67 - 42.25	Pole	TP39.99x31.0839x0.375	2	-29.21	2784.66	69.4	Pass
L3	42.25 - 0	Pole	TP51x37.7131x0.4375	3	-45.40	4312.79	69.8	Pass
							Summary	
						Pole (L3)	69.8	Pass
						RATING =	**69.8**	**Pass**

APPENDIX B

BASE LEVEL DRAWING



BUSINESS UNIT: 876387 TOWER ID: C_BASELEVEL

APPENDIX C

ADDITIONAL CALCULATIONS

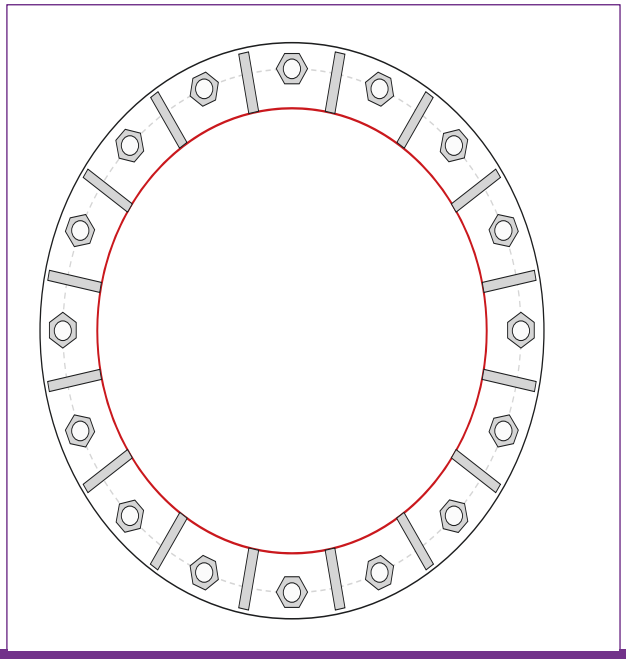
Monopole Base Plate Connection

Site Info	
BU #	876387
Site Name	:h Hebron / Ned Ellis P
Order #	656556 Rev. 0

Analysis Considerations	
TIA-222 Revision	H
Grout Considered:	No
l_{ar} (in)	0.875

Applied Loads	
Moment (kip-ft)	3703.25
Axial Force (kips)	45.40
Shear Force (kips)	40.26

**TIA-222-H Section 15.5 Applied*



Connection Properties

Anchor Rod Data

(16) 2-1/4" ø bolts (A615-75 N; Fy=75 ksi, Fu=100 ksi) on 60" BC

Base Plate Data

66" OD x 2" Plate (A871 Gr. 60; Fy=60 ksi, Fu=75 ksi)

Stiffener Data

(16) 21"H x 7"W x 1.25"T, Notch: 1"
plate: Fy= 50 ksi ; weld: Fy= 70 ksi
horiz. weld: 0.5625" groove, 45° dbl bevel, 0.3125" fillet
vert. weld: 0.3125" fillet

Pole Data

51" x 0.4375" 18-sided pole (A572-65; Fy=65 ksi, Fu=80 ksi)

Analysis Results

Anchor Rod Summary		*(units of kips, kip-in)*
Pu_t = 182.22	ϕPn_t = 243.75	**Stress Rating**
Vu = 2.52	ϕVn = 149.1	**71.2%**
Mu = n/a	ϕMn = n/a	**Pass**

Base Plate Summary		
Max Stress (ksi):	32.34	(Roark's Flexural)
Allowable Stress (ksi):	54	
Stress Rating:	**57.0%**	**Pass**

Stiffener Summary		
Horizontal Weld:	**69.5%**	**Pass**
Vertical Weld:	**51.7%**	**Pass**
Plate Flexure+Shear:	**9.1%**	**Pass**
Plate Tension+Shear:	**40.2%**	**Pass**
Plate Compression:	**40.7%**	**Pass**
Pole Summary		
Punching Shear:	**10.1%**	**Pass**

Pier and Pad Foundation

BU # :	876387
Site Name:	South Hebron / Nec
App. Number:	656556 Rev. 0

TIA-222 Revision:	H
Tower Type:	Monopole

Top & Bot. Pad Rein. Different?:	☑
Block Foundation?:	☐
Rectangular Pad?:	☐

Superstructure Analysis Reactions		
Compression, P_{comp}:	45.44	kips
Base Shear, Vu_comp:	40.22	kips
Moment, M_u:	3703.25	ft-kips
Tower Height, **H**:	119.5	ft
BP Dist. Above Fdn, bp_{dist}:	3.25	in

Pier Properties		
Pier Shape:	Square	
Pier Diameter, **dpier**:	6.5	ft
Ext. Above Grade, **E**:	1	ft
Pier Rebar Size, **Sc**:	8	
Pier Rebar Quantity, **mc**:	38	
Pier Tie/Spiral Size, **St**:	4	
Pier Tie/Spiral Quantity, **mt**:	4	
Pier Reinforcement Type:	Tie	
Pier Clear Cover, cc_{pier}:	3	in

Pad Properties		
Depth, **D**:	5	ft
Pad Width, W_1:	28	ft
Pad Thickness, **T**:	3	ft
Pad Rebar Size (Top dir.2), Sp_{top2}:	8	
Pad Rebar Quantity (Top dir. 2), mp_{top2}:	30	
Pad Rebar Size (Bottom dir. 2), Sp_2:	8	
Pad Rebar Quantity (Bottom dir. 2), mp_2:	56	
Pad Clear Cover, cc_{pad}:	3	in

Material Properties		
Rebar Grade, **Fy**:	60	ksi
Concrete Compressive Strength, **F'c**:	4	ksi
Dry Concrete Density, δc:	150	pcf

Soil Properties		
Total Soil Unit Weight, γ:	100	pcf
Ultimate Gross Bearing, Qult:	24.000	ksf
Cohesion, **Cu**:		ksf
Friction Angle, φ:		degrees
SPT Blow Count, N_{blows}:	49	
Base Friction, μ:	0.3	
Neglected Depth, **N**:	3.25	ft
Foundation Bearing on Rock?	Yes	
Groundwater Depth, **gw**:	8	ft

<--Toggle between Gross and Net

Foundation Analysis Checks				
	Capacity	**Demand**	**Rating***	**Check**
Lateral (Sliding) (kips)	128.16	40.22	**29.9%**	**Pass**
Bearing Pressure (ksf)	18.00	2.68	**14.9%**	**Pass**
*Overturning (kip*ft)*	6709.85	3955.46	**59.0%**	**Pass**
*Pier Flexure (Comp.) (kip*ft)*	4531.33	3823.91	**80.4%**	**Pass**
Pier Compression (kip)	26891.28	68.26	**0.2%**	**Pass**
*Pad Flexure (kip*ft)*	6039.74	1596.42	**25.2%**	**Pass**
Pad Shear - 1-way (kips)	1004.09	212.90	**20.2%**	**Pass**
Pad Shear - 2-way (Comp) (ksi)	0.190	0.040	**19.9%**	**Pass**
*Flexural 2-way (Comp) (kip*ft)*	5153.35	2294.35	**42.4%**	**Pass**

**Rating per TIA-222-H Section 15.5*

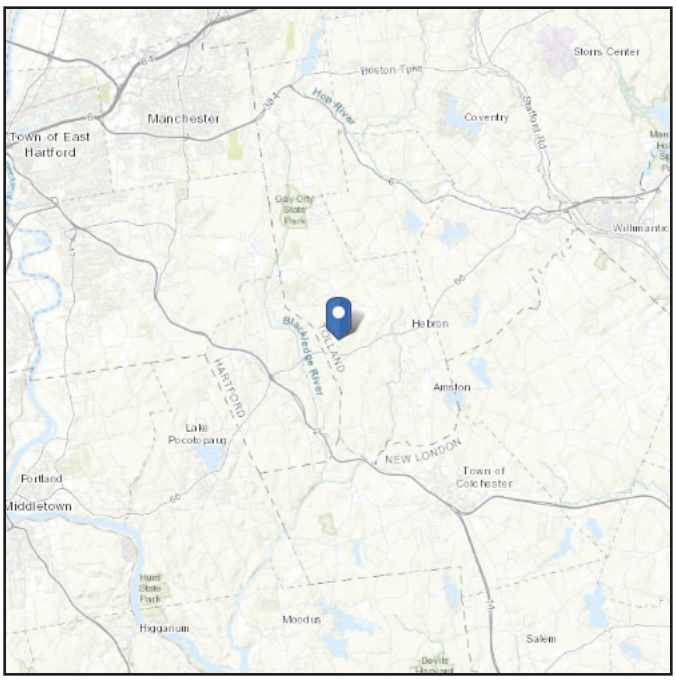
Structural Rating*:	**80.4%**
Soil Rating*:	**59.0%**

Version 5.0.2

ASCE Hazards Report

Address:
No Address at This Location

Standard:	ASCE/SEI 7-16	**Latitude:**	41.65445
Risk Category:	II	**Longitude:**	-72.410864
Soil Class:	D - Default (see Section 11.4.3)	**Elevation:**	543.6537508582056 ft (NAVD 88)



Wind

Results:

Wind Speed	120 Vmph
10-year MRI	75 Vmph
25-year MRI	84 Vmph
50-year MRI	92 Vmph
100-year MRI	99 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: Wed Jan 17 2024

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 in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2. Glazed openings need not be protected against wind-borne debris.

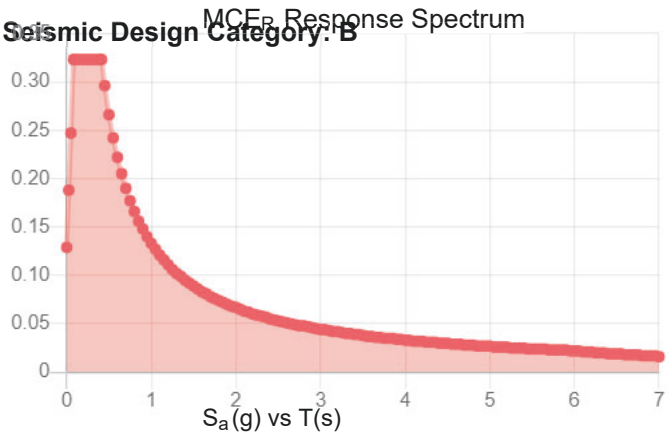
Seismic

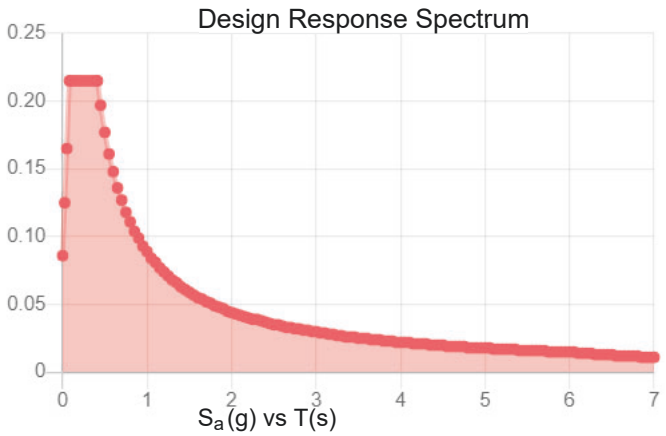
Site Soil Class: D - Default (see Section 11.4.3)

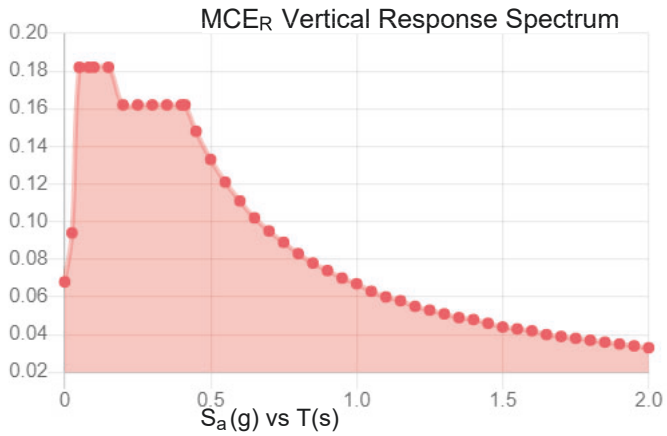
Results:

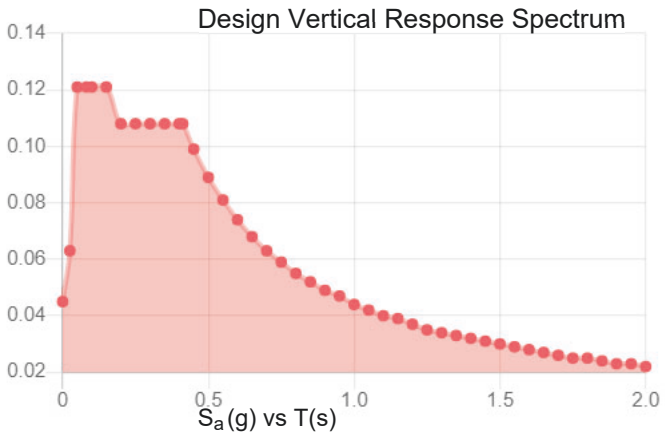
S_S :	0.202	S_{D1} :	0.089
S_1 :	0.055	T_L :	6
F_a :	1.6	PGA :	0.111
F_v :	2.4	PGA_M :	0.175
S_{MS} :	0.323	F_{PGA} :	1.578
S_{M1} :	0.133	I_e :	1
S_{DS} :	0.215	C_v :	0.704

Seismic Design Category: B









Data Accessed: **Wed Jan 17 2024**

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	50 mph
Data Source:	Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8
Date Accessed:	Wed Jan 17 2024

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.

Colliers Engineering & Design CT, PC
1055 Washington Boulevard
Stamford, CT 06901
203.324.0800
peter.albano@collierseng.com

Antenna Mount Analysis Report with Hardware Upgrades and PMI Requirements

Mount ReAnalysis

SMART Tool Project #: 10209649
Colliers Engineering & Design Project #: 23777282

September 12, 2023

Site Information	*Site ID:*	*5000243961-VZW / HEBRON WEST CT*
	Site Name:	*HEBRON WEST CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*107 Buck Rd* *Hebron, Connecticut 06248* *Tolland County*
	Latitude:	*41.654444°*
	Longitude:	*-72.410833°*
Structure Information	*Tower Type:*	*Monopole*
	Mount Type:	*13.50-Ft T-Arm*

FUZE ID # 17136777

Analysis Results

T-Arm: **90.4% Pass w/ Hardware Upgrades***

*** Antennas and equipment to be installed in compliance with PMI Requirements of this mount analysis.**

******Contractor PMI Requirements*:**
Included at the end of this MA report
Available & Submitted via portal at https://pmi.vzwsmart.com
For additional questions and support, please reach out to:
pmisupport@colliersengineering.com

Report Prepared By: Gilberto Martinez

STATE OF CONNECTICUT
DEJIAN XU
No. 33733
LICENSED PROFESSIONAL ENGINEER

09/13/2023

Executive Summary:

The objective of this report is to determine the capacity of the antenna support mount at the subject facility for the final wireless telecommunications configuration, per the applicable codes and standards. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

This analysis is inclusive of the mount structure only and does not address the structural capacity of the supporting structure. This mounting frame was not analyzed as an anchor attachment point for fall protection. All climbing activities are required to have a fall protection plan completed by a competent person.

Sources of Information:

Document Type	Remarks
Radio Frequency Data Sheet (RFDS)	*Verizon RFDS, Site ID: 674942, dated August 26, 2021*
Final Loading Configuration	*Filter Add Scope Provided by Verizon Wireless*
Mount Mapping Report	*Roaming Networks Inc., Site ID: 467919, dated May 10, 2021*
Previous Mount Analysis	*Maser Consulting Connecticut Project #: 21777324A, dated September 1, 2021*

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H 2022 Connecticut State Building Code (CSBC), Effective October 1, 2022	
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT}:	125 mph
	Ice Wind Speed (3-sec. Gust):	50 mph
	Design Ice Thickness:	1.00 in
	Risk Category:	II
	Exposure Category:	C
	Topographic Category:	1
	Topographic Feature Considered:	N/A
	Topographic Method:	N/A
	Ground Elevation Factor, K_e:	0.980
Seismic Parameters:	S_S:	0.200 g
	S_1:	0.055 g
Maintenance Parameters:	Wind Speed (3-sec. Gust):	30 mph
	Maintenance Live Load, Lv:	250 lbs.
	Maintenance Live Load, Lm:	500 lbs.
Analysis Software:	RISA-3D (V17)	

Final Loading Configuration:

The following equipment has been considered for the analysis of the mounts:

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
96.50	97.00	6	Commscope	NHH-65B-R2B	Retained
		3	Samsung	MT6407-77A	
		1	Raycap	RVZDC-6627-PF-48	
		3	Samsung	RF4439d-25A	
		3	Samsung	RF4440d-13A	
		6	Amphenol Antel	LPA-80080-4CF	
		2	Kaelus	KA-6030	Added

Any proposed antennas not currently installed should be mounted such that the centerline of the antennas does not exceed 6 inches vertically from the center of the antenna mount(s).

The recent mount mapping did not report existing OVP units. However, it is acceptable to install up to any three (3) of the OVP model numbers listed below as required at any location other than the mount face without affecting the structural capacity of the mount. If OVP units are installed on the mount face, a mount re-analysis may be required.

Model Number	Ports	AKA
DB-B1-6C-12AB-0Z	6	OVP-6
RVZDC-6627-PF-48	12	OVP-12

Standard Conditions:

1. All engineering services are performed on the basis that the information provided to Colliers Engineering & Design and used in this analysis is current and correct. The existing equipment loading has been applied at locations determined from the supplied documentation. Any deviation from the loading locations specified in this report shall be communicated to Colliers Engineering & Design to verify deviation will not adversely impact the analysis.

2. Mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer's specifications.

   Obvious safety and structural issues/deficiencies noticed at the time of the mount mapping and reported in the Mount Mapping Report are assumed to be corrected and documented as part of the PMI process and are not considered in the mount analysis.

   The mount analysis and the mount mapping are not a condition assessment of the mount. Proper maintenance and condition assessments are still required post analysis.

3. For mount analyses completed from other data sources (including new replacement mounts) and not specifically mapped in accordance with the NSTD-446 Standard, the mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer's specifications.

4. 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.

5. The mount was checked up to, and including, the bolts that fasten it to the mount collar/attachment and threaded rod connections in collar members if applicable. Local deformation and interaction between the mount collar/attachment and the supporting tower structure are outside the scope of this analysis.

6. All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. Colliers Engineering & Design is not responsible for the conclusion, opinions, and recommendations made by others based on the information supplied.

7. Structural Steel Grades have been assumed as follows, if applicable, unless otherwise noted in this analysis:
   - Channel, Solid Round, Angle, Plate — ASTM A36 (Gr. 36)
   - HSS (Rectangular) — ASTM 500 (Gr. B-46)
   - Pipe — ASTM A53 (Gr. B-35)
   - Threaded Rod — F1554 (Gr. 36)
   - Bolts — ASTM A325

Discrepancies between in-field conditions and the assumptions listed above may render this analysis invalid unless explicitly approved by Colliers Engineering & Design.

Analysis Results:

Component	Utilization %	Pass/Fail
Standoff	86.3 %	Pass
Mast Pipe	0.1 %	Pass
Face Horizontal	90.4 %	Pass
Antenna Pipe	37.2 %	Pass
Mount Connection	83.0%	Pass

Structure Rating – ***(Controlling Utilization of all Components)***	**90.4%***

***** Results valid after hardware upgrades noted in the PMI Requirements are installed. The mount has been found structurally adequate for all steel and external connection capacities. Serviceability in accordance with TIA-222-H Section 4.9.11.3 has not been considered.

Mount Steel (EPA)a per ANSI/TIA-222-H Section 2.6.11.2:

Ice Thickness (In)	Mount Pipes Excluded		Mount Pipes Included	
	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)
0	7.5	3.1	14.3	10.0
0.5	10.1	4.3	19.8	14.0
1	12.4	5.2	25.0	17.8

Notes:
- (EPA)a values listed above may be used in the absence of more precise information
- (EPA)a values in the table above include 1 sector(s).
- Ka factors included in (EPA)a calculations

Requirements:

The existing mounts will be **SUFFICIENT** for the final loading configuration shown in attachment 2 upon the completion of the requirements listed below.

Contractor shall install a new 36" long PIPE 2 SCH 40 OVP pipe on the Beta sector standoff horizontal. Contractor shall install the proposed filter units on new Site Pro 1 Dual Swivel Mount Kit (Part #: RRUDSM or EOR approved equivalent) in the location shown in the placement diagrams.

ANSI/ASSP rigging plan review services compliant with the requirements of ANSI/TIA 322 are available for a Construction Class IV site or other, if required. Separate review fees will apply.

Attachments:

1. **Contractor Required Post Installation Inspection (PMI) Report Deliverables**
2. Antenna Placement Diagrams
3. Mount Photos
4. Mount Mapping Report (for reference only)
5. Analysis Calculations

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – Passing Mount Analysis

Passing Mount Analysis requires a PMI due to a modification in loading.

Electronic pdf version of this can be downloaded at https://pmi.vzwsmart.com.

For additional questions and support, please reach out to pmisupport@colliersengineering.com

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MDG #: 5000243961 SMART Project #: 10209649 Fuze Project ID: 17136777

Purpose – to provide SMART Tool structural vendor the proper documentation in order to complete the required Mount Desktop review of the Post Modification Inspection Report.

- Contractor is responsible for making certain the photos provided as noted below provide confirmation that the installation was completed in accordance with this Passing Mount Analysis.
- Contractor shall relay any data that can impact the performance of the mount, this includes safety issues.

Base Requirements:

- If installation will cause damage to the structure, the climbing facility, or safety climb if present or any installed system, SMART Tool vendor to be notified prior to install. Any special photos outside of the standard requirements will be indicated on the drawings.
- Provide "as built mount drawings" showing contractor's name, contact information, preparer's signature, and date. Any deviations from the drawings (Proposed modification) shall be shown. NOTE: If loading is different than what is conveyed in the passing mount analysis (MA) contact the SMART Tool vendor immediately.
- Each photo should be time and date stamped
- Photos should be high resolution.
- Contractor shall ensure that the safety climb wire rope is supported and not adversely impacted by the install of the modification components. This may involve the install of wire rope guides, or other items to protect the wire rope. If there is conflict, contact the SMART Tool engineer for recommendations.
- The PMI can be accessed at the following portal: ***https://pmi.vzwsmart.com***

Photo Requirements:

- *Photos taken at ground level*
  - Photo of Gate Signs showing the tower owner, site name, and number.
  - Overall tower structure after installation.
  - Photos of the mount after installation; if the mounts are at different rad elevations, pictures must be provided for all elevations that equipment was installed.
- *Photos taken at Mount Elevation*
  - Photos showing the safety climb wire rope above and below the mount prior to installation.
  - Photos showing the climbing facility and safety climb if present.
  - Photos showing each individual sector after installation. Each entire sector shall be in one photo to show the interconnection of members.

        - These photos shall also certify that the placement and geometry of the equipment on the mount is as depicted in the antenna placement diagram in this form.
    - Photos that show the model number of each antenna and piece of equipment installed per sector.

Antenna & equipment placement and Geometry Confirmation:

- The contractor shall certify that the antenna & equipment placement and geometry is in accordance with the sketch and table as included in the mount analysis and noted below.

☐ The contractor certifies that the photos support and the equipment on the mount is as depicted on the sketch and table included in this form and with the mount analysis provided.

OR

☐ The contractor notes that the equipment on the mount is not in accordance with the sketch and has noted the differences below and provided photo documentation of any alterations.

Special Instructions / Validation as required from the MA or any other information the contractor deems necessary to share that was identified:

Issue:

Contractor shall install a new 36” long PIPE 2 SCH 40 OVP pipe on the Beta sector standoff horizontal. Contractor shall install the proposed filter units on new Site Pro 1 Dual Swivel Mount Kit (Part #: RRUDSM or EOR approved equivalent) in the location shown in the placement diagrams.

Response:

Special Instruction Confirmation:

☐ The contractor has read and acknowledges the above special instructions.

☐ All hardware listed in the Special Instructions above (if applicable) has been properly installed, and the existing hardware was inspected.

☐ The material utilized was as specified in the SMART Tool engineering vendor Special Instructions above (if applicable) and included in the material certification folder is a packing list or invoice for these materials.

OR

☐ The material utilized was approved by a SMART Tool engineering vendor as an “equivalent” and this approval is included as part of the contractor submission.

Comments:

Contractor certifies that the climbing facility / safety climb was not damaged prior to starting work:

☐ Yes ☐ No

Contractor certifies no new damage created during the current installation:

☐ Yes ☐ No

Contractor to certify the condition of the safety climb and verify no damage when leaving the site:

☐ Safety Climb in Good Condition ☐ Safety Climb Damaged

Certifying Individual:

Company:	
Employee Name:	
Contact Phone:	
Email:	
Date:	

Structure: 5000243961-VZW - HEBRON WEST CT

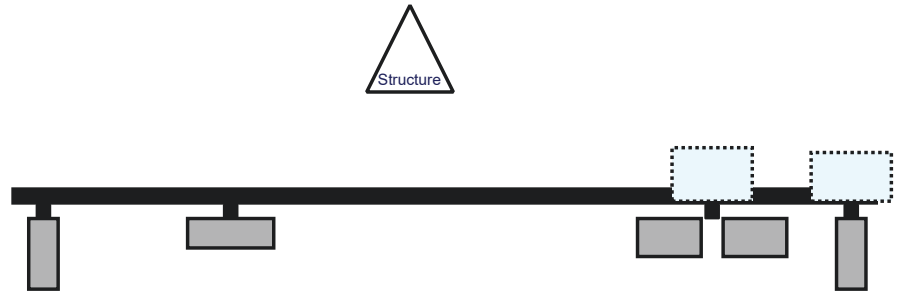
Sector: **A** 9/12/2023

Structure Type: Monopole 10209649

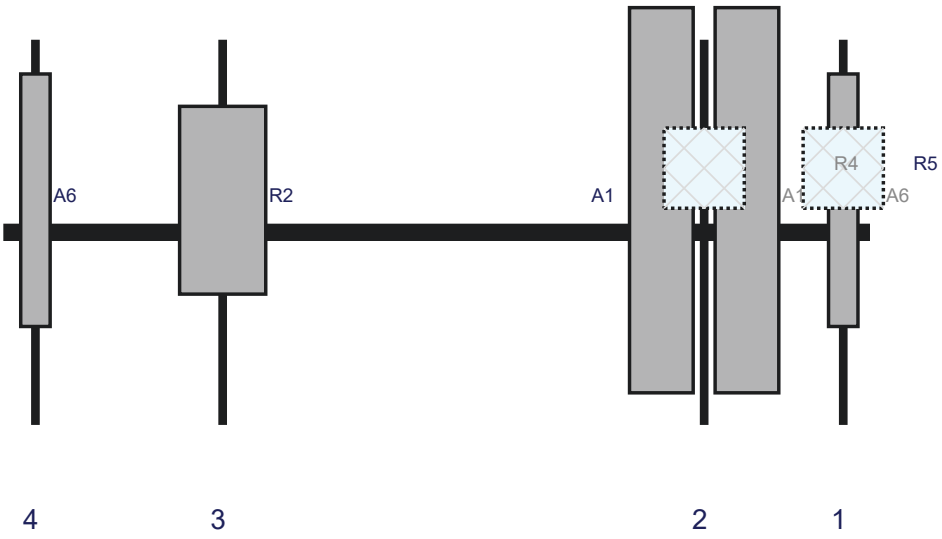
Mount Elev: 96.50 Page: 1

Colliers Engineering & Design

Plan View

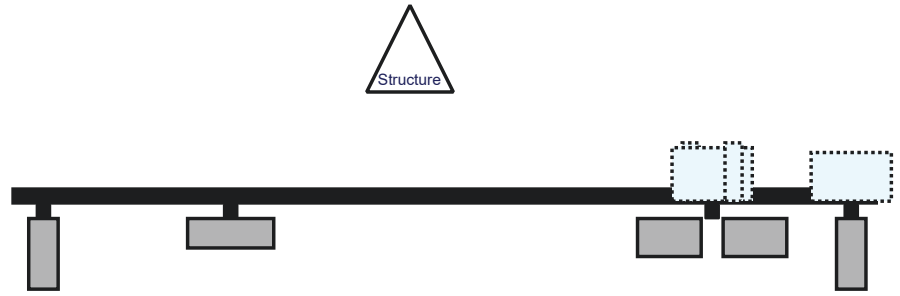


Front View - Looking at Structure

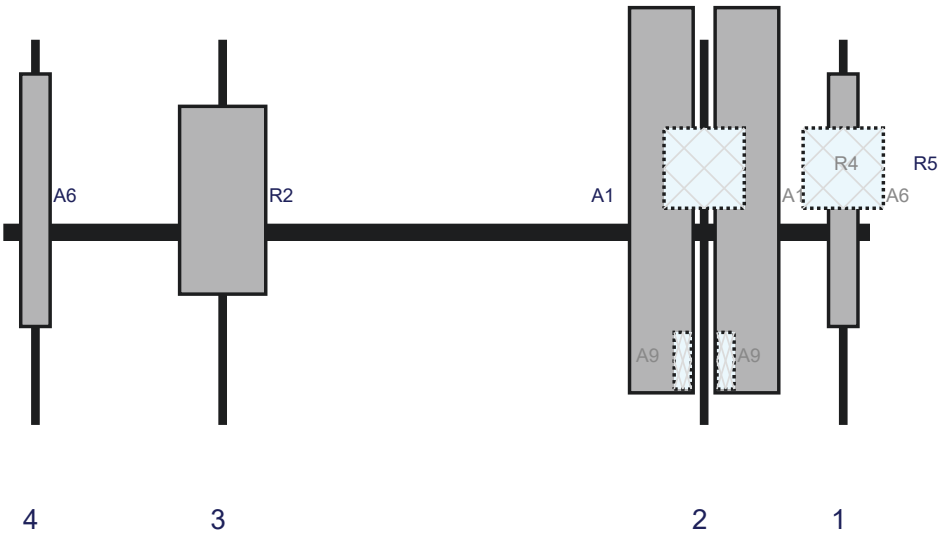


Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A6	LPA-80080-4CF	47.2	5.5	157	1	a	Front	30	0	Retained	05/10/2021
R5	RF4440d-13A	15	15	157	1	a	Behind	24	0	Retained	
A1	NHH-65B-R2B	72	11.9	131	2	a	Front	30	8	Retained	
A1	NHH-65B-R2B	72	11.9	131	2	b	Front	30	-8	Retained	
R4	RF4439d-25A	15	15	131	2	a	Behind	24	0	Retained	
R2	MT6407-77A	35.1	16.1	41	3	a	Front	30	0	Retained	
A6	LPA-80080-4CF	47.2	5.5	6	4	a	Front	30	0	Retained	05/10/2021
M16	RVZDC-6627-PF-48	29.5	16.5		Member					Retained	

Plan View

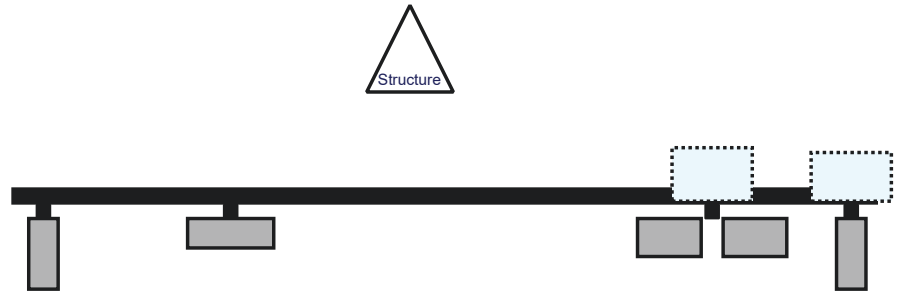


Front View - Looking at Structure

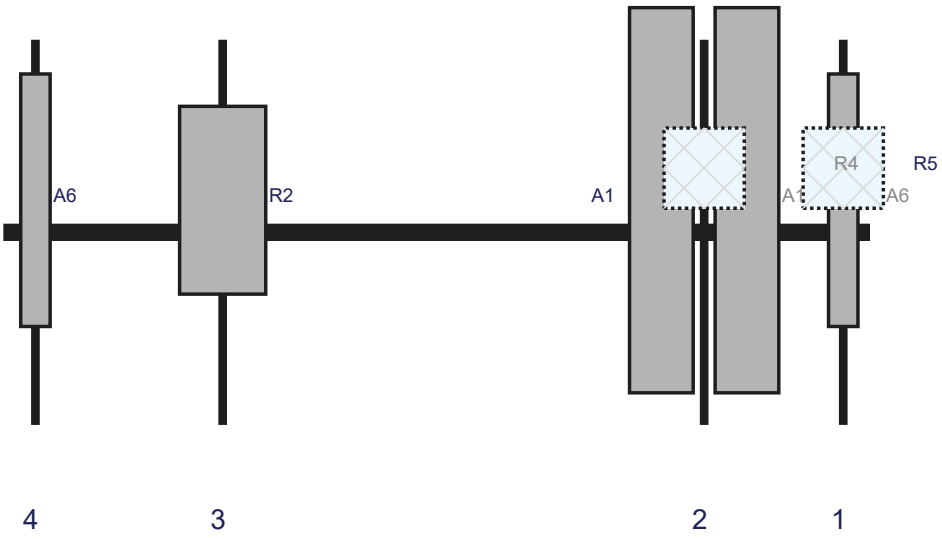


Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A6	LPA-80080-4CF	47.2	5.5	157	1	a	Front	30	0	Retained	05/10/2021
R5	RF4440d-13A	15	15	157	1	a	Behind	24	0	Retained	
A1	NHH-65B-R2B	72	11.9	131	2	a	Front	30	8	Retained	
A1	NHH-65B-R2B	72	11.9	131	2	b	Front	30	-8	Retained	
R4	RF4439d-25A	15	15	131	2	a	Behind	24	0	Retained	
A9	KA-6030	10.6	3.2	131	2	a	Behind	60	4	Added	
A9	KA-6030	10.6	3.2	131	2	b	Behind	60	-4	Added	
R2	MT6407-77A	35.1	16.1	41	3	a	Front	30	0	Retained	
A6	LPA-80080-4CF	47.2	5.5	6	4	a	Front	30	0	Retained	05/10/2021

Plan View



Front View - Looking at Structure



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A6	LPA-80080-4CF	47.2	5.5	157	1	a	Front	30	0	Retained	05/10/2021
R5	RF4440d-13A	15	15	157	1	a	Behind	24	0	Retained	
A1	NHH-65B-R2B	72	11.9	131	2	a	Front	30	8	Retained	
A1	NHH-65B-R2B	72	11.9	131	2	b	Front	30	-8	Retained	
R4	RF4439d-25A	15	15	131	2	a	Behind	24	0	Retained	
R2	MT6407-77A	35.1	16.1	41	3	a	Front	30	0	Retained	
A6	LPA-80080-4CF	47.2	5.5	6	4	a	Front	30	0	Retained	05/10/2021


05/07/2021 18:59:25
-72.41081697222222, 41.654413999999996
HEBRON WEST CT


05/07/2021 17:46:18
-72.41088, 41.654472999999996
HEBRON WEST CT

V3.0 Updated on 8-31-2020

PAUL J. FORD & COMPANY

Antenna Mount Mapping Form (PATENT PENDING)

FCC #
N/A

Tower Owner:	Crown Castle	**Mapping Date:**	5/10/2021
Site Name:	HEBRON WEST CT	**Tower Type:**	Monopole
Site Number or ID:	467919	**Tower Height (Ft.):**	N/A
Mapping Contractor:	Roaming Networks Inc.	**Mount Elevation (Ft.):**	97

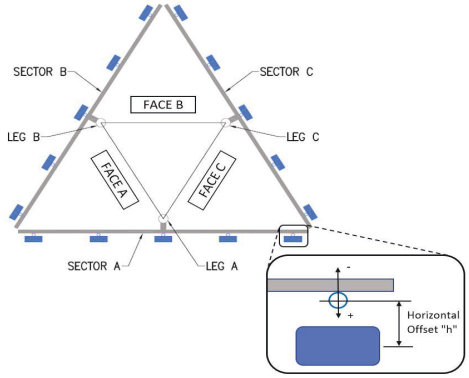
Mount Pipe Configuration and Geometries [Unit = Inches]

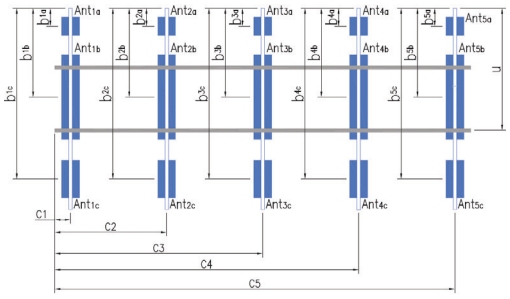
Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."	Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."
A1	PIPE 2.375"Ø X 0.26" X 72" LONG	36.00	5.00	C1	PIPE 2.375"Ø X 0.26" X 72" LONG	36.00	5.00
A2	PIPE 2.375"Ø X 0.22" X 72" LONG	36.00	31.00	C2	PIPE 2.375"Ø X 0.22" X 72" LONG	36.00	31.00
A3	PIPE 2.375"Ø X 0.26" X 72" LONG	36.00	124.00	C3	PIPE 2.375"Ø X 0.26" X 72" LONG	36.00	124.00
A4	PIPE 2.375"Ø X 0.26" X 72" LONG	36.00	156.00	C4	PIPE 2.375"Ø X 0.26" X 72" LONG	36.00	156.00
A5				C5			
A6				C6			
B1	PIPE 2.375"Ø X 0.26" X 72" LONG	36.00	5.00	D1			
B2	PIPE 2.375"Ø X 0.22" X 72" LONG	36.00	31.00	D2			
B3	PIPE 2.375"Ø X 0.26" X 72" LONG	36.00	124.00	D3			
B4	PIPE 2.375"Ø X 0.26" X 72" LONG	36.00	156.00	D4			
B5				D5			
B6				D6			

Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. :	0.00
Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.) :	
Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.) :	

Please enter additional infomation or comments below.

Tower Face Width at Mount Elev. (ft.):		Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):	26.1



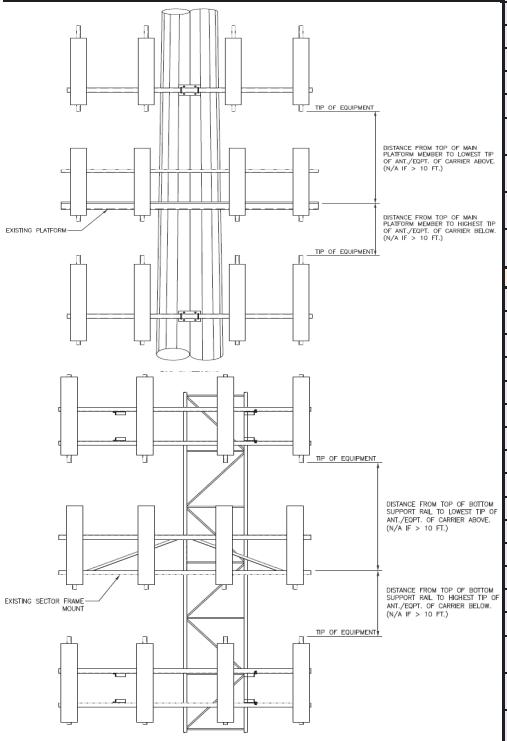


Antenna Layout (Looking Out From Tower)

Ants. Items	Enter antenna model. If not labeled, enter "Unknown". Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Antenna Center-line (Ft.)	Mounting Locations [Units are inches and degrees] Vertical Distances"b_{1a}, b_{2a}, b_{3a}, b_{1b}...." (Inches)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	Photos of antennas Photo Numbers
Sector A										
Ant_{1a}	LPA-80080-4CF-EDIN	5.50	13.20	47.20		97.6667	28.00	16.00	40.00	30
Ant_{1b}										
Ant_{1c}										
Ant_{2a}	BXA-70063-6CF-EDIN-	11.30	6.00	71.00		97	36.00	10.00	40.00	31
Ant_{2b}										
Ant_{2c}										
Ant_{3a}	SPXW 8515T4					97	36.00	10.00	40.00	28
Ant_{3b}										
Ant_{3c}										
Ant_{4a}	LPA-80080-4CF-EDIN	5.50	13.20	47.20		97.6667	28.00	16.00	40.00	29
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

Mount Azimuth (Degree) for Each Sector			Tower Leg Azimuth (Degree) for Each Sector	
Sector A:	40.00	Deg	Leg A:	Deg
Sector B:	140.00	Deg	Leg B:	Deg
Sector C:	280.00	Deg	Leg C:	Deg
Sector D:		Deg	Leg D:	Deg

Climbing Facility Information			
Location:		Deg	
Climbing Facility	Corrosion Type:		
	Access:		
	Condition:		



Sector B										
Ant_{1a}	LPA-80080-4CF-EDIN	5.50	13.20	47.20		97.6667	28.00	16.00	140.00	206
Ant_{1b}										
Ant_{1c}										
Ant_{2a}	BXA-70063-6CF-EDIN-	11.30	6.00	71.00		97	36.00	10.00	140.00	205
Ant_{2b}										
Ant_{2c}										
Ant_{3a}	SPXW 8515T4					97	36.00	10.00	140.00	207
Ant_{3b}										
Ant_{3c}										
Ant_{4a}	LPA-80080-4CF-EDIN	5.50	13.20	47.20		97.6667	28.00	16.00	140.00	208
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector C										
Ant_{1a}	LPA-80080-4CF-EDIN	5.50	13.20	47.20		97.6667	28.00	16.00	280.00	218
Ant_{1b}										
Ant_{1c}										
Ant_{2a}	BXA-70063-6CF-EDIN-	11.30	6.00	71.00		97	36.00	10.00	280.00	220
Ant_{2b}										
Ant_{2c}										
Ant_{3a}	SPXW 8515T4					97	36.00	10.00	280.00	219
Ant_{3b}										
Ant_{3c}										
Ant_{4a}	LPA-80080-4CF-EDIN	5.50	13.20	47.20		97.6667	28.00	16.00	280.00	221
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector D										
Ant_{1a}										
Ant_{1b}										
Ant_{1c}										
Ant_{2a}										
Ant_{2b}										
Ant_{2c}										
Ant_{3a}										
Ant_{3b}										
Ant_{3c}										
Ant_{4a}										
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

Observed Safety and Structural Issues During the Mount Mapping		
Issue #	Description of Issue	Photo #

1		
2		
3		
4		
5		
6		
7		
8		

Mapping Notes
1. Please report any visible structural or safety issues observed on the antenna mounts (Damaged members, loose connections, tilting mounts, safety climb issues, etc.)
2. If the thickness of the existing pipes or tubing can't be obtained from a general tool (such as Caliper), please use an ultrasonic measurement tool (thickness gauge) to measure the thickness.
3. Please create all required detail sketches of the mounts and insert them into the "Sketches" tab.
4. Please measure and enter the bolt sizes and types under the Members Box in the spreadsheet of the mount type.
5. Take and label the photos of the tower, mounts, connections, antennas and all measurements. Minimum 50 photos are required.
6. Please measure and report the size and length of all existing antenna mounting pipes.
7. Please measure and report the antenna information for all sectors.
8. Don't delete or rearrange any sheet or contents of any sheet from this mapping form.

Standard Conditions
1. Obvious safety and structural issues/deficiencies noticed at the time of the mount mapping are to be reported in this mapping. However, this mount mapping is not a condition assessment of the mount.

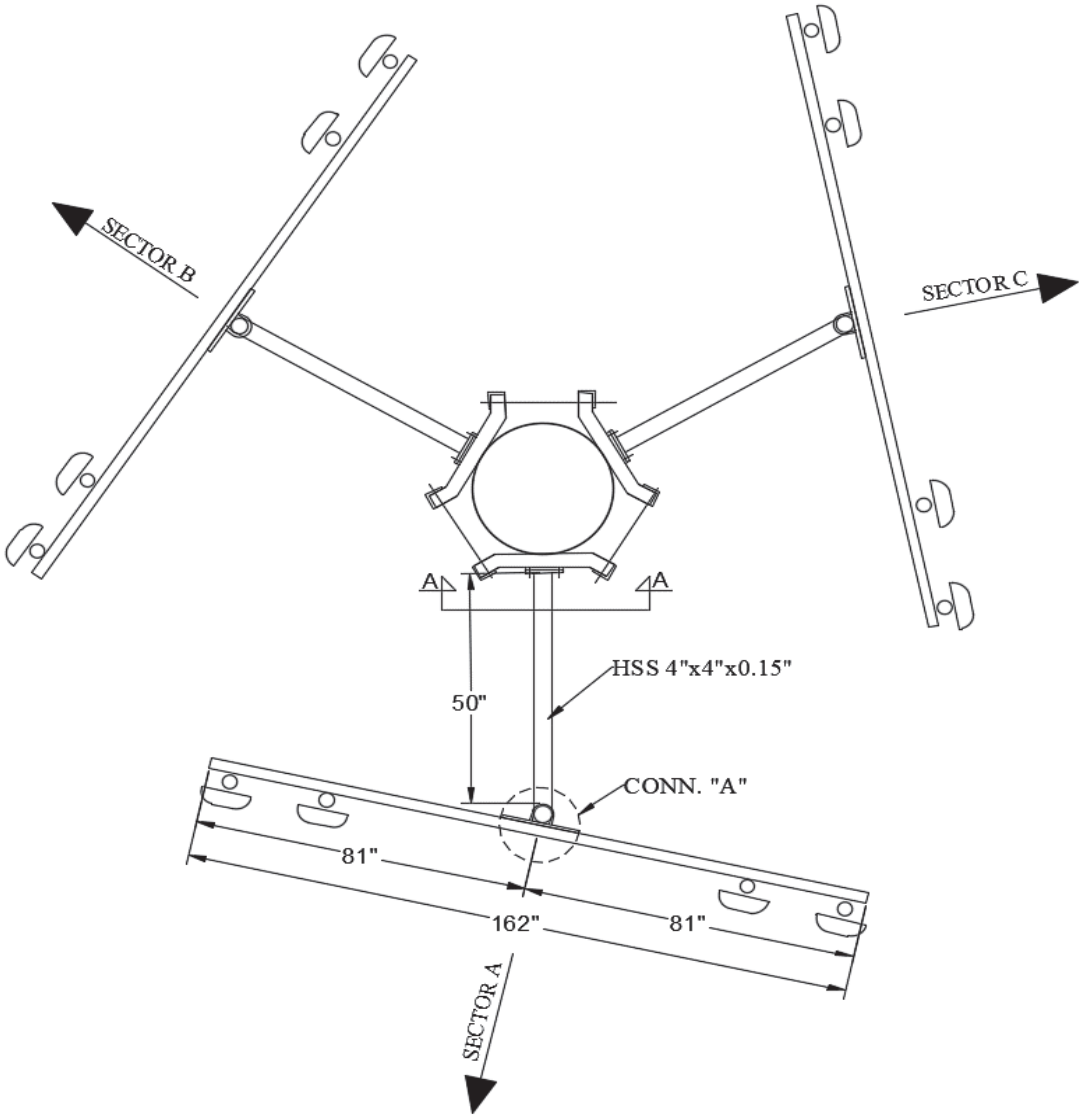
PAUL J. FORD & COMPANY

Antenna Mount Mapping Form (PATENT PENDING)

FCC #
N/A

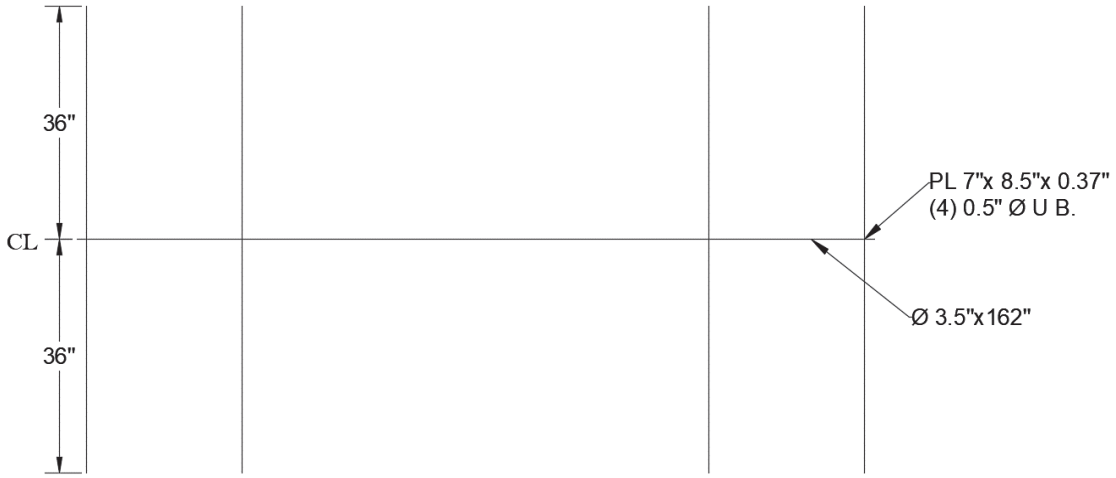
Tower Owner:	Crown Castle	**Mapping Date:**	5/10/2021
Site Name:	HEBRON WEST CT	**Tower Type:**	Monopole
Site Number or ID:	467919	**Tower Height (Ft.):**	N/A
Mapping Contractor:	Roaming Networks Inc.	**Mount Elevation (Ft.):**	97

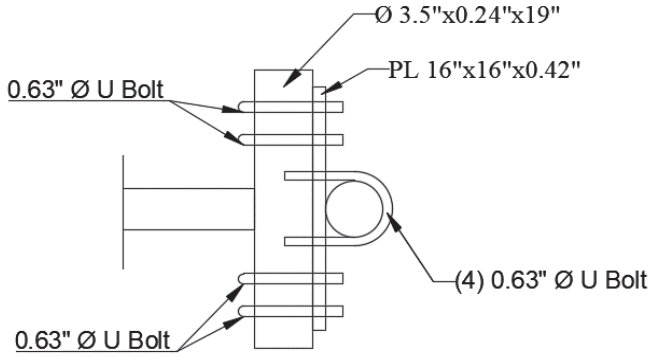
Please Insert Sketches of the Antenna Mount

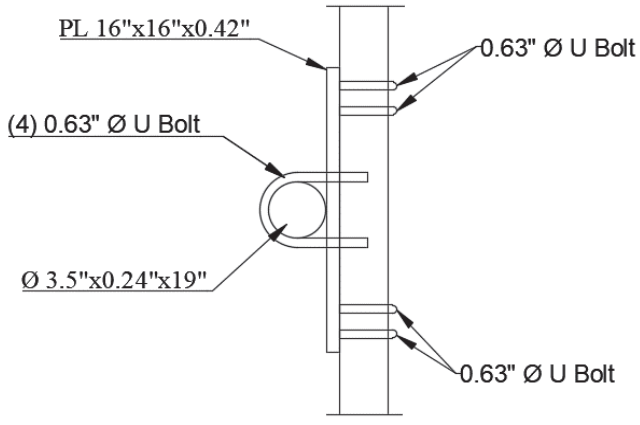


ANTENNA PLAN VIEW

Please Insert Sketches of the Antenna Mount, cont'd

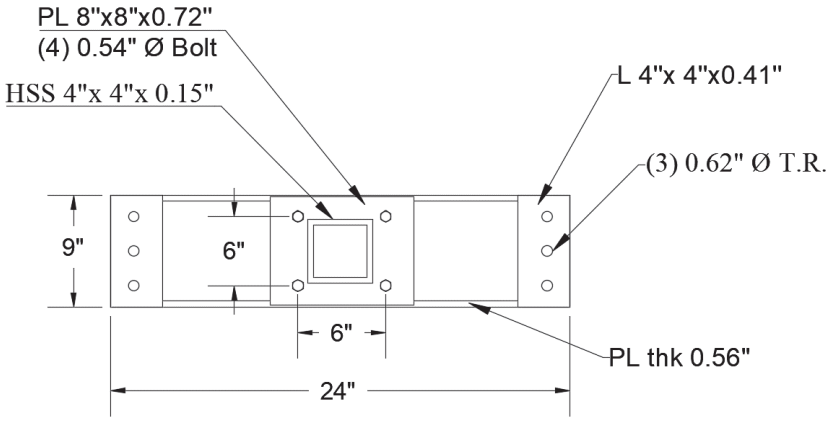




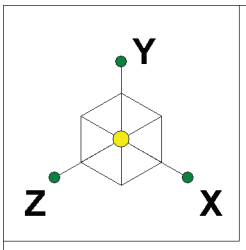


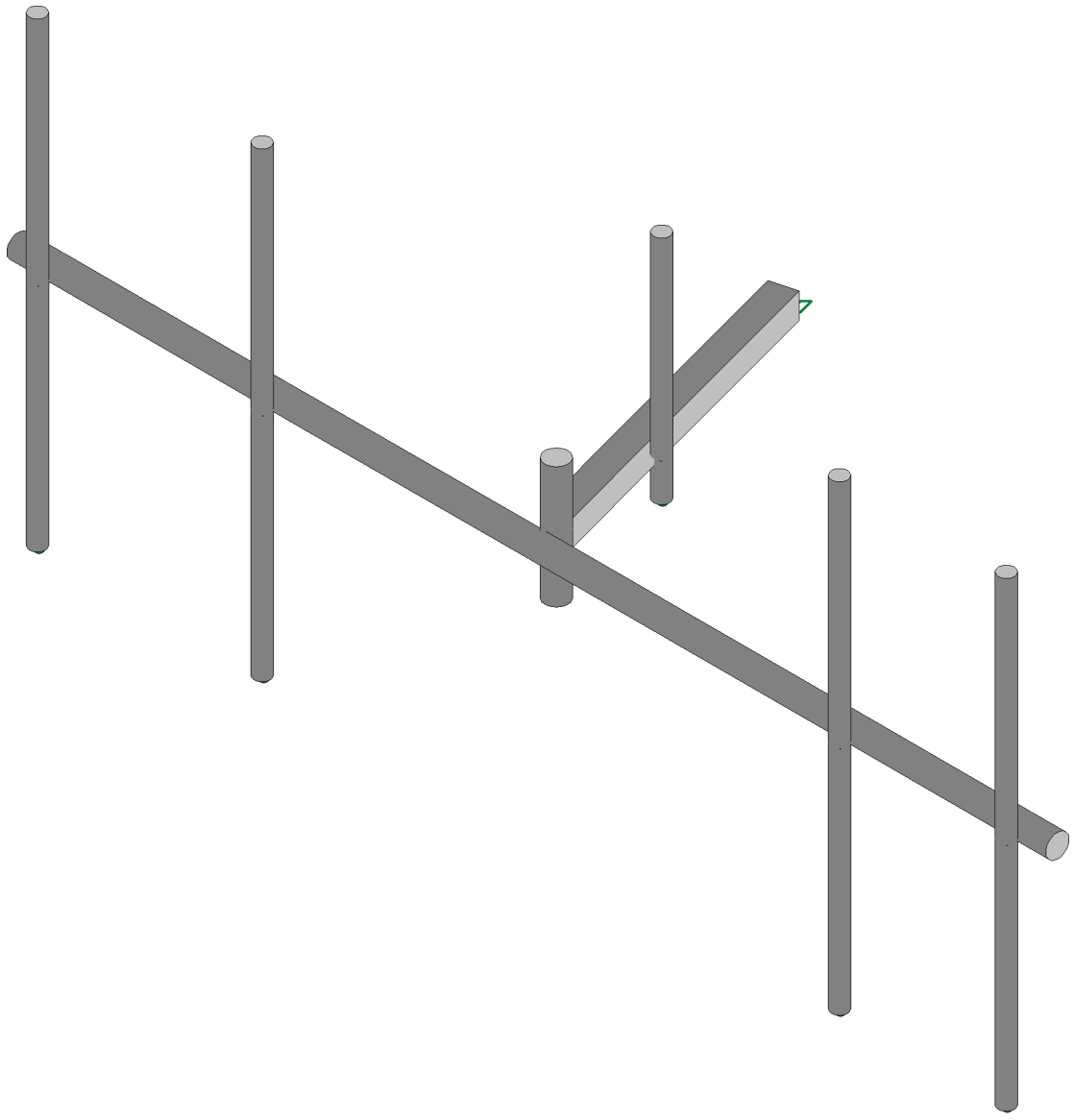
CONN. "A"

Please Insert Sketches of the Antenna Mount, cont'd



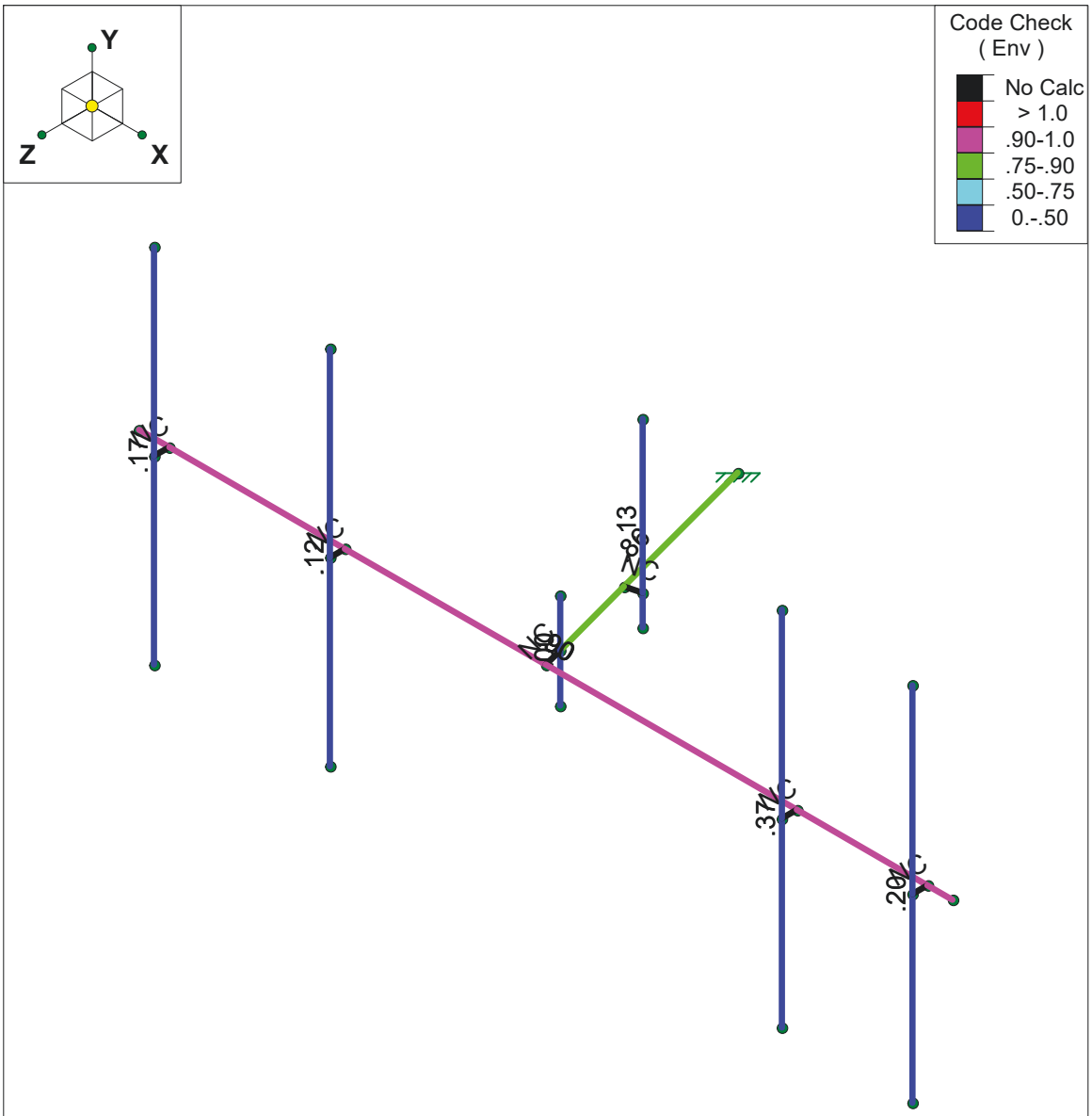
VIEW "A"





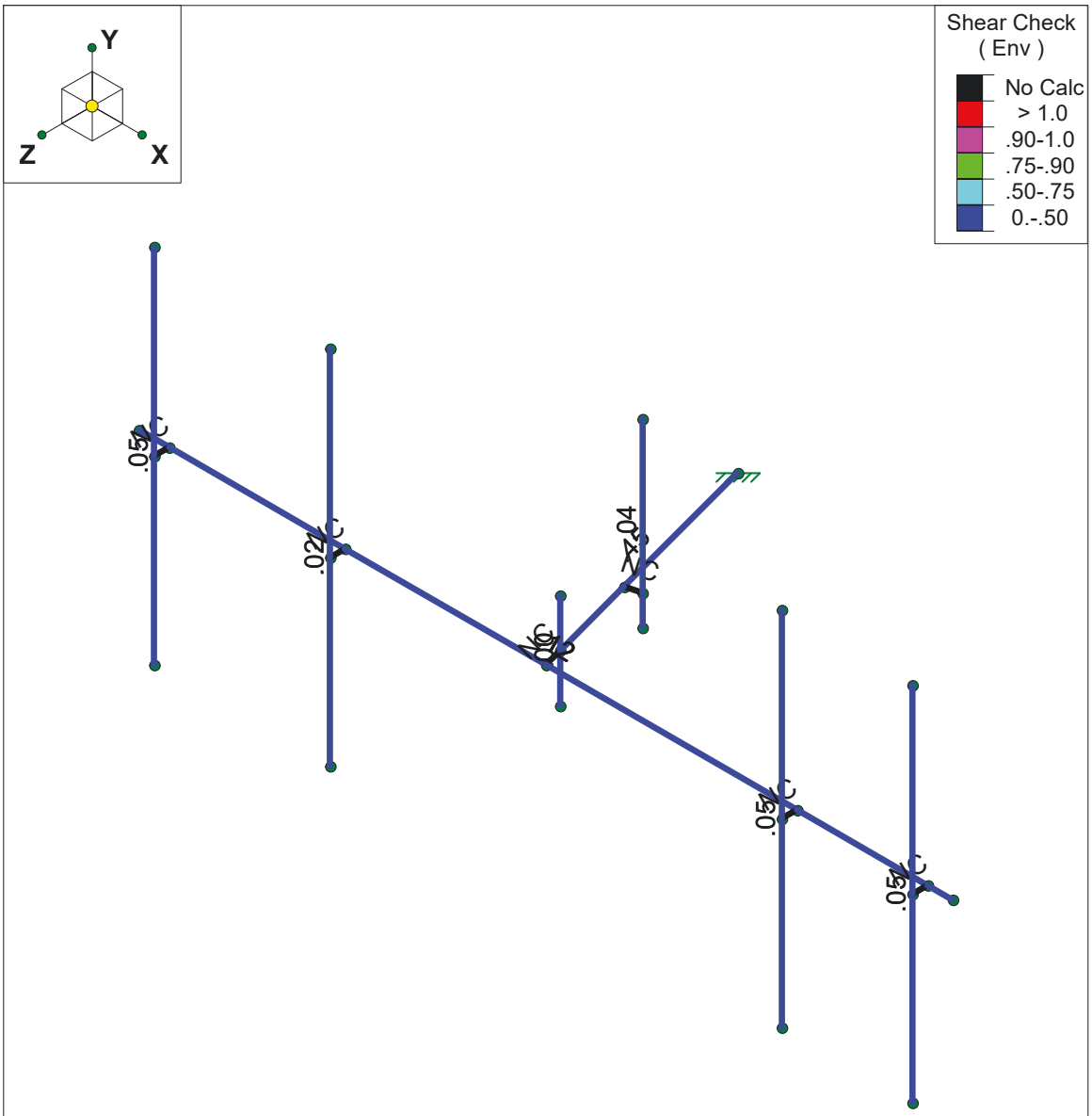
Envelope Only Solution

Colliers Engineering & Des...	5000243961-VZW_MT_LOT_SectorB_H	SK - 1
DAB		Sept 12, 2023 at 9:01 PM
Project No. 10209649		5000243961-VZW_MT_LOT_B_H.r3d



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Colliers Engineering & Des...	5000243961-VZW_MT_LOT_SectorB_H	SK - 2
DAB		Sept 12, 2023 at 9:01 PM
Project No. 10209649		5000243961-VZW_MT_LOT_B_H.r3d



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

Colliers Engineering & Des...	5000243961-VZW_MT_LOT_SectorB_H	SK - 3
DAB		Sept 12, 2023 at 9:02 PM
Project No. 10209649		5000243961-VZW_MT_LOT_B_H.r3d

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(...
1	Antenna D	None					51			
2	Antenna Di	None					51			
3	Antenna Wo (0 Deg)	None					51			
4	Antenna Wo (30 Deg)	None					51			
5	Antenna Wo (60 Deg)	None					51			
6	Antenna Wo (90 Deg)	None					51			
7	Antenna Wo (120 Deg)	None					51			
8	Antenna Wo (150 Deg)	None					51			
9	Antenna Wo (180 Deg)	None					51			
10	Antenna Wo (210 Deg)	None					51			
11	Antenna Wo (240 Deg)	None					51			
12	Antenna Wo (270 Deg)	None					51			
13	Antenna Wo (300 Deg)	None					51			
14	Antenna Wo (330 Deg)	None					51			
15	Antenna Wi (0 Deg)	None					51			
16	Antenna Wi (30 Deg)	None					51			
17	Antenna Wi (60 Deg)	None					51			
18	Antenna Wi (90 Deg)	None					51			
19	Antenna Wi (120 Deg)	None					51			
20	Antenna Wi (150 Deg)	None					51			
21	Antenna Wi (180 Deg)	None					51			
22	Antenna Wi (210 Deg)	None					51			
23	Antenna Wi (240 Deg)	None					51			
24	Antenna Wi (270 Deg)	None					51			
25	Antenna Wi (300 Deg)	None					51			
26	Antenna Wi (330 Deg)	None					51			
27	Antenna Wm (0 Deg)	None					51			
28	Antenna Wm (30 Deg)	None					51			
29	Antenna Wm (60 Deg)	None					51			
30	Antenna Wm (90 Deg)	None					51			
31	Antenna Wm (120 Deg)	None					51			
32	Antenna Wm (150 Deg)	None					51			
33	Antenna Wm (180 Deg)	None					51			
34	Antenna Wm (210 Deg)	None					51			
35	Antenna Wm (240 Deg)	None					51			
36	Antenna Wm (270 Deg)	None					51			
37	Antenna Wm (300 Deg)	None					51			
38	Antenna Wm (330 Deg)	None					51			
39	Structure D	None		-1						
40	Structure Di	None						8		
41	Structure Wo (0 Deg)	None						16		
42	Structure Wo (30 Deg)	None						16		
43	Structure Wo (60 Deg)	None						16		
44	Structure Wo (90 Deg)	None						16		
45	Structure Wo (120 Deg)	None						16		
46	Structure Wo (150 Deg)	None						16		
47	Structure Wo (180 Deg)	None						16		
48	Structure Wo (210 Deg)	None						16		
49	Structure Wo (240 Deg)	None						16		
50	Structure Wo (270 Deg)	None						16		
51	Structure Wo (300 Deg)	None						16		

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(...
52	Structure Wo (330 Deg)	None						16		
53	Structure Wi (0 Deg)	None						16		
54	Structure Wi (30 Deg)	None						16		
55	Structure Wi (60 Deg)	None						16		
56	Structure Wi (90 Deg)	None						16		
57	Structure Wi (120 Deg)	None						16		
58	Structure Wi (150 Deg)	None						16		
59	Structure Wi (180 Deg)	None						16		
60	Structure Wi (210 Deg)	None						16		
61	Structure Wi (240 Deg)	None						16		
62	Structure Wi (270 Deg)	None						16		
63	Structure Wi (300 Deg)	None						16		
64	Structure Wi (330 Deg)	None						16		
65	Structure Wm (0 Deg)	None						16		
66	Structure Wm (30 Deg)	None						16		
67	Structure Wm (60 Deg)	None						16		
68	Structure Wm (90 Deg)	None						16		
69	Structure Wm (120 Deg)	None						16		
70	Structure Wm (150 Deg)	None						16		
71	Structure Wm (180 Deg)	None						16		
72	Structure Wm (210 Deg)	None						16		
73	Structure Wm (240 Deg)	None						16		
74	Structure Wm (270 Deg)	None						16		
75	Structure Wm (300 Deg)	None						16		
76	Structure Wm (330 Deg)	None						16		
77	Lm1	None					1			
78	Lm2	None					1			
79	Lv1	None					1			
80	Lv2	None					1			
81	Antenna Ev	None					51			
82	Antenna Eh (0 Deg)	None					34			
83	Antenna Eh (90 Deg)	None					34			
84	Structure Ev	ELY		-.043						
85	Structure Eh (0 Deg)	ELZ			-.107					
86	Structure Eh (90 Deg)	ELX	.107							

Load Combinations

	Description	S...	P...	S...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...
1	1.2D+1.0Wo (0 Deg)	Yes	Y		1	1.2	39	1.2	3	1	41	1														
2	1.2D+1.0Wo (30 Deg)	Yes	Y		1	1.2	39	1.2	4	1	42	1														
3	1.2D+1.0Wo (60 Deg)	Yes	Y		1	1.2	39	1.2	5	1	43	1														
4	1.2D+1.0Wo (90 Deg)	Yes	Y		1	1.2	39	1.2	6	1	44	1														
5	1.2D+1.0Wo (120 Deg)	Yes	Y		1	1.2	39	1.2	7	1	45	1														
6	1.2D+1.0Wo (150 Deg)	Yes	Y		1	1.2	39	1.2	8	1	46	1														
7	1.2D+1.0Wo (180 Deg)	Yes	Y		1	1.2	39	1.2	9	1	47	1														
8	1.2D+1.0Wo (210 Deg)	Yes	Y		1	1.2	39	1.2	10	1	48	1														
9	1.2D+1.0Wo (240 Deg)	Yes	Y		1	1.2	39	1.2	11	1	49	1														
10	1.2D+1.0Wo (270 Deg)	Yes	Y		1	1.2	39	1.2	12	1	50	1														
11	1.2D+1.0Wo (300 Deg)	Yes	Y		1	1.2	39	1.2	13	1	51	1														
12	1.2D+1.0Wo (330 Deg)	Yes	Y		1	1.2	39	1.2	14	1	52	1														

Load Combinations (Continued)

	Description	S...	P...	S...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...
13	1.2D + 1.0Di + 1.0Wi (0 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1										
14	1.2D + 1.0Di + 1.0Wi (30 D...	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1										
15	1.2D + 1.0Di + 1.0Wi (60 D...	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1										
16	1.2D + 1.0Di + 1.0Wi (90 D...	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1										
17	1.2D + 1.0Di + 1.0Wi (120 ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1										
18	1.2D + 1.0Di + 1.0Wi (150 ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1										
19	1.2D + 1.0Di + 1.0Wi (180 ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1										
20	1.2D + 1.0Di + 1.0Wi (210 ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1										
21	1.2D + 1.0Di + 1.0Wi (240 ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1										
22	1.2D + 1.0Di + 1.0Wi (270 ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1										
23	1.2D + 1.0Di + 1.0Wi (300 ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1										
24	1.2D + 1.0Di + 1.0Wi (330 ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1										
25	1.2D + 1.5Lm1 + 1.0Wm (0...	Yes	Y		1	1.2	39	1.2	77	1.5	27	1	65	1												
26	1.2D + 1.5Lm1 + 1.0Wm (3...	Yes	Y		1	1.2	39	1.2	77	1.5	28	1	66	1												
27	1.2D + 1.5Lm1 + 1.0Wm (6...	Yes	Y		1	1.2	39	1.2	77	1.5	29	1	67	1												
28	1.2D + 1.5Lm1 + 1.0Wm (9...	Yes	Y		1	1.2	39	1.2	77	1.5	30	1	68	1												
29	1.2D + 1.5Lm1 + 1.0Wm (1...	Yes	Y		1	1.2	39	1.2	77	1.5	31	1	69	1												
30	1.2D + 1.5Lm1 + 1.0Wm (1...	Yes	Y		1	1.2	39	1.2	77	1.5	32	1	70	1												
31	1.2D + 1.5Lm1 + 1.0Wm (1...	Yes	Y		1	1.2	39	1.2	77	1.5	33	1	71	1												
32	1.2D + 1.5Lm1 + 1.0Wm (2...	Yes	Y		1	1.2	39	1.2	77	1.5	34	1	72	1												
33	1.2D + 1.5Lm1 + 1.0Wm (2...	Yes	Y		1	1.2	39	1.2	77	1.5	35	1	73	1												
34	1.2D + 1.5Lm1 + 1.0Wm (2...	Yes	Y		1	1.2	39	1.2	77	1.5	36	1	74	1												
35	1.2D + 1.5Lm1 + 1.0Wm (3...	Yes	Y		1	1.2	39	1.2	77	1.5	37	1	75	1												
36	1.2D + 1.5Lm1 + 1.0Wm (3...	Yes	Y		1	1.2	39	1.2	77	1.5	38	1	76	1												
37	1.2D + 1.5Lm2 + 1.0Wm (0...	Yes	Y		1	1.2	39	1.2	78	1.5	27	1	65	1												
38	1.2D + 1.5Lm2 + 1.0Wm (3...	Yes	Y		1	1.2	39	1.2	78	1.5	28	1	66	1												
39	1.2D + 1.5Lm2 + 1.0Wm (6...	Yes	Y		1	1.2	39	1.2	78	1.5	29	1	67	1												
40	1.2D + 1.5Lm2 + 1.0Wm (9...	Yes	Y		1	1.2	39	1.2	78	1.5	30	1	68	1												
41	1.2D + 1.5Lm2 + 1.0Wm (1...	Yes	Y		1	1.2	39	1.2	78	1.5	31	1	69	1												
42	1.2D + 1.5Lm2 + 1.0Wm (1...	Yes	Y		1	1.2	39	1.2	78	1.5	32	1	70	1												
43	1.2D + 1.5Lm2 + 1.0Wm (1...	Yes	Y		1	1.2	39	1.2	78	1.5	33	1	71	1												
44	1.2D + 1.5Lm2 + 1.0Wm (2...	Yes	Y		1	1.2	39	1.2	78	1.5	34	1	72	1												
45	1.2D + 1.5Lm2 + 1.0Wm (2...	Yes	Y		1	1.2	39	1.2	78	1.5	35	1	73	1												
46	1.2D + 1.5Lm2 + 1.0Wm (2...	Yes	Y		1	1.2	39	1.2	78	1.5	36	1	74	1												
47	1.2D + 1.5Lm2 + 1.0Wm (3...	Yes	Y		1	1.2	39	1.2	78	1.5	37	1	75	1												
48	1.2D + 1.5Lm2 + 1.0Wm (3...	Yes	Y		1	1.2	39	1.2	78	1.5	38	1	76	1												
49	1.2D + 1.5Lv1	Yes	Y		1	1.2	39	1.2	79	1.5																
50	1.2D + 1.5Lv2	Yes	Y		1	1.2	39	1.2	80	1.5																
51	1.4D	Yes	Y		1	1.4	39	1.4																		
52	1.2D + 1.0Ev + 1.0Eh (0 De...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	1	83		ELZ	1	E...							
53	1.2D + 1.0Ev + 1.0Eh (30 D...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.866	83	.5	ELZ	.866	E...	.5						
54	1.2D + 1.0Ev + 1.0Eh (60 D...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.5	83	.866	ELZ	.5	E...	.866						
55	1.2D + 1.0Ev + 1.0Eh (90 D...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82		83	1	ELZ		E...	1						
56	1.2D + 1.0Ev + 1.0Eh (120 ...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.5	83	.866	ELZ	-.5	E...	.866						
57	1.2D + 1.0Ev + 1.0Eh (150 ...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.866	83	.5	ELZ	-.866	E...	.5						
58	1.2D + 1.0Ev + 1.0Eh (180 ...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-1	83		ELZ	-1	E...							
59	1.2D + 1.0Ev + 1.0Eh (210 ...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.866	83	-.5	ELZ	-.866	E...	-.5						
60	1.2D + 1.0Ev + 1.0Eh (240 ...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.5	83	-.866	ELZ	-.5	E...	-.866						
61	1.2D + 1.0Ev + 1.0Eh (270 ...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82		83	-1	ELZ		E...	-1						
62	1.2D + 1.0Ev + 1.0Eh (300 ...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.5	83	-.866	ELZ	.5	E...	-.866						
63	1.2D + 1.0Ev + 1.0Eh (330 ...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.866	83	-.5	ELZ	.866	E...	-.5						
64	0.9D - 1.0Ev + 1.0Eh (0 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	1	83		ELZ	1	E...							

Load Combinations (Continued)

	Description	S...	P...	S...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...
65	0.9D - 1.0Ev + 1.0Eh (30 D...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.866	83	.5	ELZ	.866	E...	.5				
66	0.9D - 1.0Ev + 1.0Eh (60 D...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.5	83	.866	ELZ	.5	E...	.866				
67	0.9D - 1.0Ev + 1.0Eh (90 D...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82		83	1	ELZ		E...	1				
68	0.9D - 1.0Ev + 1.0Eh (120 ...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.5	83	.866	ELZ	-.5	E...	.866				
69	0.9D - 1.0Ev + 1.0Eh (150 ...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.866	83	.5	ELZ	-.866	E...	.5				
70	0.9D - 1.0Ev + 1.0Eh (180 ...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-1	83		ELZ	-1	E...					
71	0.9D - 1.0Ev + 1.0Eh (210 ...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.866	83	-.5	ELZ	-.866	E...	-.5				
72	0.9D - 1.0Ev + 1.0Eh (240 ...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.5	83	-.866	ELZ	-.5	E...	-.866				
73	0.9D - 1.0Ev + 1.0Eh (270 ...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82		83	-1	ELZ		E...	-1				
74	0.9D - 1.0Ev + 1.0Eh (300 ...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.5	83	-.866	ELZ	.5	E...	-.866				
75	0.9D - 1.0Ev + 1.0Eh (330 ...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.866	83	-.5	ELZ	.866	E...	-.5				

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N1	-1.164686	0	-1.388333	0	
2	N2	-0.086273	0	2.636358	0	
3	N3	0	0	2.958333	0	
4	N4	-0.086273	-0.791667	2.636358	0	
5	N5	-0.086273	0.791667	2.636358	0	
6	N6	6.75	0	2.958333	0	
7	N7	-6.75	0	2.958333	0	
8	N8	-6.25	0	2.958333	0	
9	N9	6.333333	0	2.958333	0	
10	N10	-6.25	0	3.208333	0	
11	N11	6.333333	0	3.208333	0	
12	N12	-6.25	3	3.208333	0	
13	N13	6.333333	3	3.208333	0	
14	N14	-6.25	-3	3.208333	0	
15	N15	6.333333	-3	3.208333	0	
16	N16	-3.333333	0	2.958333	0	
17	N17	-3.333333	0	3.208333	0	
18	N18	-3.333333	3	3.208333	0	
19	N19	-3.333333	-3	3.208333	0	
20	N20	4.166667	0	2.958333	0	
21	N21	4.166667	0	3.208333	0	
22	N22	4.166667	3	3.208333	0	
23	N23	4.166667	-3	3.208333	0	
24	N24	-0.233106	2.5	1.122443	0	
25	N25	-0.233106	-.5	1.122443	0	
26	N26	-0.233106	0	1.122443	0	
27	N27	-0.474588	0	1.187147	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Antenna Pipe 2	PIPE 2.5	Column	Pipe	A53 Gr. B	Typical	1.61	1.45	1.45	2.89
2	Antenna Pipe	PIPE 2.0	Column	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
3	Face Horizontal	PIPE 3.0	Beam	Pipe	A53 Gr. B	Typical	2.07	2.85	2.85	5.69
4	Vertical Pipe	PIPE 3.0	Column	Pipe	A53 Gr. B	Typical	2.07	2.85	2.85	5.69
5	Standoff	HSS4X4X3	Beam	SquareTube	A500 Gr. B 46	Typical	2.58	6.21	6.21	10

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E..Density[k/ft...		Yield[ksi]	Ry	Fu[ksi]	Rt
1	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
2	A53 Gr. B	29000	11154	.3	.65	.49	35	1.5	60	1.2
3	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	65	1.1
4	A992	29000	11154	.3	.65	.49	50	1.1	65	1.1
5	A500 Gr. B 42	29000	11154	.3	.65	.49	42	1.4	58	1.3
6	A500 Gr. B 46	29000	11154	.3	.65	.49	46	1.4	58	1.3

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N2	N3			RIGID	None	None	RIGID	Typical
2	M3	N1	N2			Standoff	Beam	SquareTube	A500 Gr. ...	Typical
3	M4	N5	N4			Vertical Pipe	Column	Pipe	A53 Gr. B	Typical
4	M5	N7	N6			Face Horizontal	Beam	Pipe	A53 Gr. B	Typical
5	MP1A	N13	N15			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
6	MP4A	N12	N14			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
7	M9	N8	N10			RIGID	None	None	RIGID	Typical
8	M11	N9	N11			RIGID	None	None	RIGID	Typical
9	MP3A	N18	N19			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
10	M12A	N16	N17			RIGID	None	None	RIGID	Typical
11	MP2A	N22	N23			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
12	M12	N20	N21			RIGID	None	None	RIGID	Typical
13	OVP	N24	N25			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
14	M14	N26	N27			RIGID	None	None	RIGID	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M1						Yes	** NA **			None
2	M3						Yes	Default			None
3	M4						Yes	** NA **			None
4	M5						Yes				None
5	MP1A						Yes	** NA **			None
6	MP4A						Yes	** NA **			None
7	M9						Yes	** NA **			None
8	M11						Yes	** NA **			None
9	MP3A						Yes	** NA **			None
10	M12A						Yes	** NA **			None
11	MP2A						Yes	** NA **			None
12	M12						Yes	** NA **			None
13	OVP						Yes	** NA **			None
14	M14						Yes	** NA **			None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	Y	-21.85	.5
2	MP2A	My	-.005	.5
3	MP2A	Mz	.017	.5

Member Point Loads (BLC 1 : Antenna D) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
4	MP2A	Y	-21.85	4.5
5	MP2A	My	-.005	4.5
6	MP2A	Mz	.017	4.5
7	MP2A	Y	-21.85	.5
8	MP2A	My	-.015	.5
9	MP2A	Mz	-.01	.5
10	MP2A	Y	-21.85	4.5
11	MP2A	My	-.015	4.5
12	MP2A	Mz	-.01	4.5
13	MP3A	Y	-43.55	1.25
14	MP3A	My	-.02	1.25
15	MP3A	Mz	.007	1.25
16	MP3A	Y	-43.55	3.75
17	MP3A	My	-.02	3.75
18	MP3A	Mz	.007	3.75
19	OVP	Y	-32	1
20	OVP	My	.012	1
21	OVP	Mz	.01	1
22	MP2A	Y	-74.7	2
23	MP2A	My	.035	2
24	MP2A	Mz	-.013	2
25	MP1A	Y	-70.3	2
26	MP1A	My	.033	2
27	MP1A	Mz	-.012	2
28	MP1A	Y	-6	.5
29	MP1A	My	-.003	.5
30	MP1A	Mz	.001	.5
31	MP1A	Y	-6	4.5
32	MP1A	My	-.003	4.5
33	MP1A	Mz	.001	4.5
34	MP4A	Y	-6	.5
35	MP4A	My	-.003	.5
36	MP4A	Mz	.001	.5
37	MP4A	Y	-6	4.5
38	MP4A	My	-.003	4.5
39	MP4A	Mz	.001	4.5
40	MP2A	Y	-8.8	4.5
41	MP2A	My	.009	4.5
42	MP2A	Mz	-.000253	4.5
43	MP2A	Y	-8.8	5.5
44	MP2A	My	.009	5.5
45	MP2A	Mz	-.000253	5.5
46	MP2A	Y	-8.8	4.5
47	MP2A	My	.007	4.5
48	MP2A	Mz	-.006	4.5
49	MP2A	Y	-8.8	5.5
50	MP2A	My	.007	5.5
51	MP2A	Mz	-.006	5.5

Member Point Loads (BLC 2 : Antenna Di)

Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]

Member Point Loads (BLC 2 : Antenna Di) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	Y	-58.238	.5
2	MP2A	My	-.014	.5
3	MP2A	Mz	.046	.5
4	MP2A	Y	-58.238	4.5
5	MP2A	My	-.014	4.5
6	MP2A	Mz	.046	4.5
7	MP2A	Y	-58.238	.5
8	MP2A	My	-.041	.5
9	MP2A	Mz	-.027	.5
10	MP2A	Y	-58.238	4.5
11	MP2A	My	-.041	4.5
12	MP2A	Mz	-.027	4.5
13	MP3A	Y	-34.219	1.25
14	MP3A	My	-.016	1.25
15	MP3A	Mz	.006	1.25
16	MP3A	Y	-34.219	3.75
17	MP3A	My	-.016	3.75
18	MP3A	Mz	.006	3.75
19	OVP	Y	-84.526	1
20	OVP	My	.032	1
21	OVP	Mz	.027	1
22	MP2A	Y	-43.117	2
23	MP2A	My	.02	2
24	MP2A	Mz	-.007	2
25	MP1A	Y	-41.055	2
26	MP1A	My	.019	2
27	MP1A	Mz	-.007	2
28	MP1A	Y	-38.715	.5
29	MP1A	My	-.018	.5
30	MP1A	Mz	.007	.5
31	MP1A	Y	-38.715	4.5
32	MP1A	My	-.018	4.5
33	MP1A	Mz	.007	4.5
34	MP4A	Y	-38.715	.5
35	MP4A	My	-.018	.5
36	MP4A	Mz	.007	.5
37	MP4A	Y	-38.715	4.5
38	MP4A	My	-.018	4.5
39	MP4A	Mz	.007	4.5
40	MP2A	Y	3.3	4.5
41	MP2A	My	-.003	4.5
42	MP2A	Mz	9.5e-5	4.5
43	MP2A	Y	3.3	5.5
44	MP2A	My	-.003	5.5
45	MP2A	Mz	9.5e-5	5.5
46	MP2A	Y	3.3	4.5
47	MP2A	My	-.003	4.5
48	MP2A	Mz	.002	4.5
49	MP2A	Y	3.3	5.5
50	MP2A	My	-.003	5.5
51	MP2A	Mz	.002	5.5

Member Point Loads (BLC 3 : Antenna Wo (0 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.5
2	MP2A	Z	-106.722	.5
3	MP2A	Mx	-.085	.5
4	MP2A	X	0	4.5
5	MP2A	Z	-106.722	4.5
6	MP2A	Mx	-.085	4.5
7	MP2A	X	0	.5
8	MP2A	Z	-106.722	.5
9	MP2A	Mx	.049	.5
10	MP2A	X	0	4.5
11	MP2A	Z	-106.722	4.5
12	MP2A	Mx	.049	4.5
13	MP3A	X	0	1.25
14	MP3A	Z	-76.226	1.25
15	MP3A	Mx	-.013	1.25
16	MP3A	X	0	3.75
17	MP3A	Z	-76.226	3.75
18	MP3A	Mx	-.013	3.75
19	OVP	X	0	1
20	OVP	Z	-120.298	1
21	OVP	Mx	-.039	1
22	MP2A	X	0	2
23	MP2A	Z	-62.775	2
24	MP2A	Mx	.011	2
25	MP1A	X	0	2
26	MP1A	Z	-62.282	2
27	MP1A	Mx	.011	2
28	MP1A	X	0	.5
29	MP1A	Z	-61.839	.5
30	MP1A	Mx	-.011	.5
31	MP1A	X	0	4.5
32	MP1A	Z	-61.839	4.5
33	MP1A	Mx	-.011	4.5
34	MP4A	X	0	.5
35	MP4A	Z	-61.839	.5
36	MP4A	Mx	-.011	.5
37	MP4A	X	0	4.5
38	MP4A	Z	-61.839	4.5
39	MP4A	Mx	-.011	4.5
40	MP2A	X	0	4.5
41	MP2A	Z	-20.225	4.5
42	MP2A	Mx	.000582	4.5
43	MP2A	X	0	5.5
44	MP2A	Z	-20.225	5.5
45	MP2A	Mx	.000582	5.5
46	MP2A	X	0	4.5
47	MP2A	Z	-20.225	4.5
48	MP2A	Mx	.013	4.5
49	MP2A	X	0	5.5
50	MP2A	Z	-20.225	5.5
51	MP2A	Mx	.013	5.5

Member Point Loads (BLC 4 : Antenna Wo (30 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	38.023	.5
2	MP2A	Z	-65.858	.5
3	MP2A	Mx	-.062	.5
4	MP2A	X	38.023	4.5
5	MP2A	Z	-65.858	4.5
6	MP2A	Mx	-.062	4.5
7	MP2A	X	38.023	.5
8	MP2A	Z	-65.858	.5
9	MP2A	Mx	.003	.5
10	MP2A	X	38.023	4.5
11	MP2A	Z	-65.858	4.5
12	MP2A	Mx	.003	4.5
13	MP3A	X	25.398	1.25
14	MP3A	Z	-43.99	1.25
15	MP3A	Mx	-.019	1.25
16	MP3A	X	25.398	3.75
17	MP3A	Z	-43.99	3.75
18	MP3A	Mx	-.019	3.75
19	OVP	X	66.28	1
20	OVP	Z	-114.8	1
21	OVP	Mx	-.012	1
22	MP2A	X	26.341	2
23	MP2A	Z	-45.624	2
24	MP2A	Mx	.02	2
25	MP1A	X	25.105	2
26	MP1A	Z	-43.483	2
27	MP1A	Mx	.019	2
28	MP1A	X	44.718	.5
29	MP1A	Z	-77.453	.5
30	MP1A	Mx	-.034	.5
31	MP1A	X	44.718	4.5
32	MP1A	Z	-77.453	4.5
33	MP1A	Mx	-.034	4.5
34	MP4A	X	44.718	.5
35	MP4A	Z	-77.453	.5
36	MP4A	Mx	-.034	.5
37	MP4A	X	44.718	4.5
38	MP4A	Z	-77.453	4.5
39	MP4A	Mx	-.034	4.5
40	MP2A	X	10.127	4.5
41	MP2A	Z	-17.54	4.5
42	MP2A	Mx	.011	4.5
43	MP2A	X	10.127	5.5
44	MP2A	Z	-17.54	5.5
45	MP2A	Mx	.011	5.5
46	MP2A	X	10.127	4.5
47	MP2A	Z	-17.54	4.5
48	MP2A	Mx	.02	4.5
49	MP2A	X	10.127	5.5
50	MP2A	Z	-17.54	5.5
51	MP2A	Mx	.02	5.5

Member Point Loads (BLC 5 : Antenna Wo (60 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	44.202	.5
2	MP2A	Z	-25.52	.5
3	MP2A	Mx	-.031	.5
4	MP2A	X	44.202	4.5
5	MP2A	Z	-25.52	4.5
6	MP2A	Mx	-.031	4.5
7	MP2A	X	44.202	.5
8	MP2A	Z	-25.52	.5
9	MP2A	Mx	-.019	.5
10	MP2A	X	44.202	4.5
11	MP2A	Z	-25.52	4.5
12	MP2A	Mx	-.019	4.5
13	MP3A	X	26.036	1.25
14	MP3A	Z	-15.032	1.25
15	MP3A	Mx	-.015	1.25
16	MP3A	X	26.036	3.75
17	MP3A	Z	-15.032	3.75
18	MP3A	Mx	-.015	3.75
19	OVP	X	112.392	1
20	OVP	Z	-64.89	1
21	OVP	Mx	.022	1
22	MP2A	X	38.498	2
23	MP2A	Z	-22.227	2
24	MP2A	Mx	.022	2
25	MP1A	X	34.96	2
26	MP1A	Z	-20.184	2
27	MP1A	Mx	.02	2
28	MP1A	X	96.936	.5
29	MP1A	Z	-55.966	.5
30	MP1A	Mx	-.055	.5
31	MP1A	X	96.936	4.5
32	MP1A	Z	-55.966	4.5
33	MP1A	Mx	-.055	4.5
34	MP4A	X	96.936	.5
35	MP4A	Z	-55.966	.5
36	MP4A	Mx	-.055	.5
37	MP4A	X	96.936	4.5
38	MP4A	Z	-55.966	4.5
39	MP4A	Mx	-.055	4.5
40	MP2A	X	17.56	4.5
41	MP2A	Z	-10.138	4.5
42	MP2A	Mx	.019	4.5
43	MP2A	X	17.56	5.5
44	MP2A	Z	-10.138	5.5
45	MP2A	Mx	.019	5.5
46	MP2A	X	17.56	4.5
47	MP2A	Z	-10.138	4.5
48	MP2A	Mx	.021	4.5
49	MP2A	X	17.56	5.5
50	MP2A	Z	-10.138	5.5
51	MP2A	Mx	.021	5.5

Member Point Loads (BLC 6 : Antenna Wo (90 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	56.708	.5
2	MP2A	Z	0	.5
3	MP2A	Mx	-.014	.5
4	MP2A	X	56.708	4.5
5	MP2A	Z	0	4.5
6	MP2A	Mx	-.014	4.5
7	MP2A	X	56.708	.5
8	MP2A	Z	0	.5
9	MP2A	Mx	-.04	.5
10	MP2A	X	56.708	4.5
11	MP2A	Z	0	4.5
12	MP2A	Mx	-.04	4.5
13	MP3A	X	34.763	1.25
14	MP3A	Z	0	1.25
15	MP3A	Mx	-.016	1.25
16	MP3A	X	34.763	3.75
17	MP3A	Z	0	3.75
18	MP3A	Mx	-.016	3.75
19	OVP	X	114.739	1
20	OVP	Z	0	1
21	OVP	Mx	.044	1
22	MP2A	X	46.319	2
23	MP2A	Z	0	2
24	MP2A	Mx	.022	2
25	MP1A	X	42.6	2
26	MP1A	Z	0	2
27	MP1A	Mx	.02	2
28	MP1A	X	106.833	.5
29	MP1A	Z	0	.5
30	MP1A	Mx	-.05	.5
31	MP1A	X	106.833	4.5
32	MP1A	Z	0	4.5
33	MP1A	Mx	-.05	4.5
34	MP4A	X	106.833	.5
35	MP4A	Z	0	.5
36	MP4A	Mx	-.05	.5
37	MP4A	X	106.833	4.5
38	MP4A	Z	0	4.5
39	MP4A	Mx	-.05	4.5
40	MP2A	X	20.271	4.5
41	MP2A	Z	0	4.5
42	MP2A	Mx	.021	4.5
43	MP2A	X	20.271	5.5
44	MP2A	Z	0	5.5
45	MP2A	Mx	.021	5.5
46	MP2A	X	20.271	4.5
47	MP2A	Z	0	4.5
48	MP2A	Mx	.017	4.5
49	MP2A	X	20.271	5.5
50	MP2A	Z	0	5.5
51	MP2A	Mx	.017	5.5

Member Point Loads (BLC 7 : Antenna Wo (120 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	75.677	.5
2	MP2A	Z	43.692	.5
3	MP2A	Mx	.017	.5
4	MP2A	X	75.677	4.5
5	MP2A	Z	43.692	4.5
6	MP2A	Mx	.017	4.5
7	MP2A	X	75.677	.5
8	MP2A	Z	43.692	.5
9	MP2A	Mx	-.073	.5
10	MP2A	X	75.677	4.5
11	MP2A	Z	43.692	4.5
12	MP2A	Mx	-.073	4.5
13	MP3A	X	52.13	1.25
14	MP3A	Z	30.097	1.25
15	MP3A	Mx	-.019	1.25
16	MP3A	X	52.13	3.75
17	MP3A	Z	30.097	3.75
18	MP3A	Mx	-.019	3.75
19	OVP	X	88.748	1
20	OVP	Z	51.239	1
21	OVP	Mx	.05	1
22	MP2A	X	48.854	2
23	MP2A	Z	28.206	2
24	MP2A	Mx	.018	2
25	MP1A	X	47.347	2
26	MP1A	Z	27.336	2
27	MP1A	Mx	.018	2
28	MP1A	X	68.621	.5
29	MP1A	Z	39.618	.5
30	MP1A	Mx	-.025	.5
31	MP1A	X	68.621	4.5
32	MP1A	Z	39.618	4.5
33	MP1A	Mx	-.025	4.5
34	MP4A	X	68.621	.5
35	MP4A	Z	39.618	.5
36	MP4A	Mx	-.025	.5
37	MP4A	X	68.621	4.5
38	MP4A	Z	39.618	4.5
39	MP4A	Mx	-.025	4.5
40	MP2A	X	17.531	4.5
41	MP2A	Z	10.121	4.5
42	MP2A	Mx	.018	4.5
43	MP2A	X	17.531	5.5
44	MP2A	Z	10.121	5.5
45	MP2A	Mx	.018	5.5
46	MP2A	X	17.531	4.5
47	MP2A	Z	10.121	4.5
48	MP2A	Mx	.008	4.5
49	MP2A	X	17.531	5.5
50	MP2A	Z	10.121	5.5
51	MP2A	Mx	.008	5.5

Member Point Loads (BLC 8 : Antenna Wo (150 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	56.195	.5
2	MP2A	Z	97.333	.5
3	MP2A	Mx	.064	.5
4	MP2A	X	56.195	4.5
5	MP2A	Z	97.333	4.5
6	MP2A	Mx	.064	4.5
7	MP2A	X	56.195	.5
8	MP2A	Z	97.333	.5
9	MP2A	Mx	-.084	.5
10	MP2A	X	56.195	4.5
11	MP2A	Z	97.333	4.5
12	MP2A	Mx	-.084	4.5
13	MP3A	X	40.463	1.25
14	MP3A	Z	70.084	1.25
15	MP3A	Mx	-.007	1.25
16	MP3A	X	40.463	3.75
17	MP3A	Z	70.084	3.75
18	MP3A	Mx	-.007	3.75
19	OVP	X	52.628	1
20	OVP	Z	91.155	1
21	OVP	Mx	.049	1
22	MP2A	X	32.32	2
23	MP2A	Z	55.98	2
24	MP2A	Mx	.006	2
25	MP1A	X	32.257	2
26	MP1A	Z	55.87	2
27	MP1A	Mx	.006	2
28	MP1A	X	28.37	.5
29	MP1A	Z	49.138	.5
30	MP1A	Mx	-.005	.5
31	MP1A	X	28.37	4.5
32	MP1A	Z	49.138	4.5
33	MP1A	Mx	-.005	4.5
34	MP4A	X	28.37	.5
35	MP4A	Z	49.138	.5
36	MP4A	Mx	-.005	.5
37	MP4A	X	28.37	4.5
38	MP4A	Z	49.138	4.5
39	MP4A	Mx	-.005	4.5
40	MP2A	X	10.11	4.5
41	MP2A	Z	17.511	4.5
42	MP2A	Mx	.01	4.5
43	MP2A	X	10.11	5.5
44	MP2A	Z	17.511	5.5
45	MP2A	Mx	.01	5.5
46	MP2A	X	10.11	4.5
47	MP2A	Z	17.511	4.5
48	MP2A	Mx	-.003	4.5
49	MP2A	X	10.11	5.5
50	MP2A	Z	17.511	5.5
51	MP2A	Mx	-.003	5.5

Member Point Loads (BLC 9 : Antenna Wo (180 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.5
2	MP2A	Z	106.722	.5
3	MP2A	Mx	.085	.5
4	MP2A	X	0	4.5
5	MP2A	Z	106.722	4.5
6	MP2A	Mx	.085	4.5
7	MP2A	X	0	.5
8	MP2A	Z	106.722	.5
9	MP2A	Mx	-.049	.5
10	MP2A	X	0	4.5
11	MP2A	Z	106.722	4.5
12	MP2A	Mx	-.049	4.5
13	MP3A	X	0	1.25
14	MP3A	Z	76.226	1.25
15	MP3A	Mx	.013	1.25
16	MP3A	X	0	3.75
17	MP3A	Z	76.226	3.75
18	MP3A	Mx	.013	3.75
19	OVP	X	0	1
20	OVP	Z	120.298	1
21	OVP	Mx	.039	1
22	MP2A	X	0	2
23	MP2A	Z	62.775	2
24	MP2A	Mx	-.011	2
25	MP1A	X	0	2
26	MP1A	Z	62.282	2
27	MP1A	Mx	-.011	2
28	MP1A	X	0	.5
29	MP1A	Z	61.839	.5
30	MP1A	Mx	.011	.5
31	MP1A	X	0	4.5
32	MP1A	Z	61.839	4.5
33	MP1A	Mx	.011	4.5
34	MP4A	X	0	.5
35	MP4A	Z	61.839	.5
36	MP4A	Mx	.011	.5
37	MP4A	X	0	4.5
38	MP4A	Z	61.839	4.5
39	MP4A	Mx	.011	4.5
40	MP2A	X	0	4.5
41	MP2A	Z	20.225	4.5
42	MP2A	Mx	-.000582	4.5
43	MP2A	X	0	5.5
44	MP2A	Z	20.225	5.5
45	MP2A	Mx	-.000582	5.5
46	MP2A	X	0	4.5
47	MP2A	Z	20.225	4.5
48	MP2A	Mx	-.013	4.5
49	MP2A	X	0	5.5
50	MP2A	Z	20.225	5.5
51	MP2A	Mx	-.013	5.5

Member Point Loads (BLC 10 : Antenna Wo (210 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-38.023	.5
2	MP2A	Z	65.858	.5
3	MP2A	Mx	.062	.5
4	MP2A	X	-38.023	4.5
5	MP2A	Z	65.858	4.5
6	MP2A	Mx	.062	4.5
7	MP2A	X	-38.023	.5
8	MP2A	Z	65.858	.5
9	MP2A	Mx	-.003	.5
10	MP2A	X	-38.023	4.5
11	MP2A	Z	65.858	4.5
12	MP2A	Mx	-.003	4.5
13	MP3A	X	-25.398	1.25
14	MP3A	Z	43.99	1.25
15	MP3A	Mx	.019	1.25
16	MP3A	X	-25.398	3.75
17	MP3A	Z	43.99	3.75
18	MP3A	Mx	.019	3.75
19	OVP	X	-66.28	1
20	OVP	Z	114.8	1
21	OVP	Mx	.012	1
22	MP2A	X	-26.341	2
23	MP2A	Z	45.624	2
24	MP2A	Mx	-.02	2
25	MP1A	X	-25.105	2
26	MP1A	Z	43.483	2
27	MP1A	Mx	-.019	2
28	MP1A	X	-44.718	.5
29	MP1A	Z	77.453	.5
30	MP1A	Mx	.034	.5
31	MP1A	X	-44.718	4.5
32	MP1A	Z	77.453	4.5
33	MP1A	Mx	.034	4.5
34	MP4A	X	-44.718	.5
35	MP4A	Z	77.453	.5
36	MP4A	Mx	.034	.5
37	MP4A	X	-44.718	4.5
38	MP4A	Z	77.453	4.5
39	MP4A	Mx	.034	4.5
40	MP2A	X	-10.127	4.5
41	MP2A	Z	17.54	4.5
42	MP2A	Mx	-.011	4.5
43	MP2A	X	-10.127	5.5
44	MP2A	Z	17.54	5.5
45	MP2A	Mx	-.011	5.5
46	MP2A	X	-10.127	4.5
47	MP2A	Z	17.54	4.5
48	MP2A	Mx	-.02	4.5
49	MP2A	X	-10.127	5.5
50	MP2A	Z	17.54	5.5
51	MP2A	Mx	-.02	5.5

Member Point Loads (BLC 11 : Antenna Wo (240 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-44.202	.5
2	MP2A	Z	25.52	.5
3	MP2A	Mx	.031	.5
4	MP2A	X	-44.202	4.5
5	MP2A	Z	25.52	4.5
6	MP2A	Mx	.031	4.5
7	MP2A	X	-44.202	.5
8	MP2A	Z	25.52	.5
9	MP2A	Mx	.019	.5
10	MP2A	X	-44.202	4.5
11	MP2A	Z	25.52	4.5
12	MP2A	Mx	.019	4.5
13	MP3A	X	-26.036	1.25
14	MP3A	Z	15.032	1.25
15	MP3A	Mx	.015	1.25
16	MP3A	X	-26.036	3.75
17	MP3A	Z	15.032	3.75
18	MP3A	Mx	.015	3.75
19	OVP	X	-112.392	1
20	OVP	Z	64.89	1
21	OVP	Mx	-.022	1
22	MP2A	X	-38.498	2
23	MP2A	Z	22.227	2
24	MP2A	Mx	-.022	2
25	MP1A	X	-34.96	2
26	MP1A	Z	20.184	2
27	MP1A	Mx	-.02	2
28	MP1A	X	-96.936	.5
29	MP1A	Z	55.966	.5
30	MP1A	Mx	.055	.5
31	MP1A	X	-96.936	4.5
32	MP1A	Z	55.966	4.5
33	MP1A	Mx	.055	4.5
34	MP4A	X	-96.936	.5
35	MP4A	Z	55.966	.5
36	MP4A	Mx	.055	.5
37	MP4A	X	-96.936	4.5
38	MP4A	Z	55.966	4.5
39	MP4A	Mx	.055	4.5
40	MP2A	X	-17.56	4.5
41	MP2A	Z	10.138	4.5
42	MP2A	Mx	-.019	4.5
43	MP2A	X	-17.56	5.5
44	MP2A	Z	10.138	5.5
45	MP2A	Mx	-.019	5.5
46	MP2A	X	-17.56	4.5
47	MP2A	Z	10.138	4.5
48	MP2A	Mx	-.021	4.5
49	MP2A	X	-17.56	5.5
50	MP2A	Z	10.138	5.5
51	MP2A	Mx	-.021	5.5

Member Point Loads (BLC 12 : Antenna Wo (270 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-56.708	.5
2	MP2A	Z	0	.5
3	MP2A	Mx	.014	.5
4	MP2A	X	-56.708	4.5
5	MP2A	Z	0	4.5
6	MP2A	Mx	.014	4.5
7	MP2A	X	-56.708	.5
8	MP2A	Z	0	.5
9	MP2A	Mx	.04	.5
10	MP2A	X	-56.708	4.5
11	MP2A	Z	0	4.5
12	MP2A	Mx	.04	4.5
13	MP3A	X	-34.763	1.25
14	MP3A	Z	0	1.25
15	MP3A	Mx	.016	1.25
16	MP3A	X	-34.763	3.75
17	MP3A	Z	0	3.75
18	MP3A	Mx	.016	3.75
19	OVP	X	-114.739	1
20	OVP	Z	0	1
21	OVP	Mx	-.044	1
22	MP2A	X	-46.319	2
23	MP2A	Z	0	2
24	MP2A	Mx	-.022	2
25	MP1A	X	-42.6	2
26	MP1A	Z	0	2
27	MP1A	Mx	-.02	2
28	MP1A	X	-106.833	.5
29	MP1A	Z	0	.5
30	MP1A	Mx	.05	.5
31	MP1A	X	-106.833	4.5
32	MP1A	Z	0	4.5
33	MP1A	Mx	.05	4.5
34	MP4A	X	-106.833	.5
35	MP4A	Z	0	.5
36	MP4A	Mx	.05	.5
37	MP4A	X	-106.833	4.5
38	MP4A	Z	0	4.5
39	MP4A	Mx	.05	4.5
40	MP2A	X	-20.271	4.5
41	MP2A	Z	0	4.5
42	MP2A	Mx	-.021	4.5
43	MP2A	X	-20.271	5.5
44	MP2A	Z	0	5.5
45	MP2A	Mx	-.021	5.5
46	MP2A	X	-20.271	4.5
47	MP2A	Z	0	4.5
48	MP2A	Mx	-.017	4.5
49	MP2A	X	-20.271	5.5
50	MP2A	Z	0	5.5
51	MP2A	Mx	-.017	5.5

Member Point Loads (BLC 13 : Antenna Wo (300 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-75.677	.5
2	MP2A	Z	-43.692	.5
3	MP2A	Mx	-.017	.5
4	MP2A	X	-75.677	4.5
5	MP2A	Z	-43.692	4.5
6	MP2A	Mx	-.017	4.5
7	MP2A	X	-75.677	.5
8	MP2A	Z	-43.692	.5
9	MP2A	Mx	.073	.5
10	MP2A	X	-75.677	4.5
11	MP2A	Z	-43.692	4.5
12	MP2A	Mx	.073	4.5
13	MP3A	X	-52.13	1.25
14	MP3A	Z	-30.097	1.25
15	MP3A	Mx	.019	1.25
16	MP3A	X	-52.13	3.75
17	MP3A	Z	-30.097	3.75
18	MP3A	Mx	.019	3.75
19	OVP	X	-88.748	1
20	OVP	Z	-51.239	1
21	OVP	Mx	-.05	1
22	MP2A	X	-48.854	2
23	MP2A	Z	-28.206	2
24	MP2A	Mx	-.018	2
25	MP1A	X	-47.347	2
26	MP1A	Z	-27.336	2
27	MP1A	Mx	-.018	2
28	MP1A	X	-68.621	.5
29	MP1A	Z	-39.618	.5
30	MP1A	Mx	.025	.5
31	MP1A	X	-68.621	4.5
32	MP1A	Z	-39.618	4.5
33	MP1A	Mx	.025	4.5
34	MP4A	X	-68.621	.5
35	MP4A	Z	-39.618	.5
36	MP4A	Mx	.025	.5
37	MP4A	X	-68.621	4.5
38	MP4A	Z	-39.618	4.5
39	MP4A	Mx	.025	4.5
40	MP2A	X	-17.531	4.5
41	MP2A	Z	-10.121	4.5
42	MP2A	Mx	-.018	4.5
43	MP2A	X	-17.531	5.5
44	MP2A	Z	-10.121	5.5
45	MP2A	Mx	-.018	5.5
46	MP2A	X	-17.531	4.5
47	MP2A	Z	-10.121	4.5
48	MP2A	Mx	-.008	4.5
49	MP2A	X	-17.531	5.5
50	MP2A	Z	-10.121	5.5
51	MP2A	Mx	-.008	5.5

Member Point Loads (BLC 14 : Antenna Wo (330 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-56.195	.5
2	MP2A	Z	-97.333	.5
3	MP2A	Mx	-.064	.5
4	MP2A	X	-56.195	4.5
5	MP2A	Z	-97.333	4.5
6	MP2A	Mx	-.064	4.5
7	MP2A	X	-56.195	.5
8	MP2A	Z	-97.333	.5
9	MP2A	Mx	.084	.5
10	MP2A	X	-56.195	4.5
11	MP2A	Z	-97.333	4.5
12	MP2A	Mx	.084	4.5
13	MP3A	X	-40.463	1.25
14	MP3A	Z	-70.084	1.25
15	MP3A	Mx	.007	1.25
16	MP3A	X	-40.463	3.75
17	MP3A	Z	-70.084	3.75
18	MP3A	Mx	.007	3.75
19	OVP	X	-52.628	1
20	OVP	Z	-91.155	1
21	OVP	Mx	-.049	1
22	MP2A	X	-32.32	2
23	MP2A	Z	-55.98	2
24	MP2A	Mx	-.006	2
25	MP1A	X	-32.257	2
26	MP1A	Z	-55.87	2
27	MP1A	Mx	-.006	2
28	MP1A	X	-28.37	.5
29	MP1A	Z	-49.138	.5
30	MP1A	Mx	.005	.5
31	MP1A	X	-28.37	4.5
32	MP1A	Z	-49.138	4.5
33	MP1A	Mx	.005	4.5
34	MP4A	X	-28.37	.5
35	MP4A	Z	-49.138	.5
36	MP4A	Mx	.005	.5
37	MP4A	X	-28.37	4.5
38	MP4A	Z	-49.138	4.5
39	MP4A	Mx	.005	4.5
40	MP2A	X	-10.11	4.5
41	MP2A	Z	-17.511	4.5
42	MP2A	Mx	-.01	4.5
43	MP2A	X	-10.11	5.5
44	MP2A	Z	-17.511	5.5
45	MP2A	Mx	-.01	5.5
46	MP2A	X	-10.11	4.5
47	MP2A	Z	-17.511	4.5
48	MP2A	Mx	.003	4.5
49	MP2A	X	-10.11	5.5
50	MP2A	Z	-17.511	5.5
51	MP2A	Mx	.003	5.5

Member Point Loads (BLC 15 : Antenna Wi (0 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.5
2	MP2A	Z	-28.84	.5
3	MP2A	Mx	-.023	.5
4	MP2A	X	0	4.5
5	MP2A	Z	-28.84	4.5
6	MP2A	Mx	-.023	4.5
7	MP2A	X	0	.5
8	MP2A	Z	-28.84	.5
9	MP2A	Mx	.013	.5
10	MP2A	X	0	4.5
11	MP2A	Z	-28.84	4.5
12	MP2A	Mx	.013	4.5
13	MP3A	X	0	1.25
14	MP3A	Z	-16.618	1.25
15	MP3A	Mx	-.003	1.25
16	MP3A	X	0	3.75
17	MP3A	Z	-16.618	3.75
18	MP3A	Mx	-.003	3.75
19	OVP	X	0	1
20	OVP	Z	-28.067	1
21	OVP	Mx	-.009	1
22	MP2A	X	0	2
23	MP2A	Z	-14.452	2
24	MP2A	Mx	.002	2
25	MP1A	X	0	2
26	MP1A	Z	-14.355	2
27	MP1A	Mx	.002	2
28	MP1A	X	0	.5
29	MP1A	Z	-11.727	.5
30	MP1A	Mx	-.002	.5
31	MP1A	X	0	4.5
32	MP1A	Z	-11.727	4.5
33	MP1A	Mx	-.002	4.5
34	MP4A	X	0	.5
35	MP4A	Z	-11.727	.5
36	MP4A	Mx	-.002	.5
37	MP4A	X	0	4.5
38	MP4A	Z	-11.727	4.5
39	MP4A	Mx	-.002	4.5
40	MP2A	X	0	4.5
41	MP2A	Z	-1.838	4.5
42	MP2A	Mx	5.3e-5	4.5
43	MP2A	X	0	5.5
44	MP2A	Z	-1.838	5.5
45	MP2A	Mx	5.3e-5	5.5
46	MP2A	X	0	4.5
47	MP2A	Z	-1.838	4.5
48	MP2A	Mx	.001	4.5
49	MP2A	X	0	5.5
50	MP2A	Z	-1.838	5.5
51	MP2A	Mx	.001	5.5

Member Point Loads (BLC 16 : Antenna Wi (30 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	12.23	.5
2	MP2A	Z	-21.184	.5
3	MP2A	Mx	-.02	.5
4	MP2A	X	12.23	4.5
5	MP2A	Z	-21.184	4.5
6	MP2A	Mx	-.02	4.5
7	MP2A	X	12.23	.5
8	MP2A	Z	-21.184	.5
9	MP2A	Mx	.001	.5
10	MP2A	X	12.23	4.5
11	MP2A	Z	-21.184	4.5
12	MP2A	Mx	.001	4.5
13	MP3A	X	5.901	1.25
14	MP3A	Z	-10.221	1.25
15	MP3A	Mx	-.005	1.25
16	MP3A	X	5.901	3.75
17	MP3A	Z	-10.221	3.75
18	MP3A	Mx	-.005	3.75
19	OVP	X	15.326	1
20	OVP	Z	-26.545	1
21	OVP	Mx	-.003	1
22	MP2A	X	6.151	2
23	MP2A	Z	-10.653	2
24	MP2A	Mx	.005	2
25	MP1A	X	5.909	2
26	MP1A	Z	-10.235	2
27	MP1A	Mx	.005	2
28	MP1A	X	8.141	.5
29	MP1A	Z	-14.1	.5
30	MP1A	Mx	-.006	.5
31	MP1A	X	8.141	4.5
32	MP1A	Z	-14.1	4.5
33	MP1A	Mx	-.006	4.5
34	MP4A	X	8.141	.5
35	MP4A	Z	-14.1	.5
36	MP4A	Mx	-.006	.5
37	MP4A	X	8.141	4.5
38	MP4A	Z	-14.1	4.5
39	MP4A	Mx	-.006	4.5
40	MP2A	X	1.523	4.5
41	MP2A	Z	-2.639	4.5
42	MP2A	Mx	.002	4.5
43	MP2A	X	1.523	5.5
44	MP2A	Z	-2.639	5.5
45	MP2A	Mx	.002	5.5
46	MP2A	X	1.523	4.5
47	MP2A	Z	-2.639	4.5
48	MP2A	Mx	.003	4.5
49	MP2A	X	1.523	5.5
50	MP2A	Z	-2.639	5.5
51	MP2A	Mx	.003	5.5

Member Point Loads (BLC 17 : Antenna Wi (60 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	18.092	.5
2	MP2A	Z	-10.445	.5
3	MP2A	Mx	-.013	.5
4	MP2A	X	18.092	4.5
5	MP2A	Z	-10.445	4.5
6	MP2A	Mx	-.013	4.5
7	MP2A	X	18.092	.5
8	MP2A	Z	-10.445	.5
9	MP2A	Mx	-.008	.5
10	MP2A	X	18.092	4.5
11	MP2A	Z	-10.445	4.5
12	MP2A	Mx	-.008	4.5
13	MP3A	X	6.821	1.25
14	MP3A	Z	-3.938	1.25
15	MP3A	Mx	-.004	1.25
16	MP3A	X	6.821	3.75
17	MP3A	Z	-3.938	3.75
18	MP3A	Mx	-.004	3.75
19	OVP	X	26.037	1
20	OVP	Z	-15.033	1
21	OVP	Mx	.005	1
22	MP2A	X	9.135	2
23	MP2A	Z	-5.274	2
24	MP2A	Mx	.005	2
25	MP1A	X	8.443	2
26	MP1A	Z	-4.875	2
27	MP1A	Mx	.005	2
28	MP1A	X	17.316	.5
29	MP1A	Z	-9.997	.5
30	MP1A	Mx	-.01	.5
31	MP1A	X	17.316	4.5
32	MP1A	Z	-9.997	4.5
33	MP1A	Mx	-.01	4.5
34	MP4A	X	17.316	.5
35	MP4A	Z	-9.997	.5
36	MP4A	Mx	-.01	.5
37	MP4A	X	17.316	4.5
38	MP4A	Z	-9.997	4.5
39	MP4A	Mx	-.01	4.5
40	MP2A	X	3.492	4.5
41	MP2A	Z	-2.016	4.5
42	MP2A	Mx	.004	4.5
43	MP2A	X	3.492	5.5
44	MP2A	Z	-2.016	5.5
45	MP2A	Mx	.004	5.5
46	MP2A	X	3.492	4.5
47	MP2A	Z	-2.016	4.5
48	MP2A	Mx	.004	4.5
49	MP2A	X	3.492	5.5
50	MP2A	Z	-2.016	5.5
51	MP2A	Mx	.004	5.5

Member Point Loads (BLC 18 : Antenna Wi (90 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	21.7	.5
2	MP2A	Z	0	.5
3	MP2A	Mx	-.005	.5
4	MP2A	X	21.7	4.5
5	MP2A	Z	0	4.5
6	MP2A	Mx	-.005	4.5
7	MP2A	X	21.7	.5
8	MP2A	Z	0	.5
9	MP2A	Mx	-.015	.5
10	MP2A	X	21.7	4.5
11	MP2A	Z	0	4.5
12	MP2A	Mx	-.015	4.5
13	MP3A	X	8.766	1.25
14	MP3A	Z	0	1.25
15	MP3A	Mx	-.004	1.25
16	MP3A	X	8.766	3.75
17	MP3A	Z	0	3.75
18	MP3A	Mx	-.004	3.75
19	OVP	X	26.896	1
20	OVP	Z	0	1
21	OVP	Mx	.01	1
22	MP2A	X	10.946	2
23	MP2A	Z	0	2
24	MP2A	Mx	.005	2
25	MP1A	X	10.218	2
26	MP1A	Z	0	2
27	MP1A	Mx	.005	2
28	MP1A	X	19.153	.5
29	MP1A	Z	0	.5
30	MP1A	Mx	-.009	.5
31	MP1A	X	19.153	4.5
32	MP1A	Z	0	4.5
33	MP1A	Mx	-.009	4.5
34	MP4A	X	19.153	.5
35	MP4A	Z	0	.5
36	MP4A	Mx	-.009	.5
37	MP4A	X	19.153	4.5
38	MP4A	Z	0	4.5
39	MP4A	Mx	-.009	4.5
40	MP2A	X	3.809	4.5
41	MP2A	Z	0	4.5
42	MP2A	Mx	.004	4.5
43	MP2A	X	3.809	5.5
44	MP2A	Z	0	5.5
45	MP2A	Mx	.004	5.5
46	MP2A	X	3.809	4.5
47	MP2A	Z	0	4.5
48	MP2A	Mx	.003	4.5
49	MP2A	X	3.809	5.5
50	MP2A	Z	0	5.5
51	MP2A	Mx	.003	5.5

Member Point Loads (BLC 19 : Antenna Wi (120 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	22.585	.5
2	MP2A	Z	13.04	.5
3	MP2A	Mx	.005	.5
4	MP2A	X	22.585	4.5
5	MP2A	Z	13.04	4.5
6	MP2A	Mx	.005	4.5
7	MP2A	X	22.585	.5
8	MP2A	Z	13.04	.5
9	MP2A	Mx	-.022	.5
10	MP2A	X	22.585	4.5
11	MP2A	Z	13.04	4.5
12	MP2A	Mx	-.022	4.5
13	MP3A	X	11.762	1.25
14	MP3A	Z	6.791	1.25
15	MP3A	Mx	-.004	1.25
16	MP3A	X	11.762	3.75
17	MP3A	Z	6.791	3.75
18	MP3A	Mx	-.004	3.75
19	OVP	X	21.055	1
20	OVP	Z	12.156	1
21	OVP	Mx	.012	1
22	MP2A	X	11.342	2
23	MP2A	Z	6.548	2
24	MP2A	Mx	.004	2
25	MP1A	X	11.047	2
26	MP1A	Z	6.378	2
27	MP1A	Mx	.004	2
28	MP1A	X	12.642	.5
29	MP1A	Z	7.299	.5
30	MP1A	Mx	-.005	.5
31	MP1A	X	12.642	4.5
32	MP1A	Z	7.299	4.5
33	MP1A	Mx	-.005	4.5
34	MP4A	X	12.642	.5
35	MP4A	Z	7.299	.5
36	MP4A	Mx	-.005	.5
37	MP4A	X	12.642	4.5
38	MP4A	Z	7.299	4.5
39	MP4A	Mx	-.005	4.5
40	MP2A	X	2.252	4.5
41	MP2A	Z	1.3	4.5
42	MP2A	Mx	.002	4.5
43	MP2A	X	2.252	5.5
44	MP2A	Z	1.3	5.5
45	MP2A	Mx	.002	5.5
46	MP2A	X	2.252	4.5
47	MP2A	Z	1.3	4.5
48	MP2A	Mx	.001	4.5
49	MP2A	X	2.252	5.5
50	MP2A	Z	1.3	5.5
51	MP2A	Mx	.001	5.5

Member Point Loads (BLC 20 : Antenna Wi (150 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	14.824	.5
2	MP2A	Z	25.677	.5
3	MP2A	Mx	.017	.5
4	MP2A	X	14.824	4.5
5	MP2A	Z	25.677	4.5
6	MP2A	Mx	.017	4.5
7	MP2A	X	14.824	.5
8	MP2A	Z	25.677	.5
9	MP2A	Mx	-.022	.5
10	MP2A	X	14.824	4.5
11	MP2A	Z	25.677	4.5
12	MP2A	Mx	-.022	4.5
13	MP3A	X	8.754	1.25
14	MP3A	Z	15.163	1.25
15	MP3A	Mx	-.002	1.25
16	MP3A	X	8.754	3.75
17	MP3A	Z	15.163	3.75
18	MP3A	Mx	-.002	3.75
19	OVP	X	12.449	1
20	OVP	Z	21.562	1
21	OVP	Mx	.012	1
22	MP2A	X	7.425	2
23	MP2A	Z	12.86	2
24	MP2A	Mx	.001	2
25	MP1A	X	7.412	2
26	MP1A	Z	12.838	2
27	MP1A	Mx	.001	2
28	MP1A	X	5.443	.5
29	MP1A	Z	9.427	.5
30	MP1A	Mx	-.000945	.5
31	MP1A	X	5.443	4.5
32	MP1A	Z	9.427	4.5
33	MP1A	Mx	-.000945	4.5
34	MP4A	X	5.443	.5
35	MP4A	Z	9.427	.5
36	MP4A	Mx	-.000945	.5
37	MP4A	X	5.443	4.5
38	MP4A	Z	9.427	4.5
39	MP4A	Mx	-.000945	4.5
40	MP2A	X	.807	4.5
41	MP2A	Z	1.398	4.5
42	MP2A	Mx	.00081	4.5
43	MP2A	X	.807	5.5
44	MP2A	Z	1.398	5.5
45	MP2A	Mx	.00081	5.5
46	MP2A	X	.807	4.5
47	MP2A	Z	1.398	4.5
48	MP2A	Mx	-.00025	4.5
49	MP2A	X	.807	5.5
50	MP2A	Z	1.398	5.5
51	MP2A	Mx	-.00025	5.5

Member Point Loads (BLC 21 : Antenna Wi (180 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.5
2	MP2A	Z	28.84	.5
3	MP2A	Mx	.023	.5
4	MP2A	X	0	4.5
5	MP2A	Z	28.84	4.5
6	MP2A	Mx	.023	4.5
7	MP2A	X	0	.5
8	MP2A	Z	28.84	.5
9	MP2A	Mx	-.013	.5
10	MP2A	X	0	4.5
11	MP2A	Z	28.84	4.5
12	MP2A	Mx	-.013	4.5
13	MP3A	X	0	1.25
14	MP3A	Z	16.618	1.25
15	MP3A	Mx	.003	1.25
16	MP3A	X	0	3.75
17	MP3A	Z	16.618	3.75
18	MP3A	Mx	.003	3.75
19	OVP	X	0	1
20	OVP	Z	28.067	1
21	OVP	Mx	.009	1
22	MP2A	X	0	2
23	MP2A	Z	14.452	2
24	MP2A	Mx	-.002	2
25	MP1A	X	0	2
26	MP1A	Z	14.355	2
27	MP1A	Mx	-.002	2
28	MP1A	X	0	.5
29	MP1A	Z	11.727	.5
30	MP1A	Mx	.002	.5
31	MP1A	X	0	4.5
32	MP1A	Z	11.727	4.5
33	MP1A	Mx	.002	4.5
34	MP4A	X	0	.5
35	MP4A	Z	11.727	.5
36	MP4A	Mx	.002	.5
37	MP4A	X	0	4.5
38	MP4A	Z	11.727	4.5
39	MP4A	Mx	.002	4.5
40	MP2A	X	0	4.5
41	MP2A	Z	1.838	4.5
42	MP2A	Mx	-5.3e-5	4.5
43	MP2A	X	0	5.5
44	MP2A	Z	1.838	5.5
45	MP2A	Mx	-5.3e-5	5.5
46	MP2A	X	0	4.5
47	MP2A	Z	1.838	4.5
48	MP2A	Mx	-.001	4.5
49	MP2A	X	0	5.5
50	MP2A	Z	1.838	5.5
51	MP2A	Mx	-.001	5.5

Member Point Loads (BLC 22 : Antenna Wi (210 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-12.23	.5
2	MP2A	Z	21.184	.5
3	MP2A	Mx	.02	.5
4	MP2A	X	-12.23	4.5
5	MP2A	Z	21.184	4.5
6	MP2A	Mx	.02	4.5
7	MP2A	X	-12.23	.5
8	MP2A	Z	21.184	.5
9	MP2A	Mx	-.001	.5
10	MP2A	X	-12.23	4.5
11	MP2A	Z	21.184	4.5
12	MP2A	Mx	-.001	4.5
13	MP3A	X	-5.901	1.25
14	MP3A	Z	10.221	1.25
15	MP3A	Mx	.005	1.25
16	MP3A	X	-5.901	3.75
17	MP3A	Z	10.221	3.75
18	MP3A	Mx	.005	3.75
19	OVP	X	-15.326	1
20	OVP	Z	26.545	1
21	OVP	Mx	.003	1
22	MP2A	X	-6.151	2
23	MP2A	Z	10.653	2
24	MP2A	Mx	-.005	2
25	MP1A	X	-5.909	2
26	MP1A	Z	10.235	2
27	MP1A	Mx	-.005	2
28	MP1A	X	-8.141	.5
29	MP1A	Z	14.1	.5
30	MP1A	Mx	.006	.5
31	MP1A	X	-8.141	4.5
32	MP1A	Z	14.1	4.5
33	MP1A	Mx	.006	4.5
34	MP4A	X	-8.141	.5
35	MP4A	Z	14.1	.5
36	MP4A	Mx	.006	.5
37	MP4A	X	-8.141	4.5
38	MP4A	Z	14.1	4.5
39	MP4A	Mx	.006	4.5
40	MP2A	X	-1.523	4.5
41	MP2A	Z	2.639	4.5
42	MP2A	Mx	-.002	4.5
43	MP2A	X	-1.523	5.5
44	MP2A	Z	2.639	5.5
45	MP2A	Mx	-.002	5.5
46	MP2A	X	-1.523	4.5
47	MP2A	Z	2.639	4.5
48	MP2A	Mx	-.003	4.5
49	MP2A	X	-1.523	5.5
50	MP2A	Z	2.639	5.5
51	MP2A	Mx	-.003	5.5

Member Point Loads (BLC 23 : Antenna Wi (240 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-18.092	.5
2	MP2A	Z	10.445	.5
3	MP2A	Mx	.013	.5
4	MP2A	X	-18.092	4.5
5	MP2A	Z	10.445	4.5
6	MP2A	Mx	.013	4.5
7	MP2A	X	-18.092	.5
8	MP2A	Z	10.445	.5
9	MP2A	Mx	.008	.5
10	MP2A	X	-18.092	4.5
11	MP2A	Z	10.445	4.5
12	MP2A	Mx	.008	4.5
13	MP3A	X	-6.821	1.25
14	MP3A	Z	3.938	1.25
15	MP3A	Mx	.004	1.25
16	MP3A	X	-6.821	3.75
17	MP3A	Z	3.938	3.75
18	MP3A	Mx	.004	3.75
19	OVP	X	-26.037	1
20	OVP	Z	15.033	1
21	OVP	Mx	-.005	1
22	MP2A	X	-9.135	2
23	MP2A	Z	5.274	2
24	MP2A	Mx	-.005	2
25	MP1A	X	-8.443	2
26	MP1A	Z	4.875	2
27	MP1A	Mx	-.005	2
28	MP1A	X	-17.316	.5
29	MP1A	Z	9.997	.5
30	MP1A	Mx	.01	.5
31	MP1A	X	-17.316	4.5
32	MP1A	Z	9.997	4.5
33	MP1A	Mx	.01	4.5
34	MP4A	X	-17.316	.5
35	MP4A	Z	9.997	.5
36	MP4A	Mx	.01	.5
37	MP4A	X	-17.316	4.5
38	MP4A	Z	9.997	4.5
39	MP4A	Mx	.01	4.5
40	MP2A	X	-3.492	4.5
41	MP2A	Z	2.016	4.5
42	MP2A	Mx	-.004	4.5
43	MP2A	X	-3.492	5.5
44	MP2A	Z	2.016	5.5
45	MP2A	Mx	-.004	5.5
46	MP2A	X	-3.492	4.5
47	MP2A	Z	2.016	4.5
48	MP2A	Mx	-.004	4.5
49	MP2A	X	-3.492	5.5
50	MP2A	Z	2.016	5.5
51	MP2A	Mx	-.004	5.5

Member Point Loads (BLC 24 : Antenna Wi (270 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-21.7	.5
2	MP2A	Z	0	.5
3	MP2A	Mx	.005	.5
4	MP2A	X	-21.7	4.5
5	MP2A	Z	0	4.5
6	MP2A	Mx	.005	4.5
7	MP2A	X	-21.7	.5
8	MP2A	Z	0	.5
9	MP2A	Mx	.015	.5
10	MP2A	X	-21.7	4.5
11	MP2A	Z	0	4.5
12	MP2A	Mx	.015	4.5
13	MP3A	X	-8.766	1.25
14	MP3A	Z	0	1.25
15	MP3A	Mx	.004	1.25
16	MP3A	X	-8.766	3.75
17	MP3A	Z	0	3.75
18	MP3A	Mx	.004	3.75
19	OVP	X	-26.896	1
20	OVP	Z	0	1
21	OVP	Mx	-.01	1
22	MP2A	X	-10.946	2
23	MP2A	Z	0	2
24	MP2A	Mx	-.005	2
25	MP1A	X	-10.218	2
26	MP1A	Z	0	2
27	MP1A	Mx	-.005	2
28	MP1A	X	-19.153	.5
29	MP1A	Z	0	.5
30	MP1A	Mx	.009	.5
31	MP1A	X	-19.153	4.5
32	MP1A	Z	0	4.5
33	MP1A	Mx	.009	4.5
34	MP4A	X	-19.153	.5
35	MP4A	Z	0	.5
36	MP4A	Mx	.009	.5
37	MP4A	X	-19.153	4.5
38	MP4A	Z	0	4.5
39	MP4A	Mx	.009	4.5
40	MP2A	X	-3.809	4.5
41	MP2A	Z	0	4.5
42	MP2A	Mx	-.004	4.5
43	MP2A	X	-3.809	5.5
44	MP2A	Z	0	5.5
45	MP2A	Mx	-.004	5.5
46	MP2A	X	-3.809	4.5
47	MP2A	Z	0	4.5
48	MP2A	Mx	-.003	4.5
49	MP2A	X	-3.809	5.5
50	MP2A	Z	0	5.5
51	MP2A	Mx	-.003	5.5

Member Point Loads (BLC 25 : Antenna Wi (300 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-22.585	.5
2	MP2A	Z	-13.04	.5
3	MP2A	Mx	-.005	.5
4	MP2A	X	-22.585	4.5
5	MP2A	Z	-13.04	4.5
6	MP2A	Mx	-.005	4.5
7	MP2A	X	-22.585	.5
8	MP2A	Z	-13.04	.5
9	MP2A	Mx	.022	.5
10	MP2A	X	-22.585	4.5
11	MP2A	Z	-13.04	4.5
12	MP2A	Mx	.022	4.5
13	MP3A	X	-11.762	1.25
14	MP3A	Z	-6.791	1.25
15	MP3A	Mx	.004	1.25
16	MP3A	X	-11.762	3.75
17	MP3A	Z	-6.791	3.75
18	MP3A	Mx	.004	3.75
19	OVP	X	-21.055	1
20	OVP	Z	-12.156	1
21	OVP	Mx	-.012	1
22	MP2A	X	-11.342	2
23	MP2A	Z	-6.548	2
24	MP2A	Mx	-.004	2
25	MP1A	X	-11.047	2
26	MP1A	Z	-6.378	2
27	MP1A	Mx	-.004	2
28	MP1A	X	-12.642	.5
29	MP1A	Z	-7.299	.5
30	MP1A	Mx	.005	.5
31	MP1A	X	-12.642	4.5
32	MP1A	Z	-7.299	4.5
33	MP1A	Mx	.005	4.5
34	MP4A	X	-12.642	.5
35	MP4A	Z	-7.299	.5
36	MP4A	Mx	.005	.5
37	MP4A	X	-12.642	4.5
38	MP4A	Z	-7.299	4.5
39	MP4A	Mx	.005	4.5
40	MP2A	X	-2.252	4.5
41	MP2A	Z	-1.3	4.5
42	MP2A	Mx	-.002	4.5
43	MP2A	X	-2.252	5.5
44	MP2A	Z	-1.3	5.5
45	MP2A	Mx	-.002	5.5
46	MP2A	X	-2.252	4.5
47	MP2A	Z	-1.3	4.5
48	MP2A	Mx	-.001	4.5
49	MP2A	X	-2.252	5.5
50	MP2A	Z	-1.3	5.5
51	MP2A	Mx	-.001	5.5

Member Point Loads (BLC 26 : Antenna Wi (330 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-14.824	.5
2	MP2A	Z	-25.677	.5
3	MP2A	Mx	-.017	.5
4	MP2A	X	-14.824	4.5
5	MP2A	Z	-25.677	4.5
6	MP2A	Mx	-.017	4.5
7	MP2A	X	-14.824	.5
8	MP2A	Z	-25.677	.5
9	MP2A	Mx	.022	.5
10	MP2A	X	-14.824	4.5
11	MP2A	Z	-25.677	4.5
12	MP2A	Mx	.022	4.5
13	MP3A	X	-8.754	1.25
14	MP3A	Z	-15.163	1.25
15	MP3A	Mx	.002	1.25
16	MP3A	X	-8.754	3.75
17	MP3A	Z	-15.163	3.75
18	MP3A	Mx	.002	3.75
19	OVP	X	-12.449	1
20	OVP	Z	-21.562	1
21	OVP	Mx	-.012	1
22	MP2A	X	-7.425	2
23	MP2A	Z	-12.86	2
24	MP2A	Mx	-.001	2
25	MP1A	X	-7.412	2
26	MP1A	Z	-12.838	2
27	MP1A	Mx	-.001	2
28	MP1A	X	-5.443	.5
29	MP1A	Z	-9.427	.5
30	MP1A	Mx	.000945	.5
31	MP1A	X	-5.443	4.5
32	MP1A	Z	-9.427	4.5
33	MP1A	Mx	.000945	4.5
34	MP4A	X	-5.443	.5
35	MP4A	Z	-9.427	.5
36	MP4A	Mx	.000945	.5
37	MP4A	X	-5.443	4.5
38	MP4A	Z	-9.427	4.5
39	MP4A	Mx	.000945	4.5
40	MP2A	X	-.807	4.5
41	MP2A	Z	-1.398	4.5
42	MP2A	Mx	-.00081	4.5
43	MP2A	X	-.807	5.5
44	MP2A	Z	-1.398	5.5
45	MP2A	Mx	-.00081	5.5
46	MP2A	X	-.807	4.5
47	MP2A	Z	-1.398	4.5
48	MP2A	Mx	.00025	4.5
49	MP2A	X	-.807	5.5
50	MP2A	Z	-1.398	5.5
51	MP2A	Mx	.00025	5.5

Member Point Loads (BLC 27 : Antenna Wm (0 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.5
2	MP2A	Z	-6.147	.5
3	MP2A	Mx	-.005	.5
4	MP2A	X	0	4.5
5	MP2A	Z	-6.147	4.5
6	MP2A	Mx	-.005	4.5
7	MP2A	X	0	.5
8	MP2A	Z	-6.147	.5
9	MP2A	Mx	.003	.5
10	MP2A	X	0	4.5
11	MP2A	Z	-6.147	4.5
12	MP2A	Mx	.003	4.5
13	MP3A	X	0	1.25
14	MP3A	Z	-4.391	1.25
15	MP3A	Mx	-.000751	1.25
16	MP3A	X	0	3.75
17	MP3A	Z	-4.391	3.75
18	MP3A	Mx	-.000751	3.75
19	OVP	X	0	1
20	OVP	Z	-6.929	1
21	OVP	Mx	-.002	1
22	MP2A	X	0	2
23	MP2A	Z	-3.616	2
24	MP2A	Mx	.000618	2
25	MP1A	X	0	2
26	MP1A	Z	-3.587	2
27	MP1A	Mx	.000613	2
28	MP1A	X	0	.5
29	MP1A	Z	-3.562	.5
30	MP1A	Mx	-.000609	.5
31	MP1A	X	0	4.5
32	MP1A	Z	-3.562	4.5
33	MP1A	Mx	-.000609	4.5
34	MP4A	X	0	.5
35	MP4A	Z	-3.562	.5
36	MP4A	Mx	-.000609	.5
37	MP4A	X	0	4.5
38	MP4A	Z	-3.562	4.5
39	MP4A	Mx	-.000609	4.5
40	MP2A	X	0	4.5
41	MP2A	Z	-1.165	4.5
42	MP2A	Mx	3.4e-5	4.5
43	MP2A	X	0	5.5
44	MP2A	Z	-1.165	5.5
45	MP2A	Mx	3.4e-5	5.5
46	MP2A	X	0	4.5
47	MP2A	Z	-1.165	4.5
48	MP2A	Mx	.000763	4.5
49	MP2A	X	0	5.5
50	MP2A	Z	-1.165	5.5
51	MP2A	Mx	.000763	5.5

Member Point Loads (BLC 28 : Antenna Wm (30 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	2.19	.5
2	MP2A	Z	-3.793	.5
3	MP2A	Mx	-.004	.5
4	MP2A	X	2.19	4.5
5	MP2A	Z	-3.793	4.5
6	MP2A	Mx	-.004	4.5
7	MP2A	X	2.19	.5
8	MP2A	Z	-3.793	.5
9	MP2A	Mx	.000199	.5
10	MP2A	X	2.19	4.5
11	MP2A	Z	-3.793	4.5
12	MP2A	Mx	.000199	4.5
13	MP3A	X	1.463	1.25
14	MP3A	Z	-2.534	1.25
15	MP3A	Mx	-.001	1.25
16	MP3A	X	1.463	3.75
17	MP3A	Z	-2.534	3.75
18	MP3A	Mx	-.001	3.75
19	OVP	X	3.818	1
20	OVP	Z	-6.612	1
21	OVP	Mx	-.000663	1
22	MP2A	X	1.517	2
23	MP2A	Z	-2.628	2
24	MP2A	Mx	.001	2
25	MP1A	X	1.446	2
26	MP1A	Z	-2.505	2
27	MP1A	Mx	.001	2
28	MP1A	X	2.576	.5
29	MP1A	Z	-4.461	.5
30	MP1A	Mx	-.002	.5
31	MP1A	X	2.576	4.5
32	MP1A	Z	-4.461	4.5
33	MP1A	Mx	-.002	4.5
34	MP4A	X	2.576	.5
35	MP4A	Z	-4.461	.5
36	MP4A	Mx	-.002	.5
37	MP4A	X	2.576	4.5
38	MP4A	Z	-4.461	4.5
39	MP4A	Mx	-.002	4.5
40	MP2A	X	.583	4.5
41	MP2A	Z	-1.01	4.5
42	MP2A	Mx	.000643	4.5
43	MP2A	X	.583	5.5
44	MP2A	Z	-1.01	5.5
45	MP2A	Mx	.000643	5.5
46	MP2A	X	.583	4.5
47	MP2A	Z	-1.01	4.5
48	MP2A	Mx	.001	4.5
49	MP2A	X	.583	5.5
50	MP2A	Z	-1.01	5.5
51	MP2A	Mx	.001	5.5

Member Point Loads (BLC 29 : Antenna Wm (60 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	2.546	.5
2	MP2A	Z	-1.47	.5
3	MP2A	Mx	-.002	.5
4	MP2A	X	2.546	4.5
5	MP2A	Z	-1.47	4.5
6	MP2A	Mx	-.002	4.5
7	MP2A	X	2.546	.5
8	MP2A	Z	-1.47	.5
9	MP2A	Mx	-.001	.5
10	MP2A	X	2.546	4.5
11	MP2A	Z	-1.47	4.5
12	MP2A	Mx	-.001	4.5
13	MP3A	X	1.5	1.25
14	MP3A	Z	-.866	1.25
15	MP3A	Mx	-.000853	1.25
16	MP3A	X	1.5	3.75
17	MP3A	Z	-.866	3.75
18	MP3A	Mx	-.000853	3.75
19	OVP	X	6.474	1
20	OVP	Z	-3.738	1
21	OVP	Mx	.001	1
22	MP2A	X	2.217	2
23	MP2A	Z	-1.28	2
24	MP2A	Mx	.001	2
25	MP1A	X	2.014	2
26	MP1A	Z	-1.163	2
27	MP1A	Mx	.001	2
28	MP1A	X	5.584	.5
29	MP1A	Z	-3.224	.5
30	MP1A	Mx	-.003	.5
31	MP1A	X	5.584	4.5
32	MP1A	Z	-3.224	4.5
33	MP1A	Mx	-.003	4.5
34	MP4A	X	5.584	.5
35	MP4A	Z	-3.224	.5
36	MP4A	Mx	-.003	.5
37	MP4A	X	5.584	4.5
38	MP4A	Z	-3.224	4.5
39	MP4A	Mx	-.003	4.5
40	MP2A	X	1.011	4.5
41	MP2A	Z	-.584	4.5
42	MP2A	Mx	.001	4.5
43	MP2A	X	1.011	5.5
44	MP2A	Z	-.584	5.5
45	MP2A	Mx	.001	5.5
46	MP2A	X	1.011	4.5
47	MP2A	Z	-.584	4.5
48	MP2A	Mx	.001	4.5
49	MP2A	X	1.011	5.5
50	MP2A	Z	-.584	5.5
51	MP2A	Mx	.001	5.5

Member Point Loads (BLC 30 : Antenna Wm (90 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	3.266	.5
2	MP2A	Z	0	.5
3	MP2A	Mx	-.00079	.5
4	MP2A	X	3.266	4.5
5	MP2A	Z	0	4.5
6	MP2A	Mx	-.00079	4.5
7	MP2A	X	3.266	.5
8	MP2A	Z	0	.5
9	MP2A	Mx	-.002	.5
10	MP2A	X	3.266	4.5
11	MP2A	Z	0	4.5
12	MP2A	Mx	-.002	4.5
13	MP3A	X	2.002	1.25
14	MP3A	Z	0	1.25
15	MP3A	Mx	-.000941	1.25
16	MP3A	X	2.002	3.75
17	MP3A	Z	0	3.75
18	MP3A	Mx	-.000941	3.75
19	OVP	X	6.609	1
20	OVP	Z	0	1
21	OVP	Mx	.003	1
22	MP2A	X	2.668	2
23	MP2A	Z	0	2
24	MP2A	Mx	.001	2
25	MP1A	X	2.454	2
26	MP1A	Z	0	2
27	MP1A	Mx	.001	2
28	MP1A	X	6.154	.5
29	MP1A	Z	0	.5
30	MP1A	Mx	-.003	.5
31	MP1A	X	6.154	4.5
32	MP1A	Z	0	4.5
33	MP1A	Mx	-.003	4.5
34	MP4A	X	6.154	.5
35	MP4A	Z	0	.5
36	MP4A	Mx	-.003	.5
37	MP4A	X	6.154	4.5
38	MP4A	Z	0	4.5
39	MP4A	Mx	-.003	4.5
40	MP2A	X	1.168	4.5
41	MP2A	Z	0	4.5
42	MP2A	Mx	.001	4.5
43	MP2A	X	1.168	5.5
44	MP2A	Z	0	5.5
45	MP2A	Mx	.001	5.5
46	MP2A	X	1.168	4.5
47	MP2A	Z	0	4.5
48	MP2A	Mx	.000964	4.5
49	MP2A	X	1.168	5.5
50	MP2A	Z	0	5.5
51	MP2A	Mx	.000964	5.5

Member Point Loads (BLC 31 : Antenna Wm (120 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	4.359	.5
2	MP2A	Z	2.517	.5
3	MP2A	Mx	.000953	.5
4	MP2A	X	4.359	4.5
5	MP2A	Z	2.517	4.5
6	MP2A	Mx	.000953	4.5
7	MP2A	X	4.359	.5
8	MP2A	Z	2.517	.5
9	MP2A	Mx	-.004	.5
10	MP2A	X	4.359	4.5
11	MP2A	Z	2.517	4.5
12	MP2A	Mx	-.004	4.5
13	MP3A	X	3.003	1.25
14	MP3A	Z	1.734	1.25
15	MP3A	Mx	-.001	1.25
16	MP3A	X	3.003	3.75
17	MP3A	Z	1.734	3.75
18	MP3A	Mx	-.001	3.75
19	OVP	X	5.112	1
20	OVP	Z	2.951	1
21	OVP	Mx	.003	1
22	MP2A	X	2.814	2
23	MP2A	Z	1.625	2
24	MP2A	Mx	.001	2
25	MP1A	X	2.727	2
26	MP1A	Z	1.575	2
27	MP1A	Mx	.001	2
28	MP1A	X	3.953	.5
29	MP1A	Z	2.282	.5
30	MP1A	Mx	-.001	.5
31	MP1A	X	3.953	4.5
32	MP1A	Z	2.282	4.5
33	MP1A	Mx	-.001	4.5
34	MP4A	X	3.953	.5
35	MP4A	Z	2.282	.5
36	MP4A	Mx	-.001	.5
37	MP4A	X	3.953	4.5
38	MP4A	Z	2.282	4.5
39	MP4A	Mx	-.001	4.5
40	MP2A	X	1.01	4.5
41	MP2A	Z	.583	4.5
42	MP2A	Mx	.001	4.5
43	MP2A	X	1.01	5.5
44	MP2A	Z	.583	5.5
45	MP2A	Mx	.001	5.5
46	MP2A	X	1.01	4.5
47	MP2A	Z	.583	4.5
48	MP2A	Mx	.000452	4.5
49	MP2A	X	1.01	5.5
50	MP2A	Z	.583	5.5
51	MP2A	Mx	.000452	5.5

Member Point Loads (BLC 32 : Antenna Wm (150 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	3.237	.5
2	MP2A	Z	5.606	.5
3	MP2A	Mx	.004	.5
4	MP2A	X	3.237	4.5
5	MP2A	Z	5.606	4.5
6	MP2A	Mx	.004	4.5
7	MP2A	X	3.237	.5
8	MP2A	Z	5.606	.5
9	MP2A	Mx	-.005	.5
10	MP2A	X	3.237	4.5
11	MP2A	Z	5.606	4.5
12	MP2A	Mx	-.005	4.5
13	MP3A	X	2.331	1.25
14	MP3A	Z	4.037	1.25
15	MP3A	Mx	-.000405	1.25
16	MP3A	X	2.331	3.75
17	MP3A	Z	4.037	3.75
18	MP3A	Mx	-.000405	3.75
19	OVP	X	3.031	1
20	OVP	Z	5.251	1
21	OVP	Mx	.003	1
22	MP2A	X	1.862	2
23	MP2A	Z	3.224	2
24	MP2A	Mx	.000324	2
25	MP1A	X	1.858	2
26	MP1A	Z	3.218	2
27	MP1A	Mx	.000323	2
28	MP1A	X	1.634	.5
29	MP1A	Z	2.83	.5
30	MP1A	Mx	-.000284	.5
31	MP1A	X	1.634	4.5
32	MP1A	Z	2.83	4.5
33	MP1A	Mx	-.000284	4.5
34	MP4A	X	1.634	.5
35	MP4A	Z	2.83	.5
36	MP4A	Mx	-.000284	.5
37	MP4A	X	1.634	4.5
38	MP4A	Z	2.83	4.5
39	MP4A	Mx	-.000284	4.5
40	MP2A	X	.582	4.5
41	MP2A	Z	1.009	4.5
42	MP2A	Mx	.000584	4.5
43	MP2A	X	.582	5.5
44	MP2A	Z	1.009	5.5
45	MP2A	Mx	.000584	5.5
46	MP2A	X	.582	4.5
47	MP2A	Z	1.009	4.5
48	MP2A	Mx	-.000181	4.5
49	MP2A	X	.582	5.5
50	MP2A	Z	1.009	5.5
51	MP2A	Mx	-.000181	5.5

Member Point Loads (BLC 33 : Antenna Wm (180 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.5
2	MP2A	Z	6.147	.5
3	MP2A	Mx	.005	.5
4	MP2A	X	0	4.5
5	MP2A	Z	6.147	4.5
6	MP2A	Mx	.005	4.5
7	MP2A	X	0	.5
8	MP2A	Z	6.147	.5
9	MP2A	Mx	-.003	.5
10	MP2A	X	0	4.5
11	MP2A	Z	6.147	4.5
12	MP2A	Mx	-.003	4.5
13	MP3A	X	0	1.25
14	MP3A	Z	4.391	1.25
15	MP3A	Mx	.000751	1.25
16	MP3A	X	0	3.75
17	MP3A	Z	4.391	3.75
18	MP3A	Mx	.000751	3.75
19	OVP	X	0	1
20	OVP	Z	6.929	1
21	OVP	Mx	.002	1
22	MP2A	X	0	2
23	MP2A	Z	3.616	2
24	MP2A	Mx	-.000618	2
25	MP1A	X	0	2
26	MP1A	Z	3.587	2
27	MP1A	Mx	-.000613	2
28	MP1A	X	0	.5
29	MP1A	Z	3.562	.5
30	MP1A	Mx	.000609	.5
31	MP1A	X	0	4.5
32	MP1A	Z	3.562	4.5
33	MP1A	Mx	.000609	4.5
34	MP4A	X	0	.5
35	MP4A	Z	3.562	.5
36	MP4A	Mx	.000609	.5
37	MP4A	X	0	4.5
38	MP4A	Z	3.562	4.5
39	MP4A	Mx	.000609	4.5
40	MP2A	X	0	4.5
41	MP2A	Z	1.165	4.5
42	MP2A	Mx	-3.4e-5	4.5
43	MP2A	X	0	5.5
44	MP2A	Z	1.165	5.5
45	MP2A	Mx	-3.4e-5	5.5
46	MP2A	X	0	4.5
47	MP2A	Z	1.165	4.5
48	MP2A	Mx	-.000763	4.5
49	MP2A	X	0	5.5
50	MP2A	Z	1.165	5.5
51	MP2A	Mx	-.000763	5.5

Member Point Loads (BLC 34 : Antenna Wm (210 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-2.19	.5
2	MP2A	Z	3.793	.5
3	MP2A	Mx	.004	.5
4	MP2A	X	-2.19	4.5
5	MP2A	Z	3.793	4.5
6	MP2A	Mx	.004	4.5
7	MP2A	X	-2.19	.5
8	MP2A	Z	3.793	.5
9	MP2A	Mx	-.000199	.5
10	MP2A	X	-2.19	4.5
11	MP2A	Z	3.793	4.5
12	MP2A	Mx	-.000199	4.5
13	MP3A	X	-1.463	1.25
14	MP3A	Z	2.534	1.25
15	MP3A	Mx	.001	1.25
16	MP3A	X	-1.463	3.75
17	MP3A	Z	2.534	3.75
18	MP3A	Mx	.001	3.75
19	OVP	X	-3.818	1
20	OVP	Z	6.612	1
21	OVP	Mx	.000663	1
22	MP2A	X	-1.517	2
23	MP2A	Z	2.628	2
24	MP2A	Mx	-.001	2
25	MP1A	X	-1.446	2
26	MP1A	Z	2.505	2
27	MP1A	Mx	-.001	2
28	MP1A	X	-2.576	.5
29	MP1A	Z	4.461	.5
30	MP1A	Mx	.002	.5
31	MP1A	X	-2.576	4.5
32	MP1A	Z	4.461	4.5
33	MP1A	Mx	.002	4.5
34	MP4A	X	-2.576	.5
35	MP4A	Z	4.461	.5
36	MP4A	Mx	.002	.5
37	MP4A	X	-2.576	4.5
38	MP4A	Z	4.461	4.5
39	MP4A	Mx	.002	4.5
40	MP2A	X	-.583	4.5
41	MP2A	Z	1.01	4.5
42	MP2A	Mx	-.000643	4.5
43	MP2A	X	-.583	5.5
44	MP2A	Z	1.01	5.5
45	MP2A	Mx	-.000643	5.5
46	MP2A	X	-.583	4.5
47	MP2A	Z	1.01	4.5
48	MP2A	Mx	-.001	4.5
49	MP2A	X	-.583	5.5
50	MP2A	Z	1.01	5.5
51	MP2A	Mx	-.001	5.5

Member Point Loads (BLC 35 : Antenna Wm (240 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-2.546	.5
2	MP2A	Z	1.47	.5
3	MP2A	Mx	.002	.5
4	MP2A	X	-2.546	4.5
5	MP2A	Z	1.47	4.5
6	MP2A	Mx	.002	4.5
7	MP2A	X	-2.546	.5
8	MP2A	Z	1.47	.5
9	MP2A	Mx	.001	.5
10	MP2A	X	-2.546	4.5
11	MP2A	Z	1.47	4.5
12	MP2A	Mx	.001	4.5
13	MP3A	X	-1.5	1.25
14	MP3A	Z	.866	1.25
15	MP3A	Mx	.000853	1.25
16	MP3A	X	-1.5	3.75
17	MP3A	Z	.866	3.75
18	MP3A	Mx	.000853	3.75
19	OVP	X	-6.474	1
20	OVP	Z	3.738	1
21	OVP	Mx	-.001	1
22	MP2A	X	-2.217	2
23	MP2A	Z	1.28	2
24	MP2A	Mx	-.001	2
25	MP1A	X	-2.014	2
26	MP1A	Z	1.163	2
27	MP1A	Mx	-.001	2
28	MP1A	X	-5.584	.5
29	MP1A	Z	3.224	.5
30	MP1A	Mx	.003	.5
31	MP1A	X	-5.584	4.5
32	MP1A	Z	3.224	4.5
33	MP1A	Mx	.003	4.5
34	MP4A	X	-5.584	.5
35	MP4A	Z	3.224	.5
36	MP4A	Mx	.003	.5
37	MP4A	X	-5.584	4.5
38	MP4A	Z	3.224	4.5
39	MP4A	Mx	.003	4.5
40	MP2A	X	-1.011	4.5
41	MP2A	Z	.584	4.5
42	MP2A	Mx	-.001	4.5
43	MP2A	X	-1.011	5.5
44	MP2A	Z	.584	5.5
45	MP2A	Mx	-.001	5.5
46	MP2A	X	-1.011	4.5
47	MP2A	Z	.584	4.5
48	MP2A	Mx	-.001	4.5
49	MP2A	X	-1.011	5.5
50	MP2A	Z	.584	5.5
51	MP2A	Mx	-.001	5.5

Member Point Loads (BLC 36 : Antenna Wm (270 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-3.266	.5
2	MP2A	Z	0	.5
3	MP2A	Mx	.00079	.5
4	MP2A	X	-3.266	4.5
5	MP2A	Z	0	4.5
6	MP2A	Mx	.00079	4.5
7	MP2A	X	-3.266	.5
8	MP2A	Z	0	.5
9	MP2A	Mx	.002	.5
10	MP2A	X	-3.266	4.5
11	MP2A	Z	0	4.5
12	MP2A	Mx	.002	4.5
13	MP3A	X	-2.002	1.25
14	MP3A	Z	0	1.25
15	MP3A	Mx	.000941	1.25
16	MP3A	X	-2.002	3.75
17	MP3A	Z	0	3.75
18	MP3A	Mx	.000941	3.75
19	OVP	X	-6.609	1
20	OVP	Z	0	1
21	OVP	Mx	-.003	1
22	MP2A	X	-2.668	2
23	MP2A	Z	0	2
24	MP2A	Mx	-.001	2
25	MP1A	X	-2.454	2
26	MP1A	Z	0	2
27	MP1A	Mx	-.001	2
28	MP1A	X	-6.154	.5
29	MP1A	Z	0	.5
30	MP1A	Mx	.003	.5
31	MP1A	X	-6.154	4.5
32	MP1A	Z	0	4.5
33	MP1A	Mx	.003	4.5
34	MP4A	X	-6.154	.5
35	MP4A	Z	0	.5
36	MP4A	Mx	.003	.5
37	MP4A	X	-6.154	4.5
38	MP4A	Z	0	4.5
39	MP4A	Mx	.003	4.5
40	MP2A	X	-1.168	4.5
41	MP2A	Z	0	4.5
42	MP2A	Mx	-.001	4.5
43	MP2A	X	-1.168	5.5
44	MP2A	Z	0	5.5
45	MP2A	Mx	-.001	5.5
46	MP2A	X	-1.168	4.5
47	MP2A	Z	0	4.5
48	MP2A	Mx	-.000964	4.5
49	MP2A	X	-1.168	5.5
50	MP2A	Z	0	5.5
51	MP2A	Mx	-.000964	5.5

Member Point Loads (BLC 37 : Antenna Wm (300 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-4.359	.5
2	MP2A	Z	-2.517	.5
3	MP2A	Mx	-.000953	.5
4	MP2A	X	-4.359	4.5
5	MP2A	Z	-2.517	4.5
6	MP2A	Mx	-.000953	4.5
7	MP2A	X	-4.359	.5
8	MP2A	Z	-2.517	.5
9	MP2A	Mx	.004	.5
10	MP2A	X	-4.359	4.5
11	MP2A	Z	-2.517	4.5
12	MP2A	Mx	.004	4.5
13	MP3A	X	-3.003	1.25
14	MP3A	Z	-1.734	1.25
15	MP3A	Mx	.001	1.25
16	MP3A	X	-3.003	3.75
17	MP3A	Z	-1.734	3.75
18	MP3A	Mx	.001	3.75
19	OVP	X	-5.112	1
20	OVP	Z	-2.951	1
21	OVP	Mx	-.003	1
22	MP2A	X	-2.814	2
23	MP2A	Z	-1.625	2
24	MP2A	Mx	-.001	2
25	MP1A	X	-2.727	2
26	MP1A	Z	-1.575	2
27	MP1A	Mx	-.001	2
28	MP1A	X	-3.953	.5
29	MP1A	Z	-2.282	.5
30	MP1A	Mx	.001	.5
31	MP1A	X	-3.953	4.5
32	MP1A	Z	-2.282	4.5
33	MP1A	Mx	.001	4.5
34	MP4A	X	-3.953	.5
35	MP4A	Z	-2.282	.5
36	MP4A	Mx	.001	.5
37	MP4A	X	-3.953	4.5
38	MP4A	Z	-2.282	4.5
39	MP4A	Mx	.001	4.5
40	MP2A	X	-1.01	4.5
41	MP2A	Z	-.583	4.5
42	MP2A	Mx	-.001	4.5
43	MP2A	X	-1.01	5.5
44	MP2A	Z	-.583	5.5
45	MP2A	Mx	-.001	5.5
46	MP2A	X	-1.01	4.5
47	MP2A	Z	-.583	4.5
48	MP2A	Mx	-.000452	4.5
49	MP2A	X	-1.01	5.5
50	MP2A	Z	-.583	5.5
51	MP2A	Mx	-.000452	5.5

Member Point Loads (BLC 38 : Antenna Wm (330 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-3.237	.5
2	MP2A	Z	-5.606	.5
3	MP2A	Mx	-.004	.5
4	MP2A	X	-3.237	4.5
5	MP2A	Z	-5.606	4.5
6	MP2A	Mx	-.004	4.5
7	MP2A	X	-3.237	.5
8	MP2A	Z	-5.606	.5
9	MP2A	Mx	.005	.5
10	MP2A	X	-3.237	4.5
11	MP2A	Z	-5.606	4.5
12	MP2A	Mx	.005	4.5
13	MP3A	X	-2.331	1.25
14	MP3A	Z	-4.037	1.25
15	MP3A	Mx	.000405	1.25
16	MP3A	X	-2.331	3.75
17	MP3A	Z	-4.037	3.75
18	MP3A	Mx	.000405	3.75
19	OVP	X	-3.031	1
20	OVP	Z	-5.251	1
21	OVP	Mx	-.003	1
22	MP2A	X	-1.862	2
23	MP2A	Z	-3.224	2
24	MP2A	Mx	-.000324	2
25	MP1A	X	-1.858	2
26	MP1A	Z	-3.218	2
27	MP1A	Mx	-.000323	2
28	MP1A	X	-1.634	.5
29	MP1A	Z	-2.83	.5
30	MP1A	Mx	.000284	.5
31	MP1A	X	-1.634	4.5
32	MP1A	Z	-2.83	4.5
33	MP1A	Mx	.000284	4.5
34	MP4A	X	-1.634	.5
35	MP4A	Z	-2.83	.5
36	MP4A	Mx	.000284	.5
37	MP4A	X	-1.634	4.5
38	MP4A	Z	-2.83	4.5
39	MP4A	Mx	.000284	4.5
40	MP2A	X	-.582	4.5
41	MP2A	Z	-1.009	4.5
42	MP2A	Mx	-.000584	4.5
43	MP2A	X	-.582	5.5
44	MP2A	Z	-1.009	5.5
45	MP2A	Mx	-.000584	5.5
46	MP2A	X	-.582	4.5
47	MP2A	Z	-1.009	4.5
48	MP2A	Mx	.000181	4.5
49	MP2A	X	-.582	5.5
50	MP2A	Z	-1.009	5.5
51	MP2A	Mx	.000181	5.5

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	Y	-500	%25

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	Y	-500	%81

Member Point Loads (BLC 79 : Lv1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	Y	-250	%50

Member Point Loads (BLC 80 : Lv2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	Y	-250	0

Member Point Loads (BLC 81 : Antenna Ev)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	Y	-.932	.5
2	MP2A	My	-.000225	.5
3	MP2A	Mz	.000743	.5
4	MP2A	Y	-.932	4.5
5	MP2A	My	-.000225	4.5
6	MP2A	Mz	.000743	4.5
7	MP2A	Y	-.932	.5
8	MP2A	My	-.000651	.5
9	MP2A	Mz	-.000425	.5
10	MP2A	Y	-.932	4.5
11	MP2A	My	-.000651	4.5
12	MP2A	Mz	-.000425	4.5
13	MP3A	Y	-1.858	1.25
14	MP3A	My	-.000873	1.25
15	MP3A	Mz	.000318	1.25
16	MP3A	Y	-1.858	3.75
17	MP3A	My	-.000873	3.75
18	MP3A	Mz	.000318	3.75
19	OVP	Y	-1.365	1
20	OVP	My	.000523	1
21	OVP	Mz	.000439	1
22	MP2A	Y	-3.187	2
23	MP2A	My	.001	2
24	MP2A	Mz	-.000545	2
25	MP1A	Y	-2.999	2
26	MP1A	My	.001	2
27	MP1A	Mz	-.000513	2
28	MP1A	Y	-.256	.5
29	MP1A	My	-.00012	.5
30	MP1A	Mz	4.4e-5	.5
31	MP1A	Y	-.256	4.5
32	MP1A	My	-.00012	4.5
33	MP1A	Mz	4.4e-5	4.5
34	MP4A	Y	-.256	.5

Member Point Loads (BLC 81 : Antenna Ev) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
35	MP4A	My	-.00012	.5
36	MP4A	Mz	4.4e-5	.5
37	MP4A	Y	-.256	4.5
38	MP4A	My	-.00012	4.5
39	MP4A	Mz	4.4e-5	4.5
40	MP2A	Y	-.375	4.5
41	MP2A	My	.000396	4.5
42	MP2A	Mz	-1.1e-5	4.5
43	MP2A	Y	-.375	5.5
44	MP2A	My	.000396	5.5
45	MP2A	Mz	-1.1e-5	5.5
46	MP2A	Y	-.375	4.5
47	MP2A	My	.00031	4.5
48	MP2A	Mz	-.000246	4.5
49	MP2A	Y	-.375	5.5
50	MP2A	My	.00031	5.5
51	MP2A	Mz	-.000246	5.5

Member Point Loads (BLC 82 : Antenna Eh (0 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	Z	-2.331	.5
2	MP2A	Mx	-.002	.5
3	MP2A	Z	-2.331	4.5
4	MP2A	Mx	-.002	4.5
5	MP2A	Z	-2.331	.5
6	MP2A	Mx	.001	.5
7	MP2A	Z	-2.331	4.5
8	MP2A	Mx	.001	4.5
9	MP3A	Z	-4.645	1.25
10	MP3A	Mx	-.000794	1.25
11	MP3A	Z	-4.645	3.75
12	MP3A	Mx	-.000794	3.75
13	OVP	Z	-3.413	1
14	OVP	Mx	-.001	1
15	MP2A	Z	-7.968	2
16	MP2A	Mx	.001	2
17	MP1A	Z	-7.499	2
18	MP1A	Mx	.001	2
19	MP1A	Z	-.64	.5
20	MP1A	Mx	-.000109	.5
21	MP1A	Z	-.64	4.5
22	MP1A	Mx	-.000109	4.5
23	MP4A	Z	-.64	.5
24	MP4A	Mx	-.000109	.5
25	MP4A	Z	-.64	4.5
26	MP4A	Mx	-.000109	4.5
27	MP2A	Z	-.939	4.5
28	MP2A	Mx	2.7e-5	4.5
29	MP2A	Z	-.939	5.5
30	MP2A	Mx	2.7e-5	5.5
31	MP2A	Z	-.939	4.5

Member Point Loads (BLC 82 : Antenna Eh (0 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
32	MP2A	Mx	.000615	4.5
33	MP2A	Z	-.939	5.5
34	MP2A	Mx	.000615	5.5

Member Point Loads (BLC 83 : Antenna Eh (90 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	2.331	.5
2	MP2A	Mx	-.000564	.5
3	MP2A	X	2.331	4.5
4	MP2A	Mx	-.000564	4.5
5	MP2A	X	2.331	.5
6	MP2A	Mx	-.002	.5
7	MP2A	X	2.331	4.5
8	MP2A	Mx	-.002	4.5
9	MP3A	X	4.645	1.25
10	MP3A	Mx	-.002	1.25
11	MP3A	X	4.645	3.75
12	MP3A	Mx	-.002	3.75
13	OVP	X	3.413	1
14	OVP	Mx	.001	1
15	MP2A	X	7.968	2
16	MP2A	Mx	.004	2
17	MP1A	X	7.499	2
18	MP1A	Mx	.004	2
19	MP1A	X	.64	.5
20	MP1A	Mx	-.000301	.5
21	MP1A	X	.64	4.5
22	MP1A	Mx	-.000301	4.5
23	MP4A	X	.64	.5
24	MP4A	Mx	-.000301	.5
25	MP4A	X	.64	4.5
26	MP4A	Mx	-.000301	4.5
27	MP2A	X	.939	4.5
28	MP2A	Mx	.000989	4.5
29	MP2A	X	.939	5.5
30	MP2A	Mx	.000989	5.5
31	MP2A	X	.939	4.5
32	MP2A	Mx	.000775	4.5
33	MP2A	X	.939	5.5
34	MP2A	Mx	.000775	5.5

Member Distributed Loads (BLC 40 : Structure Di)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	Y	-9.208	-9.208	0	%100
2	M4	Y	-6.275	-6.275	0	%100
3	M5	Y	-6.275	-6.275	0	%100
4	MP1A	Y	-4.744	-4.744	0	%100
5	MP4A	Y	-4.744	-4.744	0	%100
6	MP3A	Y	-4.744	-4.744	0	%100
7	MP2A	Y	-4.744	-4.744	0	%100

Member Distributed Loads (BLC 40 : Structure Di) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
8	OVP	Y	-4.744	-4.744	0	%100

Member Distributed Loads (BLC 41 : Structure Wo (0 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	0	0	0	%100
2	M3	Z	-1.032	-1.032	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	-9.252	-9.252	0	%100
5	M5	X	0	0	0	%100
6	M5	Z	-14.21	-14.21	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	-10.004	-10.004	0	%100
9	MP4A	X	0	0	0	%100
10	MP4A	Z	-10.004	-10.004	0	%100
11	MP3A	X	0	0	0	%100
12	MP3A	Z	-10.004	-10.004	0	%100
13	MP2A	X	0	0	0	%100
14	MP2A	Z	-10.004	-10.004	0	%100
15	OVP	X	0	0	0	%100
16	OVP	Z	-8.18	-8.18	0	%100

Member Distributed Loads (BLC 42 : Structure Wo (30 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	3.851	3.851	0	%100
2	M3	Z	-6.669	-6.669	0	%100
3	M4	X	4.626	4.626	0	%100
4	M4	Z	-8.013	-8.013	0	%100
5	M5	X	5.329	5.329	0	%100
6	M5	Z	-9.23	-9.23	0	%100
7	MP1A	X	5.002	5.002	0	%100
8	MP1A	Z	-8.664	-8.664	0	%100
9	MP4A	X	5.002	5.002	0	%100
10	MP4A	Z	-8.664	-8.664	0	%100
11	MP3A	X	5.002	5.002	0	%100
12	MP3A	Z	-8.664	-8.664	0	%100
13	MP2A	X	5.002	5.002	0	%100
14	MP2A	Z	-8.664	-8.664	0	%100
15	OVP	X	4.09	4.09	0	%100
16	OVP	Z	-7.085	-7.085	0	%100

Member Distributed Loads (BLC 43 : Structure Wo (60 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	12.445	12.445	0	%100
2	M3	Z	-7.185	-7.185	0	%100
3	M4	X	8.013	8.013	0	%100
4	M4	Z	-4.626	-4.626	0	%100
5	M5	X	3.077	3.077	0	%100
6	M5	Z	-1.776	-1.776	0	%100
7	MP1A	X	8.664	8.664	0	%100
8	MP1A	Z	-5.002	-5.002	0	%100

Member Distributed Loads (BLC 43 : Structure Wo (60 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
9	MP4A	X	8.664	8.664	0	%100
10	MP4A	Z	-5.002	-5.002	0	%100
11	MP3A	X	8.664	8.664	0	%100
12	MP3A	Z	-5.002	-5.002	0	%100
13	MP2A	X	8.664	8.664	0	%100
14	MP2A	Z	-5.002	-5.002	0	%100
15	OVP	X	7.085	7.085	0	%100
16	OVP	Z	-4.09	-4.09	0	%100

Member Distributed Loads (BLC 44 : Structure Wo (90 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	14.371	14.371	0	%100
2	M3	Z	0	0	0	%100
3	M4	X	9.252	9.252	0	%100
4	M4	Z	0	0	0	%100
5	M5	X	0	0	0	%100
6	M5	Z	0	0	0	%100
7	MP1A	X	10.004	10.004	0	%100
8	MP1A	Z	0	0	0	%100
9	MP4A	X	10.004	10.004	0	%100
10	MP4A	Z	0	0	0	%100
11	MP3A	X	10.004	10.004	0	%100
12	MP3A	Z	0	0	0	%100
13	MP2A	X	10.004	10.004	0	%100
14	MP2A	Z	0	0	0	%100
15	OVP	X	8.18	8.18	0	%100
16	OVP	Z	0	0	0	%100

Member Distributed Loads (BLC 45 : Structure Wo (120 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	6.669	6.669	0	%100
2	M3	Z	3.851	3.851	0	%100
3	M4	X	8.013	8.013	0	%100
4	M4	Z	4.626	4.626	0	%100
5	M5	X	3.077	3.077	0	%100
6	M5	Z	1.776	1.776	0	%100
7	MP1A	X	8.664	8.664	0	%100
8	MP1A	Z	5.002	5.002	0	%100
9	MP4A	X	8.664	8.664	0	%100
10	MP4A	Z	5.002	5.002	0	%100
11	MP3A	X	8.664	8.664	0	%100
12	MP3A	Z	5.002	5.002	0	%100
13	MP2A	X	8.664	8.664	0	%100
14	MP2A	Z	5.002	5.002	0	%100
15	OVP	X	7.085	7.085	0	%100
16	OVP	Z	4.09	4.09	0	%100

Member Distributed Loads (BLC 46 : Structure Wo (150 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	.516	.516	0	%100

Member Distributed Loads (BLC 46 : Structure Wo (150 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
2	M3	Z	.894	.894	0	%100
3	M4	X	4.626	4.626	0	%100
4	M4	Z	8.013	8.013	0	%100
5	M5	X	5.329	5.329	0	%100
6	M5	Z	9.23	9.23	0	%100
7	MP1A	X	5.002	5.002	0	%100
8	MP1A	Z	8.664	8.664	0	%100
9	MP4A	X	5.002	5.002	0	%100
10	MP4A	Z	8.664	8.664	0	%100
11	MP3A	X	5.002	5.002	0	%100
12	MP3A	Z	8.664	8.664	0	%100
13	MP2A	X	5.002	5.002	0	%100
14	MP2A	Z	8.664	8.664	0	%100
15	OVP	X	4.09	4.09	0	%100
16	OVP	Z	7.085	7.085	0	%100

Member Distributed Loads (BLC 47 : Structure Wo (180 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	0	0	0	%100
2	M3	Z	1.032	1.032	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	9.252	9.252	0	%100
5	M5	X	0	0	0	%100
6	M5	Z	14.21	14.21	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	10.004	10.004	0	%100
9	MP4A	X	0	0	0	%100
10	MP4A	Z	10.004	10.004	0	%100
11	MP3A	X	0	0	0	%100
12	MP3A	Z	10.004	10.004	0	%100
13	MP2A	X	0	0	0	%100
14	MP2A	Z	10.004	10.004	0	%100
15	OVP	X	0	0	0	%100
16	OVP	Z	8.18	8.18	0	%100

Member Distributed Loads (BLC 48 : Structure Wo (210 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	-3.851	-3.851	0	%100
2	M3	Z	6.669	6.669	0	%100
3	M4	X	-4.626	-4.626	0	%100
4	M4	Z	8.013	8.013	0	%100
5	M5	X	-5.329	-5.329	0	%100
6	M5	Z	9.23	9.23	0	%100
7	MP1A	X	-5.002	-5.002	0	%100
8	MP1A	Z	8.664	8.664	0	%100
9	MP4A	X	-5.002	-5.002	0	%100
10	MP4A	Z	8.664	8.664	0	%100
11	MP3A	X	-5.002	-5.002	0	%100
12	MP3A	Z	8.664	8.664	0	%100
13	MP2A	X	-5.002	-5.002	0	%100
14	MP2A	Z	8.664	8.664	0	%100

Member Distributed Loads (BLC 48 : Structure Wo (210 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
15	OVP	X	-4.09	-4.09	0	%100
16	OVP	Z	7.085	7.085	0	%100

Member Distributed Loads (BLC 49 : Structure Wo (240 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	-12.445	-12.445	0	%100
2	M3	Z	7.185	7.185	0	%100
3	M4	X	-8.013	-8.013	0	%100
4	M4	Z	4.626	4.626	0	%100
5	M5	X	-3.077	-3.077	0	%100
6	M5	Z	1.776	1.776	0	%100
7	MP1A	X	-8.664	-8.664	0	%100
8	MP1A	Z	5.002	5.002	0	%100
9	MP4A	X	-8.664	-8.664	0	%100
10	MP4A	Z	5.002	5.002	0	%100
11	MP3A	X	-8.664	-8.664	0	%100
12	MP3A	Z	5.002	5.002	0	%100
13	MP2A	X	-8.664	-8.664	0	%100
14	MP2A	Z	5.002	5.002	0	%100
15	OVP	X	-7.085	-7.085	0	%100
16	OVP	Z	4.09	4.09	0	%100

Member Distributed Loads (BLC 50 : Structure Wo (270 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	-14.371	-14.371	0	%100
2	M3	Z	0	0	0	%100
3	M4	X	-9.252	-9.252	0	%100
4	M4	Z	0	0	0	%100
5	M5	X	0	0	0	%100
6	M5	Z	0	0	0	%100
7	MP1A	X	-10.004	-10.004	0	%100
8	MP1A	Z	0	0	0	%100
9	MP4A	X	-10.004	-10.004	0	%100
10	MP4A	Z	0	0	0	%100
11	MP3A	X	-10.004	-10.004	0	%100
12	MP3A	Z	0	0	0	%100
13	MP2A	X	-10.004	-10.004	0	%100
14	MP2A	Z	0	0	0	%100
15	OVP	X	-8.18	-8.18	0	%100
16	OVP	Z	0	0	0	%100

Member Distributed Loads (BLC 51 : Structure Wo (300 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	-6.669	-6.669	0	%100
2	M3	Z	-3.851	-3.851	0	%100
3	M4	X	-8.013	-8.013	0	%100
4	M4	Z	-4.626	-4.626	0	%100
5	M5	X	-3.077	-3.077	0	%100
6	M5	Z	-1.776	-1.776	0	%100
7	MP1A	X	-8.664	-8.664	0	%100

Member Distributed Loads (BLC 51 : Structure Wo (300 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
8	MP1A	Z	-5.002	-5.002	0	%100
9	MP4A	X	-8.664	-8.664	0	%100
10	MP4A	Z	-5.002	-5.002	0	%100
11	MP3A	X	-8.664	-8.664	0	%100
12	MP3A	Z	-5.002	-5.002	0	%100
13	MP2A	X	-8.664	-8.664	0	%100
14	MP2A	Z	-5.002	-5.002	0	%100
15	OVP	X	-7.085	-7.085	0	%100
16	OVP	Z	-4.09	-4.09	0	%100

Member Distributed Loads (BLC 52 : Structure Wo (330 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	-.516	-.516	0	%100
2	M3	Z	-.894	-.894	0	%100
3	M4	X	-4.626	-4.626	0	%100
4	M4	Z	-8.013	-8.013	0	%100
5	M5	X	-5.329	-5.329	0	%100
6	M5	Z	-9.23	-9.23	0	%100
7	MP1A	X	-5.002	-5.002	0	%100
8	MP1A	Z	-8.664	-8.664	0	%100
9	MP4A	X	-5.002	-5.002	0	%100
10	MP4A	Z	-8.664	-8.664	0	%100
11	MP3A	X	-5.002	-5.002	0	%100
12	MP3A	Z	-8.664	-8.664	0	%100
13	MP2A	X	-5.002	-5.002	0	%100
14	MP2A	Z	-8.664	-8.664	0	%100
15	OVP	X	-4.09	-4.09	0	%100
16	OVP	Z	-7.085	-7.085	0	%100

Member Distributed Loads (BLC 53 : Structure Wi (0 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	0	0	0	%100
2	M3	Z	-.261	-.261	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	-2.547	-2.547	0	%100
5	M5	X	0	0	0	%100
6	M5	Z	-3.859	-3.859	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	-3.101	-3.101	0	%100
9	MP4A	X	0	0	0	%100
10	MP4A	Z	-3.101	-3.101	0	%100
11	MP3A	X	0	0	0	%100
12	MP3A	Z	-3.101	-3.101	0	%100
13	MP2A	X	0	0	0	%100
14	MP2A	Z	-3.101	-3.101	0	%100
15	OVP	X	0	0	0	%100
16	OVP	Z	-2.564	-2.564	0	%100

Member Distributed Loads (BLC 54 : Structure Wi (30 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]

Member Distributed Loads (BLC 54 : Structure Wi (30 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	.974	.974	0	%100
2	M3	Z	-1.686	-1.686	0	%100
3	M4	X	1.273	1.273	0	%100
4	M4	Z	-2.206	-2.206	0	%100
5	M5	X	1.447	1.447	0	%100
6	M5	Z	-2.507	-2.507	0	%100
7	MP1A	X	1.551	1.551	0	%100
8	MP1A	Z	-2.686	-2.686	0	%100
9	MP4A	X	1.551	1.551	0	%100
10	MP4A	Z	-2.686	-2.686	0	%100
11	MP3A	X	1.551	1.551	0	%100
12	MP3A	Z	-2.686	-2.686	0	%100
13	MP2A	X	1.551	1.551	0	%100
14	MP2A	Z	-2.686	-2.686	0	%100
15	OVP	X	1.282	1.282	0	%100
16	OVP	Z	-2.221	-2.221	0	%100

Member Distributed Loads (BLC 55 : Structure Wi (60 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	3.147	3.147	0	%100
2	M3	Z	-1.817	-1.817	0	%100
3	M4	X	2.206	2.206	0	%100
4	M4	Z	-1.273	-1.273	0	%100
5	M5	X	.836	.836	0	%100
6	M5	Z	-.482	-.482	0	%100
7	MP1A	X	2.686	2.686	0	%100
8	MP1A	Z	-1.551	-1.551	0	%100
9	MP4A	X	2.686	2.686	0	%100
10	MP4A	Z	-1.551	-1.551	0	%100
11	MP3A	X	2.686	2.686	0	%100
12	MP3A	Z	-1.551	-1.551	0	%100
13	MP2A	X	2.686	2.686	0	%100
14	MP2A	Z	-1.551	-1.551	0	%100
15	OVP	X	2.221	2.221	0	%100
16	OVP	Z	-1.282	-1.282	0	%100

Member Distributed Loads (BLC 56 : Structure Wi (90 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	3.633	3.633	0	%100
2	M3	Z	0	0	0	%100
3	M4	X	2.547	2.547	0	%100
4	M4	Z	0	0	0	%100
5	M5	X	0	0	0	%100
6	M5	Z	0	0	0	%100
7	MP1A	X	3.101	3.101	0	%100
8	MP1A	Z	0	0	0	%100
9	MP4A	X	3.101	3.101	0	%100
10	MP4A	Z	0	0	0	%100
11	MP3A	X	3.101	3.101	0	%100
12	MP3A	Z	0	0	0	%100
13	MP2A	X	3.101	3.101	0	%100

Member Distributed Loads (BLC 56 : Structure Wi (90 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
14	MP2A	Z	0	0	0	%100
15	OVP	X	2.564	2.564	0	%100
16	OVP	Z	0	0	0	%100

Member Distributed Loads (BLC 57 : Structure Wi (120 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	1.686	1.686	0	%100
2	M3	Z	.974	.974	0	%100
3	M4	X	2.206	2.206	0	%100
4	M4	Z	1.273	1.273	0	%100
5	M5	X	.836	.836	0	%100
6	M5	Z	.482	.482	0	%100
7	MP1A	X	2.686	2.686	0	%100
8	MP1A	Z	1.551	1.551	0	%100
9	MP4A	X	2.686	2.686	0	%100
10	MP4A	Z	1.551	1.551	0	%100
11	MP3A	X	2.686	2.686	0	%100
12	MP3A	Z	1.551	1.551	0	%100
13	MP2A	X	2.686	2.686	0	%100
14	MP2A	Z	1.551	1.551	0	%100
15	OVP	X	2.221	2.221	0	%100
16	OVP	Z	1.282	1.282	0	%100

Member Distributed Loads (BLC 58 : Structure Wi (150 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	.13	.13	0	%100
2	M3	Z	.226	.226	0	%100
3	M4	X	1.273	1.273	0	%100
4	M4	Z	2.206	2.206	0	%100
5	M5	X	1.447	1.447	0	%100
6	M5	Z	2.507	2.507	0	%100
7	MP1A	X	1.551	1.551	0	%100
8	MP1A	Z	2.686	2.686	0	%100
9	MP4A	X	1.551	1.551	0	%100
10	MP4A	Z	2.686	2.686	0	%100
11	MP3A	X	1.551	1.551	0	%100
12	MP3A	Z	2.686	2.686	0	%100
13	MP2A	X	1.551	1.551	0	%100
14	MP2A	Z	2.686	2.686	0	%100
15	OVP	X	1.282	1.282	0	%100
16	OVP	Z	2.221	2.221	0	%100

Member Distributed Loads (BLC 59 : Structure Wi (180 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	0	0	0	%100
2	M3	Z	.261	.261	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	2.547	2.547	0	%100
5	M5	X	0	0	0	%100
6	M5	Z	3.859	3.859	0	%100

Member Distributed Loads (BLC 59 : Structure Wi (180 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
7	MP1A	X	0	0	0	%100
8	MP1A	Z	3.101	3.101	0	%100
9	MP4A	X	0	0	0	%100
10	MP4A	Z	3.101	3.101	0	%100
11	MP3A	X	0	0	0	%100
12	MP3A	Z	3.101	3.101	0	%100
13	MP2A	X	0	0	0	%100
14	MP2A	Z	3.101	3.101	0	%100
15	OVP	X	0	0	0	%100
16	OVP	Z	2.564	2.564	0	%100

Member Distributed Loads (BLC 60 : Structure Wi (210 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	-.974	-.974	0	%100
2	M3	Z	1.686	1.686	0	%100
3	M4	X	-1.273	-1.273	0	%100
4	M4	Z	2.206	2.206	0	%100
5	M5	X	-1.447	-1.447	0	%100
6	M5	Z	2.507	2.507	0	%100
7	MP1A	X	-1.551	-1.551	0	%100
8	MP1A	Z	2.686	2.686	0	%100
9	MP4A	X	-1.551	-1.551	0	%100
10	MP4A	Z	2.686	2.686	0	%100
11	MP3A	X	-1.551	-1.551	0	%100
12	MP3A	Z	2.686	2.686	0	%100
13	MP2A	X	-1.551	-1.551	0	%100
14	MP2A	Z	2.686	2.686	0	%100
15	OVP	X	-1.282	-1.282	0	%100
16	OVP	Z	2.221	2.221	0	%100

Member Distributed Loads (BLC 61 : Structure Wi (240 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	-3.147	-3.147	0	%100
2	M3	Z	1.817	1.817	0	%100
3	M4	X	-2.206	-2.206	0	%100
4	M4	Z	1.273	1.273	0	%100
5	M5	X	-.836	-.836	0	%100
6	M5	Z	.482	.482	0	%100
7	MP1A	X	-2.686	-2.686	0	%100
8	MP1A	Z	1.551	1.551	0	%100
9	MP4A	X	-2.686	-2.686	0	%100
10	MP4A	Z	1.551	1.551	0	%100
11	MP3A	X	-2.686	-2.686	0	%100
12	MP3A	Z	1.551	1.551	0	%100
13	MP2A	X	-2.686	-2.686	0	%100
14	MP2A	Z	1.551	1.551	0	%100
15	OVP	X	-2.221	-2.221	0	%100
16	OVP	Z	1.282	1.282	0	%100

Member Distributed Loads (BLC 62 : Structure Wi (270 Deg))

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]

Member Distributed Loads (BLC 62 : Structure Wi (270 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	-3.633	-3.633	0	%100
2	M3	Z	0	0	0	%100
3	M4	X	-2.547	-2.547	0	%100
4	M4	Z	0	0	0	%100
5	M5	X	0	0	0	%100
6	M5	Z	0	0	0	%100
7	MP1A	X	-3.101	-3.101	0	%100
8	MP1A	Z	0	0	0	%100
9	MP4A	X	-3.101	-3.101	0	%100
10	MP4A	Z	0	0	0	%100
11	MP3A	X	-3.101	-3.101	0	%100
12	MP3A	Z	0	0	0	%100
13	MP2A	X	-3.101	-3.101	0	%100
14	MP2A	Z	0	0	0	%100
15	OVP	X	-2.564	-2.564	0	%100
16	OVP	Z	0	0	0	%100

Member Distributed Loads (BLC 63 : Structure Wi (300 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	-1.686	-1.686	0	%100
2	M3	Z	-.974	-.974	0	%100
3	M4	X	-2.206	-2.206	0	%100
4	M4	Z	-1.273	-1.273	0	%100
5	M5	X	-.836	-.836	0	%100
6	M5	Z	-.482	-.482	0	%100
7	MP1A	X	-2.686	-2.686	0	%100
8	MP1A	Z	-1.551	-1.551	0	%100
9	MP4A	X	-2.686	-2.686	0	%100
10	MP4A	Z	-1.551	-1.551	0	%100
11	MP3A	X	-2.686	-2.686	0	%100
12	MP3A	Z	-1.551	-1.551	0	%100
13	MP2A	X	-2.686	-2.686	0	%100
14	MP2A	Z	-1.551	-1.551	0	%100
15	OVP	X	-2.221	-2.221	0	%100
16	OVP	Z	-1.282	-1.282	0	%100

Member Distributed Loads (BLC 64 : Structure Wi (330 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	-.13	-.13	0	%100
2	M3	Z	-.226	-.226	0	%100
3	M4	X	-1.273	-1.273	0	%100
4	M4	Z	-2.206	-2.206	0	%100
5	M5	X	-1.447	-1.447	0	%100
6	M5	Z	-2.507	-2.507	0	%100
7	MP1A	X	-1.551	-1.551	0	%100
8	MP1A	Z	-2.686	-2.686	0	%100
9	MP4A	X	-1.551	-1.551	0	%100
10	MP4A	Z	-2.686	-2.686	0	%100
11	MP3A	X	-1.551	-1.551	0	%100
12	MP3A	Z	-2.686	-2.686	0	%100
13	MP2A	X	-1.551	-1.551	0	%100

Member Distributed Loads (BLC 64 : Structure Wi (330 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
14	MP2A	Z	-2.686	-2.686	0	%100
15	OVP	X	-1.282	-1.282	0	%100
16	OVP	Z	-2.221	-2.221	0	%100

Member Distributed Loads (BLC 65 : Structure Wm (0 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	0	0	0	%100
2	M3	Z	-.059	-.059	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	-.533	-.533	0	%100
5	M5	X	0	0	0	%100
6	M5	Z	-.819	-.819	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	-.576	-.576	0	%100
9	MP4A	X	0	0	0	%100
10	MP4A	Z	-.576	-.576	0	%100
11	MP3A	X	0	0	0	%100
12	MP3A	Z	-.576	-.576	0	%100
13	MP2A	X	0	0	0	%100
14	MP2A	Z	-.576	-.576	0	%100
15	OVP	X	0	0	0	%100
16	OVP	Z	-.471	-.471	0	%100

Member Distributed Loads (BLC 66 : Structure Wm (30 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	.222	.222	0	%100
2	M3	Z	-.384	-.384	0	%100
3	M4	X	.266	.266	0	%100
4	M4	Z	-.462	-.462	0	%100
5	M5	X	.307	.307	0	%100
6	M5	Z	-.532	-.532	0	%100
7	MP1A	X	.288	.288	0	%100
8	MP1A	Z	-.499	-.499	0	%100
9	MP4A	X	.288	.288	0	%100
10	MP4A	Z	-.499	-.499	0	%100
11	MP3A	X	.288	.288	0	%100
12	MP3A	Z	-.499	-.499	0	%100
13	MP2A	X	.288	.288	0	%100
14	MP2A	Z	-.499	-.499	0	%100
15	OVP	X	.236	.236	0	%100
16	OVP	Z	-.408	-.408	0	%100

Member Distributed Loads (BLC 67 : Structure Wm (60 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	.717	.717	0	%100
2	M3	Z	-.414	-.414	0	%100
3	M4	X	.462	.462	0	%100
4	M4	Z	-.266	-.266	0	%100
5	M5	X	.177	.177	0	%100
6	M5	Z	-.102	-.102	0	%100

Member Distributed Loads (BLC 67 : Structure Wm (60 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
7	MP1A	X	.499	.499	0	%100
8	MP1A	Z	-.288	-.288	0	%100
9	MP4A	X	.499	.499	0	%100
10	MP4A	Z	-.288	-.288	0	%100
11	MP3A	X	.499	.499	0	%100
12	MP3A	Z	-.288	-.288	0	%100
13	MP2A	X	.499	.499	0	%100
14	MP2A	Z	-.288	-.288	0	%100
15	OVP	X	.408	.408	0	%100
16	OVP	Z	-.236	-.236	0	%100

Member Distributed Loads (BLC 68 : Structure Wm (90 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	.828	.828	0	%100
2	M3	Z	0	0	0	%100
3	M4	X	.533	.533	0	%100
4	M4	Z	0	0	0	%100
5	M5	X	0	0	0	%100
6	M5	Z	0	0	0	%100
7	MP1A	X	.576	.576	0	%100
8	MP1A	Z	0	0	0	%100
9	MP4A	X	.576	.576	0	%100
10	MP4A	Z	0	0	0	%100
11	MP3A	X	.576	.576	0	%100
12	MP3A	Z	0	0	0	%100
13	MP2A	X	.576	.576	0	%100
14	MP2A	Z	0	0	0	%100
15	OVP	X	.471	.471	0	%100
16	OVP	Z	0	0	0	%100

Member Distributed Loads (BLC 69 : Structure Wm (120 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	.384	.384	0	%100
2	M3	Z	.222	.222	0	%100
3	M4	X	.462	.462	0	%100
4	M4	Z	.266	.266	0	%100
5	M5	X	.177	.177	0	%100
6	M5	Z	.102	.102	0	%100
7	MP1A	X	.499	.499	0	%100
8	MP1A	Z	.288	.288	0	%100
9	MP4A	X	.499	.499	0	%100
10	MP4A	Z	.288	.288	0	%100
11	MP3A	X	.499	.499	0	%100
12	MP3A	Z	.288	.288	0	%100
13	MP2A	X	.499	.499	0	%100
14	MP2A	Z	.288	.288	0	%100
15	OVP	X	.408	.408	0	%100
16	OVP	Z	.236	.236	0	%100

Member Distributed Loads (BLC 70 : Structure Wm (150 Deg))

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]

Member Distributed Loads (BLC 70 : Structure Wm (150 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	.03	.03	0	%100
2	M3	Z	.051	.051	0	%100
3	M4	X	.266	.266	0	%100
4	M4	Z	.462	.462	0	%100
5	M5	X	.307	.307	0	%100
6	M5	Z	.532	.532	0	%100
7	MP1A	X	.288	.288	0	%100
8	MP1A	Z	.499	.499	0	%100
9	MP4A	X	.288	.288	0	%100
10	MP4A	Z	.499	.499	0	%100
11	MP3A	X	.288	.288	0	%100
12	MP3A	Z	.499	.499	0	%100
13	MP2A	X	.288	.288	0	%100
14	MP2A	Z	.499	.499	0	%100
15	OVP	X	.236	.236	0	%100
16	OVP	Z	.408	.408	0	%100

Member Distributed Loads (BLC 71 : Structure Wm (180 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	0	0	0	%100
2	M3	Z	.059	.059	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	.533	.533	0	%100
5	M5	X	0	0	0	%100
6	M5	Z	.819	.819	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	.576	.576	0	%100
9	MP4A	X	0	0	0	%100
10	MP4A	Z	.576	.576	0	%100
11	MP3A	X	0	0	0	%100
12	MP3A	Z	.576	.576	0	%100
13	MP2A	X	0	0	0	%100
14	MP2A	Z	.576	.576	0	%100
15	OVP	X	0	0	0	%100
16	OVP	Z	.471	.471	0	%100

Member Distributed Loads (BLC 72 : Structure Wm (210 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	-.222	-.222	0	%100
2	M3	Z	.384	.384	0	%100
3	M4	X	-.266	-.266	0	%100
4	M4	Z	.462	.462	0	%100
5	M5	X	-.307	-.307	0	%100
6	M5	Z	.532	.532	0	%100
7	MP1A	X	-.288	-.288	0	%100
8	MP1A	Z	.499	.499	0	%100
9	MP4A	X	-.288	-.288	0	%100
10	MP4A	Z	.499	.499	0	%100
11	MP3A	X	-.288	-.288	0	%100
12	MP3A	Z	.499	.499	0	%100
13	MP2A	X	-.288	-.288	0	%100

Member Distributed Loads (BLC 72 : Structure Wm (210 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
14	MP2A	Z	.499	.499	0	%100
15	OVP	X	-.236	-.236	0	%100
16	OVP	Z	.408	.408	0	%100

Member Distributed Loads (BLC 73 : Structure Wm (240 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	-.717	-.717	0	%100
2	M3	Z	.414	.414	0	%100
3	M4	X	-.462	-.462	0	%100
4	M4	Z	.266	.266	0	%100
5	M5	X	-.177	-.177	0	%100
6	M5	Z	.102	.102	0	%100
7	MP1A	X	-.499	-.499	0	%100
8	MP1A	Z	.288	.288	0	%100
9	MP4A	X	-.499	-.499	0	%100
10	MP4A	Z	.288	.288	0	%100
11	MP3A	X	-.499	-.499	0	%100
12	MP3A	Z	.288	.288	0	%100
13	MP2A	X	-.499	-.499	0	%100
14	MP2A	Z	.288	.288	0	%100
15	OVP	X	-.408	-.408	0	%100
16	OVP	Z	.236	.236	0	%100

Member Distributed Loads (BLC 74 : Structure Wm (270 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	-.828	-.828	0	%100
2	M3	Z	0	0	0	%100
3	M4	X	-.533	-.533	0	%100
4	M4	Z	0	0	0	%100
5	M5	X	0	0	0	%100
6	M5	Z	0	0	0	%100
7	MP1A	X	-.576	-.576	0	%100
8	MP1A	Z	0	0	0	%100
9	MP4A	X	-.576	-.576	0	%100
10	MP4A	Z	0	0	0	%100
11	MP3A	X	-.576	-.576	0	%100
12	MP3A	Z	0	0	0	%100
13	MP2A	X	-.576	-.576	0	%100
14	MP2A	Z	0	0	0	%100
15	OVP	X	-.471	-.471	0	%100
16	OVP	Z	0	0	0	%100

Member Distributed Loads (BLC 75 : Structure Wm (300 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	-.384	-.384	0	%100
2	M3	Z	-.222	-.222	0	%100
3	M4	X	-.462	-.462	0	%100
4	M4	Z	-.266	-.266	0	%100
5	M5	X	-.177	-.177	0	%100
6	M5	Z	-.102	-.102	0	%100

Member Distributed Loads (BLC 75 : Structure Wm (300 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
7	MP1A	X	-.499	-.499	0	%100
8	MP1A	Z	-.288	-.288	0	%100
9	MP4A	X	-.499	-.499	0	%100
10	MP4A	Z	-.288	-.288	0	%100
11	MP3A	X	-.499	-.499	0	%100
12	MP3A	Z	-.288	-.288	0	%100
13	MP2A	X	-.499	-.499	0	%100
14	MP2A	Z	-.288	-.288	0	%100
15	OVP	X	-.408	-.408	0	%100
16	OVP	Z	-.236	-.236	0	%100

Member Distributed Loads (BLC 76 : Structure Wm (330 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	-.03	-.03	0	%100
2	M3	Z	-.051	-.051	0	%100
3	M4	X	-.266	-.266	0	%100
4	M4	Z	-.462	-.462	0	%100
5	M5	X	-.307	-.307	0	%100
6	M5	Z	-.532	-.532	0	%100
7	MP1A	X	-.288	-.288	0	%100
8	MP1A	Z	-.499	-.499	0	%100
9	MP4A	X	-.288	-.288	0	%100
10	MP4A	Z	-.499	-.499	0	%100
11	MP3A	X	-.288	-.288	0	%100
12	MP3A	Z	-.499	-.499	0	%100
13	MP2A	X	-.288	-.288	0	%100
14	MP2A	Z	-.499	-.499	0	%100
15	OVP	X	-.236	-.236	0	%100
16	OVP	Z	-.408	-.408	0	%100

Member Area Loads

Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
No Data to Print ...						

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N1	max	1347.604	10	1649.493	13	1628.407	1	-2.328	64	6.894	9	6.114	40
2		min	-1347.604	4	554.881	70	-1628.406	7	-7.275	19	-6.82	3	-.024	50
3	Totals:	max	1347.604	10	1649.493	13	1628.407	1						
4		min	-1347.604	4	554.881	70	-1628.406	7						

Envelope AISC 15th(360-16): LRFD Steel Code Checks

	Member	Shape	Code ...	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pnc ...	phi*Pnt [...	phi*Mn y...	phi*Mn z...	Cb	Eqn
1	M3	HSS4X4X3	.863	0	15	.450	0	y	39	99604.0...	106812	12.662	12.662	1....	H3-6
2	M4	PIPE 3.0	.001	.792	5	.000	.792		5	64335.7...	65205	5.749	5.749	1....	H1-1b
3	M5	PIPE 3.0	.904	6.75	44	.117	6.75		19	24533.2...	65205	5.749	5.749	1....	H1-1b
4	MP1A	PIPE 2.0	.204	3	3	.052	3		3	20866.7...	32130	1.872	1.872	1....	H1-1b

Envelope AISC 15th(360-16): LRFD Steel Code Checks (Continued)

	Member	Shape	Code ...	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pnc ...	phi*Pnt [...	phi*Mn y...	phi*Mn z...	Cb	Eqn
5	MP4A	PIPE 2.0	.174	3	9	.048	3		9	20866.7...	32130	1.872	1.872	1...	H1-1b
6	MP3A	PIPE 2.0	.116	3	6	.021	3		5	20866.7...	32130	1.872	1.872	1...	H1-1b
7	MP2A	PIPE 2.0	.372	3	12	.054	1.938		5	20866.7...	32130	1.872	1.872	1...	H1-1b
8	OVP	PIPE 2.0	.131	2.5	2	.043	2.5		5	28843.4...	32130	1.872	1.872	1...	H1-1b

VzW SMART Tool© Vendor

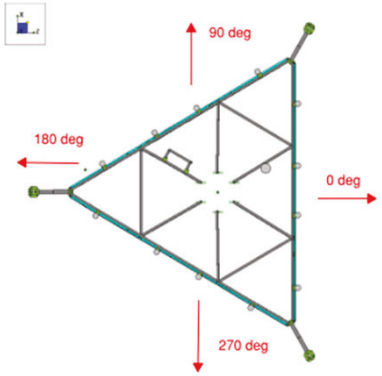
Client:	Verizon Wireless	Date:	9/12/2023
Site Name:	HEBRON WEST CT		
MDG #:	5000243961		
Fuze ID #:	17136777	Page:	1

Version 1.01

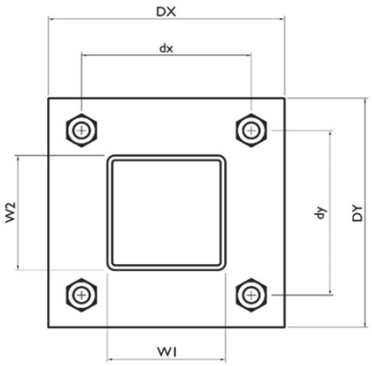
I. Mount-to-Tower Connection Check

Custom Orientation Required	Yes

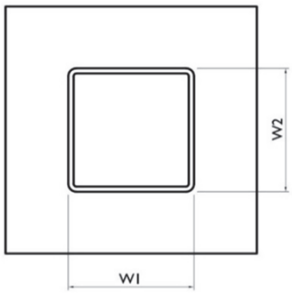
Nodes (labeled per Risa)	Orientation (per graphic of typical platform)
N1	20



Tower Connection Bolt Checks	Yes
Bolt Orientation	Parallel
Bolt Quantity per Reaction:	4
d_x (in) *(Delta X of typ. bolt config. sketch)* :	6
d_y (in) *(Delta Y of typ. bolt config. sketch)* :	6
Bolt Type:	A325N
Bolt Diameter (in):	0.5
Required Tensile Strength / bolt (kips):	11.0
Required Shear Strength / bolt (kips):	0.7
Tensile Capacity / bolt (kips):	13.3
Shear Capacity / bolt (kips):	8.0
Bolt Overall Utilization:	**83.0%**



Tower Connection Baseplate Checks	Yes
Connecting Standoff Member Shape:	Rect Tube
Weld Stiffener Configuration:	No Stiffeners
Plate Width, D_x (in):	8
Plate Height, D_y (in):	8
W1(in):	4
W2 (in):	4
Member Thickness (in):	0.1875
Stiffener location a_1 (in):	
Stiffener location b_1 (in):	
Stiffener location a_2 (in):	
Stiffener location b_2 (in):	
F_y (ksi, plate):	36
Plate Thickness (in):	0.75
Length of Yield Line, L_y (in):	5.80
Bolt Eccentricity, e (in):	1.59
M_u (kip-in):	17.48
Phi*M_n (kip-in):	26.43
Plate Bending Utilization:	**66.1%**

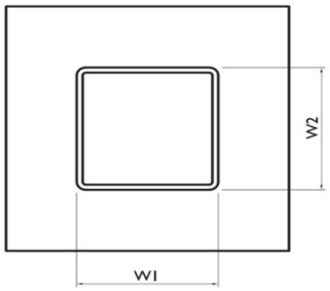


VzW SMART Tool© Vendor

Client:	Verizon Wireless	Date:	9/12/2023
Site Name:	HEBRON WEST CT		
PSLC #:	5000243961		
Fuze ID #:	17136777	Page:	2

Version 1.01

Tower Connection Weld Checks	Yes

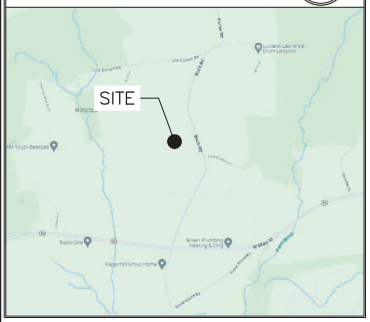


Weld Shape:	Rectangle
Weld Stiffener Configuration:	None
Stiffener Notch Length, n (in):	
Weld Size (1/16 in):	4
W1 (in):	4
W2 (in):	4
Weld Total Length (in):	16.00
Z_x (in^3/in):	21.33
Z_y (in^3/in):	21.33
J_p (in^4/in):	85.33
c_x (in)	2.1875
c_y (in)	2.1875
Required combined strength (kip/in):	4.08
Weld Capacity (kip/in):	5.57
Weld Utilization:	**73.3%**

NOTE:
AN ANALYSIS OF THE CAPACITY OF THE STRUCTURE TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY MORRISON HERSHFIELD DATED JANUARY 18, 2024.

LEASE EXHIBIT:
THIS LEASE EXHIBIT IS DIAGRAMMATIC IN NATURE AND IS INTENDED TO PROVIDE GENERAL INFORMATION REGARDING THE LOCATION AND SIZE OF THE PROPOSED WIRELESS COMMUNICATION FACILITY. THE SITE LAYOUT WILL BE FINALIZED UPON COMPLETION OF THE SITE SURVEY AND FACILITY DESIGN.

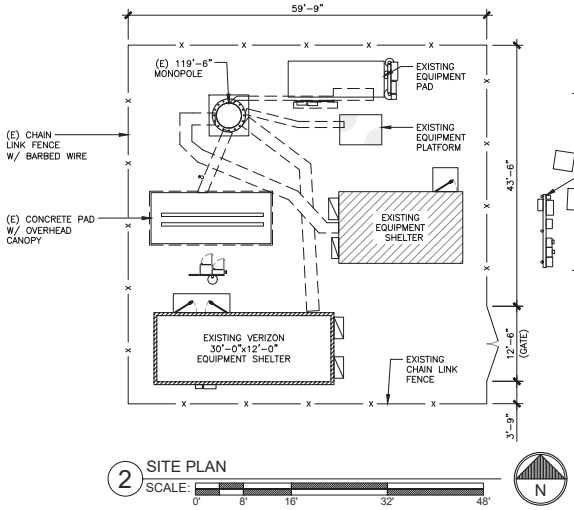
LOCATION MAP
N.T.S



APPROXIMATE COORDINATES:	LATITUDE:	41° 39' 16.0" N	41.654450° N
	LONGITUDE:	72° 24' 39.1" W	72.410864° W

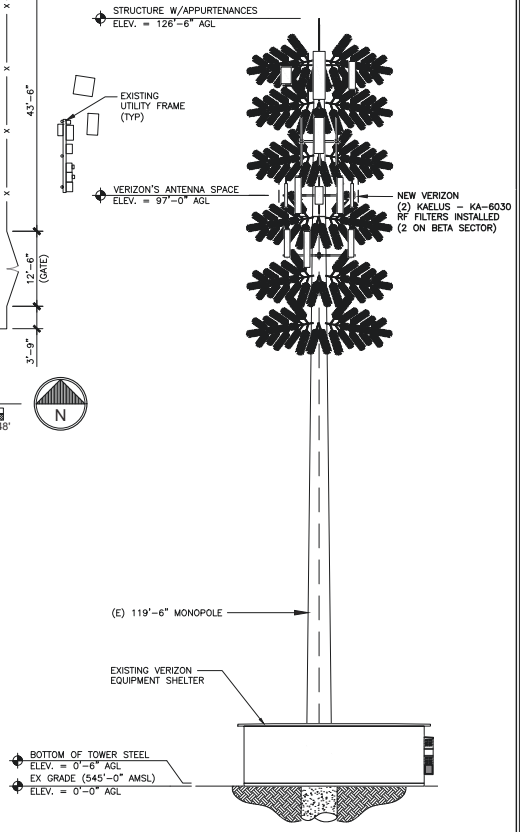
N

1 PARTIAL SITE / KEY PLAN
SCALE: N.T.S.



2 SITE PLAN
SCALE: 0' 8' 16' 32' 48'

N



3 TOWER ELEVATION
SCALE: N.T.S

verizon
20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

B+T GRP
MTS ENGINEERING, P.L.L.C.
1717 S. BOULDER
SUITE 300
TULSA, OK 74119
PH: (918) 587-4630
btes@btgrp.com

HEBRON WEST CT
107 BUCK RD.
HEBRON, CT 06248
EXISTING MONOPOLE

PROJECT NO:	147458.006.01.001
CHECKED BY:	LR

ISSUED FOR:

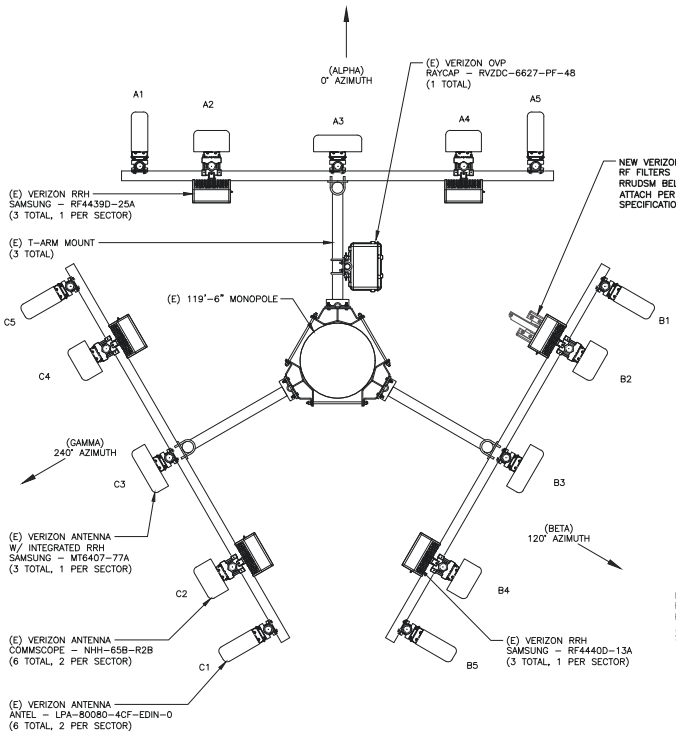
REV	DATE	DRWN	DESCRIPTION
0	2/21/24	TDG	ISSUED FOR REVIEW

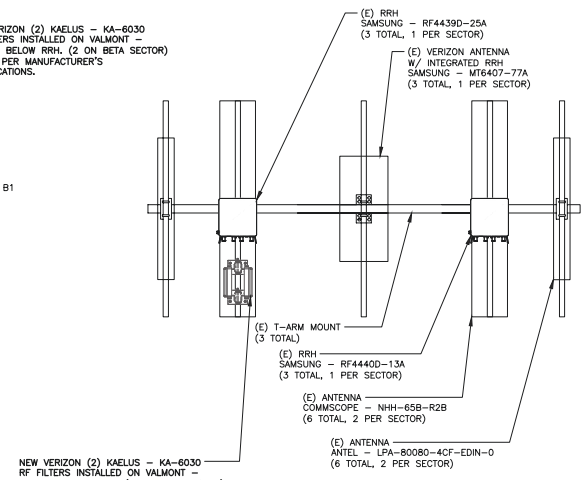
B&T ENGINEERING, INC.

STATE OF CONNECTICUT
CHAD TATE
No. 23924
LICENSED PROFESSIONAL ENGINEER
2/21/24

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SHEET NUMBER:	REVISION:
LE-1	0





NOTE:
ELEVATION VIEW FROM BEHIND ANTENNAS

1 NEW RF FILTER PLAN
SCALE: 0' 1' 2' 4' 8'

N

2 NEW RF FILTER ELEVATION
SCALE: 0' 1' 2' 4' 8'

verizon
20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

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TULSA, OK 74119
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btseo@btgrp.com

HEBRON WEST CT

107 BUCK RD.
HEBRON, CT 06248

EXISTING MONOPOLE

PROJECT NO:	147458.006.01.001
CHECKED BY:	LR

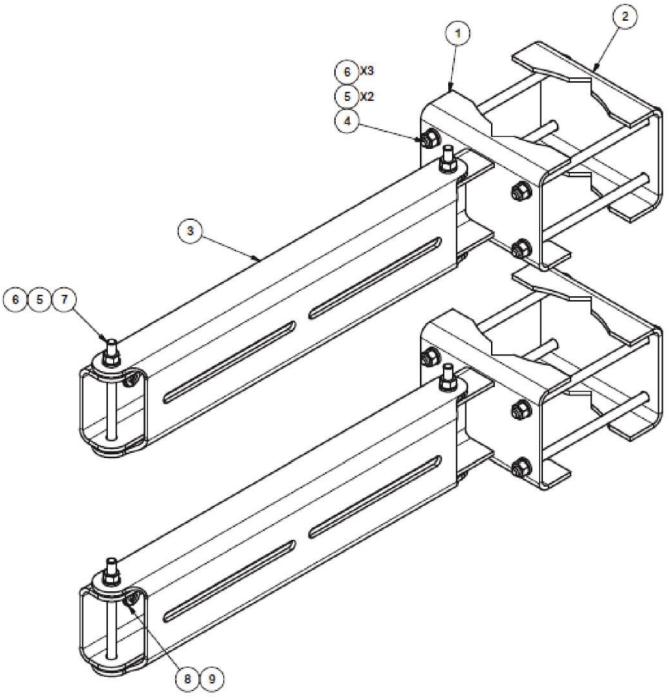
ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION
0	2/21/24	TDG	ISSUED FOR REVIEW

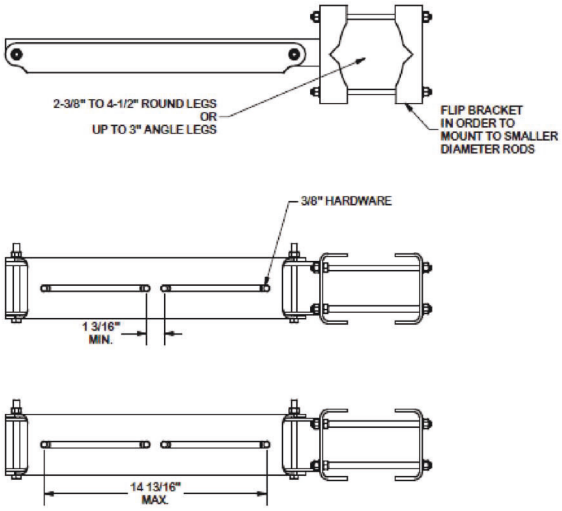
B&T ENGINEERING, INC.

STATE OF CONNECTICUT
GRAD STATE
No. 23924
LICENSED
PROFESSIONAL ENGINEER
2/21/24

SHEET NUMBER: LE-2
REVISION: 0



PARTS LIST					
ITEM	QTY	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	2	MOUNTING ARM		8.99	17.97
2	2	CLAMP PLATE		2.35	4.69
3	2	SWIVEL MOUNT		6.65	13.30
4	8	3/8"-16 UNC X 8" GALV. THREADED ROD		0.25	2.00
5	20	3/8" GALV LOCK WASHER		0.01	0.13
6	28	3/8"-16 UNC GALV HEX NUT		0.02	0.52
7	4	3/8" X 5" GALV BOLT		0.18	0.71
8	8	3/8" SS FLAT WASHER		0.01	0.06
9	8	3/8" SS LOCK WASHER		0.01	0.05
				TOTAL WT. #	39.43



TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
SAWED, SHEARED AND GAS CUT EDGES *(± 0.030")*
DRILLED AND GAS CUT HOLES *(± 0.030")* - NO CONING OF HOLES
LASER CUT EDGES AND HOLES *(± 0.010")* - NO CONING OF HOLES
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

DESCRIPTION
RRU
DUAL SWIVEL MOUNT

SITE PRO 1 — A valmont COMPANY

Engineering Support Team:
1-888-753-7446

Locations:
New York, NY
Atlanta, GA
Los Angeles, CA
Plymouth, IN
Salem, OR
Dallas, TX

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.
	CEK 1/12/2015		RRUDSM

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	01	SHOP	BMC 2/3/2015	RRUDSM