Planning Commission
County of Louisa
Thursday, October 9, 2025
Louisa County Public Meeting Room
7:00 PM

CALL TO ORDER

ROLL CALL

INVOCATION

PLEDGE OF ALLEGIANCE

I. APPROVAL OF AGENDA

II. APPROVAL OF PLANNING COMMISSION MINUTES

1. Planning Commission - Regular Meeting - August 14, 2025

III. CONSENT AGENDA

IV. PUBLIC ADDRESS

V. UNFINISHED BUSINESS

VI. PUBLIC HEARINGS

1. CUP2025-08 American Tower Asset Sub II, LLC, Applicant; 4 All Land, LLC, Owner; Lori H. Schweller, Agent - 15.2-2232 Review- Conformance with the Comprehensive Plan and a Conditional Use Permit Request
2. REZ2025-03 & CUP2025-09 Ashton Promise LLC, Applicant/Owner - Rezoning and Conditional Use Permit Requests

VII. NEW BUSINESS

VIII. DISCUSSION

IX. REPORTS

1. Variance Applications

ANNOUNCEMENTS AND ADJOURNMENT

BY ORDER OF:
JOHN DISOSWAY, CHAIRMAN
PLANNING COMMISSION
LOUISA COUNTY, VIRGINIA

Planning Commission
County of Louisa

Thursday, August 14, 2025
Louisa County Public Meeting
Room 7:00 PM

CALL TO ORDER

Chairman Disosway called the August 14, 2025, regular meeting of the Louisa County Planning Commission to order at 7:00 p.m.

ROLL CALL

Attendee Name	Title	Status	Arrived
Tommy J. Barlow	Mountain Road District Supervisor	Present	7:00 PM
Gordon Brooks	Commissioner	Present	7:00 PM
Ellis Quarles	Commissioner	Remote	7:00 PM
George Goodwin	Commissioner	Present	7:00 PM
John Disosway	Chairman	Present	7:00 PM
Matthew Kersey, Jr.	Commissioner	Remote	7:00 PM
James Dickerson	Vice Chairman	Absent	
Troy Painting	Commissioner	Present	7:00 PM
John J Purcell	Town of Louisa Representative	Present	7:00 PM

Others Present: Chris Coon, Deputy County Administrator, Patricia Smith, County Attorney; Tom Egeland, Deputy Director of Community Development; and Deborah Johnson, Administrative Assistant.

INVOCATION

Mr. Goodwin led the invocation.

PLEDGE OF ALLEGIANCE

Mr. Painting led the Pledge of Allegiance.

APPROVAL OF AGENDA

On the motion of Mr. Brooks, seconded by Mr. Goodwin, which carried a vote of 6-0, the Planning Commission voted to approve the agenda of the August 14, 2025, meeting without changes.

APPROVAL OF PLANNING COMMISSION MINUTES

On the motion of Mr. Goodwin, seconded by Mr. Brooks, which carried a vote of 5-0-1, with Mr. Painting abstained, the Planning Commission voted to approve the minutes of the July 10, 2025, meeting with changes.

On the motion of Mr. Goodwin, seconded by Mr. Brooks, which carried by a vote of 6-0, the Planning Commission voted to enter Closed Session at 7:11 p.m. for the purpose of discussing the following: In accordance with §2.2-3711(A)(8), consultation with legal counsel employed or retained by a public body regarding specific legal matters requiring the provision of legal advice by such counsel.

The Planning Commission returned from Closed Session at 7:26 p.m. and voted 6-0, that the Louisa County Planning Commission does hereby certify that, to the best of each member's knowledge, (i) only public business matters lawfully exempted from open meeting requirements by Virginia law were discussed in the closed meeting to which this certification resolution applies, and (ii) only such public business matters as were identified in the motion convening the closed meeting was heard, discussed or considered by the Louisa County Planning Commission.

CONSENT AGENDA

None.

PUBLIC ADDRESS

Chairman Disosway opened the public address period.

With no one wishing to speak, Chairman Disosway closed the public address period.

UNFINISHED BUSINESS

Chris Coon provided information on updates to the Comprehensive Plan.

PUBLIC HEARINGS

Proposed Amendments to Chapter 86. Land Development Regulations; Article I. General Provisions; Article II. Zoning Ordinance and Maps

Chris Coon presented the proposed amendments regarding a Conditional Use Permit (CUP) for humanitarian shelters. The amendment serves to replace the 2019 Emergency Shelter definition with a clearer and more functionally accurate definition of Humanitarian Shelter, establish uniform minimum CUP submission requirements that address operational, safety, and community compatibility issues, provide a transparent roadmap for applications and decision-makers to evaluate the suitability of proposed shelters, and ensure alignment with state and federal codes, without burdening County staff or services with ambiguous expectations.

Patricia Smith, County Attorney, added she reviewed the information and saw no legal issues with the proposed changes.

Chairman Disosway opened the public comment period.

Sue Frankel-Streit, Patrick Henry District, spoke in opposition to the proposed amendments.

Lin Kogle, Louisa District, spoke in opposition to the proposed amendments.

David McWilliams, Green Springs District, representing Zion United Church,
spoke in opposition to the proposed amendments.

Alicia Ford, Green Springs District, spoke in opposition to the proposed amendments.

Erin Rose, Green Springs District, spoke in opposition to the proposed amendments.

Juanita Jo Matkins, Mountain Road District, spoke in opposition to the proposed amendments.

Eileen Smith, Louisa District, spoke in opposition to the proposed amendments.

Mary Kranz, Mountain Road District, spoke in opposition to the proposed amendments.

Duane Sergent, Mineral District, spoke in opposition to the proposed amendments.

James Amick, Louisa District, spoke in opposition to the proposed amendments.

Allen Smith, Non- Louisa Resident, representing Mechanicsville Baptist Church,
spoke in opposition to the proposed amendments.

Lura Kaval, Non-Louisa Resident, lead Chaplin for Louisa County Sheriff's Office, spoke in opposition to the proposed amendments.

Pam Bickley, Non-Louisa Resident, spoke in opposition to the proposed amendments.

Dana Racette, Louisa District, spoke in opposition to the proposed amendments.

With no one else wishing to speak, Chairman Disosway closed the public comment period and brought it back to the Planning Commission for discussion.

Mr. Goodwin made a statement as follows, "Mr. Chairman, since you appointed me to lead on this issue and it has generated interest, I would like to submit my final report and address some of the issues and iterations of the proposed ordinance that staff and I have gone through since it first appeared on our agenda and how we got to where we are tonight. From the beginning, this topic has been fraught with misunderstanding, misconception, and misinformation. If you will indulge me the time, I think it will be helpful to the Commission and constituents. I'll speak to four of the issues tonight. But before I begin my report, I'd like to thank all the citizens who weighed in on this topic. They had a very important influence on the evolution of this ordinance and the final product. The first issue was the original request itself. When it was presented, there were whispers and outright positions from many corners of 'no'. I admit, I was skeptical. But, when you assigned it to me, I took the position of 'how can we say yes'. Second, the original request was generated by an outside party to modify the County's ordinance on 'emergency shelters'. Early on, research informed us that was not a viable approach. Emergency shelters are defined in the Code of Virginia and regulated by multiple state agencies, led by the Virginia Department of Emergency

Management. They are established and managed in a 'state of emergency' which is declared by the Governor of Virginia or a 'local emergency', as declared by local government. So, we shifted to a definition of 'homeless shelter', which was actually the subject of the original request. This term eventually evolved to 'humanitarian shelter' to include more opportunities to offer individuals basic humanitarian services, such as food services, extreme weather relief, homelessness, et cetera. Third is a misunderstanding of the difference between an ordinance and a conditional use permit. This misunderstanding has led to the misconception and misinformation that this is a 'County versus churches matter'. Mr. Chairman, it is not. An ordinance is established to define land use county-wide and equally, based on zoning. An ordinance is not aimed at individuals or individual entities. It is not temporal; it applies to establishment for the foreseeable future and transfers the land. A conditional use permit, on the other hand, is directed to an individual or individual entity for a specific land use on a specific parcel or parcels and it can be temporal. A conditional use permit allows the county to apply compliance conditions to ensure public safety and community coherence. Most recently, one of the interested parties in this issue offered that they would agree to the proposed conditions, if they didn't have to obtain a conditional use permit. Well, that is essentially a conditional use permit, but there is no way to get other future parties to agree to minimum terms, without the conditional use permit requirement. Finally, there is the issue of constitutionality. The Constitution of the United States, first amendment, ensures 'freedom of religion' There has been a lot of discussion on this and even the potential and threats of lawsuits. Some have suggested that we 'carve out' religious assemblies in the proposed ordinance. I am certainly not an attorney, but I have given this a lot of consideration. Just as government cannot deter religious activities, it also cannot offer favoritism in the form of exceptions or other special treatment. This has been ruled in cases such as prayer in schools, the Ten Commandments in courtrooms, and religious displays on government property. With this in mind, I am comfortable that the proposed ordinance treats religious assemblies equal to the treatment of any other applicant that desires to establish a humanitarian shelter. Mr. Chairman, members of the Commission, and citizens of Louisa County, I submit that to the best of our ability, we are offering the proper solution to the question at hand. It addresses the spectrum of human needs. It includes respect for public safety and community interests. It treats all citizens of Louisa equally. And most importantly, it offers a way to say 'yes'. Again, I want to say a special thank you to staff for their expertise and support. I intend to support it".

Mr. Brooks stated that the proposed ordinance is designed to treat everyone fairly, and he is in support of the proposed changes.

On the motion of Mr. Goodwin, seconded by Mr. Brooks, which carried a vote of 6-0, the Planning Commission voted to forward a recommendation of approval to the Louisa County Board of Supervisors on the proposed amendments to Chapter 86. Land Development Regulations; Article I. General Provisions; Article II. Zoning Ordinance and Maps as follows:

CHAPTER 86 - LAND DEVELOPMENT REGULATIONS
(Humanitarian Shelter)

The purpose of the proposed amendment is to provide zoning and regulatory provisions that balance public health and safety, economic opportunity, and community well-being while ensuring compliance with state and federal laws. It is essential to evaluate zoning and regulatory tools to responsibly manage operation of shelters within the County. The draft amendment includes a proposed definition and zoning strategies for regulating "Humanitarian Shelters."

THESE PROPOSED AMENDMENTS APPLY THROUGHOUT ALL OF LOUISA COUNTY; and are proposed pursuant to Va. Code §§ 15.2-2285 and 15.2-2286.

ARTICLE I. – GENERAL PROVISIONS

86-13 Definitions.

~~Emergency shelter. A facility providing temporary housing for one or more individuals who are temporarily or permanently homeless.~~

Humanitarian Shelter: a facility that provides temporary shelter and basic services to individuals or families, without requiring leases or occupancy agreements.

86-44. Reserved Conditional Use Permits for Humanitarian Shelters

In order to protect the health, safety, and general welfare of both shelter occupants and the surrounding community, the following minimum standards shall be required as part of any Conditional Use Permit (CUP) application for a Humanitarian Shelter. These items must be submitted with the application prior to consideration by the Planning Commission or Board of Supervisors to demonstrate responsible operations, minimize impacts on adjacent properties, and avoid undue burdens on County services.

a) **Ancillary Use Requirement - Humanitarian shelters are generally expected to operate and only be permitted as an ancillary or accessory use to an otherwise approved principal use. Stand-alone shelters may raise additional considerations and should be discussed with staff during the application process.**
b) **Continuous Supervision - An identified authorized representative must be physically present and responsible for onsite supervision during all hours of shelter operation.**
c) **Intake and Screening Requirements - Provide written documents for policy and procedures to include, but are not limited to:**
    1. **Defined intake hours and protocol**
    2. **Identification Verification Methods for all clients**
    3. **Screening Practices used to assess client suitability and ensure safe housing assignments, including any criteria that may limit entry;**

    These documents must be submitted with the CUP application and updated upon any change in procedure. Updated policies and/or procedures must be provided to the County for review prior to implementation. The Zoning Administrator will respond with a written determination within ninety (90) days of receipt of the request.
d) **On-Site Services and Partnership - Provide information on any partnerships with a qualified provider of supportive services (e.g., mental health, substance abuse, housing navigation). A brief written plan for service delivery and client referral assisting to demonstrate a supportive framework for clients.**
e) **Community Impact and Service Burden Statement - The CUP application shall include a narrative explaining how the shelter will:**
    1. **Avoid adverse impacts to surrounding properties and uses;**
    2. **Minimize or offset reliance on County or public services;**
    3. **Provide a responsible framework for managing shelter operations and resident behavior.**
f) **Good Neighbor Policy - The operator shall maintain a publicly available Good Neighbor Policy, including:**
    1. **A primary contact for community inquiries or complaints;**
    2. **Procedures for responding to concerns;**
    3. **Community outreach and education efforts.**

g) Regulatory Compliance - All Humanitarian Shelters should demonstrate awareness of and intent to comply with applicable federal, state, and local laws, including but not limited to the Virginia Uniform Statewide Building Code (USBC), the Virginia State Fire Marshal, the Virginia Department of Health, the Americans with Disabilities Act (ADA), and any other relevant accessibility, life safety, or public health regulations.

ARTICLE II. ZONING ORDINANCE AND MAPS

86-109 Matrix table.

Proposed Amendments to Section 86-109 Use Matrix to coordinate code sections based on the zoning district classification and whether the use is proposed as a permitted use, generally; or a permitted use with the issuance of a conditional use permit.

Defined Use	A-1	A-1 GAOD	A-2	A-2 GAOD	R-1	R-1 GAOD	R-2	R-2 GAOD	C-1	C-1 GAOD	C-2	C-2 GAOD	IND	IND GAOD	I-1	I-1 GAOD	I-2	I-2 GAOD	RD	PUD
COMMERCIAL																				
~~*Emergency Shelter*~~	~~X~~	~~X~~	~~C~~	~~C~~	~~X~~	~~X~~	~~X~~	~~X~~	~~C~~	~~C~~	~~C~~	~~B~~	~~C~~	~~B~~	~~C~~	~~B~~	~~X~~	~~X~~	~~X~~	-
Humanitarian Shelter	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	
****The proposed amendments affect only those uses listed above to be amended; and makes no changes to any other listed uses in Section 86-109****																				
B = Allowable by-right																				
B(R) = Allowable by-right (with restrictions)																				
C = Conditional use permit																				
X = Not allowable																				

Sec. 86-136. - Permitted uses with a conditional use permit. (A-1)

COMMERCIAL

Humanitarian shelter (Subject to the requirements of Section 86-44.)

Sec. 86-154. - Permitted uses with a conditional use permit. (A-2)

CIVIC

~~Emergency shelter~~

COMMERCIAL

Humanitarian shelter (Subject to the requirements of Section 86-44.)

Sec. 86-171. - Permitted uses—With a conditional use permit. (R-1)

COMMERCIAL

Humanitarian shelter (Subject to the requirements of Section 86-44.)

Sec. 86-189. - Permitted uses with a conditional use permit. (R-2)

COMMERCIAL

Humanitarian shelter (Subject to the requirements of Section 86-44.)

86-206 Permitted uses with a conditional use permit (C-1)

CIVIC

~~Emergency shelter~~

COMMERCIAL

Humanitarian shelter (Subject to the requirements of Section 86-44.)

86-224. Permitted uses with a conditional use permit (C-2)

CIVIC

~~Emergency shelter~~

COMMERCIAL

Humanitarian shelter (Subject to the requirements of Section 86-44.)

Sec. 86-242. - Permitted uses with a conditional use permit. (IND)

CIVIC

~~Emergency shelter~~

COMMERCIAL

Humanitarian shelter (Subject to the requirements of Section 86-44.)

Sec. 86-261. - Permitted uses with a conditional use permit. (I-1)

CIVIC

~~Emergency shelter~~

COMMERCIAL

Humanitarian shelter (Subject to the requirements of Section 86-44.)

Sec. 86-279. - Permitted uses with a conditional use permit. (I-2)

COMMERCIAL

Humanitarian shelter (Subject to the requirements of Section 86-44.)

86-296 Permitted uses with a conditional use permit (RD)

COMMERCIAL

Humanitarian shelter (Subject to the requirements of Section 86-44.)

86-312 Permitted uses with a conditional use permit (PUD)

COMMERCIAL

Humanitarian shelter (Subject to the requirements of Section 86-44.)

Sec. 86-339. - Permitted uses with a conditional use permit. (A-1 GAOD)

COMMERCIAL

Humanitarian shelter (Subject to the requirements of Section 86-44.)

Sec. 86-359. - Permitted uses with a conditional use permit. (A-2 GAOD)

CIVIC

~~Emergency shelter~~

COMMERCIAL

Humanitarian shelter (Subject to the requirements of Section 86-44.)

Sec. 86-378. - Permitted uses with a conditional use permit. (R-1 GAOD)

COMMERCIAL

Humanitarian shelter (Subject to the requirements of Section 86-44.)

Sec. 86-394. - Permitted uses with a conditional use permit. (R-2 GAOD)

COMMERCIAL

Humanitarian shelter (Subject to the requirements of Section 86-44.)

86-412 Permitted uses with a conditional use permit (C-1 GAOD)

CIVIC

~~Emergency shelter~~

COMMERCIAL

Humanitarian shelter (Subject to the requirements of Section 86-44.)

Sec. 86-429. - Permitted uses—Generally. (C-2 GAOD)

CIVIC

~~Emergency shelter~~

86-431 Permitted uses with a conditional use permit (C-2 GAOD)

COMMERCIAL

Humanitarian shelter (Subject to the requirements of Section 86-44.)

Sec. 86-447. - Permitted uses—Generally. (IND GAOD)

CIVIC

~~Emergency shelter~~

Sec. 86-449. - Permitted uses with a conditional use permit. (IND GAOD)

COMMERCIAL

Humanitarian shelter (Subject to the requirements of Section 86-44.)

Sec. 86-465. - Permitted uses—Generally. (I-1 GAOD)

CIVIC

~~Emergency shelter~~

Sec. 86-467. - Permitted uses with a conditional use permit. (I-1 GAOD)

COMMERCIAL

Humanitarian shelter (Subject to the requirements of Section 86-44.)

Sec. 86-484. - Permitted uses with a conditional use permit. (I-2 GAOD)

COMMERCIAL

Humanitarian shelter (Subject to the requirements of Section 86-44.)

TEXT LEGEND		
Bolded Text = To Be Added	Regular Text = To Remain	~~Strikethrough~~ = To Be Removed

NEW BUSINESS

None.

DISCUSSION

None.

REPORTS

None.

ANNOUNCEMENTS AND ADJOURNMENT

On the motion of Mr. Goodwin, seconded by Mr. Brooks, which carried a vote of 6-0, the Planning Commission voted to adjourn the August 14, 2025, meeting at 8:50 PM.

BY ORDER OF:

_____

JOHN DISOSWAY, CHAIRMAN
PLANNING COMMISSION
LOUISA COUNTY, VIRGINIA

COUNTY OF LOUISA
COMMUNITY DEVELOPMENT

(540) 967-3430 *Fax (540) 967-3486*

www.louisacounty.com

TO: Members, Louisa County Planning Commission
FROM: Staff, Community Development Department
SUBJECT: CUP2025-08 American Tower Asset Sub II, LLC
DATE: September 30, 2025

American Tower Asset Sub II, LLC, Applicant; 4 All Land, LLC, Owner; Lori H. Schweller, Agent requests the following:

- 15.2-2232 Review for Conformance with the Comprehensive Plan of a planned Public Facility (Civic Use and Wireless Communication Facility)
- Amendment of Conditional Use Permit (CUP) 1994-03 to eliminate condition 8 which prohibits the transfer of the Conditional Use Permit to another applicant or owner.
- Amendment of Conditional Use Permit (CUP) 1994-03 condition 10 which requires removal of the tower within ninety (90) days of a violation of the Conditional Use Permit.

15.2-2232 Review for Conformance with the Comprehensive Plan does not appear to have been required or action taken with original approval. As the Conditional Use Permit was requested to be amended, the 15.2-2232 review is required to be completed on new applications.

The Louisa County Board of Supervisors approved CUP1994-03 for Southwestern Bell Mobile Systems, Inc. T/A Cellular One on July 5, 1994, with twelve (12) conditions of which the applicant has requested to amend the following:

1. Condition 8 states "The Conditional Use Permit is not transferable to another applicant or owner". It has come to Staff's attention that the tower operator and landowner has changed over the years. The requested updates to the Conditional Use Permit would allow the tower to remain in operation.
2. Condition 10 states "Permit Revocation – violation of any condition of this permit shall be grounds for revocation of the Condition Use Permit. If a violation does occur, Southwestern Bell Mobile Systems, Inc. will have ninety (90) days in which to remove the tower." The applicant would like to update the condition to eliminate the requirement of the tower being removed within 90 days. Proposed replacement language currently used by staff is bolded in the conditions updated within this report.

A Neighborhood Meeting was held in the Louisa County Public Meeting Room on August 13, 2025, at which one (1) individual attended for clarification on the application.

The property is located on Chopping Road (Route 623), approximately .87 miles from Davis Highway (Route 22) and is further identified as tax map parcel 42-34 zoned Agricultural A-2, in the

Mineral Election District. The 2040 Louisa County Comprehensive Plan designates this area as rural, outside of the Growth Areas.

The majority of the existing conditions are inapplicable as the facility is already constructed. The applicant's preference is to remove/amend conditions 8 & 10 as shown below.

1. That the site be developed according to all Agricultural (A) District regulations.

2. That development be in accordance with a site plan approved by Louisa County.

3. That all necessary permits be secured from the Louisa County Zoning/Building Department.

4. Prior to release of the building permit for the tower or the building, a copy of FAA approval shall be submitted to the Planning Office.

5. The operation of this tower shall not interfere with any other communication system including, but not limited to, television, radio, microwave, and satellite transmissions or use of any electric equipment in the County.

6. Any UHF, VHF or other type of transmitters/receivers that would interfere with the County's Emergency communications to be prohibited from this tower.

7. The tower shall be painted and lit in accordance with FAA regulations.

~~8. The Conditional Use Permit is not transferable to another applicant or owner.~~

9. Inspections – the Board of Supervisors or their designated representatives reserves the right to inspect the site at any reasonable time without prior notice.

~~10. Permit Revocation – violation of any condition of this permit shall be grounds for revocation of the Condition Use Permit. If a violation does occur, Southwestern Bell Mobile Systems, Inc. will have ninety (90) days in which to remove the tower.~~

Violation of any conditions contained herein shall be grounds for revocation of the Conditional Use Permit.

11. Space shall be reserved on the tower, (up to 300' or higher as long as it does not cause interference), for Louisa County Emergency Services use at no cost to the County. In addition, the applicant will provide suitable communications equipment to enhance emergency services in Louisa County as an in-kind contribution to the Volunteer Fire and Rescue Organizations, with additional costs not to exceed $10,000 wholesale price, and said contribution would be transferable and cumulative to another tower if it is not needed at this site. Equipment shall be in accordance with specifications from the Emergency Services Coordinator.

12. An emergency number be provided for Louisa County cellular users to connect them directly to the Sheriff's Department until the E-911 system is implemented in Louisa County.

TEXT LEGEND		
Bolded Text = To Be Added	Regular Text = To Remain	~~Strikethrough~~ = To Be Removed

Should you have any questions or desire additional information, please contact our office.

Attachments

1. Application
2. Structural Analysis

Reviewer: DJ Case # CUP2025-08
Fee Rcv'd: _____ Rcpt # _____
Date & Time Rcv'd: 8/16/2025
Pre-App Meeting: _____

LAND USE AMENDMENT APPLICATION

Board of Supervisors of Louisa County, Virginia

The following information shall be typed or printed and completed in full. Attach additional pages where necessary.

1. **IDENTIFICATION OF REQUEST:**

A: REZONING: From_____( ) to_____( )

B: CONDITIONAL USE: This request is to amend the conditions of an existing Conditional Use Permit, issued July 5, 1994, for a communications tower to delete the non-transferability

C: condition.

TEMPORARY CONDITIONAL USE: _____

D: _____

VARIANCE: _____

E: _____

PROFFER AMENDMENT: _____

F: _____

COMP PLAN AMENDMENT: _____

G: _____

COMP PLAN REVIEW FOR CONFORMANCE:_____

H: _____

SPECIAL EXCEPTION:

2. **APPLICANT, PROPERTY OWNER, AGENT**

A. NAME OF APPLICANT:American Tower Asset Sub II, LLC

If a corporation, name of agent:Lori H. Schweller, Esq., Williams Mullen, Attorneys

B: MAILING ADDRESS: 323 2nd Street, Suit 900, Charlottesville, VA 22902

_____Telephone # 434-951-5728

C: NAME OF PRESENT OWNER OF PROPERTY ON WHICH THIS REQUEST WILL OCCUR:

4 All Land, LLC, a Virginia limited liability company

D. MAILING ADDRESS: 8249 Crown Colony Parkway, Suite 100, Mechanicsville, VA 23116

Telephone #_____

If the applicant is not the owner of the property in question, explain: The Applicant has an easement to use a portion of the property for a wireless telecommunications facility. A copy of the Easement Agreement is attached to this Application for reference.

E. NAME OF PERSON TO BE NOTIFIED IN ADDITION TO THE APPLICANT AND/OR PROPERTY OWNER: _____

_____

F. ADDRESS: _____

_____ Telephone #: _____

3. **LOCATION OF PROPERTY** (Assistance will be given in obtaining the following information upon request).

A. VOTING DISTRICT___Mineral_____B. TAX MAP #_42_____

C. SUBDIVISION NAME ___NA_____D. LOT/PARCEL#___34_____

E. PROPERTY LOCATION___977 Chopping Road, Mineral, VA

F. IS PARCEL UNDER LAND USE TAXATION PROGRAM? NO ___x___YES____

4. **EXPLAIN FULLY THE PROPOSED USE, TYPE OF DEVELOPMENT, OPERATION PROGRAM, ETC., AND THE REASON OF THIS REQUEST:** The property was the subject of a conditional use permit issued in 1994 to Southwestern Bell Mobile Systems, Inc. for a communications tower. The CUP included a condition that the CUP is non-transferable. The lease from the property owner to the permit holder has been assigned since that time, and the tower operator has changed over the years owing to assignments and corporate transactions. The purpose of this request is to delete the non-transferability condition (#8) of the CUP and update the permit revocation condition (#10).

(Attach applicable plans, renderings, elevations, photographs.)

5. **STATE HOW THIS REQUEST WILL NOT BE MATERIALLY DETRIMENTAL TO ADJACENT PROPERTY, THE SURROUNDING NEIGHBORHOOD OR THE COUNTY IN GENERAL. INCLUDE, WHERE APPLICABLE, INFORMATION CONCERNING: USE OF PUBLIC UTILITIES; EFFECT OF REQUEST ON PUBLIC SCHOOLS; EFFECT ON TRAFFIC--INCLUDE MEANS OF ACCESS TO THE NEAREST PUBLIC ROAD; EFFECT ON EXISTING AND FUTURE AREA DEVELOPMENT, ETC.** The proposed CUP amendment will not change the existing use or operation of the communications tower, which provides essential wireless communications services from Verizon Wireless, AT&T, and T-Mobile. The County noted the non-transferability condition when Verizon Wireless submitted an application to remove equipment and install equipment on the tower.

6. 6. **EXPLAIN ANY EXISTING USE PERMIT, SPECIAL EXCEPTION, (Prior) CONDITIONAL USE PERMIT, TEMPORARY CONDITIONAL USE PERMIT OR VARIANCE PREVIOUSLY GRANTED ON THE PARCEL IN QUESTION:** Conditional Use Permit approved by the Louisa County Board of Supervisors on July 5, 1994 for construction of a 350 foot cellular communications tower and related equipment building on the west side of State Route 623, approximately 3.1 miles north of Route 22/33.

7. **INDICATE THE FOLLOWING WITH RESPECT TO THE SUBJECT PARCEL:**

A. EXISTING LAND USE(S): ___forest_____

B. EXISTING STRUCTURE(S): cell tower with related ground equipment

C. EXISTING ZONING:_A2_____

D. ACREAGE OF REQUEST:___22_____

E. UTILITIES: electricity, telephone existing
(Intended use, example: public water and/or sewer; individual well and/or septic tank; other source.)

F. IS THIS PROJECT IN OR NEAR A PINE PLANTATION?___no_____

G. IS THIS PROJECT IN AN AG/FORESTAL DISTRICT? _____no_____

8. **IF REQUESTING A VARIANCE, EXPLAIN THE UNIQUE PHYSICAL HARDSHIP OR EXTRAORDINARY SITUATION THAT IS THE JUSTIFICATION FOR THE VARIANCE:**

_____NA_____

_____

9. **GIVE COMPLETE NAMES AND ADDRESSES (INCLUDING ZIP CODES) OF ALL OWNERS ADJACENT, ACROSS THE ROAD OR HIGHWAY FACING THE PROPERTY AND ACROSS ANY RAILROAD RIGHT-OF-WAY, CREEK, OR RIVER FROM SUCH PROPERTY, EVEN IF SUCH PROPERTY LIES IN ANOTHER COUNTY OR TOWN. (THIS INFORMATION MUST BE OBTAINED BY THE APPLICANT).**

* PROPERTY OWNER'S NAME:__Lisa D. Spicer_____ MAILING ADDRESS:____1070 Chopping Road, Mineral, VA 23117_____
_____TAX MAP #___42__
SUBDIVISIONNAME_____NA_____LOTPARCEL#__42__
ACREAGE_____5.88_____ ZONING_____A2_____

* PROPERTY OWNER'S NAME: _Nicholas J. Marotta_____ MAILING ADDRESS:____13209 Pennerview Lane, Fairfax, VA 22033_____
_____TAX MAP #___42_____
SUBDIVISION NAME:____NA_____LOT/PARCEL#__43_____
ACREAGE___68.5_____ ZONING___A2_____

* PROPERTY OWNER'S NAME: __Jeremy and Charity Boston_____ MAILING ADDRESS:___913 Chopping Road, Mineral, VA 23117_____
_____TAX MAP #___42-1____

SUBDIVISION NAME:___NA_____LOT/PARCEL#__3B_____

ACREAGE____9.22_____ ZONING____A2_____

* PROPERTY OWNER'S NAME: _The William A. Cooke Foundation_____

MAILING ADDRESS:__P.O. Box 462, Louisa, VA 23093_____

_____TAX MAP #___42_____

SUBDIVISION NAME:___NA_____LOT/PARCEL#__33_____

ACREAGE__25.12_____ ZONING____A2_____

* PROPERTY OWNER'S NAME: ___The William A. Cooke Foundation_____

MAILING ADDRESS:__P.O. Box 462, Louisa, VA 23093_____

_____TAX MAP #___27C-1__

SUBDIVISION NAME:___NA_____LOT/PARCEL#__B_____

ACREAGE____16.89_____ ZONING___A2_____

* PROPERTY OWNER'S NAME: __Christopher D. Brooks_____

MAILING ADDRESS:__175 Twin Cedars Road, Mineral, VA 23117_____

_____TAX MAP #____27C-1__

SUBDIVISION NAME:___NA_____LOT/PARCEL#__B3 & C1

ACREAGE____4,894_____ ZONING___A2_____

* PROPERTY OWNER'S NAME: __Patricia D. Wolfrey_____ MAILING ADDRESS:__39 Twin Cedar Road, Mineral, VA 23117_____

_____TAX MAP #__27C-1_____

SUBDIVISION NAME:__NA_____LOT/PARCEL#___C_____

ACREAGE___2.767_____ ZONING_____A2_____

* PROPERTY OWNER'S NAME: __Jay T. Jolliffe_____

MAILING ADDRESS:__1206 Chopping Road, Mineral, VA 23117_____

_____TAX MAP #_____42_____

SUBDIVISION NAME:___NA_____LOT/PARCEL#___41_____

ACREAGE___22.25_____ ZONING____A2_____

* PROPERTY OWNER'S NAME: _____

MAILING ADDRESS:_____

_____TAX MAP #_____

SUBDIVISION NAME:_____LOT/PARCEL#_____

ACREAGE_____ ZONING_____

* PROPERTY OWNER'S NAME: _____

MAILING ADDRESS:_____

10. HEREWITH IS DEPOSITED THE FEE REQUIRED. CHECKS OR MONEY ORDERS MADE PAYABLE TO TREASURER , COUNTY OF LOUISA.

****

13. **I/WE HEREBY CERTIFY THAT TO THE BEST OF MY/OUR KNOWLEDGE ALL OF THE ABOVE STATEMENTS AND THE STATEMENTS CONTAINED IN ANY EXHIBITS TRANSMITTED ARE TRUE AND THAT THE ADJACENT PROPERTY OWNERS LIST HEREWITH ARE THE OWNERS OF RECORD AS OF THE DATE OF APPLICATION.**

NOTE: INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED. ANY REQUEST WHICH REQUIRES PLANS MUST BE ACCOMPANIED BY THOSE PLANS AT THE TIME OF SUBMISSION OF THE APPLICATION.

DATE: July 24, 20 25.

By: _____
SIGNATURE OF APPLICANT
(Same Name as Used in Item 2-A, Page 1)

American Tower Asset Sub II, LLC
APPLICANT'S NAME
(Typed or Printed)

By: _____
SIGNATURE OF OWNER
(Same Name as Used in Item 2-C, Page 1)

4 All Land, LLC, a Virginia limited liability company
OWNER'S NAME
(Typed or Printed)

By: _____
SIGNATURE OF AGENT
(Name of Person Other Than, but Acting for the Applicant, Responsible for this Application)

Williams Mullen /Lori H. Schweller, Esq.
AGENT'S NAME

AMERICAN TOWER®
CORPORATION

LANDOWNER LETTER OF AUTHORIZATION FOR PERMITTING

Licensee Name: Cellco Partnership d/b/a Verizon Wireless
@ ATC Site Name: Mineral / ATC Site #: 310370 / Project #: 14921176
Site Address: 977 Chopping Rd, Mineral, VA 23117
Coordinates: 38.03718473, -77.92405042

I, SHAWN TUTHILL, of 4 ALL LAND LLC, owner of the property identified above or duly authorized agent thereof, do hereby authorize Cellco Partnership d/b/a Verizon Wireless, American Tower, and their parents, subsidiaries, affiliates, successors, assigns, contractors, and/or agents, to act as my non-exclusive agent for the sole purpose of filing and consummating any land-use, building, or electrical permit application(s) as may be required by the applicable permitting authorities for proposed equipment additions and/or modifications by Cellco Partnership d/b/a Veizon Wireless within the leased area. The Project generally consists of the following:

Proposing: the following equipment is being physically installed on the tower:
6 - 95.9' PANEL
2 - 29.5' BOB/SSB
3 - 15' RRU/RRH
2 - 1 5/8" Hybriflex

Removing: The following equipment is being physically removed from the tower:
3 - 74.9' PANEL
3 - 96.5' PANEL
6 - 96' PANEL
1 - 19.2' BOB/SSB
1 - 19.2' BOB/SSB
3 - 6.9' DIPLEXER/DUAL COUPLER
3 - 13' RRU/RRH
3 - 21.4' RRU/RRH
3 - 26.6' RRU/RRH
6 - 1 5/8" Coax
2 - 1 1/4" Hybriflex Cable

Application Groundspace:
Removing a diesel generator

Signature: _____

Print Name: Shawn Tuthill

NOTARY BLOCK

State of Virginia)
County of Hanover)

On 7/24/25, before me, Shawn Tuthill personally appeared _____, who provide to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of Virginia that the foregoing paragraph is true and correct.

Witness my hand and official seal.

Signature Christy Catlett (Seal)
My Commission Expires: 1.31.26

CHRISTY M. CATLETT
COMMONWEALTH OF VIRGINIA
REGISTRATION NO. 7769811
NOTARY PUBLIC

***American Tower as used herein includes any affiliates or subsidiaries of American Tower Corporation**

FILE COPY

County of Louisa

(410) 713-7700

Post Office Box 160
Louisa, Virginia 23093

(703) 967-0401
FAX 703) 967-3411

July 7, 1994

Jeff Owens
Southwestern Bell Mobile Systems, Inc.
T/A Cellular One
7150 Standard Drive
Hanover, MD 21076

Dear Mr. Owens:

At a regular meeting of the Louisa County Board of Supervisors held July 5, 1994, the Board voted to approve your request for a Conditional Use Permit. The Conditional Use Permit was issued for the construction of a 350 foot cellular communications tower and 12'x26' equipment building. The property is located on the west side of State Route 623, approximately 3.1 miles north of Route 22/33.

The Board approved the Conditional Use Permit with the following conditions to insure project compatibility and minimize potential nuisance from development:

1. That the site be developed according to all Agricultural (A) District regulations;

2. That development be in accordance with a site plan approved by Louisa County;

3. That all necessary permits be secured from the Louisa County Zoning/Building Department;

4. Prior to release of the building permit for the tower or the building, a copy of FAA approval shall be submitted to the Planning Office;

5. The operation of this tower shall not interfere with any other communication system including, but not limited to, television, radio, microwave, and satellite transmissions or use of any electronic equipment in the County;

6. Any UHF, VHF or other type of transmitters/receivers that would interfere with the County's Emergency communications to be prohibited from this tower;

7. The tower shall be painted and lighted in accordance with FAA regulations;

8. The Conditional Use Permit is not transferable to another applicant or owner;

9. Inspections - the Board of Supervisors or their designated representatives reserves the right to inspect the site at any reasonable time without prior notice;

10. Permit Revocation - violation of any condition of this permit shall be grounds for revocation of the Conditional Use Permit. If a violation does occur, Southwestern Bell Mobile Systems, Inc. will have ninety (90) days in which to remove the tower.

11. Space shall be reserved on the tower, (up to 300' or higher as long as it does not cause interference), for Louisa County Emergency Services use at no cost to the County. In addition, the applicant will provide suitable communications equipment to enhance emergency services in Louisa County as an in-kind contribution to the Volunteer Fire and Rescue Organizations, with additional costs not to exceed $10,000 wholesale price, and said contribution would be transferable and cumulative to another tower if it is not needed at this particular site. Equipment shall be in accordance with specifications from the Emergency Services Coordinator.

12. An emergency number be provided for Louisa County cellular users to connect them directly to the Sheriff's Department until the E-911 system is implemented in Louisa County.

Should you have any questions, please do not hesitate to contact our office.

Sincerely,

William C. Porter, Jr.
County Administrator

WCPjr/raf

Direct Dial: 434.951.5728
LSchweller@williamsmullen.com

September 12, 2025

VIA EMAIL: RMawyer@louisacounty.gov; TEgeland@louisacounty.gov
and FEDERAL EXPRESS

Louisa County Community Development
1 Woolfolk Avenue, Suite 201
Louisa, VA 23093
Attention: Renee Mawyer, Associate Planner/Deputy Subdivision Agent
Tom Egeland, Jr., Deputy Director of Community Development / Deputy Zoning Administrator

RE: **Comprehensive Plan Substantial Accord Review in relation to Conditional Use Permit Amendment Request**
Applicant: American Tower Asset Sub II, LLC
Property: Tax Map Parcel 42-34; 977 Chopping Road, Mineral, VA; 22 acres
Property Owner: 4 All Land, LLC, a Virginia limited liability company

Dear Ms. Mawyer and Mr. Egeland:

American Tower Asset Sub II, LLC, which is a wholly-owned subsidiary of American Tower Corporation, submitted a request on August 12, 2025 to amend an existing Conditional Use Permit (CUP) for an existing wireless communications facility (the "WCF" or the "Chopping Road WCF"). The request is to delete one and amend another condition of the existing Conditional Use Permit, issued July 5, 1994, "for the construction of a 350-foot cellular communications tower and 12' x 26' equipment building" on "property located on the west side of State Route 623, approximately 3.1 miles north of Route 22/23" (the "CUP").

We have been informed that the County requires a review of the WCF to determine if it is substantially in accord with the County's Comprehensive Plan. I note that Sec. 86-664 of Division 5 (Telecommunications Regulations) of the Louisa County Zoning Ordinance provides that facilities that are approved by a special use permit process, as this WCF was approved in 1994, "shall be deemed substantially in accord with the comprehensive plan." As such, we submit that the WCF may be deemed in substantial accord with the comprehensive plan by operation of the County Code.

Nevertheless, we provide the following support for a finding by the Planning Commission that the WCF is in substantial accord with the current County Comprehensive Plan.

The WCF is located at 977 Chopping Road north of Mineral. It serves the area between the Mineral Growth Area and the property developing to the north along Chopping Road (State Route 623) and Zachary Taylor Highway (S. R. 522) leading to the Lake Anna Growth Area. County wireless needs have grown substantially since the adoption of the Telecommunications Master Plan, dated September 17, 2007. The County experienced population growth, but, more significant, wireless usage has increased dramatically since 2007.

On August 4, 2025, Verizon Wireless obtained approval for a new WCF approximately 0.28 mile from the intersection of Zachary Taylor Highway (Route 522) and Chopping Road (Route 623)[1] (the "522 WCF"). The 522 WCF is needed even though Verizon Wireless has antennas on the Chopping Road WCF and on the existing tower near the County Fire & EMS Training Center at 26 Sacred Heart Avenue (where the new sector facing Mineral is overloaded). More coverage and capacity are needed in this growing area of the County. Verizon Wireless intends to remove and replace the antennas on the Chopping Road WCF to provide improved service from this important site.

The Louisa County Comprehensive Plan lays out strategies for growth in Chapter 3: Land Use. The Land Use Plan identifies guiding principle 1. to preserve and protect the County's rural heritage. The WCF is located in an area designated as Rural on the County's Future Land Use Map. The Plan denotes Rural Values and Character in 3.1.1 to include the importance of agriculture, forestry, hunting, and fishing, as well as having jobs that residents can work close to home.

This WCF is critical for the continuance of high-quality wireless communications services provided by Verizon Wireless, AT&T, and T-Mobile, which serve existing and future residents, agriculture, rural activities, and travelers through the area, all of which increasingly rely on wireless communications infrastructure for everyday life. Wireless communications enable remote work, support advanced agricultural applications, and support commerce. In addition, the WCF provides effective access to 911 first responders such as fire, EMS, and police. Residents and travelers in the area have benefitted from wireless communications from this WCF for approximately 20 years, while experiencing little to no impact from the facility.

At its meeting on July 10, 2025, the Planning Commission found the Verizon Wireless request for approval of the 522 WCF to be in substantial accord with the 2040 Louisa County Comprehensive Plan in accordance with Section 15.2-2232 of the State Code of Virginia. The Staff Report to the Planning Commission for the 522 WCF hearing provides relevant information for this request because the 522 WCF will be a handoff or connecting site for the existing Chopping Road WCF, located in the same area of the County. The staff report addressing Comprehensive Plan Conformance for the 522 WCF states as follows:

"**CONFORMANCE REVIEW**:
1. 2040 Louisa County Comprehensive Plan
The primary goal of the Louisa County 2040 Comprehensive Plan (the "2040 Plan"), "protects Louisa's rural character and provides for efficient delivery of public services, and for accommodating economic growth in designated growth areas."

The 2040 Plan contains many ideas for protecting and preserving the County's rural character, including a thorough review (and update where necessary) of designated growth areas, based on detailed future needs analyses, trends and projections. Simultaneously, the Plan provides the means for planning the delivery of capable public services to ensure a healthy future economy.

The proposed tower is located between two growth areas (Lake Anna & Mineral), on Zachary

[1] The 522 WCF parcel (Tax Map parcel 28-97F) fronts on both State Routes, but the tower site is accessed from Route 522 (Zachary Taylor Highway).

Taylor Highway (Route 522) which has an annual average daily trips of 4900. Chopping Road (Route 623) has an annual average daily trips of 4100.

2. 2007 Louisa County Wireless Telecommunication Master Plan
This Plan establishes guidelines for the rational growth and development of wireless facilities thus minimizing tower proliferation throughout the County. The Telecommunications Master Plan combines land use strategies with industry accepted radio frequency (RF) engineering standards and propagation or wireless coverage maps to create an illustrative planning tool complimenting related zoning regulations. The Master Plan also provides an engineering analysis, an inventory of existing towers, and an assessment of future wireless needs.

The 2007 Telecommunications Master Plan Projected Theoretical Coverage for 2020 Including County-Owner Land Map page 52 does not propose a tower in this area of the County (Exhibit K). However, since the creation of the 2020 Map, technology and the demand for wireless services has increased over the past 17 years. Therefore, staff finds the proposed wireless tower at this location complies with the Master Plan as it may provide improved wireless coverage for the County.

3. 2024 Public Facilities Impacts Review
The Board of Supervisors adopted a Public Facilities plan on February 20, 2024, as an amendment to the 2040 Comprehensive Plan adopted August 5, 2019. Implementation of the Public Facilities plan allows the County to deliver the planned quality of life and service standards at current and future levels by identifying the impacts of proposed development and offering the means to consider proposed mitigation(s). The Plan aims to ensure that development impacts are adequately assessed and mitigated, to promote sustainable growth and to preserve the community's well-being. As Louisa County grows, the pressure on public facilities and services intensifies. The county expects proposed developments to consider the impacts on Public Facilities and to mitigate the impacts of the development. This mitigation can take various forms, such as impact fees, infrastructure improvements, land dedication, and other items, ensuring that the burden of growth does not disproportionately fall on existing residents and businesses in the County.

This application has therefore been evaluated to determine if it impacts the following areas:

<u>Administration</u>
Staff believes there would be a minimum level of impact to Administration. Community Development Department staff is currently involved in the Conditional Use Permitting Process. Community Development Department staff would also be involved in future site plan reviews, and development permit reviews and inspections.

<u>Fire & EMS</u>
Staff believes the proposed tower would have a positive impact on Fire & EMS service resulting in increased wireless service for communication during an emergency event.

<u>Law Enforcement</u>
Staff believes a positive impact on Law Enforcement service will result in the approval of a new tower as communication is crucial during an emergency event.

Parks and Recreation
Staff believes this project would have no impact on Parks and Recreation.

Schools
Staff believes this project would have a positive impact on Schools as it would increase coverage allowing more parents the option of teleworking and students access to the internet for homework.

Solid Waste
Community Development staff believe there would be a minimum level of impact. Construction debris and refuse is also anticipated from the development to cause impacts as a user of the landfill. Standard charges would apply."

In summary, recent staff analysis clearly describes how the existing WCF, located in the same area of the County as the 522 WCF, supports County goals set out in the Comprehensive Plan and 2024 Public Facilities Impact Review.

Thank you for your consideration of this request. Please contact me with any questions at 434-951-5728 or LSchweller@williamsmullen.com.

Very truly yours,

Lori H. Schweller

Enclosures

cc: American Tower Corporation

Direct Dial: 434.951.5728
LSchweller@williamsmullen.com

August 12, 2025

VIA EMAIL: RMawyer@louisacounty.gov; TEgeland@louisacounty.gov
and FEDERAL EXPRESS

Louisa County Community Development
1 Woolfolk Avenue, Suite 201
Louisa, VA 23093
Attention: Renee Mawyer, Associate Planner/Deputy Subdivision Agent
Tom Egeland, Jr., Deputy Director of Community Development / Deputy Zoning Administrator

RE: **Conditional Use Permit Amendment Request**
Applicant: American Tower Asset Sub II, LLC
Property: Tax Map Parcel 42-34; 977 Chopping Road, Mineral, VA; 22 acres
Property Owner: 4 All Land, LLC, a Virginia limited liability company

Dear Ms. Mawyer and Mr. Egeland:

On behalf of the Applicant, American Tower Asset Sub II, LLC, which is a wholly-owned subsidiary of American Tower Corporation, I request an amendment to an existing Conditional Use Permit (CUP) for an existing wireless communications tower. Our request is to amend certain conditions of the existing Conditional Use Permit, issued July 5, 1994, "for the construction of a 350 foot cellular communications tower and 12' x 26' equipment building" on "property located on the west side of State Route 623, approximately 3.1 miles north of Route 22/23" (the "CUP"). The CUP approval letter, enclosed for reference, is addressed to Jeff Owens, Southwestern Bell Mobile Systems, Inc. t/a Cellular One. As permitted by the CUP, the Property is developed with a 350-foot guy-wired communications tower and a ground equipment compound (the "Facility"). The building permit for the tower was issued on August 12, 1994, and the tower was built in 1994-95.

Enclosed are the following:

- Land Use Amendment Application
- Landowner Letter of Authorization for Permitting
- Verizon Wireless Regulatory Compliance letter
- Check in the amount of $1,150 made payable to Louisa County
- Copy of Existing CUP approval letter

Antennas and related equipment at the Facility provide wireless communications services from Verizon Wireless, AT&T, and T-Mobile. Verizon Wireless submitted a collocation application package in January 2025 to allow Verizon Wireless to remove and replace certain antennas and equipment. We understand that this collocation application raised awareness about the non-transferability condition with Community Development.

CUP Conditions Amendment Request

The Applicant requests elimination of Condition #8, which provides that "***the Conditional Use Permit is not transferable to another applicant or owner***." Over the years since the CUP was issued, the original permit holder, Southwestern Bell Mobile Systems, Inc. assigned the lease through corporate mergers and assignments; and, by assignment, dated February 28, 2007, the Applicant acquired rights in the lease so that the current owner and operator of the Facility is the Applicant. Further, the Property owner at the time of the CUP was Miles Robert Gibson. He has transferred the property to 4 All Land, LLC. Louisa County's current conditional use permits typically are issued for the property and "run with the land" regardless of ownership or operator, so the requested change of eliminating the non-transferability condition will make the CUP consistent with other conditional use permits in the county.

As a tall tower with antennas providing service from the three major wireless communications providers, the Facility serves many County residents, so it is essential that the CUP not be terminated for violation of the condition. We ask for a simple update of the CUP to strike the outdated condition of non-transferability, thus bringing the CUP into compliance.

Additionally, the Applicant requests amendment of Condition #10 by deleting the second sentence, which requires the former permit holder, Southwestern Bell, to remove the facility within 90 days of any permit violation. It is appropriate to replace this condition with the updated condition used in the recent Arcola Towers project discussed below: "***Violation of any conditions contained herein shall be grounds for revocation of the Conditional Use Permit***." The Zoning Ordinance provides in Section 86-43(e) that the Board of Supervisors may revoke a conditional use permit under certain circumstances. The Applicant should be entitled to a public hearing before the revocation of the CUP in the case of an alleged violation. Also, since Southwestern Bell is no longer the lessee / Facility owner/operator, the second sentence is out of date with respect to the responsible party.

Conditional Use Permit Support

The Louisa County Code, Chapter 86 – Land Development Regulations, Division 5 – Conditional Use Permits allows certain uses where so listed in the district regulations of the zoning district where the use is located subject to conditions the Board of Supervisors deems necessary. Subsection (b) of Section 86-43 provides that

> *"(b) In determining imposed conditions, the governing body shall take into consideration the intent of this chapter and may impose reasonable conditions that:*
>
> *(1) Abate or restrict noise, smoke, dust or other elements that may affect surrounding property.*
>
> *(2) Establish setback, side and front yard requirements necessary for orderly development and to prevent traffic congestion.*
>
> *(3) Provide for adequate parking and ingress and egress to public streets or roads.*
>
> *(4) Provide adjoining property with a buffer or shield from view of the proposed use if such use is considered detrimental to adjoining property.*
>
> *(5) Tend to prevent such use from changing the character and established pattern of development of the community."*

As a constructed tower, the Facility will not cause any noise, smoke, dust, or other negative impacts on surrounding properties. The Facility is set back from the road on a 22-acre forested parcel and has been in place for two decades. The proposed amendments to the CUP conditions will not alter the Facility in any way that would change the character of the neighborhood. On the contrary, approving the requested revisions to the CUP conditions will allow the Facility to remain in place with no technical violations, thus providing essential wireless services to County residents. Verizon Wireless, AT&T, and T-Mobile use the Facility to provide important wireless services to the community.

Current Communications Tower Conditions Comparison

We discussed in our pre-application meeting for this proposal that it may be useful to compare the existing CUP conditions to current County CUP conditions for wireless communications facilities. A recently approved communications facility for Arcola Towers LLC, CUP2024-08 (February 20, 2025 approval letter) provides an example of conditional use permit conditions the County currently imposes on similar projects. The majority of its 21 conditions are inapplicable to the Facility because it is already constructed. The Applicant's preference is to leave the existing CUP conditions as-is except #8 and #10, as discussed above. We have the following comments regarding the recent CUP20-24-08 as they relate to the Facility CUP:

1. Construction of the 197-foot-tall monopole tower with a 2 foot tall antenna or its facility shall only take place Monday through Saturday 7:00 AM to 7:00 PM.

Inapplicable since the Facility is already constructed and is 350'.

2. All ground equipment shall be properly shielded from pedestrian view.

Inapplicable since Facility is already constructed with ground equipment well concealed within wooded parcel.

3. The Board of Supervisors or their designated representative shall have the right to inspect the site at any reasonable time without prior notice.

Already provided for in existing CUP #9.

4. All exterior lighting at the wireless communication facility shall be designed and installed to mitigate light pollution to the surrounding areas and skies and shall comply with the specifications of the International Dark-Sky Association (www.darksky.org).

Current CUP Condition #7 addresses painting and lighting, which is already installed.

5. If the approved new tower facility at this location does not become operational within two (2) years from the approval date, then this conditional use permit shall become void. The applicant is allowed one administrative extension of one year from the Zoning Administrator.

Inapplicable as Facility is constructed.

6. The overall tower height shall not exceed 199 feet in height above ground level, which shall include any antennas and a lightning rod.

Inapplicable; CUP is for a 350' tower.

7. The facility shall be developed in accordance with an approved site plan and erosion and sediment control plan to be approved by the appropriate government agency. The applicant shall post the phone number to call 24 hours for noise complaints.

Inapplicable as Facility has been developed. The Facility does not generate noise.

8. The applicant shall secure all necessary permits from the Louisa County Community Development Department.

Inapplicable as Facility has been developed and constructed.

9. Prior to issuance of a building permit for the facility, the applicant shall supply to the Community Development Department a copy of a FAA determination letter and completed NEPA study for the tower.

Inapplicable as Facility has been developed and constructed.

10. The FCC Licensee and affected carriers or service providers shall be responsible for immediately correcting any interference.

Issue is addressed by Condition #5 of the existing CUP.

11. The color and lighting system for the tower facility shall be as follows:
a. The tower shall be gray or another neutral color, acceptable to the Director of Community Development.
b. The tower shall not be lit, unless lighting is required by the Federal Aviation Administration (FAA).

Existing Facility is neutral colors, and it is required to be lit by the FAA.

12. The cellular carriers shall route all emergency "911" calls directly to the Public Safety Access Point charged with taking emergency "911" calls. At the time of application, the Public Safety Access Point is the Louisa County Emergency Services.

The Applicant cannot agree to this condition because it does not apply to the Applicant but to the cellular carriers so is not within the Applicant's control.

13. The tower shall be structurally designed and built to permit the colocation of a minimum of four (4) wireless carriers' antenna arrays and related equipment.

The Applicant would not object to this new condition.

14. The applicant or its assigns or successors in interest shall agree to remove the tower, at their own expense, from the above referenced site not more than six months from the date that the tower is no longer being used to provide space for telecommunications operations and/or providers.

The Applicant would not object to this condition.

15. The facility shall not be accessible to any unauthorized persons.

The Applicant would not object to this condition.

16. The monopole tower shall have all antenna feed lines installed inside the monopole.

Inapplicable as Facility includes a guy-wired tower, not a monopole.

17. All access ports for the tower shall be sealed in a manner that prevents access by birds or other wildlife.

Inapplicable as Facility includes a guy-wired tower, not a monopole.

18. The applicant shall provide the County with an "as built" sealed report by a Registered Virginia Professional Engineer that the tower will support the designed loading to permit the colocation of a minimum of four (4) wireless carriers' antenna arrays and related equipment and be in compliance with ANSI/EIA/TIA 222-F (as amended).

Inapplicable as Facility has been developed and constructed.

19. The applicant is responsible for notifying the Louisa County Community Development Department of the date that the primary lease tenant has become operational and is providing telecommunications services to its customers from the tower.

Inapplicable as Facility is in operation.

20. Entrance permit and/or an approval letter shall be issued by the Virginia Department of Transportation prior to issuance of any building permits.

Inapplicable as Facility has been developed and constructed.

21. Violation of any conditions contained herein shall be grounds for revocation of the Conditional Use Permit.

The Applicant would like to replace existing condition #10 with this condition.

In summary, because most of the current conditions applied to communications towers are inapplicable to this Facility, we ask simply for the elimination of Condition #8 and replacement Condition #10 of the CUP with an updated condition.

Thank you for your consideration of this request. Please contact me with any questions at 434-951-5728 or LSchweller@williamsmullen.com.

Very truly yours,

Lori H. Schweller

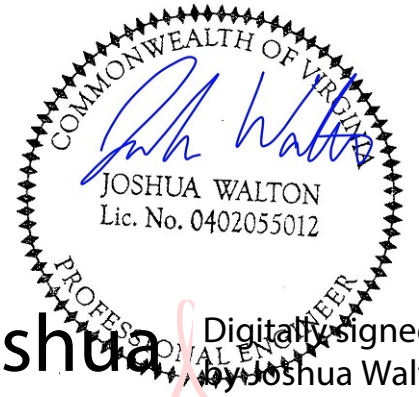
Enclosures

cc: American Tower Corporation

AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	340 ft Guyed Tower
ATC Asset Name	:	Mineral
ATC Asset Number	:	310370
Engineering Number	:	14921176_C3_03
Proposed Carrier	:	VERIZON WIRELESS
Carrier Site Name	:	MINERAL
Carrier Site Number	:	5000114073
Site Location	:	977 Chopping Road Mineral, VA 23117-4145 38.0372° N, 77.924° W
County	:	Louisa
Date	:	November 13, 2024
Max Usage	:	89%
Analysis Result	:	Pass



Joshua Walton

Digitally signed by Joshua Walton
Date: 2024.11.15 12:16:48 -05'00'

COA: 0407004594

Table of Contents

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 340 ft Guyed tower to reflect the change in loading by VERIZON WIRELESS.

Supporting Documents

Tower:	FWT Job #6766000, dated January 19, 1999
Foundation:	FWT, PJF Job #1944894, dated September 9, 1994
Geotechnical:	Triad Engineering Project #G-877, dated September 1, 1994

Analysis

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

Basic Wind Speed:	111 mph (3-second gust)
Basic Wind Speed w/ Ice:	30 mph (3-second gust) w/ 1.00" radial ice concurrent
Code(s):	ANSI/TIA-222-H / 2021 IBC / Virginia Uniform State Building Code
Exposure Category:	B
Risk Category:	II
Topographic Factor Procedure:	Method 1
Topographic Category:	1
Spectral Response:	Ss = 0.27, S_1 = 0.06
Site Class:	D - Stiff Soil - Default

Wind load and Ice thickness have been reduced by applicable existing structure load modification factors in accordance with TIA-222, ANNEX-S

Conclusion

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

If you have any questions or require additional information, please reach out to your American Tower contact. If you do not have an American Tower contact and have an Engineering question, please contact **Engineering@americantower.com** Please include the American Tower asset name, asset number, and engineering number in the subject line for any questions.

Structure Usages

Structural Component	Usage	Control	Location	Result
Leg	89.1%	Member X	Section 22	Pass
Diagonal	54.2%	Member	Section 24	Pass
Horizontal	35.7%	Member	Section 1	Pass
Bolt	14.6%	-	Section 22	Pass
Torque Arm	21.0%	Compression	Elevation 218 ft	Pass
Cable	84.0%	Tension	Elevation 328 ft	Pass
Serviceability Usage	6.0%	Rotation	Elevation 300 ft	Pass
Mat & Pier	85.1%	Bearing [Soil]	Node 1	Pass
Guy Anchor	27.3%	Tension [Anchor Rod]	Node A1	Pass
Guy Anchor	26.9%	Tension [Anchor Rod]	Node A1a	Pass
Guy Anchor	27.4%	Tension [Anchor Rod]	Node A1b	Pass
Guy Anchor	47.4%	Tension [Anchor Rod]	Node A2	Pass
Guy Anchor	46.2%	Tension [Anchor Rod]	Node A2a	Pass
Guy Anchor	46.4%	Tension [Anchor Rod]	Node A2b	Pass

Maximum Reactions

Foundation	Moment (k-ft)	Axial (k)	Uplift (k)	Shear (k)
Guyed – Pivot Base	-	140.8	-	0.6
Guyed Anchor - A2	-	-	27.0	27.5
Guyed Anchor - A1	-	-	10.5	12.7

Reactions shown are maximum overall and not limited by Load Case

Structure base reactions were analyzed using available geotechnical and foundation information.

VERIZON WIRELESS Final Loading

Elev (ft)	Qty	Equipment	Lines
335.0	2	Raycap RCMDC-6627-PF-48	(2) 1 5/8" Hybriflex
	3	Sector Frame	
	3	Samsung B2/B66A RRH ORAN (RF 4439d-25A)	
	3	Samsung MT6413-77A	
	3	Samsung RF4461d-13A	
	6	JMA Wireless MX06FHG865-HG	

Install proposed lines in the place of the existing VERIZON WIRELESS lines.

Other Existing/Reserved Loading

Elev (ft)	Qty	Equipment	Lines
338.0	-	-	(1) 1 1/4" Hybriflex Cable
335.8	3	Antel BXA-80080/8CF	-
335.6	3	Andrew HBXX-6517DS-A2M (43 lbs)	-
319.0	3	Ericsson AIR 6419 B77G	-
317.0	1	Commscope NNH4-65B-R6H4	(2) 0.39" (10mm) Fiber Trunk (1) 0.76" (19.2mm) 8 AWG 6 (1) 0.82" (20.8mm) 8 AWG 6 (1) 0.92" (23.4mm) Cable (4) 1.19" (30.3mm) Cable
	1	Commscope NNHH-65B-R4 (77.4 lbs)	
	2	Commscope NNH4-65C-R6-V3 (102.5 lbs)	
	2	Commscope NNHH-65C-R4	
	2	Raycap DC9-48-60-24-8C-EV (Enclosure)	
	3	Ericsson RRUS 4478 B14 (18.1" Height)	
	3	Ericsson Radio 4490HP 44B5 44B12A C (17.5" Height)	
	3	Ericsson Radio 4890HP 48B2/B25 48B66 M01 (68.3lbs)	
	3	Light Sector Frame	
315.0	3	Ericsson AIR 6419 B77D/ C-Band	-
306.0	3	Site Pro 1 VFA12-HD	-
302.0	3	Ericsson AIR 6419 B41	(3) 1.99" (50.7mm) Hybrid
	3	Ericsson Radio 4460 B25+B66	
	3	Ericsson Radio 4480 B71+B85A	
	3	RFS APXVAALL24 43-U-NA20	
	3	RFS APXVLL19P_43-C-A20	

(If table breaks across pages, please see previous page for data in merged cells)

Standard Conditions

All engineering services performed by ATC Tower Services LLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

- Information supplied by the client regarding antenna, mounts, and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of ATC Tower Services LLC

It is the responsibility of the client to ensure that the information provided to ATC Tower Services LLC and used in the performance of our engineering services is correct and complete.

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

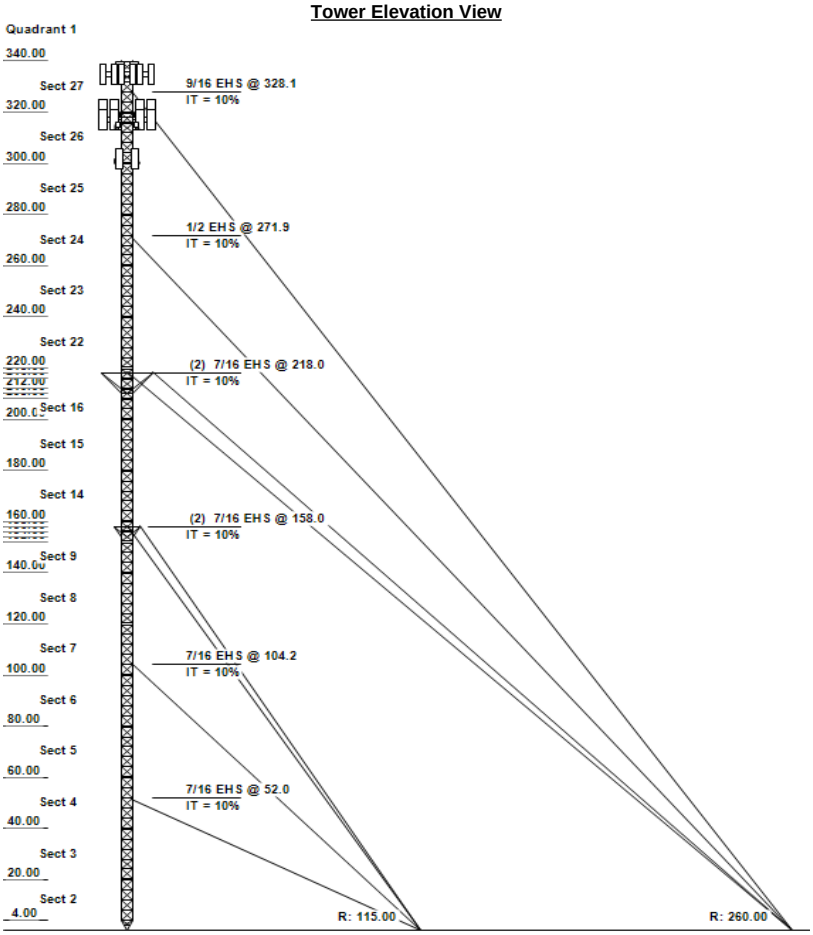
Unless explicitly agreed by both the client and ATC Tower Services LLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. ATC Tower Services LLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.

ANALYSIS PARAMETERS

Design Wind:	108 mph	**Ice Wind:**	29 mph w/ 0.85" ice	**Service Wind:**	60 mph
Risk Category:	II	**Exposure:**	B	**S_s:** 0.271	**S_1:** 0.059
Topo Factor:	Method 1	**Topo Feature:**		**Topo Category:**	1
Structure Height:	340 ft	**Base Elevation:**	0 ft	**Shape:**	Triangle
Base Width:	3.00 ft	**Top Width:**	3.00 ft	**Base Type:**	Pivot

Tower Elevation View



TOWER SECTION PROPERTIES

Section	Leg Members	Diagonal Members	Horizontal Members
1	SOL 50 ksi 2 1/4" SOLID	PL 36 ksi PL 2 x 0.5"	SAE 36 ksi 2X2X0.25
2 - 7	SOL 50 ksi 2 1/4" SOLID	SOL 36 ksi 5/8" SOLID	SAE 36 ksi 2X2X0.125
8	SOL 50 ksi 2" SOLID	SOL 36 ksi 5/8" SOLID	SAE 36 ksi 2X2X0.125
9 - 15	SOL 50 ksi 2" SOLID	SOL 36 ksi 3/4" SOLID	SAU 36 ksi 2X1.5X0.1875
16 - 22	SOL 50 ksi 2" SOLID	SOL 36 ksi 7/8" SOLID	SAU 36 ksi 2X1.5X0.25
23 - 26	SOL 50 ksi 2" SOLID	SOL 36 ksi 5/8" SOLID	SAE 36 ksi 2X2X0.125
27	SOL 50 ksi 2" SOLID	SOL 36 ksi 3/4" SOLID	SAU 36 ksi 2X1.5X0.1875

DISCRETE APPURTENANCE

Elev (ft)	Description
335.8	(3) Antel BXA-80080/8CF
335.6	(3) Andrew HBXX-6517DS-A2M (43 lbs)
335.0	(6) JMA Wireless MX06FHG865-HG
335.0	(3) Samsung MT6413-77A
335.0	(3) Samsung B2/B66A RRH ORAN (RF 4
335.0	(3) Samsung RF4461d-13A
335.0	(3) Generic Round Sector Frame
335.0	(2) Raycap RCMDC-6627-PF-48
319.0	(3) Ericsson AIR 6419 B77G
317.0	(3) Ericsson Radio 4890HP 48B2/B25 48
317.0	(2) Commscope NNH4-65C-R6-V3 (102.5
317.0	(3) Ericsson RRUS 4478 B14 (18.1" Heig
317.0	(2) Commscope NNHH-65C-R4
317.0	(3) Ericsson Radio 4490HP 44B5 44B12A
317.0	(2) Raycap DC9-48-60-24-8C-EV (Enclos
317.0	(3) Generic Flat Light Sector Frame
317.0	(1) Commscope NNH4-65B-R6H4
317.0	(1) Commscope NNHH-65B-R4 (77.4 lbs)
315.0	(3) Ericsson AIR 6419 B77D/ C-Band
306.0	(3) Site Pro 1 VFA12-HD
302.0	(3) Ericsson Radio 4480 B71+B85A
302.0	(3) Ericsson AIR 6419 B41
302.0	(3) Ericsson Radio 4460 B25+B66
302.0	(3) RFS APXVLL19P_43-C-A20
302.0	(3) RFS APXVAALL24 43-U-NA20
216.0	(1) Generic Torque Arm
160.0	(1) Generic Torque Arm

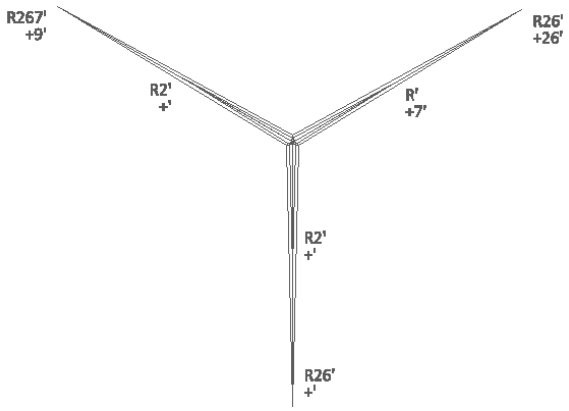
LINEAR APPURTENANCE

Elev (ft)	Description

BASE REACTIONS

Axial (k):	140.80
Shear (k):	0.64

Tower Plan View



GUY ANCHOR REACTIONS

Radius (ft)	Drop (ft)	Azimuth (°)	Uplift (k)	Shear (k)
115.0	17.00	120	10.30	12.66
125.0	5.00	0	10.47	12.40
125.0	11.00	240	10.00	12.51
260.0	11.00	0	27.00	27.32
260.0	26.00	120	25.66	27.48
267.0	19.00	240	25.52	27.31

ANALYSIS PARAMETERS

Location:	Louisa County, VA	**Height:**	340 ft
Type and Shape:	Guyed, Triangle	**Base Elevation:**	0.00 ft
Manufacturer:	FWT	**Bottom Face Width:**	3.00 ft
Kd	0.85	**Top Face Width:**	3.00 ft
Ke:	0.98		

ICE & WIND PARAMETERS

Exposure Category:	B	**Design Wind Speed Without Ice:**	108 mph
Risk Category:	II	**Design Wind Speed with Ice:**	29 mph
Topographic Factor Procedure:	Method 1	**Operational Windspeed:**	60 mph
Topographic Category:	1	**Design Ice Thickness:**	0.85 in
Crest Height:	ft	**HMSL:**	455 ft

SEISMIC PARAMETERS

Analysis Method:	Equivalent Lateral Force Method				
Site Class:	D - Stiff Soil			**Period Based on Rayleigh Method (sec):**	1.79
T_L (sec):	12	**P:**	1.3	**C_s:**	0.030
S_{ds}:	0.286	**S_{d1}:**	0.094	**$C_{s,}$ Max:**	0.030
S_s:	0.271	**S_1:**	0.059	**$C_{s,}$ Min:**	0.030
F_a:	1.583	**F_v:**	2.400		

LOAD CASES

1.2D + 1.0W Normal	1.2D + 1.0W Normal - 108.19 mph Wind with No Ice
1.2D + 1.0W 60°	1.2D + 1.0W 60° - 108.19 mph Wind with No Ice
1.2D + 1.0W 90°	1.2D + 1.0W 90° - 108.19 mph Wind with No Ice
1.2D + 1.0W 120°	1.2D + 1.0W 120° - 108.19 mph Wind with No Ice
1.2D + 1.0W 180°	1.2D + 1.0W 180° - 108.19 mph Wind with No Ice
1.2D + 1.0W 210°	1.2D + 1.0W 210° - 108.19 mph Wind with No Ice
1.2D + 1.0W 240°	1.2D + 1.0W 240° - 108.19 mph Wind with No Ice
1.2D + 1.0W 300°	1.2D + 1.0W 300° - 108.19 mph Wind with No Ice
1.2D + 1.0W 330°	1.2D + 1.0W 330° - 108.19 mph Wind with No Ice
1.2D + 1.0Di + 1.0Wi Normal	1.2D + 1.0Di + 1.0Wi Normal - 29.24 mph Wind with 0.85" Radial Ice
1.2D + 1.0Di + 1.0Wi 60°	1.2D + 1.0Di + 1.0Wi 60° - 29.24 mph Wind with 0.85" Radial Ice
1.2D + 1.0Di + 1.0Wi 90°	1.2D + 1.0Di + 1.0Wi 90° - 29.24 mph Wind with 0.85" Radial Ice
1.2D + 1.0Di + 1.0Wi 120°	1.2D + 1.0Di + 1.0Wi 120° - 29.24 mph Wind with 0.85" Radial Ice
1.2D + 1.0Di + 1.0Wi 180°	1.2D + 1.0Di + 1.0Wi 180° - 29.24 mph Wind with 0.85" Radial Ice
1.2D + 1.0Di + 1.0Wi 210°	1.2D + 1.0Di + 1.0Wi 210° - 29.24 mph Wind with 0.85" Radial Ice
1.2D + 1.0Di + 1.0Wi 240°	1.2D + 1.0Di + 1.0Wi 240° - 29.24 mph Wind with 0.85" Radial Ice
1.2D + 1.0Di + 1.0Wi 300°	1.2D + 1.0Di + 1.0Wi 300° - 29.24 mph Wind with 0.85" Radial Ice
1.2D + 1.0Di + 1.0Wi 330°	1.2D + 1.0Di + 1.0Wi 330° - 29.24 mph Wind with 0.85" Radial Ice
1.2D + 1.0Ev + 1.0Eh Normal	1.2D + 1.0Ev + 1.0Eh Normal - Seismic
1.2D + 1.0Ev + 1.0Eh 60°	1.2D + 1.0Ev + 1.0Eh 60° - Seismic
1.2D + 1.0Ev + 1.0Eh 90°	1.2D + 1.0Ev + 1.0Eh 90° - Seismic
1.2D + 1.0Ev + 1.0Eh 120°	1.2D + 1.0Ev + 1.0Eh 120° - Seismic
1.2D + 1.0Ev + 1.0Eh 180°	1.2D + 1.0Ev + 1.0Eh 180° - Seismic
1.2D + 1.0Ev + 1.0Eh 210°	1.2D + 1.0Ev + 1.0Eh 210° - Seismic
1.2D + 1.0Ev + 1.0Eh 240°	1.2D + 1.0Ev + 1.0Eh 240° - Seismic
1.2D + 1.0Ev + 1.0Eh 300°	1.2D + 1.0Ev + 1.0Eh 300° - Seismic
1.2D + 1.0Ev + 1.0Eh 330°	1.2D + 1.0Ev + 1.0Eh 330° - Seismic

LOAD CASES	
1.0D + 1.0W Service Normal	1.0D + 1.0W Service Normal - 60 mph Wind with No Ice
1.0D + 1.0W Service 60°	1.0D + 1.0W Service 60° - 60 mph Wind with No Ice
1.0D + 1.0W Service 90°	1.0D + 1.0W Service 90° - 60 mph Wind with No Ice
1.0D + 1.0W Service 120°	1.0D + 1.0W Service 120° - 60 mph Wind with No Ice
1.0D + 1.0W Service 180°	1.0D + 1.0W Service 180° - 60 mph Wind with No Ice
1.0D + 1.0W Service 210°	1.0D + 1.0W Service 210° - 60 mph Wind with No Ice
1.0D + 1.0W Service 240°	1.0D + 1.0W Service 240° - 60 mph Wind with No Ice
1.0D + 1.0W Service 300°	1.0D + 1.0W Service 300° - 60 mph Wind with No Ice
1.0D + 1.0W Service 330°	1.0D + 1.0W Service 330° - 60 mph Wind with No Ice

TOWER LOADING – DISCRETE APPURTENANCE

Discrete Appurtenance Properties for LC: **1.2D + 1.0W**

Elev (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc. (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
335.8	Antel BXA-80080/8CF	3	31	10.9	8.0	11.2	5.9	0.80	0.68	0.0	0.00	35.00	530	112
335.6	Andrew HBXX-6517DS-A2M (43 lbs	3	43	8.5	6.2	12.0	6.5	0.80	0.68	0.0	0.00	34.99	414	155
335.0	Samsung B2/B66A RRH ORAN (RF 4	3	75	1.9	1.3	15.0	10.0	0.80	0.50	0.0	0.00	34.97	67	269
335.0	Samsung RF4461d-13A	3	79	1.9	1.3	15.0	10.2	0.80	0.50	0.0	0.00	34.97	67	285
335.0	Samsung MT6413-77A	3	57	3.8	2.4	15.8	5.5	0.80	0.61	0.0	0.00	34.97	166	206
335.0	Raycap RCMDC-6627-PF-48	2	32	4.1	2.5	16.5	12.6	0.80	0.79	0.0	0.00	34.97	152	77
335.0	JMA Wireless MX06FHG865-HG	6	51	11.6	8.0	12.2	7.5	0.80	0.70	0.0	0.00	34.97	1159	367
335.0	Generic Round Sector Frame	3	700	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.00	34.97	645	2520
319.0	Ericsson AIR 6419 B77G	3	66	3.8	2.4	16.1	7.9	0.80	0.65	0.0	0.00	34.49	174	238
317.0	Ericsson Radio 4490HP 44B5 44B	3	68	1.5	1.5	15.1	6.8	0.80	0.67	0.0	0.00	34.43	69	245
317.0	Ericsson RRUS 4478 B14 (18.1"	3	59	2.0	1.5	13.4	8.3	0.80	0.50	0.0	0.00	34.43	71	214
317.0	Ericsson Radio 4890HP 48B2/B25	3	68	2.2	1.5	15.1	6.9	0.80	0.50	0.0	0.00	34.43	77	246
317.0	Raycap DC9-48-60-24-8C-EV (Enc	2	19	2.7	2.2	12.4	9.7	0.80	0.67	0.0	0.00	34.43	84	44
317.0	Commscope NNH4-65B-R6H4	1	83	12.3	6.0	19.6	7.8	0.80	1.00	0.0	0.00	34.43	287	100
317.0	Commscope NNHH-65B-R4 (77.4 lb	1	77	12.3	6.0	19.6	7.8	0.80	0.73	0.7	146.89	34.45	210	93
317.0	Commscope NNHH-65C-R4	2	99	17.1	8.0	19.6	7.8	0.80	0.64	0.4	204.71	34.44	512	238
317.0	Commscope NNH4-65C-R6-V3 (102.	2	103	17.1	8.0	19.6	7.8	0.80	0.73	0.0	0.00	34.43	584	246
317.0	Generic Flat Light Sector Fram	3	800	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.00	34.43	790	2880
315.0	Ericsson AIR 6419 B77D/ C-Band	3	64	3.8	2.4	16.1	7.3	0.80	0.64	0.0	0.00	34.36	170	230
306.0	Site Pro 1 VFA12-HD	3	690	13.3	0.0	0.0	0.0	0.75	0.67	0.0	0.00	34.08	583	2484
302.0	Ericsson Radio 4460 B25+B66	3	109	2.6	1.6	15.7	12.1	0.80	0.50	0.0	0.00	33.95	89	392
302.0	Ericsson Radio 4480 B71+B85A	3	84	2.9	1.8	15.7	7.5	0.80	0.50	0.0	0.00	33.95	99	302
302.0	Ericsson AIR 6419 B41	3	69	5.6	2.8	20.0	6.3	0.80	0.60	0.0	0.00	33.95	233	247
302.0	RFS APXVLL19P_43-C-A20	3	41	8.2	6.3	11.3	4.6	0.80	0.65	0.0	0.00	33.95	371	147
302.0	RFS APXVAALL24 43-U-NA20	3	123	20.2	8.0	24.0	8.5	0.80	0.63	0.0	0.00	33.95	883	442
216.0	Generic Torque Arm	1	500	15.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	30.85	393	600
160.0	Generic Torque Arm	1	500	15.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	28.32	361	600
	Totals	**72**	**11,649**	**582.2**									9,240	13,979

Discrete Appurtenance Properties for LC: **1.2D + 1.0Di + 1.0Wi**

Elev (ft)	Description	Qty	Ice Wt (lb)	Ice EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc. (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
335.8	Antel BXA-80080/8CF	3	158	12.9	8.0	11.2	5.9	0.80	0.68	0.0	0.00	2.56	46	493
335.6	Andrew HBXX-6517DS-A2M (43 lbs	3	151	10.3	6.2	12.0	6.5	0.80	0.68	0.0	0.00	2.56	37	479
335.0	Samsung B2/B66A RRH ORAN (RF 4	3	114	2.4	1.3	15.0	10.0	0.80	0.50	0.0	0.00	2.55	6	387
335.0	Samsung RF4461d-13A	3	119	2.4	1.3	15.0	10.2	0.80	0.50	0.0	0.00	2.55	6	404
335.0	Samsung MT6413-77A	3	109	4.6	2.4	15.8	5.5	0.80	0.61	0.0	0.00	2.55	15	363
335.0	Raycap RCMDC-6627-PF-48	2	110	4.9	2.5	16.5	12.6	0.80	0.79	0.0	0.00	2.55	13	233
335.0	JMA Wireless MX06FHG865-HG	6	196	13.6	8.0	12.2	7.5	0.80	0.70	0.0	0.00	2.55	99	1240
335.0	Generic Round Sector Frame	3	1299	24.6	0.0	0.0	0.0	0.75	0.67	0.0	0.00	2.55	80	4318
319.0	Ericsson AIR 6419 B77G	3	125	4.6	2.4	16.1	7.9	0.80	0.65	0.0	0.00	2.52	15	416
317.0	Ericsson Radio 4490HP 44B5 44B	3	96	1.9	1.5	15.1	6.8	0.80	0.67	0.0	0.00	2.51	6	330
317.0	Ericsson RRUS 4478 B14 (18.1"	3	97	2.6	1.5	13.4	8.3	0.80	0.50	0.0	0.00	2.51	7	326
317.0	Ericsson Radio 4890HP 48B2/B25	3	105	2.8	1.5	15.1	6.9	0.80	0.50	0.0	0.00	2.51	7	356
317.0	Raycap DC9-48-60-24-8C-EV (Enc	2	70	3.4	2.2	12.4	9.7	0.80	0.67	0.0	0.00	2.51	8	147
317.0	Commscope NNH4-65B-R6H4	1	237	14.0	6.0	19.6	7.8	0.80	1.00	0.0	0.00	2.51	24	253
317.0	Commscope NNHH-65B-R4 (77.4 lb	1	231	14.0	6.0	19.6	7.8	0.80	0.73	0.7	12.23	2.52	17	246
317.0	Commscope NNHH-65C-R4	2	300	19.3	8.0	19.6	7.8	0.80	0.64	0.4	16.92	2.52	42	639
317.0	Commscope NNH4-65C-R6-V3 (102.	2	303	19.3	8.0	19.6	7.8	0.80	0.73	0.0	0.00	2.51	48	647
317.0	Generic Flat Light Sector Fram	3	1481	27.1	0.0	0.0	0.0	0.75	0.67	0.0	0.00	2.51	87	4922
315.0	Ericsson AIR 6419 B77D/ C-Band	3	121	4.6	2.4	16.1	7.3	0.80	0.64	0.0	0.00	2.51	15	402
306.0	Site Pro 1 VFA12-HD	3	1301	21.7	0.0	0.0	0.0	0.75	0.67	0.0	0.00	2.49	69	4316
302.0	Ericsson Radio 4460 B25+B66	3	163	3.2	1.6	15.7	12.1	0.80	0.50	0.0	0.00	2.48	8	554
302.0	Ericsson Radio 4480 B71+B85A	3	130	3.5	1.8	15.7	7.5	0.80	0.50	0.0	0.00	2.48	9	441
302.0	Ericsson AIR 6419 B41	3	142	6.6	2.8	20.0	6.3	0.80	0.60	0.0	0.00	2.48	20	468
302.0	RFS APXVLL19P_43-C-A20	3	134	10.1	6.3	11.3	4.6	0.80	0.65	0.0	0.00	2.48	33	426
302.0	RFS APXVAALL24 43-U-NA20	3	361	22.5	8.0	24.0	8.5	0.80	0.63	0.0	0.00	2.48	72	1156
216.0	Generic Torque Arm	1	705	21.1	0.0	0.0	0.0	1.00	1.00	0.0	0.00	2.25	41	805
160.0	Generic Torque Arm	1	699	21.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	2.07	37	799
	Totals	**72**	**23,235**	**750.6**									869	25,564

Discrete Appurtenance Properties for LC: **1.0D + 1.0W Service**

Elev (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc. (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
335.8	Antel BXA-80080/8CF	3	31	10.9	8.0	11.2	5.9	0.80	0.68	0.0	0.00	10.76	163	93
335.6	Andrew HBXX-6517DS-A2M (43 lbs	3	43	8.5	6.2	12.0	6.5	0.80	0.68	0.0	0.00	10.76	127	129
335.0	Samsung B2/B66A RRH ORAN (RF 4	3	75	1.9	1.3	15.0	10.0	0.80	0.50	0.0	0.00	10.76	21	224
335.0	Samsung RF4461d-13A	3	79	1.9	1.3	15.0	10.2	0.80	0.50	0.0	0.00	10.76	21	237
335.0	Samsung MT6413-77A	3	57	3.8	2.4	15.8	5.5	0.80	0.61	0.0	0.00	10.76	51	172
335.0	Raycap RCMDC-6627-PF-48	2	32	4.1	2.5	16.5	12.6	0.80	0.79	0.0	0.00	10.76	47	64
335.0	JMA Wireless MX06FHG865-HG	6	51	11.6	8.0	12.2	7.5	0.80	0.70	0.0	0.00	10.76	357	306
335.0	Generic Round Sector Frame	3	700	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.00	10.76	198	2100
319.0	Ericsson AIR 6419 B77G	3	66	3.8	2.4	16.1	7.9	0.80	0.65	0.0	0.00	10.61	53	198

Elev (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc. (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
317.0	Ericsson Radio 4490HP 44B5 44B	3	68	1.5	1.5	15.1	6.8	0.80	0.67	0.0	0.00	10.59	21	204
317.0	Ericsson RRUS 4478 B14 (18.1"	3	59	2.0	1.5	13.4	8.3	0.80	0.50	0.0	0.00	10.59	22	178
317.0	Ericsson Radio 4890HP 48B2/B25	3	68	2.2	1.5	15.1	6.9	0.80	0.50	0.0	0.00	10.59	24	205
317.0	Raycap DC9-48-60-24-8C-EV (Enc	2	19	2.7	2.2	12.4	9.7	0.80	0.67	0.0	0.00	10.59	26	37
317.0	Commscope NNH4-65B-R6H4	1	83	12.3	6.0	19.6	7.8	0.80	1.00	0.0	0.00	10.59	88	83
317.0	Commscope NNHH-65B-R4 (77.4 lb	1	77	12.3	6.0	19.6	7.8	0.80	0.73	0.7	45.18	10.60	65	77
317.0	Commscope NNHH-65C-R4	2	99	17.1	8.0	19.6	7.8	0.80	0.64	0.4	62.96	10.59	157	198
317.0	Commscope NNH4-65C-R6-V3 (102.	2	103	17.1	8.0	19.6	7.8	0.80	0.73	0.0	0.00	10.59	179	205
317.0	Generic Flat Light Sector Fram	3	800	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.00	10.59	243	2400
315.0	Ericsson AIR 6419 B77D/ C-Band	3	64	3.8	2.4	16.1	7.3	0.80	0.64	0.0	0.00	10.57	52	192
306.0	Site Pro 1 VFA12-HD	3	690	13.3	0.0	0.0	0.0	0.75	0.67	0.0	0.00	10.48	179	2070
302.0	Ericsson Radio 4460 B25+B66	3	109	2.6	1.6	15.7	12.1	0.80	0.50	0.0	0.00	10.44	27	327
302.0	Ericsson Radio 4480 B71+B85A	3	84	2.9	1.8	15.7	7.5	0.80	0.50	0.0	0.00	10.44	30	252
302.0	Ericsson AIR 6419 B41	3	69	5.6	2.8	20.0	6.3	0.80	0.60	0.0	0.00	10.44	72	206
302.0	RFS APXVLL19P_43-C-A20	3	41	8.2	6.3	11.3	4.6	0.80	0.65	0.0	0.00	10.44	114	123
302.0	RFS APXVAALL24 43-U-NA20	3	123	20.2	8.0	24.0	8.5	0.80	0.63	0.0	0.00	10.44	272	368
216.0	Generic Torque Arm	1	500	15.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	9.49	121	500
160.0	Generic Torque Arm	1	500	15.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	8.71	111	500
	Totals	**72**	**11,649**	**582.2**									2,842	11,649

TOWER LOADING – LINEAR APPURTENANCE

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	% In Wind	Spread On Faces	Bundling	Cluster Dia (in)	Out of Zone	Spacing (in)	Orient. Factor	K_a Override
0.0	338.0	1 1/4" Hybriflex Cable	1	1.54	1.00	100	1	Individual	0.00	N	1.00	1.00	0.00
0.0	335.0	1 5/8" Hybriflex	2	1.98	1.30	100	1	Individual	0.00	N	1.00	1.00	0.00
0.0	317.0	0.76" (19.2mm) 8 AWG 6	1	0.76	0.53	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	317.0	0.82" (20.8mm) 8 AWG 6	1	0.82	0.62	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	317.0	1.19" (30.3mm) Cable	4	1.19	1.11	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	317.0	0.92" (23.4mm) Cable	1	0.92	0.89	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	317.0	0.39" (10mm) Fiber Trunk	2	0.39	0.06	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	302.0	1.99" (50.7mm) Hybrid	3	1.99	1.90	100	1	Individual	0.00	N	1.00	1.00	0.00

SECTION FORCES

1.2D + 1.0W Normal — Gust Response Factor (Gh): 0.85
108.19 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
27	330	34.82	3.111	9.634	0.00	0.201	2.59	1.00	1.00	0.0	8.71	22.57	0.00	1260	0	668	155	823
26	310	34.21	2.833	9.139	0.00	0.189	2.63	1.00	1.00	0.0	8.12	21.37	0.00	1296	0	621	451	1073
25	290	33.56	2.833	9.139	0.00	0.189	2.63	1.00	1.00	0.0	8.12	21.37	0.00	1443	0	610	668	1278
24	270	32.88	3.111	9.139	0.00	0.193	2.62	1.00	1.00	0.0	8.40	21.99	0.00	1466	0	615	654	1269
23	250	32.17	2.833	9.139	0.00	0.189	2.63	1.00	1.00	0.0	8.12	21.37	0.00	1443	0	584	640	1225
22	230	31.41	2.833	10.128	0.00	0.205	2.58	1.00	1.00	0.0	8.73	22.53	0.00	1693	0	602	625	1227
21	219	30.97	0.472	0.982	0.00	0.230	2.50	1.00	1.00	0.0	1.05	2.63	0.00	179	0	69	62	131
20	217	30.89	0.932	0.982	0.00	0.302	2.29	1.00	1.00	0.0	1.53	3.51	0.00	209	0	92	61	154
19	214	30.77	0.944	1.975	0.00	0.230	2.50	1.00	1.00	0.0	2.10	5.26	0.00	357	0	137	122	260
18	211	30.65	0.472	0.983	0.00	0.230	2.50	1.00	1.00	0.0	1.05	2.63	0.00	179	0	69	61	130
17	209	30.56	0.932	0.982	0.00	0.302	2.29	1.00	1.00	0.0	1.53	3.51	0.00	209	0	91	61	152
16	204	30.35	1.417	4.013	0.00	0.214	2.55	1.00	1.00	0.0	3.76	9.59	0.00	691	0	247	242	489
15	190	29.74	2.833	9.634	0.00	0.197	2.61	1.00	1.00	0.0	8.42	21.95	0.00	1555	0	555	592	1147
14	170	28.81	2.833	9.634	0.00	0.197	2.61	1.00	1.00	0.0	8.42	21.95	0.00	1555	0	538	573	1111
13	159	28.27	0.472	0.939	0.00	0.223	2.52	1.00	1.00	0.0	1.02	2.58	0.00	163	0	62	56	118
12	157	28.16	0.472	0.939	0.00	0.223	2.52	1.00	1.00	0.0	1.02	2.58	0.00	163	0	62	56	118
11	155	28.06	0.472	0.939	0.00	0.223	2.52	1.00	1.00	0.0	1.02	2.58	0.00	163	0	62	56	117
10	153	27.96	0.472	0.939	0.00	0.223	2.52	1.00	1.00	0.0	1.02	2.58	0.00	163	0	61	56	117
9	146	27.59	1.889	5.759	0.00	0.201	2.59	1.00	1.00	0.0	5.23	13.57	0.00	940	0	318	329	648
8	130	26.69	2.833	9.139	0.00	0.189	2.63	1.00	1.00	0.0	8.12	21.37	0.00	1443	0	485	531	1016
7	110	25.44	3.094	9.962	0.00	0.205	2.58	1.00	1.00	0.0	8.88	22.91	0.00	1671	0	496	506	1002
6	90	24.03	2.812	9.965	0.00	0.200	2.59	1.00	1.00	0.0	8.59	22.30	0.00	1648	0	455	478	933
5	70	22.36	2.812	9.965	0.00	0.200	2.59	1.00	1.00	0.0	8.59	22.30	0.00	1648	0	424	445	869
4	50	20.31	3.094	9.965	0.00	0.205	2.58	1.00	1.00	0.0	8.88	22.92	0.00	1671	0	396	404	800
3	30	17.55	2.812	9.965	0.00	0.200	2.59	1.00	1.00	0.0	8.59	22.30	0.00	1648	0	333	349	682
2	12	17.54	2.344	7.960	0.00	0.202	2.59	1.00	1.00	0.0	6.96	18.03	0.00	1321	0	269	279	548
1	2	17.54	1.639	1.635	0.00	0.485	1.92	1.00	1.00	0.0	2.75	5.27	0.00	415	0	79	60	139
													Totals	**26,588**	**0**			**17,572**

1.2D + 1.0W 60° — Gust Response Factor (Gh): 0.85
108.19 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
27	330	34.82	3.111	9.634	0.00	0.201	2.59	0.80	1.00	0.0	8.09	20.96	0.00	1260	0	620	155	775
26	310	34.21	2.833	9.139	0.00	0.189	2.63	0.80	1.00	0.0	7.55	19.88	0.00	1296	0	578	451	1029
25	290	33.56	2.833	9.139	0.00	0.189	2.63	0.80	1.00	0.0	7.55	19.88	0.00	1443	0	567	668	1235
24	270	32.88	3.111	9.139	0.00	0.193	2.62	0.80	1.00	0.0	7.78	20.37	0.00	1466	0	569	654	1224
23	250	32.17	2.833	9.139	0.00	0.189	2.63	0.80	1.00	0.0	7.55	19.88	0.00	1443	0	544	640	1184
22	230	31.41	2.833	10.128	0.00	0.205	2.58	0.80	1.00	0.0	8.16	21.07	0.00	1693	0	562	625	1188
21	219	30.97	0.472	0.982	0.00	0.230	2.50	0.80	1.00	0.0	0.96	2.39	0.00	179	0	63	62	125
20	217	30.89	0.932	0.982	0.00	0.302	2.29	0.80	1.00	0.0	1.35	3.08	0.00	209	0	81	61	142
19	214	30.77	0.944	1.975	0.00	0.230	2.50	0.80	1.00	0.0	1.92	4.78	0.00	357	0	125	122	248
18	211	30.65	0.472	0.983	0.00	0.230	2.50	0.80	1.00	0.0	0.96	2.40	0.00	179	0	62	61	123
17	209	30.56	0.932	0.982	0.00	0.302	2.29	0.80	1.00	0.0	1.35	3.08	0.00	209	0	80	61	141
16	204	30.35	1.417	4.013	0.00	0.214	2.55	0.80	1.00	0.0	3.48	8.86	0.00	691	0	229	242	470
15	190	29.74	2.833	9.634	0.00	0.197	2.61	0.80	1.00	0.0	7.86	20.48	0.00	1555	0	518	592	1110
14	170	28.81	2.833	9.634	0.00	0.197	2.61	0.80	1.00	0.0	7.86	20.48	0.00	1555	0	501	573	1075
13	159	28.27	0.472	0.939	0.00	0.223	2.52	0.80	1.00	0.0	0.93	2.34	0.00	163	0	56	56	113
12	157	28.16	0.472	0.939	0.00	0.223	2.52	0.80	1.00	0.0	0.93	2.34	0.00	163	0	56	56	112
11	155	28.06	0.472	0.939	0.00	0.223	2.52	0.80	1.00	0.0	0.93	2.34	0.00	163	0	56	56	112
10	153	27.96	0.472	0.939	0.00	0.223	2.52	0.80	1.00	0.0	0.93	2.34	0.00	163	0	56	56	111
9	146	27.59	1.889	5.759	0.00	0.201	2.59	0.80	1.00	0.0	4.86	12.59	0.00	940	0	295	329	625
8	130	26.69	2.833	9.139	0.00	0.189	2.63	0.80	1.00	0.0	7.55	19.88	0.00	1443	0	451	531	982
7	110	25.44	3.094	9.962	0.00	0.205	2.58	0.80	1.00	0.0	8.26	21.32	0.00	1671	0	461	506	967
6	90	24.03	2.812	9.965	0.00	0.200	2.59	0.80	1.00	0.0	8.03	20.84	0.00	1648	0	426	478	904
5	70	22.36	2.812	9.965	0.00	0.200	2.59	0.80	1.00	0.0	8.03	20.84	0.00	1648	0	396	445	841
4	50	20.31	3.094	9.965	0.00	0.205	2.58	0.80	1.00	0.0	8.26	21.32	0.00	1671	0	368	404	772
3	30	17.55	2.812	9.965	0.00	0.200	2.59	0.80	1.00	0.0	8.03	20.84	0.00	1648	0	311	349	660
2	12	17.54	2.344	7.960	0.00	0.202	2.59	0.80	1.00	0.0	6.50	16.82	0.00	1321	0	251	279	530
1	2	17.54	1.639	1.635	0.00	0.485	1.92	0.80	1.00	0.0	2.42	4.64	0.00	415	0	69	60	129
													Totals	**26,588**	**0**			**16,926**

1.2D + 1.0W 90° — Gust Response Factor (Gh): 0.85
108.19 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
27	330	34.82	3.111	9.634	0.00	0.201	2.59	0.85	1.00	0.0	8.24	21.36	0.00	1260	0	632	155	787
26	310	34.21	2.833	9.139	0.00	0.189	2.63	0.85	1.00	0.0	7.69	20.25	0.00	1296	0	589	451	1040
25	290	33.56	2.833	9.139	0.00	0.189	2.63	0.85	1.00	0.0	7.69	20.25	0.00	1443	0	578	668	1246
24	270	32.88	3.111	9.139	0.00	0.193	2.62	0.85	1.00	0.0	7.93	20.77	0.00	1466	0	581	654	1235
23	250	32.17	2.833	9.139	0.00	0.189	2.63	0.85	1.00	0.0	7.69	20.25	0.00	1443	0	554	640	1194
22	230	31.41	2.833	10.128	0.00	0.205	2.58	0.85	1.00	0.0	8.31	21.43	0.00	1693	0	572	625	1197
21	219	30.97	0.472	0.982	0.00	0.230	2.50	0.85	1.00	0.0	0.98	2.45	0.00	179	0	65	62	126
20	217	30.89	0.932	0.982	0.00	0.302	2.29	0.85	1.00	0.0	1.39	3.19	0.00	209	0	84	61	145
19	214	30.77	0.944	1.975	0.00	0.230	2.50	0.85	1.00	0.0	1.96	4.90	0.00	357	0	128	122	251

SECTION FORCES

1.2D + 1.0W 90° Gust Response Factor (Gh): 0.85
108.19 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
18	211	30.65	0.472	0.983	0.00	0.230	2.50	0.85	1.00	0.0	0.98	2.45	0.00	179	0	64	61	125
17	209	30.56	0.932	0.982	0.00	0.302	2.29	0.85	1.00	0.0	1.39	3.19	0.00	209	0	83	61	144
16	204	30.35	1.417	4.013	0.00	0.214	2.55	0.85	1.00	0.0	3.55	9.04	0.00	691	0	233	242	475
15	190	29.74	2.833	9.634	0.00	0.197	2.61	0.85	1.00	0.0	8.00	20.85	0.00	1555	0	527	592	1119
14	170	28.81	2.833	9.634	0.00	0.197	2.61	0.85	1.00	0.0	8.00	20.85	0.00	1555	0	511	573	1084
13	159	28.27	0.472	0.939	0.00	0.223	2.52	0.85	1.00	0.0	0.95	2.40	0.00	163	0	58	56	114
12	157	28.16	0.472	0.939	0.00	0.223	2.52	0.85	1.00	0.0	0.95	2.40	0.00	163	0	58	56	114
11	155	28.06	0.472	0.939	0.00	0.223	2.52	0.85	1.00	0.0	0.95	2.40	0.00	163	0	57	56	113
10	153	27.96	0.472	0.939	0.00	0.223	2.52	0.85	1.00	0.0	0.95	2.40	0.00	163	0	57	56	113
9	146	27.59	1.889	5.759	0.00	0.201	2.59	0.85	1.00	0.0	4.95	12.83	0.00	940	0	301	329	630
8	130	26.69	2.833	9.139	0.00	0.189	2.63	0.85	1.00	0.0	7.69	20.25	0.00	1443	0	459	531	990
7	110	25.44	3.094	9.962	0.00	0.205	2.58	0.85	1.00	0.0	8.42	21.72	0.00	1671	0	470	506	976
6	90	24.03	2.812	9.965	0.00	0.200	2.59	0.85	1.00	0.0	8.17	21.20	0.00	1648	0	433	478	911
5	70	22.36	2.812	9.965	0.00	0.200	2.59	0.85	1.00	0.0	8.17	21.20	0.00	1648	0	403	445	848
4	50	20.31	3.094	9.965	0.00	0.205	2.58	0.85	1.00	0.0	8.42	21.72	0.00	1671	0	375	404	779
3	30	17.55	2.812	9.965	0.00	0.200	2.59	0.85	1.00	0.0	8.17	21.20	0.00	1648	0	316	349	666
2	12	17.54	2.344	7.960	0.00	0.202	2.59	0.85	1.00	0.0	6.61	17.12	0.00	1321	0	255	279	534
1	2	17.54	1.639	1.635	0.00	0.485	1.92	0.85	1.00	0.0	2.50	4.80	0.00	415	0	72	60	131
													Totals	**26,588**	**0**			**17,087**

1.2D + 1.0W 120° Gust Response Factor (Gh): 0.85
108.19 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
27	330	34.82	3.111	9.634	0.00	0.201	2.59	1.00	1.00	0.0	8.71	22.57	0.00	1260	0	668	155	823
26	310	34.21	2.833	9.139	0.00	0.189	2.63	1.00	1.00	0.0	8.12	21.37	0.00	1296	0	621	451	1073
25	290	33.56	2.833	9.139	0.00	0.189	2.63	1.00	1.00	0.0	8.12	21.37	0.00	1443	0	610	668	1278
24	270	32.88	3.111	9.139	0.00	0.193	2.62	1.00	1.00	0.0	8.40	21.99	0.00	1466	0	615	654	1269
23	250	32.17	2.833	9.139	0.00	0.189	2.63	1.00	1.00	0.0	8.12	21.37	0.00	1443	0	584	640	1225
22	230	31.41	2.833	10.128	0.00	0.205	2.58	1.00	1.00	0.0	8.73	22.53	0.00	1693	0	602	625	1227
21	219	30.97	0.472	0.982	0.00	0.230	2.50	1.00	1.00	0.0	1.05	2.63	0.00	179	0	69	62	131
20	217	30.89	0.932	0.982	0.00	0.302	2.29	1.00	1.00	0.0	1.53	3.51	0.00	209	0	92	61	154
19	214	30.77	0.944	1.975	0.00	0.230	2.50	1.00	1.00	0.0	2.10	5.26	0.00	357	0	137	122	260
18	211	30.65	0.472	0.983	0.00	0.230	2.50	1.00	1.00	0.0	1.05	2.63	0.00	179	0	69	61	130
17	209	30.56	0.932	0.982	0.00	0.302	2.29	1.00	1.00	0.0	1.53	3.51	0.00	209	0	91	61	152
16	204	30.35	1.417	4.013	0.00	0.214	2.55	1.00	1.00	0.0	3.76	9.59	0.00	691	0	247	242	489
15	190	29.74	2.833	9.634	0.00	0.197	2.61	1.00	1.00	0.0	8.42	21.95	0.00	1555	0	555	592	1147
14	170	28.81	2.833	9.634	0.00	0.197	2.61	1.00	1.00	0.0	8.42	21.95	0.00	1555	0	538	573	1111
13	159	28.27	0.472	0.939	0.00	0.223	2.52	1.00	1.00	0.0	1.02	2.58	0.00	163	0	62	56	118
12	157	28.16	0.472	0.939	0.00	0.223	2.52	1.00	1.00	0.0	1.02	2.58	0.00	163	0	62	56	118
11	155	28.06	0.472	0.939	0.00	0.223	2.52	1.00	1.00	0.0	1.02	2.58	0.00	163	0	62	56	117
10	153	27.96	0.472	0.939	0.00	0.223	2.52	1.00	1.00	0.0	1.02	2.58	0.00	163	0	61	56	117
9	146	27.59	1.889	5.759	0.00	0.201	2.59	1.00	1.00	0.0	5.23	13.57	0.00	940	0	318	329	648
8	130	26.69	2.833	9.139	0.00	0.189	2.63	1.00	1.00	0.0	8.12	21.37	0.00	1443	0	485	531	1016
7	110	25.44	3.094	9.962	0.00	0.205	2.58	1.00	1.00	0.0	8.88	22.91	0.00	1671	0	496	506	1002
6	90	24.03	2.812	9.965	0.00	0.200	2.59	1.00	1.00	0.0	8.59	22.30	0.00	1648	0	455	478	933
5	70	22.36	2.812	9.965	0.00	0.200	2.59	1.00	1.00	0.0	8.59	22.30	0.00	1648	0	424	445	869
4	50	20.31	3.094	9.965	0.00	0.205	2.58	1.00	1.00	0.0	8.88	22.92	0.00	1671	0	396	404	800
3	30	17.55	2.812	9.965	0.00	0.200	2.59	1.00	1.00	0.0	8.59	22.30	0.00	1648	0	333	349	682
2	12	17.54	2.344	7.960	0.00	0.202	2.59	1.00	1.00	0.0	6.96	18.03	0.00	1321	0	269	279	548
1	2	17.54	1.639	1.635	0.00	0.485	1.92	1.00	1.00	0.0	2.75	5.27	0.00	415	0	79	60	139
													Totals	**26,588**	**0**			**17,572**

1.2D + 1.0W 180° Gust Response Factor (Gh): 0.85
108.19 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
27	330	34.82	3.111	9.634	0.00	0.201	2.59	0.80	1.00	0.0	8.09	20.96	0.00	1260	0	620	155	775
26	310	34.21	2.833	9.139	0.00	0.189	2.63	0.80	1.00	0.0	7.55	19.88	0.00	1296	0	578	451	1029
25	290	33.56	2.833	9.139	0.00	0.189	2.63	0.80	1.00	0.0	7.55	19.88	0.00	1443	0	567	668	1235
24	270	32.88	3.111	9.139	0.00	0.193	2.62	0.80	1.00	0.0	7.78	20.37	0.00	1466	0	569	654	1224
23	250	32.17	2.833	9.139	0.00	0.189	2.63	0.80	1.00	0.0	7.55	19.88	0.00	1443	0	544	640	1184
22	230	31.41	2.833	10.128	0.00	0.205	2.58	0.80	1.00	0.0	8.16	21.07	0.00	1693	0	562	625	1188
21	219	30.97	0.472	0.982	0.00	0.230	2.50	0.80	1.00	0.0	0.96	2.39	0.00	179	0	63	62	125
20	217	30.89	0.932	0.982	0.00	0.302	2.29	0.80	1.00	0.0	1.35	3.08	0.00	209	0	81	61	142
19	214	30.77	0.944	1.975	0.00	0.230	2.50	0.80	1.00	0.0	1.92	4.78	0.00	357	0	125	122	248
18	211	30.65	0.472	0.983	0.00	0.230	2.50	0.80	1.00	0.0	0.96	2.40	0.00	179	0	62	61	123
17	209	30.56	0.932	0.982	0.00	0.302	2.29	0.80	1.00	0.0	1.35	3.08	0.00	209	0	80	61	141
16	204	30.35	1.417	4.013	0.00	0.214	2.55	0.80	1.00	0.0	3.48	8.86	0.00	691	0	229	242	470
15	190	29.74	2.833	9.634	0.00	0.197	2.61	0.80	1.00	0.0	7.86	20.48	0.00	1555	0	518	592	1110
14	170	28.81	2.833	9.634	0.00	0.197	2.61	0.80	1.00	0.0	7.86	20.48	0.00	1555	0	501	573	1075
13	159	28.27	0.472	0.939	0.00	0.223	2.52	0.80	1.00	0.0	0.93	2.34	0.00	163	0	56	56	113
12	157	28.16	0.472	0.939	0.00	0.223	2.52	0.80	1.00	0.0	0.93	2.34	0.00	163	0	56	56	112
11	155	28.06	0.472	0.939	0.00	0.223	2.52	0.80	1.00	0.0	0.93	2.34	0.00	163	0	56	56	112
10	153	27.96	0.472	0.939	0.00	0.223	2.52	0.80	1.00	0.0	0.93	2.34	0.00	163	0	56	56	111

SECTION FORCES

1.2D + 1.0W 180° Gust Response Factor (Gh): 0.85
108.19 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
9	146	27.59	1.889	5.759	0.00	0.201	2.59	0.80	1.00	0.0	4.86	12.59	0.00	940	0	295	329	625
8	130	26.69	2.833	9.139	0.00	0.189	2.63	0.80	1.00	0.0	7.55	19.88	0.00	1443	0	451	531	982
7	110	25.44	3.094	9.962	0.00	0.205	2.58	0.80	1.00	0.0	8.26	21.32	0.00	1671	0	461	506	967
6	90	24.03	2.812	9.965	0.00	0.200	2.59	0.80	1.00	0.0	8.03	20.84	0.00	1648	0	426	478	904
5	70	22.36	2.812	9.965	0.00	0.200	2.59	0.80	1.00	0.0	8.03	20.84	0.00	1648	0	396	445	841
4	50	20.31	3.094	9.965	0.00	0.205	2.58	0.80	1.00	0.0	8.26	21.32	0.00	1671	0	368	404	772
3	30	17.55	2.812	9.965	0.00	0.200	2.59	0.80	1.00	0.0	8.03	20.84	0.00	1648	0	311	349	660
2	12	17.54	2.344	7.960	0.00	0.202	2.59	0.80	1.00	0.0	6.50	16.82	0.00	1321	0	251	279	530
1	2	17.54	1.639	1.635	0.00	0.485	1.92	0.80	1.00	0.0	2.42	4.64	0.00	415	0	69	60	129
													Totals	**26,588**	**0**			**16,926**

1.2D + 1.0W 210° Gust Response Factor (Gh): 0.85
108.19 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
27	330	34.82	3.111	9.634	0.00	0.201	2.59	0.85	1.00	0.0	8.24	21.36	0.00	1260	0	632	155	787
26	310	34.21	2.833	9.139	0.00	0.189	2.63	0.85	1.00	0.0	7.69	20.25	0.00	1296	0	589	451	1040
25	290	33.56	2.833	9.139	0.00	0.189	2.63	0.85	1.00	0.0	7.69	20.25	0.00	1443	0	578	668	1246
24	270	32.88	3.111	9.139	0.00	0.193	2.62	0.85	1.00	0.0	7.93	20.77	0.00	1466	0	581	654	1235
23	250	32.17	2.833	9.139	0.00	0.189	2.63	0.85	1.00	0.0	7.69	20.25	0.00	1443	0	554	640	1194
22	230	31.41	2.833	10.128	0.00	0.205	2.58	0.85	1.00	0.0	8.31	21.43	0.00	1693	0	572	625	1197
21	219	30.97	0.472	0.982	0.00	0.230	2.50	0.85	1.00	0.0	0.98	2.45	0.00	179	0	65	62	126
20	217	30.89	0.932	0.982	0.00	0.302	2.29	0.85	1.00	0.0	1.39	3.19	0.00	209	0	84	61	145
19	214	30.77	0.944	1.975	0.00	0.230	2.50	0.85	1.00	0.0	1.96	4.90	0.00	357	0	128	122	251
18	211	30.65	0.472	0.983	0.00	0.230	2.50	0.85	1.00	0.0	0.98	2.45	0.00	179	0	64	61	125
17	209	30.56	0.932	0.982	0.00	0.302	2.29	0.85	1.00	0.0	1.39	3.19	0.00	209	0	83	61	144
16	204	30.35	1.417	4.013	0.00	0.214	2.55	0.85	1.00	0.0	3.55	9.04	0.00	691	0	233	242	475
15	190	29.74	2.833	9.634	0.00	0.197	2.61	0.85	1.00	0.0	8.00	20.85	0.00	1555	0	527	592	1119
14	170	28.81	2.833	9.634	0.00	0.197	2.61	0.85	1.00	0.0	8.00	20.85	0.00	1555	0	511	573	1084
13	159	28.27	0.472	0.939	0.00	0.223	2.52	0.85	1.00	0.0	0.95	2.40	0.00	163	0	58	56	114
12	157	28.16	0.472	0.939	0.00	0.223	2.52	0.85	1.00	0.0	0.95	2.40	0.00	163	0	58	56	114
11	155	28.06	0.472	0.939	0.00	0.223	2.52	0.85	1.00	0.0	0.95	2.40	0.00	163	0	57	56	113
10	153	27.96	0.472	0.939	0.00	0.223	2.52	0.85	1.00	0.0	0.95	2.40	0.00	163	0	57	56	113
9	146	27.59	1.889	5.759	0.00	0.201	2.59	0.85	1.00	0.0	4.95	12.83	0.00	940	0	301	329	630
8	130	26.69	2.833	9.139	0.00	0.189	2.63	0.85	1.00	0.0	7.69	20.25	0.00	1443	0	459	531	990
7	110	25.44	3.094	9.962	0.00	0.205	2.58	0.85	1.00	0.0	8.42	21.72	0.00	1671	0	470	506	976
6	90	24.03	2.812	9.965	0.00	0.200	2.59	0.85	1.00	0.0	8.17	21.20	0.00	1648	0	433	478	911
5	70	22.36	2.812	9.965	0.00	0.200	2.59	0.85	1.00	0.0	8.17	21.20	0.00	1648	0	403	445	848
4	50	20.31	3.094	9.965	0.00	0.205	2.58	0.85	1.00	0.0	8.42	21.72	0.00	1671	0	375	404	779
3	30	17.55	2.812	9.965	0.00	0.200	2.59	0.85	1.00	0.0	8.17	21.20	0.00	1648	0	316	349	666
2	12	17.54	2.344	7.960	0.00	0.202	2.59	0.85	1.00	0.0	6.61	17.12	0.00	1321	0	255	279	534
1	2	17.54	1.639	1.635	0.00	0.485	1.92	0.85	1.00	0.0	2.50	4.80	0.00	415	0	72	60	131
													Totals	**26,588**	**0**			**17,087**

1.2D + 1.0W 240° Gust Response Factor (Gh): 0.85
108.19 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
27	330	34.82	3.111	9.634	0.00	0.201	2.59	1.00	1.00	0.0	8.71	22.57	0.00	1260	0	668	155	823
26	310	34.21	2.833	9.139	0.00	0.189	2.63	1.00	1.00	0.0	8.12	21.37	0.00	1296	0	621	451	1073
25	290	33.56	2.833	9.139	0.00	0.189	2.63	1.00	1.00	0.0	8.12	21.37	0.00	1443	0	610	668	1278
24	270	32.88	3.111	9.139	0.00	0.193	2.62	1.00	1.00	0.0	8.40	21.99	0.00	1466	0	615	654	1269
23	250	32.17	2.833	9.139	0.00	0.189	2.63	1.00	1.00	0.0	8.12	21.37	0.00	1443	0	584	640	1225
22	230	31.41	2.833	10.128	0.00	0.205	2.58	1.00	1.00	0.0	8.73	22.53	0.00	1693	0	602	625	1227
21	219	30.97	0.472	0.982	0.00	0.230	2.50	1.00	1.00	0.0	1.05	2.63	0.00	179	0	69	62	131
20	217	30.89	0.932	0.982	0.00	0.302	2.29	1.00	1.00	0.0	1.53	3.51	0.00	209	0	92	61	154
19	214	30.77	0.944	1.975	0.00	0.230	2.50	1.00	1.00	0.0	2.10	5.26	0.00	357	0	137	122	260
18	211	30.65	0.472	0.983	0.00	0.230	2.50	1.00	1.00	0.0	1.05	2.63	0.00	179	0	69	61	130
17	209	30.56	0.932	0.982	0.00	0.302	2.29	1.00	1.00	0.0	1.53	3.51	0.00	209	0	91	61	152
16	204	30.35	1.417	4.013	0.00	0.214	2.55	1.00	1.00	0.0	3.76	9.59	0.00	691	0	247	242	489
15	190	29.74	2.833	9.634	0.00	0.197	2.61	1.00	1.00	0.0	8.42	21.95	0.00	1555	0	555	592	1147
14	170	28.81	2.833	9.634	0.00	0.197	2.61	1.00	1.00	0.0	8.42	21.95	0.00	1555	0	538	573	1111
13	159	28.27	0.472	0.939	0.00	0.223	2.52	1.00	1.00	0.0	1.02	2.58	0.00	163	0	62	56	118
12	157	28.16	0.472	0.939	0.00	0.223	2.52	1.00	1.00	0.0	1.02	2.58	0.00	163	0	62	56	118
11	155	28.06	0.472	0.939	0.00	0.223	2.52	1.00	1.00	0.0	1.02	2.58	0.00	163	0	62	56	117
10	153	27.96	0.472	0.939	0.00	0.223	2.52	1.00	1.00	0.0	1.02	2.58	0.00	163	0	61	56	117
9	146	27.59	1.889	5.759	0.00	0.201	2.59	1.00	1.00	0.0	5.23	13.57	0.00	940	0	318	329	648
8	130	26.69	2.833	9.139	0.00	0.189	2.63	1.00	1.00	0.0	8.12	21.37	0.00	1443	0	485	531	1016
7	110	25.44	3.094	9.962	0.00	0.205	2.58	1.00	1.00	0.0	8.88	22.91	0.00	1671	0	496	506	1002
6	90	24.03	2.812	9.965	0.00	0.200	2.59	1.00	1.00	0.0	8.59	22.30	0.00	1648	0	455	478	933
5	70	22.36	2.812	9.965	0.00	0.200	2.59	1.00	1.00	0.0	8.59	22.30	0.00	1648	0	424	445	869
4	50	20.31	3.094	9.965	0.00	0.205	2.58	1.00	1.00	0.0	8.88	22.92	0.00	1671	0	396	404	800
3	30	17.55	2.812	9.965	0.00	0.200	2.59	1.00	1.00	0.0	8.59	22.30	0.00	1648	0	333	349	682
2	12	17.54	2.344	7.960	0.00	0.202	2.59	1.00	1.00	0.0	6.96	18.03	0.00	1321	0	269	279	548
1	2	17.54	1.639	1.635	0.00	0.485	1.92	1.00	1.00	0.0	2.75	5.27	0.00	415	0	79	60	139

SECTION FORCES

1.2D + 1.0W 240° Gust Response Factor (Gh): 0.85
108.19 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
													Totals	**26,588**	**0**			**17,572**

1.2D + 1.0W 300° Gust Response Factor (Gh): 0.85
108.19 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
27	330	34.82	3.111	9.634	0.00	0.201	2.59	0.80	1.00	0.0	8.09	20.96	0.00	1260	0	620	155	775
26	310	34.21	2.833	9.139	0.00	0.189	2.63	0.80	1.00	0.0	7.55	19.88	0.00	1296	0	578	451	1029
25	290	33.56	2.833	9.139	0.00	0.189	2.63	0.80	1.00	0.0	7.55	19.88	0.00	1443	0	567	668	1235
24	270	32.88	3.111	9.139	0.00	0.193	2.62	0.80	1.00	0.0	7.78	20.37	0.00	1466	0	569	654	1224
23	250	32.17	2.833	9.139	0.00	0.189	2.63	0.80	1.00	0.0	7.55	19.88	0.00	1443	0	544	640	1184
22	230	31.41	2.833	10.128	0.00	0.205	2.58	0.80	1.00	0.0	8.16	21.07	0.00	1693	0	562	625	1188
21	219	30.97	0.472	0.982	0.00	0.230	2.50	0.80	1.00	0.0	0.96	2.39	0.00	179	0	63	62	125
20	217	30.89	0.932	0.982	0.00	0.302	2.29	0.80	1.00	0.0	1.35	3.08	0.00	209	0	81	61	142
19	214	30.77	0.944	1.975	0.00	0.230	2.50	0.80	1.00	0.0	1.92	4.78	0.00	357	0	125	122	248
18	211	30.65	0.472	0.983	0.00	0.230	2.50	0.80	1.00	0.0	0.96	2.40	0.00	179	0	62	61	123
17	209	30.56	0.932	0.982	0.00	0.302	2.29	0.80	1.00	0.0	1.35	3.08	0.00	209	0	80	61	141
16	204	30.35	1.417	4.013	0.00	0.214	2.55	0.80	1.00	0.0	3.48	8.86	0.00	691	0	229	242	470
15	190	29.74	2.833	9.634	0.00	0.197	2.61	0.80	1.00	0.0	7.86	20.48	0.00	1555	0	518	592	1110
14	170	28.81	2.833	9.634	0.00	0.197	2.61	0.80	1.00	0.0	7.86	20.48	0.00	1555	0	501	573	1075
13	159	28.27	0.472	0.939	0.00	0.223	2.52	0.80	1.00	0.0	0.93	2.34	0.00	163	0	56	56	113
12	157	28.16	0.472	0.939	0.00	0.223	2.52	0.80	1.00	0.0	0.93	2.34	0.00	163	0	56	56	112
11	155	28.06	0.472	0.939	0.00	0.223	2.52	0.80	1.00	0.0	0.93	2.34	0.00	163	0	56	56	112
10	153	27.96	0.472	0.939	0.00	0.223	2.52	0.80	1.00	0.0	0.93	2.34	0.00	163	0	56	56	111
9	146	27.59	1.889	5.759	0.00	0.201	2.59	0.80	1.00	0.0	4.86	12.59	0.00	940	0	295	329	625
8	130	26.69	2.833	9.139	0.00	0.189	2.63	0.80	1.00	0.0	7.55	19.88	0.00	1443	0	451	531	982
7	110	25.44	3.094	9.962	0.00	0.205	2.58	0.80	1.00	0.0	8.26	21.32	0.00	1671	0	461	506	967
6	90	24.03	2.812	9.965	0.00	0.200	2.59	0.80	1.00	0.0	8.03	20.84	0.00	1648	0	426	478	904
5	70	22.36	2.812	9.965	0.00	0.200	2.59	0.80	1.00	0.0	8.03	20.84	0.00	1648	0	396	445	841
4	50	20.31	3.094	9.965	0.00	0.205	2.58	0.80	1.00	0.0	8.26	21.32	0.00	1671	0	368	404	772
3	30	17.55	2.812	9.965	0.00	0.200	2.59	0.80	1.00	0.0	8.03	20.84	0.00	1648	0	311	349	660
2	12	17.54	2.344	7.960	0.00	0.202	2.59	0.80	1.00	0.0	6.50	16.82	0.00	1321	0	251	279	530
1	2	17.54	1.639	1.635	0.00	0.485	1.92	0.80	1.00	0.0	2.42	4.64	0.00	415	0	69	60	129
													Totals	**26,588**	**0**			**16,926**

1.2D + 1.0W 330° Gust Response Factor (Gh): 0.85
108.19 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
27	330	34.82	3.111	9.634	0.00	0.201	2.59	0.85	1.00	0.0	8.24	21.36	0.00	1260	0	632	155	787
26	310	34.21	2.833	9.139	0.00	0.189	2.63	0.85	1.00	0.0	7.69	20.25	0.00	1296	0	589	451	1040
25	290	33.56	2.833	9.139	0.00	0.189	2.63	0.85	1.00	0.0	7.69	20.25	0.00	1443	0	578	668	1246
24	270	32.88	3.111	9.139	0.00	0.193	2.62	0.85	1.00	0.0	7.93	20.77	0.00	1466	0	581	654	1235
23	250	32.17	2.833	9.139	0.00	0.189	2.63	0.85	1.00	0.0	7.69	20.25	0.00	1443	0	554	640	1194
22	230	31.41	2.833	10.128	0.00	0.205	2.58	0.85	1.00	0.0	8.31	21.43	0.00	1693	0	572	625	1197
21	219	30.97	0.472	0.982	0.00	0.230	2.50	0.85	1.00	0.0	0.98	2.45	0.00	179	0	65	62	126
20	217	30.89	0.932	0.982	0.00	0.302	2.29	0.85	1.00	0.0	1.39	3.19	0.00	209	0	84	61	145
19	214	30.77	0.944	1.975	0.00	0.230	2.50	0.85	1.00	0.0	1.96	4.90	0.00	357	0	128	122	251
18	211	30.65	0.472	0.983	0.00	0.230	2.50	0.85	1.00	0.0	0.98	2.45	0.00	179	0	64	61	125
17	209	30.56	0.932	0.982	0.00	0.302	2.29	0.85	1.00	0.0	1.39	3.19	0.00	209	0	83	61	144
16	204	30.35	1.417	4.013	0.00	0.214	2.55	0.85	1.00	0.0	3.55	9.04	0.00	691	0	233	242	475
15	190	29.74	2.833	9.634	0.00	0.197	2.61	0.85	1.00	0.0	8.00	20.85	0.00	1555	0	527	592	1119
14	170	28.81	2.833	9.634	0.00	0.197	2.61	0.85	1.00	0.0	8.00	20.85	0.00	1555	0	511	573	1084
13	159	28.27	0.472	0.939	0.00	0.223	2.52	0.85	1.00	0.0	0.95	2.40	0.00	163	0	58	56	114
12	157	28.16	0.472	0.939	0.00	0.223	2.52	0.85	1.00	0.0	0.95	2.40	0.00	163	0	58	56	114
11	155	28.06	0.472	0.939	0.00	0.223	2.52	0.85	1.00	0.0	0.95	2.40	0.00	163	0	57	56	113
10	153	27.96	0.472	0.939	0.00	0.223	2.52	0.85	1.00	0.0	0.95	2.40	0.00	163	0	57	56	113
9	146	27.59	1.889	5.759	0.00	0.201	2.59	0.85	1.00	0.0	4.95	12.83	0.00	940	0	301	329	630
8	130	26.69	2.833	9.139	0.00	0.189	2.63	0.85	1.00	0.0	7.69	20.25	0.00	1443	0	459	531	990
7	110	25.44	3.094	9.962	0.00	0.205	2.58	0.85	1.00	0.0	8.42	21.72	0.00	1671	0	470	506	976
6	90	24.03	2.812	9.965	0.00	0.200	2.59	0.85	1.00	0.0	8.17	21.20	0.00	1648	0	433	478	911
5	70	22.36	2.812	9.965	0.00	0.200	2.59	0.85	1.00	0.0	8.17	21.20	0.00	1648	0	403	445	848
4	50	20.31	3.094	9.965	0.00	0.205	2.58	0.85	1.00	0.0	8.42	21.72	0.00	1671	0	375	404	779
3	30	17.55	2.812	9.965	0.00	0.200	2.59	0.85	1.00	0.0	8.17	21.20	0.00	1648	0	316	349	666
2	12	17.54	2.344	7.960	0.00	0.202	2.59	0.85	1.00	0.0	6.61	17.12	0.00	1321	0	255	279	534
1	2	17.54	1.639	1.635	0.00	0.485	1.92	0.85	1.00	0.0	2.50	4.80	0.00	415	0	72	60	131
													Totals	**26,588**	**0**			**17,087**

1.2D + 1.0Di + 1.0Wi Normal Gust Response Factor (Gh): 0.85
29.24 mph Wind with 0.85" Radial Ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
27	330	2.54	3.111	28.742	19.11	0.476	1.93	1.00	1.00	1.1	22.51	43.51	19.11	2204	944	94	22	116
26	310	2.50	2.833	28.128	18.99	0.463	1.95	1.00	1.00	1.1	21.62	42.21	18.99	2723	1427	90	83	172

SECTION FORCES

1.2D + 1.0Di + 1.0Wi Normal — Gust Response Factor (Gh): 0.85
29.24 mph Wind with 0.85" Radial Ice — Wind Importance Factor (Iw): 1.00 — Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
25	290	2.45	2.833	28.002	18.86	0.461	1.96	1.00	1.00	1.1	21.51	42.06	18.86	3136	1693	88	115	203
24	270	2.40	3.111	27.868	18.73	0.464	1.95	1.00	1.00	1.0	21.73	42.41	18.73	3106	1639	87	112	198
23	250	2.35	2.833	27.724	18.58	0.457	1.96	1.00	1.00	1.0	21.27	41.72	18.58	3101	1658	83	110	193
22	230	2.29	2.833	28.559	18.43	0.470	1.94	1.00	1.00	1.0	22.03	42.78	18.43	3356	1663	83	104	188
21	219	2.26	0.472	2.962	1.98	0.514	1.88	1.00	1.00	1.0	2.54	4.77	1.98	354	176	9	9	19
20	217	2.26	0.932	3.473	2.49	0.660	1.78	1.00	1.00	1.0	3.67	6.52	2.49	417	208	13	7	19
19	214	2.25	0.944	5.925	3.95	0.515	1.88	1.00	1.00	1.0	5.07	9.54	3.95	707	350	18	19	37
18	211	2.24	0.472	2.958	1.97	0.514	1.88	1.00	1.00	1.0	2.53	4.77	1.97	354	175	9	9	18
17	209	2.23	0.932	3.464	2.48	0.659	1.78	1.00	1.00	1.0	3.66	6.50	2.48	415	207	12	7	19
16	204	2.22	1.417	11.514	7.50	0.484	1.92	1.00	1.00	1.0	9.24	17.75	7.50	1361	670	33	39	72
15	190	2.17	2.833	27.716	18.08	0.458	1.96	1.00	1.00	1.0	21.28	41.73	18.08	3150	1596	77	100	177
14	170	2.10	2.833	27.516	17.88	0.455	1.97	1.00	1.00	1.0	21.11	41.49	17.88	3125	1570	74	97	171
13	159	2.06	0.472	2.858	1.92	0.500	1.90	1.00	1.00	1.0	2.44	4.64	1.92	329	166	8	9	17
12	157	2.06	0.472	2.856	1.92	0.499	1.90	1.00	1.00	1.0	2.44	4.63	1.92	328	166	8	9	17
11	155	2.05	0.472	2.853	1.91	0.499	1.90	1.00	1.00	1.0	2.44	4.63	1.91	328	165	8	9	17
10	153	2.04	0.472	2.851	1.91	0.499	1.90	1.00	1.00	1.0	2.43	4.63	1.91	328	165	8	9	17
9	146	2.02	1.889	16.467	10.71	0.459	1.96	1.00	1.00	1.0	12.86	25.19	10.71	1872	932	43	55	98
8	130	1.95	2.833	26.548	17.41	0.441	1.99	1.00	1.00	1.0	20.28	40.32	17.41	2953	1510	67	90	157
7	110	1.86	3.094	27.082	17.12	0.451	1.97	1.00	1.00	1.0	21.02	41.46	17.12	3130	1459	65	84	149
6	90	1.75	2.812	26.755	16.79	0.442	1.99	1.00	1.00	0.9	20.41	40.55	16.79	3099	1451	60	79	140
5	70	1.63	2.812	26.338	16.37	0.436	2.00	1.00	1.00	0.9	20.07	40.07	16.37	3049	1401	56	74	129
4	50	1.48	3.094	25.797	15.83	0.433	2.00	1.00	1.00	0.9	19.96	39.95	15.83	2978	1307	50	66	116
3	30	1.28	2.812	25.008	15.04	0.418	2.03	1.00	1.00	0.8	18.99	38.53	15.04	2894	1246	42	57	99
2	12	1.28	2.344	18.990	11.03	0.402	2.06	1.00	1.00	0.8	14.49	29.85	11.03	2205	884	33	44	77
1	2	1.28	1.639	3.700	2.07	0.744	1.79	1.00	1.00	0.6	4.76	8.49	2.07	567	152	9	4	14
													Totals	**51,569**	**24,981**			**2,647**

1.2D + 1.0Di + 1.0Wi 60° — Gust Response Factor (Gh): 0.85
29.24 mph Wind with 0.85" Radial Ice — Wind Importance Factor (Iw): 1.00 — Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
27	330	2.54	3.111	28.742	19.11	0.476	1.93	0.80	1.00	1.1	21.88	42.30	19.11	2204	944	91	22	113
26	310	2.50	2.833	28.128	18.99	0.463	1.95	0.80	1.00	1.1	21.05	41.11	18.99	2723	1427	87	83	170
25	290	2.45	2.833	28.002	18.86	0.461	1.96	0.80	1.00	1.1	20.94	40.95	18.86	3136	1693	85	115	200
24	270	2.40	3.111	27.868	18.73	0.464	1.95	0.80	1.00	1.0	21.11	41.20	18.73	3106	1639	84	112	196
23	250	2.35	2.833	27.724	18.58	0.457	1.96	0.80	1.00	1.0	20.70	40.61	18.58	3101	1658	81	110	191
22	230	2.29	2.833	28.559	18.43	0.470	1.94	0.80	1.00	1.0	21.46	41.68	18.43	3356	1663	81	104	186
21	219	2.26	0.472	2.962	1.98	0.514	1.88	0.80	1.00	1.0	2.44	4.60	1.98	354	176	9	9	18
20	217	2.26	0.932	3.473	2.49	0.660	1.78	0.80	1.00	1.0	3.48	6.19	2.49	417	208	12	7	18
19	214	2.25	0.944	5.925	3.95	0.515	1.88	0.80	1.00	1.0	4.88	9.18	3.95	707	350	18	19	36
18	211	2.24	0.472	2.958	1.97	0.514	1.88	0.80	1.00	1.0	2.44	4.59	1.97	354	175	9	9	18
17	209	2.23	0.932	3.464	2.48	0.659	1.78	0.80	1.00	1.0	3.47	6.17	2.48	415	207	12	7	18
16	204	2.22	1.417	11.514	7.50	0.484	1.92	0.80	1.00	1.0	8.96	17.21	7.50	1361	670	32	39	71
15	190	2.17	2.833	27.716	18.08	0.458	1.96	0.80	1.00	1.0	20.72	40.62	18.08	3150	1596	75	100	175
14	170	2.10	2.833	27.516	17.88	0.455	1.97	0.80	1.00	1.0	20.55	40.37	17.88	3125	1570	72	97	169
13	159	2.06	0.472	2.858	1.92	0.500	1.90	0.80	1.00	1.0	2.35	4.46	1.92	329	166	8	9	16
12	157	2.06	0.472	2.856	1.92	0.499	1.90	0.80	1.00	1.0	2.34	4.45	1.92	328	166	8	9	16
11	155	2.05	0.472	2.853	1.91	0.499	1.90	0.80	1.00	1.0	2.34	4.45	1.91	328	165	8	9	16
10	153	2.04	0.472	2.851	1.91	0.499	1.90	0.80	1.00	1.0	2.34	4.45	1.91	328	165	8	9	16
9	146	2.02	1.889	16.467	10.71	0.459	1.96	0.80	1.00	1.0	12.48	24.45	10.71	1872	932	42	55	96
8	130	1.95	2.833	26.548	17.41	0.441	1.99	0.80	1.00	1.0	19.71	39.19	17.41	2953	1510	65	90	155
7	110	1.86	3.094	27.082	17.12	0.451	1.97	0.80	1.00	1.0	20.40	40.24	17.12	3130	1459	64	84	147
6	90	1.75	2.812	26.755	16.79	0.442	1.99	0.80	1.00	0.9	19.85	39.44	16.79	3099	1451	59	79	138
5	70	1.63	2.812	26.338	16.37	0.436	2.00	0.80	1.00	0.9	19.51	38.94	16.37	3049	1401	54	74	128
4	50	1.48	3.094	25.797	15.83	0.433	2.00	0.80	1.00	0.9	19.34	38.72	15.83	2978	1307	49	66	115
3	30	1.28	2.812	25.008	15.04	0.418	2.03	0.80	1.00	0.8	18.42	37.39	15.04	2894	1246	41	57	98
2	12	1.28	2.344	18.990	11.03	0.402	2.06	0.80	1.00	0.8	14.02	28.89	11.03	2205	884	31	44	76
1	2	1.28	1.639	3.700	2.07	0.744	1.79	0.80	1.00	0.6	4.43	7.91	2.07	567	152	9	4	13
													Totals	**51,569**	**24,981**			**2,611**

1.2D + 1.0Di + 1.0Wi 90° — Gust Response Factor (Gh): 0.85
29.24 mph Wind with 0.85" Radial Ice — Wind Importance Factor (Iw): 1.00 — Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
27	330	2.54	3.111	28.742	19.11	0.476	1.93	0.85	1.00	1.1	22.04	42.60	19.11	2204	944	92	22	114
26	310	2.50	2.833	28.128	18.99	0.463	1.95	0.85	1.00	1.1	21.19	41.38	18.99	2723	1427	88	83	171
25	290	2.45	2.833	28.002	18.86	0.461	1.96	0.85	1.00	1.1	21.08	41.23	18.86	3136	1693	86	115	201
24	270	2.40	3.111	27.868	18.73	0.464	1.95	0.85	1.00	1.0	21.26	41.50	18.73	3106	1639	85	112	196
23	250	2.35	2.833	27.724	18.58	0.457	1.96	0.85	1.00	1.0	20.85	40.89	18.58	3101	1658	82	110	192
22	230	2.29	2.833	28.559	18.43	0.470	1.94	0.85	1.00	1.0	21.60	41.95	18.43	3356	1663	82	104	186
21	219	2.26	0.472	2.962	1.98	0.514	1.88	0.85	1.00	1.0	2.47	4.64	1.98	354	176	9	9	18
20	217	2.26	0.932	3.473	2.49	0.660	1.78	0.85	1.00	1.0	3.53	6.27	2.49	417	208	12	7	19
19	214	2.25	0.944	5.925	3.95	0.515	1.88	0.85	1.00	1.0	4.93	9.27	3.95	707	350	18	19	36
18	211	2.24	0.472	2.958	1.97	0.514	1.88	0.85	1.00	1.0	2.46	4.64	1.97	354	175	9	9	18
17	209	2.23	0.932	3.464	2.48	0.659	1.78	0.85	1.00	1.0	3.52	6.26	2.48	415	207	12	7	18

SECTION FORCES

1.2D + 1.0Di + 1.0Wi 90° Gust Response Factor (Gh): 0.85
29.24 mph Wind with 0.85" Radial Ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	204	2.22	1.417	11.514	7.50	0.484	1.92	0.85	1.00	1.0	9.03	17.34	7.50	1361	670	33	39	72
15	190	2.17	2.833	27.716	18.08	0.458	1.96	0.85	1.00	1.0	20.86	40.90	18.08	3150	1596	76	100	175
14	170	2.10	2.833	27.516	17.88	0.455	1.97	0.85	1.00	1.0	20.69	40.65	17.88	3125	1570	73	97	169
13	159	2.06	0.472	2.858	1.92	0.500	1.90	0.85	1.00	1.0	2.37	4.50	1.92	329	166	8	9	17
12	157	2.06	0.472	2.856	1.92	0.499	1.90	0.85	1.00	1.0	2.37	4.50	1.92	328	166	8	9	17
11	155	2.05	0.472	2.853	1.91	0.499	1.90	0.85	1.00	1.0	2.36	4.50	1.91	328	165	8	9	16
10	153	2.04	0.472	2.851	1.91	0.499	1.90	0.85	1.00	1.0	2.36	4.49	1.91	328	165	8	9	16
9	146	2.02	1.889	16.467	10.71	0.459	1.96	0.85	1.00	1.0	12.58	24.64	10.71	1872	932	42	55	97
8	130	1.95	2.833	26.548	17.41	0.441	1.99	0.85	1.00	1.0	19.86	39.47	17.41	2953	1510	65	90	156
7	110	1.86	3.094	27.082	17.12	0.451	1.97	0.85	1.00	1.0	20.56	40.55	17.12	3130	1459	64	84	148
6	90	1.75	2.812	26.755	16.79	0.442	1.99	0.85	1.00	0.9	19.99	39.72	16.79	3099	1451	59	79	139
5	70	1.63	2.812	26.338	16.37	0.436	2.00	0.85	1.00	0.9	19.65	39.22	16.37	3049	1401	54	74	128
4	50	1.48	3.094	25.797	15.83	0.433	2.00	0.85	1.00	0.9	19.49	39.03	15.83	2978	1307	49	66	115
3	30	1.28	2.812	25.008	15.04	0.418	2.03	0.85	1.00	0.8	18.56	37.68	15.04	2894	1246	41	57	98
2	12	1.28	2.344	18.990	11.03	0.402	2.06	0.85	1.00	0.8	14.14	29.13	11.03	2205	884	32	44	76
1	2	1.28	1.639	3.700	2.07	0.744	1.79	0.85	1.00	0.6	4.51	8.05	2.07	567	152	9	4	13
													Totals	**51,569**	**24,981**			**2,620**

1.2D + 1.0Di + 1.0Wi 120° Gust Response Factor (Gh): 0.85
29.24 mph Wind with 0.85" Radial Ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
27	330	2.54	3.111	28.742	19.11	0.476	1.93	1.00	1.00	1.1	22.51	43.51	19.11	2204	944	94	22	116
26	310	2.50	2.833	28.128	18.99	0.463	1.95	1.00	1.00	1.1	21.62	42.21	18.99	2723	1427	90	83	172
25	290	2.45	2.833	28.002	18.86	0.461	1.96	1.00	1.00	1.1	21.51	42.06	18.86	3136	1693	88	115	203
24	270	2.40	3.111	27.868	18.73	0.464	1.95	1.00	1.00	1.0	21.73	42.41	18.73	3106	1639	87	112	198
23	250	2.35	2.833	27.724	18.58	0.457	1.96	1.00	1.00	1.0	21.27	41.72	18.58	3101	1658	83	110	193
22	230	2.29	2.833	28.559	18.43	0.470	1.94	1.00	1.00	1.0	22.03	42.78	18.43	3356	1663	83	104	188
21	219	2.26	0.472	2.962	1.98	0.514	1.88	1.00	1.00	1.0	2.54	4.77	1.98	354	176	9	9	19
20	217	2.26	0.932	3.473	2.49	0.660	1.78	1.00	1.00	1.0	3.67	6.52	2.49	417	208	13	7	19
19	214	2.25	0.944	5.925	3.95	0.515	1.88	1.00	1.00	1.0	5.07	9.54	3.95	707	350	18	19	37
18	211	2.24	0.472	2.958	1.97	0.514	1.88	1.00	1.00	1.0	2.53	4.77	1.97	354	175	9	9	18
17	209	2.23	0.932	3.464	2.48	0.659	1.78	1.00	1.00	1.0	3.66	6.50	2.48	415	207	12	7	19
16	204	2.22	1.417	11.514	7.50	0.484	1.92	1.00	1.00	1.0	9.24	17.75	7.50	1361	670	33	39	72
15	190	2.17	2.833	27.716	18.08	0.458	1.96	1.00	1.00	1.0	21.28	41.73	18.08	3150	1596	77	100	177
14	170	2.10	2.833	27.516	17.88	0.455	1.97	1.00	1.00	1.0	21.11	41.49	17.88	3125	1570	74	97	171
13	159	2.06	0.472	2.858	1.92	0.500	1.90	1.00	1.00	1.0	2.44	4.64	1.92	329	166	8	9	17
12	157	2.06	0.472	2.856	1.92	0.499	1.90	1.00	1.00	1.0	2.44	4.63	1.92	328	166	8	9	17
11	155	2.05	0.472	2.853	1.91	0.499	1.90	1.00	1.00	1.0	2.44	4.63	1.91	328	165	8	9	17
10	153	2.04	0.472	2.851	1.91	0.499	1.90	1.00	1.00	1.0	2.43	4.63	1.91	328	165	8	9	17
9	146	2.02	1.889	16.467	10.71	0.459	1.96	1.00	1.00	1.0	12.86	25.19	10.71	1872	932	43	55	98
8	130	1.95	2.833	26.548	17.41	0.441	1.99	1.00	1.00	1.0	20.28	40.32	17.41	2953	1510	67	90	157
7	110	1.86	3.094	27.082	17.12	0.451	1.97	1.00	1.00	1.0	21.02	41.46	17.12	3130	1459	65	84	149
6	90	1.75	2.812	26.755	16.79	0.442	1.99	1.00	1.00	0.9	20.41	40.55	16.79	3099	1451	60	79	140
5	70	1.63	2.812	26.338	16.37	0.436	2.00	1.00	1.00	0.9	20.07	40.07	16.37	3049	1401	56	74	129
4	50	1.48	3.094	25.797	15.83	0.433	2.00	1.00	1.00	0.9	19.96	39.95	15.83	2978	1307	50	66	116
3	30	1.28	2.812	25.008	15.04	0.418	2.03	1.00	1.00	0.8	18.99	38.53	15.04	2894	1246	42	57	99
2	12	1.28	2.344	18.990	11.03	0.402	2.06	1.00	1.00	0.8	14.49	29.85	11.03	2205	884	33	44	77
1	2	1.28	1.639	3.700	2.07	0.744	1.79	1.00	1.00	0.6	4.76	8.49	2.07	567	152	9	4	14
													Totals	**51,569**	**24,981**			**2,647**

1.2D + 1.0Di + 1.0Wi 180° Gust Response Factor (Gh): 0.85
29.24 mph Wind with 0.85" Radial Ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
27	330	2.54	3.111	28.742	19.11	0.476	1.93	0.80	1.00	1.1	21.88	42.30	19.11	2204	944	91	22	113
26	310	2.50	2.833	28.128	18.99	0.463	1.95	0.80	1.00	1.1	21.05	41.11	18.99	2723	1427	87	83	170
25	290	2.45	2.833	28.002	18.86	0.461	1.96	0.80	1.00	1.1	20.94	40.95	18.86	3136	1693	85	115	200
24	270	2.40	3.111	27.868	18.73	0.464	1.95	0.80	1.00	1.0	21.11	41.20	18.73	3106	1639	84	112	196
23	250	2.35	2.833	27.724	18.58	0.457	1.96	0.80	1.00	1.0	20.70	40.61	18.58	3101	1658	81	110	191
22	230	2.29	2.833	28.559	18.43	0.470	1.94	0.80	1.00	1.0	21.46	41.68	18.43	3356	1663	81	104	186
21	219	2.26	0.472	2.962	1.98	0.514	1.88	0.80	1.00	1.0	2.44	4.60	1.98	354	176	9	9	18
20	217	2.26	0.932	3.473	2.49	0.660	1.78	0.80	1.00	1.0	3.48	6.19	2.49	417	208	12	7	18
19	214	2.25	0.944	5.925	3.95	0.515	1.88	0.80	1.00	1.0	4.88	9.18	3.95	707	350	18	19	36
18	211	2.24	0.472	2.958	1.97	0.514	1.88	0.80	1.00	1.0	2.44	4.59	1.97	354	175	9	9	18
17	209	2.23	0.932	3.464	2.48	0.659	1.78	0.80	1.00	1.0	3.47	6.17	2.48	415	207	12	7	18
16	204	2.22	1.417	11.514	7.50	0.484	1.92	0.80	1.00	1.0	8.96	17.21	7.50	1361	670	32	39	71
15	190	2.17	2.833	27.716	18.08	0.458	1.96	0.80	1.00	1.0	20.72	40.62	18.08	3150	1596	75	100	175
14	170	2.10	2.833	27.516	17.88	0.455	1.97	0.80	1.00	1.0	20.55	40.37	17.88	3125	1570	72	97	169
13	159	2.06	0.472	2.858	1.92	0.500	1.90	0.80	1.00	1.0	2.35	4.46	1.92	329	166	8	9	16
12	157	2.06	0.472	2.856	1.92	0.499	1.90	0.80	1.00	1.0	2.34	4.45	1.92	328	166	8	9	16
11	155	2.05	0.472	2.853	1.91	0.499	1.90	0.80	1.00	1.0	2.34	4.45	1.91	328	165	8	9	16
10	153	2.04	0.472	2.851	1.91	0.499	1.90	0.80	1.00	1.0	2.34	4.45	1.91	328	165	8	9	16
9	146	2.02	1.889	16.467	10.71	0.459	1.96	0.80	1.00	1.0	12.48	24.45	10.71	1872	932	42	55	96
8	130	1.95	2.833	26.548	17.41	0.441	1.99	0.80	1.00	1.0	19.71	39.19	17.41	2953	1510	65	90	155

SECTION FORCES

1.2D + 1.0Di + 1.0Wi 180° Gust Response Factor (Gh): 0.85
29.24 mph Wind with 0.85" Radial Ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
7	110	1.86	3.094	27.082	17.12	0.451	1.97	0.80	1.00	1.0	20.40	40.24	17.12	3130	1459	64	84	147
6	90	1.75	2.812	26.755	16.79	0.442	1.99	0.80	1.00	0.9	19.85	39.44	16.79	3099	1451	59	79	138
5	70	1.63	2.812	26.338	16.37	0.436	2.00	0.80	1.00	0.9	19.51	38.94	16.37	3049	1401	54	74	128
4	50	1.48	3.094	25.797	15.83	0.433	2.00	0.80	1.00	0.9	19.34	38.72	15.83	2978	1307	49	66	115
3	30	1.28	2.812	25.008	15.04	0.418	2.03	0.80	1.00	0.8	18.42	37.39	15.04	2894	1246	41	57	98
2	12	1.28	2.344	18.990	11.03	0.402	2.06	0.80	1.00	0.8	14.02	28.89	11.03	2205	884	31	44	76
1	2	1.28	1.639	3.700	2.07	0.744	1.79	0.80	1.00	0.6	4.43	7.91	2.07	567	152	9	4	13
													Totals	**51,569**	**24,981**			**2,611**

1.2D + 1.0Di + 1.0Wi 210° Gust Response Factor (Gh): 0.85
29.24 mph Wind with 0.85" Radial Ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
27	330	2.54	3.111	28.742	19.11	0.476	1.93	0.85	1.00	1.1	22.04	42.60	19.11	2204	944	92	22	114
26	310	2.50	2.833	28.128	18.99	0.463	1.95	0.85	1.00	1.1	21.19	41.38	18.99	2723	1427	88	83	171
25	290	2.45	2.833	28.002	18.86	0.461	1.96	0.85	1.00	1.1	21.08	41.23	18.86	3136	1693	86	115	201
24	270	2.40	3.111	27.868	18.73	0.464	1.95	0.85	1.00	1.0	21.26	41.50	18.73	3106	1639	85	112	196
23	250	2.35	2.833	27.724	18.58	0.457	1.96	0.85	1.00	1.0	20.85	40.89	18.58	3101	1658	82	110	192
22	230	2.29	2.833	28.559	18.43	0.470	1.94	0.85	1.00	1.0	21.60	41.95	18.43	3356	1663	82	104	186
21	219	2.26	0.472	2.962	1.98	0.514	1.88	0.85	1.00	1.0	2.47	4.64	1.98	354	176	9	9	18
20	217	2.26	0.932	3.473	2.49	0.660	1.78	0.85	1.00	1.0	3.53	6.27	2.49	417	208	12	7	19
19	214	2.25	0.944	5.925	3.95	0.515	1.88	0.85	1.00	1.0	4.93	9.27	3.95	707	350	18	19	36
18	211	2.24	0.472	2.958	1.97	0.514	1.88	0.85	1.00	1.0	2.46	4.64	1.97	354	175	9	9	18
17	209	2.23	0.932	3.464	2.48	0.659	1.78	0.85	1.00	1.0	3.52	6.26	2.48	415	207	12	7	18
16	204	2.22	1.417	11.514	7.50	0.484	1.92	0.85	1.00	1.0	9.03	17.34	7.50	1361	670	33	39	72
15	190	2.17	2.833	27.716	18.08	0.458	1.96	0.85	1.00	1.0	20.86	40.90	18.08	3150	1596	76	100	175
14	170	2.10	2.833	27.516	17.88	0.455	1.97	0.85	1.00	1.0	20.69	40.65	17.88	3125	1570	73	97	169
13	159	2.06	0.472	2.858	1.92	0.500	1.90	0.85	1.00	1.0	2.37	4.50	1.92	329	166	8	9	17
12	157	2.06	0.472	2.856	1.92	0.499	1.90	0.85	1.00	1.0	2.37	4.50	1.92	328	166	8	9	17
11	155	2.05	0.472	2.853	1.91	0.499	1.90	0.85	1.00	1.0	2.36	4.50	1.91	328	165	8	9	16
10	153	2.04	0.472	2.851	1.91	0.499	1.90	0.85	1.00	1.0	2.36	4.49	1.91	328	165	8	9	16
9	146	2.02	1.889	16.467	10.71	0.459	1.96	0.85	1.00	1.0	12.58	24.64	10.71	1872	932	42	55	97
8	130	1.95	2.833	26.548	17.41	0.441	1.99	0.85	1.00	1.0	19.86	39.47	17.41	2953	1510	65	90	156
7	110	1.86	3.094	27.082	17.12	0.451	1.97	0.85	1.00	1.0	20.56	40.55	17.12	3130	1459	64	84	148
6	90	1.75	2.812	26.755	16.79	0.442	1.99	0.85	1.00	0.9	19.99	39.72	16.79	3099	1451	59	79	139
5	70	1.63	2.812	26.338	16.37	0.436	2.00	0.85	1.00	0.9	19.65	39.22	16.37	3049	1401	54	74	128
4	50	1.48	3.094	25.797	15.83	0.433	2.00	0.85	1.00	0.9	19.49	39.03	15.83	2978	1307	49	66	115
3	30	1.28	2.812	25.008	15.04	0.418	2.03	0.85	1.00	0.8	18.56	37.68	15.04	2894	1246	41	57	98
2	12	1.28	2.344	18.990	11.03	0.402	2.06	0.85	1.00	0.8	14.14	29.13	11.03	2205	884	32	44	76
1	2	1.28	1.639	3.700	2.07	0.744	1.79	0.85	1.00	0.6	4.51	8.05	2.07	567	152	9	4	13
													Totals	**51,569**	**24,981**			**2,620**

1.2D + 1.0Di + 1.0Wi 240° Gust Response Factor (Gh): 0.85
29.24 mph Wind with 0.85" Radial Ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
27	330	2.54	3.111	28.742	19.11	0.476	1.93	1.00	1.00	1.1	22.51	43.51	19.11	2204	944	94	22	116
26	310	2.50	2.833	28.128	18.99	0.463	1.95	1.00	1.00	1.1	21.62	42.21	18.99	2723	1427	90	83	172
25	290	2.45	2.833	28.002	18.86	0.461	1.96	1.00	1.00	1.1	21.51	42.06	18.86	3136	1693	88	115	203
24	270	2.40	3.111	27.868	18.73	0.464	1.95	1.00	1.00	1.0	21.73	42.41	18.73	3106	1639	87	112	198
23	250	2.35	2.833	27.724	18.58	0.457	1.96	1.00	1.00	1.0	21.27	41.72	18.58	3101	1658	83	110	193
22	230	2.29	2.833	28.559	18.43	0.470	1.94	1.00	1.00	1.0	22.03	42.78	18.43	3356	1663	83	104	188
21	219	2.26	0.472	2.962	1.98	0.514	1.88	1.00	1.00	1.0	2.54	4.77	1.98	354	176	9	9	19
20	217	2.26	0.932	3.473	2.49	0.660	1.78	1.00	1.00	1.0	3.67	6.52	2.49	417	208	13	7	19
19	214	2.25	0.944	5.925	3.95	0.515	1.88	1.00	1.00	1.0	5.07	9.54	3.95	707	350	18	19	37
18	211	2.24	0.472	2.958	1.97	0.514	1.88	1.00	1.00	1.0	2.53	4.77	1.97	354	175	9	9	18
17	209	2.23	0.932	3.464	2.48	0.659	1.78	1.00	1.00	1.0	3.66	6.50	2.48	415	207	12	7	19
16	204	2.22	1.417	11.514	7.50	0.484	1.92	1.00	1.00	1.0	9.24	17.75	7.50	1361	670	33	39	72
15	190	2.17	2.833	27.716	18.08	0.458	1.96	1.00	1.00	1.0	21.28	41.73	18.08	3150	1596	77	100	177
14	170	2.10	2.833	27.516	17.88	0.455	1.97	1.00	1.00	1.0	21.11	41.49	17.88	3125	1570	74	97	171
13	159	2.06	0.472	2.858	1.92	0.500	1.90	1.00	1.00	1.0	2.44	4.64	1.92	329	166	8	9	17
12	157	2.06	0.472	2.856	1.92	0.499	1.90	1.00	1.00	1.0	2.44	4.63	1.92	328	166	8	9	17
11	155	2.05	0.472	2.853	1.91	0.499	1.90	1.00	1.00	1.0	2.44	4.63	1.91	328	165	8	9	17
10	153	2.04	0.472	2.851	1.91	0.499	1.90	1.00	1.00	1.0	2.43	4.63	1.91	328	165	8	9	17
9	146	2.02	1.889	16.467	10.71	0.459	1.96	1.00	1.00	1.0	12.86	25.19	10.71	1872	932	43	55	98
8	130	1.95	2.833	26.548	17.41	0.441	1.99	1.00	1.00	1.0	20.28	40.32	17.41	2953	1510	67	90	157
7	110	1.86	3.094	27.082	17.12	0.451	1.97	1.00	1.00	1.0	21.02	41.46	17.12	3130	1459	65	84	149
6	90	1.75	2.812	26.755	16.79	0.442	1.99	1.00	1.00	0.9	20.41	40.55	16.79	3099	1451	60	79	140
5	70	1.63	2.812	26.338	16.37	0.436	2.00	1.00	1.00	0.9	20.07	40.07	16.37	3049	1401	56	74	129
4	50	1.48	3.094	25.797	15.83	0.433	2.00	1.00	1.00	0.9	19.96	39.95	15.83	2978	1307	50	66	116
3	30	1.28	2.812	25.008	15.04	0.418	2.03	1.00	1.00	0.8	18.99	38.53	15.04	2894	1246	42	57	99
2	12	1.28	2.344	18.990	11.03	0.402	2.06	1.00	1.00	0.8	14.49	29.85	11.03	2205	884	33	44	77
1	2	1.28	1.639	3.700	2.07	0.744	1.79	1.00	1.00	0.6	4.76	8.49	2.07	567	152	9	4	14
													Totals	**51,569**	**24,981**			**2,647**

SECTION FORCES

1.2D + 1.0Di + 1.0Wi 300° Gust Response Factor (Gh): 0.85
29.24 mph Wind with 0.85" Radial Ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
27	330	2.54	3.111	28.742	19.11	0.476	1.93	0.80	1.00	1.1	21.88	42.30	19.11	2204	944	91	22	113
26	310	2.50	2.833	28.128	18.99	0.463	1.95	0.80	1.00	1.1	21.05	41.11	18.99	2723	1427	87	83	170
25	290	2.45	2.833	28.002	18.86	0.461	1.96	0.80	1.00	1.1	20.94	40.95	18.86	3136	1693	85	115	200
24	270	2.40	3.111	27.868	18.73	0.464	1.95	0.80	1.00	1.0	21.11	41.20	18.73	3106	1639	84	112	196
23	250	2.35	2.833	27.724	18.58	0.457	1.96	0.80	1.00	1.0	20.70	40.61	18.58	3101	1658	81	110	191
22	230	2.29	2.833	28.559	18.43	0.470	1.94	0.80	1.00	1.0	21.46	41.68	18.43	3356	1663	81	104	186
21	219	2.26	0.472	2.962	1.98	0.514	1.88	0.80	1.00	1.0	2.44	4.60	1.98	354	176	9	9	18
20	217	2.26	0.932	3.473	2.49	0.660	1.78	0.80	1.00	1.0	3.48	6.19	2.49	417	208	12	7	18
19	214	2.25	0.944	5.925	3.95	0.515	1.88	0.80	1.00	1.0	4.88	9.18	3.95	707	350	18	19	36
18	211	2.24	0.472	2.958	1.97	0.514	1.88	0.80	1.00	1.0	2.44	4.59	1.97	354	175	9	9	18
17	209	2.23	0.932	3.464	2.48	0.659	1.78	0.80	1.00	1.0	3.47	6.17	2.48	415	207	12	7	18
16	204	2.22	1.417	11.514	7.50	0.484	1.92	0.80	1.00	1.0	8.96	17.21	7.50	1361	670	32	39	71
15	190	2.17	2.833	27.716	18.08	0.458	1.96	0.80	1.00	1.0	20.72	40.62	18.08	3150	1596	75	100	175
14	170	2.10	2.833	27.516	17.88	0.455	1.97	0.80	1.00	1.0	20.55	40.37	17.88	3125	1570	72	97	169
13	159	2.06	0.472	2.858	1.92	0.500	1.90	0.80	1.00	1.0	2.35	4.46	1.92	329	166	8	9	16
12	157	2.06	0.472	2.856	1.92	0.499	1.90	0.80	1.00	1.0	2.34	4.45	1.92	328	166	8	9	16
11	155	2.05	0.472	2.853	1.91	0.499	1.90	0.80	1.00	1.0	2.34	4.45	1.91	328	165	8	9	16
10	153	2.04	0.472	2.851	1.91	0.499	1.90	0.80	1.00	1.0	2.34	4.45	1.91	328	165	8	9	16
9	146	2.02	1.889	16.467	10.71	0.459	1.96	0.80	1.00	1.0	12.48	24.45	10.71	1872	932	42	55	96
8	130	1.95	2.833	26.548	17.41	0.441	1.99	0.80	1.00	1.0	19.71	39.19	17.41	2953	1510	65	90	155
7	110	1.86	3.094	27.082	17.12	0.451	1.97	0.80	1.00	1.0	20.40	40.24	17.12	3130	1459	64	84	147
6	90	1.75	2.812	26.755	16.79	0.442	1.99	0.80	1.00	0.9	19.85	39.44	16.79	3099	1451	59	79	138
5	70	1.63	2.812	26.338	16.37	0.436	2.00	0.80	1.00	0.9	19.51	38.94	16.37	3049	1401	54	74	128
4	50	1.48	3.094	25.797	15.83	0.433	2.00	0.80	1.00	0.9	19.34	38.72	15.83	2978	1307	49	66	115
3	30	1.28	2.812	25.008	15.04	0.418	2.03	0.80	1.00	0.8	18.42	37.39	15.04	2894	1246	41	57	98
2	12	1.28	2.344	18.990	11.03	0.402	2.06	0.80	1.00	0.8	14.02	28.89	11.03	2205	884	31	44	76
1	2	1.28	1.639	3.700	2.07	0.744	1.79	0.80	1.00	0.6	4.43	7.91	2.07	567	152	9	4	13
													Totals	**51,569**	**24,981**			**2,611**

1.2D + 1.0Di + 1.0Wi 330° Gust Response Factor (Gh): 0.85
29.24 mph Wind with 0.85" Radial Ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
27	330	2.54	3.111	28.742	19.11	0.476	1.93	0.85	1.00	1.1	22.04	42.60	19.11	2204	944	92	22	114
26	310	2.50	2.833	28.128	18.99	0.463	1.95	0.85	1.00	1.1	21.19	41.38	18.99	2723	1427	88	83	171
25	290	2.45	2.833	28.002	18.86	0.461	1.96	0.85	1.00	1.1	21.08	41.23	18.86	3136	1693	86	115	201
24	270	2.40	3.111	27.868	18.73	0.464	1.95	0.85	1.00	1.0	21.26	41.50	18.73	3106	1639	85	112	196
23	250	2.35	2.833	27.724	18.58	0.457	1.96	0.85	1.00	1.0	20.85	40.89	18.58	3101	1658	82	110	192
22	230	2.29	2.833	28.559	18.43	0.470	1.94	0.85	1.00	1.0	21.60	41.95	18.43	3356	1663	82	104	186
21	219	2.26	0.472	2.962	1.98	0.514	1.88	0.85	1.00	1.0	2.47	4.64	1.98	354	176	9	9	18
20	217	2.26	0.932	3.473	2.49	0.660	1.78	0.85	1.00	1.0	3.53	6.27	2.49	417	208	12	7	19
19	214	2.25	0.944	5.925	3.95	0.515	1.88	0.85	1.00	1.0	4.93	9.27	3.95	707	350	18	19	36
18	211	2.24	0.472	2.958	1.97	0.514	1.88	0.85	1.00	1.0	2.46	4.64	1.97	354	175	9	9	18
17	209	2.23	0.932	3.464	2.48	0.659	1.78	0.85	1.00	1.0	3.52	6.26	2.48	415	207	12	7	18
16	204	2.22	1.417	11.514	7.50	0.484	1.92	0.85	1.00	1.0	9.03	17.34	7.50	1361	670	33	39	72
15	190	2.17	2.833	27.716	18.08	0.458	1.96	0.85	1.00	1.0	20.86	40.90	18.08	3150	1596	76	100	175
14	170	2.10	2.833	27.516	17.88	0.455	1.97	0.85	1.00	1.0	20.69	40.65	17.88	3125	1570	73	97	169
13	159	2.06	0.472	2.858	1.92	0.500	1.90	0.85	1.00	1.0	2.37	4.50	1.92	329	166	8	9	17
12	157	2.06	0.472	2.856	1.92	0.499	1.90	0.85	1.00	1.0	2.37	4.50	1.92	328	166	8	9	17
11	155	2.05	0.472	2.853	1.91	0.499	1.90	0.85	1.00	1.0	2.36	4.50	1.91	328	165	8	9	16
10	153	2.04	0.472	2.851	1.91	0.499	1.90	0.85	1.00	1.0	2.36	4.49	1.91	328	165	8	9	16
9	146	2.02	1.889	16.467	10.71	0.459	1.96	0.85	1.00	1.0	12.58	24.64	10.71	1872	932	42	55	97
8	130	1.95	2.833	26.548	17.41	0.441	1.99	0.85	1.00	1.0	19.86	39.47	17.41	2953	1510	65	90	156
7	110	1.86	3.094	27.082	17.12	0.451	1.97	0.85	1.00	1.0	20.56	40.55	17.12	3130	1459	64	84	148
6	90	1.75	2.812	26.755	16.79	0.442	1.99	0.85	1.00	0.9	19.99	39.72	16.79	3099	1451	59	79	139
5	70	1.63	2.812	26.338	16.37	0.436	2.00	0.85	1.00	0.9	19.65	39.22	16.37	3049	1401	54	74	128
4	50	1.48	3.094	25.797	15.83	0.433	2.00	0.85	1.00	0.9	19.49	39.03	15.83	2978	1307	49	66	115
3	30	1.28	2.812	25.008	15.04	0.418	2.03	0.85	1.00	0.8	18.56	37.68	15.04	2894	1246	41	57	98
2	12	1.28	2.344	18.990	11.03	0.402	2.06	0.85	1.00	0.8	14.14	29.13	11.03	2205	884	32	44	76
1	2	1.28	1.639	3.700	2.07	0.744	1.79	0.85	1.00	0.6	4.51	8.05	2.07	567	152	9	4	13
													Totals	**51,569**	**24,981**			**2,620**

1.0D + 1.0W Service Normal Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
27	330	10.71	3.111	9.634	0.00	0.201	2.59	1.00	1.00	0.0	8.71	22.57	0.00	1050	0	205	48	253
26	310	10.52	2.833	9.139	0.00	0.189	2.63	1.00	1.00	0.0	8.12	21.37	0.00	1080	0	191	139	330
25	290	10.32	2.833	9.139	0.00	0.189	2.63	1.00	1.00	0.0	8.12	21.37	0.00	1202	0	188	205	393
24	270	10.11	3.111	9.139	0.00	0.193	2.62	1.00	1.00	0.0	8.40	21.99	0.00	1222	0	189	201	390
23	250	9.89	2.833	9.139	0.00	0.189	2.63	1.00	1.00	0.0	8.12	21.37	0.00	1202	0	180	197	377
22	230	9.66	2.833	10.128	0.00	0.205	2.58	1.00	1.00	0.0	8.73	22.53	0.00	1411	0	185	192	377
21	219	9.53	0.472	0.982	0.00	0.230	2.50	1.00	1.00	0.0	1.05	2.63	0.00	149	0	21	19	40
20	217	9.50	0.932	0.982	0.00	0.302	2.29	1.00	1.00	0.0	1.53	3.51	0.00	174	0	28	19	47
19	214	9.46	0.944	1.975	0.00	0.230	2.50	1.00	1.00	0.0	2.10	5.26	0.00	298	0	42	38	80

SECTION FORCES

1.0D + 1.0W Service Normal — Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
18	211	9.43	0.472	0.983	0.00	0.230	2.50	1.00	1.00	0.0	1.05	2.63	0.00	149	0	21	19	40
17	209	9.40	0.932	0.982	0.00	0.302	2.29	1.00	1.00	0.0	1.53	3.51	0.00	174	0	28	19	47
16	204	9.34	1.417	4.013	0.00	0.214	2.55	1.00	1.00	0.0	3.76	9.59	0.00	576	0	76	74	150
15	190	9.15	2.833	9.634	0.00	0.197	2.61	1.00	1.00	0.0	8.42	21.95	0.00	1295	0	171	182	353
14	170	8.86	2.833	9.634	0.00	0.197	2.61	1.00	1.00	0.0	8.42	21.95	0.00	1295	0	165	176	342
13	159	8.69	0.472	0.939	0.00	0.223	2.52	1.00	1.00	0.0	1.02	2.58	0.00	136	0	19	17	36
12	157	8.66	0.472	0.939	0.00	0.223	2.52	1.00	1.00	0.0	1.02	2.58	0.00	136	0	19	17	36
11	155	8.63	0.472	0.939	0.00	0.223	2.52	1.00	1.00	0.0	1.02	2.58	0.00	136	0	19	17	36
10	153	8.60	0.472	0.939	0.00	0.223	2.52	1.00	1.00	0.0	1.02	2.58	0.00	136	0	19	17	36
9	146	8.48	1.889	5.759	0.00	0.201	2.59	1.00	1.00	0.0	5.23	13.57	0.00	783	0	98	101	199
8	130	8.21	2.833	9.139	0.00	0.189	2.63	1.00	1.00	0.0	8.12	21.37	0.00	1202	0	149	163	312
7	110	7.83	3.094	9.962	0.00	0.205	2.58	1.00	1.00	0.0	8.88	22.91	0.00	1392	0	152	156	308
6	90	7.39	2.812	9.965	0.00	0.200	2.59	1.00	1.00	0.0	8.59	22.30	0.00	1373	0	140	147	287
5	70	6.88	2.812	9.965	0.00	0.200	2.59	1.00	1.00	0.0	8.59	22.30	0.00	1373	0	130	137	267
4	50	6.25	3.094	9.965	0.00	0.205	2.58	1.00	1.00	0.0	8.88	22.92	0.00	1393	0	122	124	246
3	30	5.40	2.812	9.965	0.00	0.200	2.59	1.00	1.00	0.0	8.59	22.30	0.00	1373	0	102	107	210
2	12	5.39	2.344	7.960	0.00	0.202	2.59	1.00	1.00	0.0	6.96	18.03	0.00	1101	0	83	86	169
1	2	5.39	1.639	1.635	0.00	0.485	1.92	1.00	1.00	0.0	2.75	5.27	0.00	346	0	24	18	43
													Totals	**22,156**	**0**			**5,405**

1.0D + 1.0W Service 60° — Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
27	330	10.71	3.111	9.634	0.00	0.201	2.59	0.80	1.00	0.0	8.09	20.96	0.00	1050	0	191	48	238
26	310	10.52	2.833	9.139	0.00	0.189	2.63	0.80	1.00	0.0	7.55	19.88	0.00	1080	0	178	139	317
25	290	10.32	2.833	9.139	0.00	0.189	2.63	0.80	1.00	0.0	7.55	19.88	0.00	1202	0	174	205	380
24	270	10.11	3.111	9.139	0.00	0.193	2.62	0.80	1.00	0.0	7.78	20.37	0.00	1222	0	175	201	376
23	250	9.89	2.833	9.139	0.00	0.189	2.63	0.80	1.00	0.0	7.55	19.88	0.00	1202	0	167	197	364
22	230	9.66	2.833	10.128	0.00	0.205	2.58	0.80	1.00	0.0	8.16	21.07	0.00	1411	0	173	192	365
21	219	9.53	0.472	0.982	0.00	0.230	2.50	0.80	1.00	0.0	0.96	2.39	0.00	149	0	19	19	38
20	217	9.50	0.932	0.982	0.00	0.302	2.29	0.80	1.00	0.0	1.35	3.08	0.00	174	0	25	19	44
19	214	9.46	0.944	1.975	0.00	0.230	2.50	0.80	1.00	0.0	1.92	4.78	0.00	298	0	38	38	76
18	211	9.43	0.472	0.983	0.00	0.230	2.50	0.80	1.00	0.0	0.96	2.40	0.00	149	0	19	19	38
17	209	9.40	0.932	0.982	0.00	0.302	2.29	0.80	1.00	0.0	1.35	3.08	0.00	174	0	25	19	43
16	204	9.34	1.417	4.013	0.00	0.214	2.55	0.80	1.00	0.0	3.48	8.86	0.00	576	0	70	74	145
15	190	9.15	2.833	9.634	0.00	0.197	2.61	0.80	1.00	0.0	7.86	20.48	0.00	1295	0	159	182	341
14	170	8.86	2.833	9.634	0.00	0.197	2.61	0.80	1.00	0.0	7.86	20.48	0.00	1295	0	154	176	331
13	159	8.69	0.472	0.939	0.00	0.223	2.52	0.80	1.00	0.0	0.93	2.34	0.00	136	0	17	17	35
12	157	8.66	0.472	0.939	0.00	0.223	2.52	0.80	1.00	0.0	0.93	2.34	0.00	136	0	17	17	34
11	155	8.63	0.472	0.939	0.00	0.223	2.52	0.80	1.00	0.0	0.93	2.34	0.00	136	0	17	17	34
10	153	8.60	0.472	0.939	0.00	0.223	2.52	0.80	1.00	0.0	0.93	2.34	0.00	136	0	17	17	34
9	146	8.48	1.889	5.759	0.00	0.201	2.59	0.80	1.00	0.0	4.86	12.59	0.00	783	0	91	101	192
8	130	8.21	2.833	9.139	0.00	0.189	2.63	0.80	1.00	0.0	7.55	19.88	0.00	1202	0	139	163	302
7	110	7.83	3.094	9.962	0.00	0.205	2.58	0.80	1.00	0.0	8.26	21.32	0.00	1392	0	142	156	298
6	90	7.39	2.812	9.965	0.00	0.200	2.59	0.80	1.00	0.0	8.03	20.84	0.00	1373	0	131	147	278
5	70	6.88	2.812	9.965	0.00	0.200	2.59	0.80	1.00	0.0	8.03	20.84	0.00	1373	0	122	137	259
4	50	6.25	3.094	9.965	0.00	0.205	2.58	0.80	1.00	0.0	8.26	21.32	0.00	1393	0	113	124	238
3	30	5.40	2.812	9.965	0.00	0.200	2.59	0.80	1.00	0.0	8.03	20.84	0.00	1373	0	96	107	203
2	12	5.39	2.344	7.960	0.00	0.202	2.59	0.80	1.00	0.0	6.50	16.82	0.00	1101	0	77	86	163
1	2	5.39	1.639	1.635	0.00	0.485	1.92	0.80	1.00	0.0	2.42	4.64	0.00	346	0	21	18	40
													Totals	**22,156**	**0**			**5,206**

1.0D + 1.0W Service 90° — Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
27	330	10.71	3.111	9.634	0.00	0.201	2.59	0.85	1.00	0.0	8.24	21.36	0.00	1050	0	194	48	242
26	310	10.52	2.833	9.139	0.00	0.189	2.63	0.85	1.00	0.0	7.69	20.25	0.00	1080	0	181	139	320
25	290	10.32	2.833	9.139	0.00	0.189	2.63	0.85	1.00	0.0	7.69	20.25	0.00	1202	0	178	205	383
24	270	10.11	3.111	9.139	0.00	0.193	2.62	0.85	1.00	0.0	7.93	20.77	0.00	1222	0	179	201	380
23	250	9.89	2.833	9.139	0.00	0.189	2.63	0.85	1.00	0.0	7.69	20.25	0.00	1202	0	170	197	367
22	230	9.66	2.833	10.128	0.00	0.205	2.58	0.85	1.00	0.0	8.31	21.43	0.00	1411	0	176	192	368
21	219	9.53	0.472	0.982	0.00	0.230	2.50	0.85	1.00	0.0	0.98	2.45	0.00	149	0	20	19	39
20	217	9.50	0.932	0.982	0.00	0.302	2.29	0.85	1.00	0.0	1.39	3.19	0.00	174	0	26	19	45
19	214	9.46	0.944	1.975	0.00	0.230	2.50	0.85	1.00	0.0	1.96	4.90	0.00	298	0	39	38	77
18	211	9.43	0.472	0.983	0.00	0.230	2.50	0.85	1.00	0.0	0.98	2.45	0.00	149	0	20	19	38
17	209	9.40	0.932	0.982	0.00	0.302	2.29	0.85	1.00	0.0	1.39	3.19	0.00	174	0	25	19	44
16	204	9.34	1.417	4.013	0.00	0.214	2.55	0.85	1.00	0.0	3.55	9.04	0.00	576	0	72	74	146
15	190	9.15	2.833	9.634	0.00	0.197	2.61	0.85	1.00	0.0	8.00	20.85	0.00	1295	0	162	182	344
14	170	8.86	2.833	9.634	0.00	0.197	2.61	0.85	1.00	0.0	8.00	20.85	0.00	1295	0	157	176	333
13	159	8.69	0.472	0.939	0.00	0.223	2.52	0.85	1.00	0.0	0.95	2.40	0.00	136	0	18	17	35
12	157	8.66	0.472	0.939	0.00	0.223	2.52	0.85	1.00	0.0	0.95	2.40	0.00	136	0	18	17	35
11	155	8.63	0.472	0.939	0.00	0.223	2.52	0.85	1.00	0.0	0.95	2.40	0.00	136	0	18	17	35
10	153	8.60	0.472	0.939	0.00	0.223	2.52	0.85	1.00	0.0	0.95	2.40	0.00	136	0	18	17	35

SECTION FORCES

1.0D + 1.0W Service 90° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
9	146	8.48	1.889	5.759	0.00	0.201	2.59	0.85	1.00	0.0	4.95	12.83	0.00	783	0	93	101	194
8	130	8.21	2.833	9.139	0.00	0.189	2.63	0.85	1.00	0.0	7.69	20.25	0.00	1202	0	141	163	305
7	110	7.83	3.094	9.962	0.00	0.205	2.58	0.85	1.00	0.0	8.42	21.72	0.00	1392	0	144	156	300
6	90	7.39	2.812	9.965	0.00	0.200	2.59	0.85	1.00	0.0	8.17	21.20	0.00	1373	0	133	147	280
5	70	6.88	2.812	9.965	0.00	0.200	2.59	0.85	1.00	0.0	8.17	21.20	0.00	1373	0	124	137	261
4	50	6.25	3.094	9.965	0.00	0.205	2.58	0.85	1.00	0.0	8.42	21.72	0.00	1393	0	115	124	240
3	30	5.40	2.812	9.965	0.00	0.200	2.59	0.85	1.00	0.0	8.17	21.20	0.00	1373	0	97	107	205
2	12	5.39	2.344	7.960	0.00	0.202	2.59	0.85	1.00	0.0	6.61	17.12	0.00	1101	0	79	86	164
1	2	5.39	1.639	1.635	0.00	0.485	1.92	0.85	1.00	0.0	2.50	4.80	0.00	346	0	22	18	40
													Totals	**22,156**	**0**			**5,255**

1.0D + 1.0W Service 120° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
27	330	10.71	3.111	9.634	0.00	0.201	2.59	1.00	1.00	0.0	8.71	22.57	0.00	1050	0	205	48	253
26	310	10.52	2.833	9.139	0.00	0.189	2.63	1.00	1.00	0.0	8.12	21.37	0.00	1080	0	191	139	330
25	290	10.32	2.833	9.139	0.00	0.189	2.63	1.00	1.00	0.0	8.12	21.37	0.00	1202	0	188	205	393
24	270	10.11	3.111	9.139	0.00	0.193	2.62	1.00	1.00	0.0	8.40	21.99	0.00	1222	0	189	201	390
23	250	9.89	2.833	9.139	0.00	0.189	2.63	1.00	1.00	0.0	8.12	21.37	0.00	1202	0	180	197	377
22	230	9.66	2.833	10.128	0.00	0.205	2.58	1.00	1.00	0.0	8.73	22.53	0.00	1411	0	185	192	377
21	219	9.53	0.472	0.982	0.00	0.230	2.50	1.00	1.00	0.0	1.05	2.63	0.00	149	0	21	19	40
20	217	9.50	0.932	0.982	0.00	0.302	2.29	1.00	1.00	0.0	1.53	3.51	0.00	174	0	28	19	47
19	214	9.46	0.944	1.975	0.00	0.230	2.50	1.00	1.00	0.0	2.10	5.26	0.00	298	0	42	38	80
18	211	9.43	0.472	0.983	0.00	0.230	2.50	1.00	1.00	0.0	1.05	2.63	0.00	149	0	21	19	40
17	209	9.40	0.932	0.982	0.00	0.302	2.29	1.00	1.00	0.0	1.53	3.51	0.00	174	0	28	19	47
16	204	9.34	1.417	4.013	0.00	0.214	2.55	1.00	1.00	0.0	3.76	9.59	0.00	576	0	76	74	150
15	190	9.15	2.833	9.634	0.00	0.197	2.61	1.00	1.00	0.0	8.42	21.95	0.00	1295	0	171	182	353
14	170	8.86	2.833	9.634	0.00	0.197	2.61	1.00	1.00	0.0	8.42	21.95	0.00	1295	0	165	176	342
13	159	8.69	0.472	0.939	0.00	0.223	2.52	1.00	1.00	0.0	1.02	2.58	0.00	136	0	19	17	36
12	157	8.66	0.472	0.939	0.00	0.223	2.52	1.00	1.00	0.0	1.02	2.58	0.00	136	0	19	17	36
11	155	8.63	0.472	0.939	0.00	0.223	2.52	1.00	1.00	0.0	1.02	2.58	0.00	136	0	19	17	36
10	153	8.60	0.472	0.939	0.00	0.223	2.52	1.00	1.00	0.0	1.02	2.58	0.00	136	0	19	17	36
9	146	8.48	1.889	5.759	0.00	0.201	2.59	1.00	1.00	0.0	5.23	13.57	0.00	783	0	98	101	199
8	130	8.21	2.833	9.139	0.00	0.189	2.63	1.00	1.00	0.0	8.12	21.37	0.00	1202	0	149	163	312
7	110	7.83	3.094	9.962	0.00	0.205	2.58	1.00	1.00	0.0	8.88	22.91	0.00	1392	0	152	156	308
6	90	7.39	2.812	9.965	0.00	0.200	2.59	1.00	1.00	0.0	8.59	22.30	0.00	1373	0	140	147	287
5	70	6.88	2.812	9.965	0.00	0.200	2.59	1.00	1.00	0.0	8.59	22.30	0.00	1373	0	130	137	267
4	50	6.25	3.094	9.965	0.00	0.205	2.58	1.00	1.00	0.0	8.88	22.92	0.00	1393	0	122	124	246
3	30	5.40	2.812	9.965	0.00	0.200	2.59	1.00	1.00	0.0	8.59	22.30	0.00	1373	0	102	107	210
2	12	5.39	2.344	7.960	0.00	0.202	2.59	1.00	1.00	0.0	6.96	18.03	0.00	1101	0	83	86	169
1	2	5.39	1.639	1.635	0.00	0.485	1.92	1.00	1.00	0.0	2.75	5.27	0.00	346	0	24	18	43
													Totals	**22,156**	**0**			**5,405**

1.0D + 1.0W Service 180° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
27	330	10.71	3.111	9.634	0.00	0.201	2.59	0.80	1.00	0.0	8.09	20.96	0.00	1050	0	191	48	238
26	310	10.52	2.833	9.139	0.00	0.189	2.63	0.80	1.00	0.0	7.55	19.88	0.00	1080	0	178	139	317
25	290	10.32	2.833	9.139	0.00	0.189	2.63	0.80	1.00	0.0	7.55	19.88	0.00	1202	0	174	205	380
24	270	10.11	3.111	9.139	0.00	0.193	2.62	0.80	1.00	0.0	7.78	20.37	0.00	1222	0	175	201	376
23	250	9.89	2.833	9.139	0.00	0.189	2.63	0.80	1.00	0.0	7.55	19.88	0.00	1202	0	167	197	364
22	230	9.66	2.833	10.128	0.00	0.205	2.58	0.80	1.00	0.0	8.16	21.07	0.00	1411	0	173	192	365
21	219	9.53	0.472	0.982	0.00	0.230	2.50	0.80	1.00	0.0	0.96	2.39	0.00	149	0	19	19	38
20	217	9.50	0.932	0.982	0.00	0.302	2.29	0.80	1.00	0.0	1.35	3.08	0.00	174	0	25	19	44
19	214	9.46	0.944	1.975	0.00	0.230	2.50	0.80	1.00	0.0	1.92	4.78	0.00	298	0	38	38	76
18	211	9.43	0.472	0.983	0.00	0.230	2.50	0.80	1.00	0.0	0.96	2.40	0.00	149	0	19	19	38
17	209	9.40	0.932	0.982	0.00	0.302	2.29	0.80	1.00	0.0	1.35	3.08	0.00	174	0	25	19	43
16	204	9.34	1.417	4.013	0.00	0.214	2.55	0.80	1.00	0.0	3.48	8.86	0.00	576	0	70	74	145
15	190	9.15	2.833	9.634	0.00	0.197	2.61	0.80	1.00	0.0	7.86	20.48	0.00	1295	0	159	182	341
14	170	8.86	2.833	9.634	0.00	0.197	2.61	0.80	1.00	0.0	7.86	20.48	0.00	1295	0	154	176	331
13	159	8.69	0.472	0.939	0.00	0.223	2.52	0.80	1.00	0.0	0.93	2.34	0.00	136	0	17	17	35
12	157	8.66	0.472	0.939	0.00	0.223	2.52	0.80	1.00	0.0	0.93	2.34	0.00	136	0	17	17	34
11	155	8.63	0.472	0.939	0.00	0.223	2.52	0.80	1.00	0.0	0.93	2.34	0.00	136	0	17	17	34
10	153	8.60	0.472	0.939	0.00	0.223	2.52	0.80	1.00	0.0	0.93	2.34	0.00	136	0	17	17	34
9	146	8.48	1.889	5.759	0.00	0.201	2.59	0.80	1.00	0.0	4.86	12.59	0.00	783	0	91	101	192
8	130	8.21	2.833	9.139	0.00	0.189	2.63	0.80	1.00	0.0	7.55	19.88	0.00	1202	0	139	163	302
7	110	7.83	3.094	9.962	0.00	0.205	2.58	0.80	1.00	0.0	8.26	21.32	0.00	1392	0	142	156	298
6	90	7.39	2.812	9.965	0.00	0.200	2.59	0.80	1.00	0.0	8.03	20.84	0.00	1373	0	131	147	278
5	70	6.88	2.812	9.965	0.00	0.200	2.59	0.80	1.00	0.0	8.03	20.84	0.00	1373	0	122	137	259
4	50	6.25	3.094	9.965	0.00	0.205	2.58	0.80	1.00	0.0	8.26	21.32	0.00	1393	0	113	124	238
3	30	5.40	2.812	9.965	0.00	0.200	2.59	0.80	1.00	0.0	8.03	20.84	0.00	1373	0	96	107	203
2	12	5.39	2.344	7.960	0.00	0.202	2.59	0.80	1.00	0.0	6.50	16.82	0.00	1101	0	77	86	163
1	2	5.39	1.639	1.635	0.00	0.485	1.92	0.80	1.00	0.0	2.42	4.64	0.00	346	0	21	18	40

SECTION FORCES

1.0D + 1.0W Service 180° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
													Totals	**22,156**	**0**			**5,206**

1.0D + 1.0W Service 210° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
27	330	10.71	3.111	9.634	0.00	0.201	2.59	0.85	1.00	0.0	8.24	21.36	0.00	1050	0	194	48	242
26	310	10.52	2.833	9.139	0.00	0.189	2.63	0.85	1.00	0.0	7.69	20.25	0.00	1080	0	181	139	320
25	290	10.32	2.833	9.139	0.00	0.189	2.63	0.85	1.00	0.0	7.69	20.25	0.00	1202	0	178	205	383
24	270	10.11	3.111	9.139	0.00	0.193	2.62	0.85	1.00	0.0	7.93	20.77	0.00	1222	0	179	201	380
23	250	9.89	2.833	9.139	0.00	0.189	2.63	0.85	1.00	0.0	7.69	20.25	0.00	1202	0	170	197	367
22	230	9.66	2.833	10.128	0.00	0.205	2.58	0.85	1.00	0.0	8.31	21.43	0.00	1411	0	176	192	368
21	219	9.53	0.472	0.982	0.00	0.230	2.50	0.85	1.00	0.0	0.98	2.45	0.00	149	0	20	19	39
20	217	9.50	0.932	0.982	0.00	0.302	2.29	0.85	1.00	0.0	1.39	3.19	0.00	174	0	26	19	45
19	214	9.46	0.944	1.975	0.00	0.230	2.50	0.85	1.00	0.0	1.96	4.90	0.00	298	0	39	38	77
18	211	9.43	0.472	0.983	0.00	0.230	2.50	0.85	1.00	0.0	0.98	2.45	0.00	149	0	20	19	38
17	209	9.40	0.932	0.982	0.00	0.302	2.29	0.85	1.00	0.0	1.39	3.19	0.00	174	0	25	19	44
16	204	9.34	1.417	4.013	0.00	0.214	2.55	0.85	1.00	0.0	3.55	9.04	0.00	576	0	72	74	146
15	190	9.15	2.833	9.634	0.00	0.197	2.61	0.85	1.00	0.0	8.00	20.85	0.00	1295	0	162	182	344
14	170	8.86	2.833	9.634	0.00	0.197	2.61	0.85	1.00	0.0	8.00	20.85	0.00	1295	0	157	176	333
13	159	8.69	0.472	0.939	0.00	0.223	2.52	0.85	1.00	0.0	0.95	2.40	0.00	136	0	18	17	35
12	157	8.66	0.472	0.939	0.00	0.223	2.52	0.85	1.00	0.0	0.95	2.40	0.00	136	0	18	17	35
11	155	8.63	0.472	0.939	0.00	0.223	2.52	0.85	1.00	0.0	0.95	2.40	0.00	136	0	18	17	35
10	153	8.60	0.472	0.939	0.00	0.223	2.52	0.85	1.00	0.0	0.95	2.40	0.00	136	0	18	17	35
9	146	8.48	1.889	5.759	0.00	0.201	2.59	0.85	1.00	0.0	4.95	12.83	0.00	783	0	93	101	194
8	130	8.21	2.833	9.139	0.00	0.189	2.63	0.85	1.00	0.0	7.69	20.25	0.00	1202	0	141	163	305
7	110	7.83	3.094	9.962	0.00	0.205	2.58	0.85	1.00	0.0	8.42	21.72	0.00	1392	0	144	156	300
6	90	7.39	2.812	9.965	0.00	0.200	2.59	0.85	1.00	0.0	8.17	21.20	0.00	1373	0	133	147	280
5	70	6.88	2.812	9.965	0.00	0.200	2.59	0.85	1.00	0.0	8.17	21.20	0.00	1373	0	124	137	261
4	50	6.25	3.094	9.965	0.00	0.205	2.58	0.85	1.00	0.0	8.42	21.72	0.00	1393	0	115	124	240
3	30	5.40	2.812	9.965	0.00	0.200	2.59	0.85	1.00	0.0	8.17	21.20	0.00	1373	0	97	107	205
2	12	5.39	2.344	7.960	0.00	0.202	2.59	0.85	1.00	0.0	6.61	17.12	0.00	1101	0	79	86	164
1	2	5.39	1.639	1.635	0.00	0.485	1.92	0.85	1.00	0.0	2.50	4.80	0.00	346	0	22	18	40
													Totals	**22,156**	**0**			**5,255**

1.0D + 1.0W Service 240° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
27	330	10.71	3.111	9.634	0.00	0.201	2.59	1.00	1.00	0.0	8.71	22.57	0.00	1050	0	205	48	253
26	310	10.52	2.833	9.139	0.00	0.189	2.63	1.00	1.00	0.0	8.12	21.37	0.00	1080	0	191	139	330
25	290	10.32	2.833	9.139	0.00	0.189	2.63	1.00	1.00	0.0	8.12	21.37	0.00	1202	0	188	205	393
24	270	10.11	3.111	9.139	0.00	0.193	2.62	1.00	1.00	0.0	8.40	21.99	0.00	1222	0	189	201	390
23	250	9.89	2.833	9.139	0.00	0.189	2.63	1.00	1.00	0.0	8.12	21.37	0.00	1202	0	180	197	377
22	230	9.66	2.833	10.128	0.00	0.205	2.58	1.00	1.00	0.0	8.73	22.53	0.00	1411	0	185	192	377
21	219	9.53	0.472	0.982	0.00	0.230	2.50	1.00	1.00	0.0	1.05	2.63	0.00	149	0	21	19	40
20	217	9.50	0.932	0.982	0.00	0.302	2.29	1.00	1.00	0.0	1.53	3.51	0.00	174	0	28	19	47
19	214	9.46	0.944	1.975	0.00	0.230	2.50	1.00	1.00	0.0	2.10	5.26	0.00	298	0	42	38	80
18	211	9.43	0.472	0.983	0.00	0.230	2.50	1.00	1.00	0.0	1.05	2.63	0.00	149	0	21	19	40
17	209	9.40	0.932	0.982	0.00	0.302	2.29	1.00	1.00	0.0	1.53	3.51	0.00	174	0	28	19	47
16	204	9.34	1.417	4.013	0.00	0.214	2.55	1.00	1.00	0.0	3.76	9.59	0.00	576	0	76	74	150
15	190	9.15	2.833	9.634	0.00	0.197	2.61	1.00	1.00	0.0	8.42	21.95	0.00	1295	0	171	182	353
14	170	8.86	2.833	9.634	0.00	0.197	2.61	1.00	1.00	0.0	8.42	21.95	0.00	1295	0	165	176	342
13	159	8.69	0.472	0.939	0.00	0.223	2.52	1.00	1.00	0.0	1.02	2.58	0.00	136	0	19	17	36
12	157	8.66	0.472	0.939	0.00	0.223	2.52	1.00	1.00	0.0	1.02	2.58	0.00	136	0	19	17	36
11	155	8.63	0.472	0.939	0.00	0.223	2.52	1.00	1.00	0.0	1.02	2.58	0.00	136	0	19	17	36
10	153	8.60	0.472	0.939	0.00	0.223	2.52	1.00	1.00	0.0	1.02	2.58	0.00	136	0	19	17	36
9	146	8.48	1.889	5.759	0.00	0.201	2.59	1.00	1.00	0.0	5.23	13.57	0.00	783	0	98	101	199
8	130	8.21	2.833	9.139	0.00	0.189	2.63	1.00	1.00	0.0	8.12	21.37	0.00	1202	0	149	163	312
7	110	7.83	3.094	9.962	0.00	0.205	2.58	1.00	1.00	0.0	8.88	22.91	0.00	1392	0	152	156	308
6	90	7.39	2.812	9.965	0.00	0.200	2.59	1.00	1.00	0.0	8.59	22.30	0.00	1373	0	140	147	287
5	70	6.88	2.812	9.965	0.00	0.200	2.59	1.00	1.00	0.0	8.59	22.30	0.00	1373	0	130	137	267
4	50	6.25	3.094	9.965	0.00	0.205	2.58	1.00	1.00	0.0	8.88	22.92	0.00	1393	0	122	124	246
3	30	5.40	2.812	9.965	0.00	0.200	2.59	1.00	1.00	0.0	8.59	22.30	0.00	1373	0	102	107	210
2	12	5.39	2.344	7.960	0.00	0.202	2.59	1.00	1.00	0.0	6.96	18.03	0.00	1101	0	83	86	169
1	2	5.39	1.639	1.635	0.00	0.485	1.92	1.00	1.00	0.0	2.75	5.27	0.00	346	0	24	18	43
													Totals	**22,156**	**0**			**5,405**

1.0D + 1.0W Service 300° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
27	330	10.71	3.111	9.634	0.00	0.201	2.59	0.80	1.00	0.0	8.09	20.96	0.00	1050	0	191	48	238
26	310	10.52	2.833	9.139	0.00	0.189	2.63	0.80	1.00	0.0	7.55	19.88	0.00	1080	0	178	139	317

SECTION FORCES

1.0D + 1.0W Service 300° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
25	290	10.32	2.833	9.139	0.00	0.189	2.63	0.80	1.00	0.0	7.55	19.88	0.00	1202	0	174	205	380
24	270	10.11	3.111	9.139	0.00	0.193	2.62	0.80	1.00	0.0	7.78	20.37	0.00	1222	0	175	201	376
23	250	9.89	2.833	9.139	0.00	0.189	2.63	0.80	1.00	0.0	7.55	19.88	0.00	1202	0	167	197	364
22	230	9.66	2.833	10.128	0.00	0.205	2.58	0.80	1.00	0.0	8.16	21.07	0.00	1411	0	173	192	365
21	219	9.53	0.472	0.982	0.00	0.230	2.50	0.80	1.00	0.0	0.96	2.39	0.00	149	0	19	19	38
20	217	9.50	0.932	0.982	0.00	0.302	2.29	0.80	1.00	0.0	1.35	3.08	0.00	174	0	25	19	44
19	214	9.46	0.944	1.975	0.00	0.230	2.50	0.80	1.00	0.0	1.92	4.78	0.00	298	0	38	38	76
18	211	9.43	0.472	0.983	0.00	0.230	2.50	0.80	1.00	0.0	0.96	2.40	0.00	149	0	19	19	38
17	209	9.40	0.932	0.982	0.00	0.302	2.29	0.80	1.00	0.0	1.35	3.08	0.00	174	0	25	19	43
16	204	9.34	1.417	4.013	0.00	0.214	2.55	0.80	1.00	0.0	3.48	8.86	0.00	576	0	70	74	145
15	190	9.15	2.833	9.634	0.00	0.197	2.61	0.80	1.00	0.0	7.86	20.48	0.00	1295	0	159	182	341
14	170	8.86	2.833	9.634	0.00	0.197	2.61	0.80	1.00	0.0	7.86	20.48	0.00	1295	0	154	176	331
13	159	8.69	0.472	0.939	0.00	0.223	2.52	0.80	1.00	0.0	0.93	2.34	0.00	136	0	17	17	35
12	157	8.66	0.472	0.939	0.00	0.223	2.52	0.80	1.00	0.0	0.93	2.34	0.00	136	0	17	17	34
11	155	8.63	0.472	0.939	0.00	0.223	2.52	0.80	1.00	0.0	0.93	2.34	0.00	136	0	17	17	34
10	153	8.60	0.472	0.939	0.00	0.223	2.52	0.80	1.00	0.0	0.93	2.34	0.00	136	0	17	17	34
9	146	8.48	1.889	5.759	0.00	0.201	2.59	0.80	1.00	0.0	4.86	12.59	0.00	783	0	91	101	192
8	130	8.21	2.833	9.139	0.00	0.189	2.63	0.80	1.00	0.0	7.55	19.88	0.00	1202	0	139	163	302
7	110	7.83	3.094	9.962	0.00	0.205	2.58	0.80	1.00	0.0	8.26	21.32	0.00	1392	0	142	156	298
6	90	7.39	2.812	9.965	0.00	0.200	2.59	0.80	1.00	0.0	8.03	20.84	0.00	1373	0	131	147	278
5	70	6.88	2.812	9.965	0.00	0.200	2.59	0.80	1.00	0.0	8.03	20.84	0.00	1373	0	122	137	259
4	50	6.25	3.094	9.965	0.00	0.205	2.58	0.80	1.00	0.0	8.26	21.32	0.00	1393	0	113	124	238
3	30	5.40	2.812	9.965	0.00	0.200	2.59	0.80	1.00	0.0	8.03	20.84	0.00	1373	0	96	107	203
2	12	5.39	2.344	7.960	0.00	0.202	2.59	0.80	1.00	0.0	6.50	16.82	0.00	1101	0	77	86	163
1	2	5.39	1.639	1.635	0.00	0.485	1.92	0.80	1.00	0.0	2.42	4.64	0.00	346	0	21	18	40
													Totals	**22,156**	**0**			**5,206**

1.0D + 1.0W Service 330° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
27	330	10.71	3.111	9.634	0.00	0.201	2.59	0.85	1.00	0.0	8.24	21.36	0.00	1050	0	194	48	242
26	310	10.52	2.833	9.139	0.00	0.189	2.63	0.85	1.00	0.0	7.69	20.25	0.00	1080	0	181	139	320
25	290	10.32	2.833	9.139	0.00	0.189	2.63	0.85	1.00	0.0	7.69	20.25	0.00	1202	0	178	205	383
24	270	10.11	3.111	9.139	0.00	0.193	2.62	0.85	1.00	0.0	7.93	20.77	0.00	1222	0	179	201	380
23	250	9.89	2.833	9.139	0.00	0.189	2.63	0.85	1.00	0.0	7.69	20.25	0.00	1202	0	170	197	367
22	230	9.66	2.833	10.128	0.00	0.205	2.58	0.85	1.00	0.0	8.31	21.43	0.00	1411	0	176	192	368
21	219	9.53	0.472	0.982	0.00	0.230	2.50	0.85	1.00	0.0	0.98	2.45	0.00	149	0	20	19	39
20	217	9.50	0.932	0.982	0.00	0.302	2.29	0.85	1.00	0.0	1.39	3.19	0.00	174	0	26	19	45
19	214	9.46	0.944	1.975	0.00	0.230	2.50	0.85	1.00	0.0	1.96	4.90	0.00	298	0	39	38	77
18	211	9.43	0.472	0.983	0.00	0.230	2.50	0.85	1.00	0.0	0.98	2.45	0.00	149	0	20	19	38
17	209	9.40	0.932	0.982	0.00	0.302	2.29	0.85	1.00	0.0	1.39	3.19	0.00	174	0	25	19	44
16	204	9.34	1.417	4.013	0.00	0.214	2.55	0.85	1.00	0.0	3.55	9.04	0.00	576	0	72	74	146
15	190	9.15	2.833	9.634	0.00	0.197	2.61	0.85	1.00	0.0	8.00	20.85	0.00	1295	0	162	182	344
14	170	8.86	2.833	9.634	0.00	0.197	2.61	0.85	1.00	0.0	8.00	20.85	0.00	1295	0	157	176	333
13	159	8.69	0.472	0.939	0.00	0.223	2.52	0.85	1.00	0.0	0.95	2.40	0.00	136	0	18	17	35
12	157	8.66	0.472	0.939	0.00	0.223	2.52	0.85	1.00	0.0	0.95	2.40	0.00	136	0	18	17	35
11	155	8.63	0.472	0.939	0.00	0.223	2.52	0.85	1.00	0.0	0.95	2.40	0.00	136	0	18	17	35
10	153	8.60	0.472	0.939	0.00	0.223	2.52	0.85	1.00	0.0	0.95	2.40	0.00	136	0	18	17	35
9	146	8.48	1.889	5.759	0.00	0.201	2.59	0.85	1.00	0.0	4.95	12.83	0.00	783	0	93	101	194
8	130	8.21	2.833	9.139	0.00	0.189	2.63	0.85	1.00	0.0	7.69	20.25	0.00	1202	0	141	163	305
7	110	7.83	3.094	9.962	0.00	0.205	2.58	0.85	1.00	0.0	8.42	21.72	0.00	1392	0	144	156	300
6	90	7.39	2.812	9.965	0.00	0.200	2.59	0.85	1.00	0.0	8.17	21.20	0.00	1373	0	133	147	280
5	70	6.88	2.812	9.965	0.00	0.200	2.59	0.85	1.00	0.0	8.17	21.20	0.00	1373	0	124	137	261
4	50	6.25	3.094	9.965	0.00	0.205	2.58	0.85	1.00	0.0	8.42	21.72	0.00	1393	0	115	124	240
3	30	5.40	2.812	9.965	0.00	0.200	2.59	0.85	1.00	0.0	8.17	21.20	0.00	1373	0	97	107	205
2	12	5.39	2.344	7.960	0.00	0.202	2.59	0.85	1.00	0.0	6.61	17.12	0.00	1101	0	79	86	164
1	2	5.39	1.639	1.635	0.00	0.485	1.92	0.85	1.00	0.0	2.50	4.80	0.00	346	0	22	18	40
													Totals	**22,156**	**0**			**5,255**

EQUIVALENT LATERAL FORCE METHOD

Spectral Response Acceleration for Short Period (S_S):	0.27
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.06
Long-Period Transition Period (T_L – Seconds):	12
Importance Factor (I_e):	1.00
Site Coefficient F_a:	1.58
Site Coefficient F_v:	2.40
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.29
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.09
Seismic Response Coefficient (C_s):	0.03
Upper Limit C_S:	0.03
Lower Limit C_S:	0.03
Period based on Rayleigh Method (sec):	1.79
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	1.65
Total Unfactored Dead Load:	33.81 k
Seismic Base Shear (E):	1.32 k

SEISMIC FORCES

1.2D + 1.0Ev + 1.0Eh

Section/Appurtenance	Height Above Base (ft)	Weight (lb)	W_Z (lb-ft)	Cvx	Horizontal Force (lb)	Vertical Force (lb)
27	330.00	1,050	14,724,761	0.056	74	1,320
26	310.00	1,080	13,666,020	0.052	68	1,358
25	290.00	1,202	13,632,516	0.052	68	1,512
24	270.00	1,222	12,317,006	0.047	62	1,536
23	250.00	1,202	10,676,799	0.041	53	1,512
22	230.00	1,411	10,918,634	0.042	55	1,773
21	219.00	149	1,063,097	0.004	5	187
20	217.00	174	1,222,498	0.005	6	219
19	214.00	298	2,046,855	0.008	10	374
18	211.00	149	1,000,533	0.004	5	187
17	209.00	174	1,149,177	0.004	6	219
16	204.00	576	3,659,208	0.014	18	724
15	190.00	1,295	7,320,857	0.028	37	1,629
14	170.00	1,295	6,095,715	0.023	31	1,629
13	159.00	136	571,804	0.002	3	171
12	157.00	136	560,009	0.002	3	171
11	155.00	136	548,311	0.002	3	171
10	153.00	136	536,710	0.002	3	171
9	146.00	783	2,869,034	0.011	14	985
8	130.00	1,202	3,637,635	0.014	18	1,512
7	110.00	1,392	3,199,484	0.012	16	1,751
6	90.00	1,373	2,267,151	0.009	11	1,726
5	70.00	1,373	1,498,876	0.006	8	1,726
4	50.00	1,393	873,609	0.003	4	1,751
3	30.00	1,373	371,419	0.001	2	1,726
2	12.00	1,101	65,859	0.000	0	1,384
1	2.00	346	1,082	0.000	0	435
Antel BXA-80080/8CF	335.80	93	1,342,349	0.005	7	117
Andrew HBXX-6517DS-A2M (43 lbs)	335.60	129	1,860,142	0.007	9	162
Samsung B2/B66A RRH ORAN (RF 4439d-25A)	335.00	224	3,221,949	0.012	16	282
Samsung RF4461d-13A	335.00	237	3,411,730	0.013	17	298
Samsung MT6413-77A	335.00	172	2,471,455	0.009	12	216
Raycap RCMDC-6627-PF-48	335.00	64	920,146	0.004	5	80
JMA Wireless MX06FHG865-HG	335.00	306	4,399,449	0.017	22	385
Generic Round Sector Frame	335.00	2,100	30,192,297	0.115	151	2,640
Ericsson AIR 6419 B77G	319.00	198	2,630,286	0.010	13	249
Ericsson Radio 4490HP 44B5 44B12A C (17.5" Height)	317.00	204	2,678,015	0.010	13	256
Ericsson RRUS 4478 B14 (18.1" Height)	317.00	178	2,339,325	0.009	12	224
Ericsson Radio 4890HP 48B2/B25 48B66 M01 (68.3lbs)	317.00	205	2,689,830	0.010	13	258
Raycap DC9-48-60-24-8C-EV (Enclosure)	317.00	37	485,718	0.002	2	47
Commscope NNH4-65B-R6H4	317.00	83	1,093,523	0.004	5	105
Commscope NNHH-65B-R4 (77.4 lbs)	317.00	77	1,016,070	0.004	5	97

Commscope NNHH-65C-R4		317.00	198	2,604,501	0.010	13	249
Commscope NNH4-65C-R6-V3 (102.5 lbs)		317.00	205	2,691,143	0.010	13	258
Generic Flat Light Sector Frame		317.00	2,400	31,506,060	0.120	158	3,017
Ericsson AIR 6419 B77D/ C-Band		315.00	192	2,494,354	0.010	12	241
Site Pro 1 VFA12-HD		306.00	2,070	25,638,835	0.097	128	2,602
Ericsson Radio 4460 B25+B66		302.00	327	3,963,386	0.015	20	411
Ericsson Radio 4480 B71+B85A		302.00	252	3,054,352	0.012	15	317
Ericsson AIR 6419 B41		302.00	206	2,490,752	0.010	12	258
RFS APXVLL19P_43-C-A20		302.00	123	1,487,179	0.006	7	154
RFS APXVAALL24 43-U-NA20		302.00	368	4,465,172	0.017	22	463
Generic Torque Arm		216.00	500	3,489,991	0.013	17	629
Generic Torque Arm		160.00	500	2,129,217	0.008	11	629
	Totals		**33,806**	**263,261,886**	**1.000**	**1,318**	**42,501**

FORCE/STRESS SUMMARY

Section 1 – 0.0' to 4.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2 1/4" SOLID	-51.32	1.2D + 1.0Di + 1.0Wi 240°	2.179	100	100	100	46.49	50.00	152.77	0.00	0.00	0	0	34	Member X
D PL - PL 2 x 0.5"	-1.89	1.2D + 1.0W N	3.041	100	100	100	201.75	36.00	7.03	0.00	0.00	0	0	0	Member Y

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 2X2X0.25	10.88	1.2D + 1.0Di + 1.0Wi 120°	36.0	58	30.46	0.00	0.00	0.00	0	0	36	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

Section 2 – 4.0' to 20.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2 1/4" SOLID	-44.38	1.2D + 1.0Di + 1.0Wi 240°	3.865	100	100	100	82.45	50.00	108.84	0.00	0.00	0	0	41	Member X
D SOL - 5/8" SOLID	-1.41	1.2D + 1.0W N	4.893	50	50	50	169.36	36.00	2.42	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 2X2X0.125	2.91	1.2D + 1.0Di + 1.0Wi 240°	36.0	58	15.55	0.00	0.00	0.00	0	0	19	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

FORCE/STRESS SUMMARY

Section 3 – 20.0' to 40.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Φc Pn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2 1/4" SOLID	-43.80	1.2D + 1.0Di + 1.0Wi 210°	3.9	100	100	100	83.20	50.00	107.86	0.00	0.00	0	0	41	Member X
D SOL - 5/8" SOLID	-1.24	1.2D + 1.0W N	4.92	50	50	50	170.32	36.00	2.39	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	ΦcPn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	Blk Shear Φt Pn (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 2X2X0.125	2.06	1.2D + 1.0Di + 1.0Wi 120°	36.0	58	15.55	0.00	0.00	0.00	0	0	13	Member

Max Splice Forces	Pu (kip)	Load Case	ΦRnt (kip)	Use %	Num Bolts	Bolt Type

Section 4 – 40.0' to 60.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Φc Pn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2 1/4" SOLID	-42.79	1.2D + 1.0Di + 1.0Wi 240°	3.9	100	100	100	83.20	50.00	107.86	0.00	0.00	0	0	40	Member X
D SOL - 5/8" SOLID	-0.87	1.2D + 1.0W N	4.92	50	50	50	170.32	36.00	2.39	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	ΦcPn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	Blk Shear Φt Pn (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 2X2X0.125	2.01	1.2D + 1.0Di + 1.0Wi 120°	36.0	58	15.55	0.00	0.00	0.00	0	0	13	Member

Max Splice Forces	Pu (kip)	Load Case	ΦRnt (kip)	Use %	Num Bolts	Bolt Type

Section 5 – 60.0' to 80.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Φc Pn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2 1/4" SOLID	-40.95	1.2D + 1.0Di + 1.0Wi 60°	3.9	100	100	100	83.20	50.00	107.86	0.00	0.00	0	0	38	Member X
D SOL - 5/8" SOLID	-1.50	1.2D + 1.0W N	4.92	50	50	50	170.32	36.00	2.39	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	ΦcPn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	Blk Shear Φt Pn (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 2X2X0.125	1.93	1.2D + 1.0Di + 1.0Wi 120°	36.0	58	15.55	0.00	0.00	0.00	0	0	12	Member

Max Splice Forces	Pu (kip)	Load Case	ΦRnt (kip)	Use %	Num Bolts	Bolt Type

Section 6 – 80.0' to 100.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Φc Pn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2 1/4" SOLID	-40.15	1.2D + 1.0Di + 1.0Wi 60°	3.9	100	100	100	83.20	50.00	107.86	0.00	0.00	0	0	37	Member X
D SOL - 5/8" SOLID	-1.00	1.2D + 1.0W N	4.92	50	50	50	170.32	36.00	2.39	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	ΦcPn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	Blk Shear Φt Pn (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 2X2X0.125	1.89	1.2D + 1.0Di + 1.0Wi N	36.0	58	15.55	0.00	0.00	0.00	0	0	12	Member

Max Splice Forces	Pu (kip)	Load Case	ΦRnt (kip)	Use %	Num Bolts	Bolt Type

Section 7 – 100.0' to 120.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Φc Pn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	# Bolt	# Hole	Use %	Controls

FORCE/STRESS SUMMARY

Section 7 – 100.0' to 120.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2 1/4" SOLID	-38.63	1.2D + 1.0Di + 1.0Wi N	3.892	100	100	100	83.03	50.00	108.08	0.00	0.00	0	0	36	Member X
H SAE - 2X2X0.125	-0.02	1.2D + 1.0Di + 1.0Wi 60°	3	100	100	100	105.23	36.00	11.26	0.00	0.00	0	0	0	Member Z
D SOL - 5/8" SOLID	-0.61	1.2D + 1.0W N	4.914	50	50	50	170.10	36.00	2.40	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 2X2X0.125	1.73	1.2D + 1.0Di + 1.0Wi N	36.0	58	15.55	0.00	0.00	0.00	0	0	11	Member
D SOL - 5/8" SOLID	0.02	1.2D + 1.0Di + 1.0Wi 60°	36.0	58	9.94	0.00	0.00	0.00	0	0	0	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

FORCE/STRESS SUMMARY

Section 8 – 120.0' to 140.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Φc Pn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-37.98	1.2D + 1.0Di + 1.0Wi 60°	3.892	100	100	100	93.41	50.00	74.70	0.00	0.00	0	0	51	Member X
D SOL - 5/8" SOLID	-1.34	1.2D + 1.0W N	4.914	50	50	50	170.10	36.00	2.40	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	ΦcPn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	Blk Shear Φt Pn (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 2X2X0.125	2.15	1.2D + 1.0Di + 1.0Wi 60°	36.0	58	15.55	0.00	0.00	0.00	0	0	14	Member
D SOL - 5/8" SOLID	0.00	1.2D + 1.0Di + 1.0Wi 60°	36.0	58	9.94	0.00	0.00	0.00	0	0	0	Member

Max Splice Forces	Pu (kip)	Load Case	ΦRnt (kip)	Use %	Num Bolts	Bolt Type

Section 9 – 140.0' to 152.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Φc Pn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-36.08	1.2D + 1.0W 120°	3.82	100	100	100	91.68	50.00	76.46	0.00	0.00	0	0	47	Member X
D SOL - 3/4" SOLID	-1.38	1.2D + 1.0W N	4.857	50	50	50	139.89	36.00	5.10	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	ΦcPn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	Blk Shear Φt Pn (kip)	# Bolt	# Hole	Use %	Controls
H SAU - 2X1.5X0.1875	2.81	1.2D + 1.0Di + 1.0Wi 240°	36.0	58	20.09	0.00	0.00	0.00	0	0	14	Member

Max Splice Forces	Pu (kip)	Load Case	ΦRnt (kip)	Use %	Num Bolts	Bolt Type

Section 10 – 152.0' to 154.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Φc Pn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-41.23	1.2D + 1.0W 120°	1.73	100	100	100	41.52	50.00	124.63	0.00	0.00	0	0	33	Member X
H SAU - 2X1.5X0.1875	-0.10	1.2D + 1.0W 60°	3	100	100	100	115.90	36.00	12.89	0.00	0.00	0	0	1	Member Z
D SOL - 3/4" SOLID	-0.22	1.2D + 1.0W N	2.29	50	50	50	65.94	36.00	11.39	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	ΦcPn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	Blk Shear Φt Pn (kip)	# Bolt	# Hole	Use %	Controls
H SAU - 2X1.5X0.1875	0.58	1.2D + 1.0W 60°	36.0	58	20.09	0.00	0.00	0.00	0	0	3	Member
D SOL - 3/4" SOLID	0.69	1.2D + 1.0W 210°	36.0	58	14.31	0.00	0.00	0.00	0	0	5	Member

Max Splice Forces	Pu (kip)	Load Case	ΦRnt (kip)	Use %	Num Bolts	Bolt Type

Section 11 – 154.0' to 156.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Φc Pn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-41.29	1.2D + 1.0W 120°	1.73	100	100	100	41.52	50.00	124.63	0.00	0.00	0	0	33	Member X
H SAU - 2X1.5X0.1875	-0.33	1.2D + 1.0W 120°	3	100	100	100	115.90	36.00	12.89	0.00	0.00	0	0	3	Member Z
D SOL - 3/4" SOLID	-0.75	1.2D + 1.0W N	2.29	50	50	50	65.94	36.00	11.39	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	ΦcPn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	Blk Shear Φt Pn (kip)	# Bolt	# Hole	Use %	Controls
H SAU - 2X1.5X0.1875	0.55	1.2D + 1.0W 60°	36.0	58	20.09	0.00	0.00	0.00	0	0	3	Member
D SOL - 3/4" SOLID	0.71	1.2D + 1.0W 210°	36.0	58	14.31	0.00	0.00	0.00	0	0	5	Member

Max Splice Forces	Pu (kip)	Load Case	ΦRnt (kip)	Use %	Num Bolts	Bolt Type

FORCE/STRESS SUMMARY

Section 12 – 156.0' to 158.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-42.51	1.2D + 1.0W 120°	1.73	100	100	100	41.52	50.00	124.63	0.00	0.00	0	0	34	Member X
H SAU - 2X1.5X0.1875	-0.06	1.2D + 1.0W 210°	3	100	100	100	115.90	36.00	12.89	0.00	0.00	0	0	0	Member Z
D SOL - 3/4" SOLID	-0.28	1.2D + 1.0W N	2.29	50	50	50	65.94	36.00	11.39	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAU - 2X1.5X0.1875	0.40	1.2D + 1.0W 60°	36.0	58	20.09	0.00	0.00	0.00	0	0	2	Member
D SOL - 3/4" SOLID	0.17	1.2D + 1.0W 300°	36.0	58	14.31	0.00	0.00	0.00	0	0	1	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

FORCE/STRESS SUMMARY

Section 13 – 158.0' to 160.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-42.62	1.2D + 1.0W 120°	1.73	100	100	100	41.52	50.00	124.63	0.00	0.00	0	0	34	Member X
H SAU - 2X1.5X0.1875	-0.28	1.2D + 1.0W 120°	3	100	100	100	115.90	36.00	12.89	0.00	0.00	0	0	2	Member Z
D SOL - 3/4" SOLID	-0.19	1.2D + 1.0W N	2.29	50	50	50	65.94	36.00	11.39	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAU - 2X1.5X0.1875	0.62	1.2D + 1.0W 180°	36.0	58	20.09	0.00	0.00	0.00	0	0	3	Member
D SOL - 3/4" SOLID	0.17	1.2D + 1.0W 300°	36.0	58	14.31	0.00	0.00	0.00	0	0	1	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

Section 14 – 160.0' to 180.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-41.84	1.2D + 1.0W 120°	3.892	100	100	100	93.41	50.00	74.70	0.00	0.00	0	0	56	Member X
D SOL - 3/4" SOLID	-1.90	1.2D + 1.0W N	4.914	50	50	50	141.52	36.00	4.98	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAU - 2X1.5X0.1875	2.45	1.2D + 1.0Di + 1.0Wi 210°	36.0	58	20.09	0.00	0.00	0.00	0	0	12	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

Section 15 – 180.0' to 200.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-50.91	1.2D + 1.0W 120°	3.892	100	100	100	93.41	50.00	74.70	0.00	0.00	0	0	68	Member X
D SOL - 3/4" SOLID	-1.37	1.2D + 1.0W N	4.914	50	50	50	141.52	36.00	4.98	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAU - 2X1.5X0.1875	2.38	1.2D + 1.0W 240°	36.0	58	20.09	0.00	0.00	0.00	0	0	12	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

Section 16 – 200.0' to 208.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-55.72	1.2D + 1.0W 120°	3.725	100	100	100	89.40	50.00	78.81	0.00	0.00	0	0	71	Member X
H SAU - 2X1.5X0.25	-0.12	1.2D + 1.0W 120°	3	100	100	100	116.25	36.00	16.77	0.00	0.00	0	0	1	Member Z
D SOL - 7/8" SOLID	-1.64	1.2D + 1.0W N	4.783	50	50	50	118.09	36.00	9.35	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAU - 2X1.5X0.25	3.31	1.2D + 1.0W 240°	36.0	58	26.24	0.00	0.00	0.00	0	0	13	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

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Section 17 – 208.0' to 210.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-59.18	1.2D + 1.0W 120°	1.72	100	100	100	41.28	50.00	124.81	0.00	0.00	0	0	47	Member X
H SAU - 2X1.5X0.25	-1.52	1.2D + 1.0W 90°	1.5	100	100	100	88.12	36.00	22.04	0.00	0.00	0	0	7	Member Z
D SOL - 7/8" SOLID	-1.44	1.2D + 1.0W N	2.282	50	50	50	56.35	36.00	16.48	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAU - 2X1.5X0.25	1.43	1.2D + 1.0W 240°	36.0	58	26.24	0.00	0.00	0.00	0	0	5	Member
D SOL - 7/8" SOLID	0.20	1.2D + 1.0W 330°	36.0	58	19.48	0.00	0.00	0.00	0	0	1	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

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Section 18 – 210.0' to 212.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-57.35	1.2D + 1.0W 120°	1.73	100	100	100	41.52	50.00	124.63	0.00	0.00	0	0	46	Member X
H SAU - 2X1.5X0.25	-0.66	1.2D + 1.0W 120°	3	100	100	100	116.25	36.00	16.77	0.00	0.00	0	0	4	Member Z
D SOL - 7/8" SOLID	-4.68	1.2D + 1.0W N	2.29	50	50	50	56.54	36.00	16.46	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	6.86	1.2D + 1.0W 180°	50.0	65	141.37	0.00	0.00		0	0	5	Member
H SAU - 2X1.5X0.25	2.07	1.2D + 1.0W 210°	36.0	58	26.24	0.00	0.00	0.00	0	0	8	Member
D SOL - 7/8" SOLID	0.48	1.2D + 1.0W 210°	36.0	58	19.48	0.00	0.00	0.00	0	0	2	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

Section 19 – 212.0' to 216.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-64.12	1.2D + 1.0W 120°	3.44	100	100	100	82.56	50.00	85.89	0.00	0.00	0	0	75	Member X
H SAU - 2X1.5X0.25	-0.90	1.2D + 1.0W 120°	3	100	100	100	116.25	36.00	16.77	0.00	0.00	0	0	5	Member Z
D SOL - 7/8" SOLID	-0.36	1.2D + 1.0W N	4.564	50	50	50	112.70	36.00	9.98	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	11.71	1.2D + 1.0W 180°	50.0	65	141.37	0.00	0.00		0	0	8	Member
H SAU - 2X1.5X0.25	2.12	1.2D + 1.0W 210°	36.0	58	26.24	0.00	0.00	0.00	0	0	8	Member
D SOL - 7/8" SOLID	1.02	1.2D + 1.0W 210°	36.0	58	19.48	0.00	0.00	0.00	0	0	5	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

Section 20 – 216.0' to 218.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-70.80	1.2D + 1.0W 120°	1.72	100	100	100	41.28	50.00	124.81	0.00	0.00	0	0	57	Member X
H SAU - 2X1.5X0.25	-6.17	1.2D + 1.0W 120°	1.5	100	100	100	88.12	36.00	22.04	0.00	0.00	0	0	28	Member Z
D SOL - 7/8" SOLID	-0.36	1.2D + 1.0W N	2.282	50	50	50	56.35	36.00	16.48	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	15.63	1.2D + 1.0W 180°	50.0	65	141.37	0.00	0.00		0	0	11	Member
H SAU - 2X1.5X0.25	7.40	1.2D + 1.0W 210°	36.0	58	26.24	0.00	0.00	0.00	0	0	28	Member
D SOL - 7/8" SOLID	1.46	1.2D + 1.0W 210°	36.0	58	19.48	0.00	0.00	0.00	0	0	8	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

Section 21 – 218.0' to 220.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-70.79	1.2D + 1.0W 120°	1.72	100	100	100	41.28	50.00	124.81	0.00	0.00	0	0	57	Member X
H SAU - 2X1.5X0.25	-0.57	1.2D + 1.0W 120°	3	100	100	100	116.25	36.00	16.77	0.00	0.00	0	0	3	Member Z
D SOL - 7/8" SOLID	-1.41	1.2D + 1.0W N	2.282	50	50	50	56.35	36.00	16.48	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	15.66	1.2D + 1.0W 180°	50.0	65	141.37	0.00	0.00		0	0	11	Member
H SAU - 2X1.5X0.25	1.81	1.2D + 1.0W 210°	36.0	58	26.24	0.00	0.00	0.00	0	0	7	Member

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D SOL - 7/8" SOLID	1.31	1.2D + 1.0W 90°	36.0	58	19.48	0.00	0.00	0.00	0	0	7	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

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Section 22 – 220.0' to 240.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-66.59	1.2D + 1.0W 120°	3.892	100	100	100	93.41	50.00	74.70	0.00	0.00	0	0	89	Member X
H SAU - 2X1.5X0.25	-0.80	1.2D + 1.0W 120°	3	100	100	100	116.25	36.00	16.77	0.00	0.00	0	0	5	Member Z
D SOL - 7/8" SOLID	-4.00	1.2D + 1.0W N	4.914	50	50	50	121.33	36.00	8.98	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	13.20	1.2D + 1.0W 180°	50.0	65	141.37	0.00	0.00		0	0	9	Member
H SAU - 2X1.5X0.25	3.30	1.2D + 1.0W 210°	36.0	58	26.24	0.00	0.00	0.00	0	0	13	Member
D SOL - 7/8" SOLID	1.11	1.2D + 1.0W 90°	36.0	58	19.48	0.00	0.00	0.00	0	0	6	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	13.17	1.2D + 1.0W 180°	90.30	15	3	0.75" A325

Section 23 – 240.0' to 260.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-53.15	1.2D + 1.0W 120°	3.892	100	100	100	93.41	50.00	74.70	0.00	0.00	0	0	71	Member X
H SAE - 2X2X0.125	-0.20	1.2D + 1.0W 120°	3	100	100	100	105.23	36.00	11.26	0.00	0.00	0	0	2	Member Z
D SOL - 5/8" SOLID	-2.06	1.2D + 1.0W N	4.914	50	50	50	170.10	36.00	2.40	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	2.87	1.2D + 1.0W 210°	50.0	65	141.37	0.00	0.00		0	0	2	Member
H SAE - 2X2X0.125	1.51	1.2D + 1.0W 120°	36.0	58	15.55	0.00	0.00	0.00	0	0	10	Member
D SOL - 5/8" SOLID	0.26	1.2D + 1.0W 90°	36.0	58	9.94	0.00	0.00	0.00	0	0	3	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	2.46	1.2D + 1.0W 210°	90.30	3	3	0.75" A325

Section 24 – 260.0' to 280.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-46.03	1.2D + 1.0W 120°	3.892	100	100	100	93.41	50.00	74.70	0.00	0.00	0	0	62	Member X
H SAE - 2X2X0.125	-3.19	1.2D + 1.0W 330°	3	100	100	100	105.23	36.00	11.26	0.00	0.00	0	0	28	Member Z
D SOL - 5/8" SOLID	-1.44	1.2D + 1.0W N	4.914	50	50	50	170.10	36.00	2.40	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	4.34	1.2D + 1.0W 180°	50.0	65	141.37	0.00	0.00		0	0	3	Member
H SAE - 2X2X0.125	1.45	1.2D + 1.0W 210°	36.0	58	15.55	0.00	0.00	0.00	0	0	9	Member
D SOL - 5/8" SOLID	5.39	1.2D + 1.0W 330°	36.0	58	9.94	0.00	0.00	0.00	0	0	54	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

Section 25 – 280.0' to 300.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-31.08	1.2D + 1.0W 120°	3.892	100	100	100	93.41	50.00	74.70	0.00	0.00	0	0	42	Member X
H SAE - 2X2X0.125	-2.72	1.2D + 1.0W 330°	3	100	100	100	105.23	36.00	11.26	0.00	0.00	0	0	24	Member Z
D SOL - 5/8" SOLID	-0.53	1.2D + 1.0W N	4.914	50	50	50	170.10	36.00	2.40	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 2X2X0.125	0.93	1.2D + 1.0W 120°	36.0	58	15.55	0.00	0.00	0.00	0	0	6	Member

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D SOL - 5/8" SOLID	4.79	1.2D + 1.0W 330°	36.0	58	9.94	0.00	0.00	0.00	0	0	48	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

Section 26 – 300.0' to 320.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-26.28	1.2D + 1.0W 180°	3.892	100	100	100	93.41	50.00	74.70	0.00	0.00	0	0	35	Member X
H SAE - 2X2X0.125	-1.26	1.2D + 1.0W 300°	3	100	100	100	105.23	36.00	11.26	0.00	0.00	0	0	11	Member Z
D SOL - 5/8" SOLID	-1.19	1.2D + 1.0W N	4.914	50	50	50	170.10	36.00	2.40	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	2.73	1.2D + 1.0W 240°	50.0	65	141.37	0.00	0.00		0	0	2	Member
H SAE - 2X2X0.125	1.60	1.2D + 1.0W 240°	36.0	58	15.55	0.00	0.00	0.00	0	0	10	Member
D SOL - 5/8" SOLID	3.99	1.2D + 1.0W 330°	36.0	58	9.94	0.00	0.00	0.00	0	0	40	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

Section 27 – 320.0' to 340.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-13.01	1.2D + 1.0W 210°	3.892	100	100	100	93.41	50.00	74.70	0.00	0.00	0	0	17	Member X
H SAU - 2X1.5X0.1875	-0.45	1.2D + 1.0W 60°	3	100	100	100	115.90	36.00	12.89	0.00	0.00	0	0	3	Member Z
D SOL - 3/4" SOLID	-0.69	1.2D + 1.0W N	4.914	50	50	50	141.52	36.00	4.98	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	6.46	1.2D + 1.0W 60°	50.0	65	141.37	0.00	0.00		0	0	5	Member
H SAU - 2X1.5X0.1875	0.96	1.2D + 1.0W 120°	36.0	58	20.09	0.00	0.00	0.00	0	0	5	Member
D SOL - 3/4" SOLID	2.15	1.2D + 1.0W 330°	36.0	58	14.31	0.00	0.00	0.00	0	0	15	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
1.2D + 1.0W Normal	51.95	7/16 EHS	A1	20	12.48	0.65	5
		7/16 EHS	A1b	20a	12.48	2.94	24
		7/16 EHS	A1a	20b	12.48	2.92	23
	104.16	7/16 EHS	A1	39	12.48	0.19	2
		7/16 EHS	A1b	39a	12.48	3.03	24
		7/16 EHS	A1a	39b	12.48	2.97	24
	158.00	7/16 EHS	A1	T3	12.48	0.83	7
		7/16 EHS	A1b	T3	12.48	3.05	24
		7/16 EHS	A1a	T3a	12.48	3.06	25
		7/16 EHS	A1b	T3a	12.48	3.08	25
		7/16 EHS	A1a	T3b	12.48	3.02	24
		7/16 EHS	A1	T3b	12.48	0.83	7
	218.00	7/16 EHS	A2	T4	12.48	0.36	3
		7/16 EHS	A2b	T4	12.48	4.27	34
		7/16 EHS	A2a	T4a	12.48	4.59	37
		7/16 EHS	A2b	T4a	12.48	4.57	37
		7/16 EHS	A2	T4b	12.48	0.36	3
		7/16 EHS	A2a	T4b	12.48	4.24	34
	271.95	1/2 EHS	A2	111	16.14	0.58	4
		1/2 EHS	A2b	111a	16.14	8.39	52
		1/2 EHS	A2a	111b	16.14	8.38	52
	328.05	9/16 EHS	A2	131	21	0.87	4
		9/16 EHS	A2b	131a	21	14.71	70
		9/16 EHS	A2a	131b	21	14.7	70
1.2D + 1.0W 60°	51.95	7/16 EHS	A1	20	12.48	1.41	11
		7/16 EHS	A1b	20a	12.48	1.41	11
		7/16 EHS	A1a	20b	12.48	3.75	30
	104.16	7/16 EHS	A1	39	12.48	1.36	11
		7/16 EHS	A1b	39a	12.48	1.34	11
		7/16 EHS	A1a	39b	12.48	4.26	34
	158.00	7/16 EHS	A1	T3	12.48	1.67	13
		7/16 EHS	A1b	T3	12.48	1.61	13
		7/16 EHS	A1b	T3a	12.48	1.59	13
		7/16 EHS	A1a	T3a	12.48	4.26	34
		7/16 EHS	A1a	T3b	12.48	4.29	34
		7/16 EHS	A1	T3b	12.48	1.64	13
	218.00	7/16 EHS	A2b	T4	12.48	2.12	17
		7/16 EHS	A2	T4	12.48	2.16	17
		7/16 EHS	A2a	T4a	12.48	5.45	44
		7/16 EHS	A2b	T4a	12.48	2.13	17
		7/16 EHS	A2	T4b	12.48	2.16	17
		7/16 EHS	A2a	T4b	12.48	5.49	44
	271.95	1/2 EHS	A2	111	16.14	2.51	16
		1/2 EHS	A2b	111a	16.14	2.44	15
		1/2 EHS	A2a	111b	16.14	10.22	63
	328.05	9/16 EHS	A2	131	21	3.04	14
		9/16 EHS	A2b	131a	21	2.96	14
		9/16 EHS	A2a	131b	21	16.85	80
1.2D + 1.0W 90°	51.95	7/16 EHS	A1	20	12.48	2.11	17
		7/16 EHS	A1b	20a	12.48	0.78	6
		7/16 EHS	A1a	20b	12.48	3.47	28
	104.16	7/16 EHS	A1	39	12.48	2.06	17
		7/16 EHS	A1b	39a	12.48	0.67	5
		7/16 EHS	A1a	39b	12.48	3.82	31
	158.00	7/16 EHS	A1	T3	12.48	2.29	18
		7/16 EHS	A1b	T3	12.48	1.06	9
		7/16 EHS	A1b	T3a	12.48	1.04	8
		7/16 EHS	A1a	T3a	12.48	3.81	30
		7/16 EHS	A1	T3b	12.48	2.28	18

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
		7/16 EHS	A1a	T3b	12.48	3.9	31
	218.00	7/16 EHS	A2b	T4	12.48	0.94	8
		7/16 EHS	A2	T4	12.48	3.38	27
		7/16 EHS	A2b	T4a	12.48	0.88	7
		7/16 EHS	A2a	T4a	12.48	4.98	40
		7/16 EHS	A2	T4b	12.48	3.54	28
		7/16 EHS	A2a	T4b	12.48	5.38	43
	271.95	1/2 EHS	A2	111	16.14	5.63	35
		1/2 EHS	A2b	111a	16.14	0.96	6
		1/2 EHS	A2a	111b	16.14	10.02	62
	328.05	9/16 EHS	A2	131	21	9.24	44
		9/16 EHS	A2b	131a	21	1.2	6
		9/16 EHS	A2a	131b	21	17.11	81
1.2D + 1.0W 120°	51.95	7/16 EHS	A1	20	12.48	2.89	23
		7/16 EHS	A1b	20a	12.48	0.59	5
		7/16 EHS	A1a	20b	12.48	2.85	23
	104.16	7/16 EHS	A1	39	12.48	2.95	24
		7/16 EHS	A1b	39a	12.48	0.12	1
		7/16 EHS	A1a	39b	12.48	2.9	23
	158.00	7/16 EHS	A1	T3	12.48	3.05	24
		7/16 EHS	A1b	T3	12.48	0.78	6
		7/16 EHS	A1b	T3a	12.48	0.78	6
		7/16 EHS	A1a	T3a	12.48	2.95	24
		7/16 EHS	A1a	T3b	12.48	3.01	24
		7/16 EHS	A1	T3b	12.48	3.07	25
	218.00	7/16 EHS	A2	T4	12.48	4.32	35
		7/16 EHS	A2b	T4	12.48	0.26	2
		7/16 EHS	A2a	T4a	12.48	4.15	33
		7/16 EHS	A2b	T4a	12.48	0.26	2
		7/16 EHS	A2a	T4b	12.48	4.55	36
		7/16 EHS	A2	T4b	12.48	4.63	37
	271.95	1/2 EHS	A2	111	16.14	8.56	53
		1/2 EHS	A2b	111a	16.14	0.49	3
		1/2 EHS	A2a	111b	16.14	8.29	51
	328.05	9/16 EHS	A2	131	21	15.02	72
		9/16 EHS	A2b	131a	21	0.77	4
		9/16 EHS	A2a	131b	21	14.61	70
1.2D + 1.0W 180°	51.95	7/16 EHS	A1	20	12.48	3.79	30
		7/16 EHS	A1b	20a	12.48	1.37	11
		7/16 EHS	A1a	20b	12.48	1.37	11
	104.16	7/16 EHS	A1	39	12.48	4.3	34
		7/16 EHS	A1b	39a	12.48	1.3	10
		7/16 EHS	A1a	39b	12.48	1.3	10
	158.00	7/16 EHS	A1	T3	12.48	4.34	35
		7/16 EHS	A1b	T3	12.48	1.56	13
		7/16 EHS	A1a	T3a	12.48	1.57	13
		7/16 EHS	A1b	T3a	12.48	1.6	13
		7/16 EHS	A1a	T3b	12.48	1.55	12
		7/16 EHS	A1	T3b	12.48	4.33	35
	218.00	7/16 EHS	A2	T4	12.48	5.66	45
		7/16 EHS	A2b	T4	12.48	2.1	17
		7/16 EHS	A2a	T4a	12.48	2.09	17
		7/16 EHS	A2b	T4a	12.48	2.11	17
		7/16 EHS	A2	T4b	12.48	5.62	45
		7/16 EHS	A2a	T4b	12.48	2.1	17
	271.95	1/2 EHS	A2	111	16.14	10.5	65
		1/2 EHS	A2b	111a	16.14	2.41	15
		1/2 EHS	A2a	111b	16.14	2.41	15
	328.05	9/16 EHS	A2	131	21	17.28	82

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
		9/16 EHS	A2b	131a	21	2.89	14
		9/16 EHS	A2a	131b	21	2.91	14
1.2D + 1.0W 210°	51.95	7/16 EHS	A1	20	12.48	3.53	28
		7/16 EHS	A1b	20a	12.48	2.11	17
		7/16 EHS	A1a	20b	12.48	0.79	6
	104.16	7/16 EHS	A1	39	12.48	3.87	31
		7/16 EHS	A1b	39a	12.48	2.03	16
		7/16 EHS	A1a	39b	12.48	0.66	5
	158.00	7/16 EHS	A1b	T3	12.48	2.21	18
		7/16 EHS	A1	T3	12.48	3.94	32
		7/16 EHS	A1b	T3a	12.48	2.21	18
		7/16 EHS	A1a	T3a	12.48	1.04	8
		7/16 EHS	A1	T3b	12.48	3.89	31
		7/16 EHS	A1a	T3b	12.48	1.01	8
	218.00	7/16 EHS	A2	T4	12.48	5.54	44
		7/16 EHS	A2b	T4	12.48	3.49	28
		7/16 EHS	A2a	T4a	12.48	0.95	8
		7/16 EHS	A2b	T4a	12.48	3.31	27
		7/16 EHS	A2a	T4b	12.48	0.9	7
		7/16 EHS	A2	T4b	12.48	5.19	42
	271.95	1/2 EHS	A2	111	16.14	10.35	64
		1/2 EHS	A2b	111a	16.14	5.48	34
		1/2 EHS	A2a	111b	16.14	0.98	6
	328.05	9/16 EHS	A2	131	21	17.61	84
		9/16 EHS	A2b	131a	21	9	43
		9/16 EHS	A2a	131b	21	1.22	6
1.2D + 1.0W 240°	51.95	7/16 EHS	A1	20	12.48	2.93	24
		7/16 EHS	A1b	20a	12.48	2.91	23
		7/16 EHS	A1a	20b	12.48	0.65	5
	104.16	7/16 EHS	A1	39	12.48	2.96	24
		7/16 EHS	A1b	39a	12.48	2.96	24
		7/16 EHS	A1a	39b	12.48	0.11	1
	158.00	7/16 EHS	A1b	T3	12.48	3.02	24
		7/16 EHS	A1	T3	12.48	3.06	25
		7/16 EHS	A1a	T3a	12.48	0.77	6
		7/16 EHS	A1b	T3a	12.48	2.98	24
		7/16 EHS	A1a	T3b	12.48	0.77	6
		7/16 EHS	A1	T3b	12.48	3.04	24
	218.00	7/16 EHS	A2b	T4	12.48	4.54	36
		7/16 EHS	A2	T4	12.48	4.64	37
		7/16 EHS	A2b	T4a	12.48	4.17	33
		7/16 EHS	A2a	T4a	12.48	0.27	2
		7/16 EHS	A2	T4b	12.48	4.32	35
		7/16 EHS	A2a	T4b	12.48	0.27	2
	271.95	1/2 EHS	A2	111	16.14	8.57	53
		1/2 EHS	A2b	111a	16.14	8.31	52
		1/2 EHS	A2a	111b	16.14	0.5	3
	328.05	9/16 EHS	A2	131	21	15.02	72
		9/16 EHS	A2b	131a	21	14.62	70
		9/16 EHS	A2a	131b	21	0.79	4
1.2D + 1.0W 300°	51.95	7/16 EHS	A1	20	12.48	1.48	12
		7/16 EHS	A1b	20a	12.48	3.84	31
		7/16 EHS	A1a	20b	12.48	1.47	12
	104.16	7/16 EHS	A1	39	12.48	1.41	11
		7/16 EHS	A1b	39a	12.48	4.4	35
		7/16 EHS	A1a	39b	12.48	1.38	11
	158.00	7/16 EHS	A1	T3	12.48	1.67	13
		7/16 EHS	A1b	T3	12.48	4.36	35
		7/16 EHS	A1a	T3a	12.48	1.61	13

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
		7/16 EHS	A1b	T3a	12.48	4.33	35
		7/16 EHS	A1	T3b	12.48	1.7	14
		7/16 EHS	A1a	T3b	12.48	1.63	13
	218.00	7/16 EHS	A2b	T4	12.48	5.56	45
		7/16 EHS	A2	T4	12.48	2.19	18
		7/16 EHS	A2b	T4a	12.48	5.48	44
		7/16 EHS	A2a	T4a	12.48	2.16	17
		7/16 EHS	A2a	T4b	12.48	2.15	17
		7/16 EHS	A2	T4b	12.48	2.21	18
	271.95	1/2 EHS	A2	111	16.14	2.56	16
		1/2 EHS	A2b	111a	16.14	10.28	64
		1/2 EHS	A2a	111b	16.14	2.49	15
	328.05	9/16 EHS	A2	131	21	3.08	15
		9/16 EHS	A2b	131a	21	16.91	81
		9/16 EHS	A2a	131b	21	3.02	14
1.2D + 1.0W 330°	51.95	7/16 EHS	A1	20	12.48	0.87	7
		7/16 EHS	A1b	20a	12.48	3.57	29
		7/16 EHS	A1a	20b	12.48	2.17	17
	104.16	7/16 EHS	A1	39	12.48	0.75	6
		7/16 EHS	A1b	39a	12.48	3.97	32
		7/16 EHS	A1a	39b	12.48	2.09	17
	158.00	7/16 EHS	A1b	T3	12.48	3.92	31
		7/16 EHS	A1	T3	12.48	1.11	9
		7/16 EHS	A1b	T3a	12.48	3.96	32
		7/16 EHS	A1a	T3a	12.48	2.26	18
		7/16 EHS	A1	T3b	12.48	1.14	9
		7/16 EHS	A1a	T3b	12.48	2.25	18
	218.00	7/16 EHS	A2	T4	12.48	0.96	8
		7/16 EHS	A2b	T4	12.48	5.11	41
		7/16 EHS	A2b	T4a	12.48	5.38	43
		7/16 EHS	A2a	T4a	12.48	3.54	28
		7/16 EHS	A2	T4b	12.48	1.03	8
		7/16 EHS	A2a	T4b	12.48	3.34	27
	271.95	1/2 EHS	A2	111	16.14	1.06	7
		1/2 EHS	A2b	111a	16.14	10.12	63
		1/2 EHS	A2a	111b	16.14	5.53	34
	328.05	9/16 EHS	A2	131	21	1.31	6
		9/16 EHS	A2b	131a	21	17.21	82
		9/16 EHS	A2a	131b	21	9.08	43
1.2D + 1.0Di + 1.0Wi Normal	51.95	7/16 EHS	A1	20	12.48	2.74	22
		7/16 EHS	A1b	20a	12.48	3.09	25
		7/16 EHS	A1a	20b	12.48	3.08	25
	104.16	7/16 EHS	A1	39	12.48	2.53	20
		7/16 EHS	A1b	39a	12.48	2.98	24
		7/16 EHS	A1a	39b	12.48	2.94	24
	158.00	7/16 EHS	A1	T3	12.48	2.44	20
		7/16 EHS	A1b	T3	12.48	2.9	23
		7/16 EHS	A1a	T3a	12.48	2.87	23
		7/16 EHS	A1b	T3a	12.48	2.88	23
		7/16 EHS	A1a	T3b	12.48	2.89	23
		7/16 EHS	A1	T3b	12.48	2.45	20
	218.00	7/16 EHS	A2	T4	12.48	3.81	30
		7/16 EHS	A2b	T4	12.48	4.33	35
		7/16 EHS	A2a	T4a	12.48	4.32	35
		7/16 EHS	A2b	T4a	12.48	4.33	35
		7/16 EHS	A2	T4b	12.48	3.81	31
		7/16 EHS	A2a	T4b	12.48	4.33	35
	271.95	1/2 EHS	A2	111	16.14	4.31	27
		1/2 EHS	A2b	111a	16.14	5.28	33

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
		1/2 EHS	A2a	111b	16.14	5.29	33
	328.05	9/16 EHS	A2	131	21	4.91	23
		9/16 EHS	A2b	131a	21	6.49	31
		9/16 EHS	A2a	131b	21	6.52	31
1.2D + 1.0Di + 1.0Wi 60°	51.95	7/16 EHS	A1	20	12.48	2.85	23
		7/16 EHS	A1b	20a	12.48	2.82	23
		7/16 EHS	A1a	20b	12.48	3.17	25
	104.16	7/16 EHS	A1	39	12.48	2.67	21
		7/16 EHS	A1b	39a	12.48	2.65	21
		7/16 EHS	A1a	39b	12.48	3.04	24
	158.00	7/16 EHS	A1	T3	12.48	2.61	21
		7/16 EHS	A1b	T3	12.48	2.51	20
		7/16 EHS	A1a	T3a	12.48	3.05	24
		7/16 EHS	A1b	T3a	12.48	2.48	20
		7/16 EHS	A1a	T3b	12.48	3.06	24
		7/16 EHS	A1	T3b	12.48	2.58	21
	218.00	7/16 EHS	A2	T4	12.48	3.95	32
		7/16 EHS	A2b	T4	12.48	3.88	31
		7/16 EHS	A2a	T4a	12.48	4.44	36
		7/16 EHS	A2b	T4a	12.48	3.88	31
		7/16 EHS	A2	T4b	12.48	3.95	32
		7/16 EHS	A2a	T4b	12.48	4.45	36
	271.95	1/2 EHS	A2	111	16.14	4.62	29
		1/2 EHS	A2b	111a	16.14	4.49	28
		1/2 EHS	A2a	111b	16.14	5.58	35
	328.05	9/16 EHS	A2	131	21	5.44	26
		9/16 EHS	A2b	131a	21	5.28	25
		9/16 EHS	A2a	131b	21	7.03	33
1.2D + 1.0Di + 1.0Wi 90°	51.95	7/16 EHS	A1	20	12.48	2.97	24
		7/16 EHS	A1b	20a	12.48	2.73	22
		7/16 EHS	A1a	20b	12.48	3.15	25
	104.16	7/16 EHS	A1	39	12.48	2.83	23
		7/16 EHS	A1b	39a	12.48	2.53	20
		7/16 EHS	A1a	39b	12.48	3.03	24
	158.00	7/16 EHS	A1	T3	12.48	2.81	23
		7/16 EHS	A1b	T3	12.48	2.39	19
		7/16 EHS	A1a	T3a	12.48	2.99	24
		7/16 EHS	A1b	T3a	12.48	2.39	19
		7/16 EHS	A1	T3b	12.48	2.79	22
		7/16 EHS	A1a	T3b	12.48	3	24
	218.00	7/16 EHS	A2	T4	12.48	4.19	34
		7/16 EHS	A2b	T4	12.48	3.76	30
		7/16 EHS	A2b	T4a	12.48	3.77	30
		7/16 EHS	A2a	T4a	12.48	4.42	35
		7/16 EHS	A2a	T4b	12.48	4.44	36
		7/16 EHS	A2	T4b	12.48	4.18	33
	271.95	1/2 EHS	A2	111	16.14	5.03	31
		1/2 EHS	A2b	111a	16.14	4.26	26
		1/2 EHS	A2a	111b	16.14	5.52	34
	328.05	9/16 EHS	A2	131	21	6.06	29
		9/16 EHS	A2b	131a	21	4.88	23
		9/16 EHS	A2a	131b	21	6.91	33
1.2D + 1.0Di + 1.0Wi 120°	51.95	7/16 EHS	A1	20	12.48	3.11	25
		7/16 EHS	A1b	20a	12.48	2.7	22
		7/16 EHS	A1a	20b	12.48	3.07	25
	104.16	7/16 EHS	A1	39	12.48	3	24
		7/16 EHS	A1b	39a	12.48	2.5	20
		7/16 EHS	A1a	39b	12.48	2.93	23
	158.00	7/16 EHS	A1	T3	12.48	3	24

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
		7/16 EHS	A1b	T3	12.48	2.35	19
		7/16 EHS	A1a	T3a	12.48	2.89	23
		7/16 EHS	A1b	T3a	12.48	2.35	19
		7/16 EHS	A1a	T3b	12.48	2.88	23
		7/16 EHS	A1	T3b	12.48	2.99	24
	218.00	7/16 EHS	A2b	T4	12.48	3.74	30
		7/16 EHS	A2	T4	12.48	4.42	35
		7/16 EHS	A2a	T4a	12.48	4.32	35
		7/16 EHS	A2b	T4a	12.48	3.75	30
		7/16 EHS	A2a	T4b	12.48	4.33	35
		7/16 EHS	A2	T4b	12.48	4.42	35
	271.95	1/2 EHS	A2	111	16.14	5.44	34
		1/2 EHS	A2b	111a	16.14	4.19	26
		1/2 EHS	A2a	111b	16.14	5.29	33
	328.05	9/16 EHS	A2	131	21	6.68	32
		9/16 EHS	A2b	131a	21	4.75	23
		9/16 EHS	A2a	131b	21	6.52	31
1.2D + 1.0Di + 1.0Wi 180°	51.95	7/16 EHS	A1	20	12.48	3.21	26
		7/16 EHS	A1b	20a	12.48	2.82	23
		7/16 EHS	A1a	20b	12.48	2.81	23
	104.16	7/16 EHS	A1	39	12.48	3.13	25
		7/16 EHS	A1b	39a	12.48	2.63	21
		7/16 EHS	A1a	39b	12.48	2.59	21
	158.00	7/16 EHS	A1	T3	12.48	3.14	25
		7/16 EHS	A1b	T3	12.48	2.5	20
		7/16 EHS	A1a	T3a	12.48	2.51	20
		7/16 EHS	A1b	T3a	12.48	2.52	20
		7/16 EHS	A1a	T3b	12.48	2.5	20
		7/16 EHS	A1	T3b	12.48	3.14	25
	218.00	7/16 EHS	A2	T4	12.48	4.55	36
		7/16 EHS	A2b	T4	12.48	3.88	31
		7/16 EHS	A2a	T4a	12.48	3.87	31
		7/16 EHS	A2b	T4a	12.48	3.88	31
		7/16 EHS	A2	T4b	12.48	4.55	36
		7/16 EHS	A2a	T4b	12.48	3.87	31
	271.95	1/2 EHS	A2	111	16.14	5.75	36
		1/2 EHS	A2b	111a	16.14	4.49	28
		1/2 EHS	A2a	111b	16.14	4.5	28
	328.05	9/16 EHS	A2	131	21	7.23	34
		9/16 EHS	A2b	131a	21	5.27	25
		9/16 EHS	A2a	131b	21	5.3	25
1.2D + 1.0Di + 1.0Wi 210°	51.95	7/16 EHS	A1	20	12.48	3.19	26
		7/16 EHS	A1b	20a	12.48	2.95	24
		7/16 EHS	A1a	20b	12.48	2.73	22
	104.16	7/16 EHS	A1	39	12.48	3.1	25
		7/16 EHS	A1b	39a	12.48	2.8	22
		7/16 EHS	A1a	39b	12.48	2.5	20
	158.00	7/16 EHS	A1	T3	12.48	3.1	25
		7/16 EHS	A1b	T3	12.48	2.69	22
		7/16 EHS	A1b	T3a	12.48	2.71	22
		7/16 EHS	A1a	T3a	12.48	2.38	19
		7/16 EHS	A1	T3b	12.48	3.11	25
		7/16 EHS	A1a	T3b	12.48	2.39	19
	218.00	7/16 EHS	A2b	T4	12.48	4.1	33
		7/16 EHS	A2	T4	12.48	4.53	36
		7/16 EHS	A2a	T4a	12.48	3.75	30
		7/16 EHS	A2b	T4a	12.48	4.11	33
		7/16 EHS	A2	T4b	12.48	4.53	36
		7/16 EHS	A2a	T4b	12.48	3.76	30

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
	271.95	1/2 EHS	A2	111	16.14	5.68	35
		1/2 EHS	A2b	111a	16.14	4.89	30
		1/2 EHS	A2a	111b	16.14	4.26	26
	328.05	9/16 EHS	A2	131	21	7.1	34
		9/16 EHS	A2b	131a	21	5.88	28
		9/16 EHS	A2a	131b	21	4.91	23
1.2D + 1.0Di + 1.0Wi 240°	51.95	7/16 EHS	A1	20	12.48	3.12	25
		7/16 EHS	A1b	20a	12.48	3.09	25
		7/16 EHS	A1a	20b	12.48	2.71	22
	104.16	7/16 EHS	A1	39	12.48	3	24
		7/16 EHS	A1b	39a	12.48	2.98	24
		7/16 EHS	A1a	39b	12.48	2.47	20
	158.00	7/16 EHS	A1	T3	12.48	2.98	24
		7/16 EHS	A1b	T3	12.48	2.89	23
		7/16 EHS	A1b	T3a	12.48	2.89	23
		7/16 EHS	A1a	T3a	12.48	2.34	19
		7/16 EHS	A1a	T3b	12.48	2.35	19
		7/16 EHS	A1	T3b	12.48	3	24
	218.00	7/16 EHS	A2b	T4	12.48	4.33	35
		7/16 EHS	A2	T4	12.48	4.41	35
		7/16 EHS	A2a	T4a	12.48	3.74	30
		7/16 EHS	A2b	T4a	12.48	4.33	35
		7/16 EHS	A2a	T4b	12.48	3.74	30
		7/16 EHS	A2	T4b	12.48	4.42	35
	271.95	1/2 EHS	A2	111	16.14	5.44	34
		1/2 EHS	A2b	111a	16.14	5.28	33
		1/2 EHS	A2a	111b	16.14	4.21	26
	328.05	9/16 EHS	A2	131	21	6.69	32
		9/16 EHS	A2b	131a	21	6.49	31
		9/16 EHS	A2a	131b	21	4.79	23
1.2D + 1.0Di + 1.0Wi 300°	51.95	7/16 EHS	A1	20	12.48	2.86	23
		7/16 EHS	A1b	20a	12.48	3.2	26
		7/16 EHS	A1a	20b	12.48	2.82	23
	104.16	7/16 EHS	A1	39	12.48	2.67	21
		7/16 EHS	A1b	39a	12.48	3.12	25
		7/16 EHS	A1a	39b	12.48	2.61	21
	158.00	7/16 EHS	A1	T3	12.48	2.6	21
		7/16 EHS	A1b	T3	12.48	3.05	24
		7/16 EHS	A1a	T3a	12.48	2.5	20
		7/16 EHS	A1b	T3a	12.48	3.04	24
		7/16 EHS	A1a	T3b	12.48	2.52	20
		7/16 EHS	A1	T3b	12.48	2.62	21
	218.00	7/16 EHS	A2	T4	12.48	3.94	32
		7/16 EHS	A2b	T4	12.48	4.46	36
		7/16 EHS	A2a	T4a	12.48	3.87	31
		7/16 EHS	A2b	T4a	12.48	4.45	36
		7/16 EHS	A2	T4b	12.48	3.96	32
		7/16 EHS	A2a	T4b	12.48	3.88	31
	271.95	1/2 EHS	A2	111	16.14	4.63	29
		1/2 EHS	A2b	111a	16.14	5.58	35
		1/2 EHS	A2a	111b	16.14	4.51	28
	328.05	9/16 EHS	A2	131	21	5.45	26
		9/16 EHS	A2b	131a	21	7.02	33
		9/16 EHS	A2a	131b	21	5.32	25
1.2D + 1.0Di + 1.0Wi 330°	51.95	7/16 EHS	A1	20	12.48	2.77	22
		7/16 EHS	A1b	20a	12.48	3.18	25
		7/16 EHS	A1a	20b	12.48	2.95	24
	104.16	7/16 EHS	A1	39	12.48	2.56	21
		7/16 EHS	A1b	39a	12.48	3.09	25

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
		7/16 EHS	A1a	39b	12.48	2.77	22
	158.00	7/16 EHS	A1	T3	12.48	2.49	20
		7/16 EHS	A1b	T3	12.48	3.01	24
		7/16 EHS	A1b	T3a	12.48	3	24
		7/16 EHS	A1a	T3a	12.48	2.68	22
		7/16 EHS	A1a	T3b	12.48	2.71	22
		7/16 EHS	A1	T3b	12.48	2.49	20
	218.00	7/16 EHS	A2	T4	12.48	3.83	31
		7/16 EHS	A2b	T4	12.48	4.43	35
		7/16 EHS	A2a	T4a	12.48	4.1	33
		7/16 EHS	A2b	T4a	12.48	4.44	36
		7/16 EHS	A2a	T4b	12.48	4.12	33
		7/16 EHS	A2	T4b	12.48	3.83	31
	271.95	1/2 EHS	A2	111	16.14	4.39	27
		1/2 EHS	A2b	111a	16.14	5.51	34
		1/2 EHS	A2a	111b	16.14	4.91	30
	328.05	9/16 EHS	A2	131	21	5.05	24
		9/16 EHS	A2b	131a	21	6.88	33
		9/16 EHS	A2a	131b	21	5.93	28
1.2D + 1.0Ev + 1.0Eh Normal	51.95	7/16 EHS	A1	20	12.48	2.02	16
		7/16 EHS	A1b	20a	12.48	2.01	16
		7/16 EHS	A1a	20b	12.48	2.01	16
	104.16	7/16 EHS	A1	39	12.48	1.89	15
		7/16 EHS	A1b	39a	12.48	1.89	15
		7/16 EHS	A1a	39b	12.48	1.86	15
	158.00	7/16 EHS	A1	T3	12.48	1.79	14
		7/16 EHS	A1b	T3	12.48	1.79	14
		7/16 EHS	A1a	T3a	12.48	1.77	14
		7/16 EHS	A1b	T3a	12.48	1.79	14
		7/16 EHS	A1a	T3b	12.48	1.77	14
		7/16 EHS	A1	T3b	12.48	1.79	14
	218.00	7/16 EHS	A2	T4	12.48	1.9	15
		7/16 EHS	A2b	T4	12.48	1.99	16
		7/16 EHS	A2a	T4a	12.48	2	16
		7/16 EHS	A2b	T4a	12.48	2	16
		7/16 EHS	A2	T4b	12.48	1.9	15
		7/16 EHS	A2a	T4b	12.48	1.99	16
	271.95	1/2 EHS	A2	111	16.14	2.25	14
		1/2 EHS	A2b	111a	16.14	2.65	16
		1/2 EHS	A2a	111b	16.14	2.66	16
	328.05	9/16 EHS	A2	131	21	2.7	13
		9/16 EHS	A2b	131a	21	3.58	17
		9/16 EHS	A2a	131b	21	3.58	17
1.2D + 1.0Ev + 1.0Eh 60°	51.95	7/16 EHS	A1	20	12.48	2.03	16
		7/16 EHS	A1b	20a	12.48	2	16
		7/16 EHS	A1a	20b	12.48	2.01	16
	104.16	7/16 EHS	A1	39	12.48	1.89	15
		7/16 EHS	A1b	39a	12.48	1.87	15
		7/16 EHS	A1a	39b	12.48	1.87	15
	158.00	7/16 EHS	A1	T3	12.48	1.8	14
		7/16 EHS	A1b	T3	12.48	1.77	14
		7/16 EHS	A1a	T3a	12.48	1.79	14
		7/16 EHS	A1b	T3a	12.48	1.77	14
		7/16 EHS	A1a	T3b	12.48	1.79	14
		7/16 EHS	A1	T3b	12.48	1.8	14
	218.00	7/16 EHS	A2	T4	12.48	1.94	16
		7/16 EHS	A2b	T4	12.48	1.9	15
		7/16 EHS	A2a	T4a	12.48	2.03	16
		7/16 EHS	A2b	T4a	12.48	1.91	15

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
		7/16 EHS	A2	T4b	12.48	1.95	16
		7/16 EHS	A2a	T4b	12.48	2.03	16
	271.95	1/2 EHS	A2	111	16.14	2.41	15
		1/2 EHS	A2b	111a	16.14	2.34	15
		1/2 EHS	A2a	111b	16.14	2.8	17
	328.05	9/16 EHS	A2	131	21	3.01	14
		9/16 EHS	A2b	131a	21	2.93	14
		9/16 EHS	A2a	131b	21	3.88	18
1.2D + 1.0Ev + 1.0Eh 90°	51.95	7/16 EHS	A1	20	12.48	2.03	16
		7/16 EHS	A1b	20a	12.48	2	16
		7/16 EHS	A1a	20b	12.48	2.01	16
	104.16	7/16 EHS	A1	39	12.48	1.9	15
		7/16 EHS	A1b	39a	12.48	1.87	15
		7/16 EHS	A1a	39b	12.48	1.87	15
	158.00	7/16 EHS	A1	T3	12.48	1.81	15
		7/16 EHS	A1b	T3	12.48	1.76	14
		7/16 EHS	A1a	T3a	12.48	1.78	14
		7/16 EHS	A1b	T3a	12.48	1.76	14
		7/16 EHS	A1	T3b	12.48	1.81	15
		7/16 EHS	A1a	T3b	12.48	1.78	14
	218.00	7/16 EHS	A2	T4	12.48	1.98	16
		7/16 EHS	A2b	T4	12.48	1.87	15
		7/16 EHS	A2b	T4a	12.48	1.88	15
		7/16 EHS	A2a	T4a	12.48	2.01	16
		7/16 EHS	A2	T4b	12.48	2	16
		7/16 EHS	A2a	T4b	12.48	2.02	16
	271.95	1/2 EHS	A2	111	16.14	2.56	16
		1/2 EHS	A2b	111a	16.14	2.23	14
		1/2 EHS	A2a	111b	16.14	2.76	17
	328.05	9/16 EHS	A2	131	21	3.33	16
		9/16 EHS	A2b	131a	21	2.7	13
		9/16 EHS	A2a	131b	21	3.79	18
1.2D + 1.0Ev + 1.0Eh 120°	51.95	7/16 EHS	A1	20	12.48	2.04	16
		7/16 EHS	A1b	20a	12.48	1.99	16
		7/16 EHS	A1a	20b	12.48	2.01	16
	104.16	7/16 EHS	A1	39	12.48	1.91	15
		7/16 EHS	A1b	39a	12.48	1.86	15
		7/16 EHS	A1a	39b	12.48	1.86	15
	158.00	7/16 EHS	A1	T3	12.48	1.82	15
		7/16 EHS	A1b	T3	12.48	1.76	14
		7/16 EHS	A1b	T3a	12.48	1.76	14
		7/16 EHS	A1a	T3a	12.48	1.77	14
		7/16 EHS	A1a	T3b	12.48	1.78	14
		7/16 EHS	A1	T3b	12.48	1.83	15
	218.00	7/16 EHS	A2	T4	12.48	2.02	16
		7/16 EHS	A2b	T4	12.48	1.86	15
		7/16 EHS	A2a	T4a	12.48	1.98	16
		7/16 EHS	A2b	T4a	12.48	1.86	15
		7/16 EHS	A2a	T4b	12.48	1.99	16
		7/16 EHS	A2	T4b	12.48	2.04	16
	271.95	1/2 EHS	A2	111	16.14	2.71	17
		1/2 EHS	A2b	111a	16.14	2.19	14
		1/2 EHS	A2a	111b	16.14	2.65	16
	328.05	9/16 EHS	A2	131	21	3.65	17
		9/16 EHS	A2b	131a	21	2.62	12
		9/16 EHS	A2a	131b	21	3.56	17
1.2D + 1.0Ev + 1.0Eh 180°	51.95	7/16 EHS	A1	20	12.48	2.04	16
		7/16 EHS	A1b	20a	12.48	2	16
		7/16 EHS	A1a	20b	12.48	2	16

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
	104.16	7/16 EHS	A1	39	12.48	1.91	15
		7/16 EHS	A1b	39a	12.48	1.87	15
		7/16 EHS	A1a	39b	12.48	1.85	15
	158.00	7/16 EHS	A1	T3	12.48	1.84	15
		7/16 EHS	A1b	T3	12.48	1.77	14
		7/16 EHS	A1b	T3a	12.48	1.77	14
		7/16 EHS	A1a	T3a	12.48	1.75	14
		7/16 EHS	A1a	T3b	12.48	1.75	14
		7/16 EHS	A1	T3b	12.48	1.84	15
	218.00	7/16 EHS	A2	T4	12.48	2.08	17
		7/16 EHS	A2b	T4	12.48	1.91	15
		7/16 EHS	A2a	T4a	12.48	1.89	15
		7/16 EHS	A2b	T4a	12.48	1.9	15
		7/16 EHS	A2a	T4b	12.48	1.91	15
		7/16 EHS	A2	T4b	12.48	2.08	17
	271.95	1/2 EHS	A2	111	16.14	2.88	18
		1/2 EHS	A2b	111a	16.14	2.33	14
		1/2 EHS	A2a	111b	16.14	2.34	14
	328.05	9/16 EHS	A2	131	21	3.99	19
		9/16 EHS	A2b	131a	21	2.91	14
		9/16 EHS	A2a	131b	21	2.92	14
1.2D + 1.0Ev + 1.0Eh 210°	51.95	7/16 EHS	A1	20	12.48	2.04	16
		7/16 EHS	A1b	20a	12.48	2	16
		7/16 EHS	A1a	20b	12.48	1.99	16
	104.16	7/16 EHS	A1	39	12.48	1.91	15
		7/16 EHS	A1b	39a	12.48	1.88	15
		7/16 EHS	A1a	39b	12.48	1.84	15
	158.00	7/16 EHS	A1	T3	12.48	1.83	15
		7/16 EHS	A1b	T3	12.48	1.78	14
		7/16 EHS	A1a	T3a	12.48	1.74	14
		7/16 EHS	A1b	T3a	12.48	1.78	14
		7/16 EHS	A1	T3b	12.48	1.83	15
		7/16 EHS	A1a	T3b	12.48	1.74	14
	218.00	7/16 EHS	A2	T4	12.48	2.07	17
		7/16 EHS	A2b	T4	12.48	1.96	16
		7/16 EHS	A2b	T4a	12.48	1.94	16
		7/16 EHS	A2a	T4a	12.48	1.87	15
		7/16 EHS	A2	T4b	12.48	2.06	17
		7/16 EHS	A2a	T4b	12.48	1.88	15
	271.95	1/2 EHS	A2	111	16.14	2.83	18
		1/2 EHS	A2b	111a	16.14	2.49	15
		1/2 EHS	A2a	111b	16.14	2.24	14
	328.05	9/16 EHS	A2	131	21	3.89	19
		9/16 EHS	A2b	131a	21	3.24	15
		9/16 EHS	A2a	131b	21	2.71	13
1.2D + 1.0Ev + 1.0Eh 240°	51.95	7/16 EHS	A1	20	12.48	2.04	16
		7/16 EHS	A1b	20a	12.48	2.01	16
		7/16 EHS	A1a	20b	12.48	1.99	16
	104.16	7/16 EHS	A1	39	12.48	1.91	15
		7/16 EHS	A1b	39a	12.48	1.89	15
		7/16 EHS	A1a	39b	12.48	1.84	15
	158.00	7/16 EHS	A1b	T3	12.48	1.79	14
		7/16 EHS	A1	T3	12.48	1.82	15
		7/16 EHS	A1a	T3a	12.48	1.74	14
		7/16 EHS	A1b	T3a	12.48	1.79	14
		7/16 EHS	A1a	T3b	12.48	1.74	14
		7/16 EHS	A1	T3b	12.48	1.82	15
	218.00	7/16 EHS	A2	T4	12.48	2.04	16
		7/16 EHS	A2b	T4	12.48	2	16

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
		7/16 EHS	A2a	T4a	12.48	1.86	15
		7/16 EHS	A2b	T4a	12.48	1.99	16
		7/16 EHS	A2a	T4b	12.48	1.86	15
		7/16 EHS	A2	T4b	12.48	2.03	16
	271.95	1/2 EHS	A2	111	16.14	2.72	17
		1/2 EHS	A2b	111a	16.14	2.65	16
		1/2 EHS	A2a	111b	16.14	2.2	14
	328.05	9/16 EHS	A2	131	21	3.66	17
		9/16 EHS	A2b	131a	21	3.57	17
		9/16 EHS	A2a	131b	21	2.63	13
1.2D + 1.0Ev + 1.0Eh 300°	51.95	7/16 EHS	A1	20	12.48	2.03	16
		7/16 EHS	A1b	20a	12.48	2.01	16
		7/16 EHS	A1a	20b	12.48	2	16
	104.16	7/16 EHS	A1	39	12.48	1.89	15
		7/16 EHS	A1b	39a	12.48	1.89	15
		7/16 EHS	A1a	39b	12.48	1.85	15
	158.00	7/16 EHS	A1	T3	12.48	1.8	14
		7/16 EHS	A1b	T3	12.48	1.81	14
		7/16 EHS	A1b	T3a	12.48	1.81	14
		7/16 EHS	A1a	T3a	12.48	1.75	14
		7/16 EHS	A1a	T3b	12.48	1.75	14
		7/16 EHS	A1	T3b	12.48	1.8	14
	218.00	7/16 EHS	A2	T4	12.48	1.95	16
		7/16 EHS	A2b	T4	12.48	2.04	16
		7/16 EHS	A2a	T4a	12.48	1.91	15
		7/16 EHS	A2b	T4a	12.48	2.04	16
		7/16 EHS	A2a	T4b	12.48	1.9	15
		7/16 EHS	A2	T4b	12.48	1.94	16
	271.95	1/2 EHS	A2	111	16.14	2.41	15
		1/2 EHS	A2b	111a	16.14	2.8	17
		1/2 EHS	A2a	111b	16.14	2.35	15
	328.05	9/16 EHS	A2	131	21	3.02	14
		9/16 EHS	A2b	131a	21	3.89	19
		9/16 EHS	A2a	131b	21	2.94	14
1.2D + 1.0Ev + 1.0Eh 330°	51.95	7/16 EHS	A1	20	12.48	2.02	16
		7/16 EHS	A1b	20a	12.48	2.01	16
		7/16 EHS	A1a	20b	12.48	2	16
	104.16	7/16 EHS	A1	39	12.48	1.89	15
		7/16 EHS	A1b	39a	12.48	1.89	15
		7/16 EHS	A1a	39b	12.48	1.86	15
	158.00	7/16 EHS	A1	T3	12.48	1.79	14
		7/16 EHS	A1b	T3	12.48	1.8	14
		7/16 EHS	A1a	T3a	12.48	1.76	14
		7/16 EHS	A1b	T3a	12.48	1.8	14
		7/16 EHS	A1a	T3b	12.48	1.76	14
		7/16 EHS	A1	T3b	12.48	1.79	14
	218.00	7/16 EHS	A2	T4	12.48	1.92	15
		7/16 EHS	A2b	T4	12.48	2.02	16
		7/16 EHS	A2b	T4a	12.48	2.03	16
		7/16 EHS	A2a	T4a	12.48	1.95	16
		7/16 EHS	A2	T4b	12.48	1.91	15
		7/16 EHS	A2a	T4b	12.48	1.94	16
	271.95	1/2 EHS	A2	111	16.14	2.3	14
		1/2 EHS	A2b	111a	16.14	2.76	17
		1/2 EHS	A2a	111b	16.14	2.5	16
	328.05	9/16 EHS	A2	131	21	2.79	13
		9/16 EHS	A2b	131a	21	3.81	18
		9/16 EHS	A2a	131b	21	3.25	15
1.0D + 1.0W Service Normal	51.95	7/16 EHS	A1	20	12.48	1.56	12

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
		7/16 EHS	A1b	20a	12.48	2.3	18
		7/16 EHS	A1a	20b	12.48	2.29	18
	104.16	7/16 EHS	A1	39	12.48	1.32	11
		7/16 EHS	A1b	39a	12.48	2.26	18
		7/16 EHS	A1a	39b	12.48	2.23	18
	158.00	7/16 EHS	A1b	T3	12.48	2.16	17
		7/16 EHS	A1	T3	12.48	1.34	11
		7/16 EHS	A1a	T3a	12.48	2.11	17
		7/16 EHS	A1b	T3a	12.48	2.13	17
		7/16 EHS	A1	T3b	12.48	1.34	11
		7/16 EHS	A1a	T3b	12.48	2.13	17
	218.00	7/16 EHS	A2b	T4	12.48	2.44	20
		7/16 EHS	A2	T4	12.48	1.37	11
		7/16 EHS	A2b	T4a	12.48	2.45	20
		7/16 EHS	A2a	T4a	12.48	2.45	20
		7/16 EHS	A2a	T4b	12.48	2.42	19
		7/16 EHS	A2	T4b	12.48	1.38	11
	271.95	1/2 EHS	A2	111	16.14	1.09	7
		1/2 EHS	A2b	111a	16.14	3.47	22
		1/2 EHS	A2a	111b	16.14	3.47	21
	328.05	9/16 EHS	A2	131	21	0.74	4
		9/16 EHS	A2b	131a	21	4.92	23
		9/16 EHS	A2a	131b	21	4.92	23
1.0D + 1.0W Service 60°	51.95	7/16 EHS	A1	20	12.48	1.8	14
		7/16 EHS	A1b	20a	12.48	1.78	14
		7/16 EHS	A1a	20b	12.48	2.49	20
	104.16	7/16 EHS	A1	39	12.48	1.64	13
		7/16 EHS	A1b	39a	12.48	1.61	13
		7/16 EHS	A1a	39b	12.48	2.5	20
	158.00	7/16 EHS	A1	T3	12.48	1.63	13
		7/16 EHS	A1b	T3	12.48	1.59	13
		7/16 EHS	A1a	T3a	12.48	2.41	19
		7/16 EHS	A1b	T3a	12.48	1.58	13
		7/16 EHS	A1a	T3b	12.48	2.42	19
		7/16 EHS	A1	T3b	12.48	1.61	13
	218.00	7/16 EHS	A2	T4	12.48	1.79	14
		7/16 EHS	A2b	T4	12.48	1.75	14
		7/16 EHS	A2a	T4a	12.48	2.77	22
		7/16 EHS	A2b	T4a	12.48	1.76	14
		7/16 EHS	A2	T4b	12.48	1.79	14
		7/16 EHS	A2a	T4b	12.48	2.78	22
	271.95	1/2 EHS	A2	111	16.14	2.06	13
		1/2 EHS	A2b	111a	16.14	2	12
		1/2 EHS	A2a	111b	16.14	4.35	27
	328.05	9/16 EHS	A2	131	21	2.44	12
		9/16 EHS	A2b	131a	21	2.37	11
		9/16 EHS	A2a	131b	21	6.57	31
1.0D + 1.0W Service 90°	51.95	7/16 EHS	A1	20	12.48	2.05	16
		7/16 EHS	A1b	20a	12.48	1.58	13
		7/16 EHS	A1a	20b	12.48	2.43	19
	104.16	7/16 EHS	A1	39	12.48	1.93	15
		7/16 EHS	A1b	39a	12.48	1.38	11
		7/16 EHS	A1a	39b	12.48	2.42	19
	158.00	7/16 EHS	A1	T3	12.48	1.88	15
		7/16 EHS	A1b	T3	12.48	1.4	11
		7/16 EHS	A1a	T3a	12.48	2.33	19
		7/16 EHS	A1b	T3a	12.48	1.41	11
		7/16 EHS	A1a	T3b	12.48	2.33	19
		7/16 EHS	A1	T3b	12.48	1.86	15

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
	218.00	7/16 EHS	A2	T4	12.48	2.14	17
		7/16 EHS	A2b	T4	12.48	1.43	11
		7/16 EHS	A2a	T4a	12.48	2.65	21
		7/16 EHS	A2b	T4a	12.48	1.46	12
		7/16 EHS	A2	T4b	12.48	2.15	17
		7/16 EHS	A2a	T4b	12.48	2.7	22
	271.95	1/2 EHS	A2	111	16.14	2.81	17
		1/2 EHS	A2b	111a	16.14	1.31	8
		1/2 EHS	A2a	111b	16.14	4.1	25
	328.05	9/16 EHS	A2	131	21	3.74	18
		9/16 EHS	A2b	131a	21	1.28	6
		9/16 EHS	A2a	131b	21	6.11	29
1.0D + 1.0W Service 120°	51.95	7/16 EHS	A1	20	12.48	2.29	18
		7/16 EHS	A1b	20a	12.48	1.5	12
		7/16 EHS	A1a	20b	12.48	2.26	18
	104.16	7/16 EHS	A1	39	12.48	2.25	18
		7/16 EHS	A1b	39a	12.48	1.27	10
		7/16 EHS	A1a	39b	12.48	2.2	18
	158.00	7/16 EHS	A1b	T3	12.48	1.3	10
		7/16 EHS	A1	T3	12.48	2.18	17
		7/16 EHS	A1a	T3a	12.48	2.11	17
		7/16 EHS	A1b	T3a	12.48	1.3	10
		7/16 EHS	A1a	T3b	12.48	2.1	17
		7/16 EHS	A1	T3b	12.48	2.16	17
	218.00	7/16 EHS	A2b	T4	12.48	1.32	11
		7/16 EHS	A2	T4	12.48	2.49	20
		7/16 EHS	A2b	T4a	12.48	1.34	11
		7/16 EHS	A2a	T4a	12.48	2.41	19
		7/16 EHS	A2a	T4b	12.48	2.45	20
		7/16 EHS	A2	T4b	12.48	2.5	20
	271.95	1/2 EHS	A2	111	16.14	3.56	22
		1/2 EHS	A2b	111a	16.14	1.01	6
		1/2 EHS	A2a	111b	16.14	3.46	21
	328.05	9/16 EHS	A2	131	21	5.05	24
		9/16 EHS	A2b	131a	21	0.7	3
		9/16 EHS	A2a	131b	21	4.92	23
1.0D + 1.0W Service 180°	51.95	7/16 EHS	A1	20	12.48	2.52	20
		7/16 EHS	A1b	20a	12.48	1.76	14
		7/16 EHS	A1a	20b	12.48	1.77	14
	104.16	7/16 EHS	A1	39	12.48	2.54	20
		7/16 EHS	A1b	39a	12.48	1.6	13
		7/16 EHS	A1a	39b	12.48	1.58	13
	158.00	7/16 EHS	A1b	T3	12.48	1.56	13
		7/16 EHS	A1	T3	12.48	2.46	20
		7/16 EHS	A1a	T3a	12.48	1.56	13
		7/16 EHS	A1b	T3a	12.48	1.58	13
		7/16 EHS	A1a	T3b	12.48	1.55	12
		7/16 EHS	A1	T3b	12.48	2.46	20
	218.00	7/16 EHS	A2	T4	12.48	2.85	23
		7/16 EHS	A2b	T4	12.48	1.74	14
		7/16 EHS	A2a	T4a	12.48	1.73	14
		7/16 EHS	A2b	T4a	12.48	1.74	14
		7/16 EHS	A2	T4b	12.48	2.84	23
		7/16 EHS	A2a	T4b	12.48	1.74	14
	271.95	1/2 EHS	A2	111	16.14	4.47	28
		1/2 EHS	A2b	111a	16.14	1.98	12
		1/2 EHS	A2a	111b	16.14	1.98	12
	328.05	9/16 EHS	A2	131	21	6.72	32
		9/16 EHS	A2b	131a	21	2.33	11

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
		9/16 EHS	A2a	131b	21	2.34	11
1.0D + 1.0W Service 210°	51.95	7/16 EHS	A1	20	12.48	2.47	20
		7/16 EHS	A1b	20a	12.48	2.02	16
		7/16 EHS	A1a	20b	12.48	1.59	13
	104.16	7/16 EHS	A1	39	12.48	2.47	20
		7/16 EHS	A1b	39a	12.48	1.91	15
		7/16 EHS	A1a	39b	12.48	1.36	11
	158.00	7/16 EHS	A1b	T3	12.48	1.81	14
		7/16 EHS	A1	T3	12.48	2.37	19
		7/16 EHS	A1a	T3a	12.48	1.38	11
		7/16 EHS	A1b	T3a	12.48	1.83	15
		7/16 EHS	A1	T3b	12.48	2.38	19
		7/16 EHS	A1a	T3b	12.48	1.38	11
	218.00	7/16 EHS	A2	T4	12.48	2.76	22
		7/16 EHS	A2b	T4	12.48	2.1	17
		7/16 EHS	A2a	T4a	12.48	1.43	11
		7/16 EHS	A2b	T4a	12.48	2.09	17
		7/16 EHS	A2a	T4b	12.48	1.45	12
		7/16 EHS	A2	T4b	12.48	2.73	22
	271.95	1/2 EHS	A2	111	16.14	4.2	26
		1/2 EHS	A2b	111a	16.14	2.72	17
		1/2 EHS	A2a	111b	16.14	1.32	8
	328.05	9/16 EHS	A2	131	21	6.25	30
		9/16 EHS	A2b	131a	21	3.62	17
		9/16 EHS	A2a	131b	21	1.29	6
1.0D + 1.0W Service 240°	51.95	7/16 EHS	A1	20	12.48	2.31	19
		7/16 EHS	A1b	20a	12.48	2.28	18
		7/16 EHS	A1a	20b	12.48	1.53	12
	104.16	7/16 EHS	A1	39	12.48	2.26	18
		7/16 EHS	A1b	39a	12.48	2.24	18
		7/16 EHS	A1a	39b	12.48	1.27	10
	158.00	7/16 EHS	A1	T3	12.48	2.16	17
		7/16 EHS	A1b	T3	12.48	2.12	17
		7/16 EHS	A1a	T3a	12.48	1.28	10
		7/16 EHS	A1b	T3a	12.48	2.13	17
		7/16 EHS	A1	T3b	12.48	2.18	17
		7/16 EHS	A1a	T3b	12.48	1.28	10
	218.00	7/16 EHS	A2b	T4	12.48	2.45	20
		7/16 EHS	A2	T4	12.48	2.5	20
		7/16 EHS	A2a	T4a	12.48	1.33	11
		7/16 EHS	A2b	T4a	12.48	2.42	19
		7/16 EHS	A2	T4b	12.48	2.48	20
		7/16 EHS	A2a	T4b	12.48	1.33	11
	271.95	1/2 EHS	A2	111	16.14	3.57	22
		1/2 EHS	A2b	111a	16.14	3.47	21
		1/2 EHS	A2a	111b	16.14	1.04	6
	328.05	9/16 EHS	A2	131	21	5.06	24
		9/16 EHS	A2b	131a	21	4.92	23
		9/16 EHS	A2a	131b	21	0.74	4
1.0D + 1.0W Service 300°	51.95	7/16 EHS	A1	20	12.48	1.82	15
		7/16 EHS	A1b	20a	12.48	2.52	20
		7/16 EHS	A1a	20b	12.48	1.8	14
	104.16	7/16 EHS	A1	39	12.48	1.65	13
		7/16 EHS	A1b	39a	12.48	2.56	20
		7/16 EHS	A1a	39b	12.48	1.61	13
	158.00	7/16 EHS	A1	T3	12.48	1.62	13
		7/16 EHS	A1b	T3	12.48	2.45	20
		7/16 EHS	A1a	T3a	12.48	1.57	13
		7/16 EHS	A1b	T3a	12.48	2.44	20

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
		7/16 EHS	A1a	T3b	12.48	1.58	13
		7/16 EHS	A1	T3b	12.48	1.64	13
	218.00	7/16 EHS	A2	T4	12.48	1.79	14
		7/16 EHS	A2b	T4	12.48	2.8	22
		7/16 EHS	A2a	T4a	12.48	1.76	14
		7/16 EHS	A2b	T4a	12.48	2.78	22
		7/16 EHS	A2	T4b	12.48	1.8	14
		7/16 EHS	A2a	T4b	12.48	1.75	14
	271.95	1/2 EHS	A2	111	16.14	2.07	13
		1/2 EHS	A2b	111a	16.14	4.39	27
		1/2 EHS	A2a	111b	16.14	2.02	13
	328.05	9/16 EHS	A2	131	21	2.46	12
		9/16 EHS	A2b	131a	21	6.62	32
		9/16 EHS	A2a	131b	21	2.4	11
1.0D + 1.0W Service 330°	51.95	7/16 EHS	A1	20	12.48	1.64	13
		7/16 EHS	A1b	20a	12.48	2.46	20
		7/16 EHS	A1a	20b	12.48	2.05	16
	104.16	7/16 EHS	A1	39	12.48	1.42	11
		7/16 EHS	A1b	39a	12.48	2.48	20
		7/16 EHS	A1a	39b	12.48	1.91	15
	158.00	7/16 EHS	A1	T3	12.48	1.44	12
		7/16 EHS	A1b	T3	12.48	2.37	19
		7/16 EHS	A1b	T3a	12.48	2.36	19
		7/16 EHS	A1a	T3a	12.48	1.81	15
		7/16 EHS	A1a	T3b	12.48	1.83	15
		7/16 EHS	A1	T3b	12.48	1.45	12
	218.00	7/16 EHS	A2	T4	12.48	1.49	12
		7/16 EHS	A2b	T4	12.48	2.69	22
		7/16 EHS	A2a	T4a	12.48	2.12	17
		7/16 EHS	A2b	T4a	12.48	2.7	22
		7/16 EHS	A2a	T4b	12.48	2.1	17
		7/16 EHS	A2	T4b	12.48	1.49	12
	271.95	1/2 EHS	A2	111	16.14	1.39	9
		1/2 EHS	A2b	111a	16.14	4.13	26
		1/2 EHS	A2a	111b	16.14	2.76	17
	328.05	9/16 EHS	A2	131	21	1.36	6
		9/16 EHS	A2b	131a	21	6.15	29
		9/16 EHS	A2a	131b	21	3.68	18

MAXIMUM CABLE FORCES SUMMARY

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
1.2D + 1.0W 300°	51.95	7/16 EHS	A1b	20a	12.48	3.84	31
1.2D + 1.0W 300°	104.16	7/16 EHS	A1b	39a	12.48	4.40	35
1.2D + 1.0W 180°	158.00	7/16 EHS	A1	T3	12.48	4.34	35
1.2D + 1.0W 180°	218.00	7/16 EHS	A2	T4	12.48	5.66	45
1.2D + 1.0W 180°	271.95	1/2 EHS	A2	111	16.14	10.50	65
1.2D + 1.0W 210°	328.05	9/16 EHS	A2	131	21.00	17.61	84

MAXIMUM TORQUE ARM STRESS SUMMARY

Load Case	Elevation (ft)	Member	Type	Compression (%)	Tension (%)
1.2D + 1.0Di + 1.0Wi Normal	52.00	PL 3 x 0.375	Horiz	0	10
1.2D + 1.0Di + 1.0Wi Normal	104.00	PL 3 x 0.375	Horiz	0	8.7
1.2D + 1.0W 180°	158.00	3.5X3.5X0.375	Lower Kicker	7.9	0
1.2D + 1.0W 300°	158.00	3.5X3.5X0.375	Torque Arm	0	3.6
1.2D + 1.0W 210°	218.00	3X3X0.25	Lower Kicker	21	0
1.2D + 1.0W 330°	218.00	3X3X0.25	Torque Arm	0	16.6
1.2D + 1.0W Normal	272.00	PL 3 x 0.375	Horiz	0	10.2
1.2D + 1.0W Normal	328.00	PL 3 x 0.375	Horiz	0	15.4

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	160.00	0.0549	0.0016	0.0492	0.0492
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	216.00	0.0935	-0.0068	0.0501	0.0506
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	300.27	0.3404	-0.0869	0.2316	0.2472
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	304.16	0.3539	-0.0920	0.1904	0.2115
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	315.84	0.3913	-0.1047	0.1849	0.2123
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	319.73	0.4023	-0.1047	0.1281	0.1652
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	335.84	0.4489	-0.1054	0.1753	0.2045
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	160.00	0.0637	-0.0095	0.0615	0.0622
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	216.00	0.1141	-0.0178	0.0621	0.0642
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	300.27	0.3696	-0.1216	0.2255	0.2562
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	304.16	0.3828	-0.1278	0.1837	0.2238
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	315.84	0.4191	-0.1431	0.1690	0.2208
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	319.73	0.4296	-0.1433	0.1183	0.1857
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	335.84	0.4742	-0.1444	0.1662	0.2202
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	160.00	0.0503	-0.0056	0.0423	0.0426
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	216.00	0.0806	-0.0086	0.0398	0.0408
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	300.27	0.3221	-0.0527	0.2221	0.2283
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	304.16	0.3352	-0.0554	0.1818	0.1901
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	315.84	0.3711	-0.0621	0.1676	0.1784
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	319.73	0.3816	-0.0616	0.1187	0.1336
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	335.84	0.4259	-0.0614	0.1651	0.1761
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	160.00	0.0581	0.0078	0.0565	0.0571
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	216.00	0.1054	0.0101	0.0596	0.0602
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	300.27	0.3695	0.0330	0.2390	0.2413
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	304.16	0.3838	0.0343	0.2003	0.2032
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	315.84	0.4232	0.0371	0.1924	0.1957
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	319.73	0.4348	0.0373	0.1383	0.1433
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	335.84	0.4842	0.0390	0.1842	0.1883
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	160.00	0.0662	0.0042	0.0694	0.0695
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	216.00	0.1261	0.0098	0.0719	0.0724
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	300.27	0.4	0.0693	0.2369	0.2469
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	304.16	0.4141	0.0730	0.1965	0.2096
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	315.84	0.4529	0.0819	0.1912	0.2077
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	319.73	0.4643	0.0820	0.1290	0.1529
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	335.84	0.5124	0.0834	0.1785	0.197
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	160.00	0.0448	0.0090	0.0448	0.0457
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	216.00	0.0778	0.0173	0.0421	0.0455
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	300.27	0.3218	0.1218	0.2257	0.2565
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	304.16	0.335	0.1280	0.1828	0.2231
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	315.84	0.3712	0.1435	0.1682	0.2209
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	319.73	0.3817	0.1438	0.1188	0.1865
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	335.84	0.4262	0.1449	0.1659	0.2203
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	160.00	0.0501	0.0165	0.0528	0.0553
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	216.00	0.0936	0.0233	0.0561	0.0601
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	300.27	0.3496	0.1235	0.2344	0.2649
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	304.16	0.3633	0.1290	0.1924	0.2317
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	315.84	0.4014	0.1431	0.1740	0.2251
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	319.73	0.4125	0.1434	0.1313	0.1944
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	335.84	0.4597	0.1446	0.1763	0.228
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	160.00	0.0582	0.0055	0.0631	0.0633
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	216.00	0.1115	0.0089	0.0663	0.0666
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	300.27	0.3683	0.0528	0.2236	0.2298
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	304.16	0.3816	0.0554	0.1852	0.1933
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	315.84	0.4181	0.0620	0.1716	0.1821
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	319.73	0.4288	0.0615	0.1211	0.1355
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	335.84	0.4741	0.0612	0.1690	0.1798
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	160.00	0.0461	-0.0036	0.0361	0.0363
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	216.00	0.0692	-0.0093	0.0324	0.0334
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	300.27	0.2947	-0.0687	0.2109	0.2218

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	304.16	0.307	-0.0723	0.1706	0.1853
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	315.84	0.3408	-0.0813	0.1670	0.1858
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	319.73	0.3506	-0.0816	0.1052	0.1332
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	335.84	0.3921	-0.0830	0.1552	0.176
1.2D + 1.0Ev + 1.0Eh 330° Seismic	160.00	0.0047	-0.0001	0.0067	0.0067
1.2D + 1.0Ev + 1.0Eh 330° Seismic	216.00	0.0116	-0.0004	0.0166	0.0166
1.2D + 1.0Ev + 1.0Eh 330° Seismic	300.27	0.0794	-0.0002	0.0659	0.0659
1.2D + 1.0Ev + 1.0Eh 330° Seismic	304.16	0.0833	-0.0003	0.0553	0.0553
1.2D + 1.0Ev + 1.0Eh 330° Seismic	315.84	0.0941	-0.0003	0.0515	0.0515
1.2D + 1.0Ev + 1.0Eh 330° Seismic	319.73	0.0974	-0.0002	0.0396	0.0396
1.2D + 1.0Ev + 1.0Eh 330° Seismic	335.84	0.1105	-0.0002	0.0484	0.0484
1.2D + 1.0Ev + 1.0Eh 300° Seismic	160.00	0.0057	-0.0001	0.0091	0.0091
1.2D + 1.0Ev + 1.0Eh 300° Seismic	216.00	0.0143	-0.0003	0.0161	0.0161
1.2D + 1.0Ev + 1.0Eh 300° Seismic	300.27	0.0806	-0.0003	0.0643	0.0643
1.2D + 1.0Ev + 1.0Eh 300° Seismic	304.16	0.0844	-0.0004	0.0535	0.0535
1.2D + 1.0Ev + 1.0Eh 300° Seismic	315.84	0.0948	-0.0004	0.0496	0.0496
1.2D + 1.0Ev + 1.0Eh 300° Seismic	319.73	0.0979	-0.0003	0.0371	0.0371
1.2D + 1.0Ev + 1.0Eh 300° Seismic	335.84	0.1105	-0.0002	0.0463	0.0463
1.2D + 1.0Ev + 1.0Eh 240° Seismic	160.00	0.0065	0.0000	0.0125	0.0125
1.2D + 1.0Ev + 1.0Eh 240° Seismic	216.00	0.02	-0.0002	0.0205	0.0205
1.2D + 1.0Ev + 1.0Eh 240° Seismic	300.27	0.0961	-0.0002	0.0718	0.0718
1.2D + 1.0Ev + 1.0Eh 240° Seismic	304.16	0.1004	-0.0003	0.0608	0.0608
1.2D + 1.0Ev + 1.0Eh 240° Seismic	315.84	0.1124	-0.0003	0.0568	0.0568
1.2D + 1.0Ev + 1.0Eh 240° Seismic	319.73	0.116	-0.0002	0.0453	0.0453
1.2D + 1.0Ev + 1.0Eh 240° Seismic	335.84	0.1306	-0.0001	0.0535	0.0535
1.2D + 1.0Ev + 1.0Eh 210° Seismic	160.00	0.0064	0.0000	0.0132	0.0132
1.2D + 1.0Ev + 1.0Eh 210° Seismic	216.00	0.0211	0.0002	0.0219	0.0219
1.2D + 1.0Ev + 1.0Eh 210° Seismic	300.27	0.0979	-0.0001	0.0709	0.0709
1.2D + 1.0Ev + 1.0Eh 210° Seismic	304.16	0.1022	-0.0002	0.0600	0.06
1.2D + 1.0Ev + 1.0Eh 210° Seismic	315.84	0.1139	-0.0002	0.0558	0.0558
1.2D + 1.0Ev + 1.0Eh 210° Seismic	319.73	0.1174	0.0001	0.0441	0.0441
1.2D + 1.0Ev + 1.0Eh 210° Seismic	335.84	0.1316	-0.0001	0.0523	0.0523
1.2D + 1.0Ev + 1.0Eh 180° Seismic	160.00	0.006	0.0001	0.0145	0.0145
1.2D + 1.0Ev + 1.0Eh 180° Seismic	216.00	0.0217	0.0003	0.0232	0.0232
1.2D + 1.0Ev + 1.0Eh 180° Seismic	300.27	0.0986	0.0002	0.0694	0.0694
1.2D + 1.0Ev + 1.0Eh 180° Seismic	304.16	0.1027	0.0003	0.0583	0.0583
1.2D + 1.0Ev + 1.0Eh 180° Seismic	315.84	0.1141	0.0003	0.0538	0.0538
1.2D + 1.0Ev + 1.0Eh 180° Seismic	319.73	0.1175	0.0002	0.0411	0.0411
1.2D + 1.0Ev + 1.0Eh 180° Seismic	335.84	0.1311	0.0001	0.0499	0.0499
1.2D + 1.0Ev + 1.0Eh 120° Seismic	160.00	0.0035	0.0001	0.0147	0.0147
1.2D + 1.0Ev + 1.0Eh 120° Seismic	216.00	0.0175	0.0003	0.0231	0.0231
1.2D + 1.0Ev + 1.0Eh 120° Seismic	300.27	0.0931	0.0003	0.0696	0.0696
1.2D + 1.0Ev + 1.0Eh 120° Seismic	304.16	0.0973	0.0003	0.0588	0.0588
1.2D + 1.0Ev + 1.0Eh 120° Seismic	315.84	0.1088	0.0004	0.0546	0.0546
1.2D + 1.0Ev + 1.0Eh 120° Seismic	319.73	0.1122	0.0003	0.0428	0.0428
1.2D + 1.0Ev + 1.0Eh 120° Seismic	335.84	0.1262	0.0002	0.0513	0.0513
1.2D + 1.0Ev + 1.0Eh 90° Seismic	160.00	0.0019	0.0000	0.0138	0.0138
1.2D + 1.0Ev + 1.0Eh 90° Seismic	216.00	0.0146	0.0002	0.0218	0.0218
1.2D + 1.0Ev + 1.0Eh 90° Seismic	300.27	0.0861	0.0003	0.0661	0.0661
1.2D + 1.0Ev + 1.0Eh 90° Seismic	304.16	0.0901	0.0004	0.0555	0.0555
1.2D + 1.0Ev + 1.0Eh 90° Seismic	315.84	0.1009	0.0004	0.0514	0.0514
1.2D + 1.0Ev + 1.0Eh 90° Seismic	319.73	0.1041	0.0003	0.0394	0.0394
1.2D + 1.0Ev + 1.0Eh 90° Seismic	335.84	0.1172	0.0002	0.0481	0.0481
1.2D + 1.0Ev + 1.0Eh 60° Seismic	160.00	0.0008	0.0000	0.0122	0.0122
1.2D + 1.0Ev + 1.0Eh 60° Seismic	216.00	0.0117	0.0002	0.0200	0.02
1.2D + 1.0Ev + 1.0Eh 60° Seismic	300.27	0.0799	0.0002	0.0637	0.0637
1.2D + 1.0Ev + 1.0Eh 60° Seismic	304.16	0.0836	0.0003	0.0530	0.053
1.2D + 1.0Ev + 1.0Eh 60° Seismic	315.84	0.0939	0.0003	0.0490	0.049
1.2D + 1.0Ev + 1.0Eh 60° Seismic	319.73	0.097	0.0002	0.0362	0.0362

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Ev + 1.0Eh 60° Seismic	335.84	0.1093	0.0001	0.0456	0.0456
1.2D + 1.0Ev + 1.0Eh Normal Seismic	160.00	0.0033	-0.0001	0.0078	0.0078
1.2D + 1.0Ev + 1.0Eh Normal Seismic	216.00	0.0106	-0.0003	0.0188	0.0188
1.2D + 1.0Ev + 1.0Eh Normal Seismic	300.27	0.0829	-0.0002	0.0691	0.0691
1.2D + 1.0Ev + 1.0Eh Normal Seismic	304.16	0.087	-0.0002	0.0583	0.0583
1.2D + 1.0Ev + 1.0Eh Normal Seismic	315.84	0.0985	-0.0002	0.0544	0.0544
1.2D + 1.0Ev + 1.0Eh Normal Seismic	319.73	0.1019	-0.0002	0.0424	0.0424
1.2D + 1.0Ev + 1.0Eh Normal Seismic	335.84	0.1159	-0.0001	0.0515	0.0515
1.2D + 1.0Di + 1.0Wi 330° 29.24 mph Wind with 0.85" Radial Ice	160.00	0.0349	0.0082	0.0258	0.0271
1.2D + 1.0Di + 1.0Wi 330° 29.24 mph Wind with 0.85" Radial Ice	216.00	0.0437	0.0074	0.0118	0.0139
1.2D + 1.0Di + 1.0Wi 330° 29.24 mph Wind with 0.85" Radial Ice	300.27	0.1115	-0.0020	0.0651	0.0652
1.2D + 1.0Di + 1.0Wi 330° 29.24 mph Wind with 0.85" Radial Ice	304.16	0.115	-0.0029	0.0524	0.0525
1.2D + 1.0Di + 1.0Wi 330° 29.24 mph Wind with 0.85" Radial Ice	315.84	0.1245	-0.0052	0.0487	0.049
1.2D + 1.0Di + 1.0Wi 330° 29.24 mph Wind with 0.85" Radial Ice	319.73	0.1272	-0.0047	0.0287	0.0291
1.2D + 1.0Di + 1.0Wi 330° 29.24 mph Wind with 0.85" Radial Ice	335.84	0.1385	-0.0042	0.0446	0.0448
1.2D + 1.0Di + 1.0Wi 300° 29.24 mph Wind with 0.85" Radial Ice	160.00	0.0414	-0.0034	0.0342	0.0343
1.2D + 1.0Di + 1.0Wi 300° 29.24 mph Wind with 0.85" Radial Ice	216.00	0.057	-0.0056	0.0190	0.0196
1.2D + 1.0Di + 1.0Wi 300° 29.24 mph Wind with 0.85" Radial Ice	300.27	0.1427	-0.0322	0.0706	0.0776
1.2D + 1.0Di + 1.0Wi 300° 29.24 mph Wind with 0.85" Radial Ice	304.16	0.1467	-0.0338	0.0570	0.0663
1.2D + 1.0Di + 1.0Wi 300° 29.24 mph Wind with 0.85" Radial Ice	315.84	0.1573	-0.0379	0.0507	0.0631
1.2D + 1.0Di + 1.0Wi 300° 29.24 mph Wind with 0.85" Radial Ice	319.73	0.1603	-0.0378	0.0317	0.0491
1.2D + 1.0Di + 1.0Wi 300° 29.24 mph Wind with 0.85" Radial Ice	335.84	0.1726	-0.0380	0.0478	0.0611
1.2D + 1.0Di + 1.0Wi 240° 29.24 mph Wind with 0.85" Radial Ice	160.00	0.0347	-0.0034	0.0409	0.041
1.2D + 1.0Di + 1.0Wi 240° 29.24 mph Wind with 0.85" Radial Ice	216.00	0.0546	-0.0037	0.0253	0.0255
1.2D + 1.0Di + 1.0Wi 240° 29.24 mph Wind with 0.85" Radial Ice	300.27	0.1435	-0.0158	0.0647	0.0665
1.2D + 1.0Di + 1.0Wi 240° 29.24 mph Wind with 0.85" Radial Ice	304.16	0.1471	-0.0165	0.0509	0.0535
1.2D + 1.0Di + 1.0Wi 240° 29.24 mph Wind with 0.85" Radial Ice	315.84	0.1566	-0.0183	0.0422	0.046
1.2D + 1.0Di + 1.0Wi 240° 29.24 mph Wind with 0.85" Radial Ice	319.73	0.1591	-0.0182	0.0236	0.0296
1.2D + 1.0Di + 1.0Wi 240° 29.24 mph Wind with 0.85" Radial Ice	335.84	0.1693	-0.0180	0.0389	0.0428
1.2D + 1.0Di + 1.0Wi 210° 29.24 mph Wind with 0.85" Radial Ice	160.00	0.0349	0.0084	0.0479	0.0485
1.2D + 1.0Di + 1.0Wi 210° 29.24 mph Wind with 0.85" Radial Ice	216.00	0.0657	0.0106	0.0361	0.0374
1.2D + 1.0Di + 1.0Wi 210° 29.24 mph Wind with 0.85" Radial Ice	300.27	0.1694	0.0271	0.0724	0.0773
1.2D + 1.0Di + 1.0Wi 210° 29.24 mph Wind with 0.85" Radial Ice	304.16	0.1737	0.0278	0.0587	0.065
1.2D + 1.0Di + 1.0Wi 210° 29.24 mph Wind with 0.85" Radial Ice	315.84	0.1848	0.0294	0.0521	0.0595
1.2D + 1.0Di + 1.0Wi 210° 29.24 mph Wind with 0.85" Radial Ice	319.73	0.1878	0.0298	0.0314	0.0433
1.2D + 1.0Di + 1.0Wi 210° 29.24 mph Wind with 0.85" Radial Ice	335.84	0.2002	0.0306	0.0463	0.0555
1.2D + 1.0Di + 1.0Wi 180° 29.24 mph Wind with 0.85" Radial Ice	160.00	0.0366	0.0003	0.0526	0.0526
1.2D + 1.0Di + 1.0Wi 180° 29.24 mph Wind with 0.85" Radial Ice	216.00	0.0731	0.0022	0.0407	0.0408
1.2D + 1.0Di + 1.0Wi 180° 29.24 mph Wind with 0.85" Radial Ice	300.27	0.1839	0.0167	0.0776	0.0794
1.2D + 1.0Di + 1.0Wi 180° 29.24 mph Wind with 0.85" Radial Ice	304.16	0.1885	0.0177	0.0640	0.0664
1.2D + 1.0Di + 1.0Wi 180° 29.24 mph Wind with 0.85" Radial Ice	315.84	0.2005	0.0199	0.0581	0.0613
1.2D + 1.0Di + 1.0Wi 180° 29.24 mph Wind with 0.85" Radial Ice	319.73	0.2039	0.0199	0.0350	0.0401
1.2D + 1.0Di + 1.0Wi 180° 29.24 mph Wind with 0.85" Radial Ice	335.84	0.2176	0.0201	0.0515	0.0553
1.2D + 1.0Di + 1.0Wi 120° 29.24 mph Wind with 0.85" Radial Ice	160.00	0.0138	0.0035	0.0437	0.0438
1.2D + 1.0Di + 1.0Wi 120° 29.24 mph Wind with 0.85" Radial Ice	216.00	0.0397	0.0056	0.0284	0.029
1.2D + 1.0Di + 1.0Wi 120° 29.24 mph Wind with 0.85" Radial Ice	300.27	0.1271	0.0321	0.0659	0.0733
1.2D + 1.0Di + 1.0Wi 120° 29.24 mph Wind with 0.85" Radial Ice	304.16	0.1308	0.0337	0.0525	0.0623
1.2D + 1.0Di + 1.0Wi 120° 29.24 mph Wind with 0.85" Radial Ice	315.84	0.1404	0.0378	0.0450	0.0587
1.2D + 1.0Di + 1.0Wi 120° 29.24 mph Wind with 0.85" Radial Ice	319.73	0.143	0.0377	0.0255	0.0455
1.2D + 1.0Di + 1.0Wi 120° 29.24 mph Wind with 0.85" Radial Ice	335.84	0.1538	0.0379	0.0422	0.0567
1.2D + 1.0Di + 1.0Wi 90° 29.24 mph Wind with 0.85" Radial Ice	160.00	0.0093	0.0138	0.0384	0.0406
1.2D + 1.0Di + 1.0Wi 90° 29.24 mph Wind with 0.85" Radial Ice	216.00	0.0288	0.0164	0.0246	0.0292
1.2D + 1.0Di + 1.0Wi 90° 29.24 mph Wind with 0.85" Radial Ice	300.27	0.1186	0.0539	0.0692	0.0878
1.2D + 1.0Di + 1.0Wi 90° 29.24 mph Wind with 0.85" Radial Ice	304.16	0.1226	0.0558	0.0561	0.0791
1.2D + 1.0Di + 1.0Wi 90° 29.24 mph Wind with 0.85" Radial Ice	315.84	0.1333	0.0604	0.0492	0.0776
1.2D + 1.0Di + 1.0Wi 90° 29.24 mph Wind with 0.85" Radial Ice	319.73	0.1362	0.0609	0.0317	0.0686
1.2D + 1.0Di + 1.0Wi 90° 29.24 mph Wind with 0.85" Radial Ice	335.84	0.1487	0.0616	0.0479	0.078
1.2D + 1.0Di + 1.0Wi 60° 29.24 mph Wind with 0.85" Radial Ice	160.00	0.0197	0.0067	0.0320	0.0326
1.2D + 1.0Di + 1.0Wi 60° 29.24 mph Wind with 0.85" Radial Ice	216.00	0.0319	0.0054	0.0240	0.0244

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Di + 1.0Wi 60° 29.24 mph Wind with 0.85" Radial Ice	300.27	0.1223	0.0184	0.0731	0.0754
1.2D + 1.0Di + 1.0Wi 60° 29.24 mph Wind with 0.85" Radial Ice	304.16	0.1267	0.0192	0.0614	0.0643
1.2D + 1.0Di + 1.0Wi 60° 29.24 mph Wind with 0.85" Radial Ice	315.84	0.1384	0.0211	0.0565	0.0602
1.2D + 1.0Di + 1.0Wi 60° 29.24 mph Wind with 0.85" Radial Ice	319.73	0.1418	0.0209	0.0367	0.0422
1.2D + 1.0Di + 1.0Wi 60° 29.24 mph Wind with 0.85" Radial Ice	335.84	0.156	0.0208	0.0542	0.0581
1.2D + 1.0Di + 1.0Wi Normal 29.24 mph Wind with 0.85" Radial Ice	160.00	0.0222	0.0005	0.0135	0.0135
1.2D + 1.0Di + 1.0Wi Normal 29.24 mph Wind with 0.85" Radial Ice	216.00	0.0175	-0.0020	0.0041	0.0043
1.2D + 1.0Di + 1.0Wi Normal 29.24 mph Wind with 0.85" Radial Ice	300.27	0.0802	-0.0162	0.0610	0.0631
1.2D + 1.0Di + 1.0Wi Normal 29.24 mph Wind with 0.85" Radial Ice	304.16	0.0837	-0.0171	0.0487	0.0516
1.2D + 1.0Di + 1.0Wi Normal 29.24 mph Wind with 0.85" Radial Ice	315.84	0.093	-0.0194	0.0463	0.0502
1.2D + 1.0Di + 1.0Wi Normal 29.24 mph Wind with 0.85" Radial Ice	319.73	0.0956	-0.0193	0.0241	0.0309
1.2D + 1.0Di + 1.0Wi Normal 29.24 mph Wind with 0.85" Radial Ice	335.84	0.1065	-0.0196	0.0419	0.0462
1.2D + 1.0W 330° 108.19 mph Wind with No Ice	160.00	0.2412	0.0021	0.2397	0.2397
1.2D + 1.0W 330° 108.19 mph Wind with No Ice	216.00	0.542	-0.0290	0.4562	0.4571
1.2D + 1.0W 330° 108.19 mph Wind with No Ice	300.27	2.0935	-0.7375	1.3816	1.5656
1.2D + 1.0W 330° 108.19 mph Wind with No Ice	304.16	2.1788	-0.7536	1.2291	1.4378
1.2D + 1.0W 330° 108.19 mph Wind with No Ice	315.84	2.4259	-0.7753	1.2158	1.442
1.2D + 1.0W 330° 108.19 mph Wind with No Ice	319.73	2.5011	-0.7295	1.0551	1.2827
1.2D + 1.0W 330° 108.19 mph Wind with No Ice	335.84	2.8275	-0.7190	1.1936	1.3935
1.2D + 1.0W 300° 108.19 mph Wind with No Ice	160.00	0.2739	-0.0339	0.2547	0.2569
1.2D + 1.0W 300° 108.19 mph Wind with No Ice	216.00	0.5107	-0.0559	0.2904	0.2949
1.2D + 1.0W 300° 108.19 mph Wind with No Ice	300.27	1.5146	-0.6266	0.8465	1.0532
1.2D + 1.0W 300° 108.19 mph Wind with No Ice	304.16	1.5654	-0.6428	0.7103	0.958
1.2D + 1.0W 300° 108.19 mph Wind with No Ice	315.84	1.7061	-0.6797	0.6462	0.9362
1.2D + 1.0W 300° 108.19 mph Wind with No Ice	319.73	1.7448	-0.6757	0.4793	0.8274
1.2D + 1.0W 300° 108.19 mph Wind with No Ice	335.84	1.9206	-0.6745	0.6514	0.9377
1.2D + 1.0W 240° 108.19 mph Wind with No Ice	160.00	0.2026	-0.0164	0.2182	0.2188
1.2D + 1.0W 240° 108.19 mph Wind with No Ice	216.00	0.5578	-0.0277	0.5463	0.547
1.2D + 1.0W 240° 108.19 mph Wind with No Ice	300.27	2.4527	-0.2700	1.6702	1.6906
1.2D + 1.0W 240° 108.19 mph Wind with No Ice	304.16	2.5578	-0.2799	1.5105	1.5341
1.2D + 1.0W 240° 108.19 mph Wind with No Ice	315.84	2.8639	-0.2937	1.4768	1.5048
1.2D + 1.0W 240° 108.19 mph Wind with No Ice	319.73	2.9614	-0.2939	1.3331	1.3651
1.2D + 1.0W 240° 108.19 mph Wind with No Ice	335.84	3.3688	-0.2895	1.4740	1.502
1.2D + 1.0W 210° 108.19 mph Wind with No Ice	160.00	0.2548	0.0271	0.2563	0.2575
1.2D + 1.0W 210° 108.19 mph Wind with No Ice	216.00	0.5866	0.0285	0.4933	0.4936
1.2D + 1.0W 210° 108.19 mph Wind with No Ice	300.27	2.2174	-0.2757	1.4453	1.4712
1.2D + 1.0W 210° 108.19 mph Wind with No Ice	304.16	2.3068	-0.2764	1.2924	1.3215
1.2D + 1.0W 210° 108.19 mph Wind with No Ice	315.84	2.5664	-0.2572	1.2697	1.2955
1.2D + 1.0W 210° 108.19 mph Wind with No Ice	319.73	2.646	-0.2120	1.1175	1.1374
1.2D + 1.0W 210° 108.19 mph Wind with No Ice	335.84	2.9899	-0.2004	1.2561	1.272
1.2D + 1.0W 180° 108.19 mph Wind with No Ice	160.00	0.289	0.0165	0.2726	0.2731
1.2D + 1.0W 180° 108.19 mph Wind with No Ice	216.00	0.5535	0.0314	0.3250	0.3261
1.2D + 1.0W 180° 108.19 mph Wind with No Ice	300.27	1.6278	0.3653	0.9040	0.975
1.2D + 1.0W 180° 108.19 mph Wind with No Ice	304.16	1.6827	0.3749	0.7713	0.8575
1.2D + 1.0W 180° 108.19 mph Wind with No Ice	315.84	1.8361	0.3977	0.7556	0.8528
1.2D + 1.0W 180° 108.19 mph Wind with No Ice	319.73	1.8822	0.3959	0.5518	0.6762
1.2D + 1.0W 180° 108.19 mph Wind with No Ice	335.84	2.0758	0.3968	0.7140	0.8169
1.2D + 1.0W 120° 108.19 mph Wind with No Ice	160.00	0.1956	0.0341	0.2216	0.2241
1.2D + 1.0W 120° 108.19 mph Wind with No Ice	216.00	0.5586	0.0609	0.5575	0.5608
1.2D + 1.0W 120° 108.19 mph Wind with No Ice	300.27	2.4815	0.5458	1.6886	1.7721
1.2D + 1.0W 120° 108.19 mph Wind with No Ice	304.16	2.5881	0.5650	1.5307	1.6268
1.2D + 1.0W 120° 108.19 mph Wind with No Ice	315.84	2.8986	0.6016	1.4954	1.6095
1.2D + 1.0W 120° 108.19 mph Wind with No Ice	319.73	2.9973	0.6012	1.3537	1.4812
1.2D + 1.0W 120° 108.19 mph Wind with No Ice	335.84	3.4101	0.5973	1.4935	1.6077
1.2D + 1.0W 90° 108.19 mph Wind with No Ice	160.00	0.234	0.0594	0.2474	0.2539
1.2D + 1.0W 90° 108.19 mph Wind with No Ice	216.00	0.5533	0.0748	0.4838	0.4881
1.2D + 1.0W 90° 108.19 mph Wind with No Ice	300.27	2.1393	0.1332	1.4016	1.407
1.2D + 1.0W 90° 108.19 mph Wind with No Ice	304.16	2.2271	0.1486	1.2627	1.2705
1.2D + 1.0W 90° 108.19 mph Wind with No Ice	315.84	2.4815	0.1913	1.2141	1.2285

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0W 90° 108.19 mph Wind with No Ice	319.73	2.5616	0.2373	1.0902	1.1141
1.2D + 1.0W 90° 108.19 mph Wind with No Ice	335.84	2.8977	0.2444	1.2261	1.2487
1.2D + 1.0W 60° 108.19 mph Wind with No Ice	160.00	0.2705	0.0204	0.2615	0.2623
1.2D + 1.0W 60° 108.19 mph Wind with No Ice	216.00	0.5183	0.0292	0.3053	0.3064
1.2D + 1.0W 60° 108.19 mph Wind with No Ice	300.27	1.5268	0.2623	0.8497	0.8893
1.2D + 1.0W 60° 108.19 mph Wind with No Ice	304.16	1.5783	0.2694	0.7218	0.7704
1.2D + 1.0W 60° 108.19 mph Wind with No Ice	315.84	1.7213	0.2865	0.6767	0.733
1.2D + 1.0W 60° 108.19 mph Wind with No Ice	319.73	1.764	0.2830	0.5106	0.5815
1.2D + 1.0W 60° 108.19 mph Wind with No Ice	335.84	1.9441	0.2796	0.6667	0.7229
1.2D + 1.0W Normal 108.19 mph Wind with No Ice	160.00	0.2068	-0.0154	0.2157	0.2162
1.2D + 1.0W Normal 108.19 mph Wind with No Ice	216.00	0.55	-0.0349	0.5264	0.5271
1.2D + 1.0W Normal 108.19 mph Wind with No Ice	300.27	2.3866	-0.3193	1.6197	1.6493
1.2D + 1.0W Normal 108.19 mph Wind with No Ice	304.16	2.4886	-0.3315	1.4631	1.4974
1.2D + 1.0W Normal 108.19 mph Wind with No Ice	315.84	2.7852	-0.3523	1.4628	1.502
1.2D + 1.0W Normal 108.19 mph Wind with No Ice	319.73	2.8796	-0.3528	1.2756	1.3235
1.2D + 1.0W Normal 108.19 mph Wind with No Ice	335.84	3.2742	-0.3525	1.4287	1.4707

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	*(-) Uplift and (+) Down* FX* (kip)	FY* (kip)	FZ* (kip)
	0.00	0.00		1	-0.02	103.84	-0.61
	125.00	5.00	0	A1	0.00	-1.55	1.61
	125.00	11.00	240	A1a	-7.71	-7.10	-4.77
1.2D + 1.0W Normal	115.00	17.00	120	A1b	7.72	-7.24	-4.76
	260.00	11.00	0	A2	0.00	-1.34	0.99
	267.00	19.00	240	A2a	-19.24	-21.46	-12.18
	260.00	26.00	120	A2b	19.27	-21.48	-12.18
	0.00	0.00		1	-0.43	98.73	-0.23
	125.00	5.00	0	A1	-0.27	-3.80	4.31
	125.00	11.00	240	A1a	-10.83	-10.00	-6.26
1.2D + 1.0W 60°	115.00	17.00	120	A1b	3.58	-3.61	-2.37
	260.00	11.00	0	A2	-0.81	-6.53	6.61
	267.00	19.00	240	A2a	-23.65	-25.52	-13.66
	260.00	26.00	120	A2b	5.38	-6.17	-4.03
	0.00	0.00		1	-0.55	102.66	0.06
	125.00	5.00	0	A1	-0.34	-5.39	6.37
	125.00	11.00	240	A1a	-9.89	-9.00	-5.56
1.2D + 1.0W 90°	115.00	17.00	120	A1b	2.05	-2.20	-1.32
	260.00	11.00	0	A2	-1.07	-14.95	15.00
	267.00	19.00	240	A2a	-23.50	-25.23	-13.00
	260.00	26.00	120	A2b	1.93	-2.47	-1.54
	0.00	0.00		1	-0.56	104.25	0.32
	125.00	5.00	0	A1	-0.28	-7.36	8.85
	125.00	11.00	240	A1a	-7.80	-6.94	-4.19
1.2D + 1.0W 120°	115.00	17.00	120	A1b	1.27	-1.38	-0.74
	260.00	11.00	0	A2	-0.93	-22.54	22.56
	267.00	19.00	240	A2a	-19.97	-21.25	-10.46
	260.00	26.00	120	A2b	0.67	-1.03	-0.39
	0.00	0.00		1	-0.01	99.79	0.48
	125.00	5.00	0	A1	0.00	-10.47	12.40
	125.00	11.00	240	A1a	-3.78	-3.49	-1.87
1.2D + 1.0W 180°	115.00	17.00	120	A1b	3.76	-3.54	-1.87
	260.00	11.00	0	A2	0.00	-27.00	27.32
	267.00	19.00	240	A2a	-6.09	-6.08	-2.58
	260.00	26.00	120	A2b	6.10	-6.07	-2.60
	0.00	0.00		1	0.30	103.61	0.44
	125.00	5.00	0	A1	0.13	-9.47	11.29
	125.00	11.00	240	A1a	-2.17	-2.13	-1.10
1.2D + 1.0W 210°	115.00	17.00	120	A1b	5.64	-5.12	-2.89
	260.00	11.00	0	A2	0.50	-26.81	26.98
	267.00	19.00	240	A2a	-2.33	-2.51	-0.91
	260.00	26.00	120	A2b	13.59	-14.15	-6.62
	0.00	0.00		1	0.54	104.44	0.33
	125.00	5.00	0	A1	0.28	-7.38	8.89
	125.00	11.00	240	A1a	-1.32	-1.36	-0.76
1.2D + 1.0W 240°	115.00	17.00	120	A1b	7.84	-7.09	-4.22
	260.00	11.00	0	A2	0.93	-22.55	22.58
	267.00	19.00	240	A2a	-0.70	-1.07	-0.41
	260.00	26.00	120	A2b	20.00	-21.29	-10.49
	0.00	0.00		1	0.40	99.52	-0.23
	125.00	5.00	0	A1	0.27	-3.91	4.46
	125.00	11.00	240	A1a	-3.72	-3.66	-2.46
1.2D + 1.0W 300°	115.00	17.00	120	A1b	10.97	-10.30	-6.33
	260.00	11.00	0	A2	0.81	-6.64	6.73
	267.00	19.00	240	A2a	-5.47	-6.29	-4.10
	260.00	26.00	120	A2b	23.79	-25.66	-13.74
	0.00	0.00		1	0.20	102.89	-0.48
1.2D + 1.0W 330°	125.00	5.00	0	A1	0.13	-2.43	2.62
	125.00	11.00	240	A1a	-5.52	-5.21	-3.57

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	FX* (kip)	FY* (kip)	FZ* (kip)
					*(-) Uplift and (+) Down		
	115.00	17.00	120	A1b	9.94	-9.33	-5.88
	260.00	11.00	0	A2	0.39	-2.81	2.60
	267.00	19.00	240	A2a	-12.65	-14.30	-8.54
	260.00	26.00	120	A2b	23.23	-25.45	-13.97
	0.00	0.00		1	-0.03	140.57	-0.07
	125.00	5.00	0	A1	0.00	-5.47	7.25
	125.00	11.00	240	A1a	-7.49	-6.23	-4.44
1.2D + 1.0Di + 1.0Wi Normal	115.00	17.00	120	A1b	7.48	-6.35	-4.43
	260.00	11.00	0	A2	0.00	-9.38	11.11
	267.00	19.00	240	A2a	-12.18	-11.37	-7.36
	260.00	26.00	120	A2b	12.20	-11.39	-7.36
	0.00	0.00		1	-0.09	139.81	-0.03
	125.00	5.00	0	A1	-0.10	-5.81	7.67
	125.00	11.00	240	A1a	-7.88	-6.56	-4.55
1.2D + 1.0Di + 1.0Wi 60°	115.00	17.00	120	A1b	6.55	-5.50	-3.89
	260.00	11.00	0	A2	-0.29	-10.14	11.93
	267.00	19.00	240	A2a	-12.99	-12.07	-7.50
	260.00	26.00	120	A2b	10.27	-9.56	-6.25
	0.00	0.00		1	-0.10	140.28	0.02
	125.00	5.00	0	A1	-0.12	-6.24	8.19
	125.00	11.00	240	A1a	-7.82	-6.47	-4.46
1.2D + 1.0Di + 1.0Wi 90°	115.00	17.00	120	A1b	6.30	-5.25	-3.69
	260.00	11.00	0	A2	-0.35	-11.12	13.05
	267.00	19.00	240	A2a	-12.93	-11.91	-7.31
	260.00	26.00	120	A2b	9.79	-8.99	-5.80
	0.00	0.00		1	-0.09	140.74	0.05
	125.00	5.00	0	A1	-0.10	-6.67	8.71
	125.00	11.00	240	A1a	-7.57	-6.21	-4.26
1.2D + 1.0Di + 1.0Wi 120°	115.00	17.00	120	A1b	6.22	-5.16	-3.59
	260.00	11.00	0	A2	-0.29	-12.10	14.17
	267.00	19.00	240	A2a	-12.47	-11.37	-6.86
	260.00	26.00	120	A2b	9.71	-8.82	-5.60
	0.00	0.00		1	-0.03	140.05	0.08
	125.00	5.00	0	A1	0.00	-7.01	9.12
	125.00	11.00	240	A1a	-6.66	-5.41	-3.73
1.2D + 1.0Di + 1.0Wi 180°	115.00	17.00	120	A1b	6.64	-5.51	-3.73
	260.00	11.00	0	A2	0.00	-12.88	14.99
	267.00	19.00	240	A2a	-10.53	-9.53	-5.75
	260.00	26.00	120	A2b	10.54	-9.54	-5.76
	0.00	0.00		1	0.02	140.42	0.07
	125.00	5.00	0	A1	0.05	-6.93	9.03
	125.00	11.00	240	A1a	-6.36	-5.15	-3.62
1.2D + 1.0Di + 1.0Wi 210°	115.00	17.00	120	A1b	7.11	-5.92	-3.97
	260.00	11.00	0	A2	0.14	-12.70	14.82
	267.00	19.00	240	A2a	-9.89	-8.96	-5.55
	260.00	26.00	120	A2b	11.55	-10.47	-6.26
	0.00	0.00		1	0.04	140.80	0.05
	125.00	5.00	0	A1	0.10	-6.67	8.73
	125.00	11.00	240	A1a	-6.25	-5.07	-3.61
1.2D + 1.0Di + 1.0Wi 240°	115.00	17.00	120	A1b	7.57	-6.35	-4.26
	260.00	11.00	0	A2	0.29	-12.10	14.17
	267.00	19.00	240	A2a	-9.70	-8.82	-5.60
	260.00	26.00	120	A2b	12.48	-11.40	-6.88
	0.00	0.00		1	0.03	139.93	-0.02
	125.00	5.00	0	A1	0.10	-5.83	7.69
	125.00	11.00	240	A1a	-6.59	-5.43	-3.92
1.2D + 1.0Di + 1.0Wi 300°	115.00	17.00	120	A1b	7.90	-6.70	-4.56
	260.00	11.00	0	A2	0.29	-10.15	11.93
	267.00	19.00	240	A2a	-10.26	-9.55	-6.26

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	FX* (kip)	FY* (kip)	FZ* (kip)
					*(-) Uplift and (+) Down		
	260.00	26.00	120	A2b	13.04	-12.12	-7.52
	0.00	0.00		1	0.00	140.24	-0.05
	125.00	5.00	0	A1	0.05	-5.56	7.36
	125.00	11.00	240	A1a	-7.03	-5.83	-4.20
1.2D + 1.0Di + 1.0Wi 330°	115.00	17.00	120	A1b	7.79	-6.61	-4.55
	260.00	11.00	0	A2	0.14	-9.56	11.29
	267.00	19.00	240	A2a	-11.20	-10.48	-6.88
	260.00	26.00	120	A2b	12.81	-11.93	-7.55
	0.00	0.00		1	-0.01	76.87	0.01
	125.00	5.00	0	A1	0.00	-4.49	5.55
	125.00	11.00	240	A1a	-4.86	-4.28	-2.81
1.2D + 1.0Ev + 1.0Eh Normal	115.00	17.00	120	A1b	4.85	-4.36	-2.80
	260.00	11.00	0	A2	0.00	-5.55	6.07
	267.00	19.00	240	A2a	-6.28	-6.43	-3.63
	260.00	26.00	120	A2b	6.30	-6.44	-3.64
	0.00	0.00		1	-0.01	76.83	0.01
	125.00	5.00	0	A1	0.00	-4.51	5.57
	125.00	11.00	240	A1a	-4.88	-4.31	-2.82
1.2D + 1.0Ev + 1.0Eh 60°	115.00	17.00	120	A1b	4.81	-4.31	-2.78
	260.00	11.00	0	A2	0.00	-5.96	6.44
	267.00	19.00	240	A2a	-6.60	-6.80	-3.81
	260.00	26.00	120	A2b	5.61	-5.62	-3.24
	0.00	0.00		1	-0.01	76.84	0.01
	125.00	5.00	0	A1	0.00	-4.54	5.59
	125.00	11.00	240	A1a	-4.88	-4.30	-2.81
1.2D + 1.0Ev + 1.0Eh 90°	115.00	17.00	120	A1b	4.79	-4.29	-2.77
	260.00	11.00	0	A2	0.00	-6.36	6.82
	267.00	19.00	240	A2a	-6.51	-6.69	-3.75
	260.00	26.00	120	A2b	5.37	-5.33	-3.10
	0.00	0.00		1	-0.01	76.85	0.01
	125.00	5.00	0	A1	0.00	-4.56	5.62
	125.00	11.00	240	A1a	-4.86	-4.28	-2.80
1.2D + 1.0Ev + 1.0Eh 120°	115.00	17.00	120	A1b	4.79	-4.28	-2.76
	260.00	11.00	0	A2	0.00	-6.78	7.20
	267.00	19.00	240	A2a	-6.26	-6.40	-3.61
	260.00	26.00	120	A2b	5.28	-5.23	-3.05
	0.00	0.00		1	-0.01	76.87	0.01
	125.00	5.00	0	A1	0.00	-4.59	5.64
	125.00	11.00	240	A1a	-4.81	-4.23	-2.78
1.2D + 1.0Ev + 1.0Eh 180°	115.00	17.00	120	A1b	4.81	-4.30	-2.78
	260.00	11.00	0	A2	0.00	-7.22	7.60
	267.00	19.00	240	A2a	-5.59	-5.60	-3.22
	260.00	26.00	120	A2b	5.60	-5.60	-3.23
	0.00	0.00		1	-0.01	76.89	0.01
	125.00	5.00	0	A1	0.00	-4.58	5.63
	125.00	11.00	240	A1a	-4.80	-4.22	-2.77
1.2D + 1.0Ev + 1.0Eh 210°	115.00	17.00	120	A1b	4.83	-4.33	-2.79
	260.00	11.00	0	A2	0.00	-7.09	7.48
	267.00	19.00	240	A2a	-5.36	-5.33	-3.10
	260.00	26.00	120	A2b	5.94	-6.01	-3.43
	0.00	0.00		1	-0.01	76.90	0.01
	125.00	5.00	0	A1	0.00	-4.56	5.62
	125.00	11.00	240	A1a	-4.79	-4.21	-2.77
1.2D + 1.0Ev + 1.0Eh 240°	115.00	17.00	120	A1b	4.85	-4.35	-2.80
	260.00	11.00	0	A2	0.00	-6.79	7.21
	267.00	19.00	240	A2a	-5.28	-5.24	-3.05
	260.00	26.00	120	A2b	6.28	-6.42	-3.63
	0.00	0.00		1	-0.01	76.88	0.01
1.2D + 1.0Ev + 1.0Eh 300°	125.00	5.00	0	A1	0.00	-4.51	5.57

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	FX* (kip)	FY* (kip)	FZ* (kip)
					*(-) Uplift and (+) Down		
	125.00	11.00	240	A1a	-4.82	-4.23	-2.78
	115.00	17.00	120	A1b	4.88	-4.38	-2.82
	260.00	11.00	0	A2	0.00	-5.97	6.46
	267.00	19.00	240	A2a	-5.61	-5.63	-3.24
	260.00	26.00	120	A2b	6.63	-6.83	-3.82
	0.00	0.00		1	-0.01	76.88	0.01
	125.00	5.00	0	A1	0.00	-4.50	5.55
	125.00	11.00	240	A1a	-4.84	-4.26	-2.79
1.2D + 1.0Ev + 1.0Eh 330°	115.00	17.00	120	A1b	4.87	-4.38	-2.81
	260.00	11.00	0	A2	0.00	-5.67	6.18
	267.00	19.00	240	A2a	-5.94	-6.02	-3.43
	260.00	26.00	120	A2b	6.54	-6.72	-3.77
	0.00	0.00		1	-0.01	69.92	-0.19
	125.00	5.00	0	A1	0.00	-3.30	4.07
	125.00	11.00	240	A1a	-5.71	-5.10	-3.39
1.0D + 1.0W Service Normal	115.00	17.00	120	A1b	5.71	-5.20	-3.39
	260.00	11.00	0	A2	0.00	-2.64	3.08
	267.00	19.00	240	A2a	-8.10	-8.47	-4.96
	260.00	26.00	120	A2b	8.12	-8.48	-4.97
	0.00	0.00		1	-0.17	70.83	-0.09
	125.00	5.00	0	A1	-0.08	-4.01	4.91
	125.00	11.00	240	A1a	-6.44	-5.76	-3.72
1.0D + 1.0W Service 60°	115.00	17.00	120	A1b	4.19	-3.82	-2.51
	260.00	11.00	0	A2	-0.25	-5.14	5.52
	267.00	19.00	240	A2a	-10.20	-10.69	-5.89
	260.00	26.00	120	A2b	4.69	-4.84	-2.99
	0.00	0.00		1	-0.20	70.54	0.01
	125.00	5.00	0	A1	-0.10	-4.65	5.70
	125.00	11.00	240	A1a	-6.25	-5.57	-3.57
1.0D + 1.0W Service 90°	115.00	17.00	120	A1b	3.69	-3.35	-2.17
	260.00	11.00	0	A2	-0.31	-7.06	7.50
	267.00	19.00	240	A2a	-9.71	-10.06	-5.47
	260.00	26.00	120	A2b	3.26	-3.20	-2.01
	0.00	0.00		1	-0.18	70.14	0.10
	125.00	5.00	0	A1	-0.08	-5.38	6.58
	125.00	11.00	240	A1a	-5.73	-5.05	-3.21
1.0D + 1.0W Service 120°	115.00	17.00	120	A1b	3.45	-3.10	-1.99
	260.00	11.00	0	A2	-0.25	-8.98	9.47
	267.00	19.00	240	A2a	-8.33	-8.45	-4.52
	260.00	26.00	120	A2b	2.65	-2.42	-1.53
	0.00	0.00		1	-0.01	71.05	0.19
	125.00	5.00	0	A1	0.00	-6.09	7.40
	125.00	11.00	240	A1a	-4.24	-3.72	-2.35
1.0D + 1.0W Service 180°	115.00	17.00	120	A1b	4.23	-3.79	-2.35
	260.00	11.00	0	A2	0.00	-11.32	11.75
	267.00	19.00	240	A2a	-4.88	-4.79	-2.53
	260.00	26.00	120	A2b	4.88	-4.78	-2.54
	0.00	0.00		1	0.09	70.70	0.17
	125.00	5.00	0	A1	0.04	-5.89	7.19
	125.00	11.00	240	A1a	-3.72	-3.27	-2.10
1.0D + 1.0W Service 210°	115.00	17.00	120	A1b	4.96	-4.41	-2.75
	260.00	11.00	0	A2	0.12	-10.64	11.10
	267.00	19.00	240	A2a	-3.37	-3.20	-1.81
	260.00	26.00	120	A2b	6.65	-6.63	-3.49
	0.00	0.00		1	0.16	70.26	0.11
	125.00	5.00	0	A1	0.08	-5.39	6.60
1.0D + 1.0W Service 240°	125.00	11.00	240	A1a	-3.48	-3.05	-2.01
	115.00	17.00	120	A1b	5.74	-5.15	-3.22
	260.00	11.00	0	A2	0.25	-8.99	9.48

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	FX* (kip)	FY* (kip)	FZ* (kip)
					(-) Uplift and (+) Down		
	267.00	19.00	240	A2a	-2.67	-2.47	-1.54
	260.00	26.00	120	A2b	8.35	-8.47	-4.54
	0.00	0.00		1	0.15	71.10	-0.08
	125.00	5.00	0	A1	0.08	-4.04	4.94
	125.00	11.00	240	A1a	-4.23	-3.78	-2.54
1.0D + 1.0W Service 300°	115.00	17.00	120	A1b	6.47	-5.90	-3.74
	260.00	11.00	0	A2	0.25	-5.17	5.56
	267.00	19.00	240	A2a	-4.71	-4.88	-3.00
	260.00	26.00	120	A2b	10.29	-10.79	-5.94
	0.00	0.00		1	0.08	70.64	-0.16
	125.00	5.00	0	A1	0.04	-3.56	4.35
	125.00	11.00	240	A1a	-4.93	-4.40	-2.96
1.0D + 1.0W Service 330°	115.00	17.00	120	A1b	6.27	-5.71	-3.66
	260.00	11.00	0	A2	0.12	-3.48	3.87
	267.00	19.00	240	A2a	-6.41	-6.72	-4.06
	260.00	26.00	120	A2b	9.67	-10.14	-5.72

MAXIMUM GUY ANCHOR REACTIONS

Radius (ft)	Drop (ft)	Azimuth (deg)	Uplift (kip)	Shear (kip)
115.00	17.00	120	10.30	12.66
125.00	5.00	0	10.47	12.40
125.00	11.00	240	10.00	12.51
260.00	11.00	0	27.00	27.32
260.00	26.00	120	25.66	27.48
267.00	19.00	240	25.52	27.31

MAXIMUM REACTIONS SUMMARY

Base / Anchor Group	Vertical Load *(Compression for Base; Uplift for Anchor)*	Horizontal Shear
Guyed – Pivot Base	140.80 (kip)	0.64 (kip)
Guyed Anchor - A1	10.47 (kip)	12.66 (kip)
Guyed Anchor - A2	27.00 (kip)	27.48 (kip)

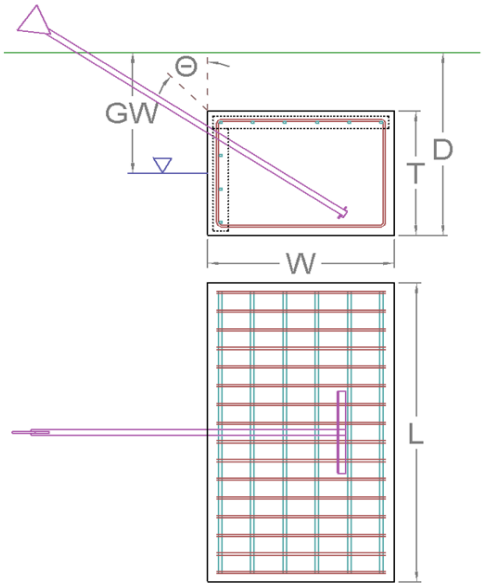
GUY ANCHOR BLOCK FOUNDATION ANALYSIS (NODE A1 @ r = 125 ft)

APPLIED REACTIONS

Uplift (k)	Shear (k)
10.47	12.40

FOUNDATION PARAMETERS

Base Depth:	D	6.5	ft
Block Width:	W	6	ft
Block Length:	L	28	ft
Block Thickness:	T	6	ft
Concrete Compressive Strength:		3,000	psi
Top Rebar Quantity, Size, & Yield:		(5) #6 bars [60 ksi]	
Side Rebar Quantity, Size, & Yield:		(4) #6 bars [60 ksi]	
Anchor Rod Quantity & Shape:		(1) Solid Rod	
Anchor Rod Area (gross//net):		1.770 // 1.770	in^2
Anchor Rod Strength (fy//fu):		42 // 58	ksi



SOIL PARAMETERS

Water Table Depth [BGL]:	GW	4	ft
Soil Unit Weight:		107	pcf
Friction Angle:		27	°
Cohesion:		0	psf
Ultimate Skin Friction		150	psf
Coefficient of Shear Friction:		0.3	
Uplift Pullout Angle:	θ	30	°
Uplift at ____ of Anchor:		Top	

SOIL STRENGTH ANALYSIS

Uplift Strength Reduction Factor, Φ_u	Shear Strength Reduction Factor, Φ_v	Dead Load Factor
0.75	0.75	0.9

SOIL UPLIFT ANALYSIS

Uplift Resistance from Skin Friction and Soil Shear (k)	Additional Uplift Resistance (k)	Uplift Capacity, ΦT_n (k)	Soil Uplift Usage, $T_u / \Phi T_n$	
32.17	0	145.10	7.2%	✓

SOIL SHEAR ANALYSIS

Skin Friction Resistance (k)	Normal Force Resistance (k)	Passive Pressure (psf)	Passive Pressure Resistance (k)	Additional Shear Resistance (k)	Shear Capacity, ΦV_n (k)	Soil Shear Usage, $V_u / \Phi V_n$	
8.25	33.03	997.27	167.54	0	156.62	7.9%	✓

ANCHOR ROD STRENGTH ANALYSIS

Yield Strength Reduction Factor, Φ_y	Tensile Strength Reduction Factor, Φ_t	Resultant Tensile Load, T_u (k)	Tensile Capacity, ΦT_n (k-ft)	Anchor Rod Tensile Usage, $T_u / \Phi T_n$	
0.8	0.65	16.2	59.47	27.3%	✓

REINFORCING STEEL STRENGTH ANALYSIS			
Strength Shear Reduction Factor, Φ_V	Strength Reduction Factor for Lateral Flexure, Φ_{BV}	Strength Reduction Factor for Vertical Flexure, Φ_{BT}	Compression Zone Factor, β_1
0.75	0.9	0.9	0.65

REINFORCING ONE WAY SHEAR ANALYSIS - SHEAR		
One Way Shear due to Shear, V_u (k)	One Way Shear Capacity due to Shear, $\Phi_c V_n$ (k)	Rebar One Way Shear Usage, $V_u / \Phi_c V_n$
4.95	402.99	1.2%

REINFORCING ONE WAY SHEAR ANALYSIS – UPLIFT		
One Way Shear due to Uplift, V_u (k)	One Way Shear Capacity due to Uplift, $\Phi_c V_n$ (k)	Rebar One Way Shear Usage, $V_u / \Phi_c V_n$
4.18	402.99	1.0%

REINFORCING FLEXURE ANALYSIS - SHEAR					
Flexure Load, M_{uv} (k-ft)	Distance to steel, d_v (in)	Whitney Block, a_v (in)	Strain in Rebar, ε_t (in/in)	Flexural Capacity, $\Phi_{bv}M_{nv}$ (k-ft)	Rebar Flexural Usage, $M_{uv} / \Phi_{bv}M_{nv}$
43.40	68.125	0.575	0.2990	537.27	8.1%

REINFORCING FLEXURE ANALYSIS – UPLIFT					
Flexure Load, M_{ut} (k-ft)	Depth to steel, d_t (in)	Whitney Block, a_t (in)	Strain in Rebar, ε_t (in/in)	Flexural Capacity, $\Phi_{bt}M_{nt}$ (k-ft)	Rebar Flexural Usage, $M_{ut} / \Phi_{bt}M_{nt}$
36.64	68.125	0.719	0.2386	670.88	5.5%

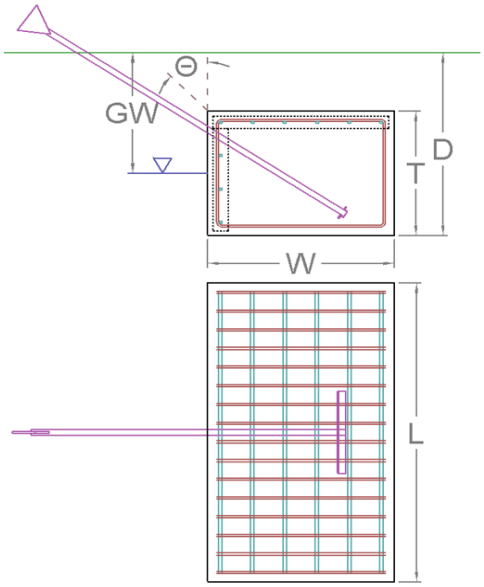
GUY ANCHOR BLOCK FOUNDATION ANALYSIS (NODE A1a @ r = 125 ft)

APPLIED REACTIONS

Uplift (k)	Shear (k)
10.00	12.51

FOUNDATION PARAMETERS

Base Depth:	D	6.5	ft
Block Width:	W	6	ft
Block Length:	L	28	ft
Block Thickness:	T	6	ft
Concrete Compressive Strength:		3,000	psi
Top Rebar Quantity, Size, & Yield:		(5) #6 bars [60 ksi]	
Side Rebar Quantity, Size, & Yield:		(4) #6 bars [60 ksi]	
Anchor Rod Quantity & Shape:		(1) Solid Rod	
Anchor Rod Area (gross//net):		1.770 // 1.770	in^2
Anchor Rod Strength (fy//fu):		42 // 58	ksi



SOIL PARAMETERS

Water Table Depth [BGL]:	GW	4	ft
Soil Unit Weight:		107	pcf
Friction Angle:		27	°
Cohesion:		0	psf
Ultimate Skin Friction		150	psf
Coefficient of Shear Friction:		0.3	
Uplift Pullout Angle:	θ	30	°
Uplift at ____ of Anchor:		Top	

SOIL STRENGTH ANALYSIS

Uplift Strength Reduction Factor, Φ_u	Shear Strength Reduction Factor, Φ_v	Dead Load Factor
0.75	0.75	0.9

SOIL UPLIFT ANALYSIS

Uplift Resistance from Skin Friction and Soil Shear (k)	Additional Uplift Resistance (k)	Uplift Capacity, ΦT_n (k)	Soil Uplift Usage, T_u / ΦT_n	
31.94	0	144.94	6.9%	✓

SOIL SHEAR ANALYSIS

Skin Friction Resistance (k)	Normal Force Resistance (k)	Passive Pressure (psf)	Passive Pressure Resistance (k)	Additional Shear Resistance (k)	Shear Capacity, ΦV_n (k)	Soil Shear Usage, V_u / ΦV_n	
8.43	33.17	997.27	167.54	0	156.86	8.0%	✓

ANCHOR ROD STRENGTH ANALYSIS

Yield Strength Reduction Factor, Φ_y	Tensile Strength Reduction Factor, Φ_t	Resultant Tensile Load, T_u (k)	Tensile Capacity, ΦT_n (k-ft)	Anchor Rod Tensile Usage, T_u / ΦT_n	
0.8	0.65	16.0	59.47	26.9%	✓

REINFORCING STEEL STRENGTH ANALYSIS			
Strength Shear Reduction Factor, Φ_V	Strength Reduction Factor for Lateral Flexure, Φ_{BV}	Strength Reduction Factor for Vertical Flexure, Φ_{BT}	Compression Zone Factor, β_1
0.75	0.9	0.9	0.65

REINFORCING ONE WAY SHEAR ANALYSIS - SHEAR		
One Way Shear due to Shear, V_u (k)	One Way Shear Capacity due to Shear, $\Phi_c V_n$ (k)	Rebar One Way Shear Usage, $V_u / \Phi_c V_n$
4.99	402.99	1.2%

REINFORCING ONE WAY SHEAR ANALYSIS – UPLIFT		
One Way Shear due to Uplift, V_u (k)	One Way Shear Capacity due to Uplift, $\Phi_c V_n$ (k)	Rebar One Way Shear Usage, $V_u / \Phi_c V_n$
3.99	402.99	1.0%

REINFORCING FLEXURE ANALYSIS - SHEAR					
Flexure Load, M_{uv} (k-ft)	Distance to steel, d_v (in)	Whitney Block, a_v (in)	Strain in Rebar, ε_t (in/in)	Flexural Capacity, $\Phi_{bv}M_{nv}$ (k-ft)	Rebar Flexural Usage, $M_{uv} / \Phi_{bv}M_{nv}$
43.78	68.125	0.575	0.2990	537.27	8.1%

REINFORCING FLEXURE ANALYSIS – UPLIFT					
Flexure Load, M_{ut} (k-ft)	Depth to steel, d_t (in)	Whitney Block, a_t (in)	Strain in Rebar, ε_t (in/in)	Flexural Capacity, $\Phi_{bt}M_{nt}$ (k-ft)	Rebar Flexural Usage, $M_{ut} / \Phi_{bt}M_{nt}$
35.00	68.125	0.719	0.2386	670.88	5.2%

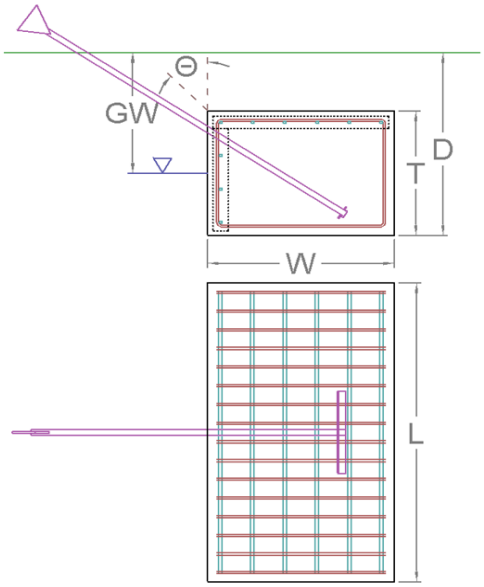
GUY ANCHOR BLOCK FOUNDATION ANALYSIS (NODE A1b @ r = 115 ft)

APPLIED REACTIONS

Uplift (k)	Shear (k)
10.30	12.66

FOUNDATION PARAMETERS

Base Depth:	D	6.5	ft
Block Width:	W	6	ft
Block Length:	L	28	ft
Block Thickness:	T	6	ft
Concrete Compressive Strength:		3,000	psi
Top Rebar Quantity, Size, & Yield:		(5) #6 bars [60 ksi]	
Side Rebar Quantity, Size, & Yield:		(4) #6 bars [60 ksi]	
Anchor Rod Quantity & Shape:		(1) Solid Rod	
Anchor Rod Area (gross//net):		1.770 // 1.770	in^2
Anchor Rod Strength (fy//fu):		42 // 58	ksi



SOIL PARAMETERS

Water Table Depth [BGL]:	GW	4	ft
Soil Unit Weight:		107	pcf
Friction Angle:		27	°
Cohesion:		0	psf
Ultimate Skin Friction		150	psf
Coefficient of Shear Friction:		0.3	
Uplift Pullout Angle:	θ	30	°
Uplift at ____ of Anchor:		Top	

SOIL STRENGTH ANALYSIS

Uplift Strength Reduction Factor, Φ_u	Shear Strength Reduction Factor, Φ_v	Dead Load Factor
0.75	0.75	0.9

SOIL UPLIFT ANALYSIS

Uplift Resistance from Skin Friction and Soil Shear (k)	Additional Uplift Resistance (k)	Uplift Capacity, ΦT_n (k)	Soil Uplift Usage, T_u / ΦT_n	
32.02	0	144.99	7.1%	✓

SOIL SHEAR ANALYSIS

Skin Friction Resistance (k)	Normal Force Resistance (k)	Passive Pressure (psf)	Passive Pressure Resistance (k)	Additional Shear Resistance (k)	Shear Capacity, ΦV_n (k)	Soil Shear Usage, V_u / ΦV_n	
8.38	33.08	997.27	167.54	0	156.75	8.1%	✓

ANCHOR ROD STRENGTH ANALYSIS

Yield Strength Reduction Factor, Φ_y	Tensile Strength Reduction Factor, Φ_t	Resultant Tensile Load, T_u (k)	Tensile Capacity, ΦT_n (k-ft)	Anchor Rod Tensile Usage, T_u / ΦT_n	
0.8	0.65	16.3	59.47	27.4%	✓

REINFORCING STEEL STRENGTH ANALYSIS			
Strength Shear Reduction Factor, Φ_V	Strength Reduction Factor for Lateral Flexure, Φ_{BV}	Strength Reduction Factor for Vertical Flexure, Φ_{BT}	Compression Zone Factor, β_1
0.75	0.9	0.9	0.65

REINFORCING ONE WAY SHEAR ANALYSIS - SHEAR		
One Way Shear due to Shear, V_u (k)	One Way Shear Capacity due to Shear, $\Phi_c V_n$ (k)	Rebar One Way Shear Usage, $V_u / \Phi_c V_n$
5.05	402.99	1.3%

REINFORCING ONE WAY SHEAR ANALYSIS – UPLIFT		
One Way Shear due to Uplift, V_u (k)	One Way Shear Capacity due to Uplift, $\Phi_c V_n$ (k)	Rebar One Way Shear Usage, $V_u / \Phi_c V_n$
4.11	402.99	1.0%

REINFORCING FLEXURE ANALYSIS - SHEAR					
Flexure Load, M_{uv} (k-ft)	Distance to steel, d_v (in)	Whitney Block, a_v (in)	Strain in Rebar, ε_t (in/in)	Flexural Capacity, $\Phi_{bv}M_{nv}$ (k-ft)	Rebar Flexural Usage, $M_{uv} / \Phi_{bv}M_{nv}$
44.31	68.125	0.575	0.2990	537.27	8.2%

REINFORCING FLEXURE ANALYSIS – UPLIFT					
Flexure Load, M_{ut} (k-ft)	Depth to steel, d_t (in)	Whitney Block, a_t (in)	Strain in Rebar, ε_t (in/in)	Flexural Capacity, $\Phi_{bt}M_{nt}$ (k-ft)	Rebar Flexural Usage, $M_{ut} / \Phi_{bt}M_{nt}$
36.05	68.125	0.719	0.2386	670.88	5.4%

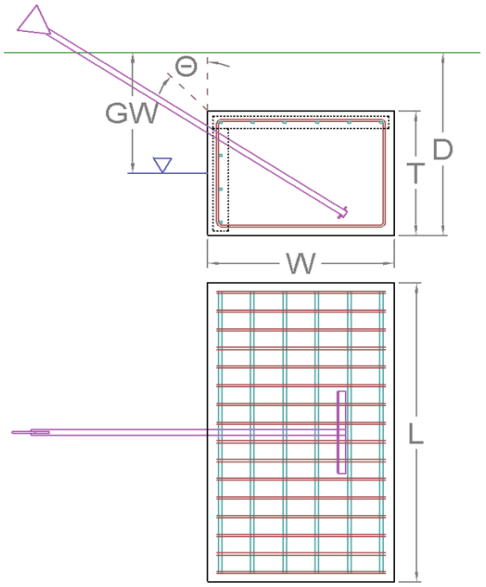
GUY ANCHOR BLOCK FOUNDATION ANALYSIS (NODE A2 @ r = 260 ft)

APPLIED REACTIONS

Uplift (k)	Shear (k)
27.00	27.32

FOUNDATION PARAMETERS

Base Depth:	D	7	ft
Block Width:	W	6.5	ft
Block Length:	L	32	ft
Block Thickness:	T	6.5	ft
Concrete Compressive Strength:		3,000	psi
Top Rebar Quantity, Size, & Yield:		(5) #6 bars [60 ksi]	
Side Rebar Quantity, Size, & Yield:		(4) #6 bars [60 ksi]	
Anchor Rod Quantity & Shape:		(1) Solid Rod	
Anchor Rod Area (gross//net):		2.410 // 2.410	in^2
Anchor Rod Strength (fy//fu):		42 // 58	ksi



SOIL PARAMETERS

Water Table Depth [BGL]:	GW	4	ft
Soil Unit Weight:		110	pcf
Friction Angle:		0	°
Cohesion:		900	psf
Ultimate Skin Friction		450	psf
Coefficient of Shear Friction:		0.3	
Uplift Pullout Angle:	θ	30	°
Uplift at ____ of Anchor:		Top	

SOIL STRENGTH ANALYSIS

Uplift Strength Reduction Factor, Φ_u	Shear Strength Reduction Factor, Φ_v	Dead Load Factor
0.75	0.75	0.9

SOIL UPLIFT ANALYSIS

Uplift Resistance from Skin Friction and Soil Shear (k)	Additional Uplift Resistance (k)	Uplift Capacity, ΦT_n (k)	Soil Uplift Usage, T_u / ΦT_n	
120.33	0	206.99	13.0%	✓

SOIL SHEAR ANALYSIS

Skin Friction Resistance (k)	Normal Force Resistance (k)	Passive Pressure (psf)	Passive Pressure Resistance (k)	Additional Shear Resistance (k)	Shear Capacity, ΦV_n (k)	Soil Shear Usage, V_u / ΦV_n	
27.05	39.23	2,212.50	460.20	0	394.86	6.9%	✓

ANCHOR ROD STRENGTH ANALYSIS

Yield Strength Reduction Factor, Φ_y	Tensile Strength Reduction Factor, Φ_t	Resultant Tensile Load, T_u (k)	Tensile Capacity, ΦT_n (k-ft)	Anchor Rod Tensile Usage, T_u / ΦT_n	
0.8	0.65	38.4	80.98	47.4%	✓

REINFORCING STEEL STRENGTH ANALYSIS			
Strength Shear Reduction Factor, Φ_V	Strength Reduction Factor for Lateral Flexure, Φ_{BV}	Strength Reduction Factor for Vertical Flexure, Φ_{BT}	Compression Zone Factor, β_1
0.75	0.9	0.9	0.65

REINFORCING ONE WAY SHEAR ANALYSIS - SHEAR		
One Way Shear due to Shear, V_u (k)	One Way Shear Capacity due to Shear, $\Phi_c V_n$ (k)	Rebar One Way Shear Usage, $V_u / \Phi_c V_n$
11.03	475.02	2.3%

REINFORCING ONE WAY SHEAR ANALYSIS – UPLIFT		
One Way Shear due to Uplift, V_u (k)	One Way Shear Capacity due to Uplift, $\Phi_c V_n$ (k)	Rebar One Way Shear Usage, $V_u / \Phi_c V_n$
10.90	475.02	2.3%

REINFORCING FLEXURE ANALYSIS - SHEAR					
Flexure Load, M_{uv} (k-ft)	Distance to steel, d_v (in)	Whitney Block, a_v (in)	Strain in Rebar, ε_t (in/in)	Flexural Capacity, $\Phi_{bv}M_{nv}$ (k-ft)	Rebar Flexural Usage, $M_{uv} / \Phi_{bv}M_{nv}$
109.28	74.125	0.531	0.3530	584.97	18.7%

REINFORCING FLEXURE ANALYSIS – UPLIFT					
Flexure Load, M_{ut} (k-ft)	Depth to steel, d_t (in)	Whitney Block, a_t (in)	Strain in Rebar, ε_t (in/in)	Flexural Capacity, $\Phi_{bt}M_{nt}$ (k-ft)	Rebar Flexural Usage, $M_{ut} / \Phi_{bt}M_{nt}$
108.00	74.125	0.664	0.2818	730.55	14.8%

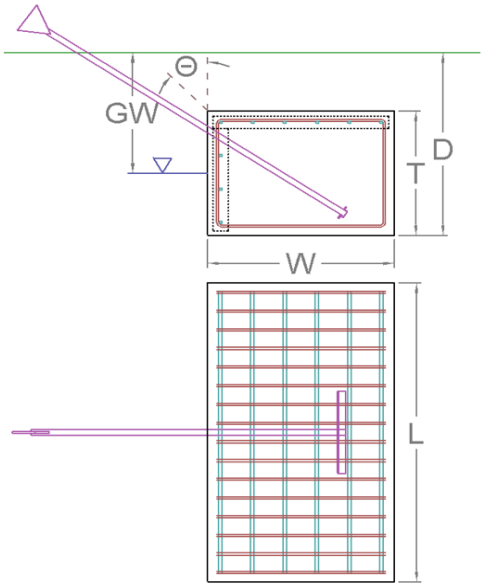
GUY ANCHOR BLOCK FOUNDATION ANALYSIS (NODE A2a @ r = 267 ft)

APPLIED REACTIONS

Uplift (k)	Shear (k)
25.52	27.31

FOUNDATION PARAMETERS

Base Depth:	D	7	ft
Block Width:	W	6.5	ft
Block Length:	L	32	ft
Block Thickness:	T	6.5	ft
Concrete Compressive Strength:		3,000	psi
Top Rebar Quantity, Size, & Yield:		(5) #6 bars [60 ksi]	
Side Rebar Quantity, Size, & Yield:		(4) #6 bars [60 ksi]	
Anchor Rod Quantity & Shape:		(1) Solid Rod	
Anchor Rod Area (gross//net):		2.410 // 2.410	in^2
Anchor Rod Strength (fy//fu):		42 // 58	ksi



SOIL PARAMETERS

Water Table Depth [BGL]:	GW	4	ft
Soil Unit Weight:		110	pcf
Friction Angle:		0	°
Cohesion:		900	psf
Ultimate Skin Friction		450	psf
Coefficient of Shear Friction:		0.3	
Uplift Pullout Angle:	θ	30	°
Uplift at ____ of Anchor:		Top	

SOIL STRENGTH ANALYSIS

Uplift Strength Reduction Factor, Φ_u	Shear Strength Reduction Factor, Φ_v	Dead Load Factor
0.75	0.75	0.9

SOIL UPLIFT ANALYSIS

Uplift Resistance from Skin Friction and Soil Shear (k)	Additional Uplift Resistance (k)	Uplift Capacity, ΦT_n (k)	Soil Uplift Usage, T_u / ΦT_n	
119.56	0	206.99	12.3%	✓

SOIL SHEAR ANALYSIS

Skin Friction Resistance (k)	Normal Force Resistance (k)	Passive Pressure (psf)	Passive Pressure Resistance (k)	Additional Shear Resistance (k)	Shear Capacity, ΦV_n (k)	Soil Shear Usage, V_u / ΦV_n	
27.78	39.68	2,212.50	460.20	0	395.74	6.9%	✓

ANCHOR ROD STRENGTH ANALYSIS

Yield Strength Reduction Factor, Φ_y	Tensile Strength Reduction Factor, Φ_t	Resultant Tensile Load, T_u (k)	Tensile Capacity, ΦT_n (k-ft)	Anchor Rod Tensile Usage, T_u / ΦT_n	
0.8	0.65	37.4	80.98	46.2%	✓

REINFORCING STEEL STRENGTH ANALYSIS

Strength Shear Reduction Factor, Φ_V	Strength Reduction Factor for Lateral Flexure, Φ_{BV}	Strength Reduction Factor for Vertical Flexure, Φ_{BT}	Compression Zone Factor, β_1
0.75	0.9	0.9	0.65

REINFORCING ONE WAY SHEAR ANALYSIS - SHEAR

One Way Shear due to Shear, V_u (k)	One Way Shear Capacity due to Shear, $\Phi_c V_n$ (k)	Rebar One Way Shear Usage, $V_u / \Phi_c V_n$	
11.02	475.02	2.3%	✓

REINFORCING ONE WAY SHEAR ANALYSIS – UPLIFT

One Way Shear due to Uplift, V_u (k)	One Way Shear Capacity due to Uplift, $\Phi_c V_n$ (k)	Rebar One Way Shear Usage, $V_u / \Phi_c V_n$	
10.30	475.02	2.2%	✓

REINFORCING FLEXURE ANALYSIS - SHEAR

Flexure Load, M_{uv} (k-ft)	Distance to steel, d_v (in)	Whitney Block, a_v (in)	Strain in Rebar, ε_t (in/in)	Flexural Capacity, $\Phi_{bv} M_{nv}$ (k-ft)	Rebar Flexural Usage, $M_{uv} / \Phi_{bv} M_{nv}$	
109.24	74.125	0.531	0.3530	584.97	18.7%	✓

REINFORCING FLEXURE ANALYSIS – UPLIFT

Flexure Load, M_{ut} (k-ft)	Depth to steel, d_t (in)	Whitney Block, a_t (in)	Strain in Rebar, ε_t (in/in)	Flexural Capacity, $\Phi_{bt} M_{nt}$ (k-ft)	Rebar Flexural Usage, $M_{ut} / \Phi_{bt} M_{nt}$	
102.08	74.125	0.664	0.2818	730.55	14.0%	✓

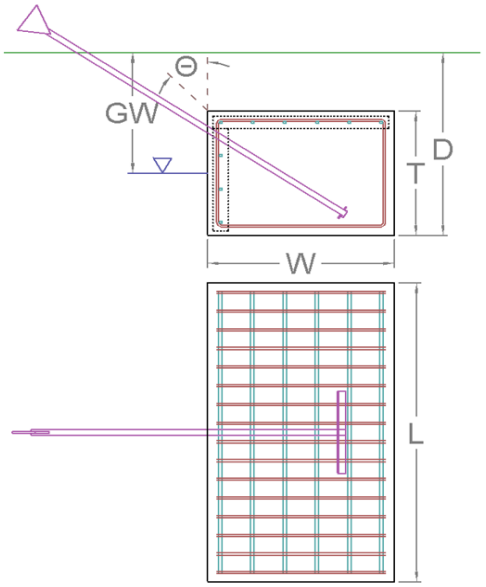
GUY ANCHOR BLOCK FOUNDATION ANALYSIS (NODE A2b @ r = 260 ft)

APPLIED REACTIONS

Uplift (k)	Shear (k)
25.66	27.48

FOUNDATION PARAMETERS

Base Depth:	D	7	ft
Block Width:	W	6.5	ft
Block Length:	L	32	ft
Block Thickness:	T	6.5	ft
Concrete Compressive Strength:		3,000	psi
Top Rebar Quantity, Size, & Yield:		(5) #6 bars [60 ksi]	
Side Rebar Quantity, Size, & Yield:		(4) #6 bars [60 ksi]	
Anchor Rod Quantity & Shape:		(1) Solid Rod	
Anchor Rod Area (gross//net):		2.410 // 2.410	in^2
Anchor Rod Strength (fy//fu):		42 // 58	ksi



SOIL PARAMETERS

Water Table Depth [BGL]:	GW	4	ft
Soil Unit Weight:		110	pcf
Friction Angle:		0	°
Cohesion:		900	psf
Ultimate Skin Friction		450	psf
Coefficient of Shear Friction:		0.3	
Uplift Pullout Angle:	θ	30	°
Uplift at ____ of Anchor:		Top	

SOIL STRENGTH ANALYSIS

Uplift Strength Reduction Factor, Φ_u	Shear Strength Reduction Factor, Φ_v	Dead Load Factor
0.75	0.75	0.9

SOIL UPLIFT ANALYSIS

Uplift Resistance from Skin Friction and Soil Shear (k)	Additional Uplift Resistance (k)	Uplift Capacity, ΦT_n (k)	Soil Uplift Usage, T_u / ΦT_n	
119.55	0	206.99	12.4%	✓

SOIL SHEAR ANALYSIS

Skin Friction Resistance (k)	Normal Force Resistance (k)	Passive Pressure (psf)	Passive Pressure Resistance (k)	Additional Shear Resistance (k)	Shear Capacity, ΦV_n (k)	Soil Shear Usage, V_u / ΦV_n	
27.79	39.63	2,212.50	460.20	0	395.72	6.9%	✓

ANCHOR ROD STRENGTH ANALYSIS

Yield Strength Reduction Factor, Φ_y	Tensile Strength Reduction Factor, Φ_t	Resultant Tensile Load, T_u (k)	Tensile Capacity, ΦT_n (k-ft)	Anchor Rod Tensile Usage, T_u / ΦT_n	
0.8	0.65	37.6	80.98	46.4%	✓

REINFORCING STEEL STRENGTH ANALYSIS

Strength Shear Reduction Factor, Φ_V	Strength Reduction Factor for Lateral Flexure, Φ_{BV}	Strength Reduction Factor for Vertical Flexure, Φ_{BT}	Compression Zone Factor, β_1
0.75	0.9	0.9	0.65

REINFORCING ONE WAY SHEAR ANALYSIS - SHEAR

One Way Shear due to Shear, V_u (k)	One Way Shear Capacity due to Shear, $\Phi_c V_n$ (k)	Rebar One Way Shear Usage, $V_u / \Phi_c V_n$	
11.09	475.02	2.3%	✓

REINFORCING ONE WAY SHEAR ANALYSIS – UPLIFT

One Way Shear due to Uplift, V_u (k)	One Way Shear Capacity due to Uplift, $\Phi_c V_n$ (k)	Rebar One Way Shear Usage, $V_u / \Phi_c V_n$	
10.36	475.02	2.2%	✓

REINFORCING FLEXURE ANALYSIS - SHEAR

Flexure Load, M_{uv} (k-ft)	Distance to steel, d_v (in)	Whitney Block, a_v (in)	Strain in Rebar, ε_t (in/in)	Flexural Capacity, $\Phi_{bv} M_{nv}$ (k-ft)	Rebar Flexural Usage, $M_{uv} / \Phi_{bv} M_{nv}$	
109.92	74.125	0.531	0.3530	584.97	18.8%	✓

REINFORCING FLEXURE ANALYSIS – UPLIFT

Flexure Load, M_{ut} (k-ft)	Depth to steel, d_t (in)	Whitney Block, a_t (in)	Strain in Rebar, ε_t (in/in)	Flexural Capacity, $\Phi_{bt} M_{nt}$ (k-ft)	Rebar Flexural Usage, $M_{ut} / \Phi_{bt} M_{nt}$	
102.64	74.125	0.664	0.2818	730.55	14.0%	✓

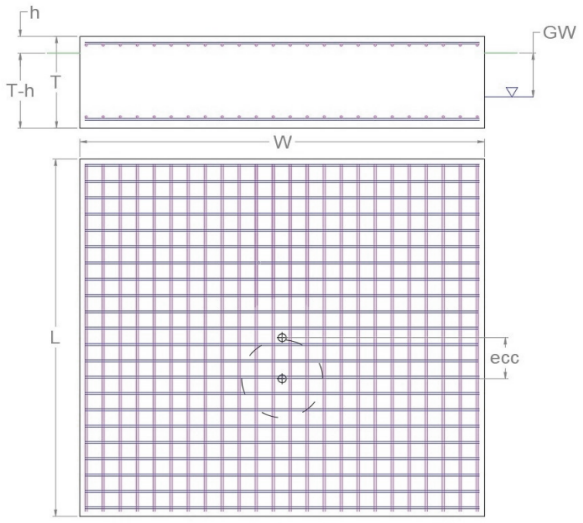
MAT & PIER FOUNDATION ANALYSIS (NODE 1)

APPLIED GLOBAL REACTIONS

Moment (k-ft)	Axial (k)	Shear (k)
0.00	140.80	0.07

FOUNDATION PARAMETERS

Mat Length:	L	10	ft
Mat Width:	W	10	ft
Mat Thickness:	T	5.5	ft
Base Depth:	L+T-h	5	ft
Concrete Compressive Strength:		3,000	psi
Mat Top Rebar:		(10) #6 bars [60 ksi]	
Mat Bottom Rebar:		(10) #6 bars [60 ksi]	
Rebar Clear Cover:		3.0	in
Tower Eccentricity:	ecc	0	ft
Tower Leg Count		1	



SOIL PARAMETERS

Water Table Depth [BGL]:	GW	7	ft
Soil Unit Weight:		107	pcf
Ultimate Skin Friction:		50	psf
Ultimate Bearing Pressure:		4,700	psf
Bearing Pressure Type:		Gross	
Coefficient of Shear Friction:		0.3	

SOIL STRENGTH ANALYSIS

Soil Strength Reduction Factor, Φ_s	Uplift Strength Reduction Factor, Φ_s	Asset Dead Load Factor	Dead Load Factor
0.6	0.75	1.2	1.2

SOIL OVERTURNING ANALYSIS

Design Moment, $M_{u,Design}$ (k-ft)	Nominal Overturning Capacity, $\Phi_m M_n$ (k-ft)	Soil Overturning Usage, $M_{u,Design} / \Phi_m M_n$	
0.38	1,248.14	**0.0%**	✓

SOIL BEARING ANALYSIS

Net Bearing Pressure, $P_{u,Net}$ (psf)	Nominal Bearing Capacity, $\Phi_b P_n$ (psf)	Bearing Pressure Controlling Load Direction	Soil Bearing Usage, $P_{u,net} / \Phi_b P_n$	
2,399.00	2,820.00	Parallel to Pad Edge	**85.1%**	✓

SOIL SLIDING SHEAR ANALYSIS

Applied Shear Force, V_u (k)	Friction Resistance (k)	Passive Pressure (psf)	Passive Pressure Resistance (k)	Nominal Shear Capacity, $\Phi_s V_n$ (k)	Soil Sliding Shear Usage, $V_u / \Phi_s V_n$	
0.07	59.95	240.8	13.24	43.91	**0.0%**	✓

MAT REINFORCING STEEL STRENGTH ANALYSIS

Steel Elastic Modulus, E (ksi)	Strength Bending/Tension Reduction Factor, Φ_b	Strength Shear Reduction Factor, Φ_v	Strength Compression Reduction Factor, Φ_c
29,000	0.9	0.75	0.65

MAT REINFORCING ONE WAY SHEAR ANALYSIS

One Way Design Shear, V_u (k)	Nominal One Way Shear Capacity, $\Phi_c V_n$ (k)	One Way Shear Controlling Load Direction	Mat One Way Shear Usage, $V_u / \Phi_c V_n$	
5.78	231.20	Diagonal to Pad Edge	**2.5%**	✓

MAT REINFORCING PUNCHING SHEAR ANALYSIS

Punching Shear Design Stress, v_u (psi)	Nominal Punching Shear Capacity, $\Phi_c v_n$ (psi)	Mat Punching Shear Usage, $v_u / \Phi_c v_n$	
9.1	164.3	**5.5%**	✓

MAT REINFORCING MOMENT TRANSFER ANALYSIS

Moment Transfer Effective Flexural Width, w_f (in)	Neutral Axis Depth (in)	Pier Moment at Joint, M_{ut} (k-in)	Nominal Moment Transfer Capacity, $\Phi M_{sc,f}$ (k-in)	Mat Moment Transfer Usage, $0.6\ M_{ut} / \Phi M_{sc,f}$	
16.50	0.87	0.00	24,528.4	**0.0%**	✓

MAT REINFORCING FLEXURE ANALYSIS – UPPER STEEL

Factored Moment, M_u (k-ft)	Nominal Flexural Capacity, ΦM_n (k-ft)	Flexural Steel Controlling Load Direction	Mat Upper Rebar Flexure Usage, $M_u / \Phi M_n$	
0.04	1,644.74	Diagonal to Pad Edge	**0.0%**	✓

MAT REINFORCING FLEXURE ANALYSIS – LOWER STEEL

Factored Moment, M_u (k-ft)	Nominal Flexural Capacity, ΦM_n (k-ft)	Flexural Steel Controlling Load Direction	Mat Lower Rebar Flexure Usage, $M_u / \Phi M_n$	
176.10	1,225.29	Parallel to Pad Edge	**14.4%**	✓

Phone (540) 967-3430 **COUNTY OF LOUISA** *Fax (540) 967-3486*
COMMUNITY DEVELOPMENT DEPARTMENT
www.louisacounty.com

TO: Louisa County Planning Commission

FROM: Staff, Louisa County Community Development

REQUEST: REZ2025-03, Rezoning parcel 16-31 from R-2 and A-2 to R-2 and C-2
CUP2025-09, Conditional Use Permit for Recreational Vehicle Sales and Service

APPLICANT: Ashton Promise, LLC.

OWNER: Ashton Promise, LLC.

DATE: September 26, 2025

REQUEST: The Planning Commission will meet to review the above items Thursday, October 9, 2025, at 7:00 P.M. in the Louisa County Public Meeting Room.

INFORMATION SUMMARY	
TAX MAP AND PARCEL #:	16-31
ACREAGE:	20.553
ELECTION DISTRICT:	Mineral
ZONING:	split zoned Residential General R-2 (4.596 acres) and Agricultural A-2 (15.957 acres) Enclosure 2
REQUESTED ZONING	split zoned Residential General R-2 (11.235 acres) and General Commercial C-2 (9.318 acres) Enclosure 2
SURROUNDING ZONING:	Agricultural (A-2) General Residential (R-2)
EXISTING USE(S):	Campground Marina 30x40 Storage Building
REQUESTED USE(S):	Conditional Use Permit for Recreational vehicle sales and service
EXISTING LAND USE PERMIT(S):	SP2023-36 30x40 Storage Building
GROWTH AREA:	Lake Anna
FUTURE LAND USE(S):	Low Density Residential

OWNER/APPLICANT:

Ashton Promise, LLC
Mr. Sammy Kelley
7149 Zachery Taylor Hwy
Mineral, VA 23117

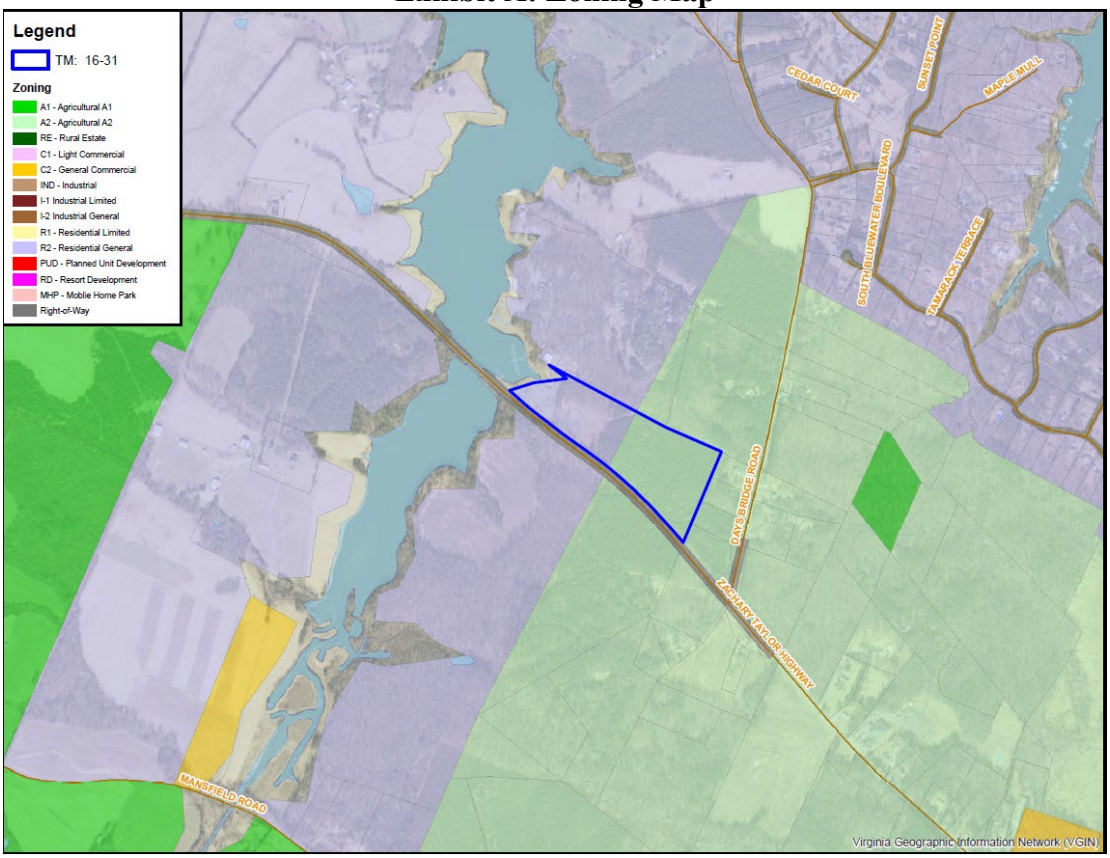
PROPERTY LOCATION:

The property is located on Zachary Taylor Highway (Route 522), and is further identified as tax map parcel 16-31, in the Mineral Election District. The subject property is located in the Lake Anna Growth Area and is designated as Low Density Residential on the 2040 Louisa County Comprehensive Plan Future Land Use Map.

BACKGROUND INFORMATION:

The Christopher Run Campground opened in 1973 and has become a legally nonconforming use. The Rezoning and Conditional Use Permit request would allow the applicant to offer additional services to citizens and visitors of Louisa County as part of the Christopher Run Campground Facilities and an area to expand the business in the future under the current Land Development Regulations.

Exhibit A: Zoning Map



Parcel 16-31 appears to be split zoned from when the zoning ordinance was originally adopted in 1969 as can be seen in Exhibit B.

Exhibit B: 1969 Zoning Map

CONFORMANCE REVIEW:

I. 2040 Louisa County Comprehensive Plan

The Population Summary section 2.2.4 of the Louisa County 2040 Comprehensive Plan (the "2040 Plan") states, "when compared to other counties in the region, there is a higher than average number of renter occupied units in Louisa County, likely driven by vacation homes on Lake Anna". The applicant's proposed business would provide products and services that would support the growing Lake Anna Community and it's visitors. Section 3.01, Guiding Principles of the 2040 Comprehensive Plan, states that there should be focus on "broadening the tax base by establishing businesses."

II. Agricultural Preservation Review

The primary goal of the Louisa County 2040 Comprehensive Plan (the "2040 Plan") is to," Preserve Louisa County's Rural Character, Beautify Its Gateways and Roadways." Chrisopher Run Campground has been at this location since 1973. The property is currently split zoned General Residential (R-2) and Agricultural General (A-2) allowing permitted uses such as single-family dwelling and farming. The surrounding area is not currently served by public water and sewer to accommodate a majority of the permitted uses C-2 allows. Staff believes that allowing the business to grow in its current location would prevent the spread of commercial businesses into other agriculturally zoned properties in the aera.

III. Louisa County Land Development Regulations

Section 86-186. General Residential (R-2) district – Statement of intent; policy guidance:

The residential general district (R-2) is composed of certain quiet, low density residential uses plus certain open areas where similar development appears likely to occur. The regulations for this district are designed to stabilize and protect the essential characteristics of the district, to promote and encourage a suitable environment for family life where there are children, and to prohibit activities of a commercial nature. In order to enhance compatibility between dwellings of different types, protect the natural environment, and achieve attractive and well-coordinated designs for building groups, dwelling types other than single-family dwelling, detached are to be permitted only with a conditional use permit.

Section 86-221. General Commercial (C-2) district – Statement of intent; policy guidance:

Generally, the general commercial district (C-2) covers that portion of the community intended for the conduct of general business to which the public requires direct and frequent access. In the rural areas of the county, commercial uses should be limited and allowed by conditional use permits only. Future development should align more appropriately with the rural character of the county.

Section 86-224. Permitted Uses - With Conditional Use Permit enables the issuance of a conditional use permit for *recreational vehicle sales and service* which is defined as follows:

Recreational vehicle sales and service. *Retail sales of recreational vehicles and boats, which may include service and storage of vehicles and parts and related accessories.*

IV. 2024 Public Facilities Impacts Review

The Board of Supervisors adopted a Public Facilities plan on February 20, 2024, as an amendment to the 2040 Comprehensive Plan adopted August 5, 2019. The Plan aims to ensure that development impacts are adequately assessed and mitigated, to promote sustainable growth and to preserve the community's well-being. As Louisa County grows, the pressure on public facilities and services intensifies. The county expects proposed developments to consider the impacts on Public Facilities and to mitigate the impacts of the development. This mitigation can take various forms, such as impact fees, infrastructure improvements, land dedication, and other items, ensuring that the burden of growth does not disproportionately fall on existing residents and businesses in the County.

This application has therefore been evaluated to determine if it impacts the following areas:

Administration
Staff believes there would be a minimum level of impact to Administration. Community Development Department staff is currently involved in the Rezoning and Conditional Use Permitting Process and would also be involved in future site plan reviews, development permit reviews, and inspections.

Fire & EMS
Staff believes approval of the Rezoning and Conditional Use Permit will not require any additional services by Fire and EMS personnel, if the applicant is willing to coordinate with Fire & EMS to

provide them access to the property by either installing a Knox Box, Police/Fire- only keypad code, or other device for the building(s) and/or potential gate systems.

Law Enforcement
Staff believes there would be minimal impact from approval of the Rezoning and Conditional Use Permit.

Parks and Recreation
Staff does not believe approval of Rezoning and Conditional Use Permit will have an impact to parks and recreation. The applicant operates an outdoor campground on Lake Anna.

Schools
Staff believes approval of the Rezoning and Conditional Use Permit will impact schools positively as the applicant currently employs high schoolers during the summer months.

Solid Waste
Staff does not believe the Rezoning and Conditional Use Permit will increase any impact to solid waste facilities at this time.

NEIGHBORHOOD MEETING RESULTS:

A neighborhood meeting was held in the Louisa County Public Meeting Room on September 4, 2025. No citizens attended this project.

CONSIDERATIONS FOR EVALUATION:

In determining imposed conditions, the governing body shall take into consideration the intent of this chapter [Note: Chapter 86 Land Development Regulations] and may impose reasonable conditions that:

(1) Abate or restrict noise, smoke, dust or other elements that may affect surrounding property. **This has been addressed by the Louisa County Land Development Regulation Chapter 51 Noise of the Land Development Regulations and condition 4.**

(2) Establish setback, side and front yard requirements necessary for orderly development and to prevent traffic congestion. **This has been addressed by the Louisa County Land Development Regulation section Sec. 86-230. - Yard regulations and Sec. 86-115. - Setback regulations for buildings and structures – Generally.**

(3) Provide for adequate parking and ingress and egress to public streets or roads. **The applicant is responsible for obtaining any necessary entrance permits from VDOT.**

(3) Provide adjoining property with a buffer or shield from view of the proposed use if such use is considered detrimental to adjoining property. **This has been addressed by the Louisa County Land Development Regulation section Sec. 86-230. - Yard regulations.**

(4) Tend to prevent such use from changing the character and established pattern of development of the community. **Chrisopher Run Campground has been at this location since 1973 and is along Route 522 which serves many citizens and visitors to Lake Anna.**

PROFFERS:

The applicant has provided a proffer statement that excludes some uses as part of the rezoning request for General Commercial C-2, which can be found in Enclosure 1.

STAFF RECOMMENDATION:

Staff recommends the eight (8) conditions listed below for the Planning Commission's Consideration:

1. Lighting. All design and use of exterior lighting shall comply with the International Dark-Sky Association and shall be labeled as such on the site plan sketch.

2. Permits. The applicant shall secure all necessary permits and approvals from the Louisa County Community Development Department, the Virginia Department of Transportation (VDOT), and the Virginia Department of Health (VDH) as applicable.

3. Land Disturbance. If land disturbance, which includes the addition of gravel, asphalt, or the grading of land, meets or exceeds 10,000 square feet of area, an erosion and sediment control plan must be prepared and submitted to the County for review and approval, prior to any land disturbing activities commencing on-site.

4. Buffer. The Property Owner must meet vegetative buffer requirements as defined by Louisa County Land Development Regulations.

5. Spill Plan. The Property owner will maintain a fuel and chemical spill plan on site. Oil absorbent pads, booms, and quick dry materials will be stored both inside and outside the repair shop. Campground employees will be trained to use these items in case of a spill event that occurs outside of business hours.

6. Ground Cover. All areas not occupied by buildings, structures, driveways and parking shall be covered with one or more of the following: lawn grass, natural shrubbery, plants, trees, or a vegetation combination as agreed upon by the Zoning Administrator and owner.

7. Inspections. The Board of Supervisors or their designated representative shall have the right to inspect the site at any reasonable time without prior notice.

8. Permit Revocation. Violation of any conditions contained herein shall be grounds for revocation of the Conditional Use Permit.

ENCLOSURES (3):

Enclosure 1: Application
Enclosure 2: Concept Plan
Enclosure 3: Signed Proffer Statement

Enclosure 1

CUP2025-09

Reviewer: DJ Case # REZ2025-03
Fee Rcv'd: _____ Rcpt # _____
Date & Time Rcv'd: 8/20/2025
Pre-App Meeting: _____

LAND USE AMENDMENT APPLICATION

Board of Supervisors of Louisa County, Virginia

The following information shall be typed or printed and completed in full. Attach additional pages where necessary.

1. **IDENTIFICATION OF REQUEST:**

A: REZONING: From A2/R2 ( ) to R2/C2 ( )

B: CONDITIONAL USE: Recreational vehicle sales and service

C: TEMPORARY CONDITIONAL USE: _____

D: VARIANCE: _____

E: PROFFER AMENDMENT: _____

F: COMP PLAN AMENDMENT: _____

G: COMP PLAN REVIEW FOR CONFORMANCE: _____

H: SPECIAL EXCEPTION: _____

2. **APPLICANT, PROPERTY OWNER, AGENT**

A. NAME OF APPLICANT: Ashton Promise LLC / Sammy Kelley

If a corporation, name of agent: _____

B: MAILING ADDRESS: 7149 Zachary Taylor Hwy, Mineral VA 23117

Telephone # 540 604 7350

C: NAME OF PRESENT OWNER OF PROPERTY ON WHICH THIS REQUEST WILL OCCUR:
Ashton Promise LLC

D. MAILING ADDRESS: 7149 Zachary Taylor Hwy, Mineral VA 23117

Telephone # 540 894 4772

If the applicant is not the owner of the property in question, explain: The owner is 90 years old, she has turned everything over to her grandson. (Sammy Kelley)

A copy of pending contract or option agreement shall be attached hereto and made a part of this application.

E. NAME OF PERSON TO BE NOTIFIED IN ADDITION TO THE APPLICANT AND/OR PROPERTY OWNER: _____

_____

F. ADDRESS: _____

_____ Telephone #: _____

3. **LOCATION OF PROPERTY** (Assistance will be given in obtaining the following information upon request).

A. VOTING DISTRICT Mineral B. TAX MAP # 16

C. SUBDIVISION NAME _____ D. LOT/PARCEL# 31

E. PROPERTY LOCATION 6478 Zachary Taylor Hwy, Mineral VA 23117

_____

F. IS PARCEL UNDER LAND USE TAXATION PROGRAM? X YES _____ NO

4. **EXPLAIN FULLY THE PROPOSED USE, TYPE OF DEVELOPMENT, OPERATION PROGRAM, ETC., AND THE REASON OF THIS REQUEST:**

A storage building that will be turned into a recreational vehicle sales and service building.

Requesting to rezone in order to have this business on the property.

(Attach applicable plans, renderings, elevations, photographs.)

5. **STATE HOW THIS REQUEST WILL NOT BE MATERIALLY DETRIMENTAL TO ADJACENT PROPERTY, THE SURROUNDING NEIGHBORHOOD OR THE COUNTY IN GENERAL. INCLUDE, WHERE APPLICABLE, INFORMATION CONCERNING: USE OF PUBLIC UTILITIES; EFFECT OF REQUEST ON PUBLIC SCHOOLS; EFFECT ON TRAFFIC--INCLUDE MEANS OF ACCESS TO THE NEAREST PUBLIC ROAD; EFFECT ON EXISTING AND FUTURE AREA DEVELOPMENT, ETC.**

The area has been used as storage and parking for boats and vehicles for 40 plus years.

The use will not change, but recreational vehicle sales and service will be added.

No public utilities will be used; it will have a private well and drain field. No effects to traffic will occur.

It will provide a recreational vehicle sales and service to the growing Lake Anna community.

The property also provides water access for EMS/Fire and provides employment for local students.

6. **EXPLAIN ANY EXISTING USE PERMIT, SPECIAL EXCEPTION, (Prior) CONDITIONAL USE PERMIT, TEMPORARY CONDITIONAL USE PERMIT OR VARIANCE PREVIOUSLY GRANTED ON THE PARCEL IN QUESTION:**

n/a

7. **INDICATE THE FOLLOWING WITH RESPECT TO THE SUBJECT PARCEL:**

A. EXISTING LAND USE(S): _____

B. EXISTING STRUCTURE(S): 30x40 storage building

C. EXISTING ZONING: A2/R2

D. ACREAGE OF REQUEST: 20.55 Please see attached exhibit.

E. UTILITIES: Individual well and septic tank

(Intended use, example: public water and/or sewer; individual well and/or septic tank; other source.)

F. IS THIS PROJECT IN OR NEAR A PINE PLANTATION? yes

G. IS THIS PROJECT IN AN AG/FORESTAL DISTRICT? no

8. **IF REQUESTING A VARIANCE, EXPLAIN THE UNIQUE PHYSICAL HARDSHIP OR EXTRAORDINARY SITUATION THAT IS THE JUSTIFICATION FOR THE VARIANCE:**

_____

_____

_____

9. **GIVE COMPLETE NAMES AND ADDRESSES (INCLUDING ZIP CODES) OF ALL OWNERS ADJACENT, ACROSS THE ROAD OR HIGHWAY FACING THE PROPERTY AND ACROSS ANY RAILROAD RIGHT-OF-WAY, CREEK, OR RIVER FROM SUCH PROPERTY, EVEN IF SUCH PROPERTY LIES IN ANOTHER COUNTY OR TOWN. (THIS INFORMATION MUST BE OBTAINED BY THE APPLICANT).**

* PROPERTY OWNER'S NAME: Ashton Promise LLC

MAILING ADDRESS: 7149 Zachary Taylor Hwy Mineral VA 23117

_____ TAX MAP # 16

SUBDIVISIONNAME _____ LOT/PARCEL# 29

ACREAGE 35.82 ZONING R2

* PROPERTY OWNER'S NAME: Ashton Promise LLC

MAILING ADDRESS: 7149 Zachary Taylor Hwy Mineral VA 23117

_____ TAX MAP # 16

SUBDIVISION NAME: _____ LOT/PARCEL# 28

ACREAGE 1 ZONING R2

* PROPERTY OWNER'S NAME: Lois T Holland Trustee

MAILING ADDRESS: 5034 Ellisville Dr. Louisa VA 23093

_____ TAX MAP # 16

SUBDIVISION NAME: _____ LOT/PARCEL# 30

ACREAGE 15 ZONING A2

* PROPERTY OWNER'S NAME: Ernest Winn

MAILING ADDRESS: 338 Days Bridge Rd Mineral VA 23117

_____ TAX MAP # 16

SUBDIVISION NAME: _____ LOT/PARCEL# 32

ACREAGE 1.78 ZONING A2

* PROPERTY OWNER'S NAME: Shalonda Roxanne Winn

MAILING ADDRESS: 1202 S Claiborne Rd Salisbury NC 28416

_____ TAX MAP # 16

SUBDIVISION NAME: _____ LOT/PARCEL# 33

ACREAGE 1.5 ZONING A2

* PROPERTY OWNER'S NAME: Ashton Promise LLC

MAILING ADDRESS: 7149 Zachary Taylor Hwy Mineral VA 23117

_____ TAX MAP # 16

SUBDIVISION NAME: _____ LOT/PARCEL# 34

ACREAGE 1.5 ZONING A2

* PROPERTY OWNER'S NAME: Mansfield LLC

MAILING ADDRESS: 7149 Zachary Taylor Hwy Mineral VA 23117

_____ TAX MAP # 16

SUBDIVISION NAME: _____ LOT/PARCEL# 35

ACREAGE 7.698 ZONING A2

* PROPERTY OWNER'S NAME: Mansfield LLC

MAILING ADDRESS: 7149 Zachary Taylor Hwy Mineral VA 23117

_____ TAX MAP # 16

SUBDIVISION NAME: _____ LOT/PARCEL# 42

ACREAGE 96.09 ZONING A2/R2

* PROPERTY OWNER'S NAME: Ashton Promise LLC

MAILING ADDRESS: 7149 Zachary Taylory Hwy Mineral VA 23117

_____ TAX MAP # 16

SUBDIVISION NAME: _____ LOT/PARCEL# 28

ACREAGE 1 ZONING R2

* PROPERTY OWNER'S NAME: _____

MAILING ADDRESS: _____

____TAX MAP #____________

SUBDIVISION NAME:_____________________________LOT/PARCEL#__________

ACREAGE_________________ ZONING_________________

* PROPERTY OWNER'S NAME: ____

MAILING ADDRESS:____

____TAX MAP #____________

SUBDIVISION NAME:_____________________________LOT/PARCEL#__________

ACREAGE_________________ ZONING_________________

* PROPERTY OWNER'S NAME: ____

MAILING ADDRESS:____

____TAX MAP #____________

SUBDIVISION NAME:_____________________________LOT/PARCEL#__________

ACREAGE_________________ ZONING_________________

* PROPERTY OWNER'S NAME: ____

MAILING ADDRESS:____

____TAX MAP #____________

SUBDIVISION NAME:_____________________________LOT/PARCEL#__________

ACREAGE_________________ ZONING_________________

* PROPERTY OWNER'S NAME: ____

MAILING ADDRESS:____

____TAX MAP #____________

SUBDIVISION NAME:_____________________________LOT/PARCEL#__________

ACREAGE_________________ ZONING_________________

* PROPERTY OWNER'S NAME: ____

MAILING ADDRESS:____

____TAX MAP #____________

SUBDIVISION NAME:_____________________________LOT/PARCEL#__________

ACREAGE_________________ ZONING_________________

* PROPERTY OWNER'S NAME: ____

MAILING ADDRESS:____

____TAX MAP #____________

SUBDIVISION NAME:_____________________________LOT/PARCEL#__________

ACREAGE_________________ ZONING_________________

* PROPERTY OWNER'S NAME: ____

MAILING ADDRESS:_____

_____TAX MAP #_____

SUBDIVISION NAME:_____LOT/PARCEL#_____

ACREAGE_____ ZONING_____

* PROPERTY OWNER'S NAME: _____

MAILING ADDRESS:_____

_____TAX MAP #_____

SUBDIVISION NAME:_____LOT/PARCEL#_____

ACREAGE_____ ZONING_____

10. HEREWITH IS DEPOSITED THE FEE REQUIRED. CHECKS OR MONEY ORDERS MADE PAYABLE TO TREASURER , COUNTY OF LOUISA.

A. REZONING	Tiered System
B. CONDITIONAL USE PERMIT	Tiered System
C. TEMPORARY CONDITIONAL USE PERMIT	$325.00*
Temporary Housing* Extension or Amendment* Other*	
D. VARIANCE	$1,250.00*
E. PROFFER AMENDMENT	$1,500.00*
F. COMP PLAN AMENDMENT	$650.00*

**IN ADDITION TO THE STANDARD FEE, AN ADDITIONAL $75.00 WILL BE CHARGED FOR EACH REQUEST AS A DEPOSIT ON A ZONING SIGN AND WILL BE REFUNDED UPON THE RETURN OF THE SIGN BY THE APPLICANT ONCE THE REQUEST HAS BEEN ACTED UPON.*

**THERE WILL BE A $25.00 FEE CHARGED PER ADJACENT/ADJOINING PROPERTY OWNER FOR NOTIFICATION AND ADVERTISEMENT. THERE WILL ALSO BE A RE-ADVERTISEMENT FEE EACH TIME AN APPLICATION IS DELAYED OR POSTPONED AT THE REQUEST OF THE APPLICANT OR NECESSARY DUE TO SOME FAILURE TO ACT ON THE PART OF THE APPLICANT, PLUS A $25.00 FEE CHARGED PER ADJACENT/ADJOINING PROPERTY OWNER FOR RENOTIFICATION.*

**THERE IS AN ADDITIONAL CHARGE FOR PUBLIC NOTICE ADVERTISEMENT.*

11. ENCLOSED WITH THIS APPLICATION IS A SITE PLAN OR TENTATIVE PLAN.

12. ENCLOSED WITH THIS APPLICATION IS THE APPROPRIATE COUNTY TAX MAP WITH THE PROPERTY MARKED AND A SURVEYED PLAT OF THE ENTIRE PARCEL.

****

13. I/WE HEREBY CERTIFY THAT TO THE BEST OF MY/OUR KNOWLEDGE ALL OF THE ABOVE STATEMENTS AND THE STATEMENTS CONTAINED IN ANY EXHIBITS TRANSMITTED ARE TRUE AND THAT THE ADJACENT PROPERTY OWNERS LIST HEREWITH ARE THE OWNERS OF RECORD AS OF THE DATE OF APPLICATION.

NOTE: INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED. ANY REQUEST WHICH REQUIRES PLANS MUST BE ACCOMPANIED BY THOSE PLANS AT THE TIME OF SUBMISSION OF THE APPLICATION.

DATE: August 4, 2025.

Samuel Kelly
SIGNATURE OF APPLICANT
(Same Name as Used in Item 2-A, Page 1)

Samuel Kelly
APPLICANT'S NAME
(Typed or Printed)

Samuel Kelly Emily B Kelley
Jean Bazzanella
Samuel Bazzanella
SIGNATURE OF OWNER
(Same Name as Used in Item 2-C, Page 1)

Samuel Kelly Emily B Kelley
Jean Bazzanella
Samuel Bazzanella
OWNER'S NAME
(Typed or Printed)

Samuel Kelly
SIGNATURE OF AGENT
(Name of Person Other Than, but Acting for the Applicant, Responsible for this Application)

Samuel Kelly
AGENT'S NAME
(Typed or Printed)

NOTICE TO TEMPORARY CONDITIONAL USE PERMIT APPLICANTS

In accordance with Section 86-91. of the Louisa County Zoning Ordinance, any Temporary Conditional Use Permit granted shall be considered canceled if the applicant does not avail himself/herself of the privilege within ninety (90) days from the date of issuance of the Temporary Conditional Use Permit.

Narrative for the Public Facilities Plan

Our goal is to provide a recreational sales and service facility for the public in a convenient location to Lake Anna - where they often need it most.

Patrons will be able to turn right off of 522 and access a mechanic that can service any recreational vehicles. The shop will also be able to provide state inspections for the community.

PROFFER STATEMENT

Christopher Run Campground Addition

Date of Proffer:	08/11/2025
Project Name:	Christopher Run Campground Addition
Owner:	Ashton Promise, LLC
Existing Zoning:	R2/A2
Zoning Requested:	R2/C2
Acreage of Parcel(s):	20.553
Voting District(s):	Mineral
Tax Map #(s):	16-31
Exhibit(s)/References:	

The Term "Owner" as referenced within this document shall include within its meaning the owner, or owners, of record of the Property, or properties, and their successors in interest.

The Owner hereby voluntarily proffers the conditions listed herein which shall be applied to the above-referenced property owned by Ashton Promise, LLC, provided that the Louisa County Board of Supervisors accepts these proffers and approves the rezoning of the land to the Mineral district.

1) The following uses will be permitted section 86-222: Agricultural activity passive, Brewery (limited), Distillery (farm), Forestry, Sawmill (Temporary non-commerical), Winery (farm), Utility service (minor) Bed and Breakfast, Business or trade school, Business support service, Car wash, Consumer repair service, Food Truck, Garden center, General office, Grocery store, Kennel (commercial), Mini-warehouse, Restaurant (drive-in), Restaurant

2) I will be able to apply for the Conditional use permitted section 86-224: Brewery (Major), Distillery (Major), Winery (Major), Civic Use, Club, Public Assembly, Public Maintenance and Service Facility, Public Park and Recreational Area, Public Recreation Assembly, Religious Assembly, Shelter, Utility Service (Major), Automobile Dealership, Automobile Parts/Supply/Retail, Automobile Rental/Leasing, Automobile Repair Service, Commercial Indoor Amusement, Commercial Indoor entertainment, Commercial Indoor Sports and Recreation, Commercial vehicle repair service, Communications Service, Construction Yard, Contractor's Offices and Shop, Dance Hall, Equipment Sales and Rental, Farmer's Market, Gasoline Station, Hotel, Laundry, Manufactured Home Sales, Marina, Parking Facility, Pawn

Shop, Shooting Range (Indoor), Short-term Rental of Dwelling, Special Occasion Facility, Specialty Shop, Store (General), Store (Neighborhood Convenience), Surplus Sales, Transportation Terminal, Truck Terminal, Motor Vehicle Towing Services, Outdoor Gathering

3)

4)

The undersigned Owner hereby proffers that the use and development of the Property shall be in conformance with the proffers and conditions herein above. This document shall supersede all other agreements, proffers or conditions that may be found to be in conflict. The Owner agrees that all proffers shall be binding to the property, which means the proffers shall be transferred to all future property successors of the land.

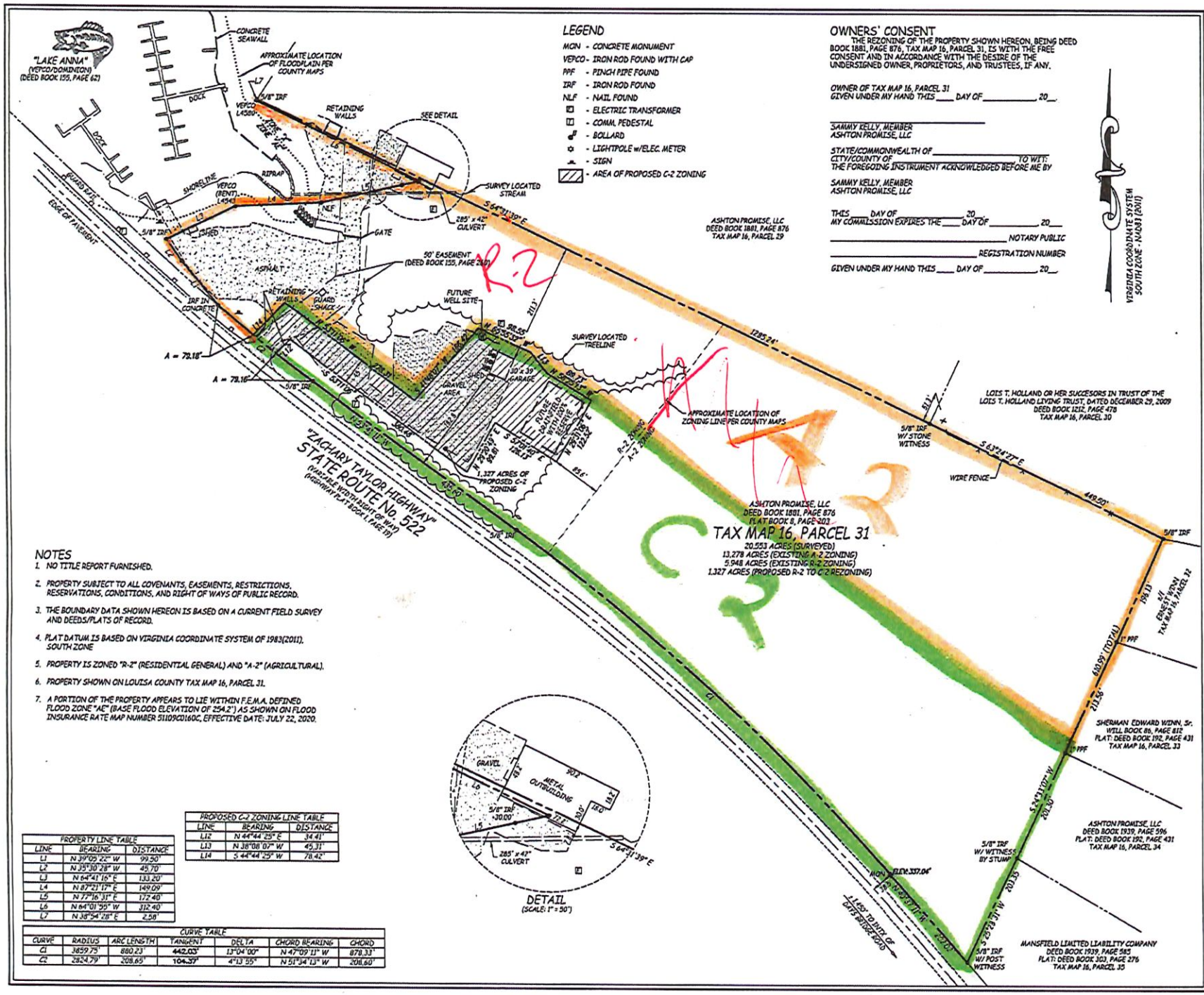
Owner: Ashton Promise LLC / Samuel C. Kelly

Joan Bazzanella Samuel Bazzanella

Agreed and Accepted: The County of Louisa, Virginia:

_____ _____

Louisa County Board of Supervisors
*By*_____*., Chairperson*



NOTES

1. NO TITLE REPORT FURNISHED.
2. PROPERTY SUBJECT TO ALL COVENANTS, EASEMENTS, RESTRICTIONS, RESERVATIONS, CONDITIONS, AND RIGHT OF WAYS OF PUBLIC RECORD.
3. THE BOUNDARY DATA SHOWN HEREON IS BASED ON A CURRENT FIELD SURVEY AND DEEDS/PLATS OF RECORD.
4. PLAT DATUM IS BASED ON VIRGINIA COORDINATE SYSTEM OF 1983(2011), SOUTH ZONE
5. PROPERTY IS ZONED "R-2" (RESIDENTIAL GENERAL) AND "A-2" (AGRICULTURAL).
6. PROPERTY SHOWN ON LOUISA COUNTY TAX MAP 16, PARCEL 31.
7. A PORTION OF THE PROPERTY APPEARS TO LIE WITHIN F.E.M.A. DEFINED FLOOD ZONE "AE" (BASE FLOOD ELEVATION OF 254.2') AS SHOWN ON FLOOD INSURANCE RATE MAP NUMBER 51109C0160C, EFFECTIVE DATE: JULY 22, 2020.

PROPERTY LINE TABLE		
LINE	BEARING	DISTANCE
L1	N 39°05'22" W	99.50'
L2	N 35°30'28" W	45.70'
L3	N 64°41'16" E	133.20'
L4	N 87°21'17" E	149.09'
L5	N 77°16'31" E	172.40'
L6	N 64°01'55" W	312.40'
L7	N 38°54'28" E	2.58'

PROPOSED C-2 ZONING LINE TABLE		
LINE	BEARING	DISTANCE
L12	N 44°44'25" E	34.41'
L13	N 38°08'07" W	45.31'
L14	S 44°44'25" W	78.42'

CURVE TABLE						
CURVE	RADIUS	ARC LENGTH	TANGENT	DELTA	CHORD BEARING	CHORD
C1	3859.79'	880.23'	442.03'	13°04'00"	N 47°09'11" W	878.33'
C2	2824.79'	208.65'	104.39'	4°13'55"	N 51°34'13" W	208.60'

REVISION		
NO	DATE	

PRELIMINARY NOT TO BE RECORDED

MANAGER: BWK | DESIGN BY: | CHKD BY: | DRAWN BY: RDW | CHKD BY: ZJT | SURV. CHIEF: DBJr | DATE: 04-04-2025 | FIELDBOOK NO. N/A

CLIENT: SAMMY & EMILY KELLY, MANAGER@CAMPSTEPHENS.WPENGLAND.COM, 540-664-7350

SCALE: 0, 50', 100', 200', 300', 1" = 100'

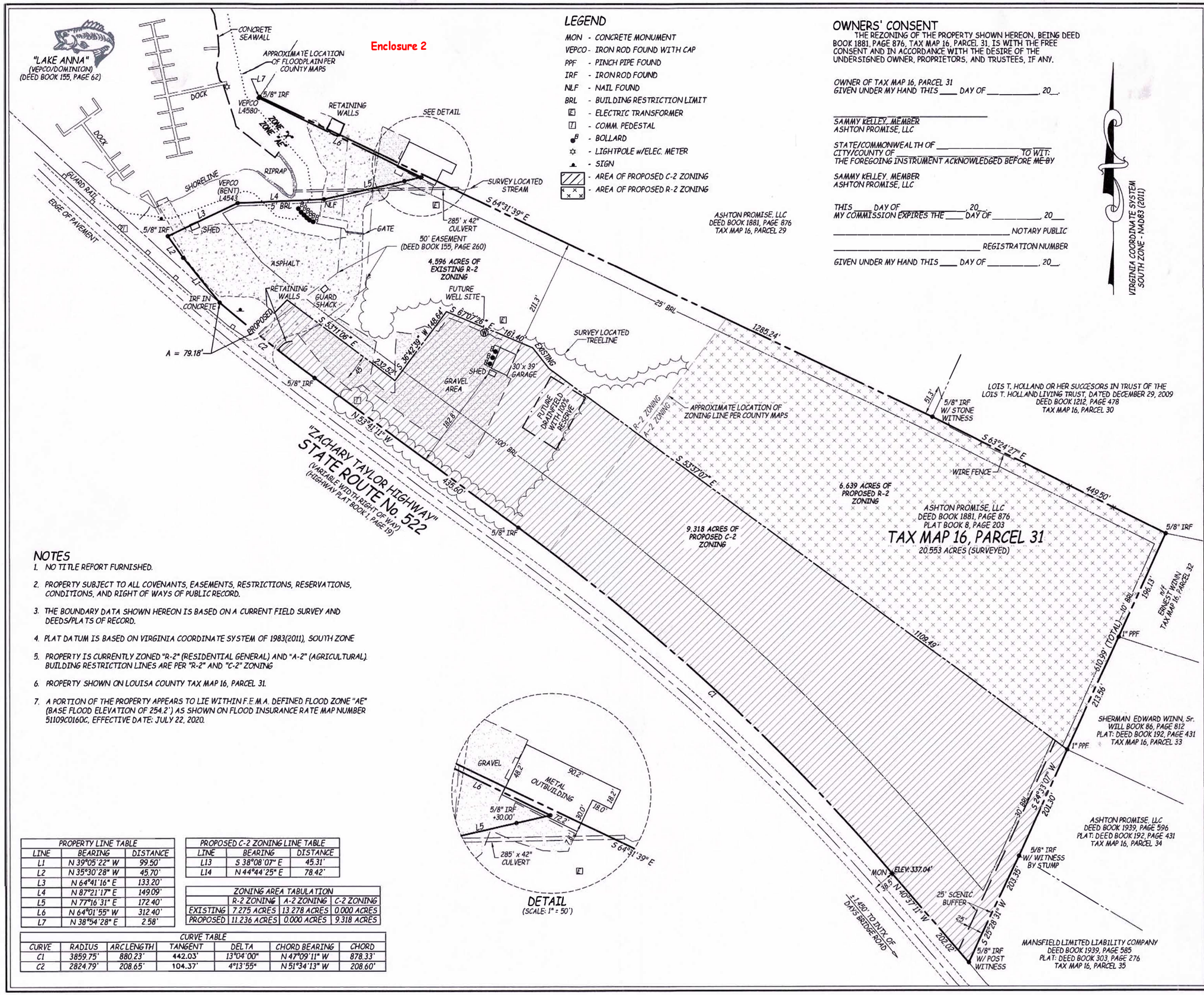
AXIS LAND SURVEY, INC. 3753 COURTHOUSE ROAD SPOTSYLVANIA, VA 22551 OFFICE@AXISLS.NET (540) 895-5011

PLAT SHOWING PROPOSED REZONING
TAX MAP 16, PARCEL 31
ASHTON PROMISE, LLC PROPERTY
MINERAL MAGISTERIAL DISTRICT
LOUISA COUNTY, VIRGINIA

SHEET No. 1 OF 1

JOB No. 25-094

Enclosure 2



LEGEND

- MON - CONCRETE MONUMENT
- VEPCO - IRON ROD FOUND WITH CAP
- PPF - PINCH PIPE FOUND
- IRF - IRON ROD FOUND
- NLF - NAIL FOUND
- BRL - BUILDING RESTRICTION LIMIT
- E - ELECTRIC TRANSFORMER
- T - COMM. PEDESTAL
- B - BOLLARD
- LIGHTPOLE w/ELEC. METER
- SIGN
- AREA OF PROPOSED C-2 ZONING
- AREA OF PROPOSED R-2 ZONING

OWNERS' CONSENT

THE REZONING OF THE PROPERTY SHOWN HEREON, BEING DEED BOOK 1881, PAGE 876, TAX MAP 16, PARCEL 31, IS WITH THE FREE CONSENT AND IN ACCORDANCE WITH THE DESIRE OF THE UNDERSIGNED OWNER, PROPRIETORS, AND TRUSTEES, IF ANY.

OWNER OF TAX MAP 16, PARCEL 31
GIVEN UNDER MY HAND THIS ___ DAY OF _____, 20__.

_____
SAMMY KELLEY, MEMBER
ASHTON PROMISE, LLC

STATE/COMMONWEALTH OF _____
CITY/COUNTY OF _____, TO WIT:
THE FOREGOING INSTRUMENT ACKNOWLEDGED BEFORE ME BY

SAMMY KELLEY, MEMBER
ASHTON PROMISE, LLC

THIS ___ DAY OF _____, 20__.
MY COMMISSION EXPIRES THE ___ DAY OF _____, 20__

_____ NOTARY PUBLIC

_____ REGISTRATION NUMBER

GIVEN UNDER MY HAND THIS ___ DAY OF _____, 20__.

NOTES

1. NO TITLE REPORT FURNISHED.
2. PROPERTY SUBJECT TO ALL COVENANTS, EASEMENTS, RESTRICTIONS, RESERVATIONS, CONDITIONS, AND RIGHT OF WAYS OF PUBLIC RECORD.
3. THE BOUNDARY DATA SHOWN HEREON IS BASED ON A CURRENT FIELD SURVEY AND DEEDS/PLATS OF RECORD.
4. PLAT DATUM IS BASED ON VIRGINIA COORDINATE SYSTEM OF 1983(2011), SOUTH ZONE
5. PROPERTY IS CURRENTLY ZONED "R-2" (RESIDENTIAL GENERAL) AND "A-2" (AGRICULTURAL). BUILDING RESTRICTION LINES ARE PER "R-2" AND "C-2" ZONING
6. PROPERTY SHOWN ON LOUISA COUNTY TAX MAP 16, PARCEL 31.
7. A PORTION OF THE PROPERTY APPEARS TO LIE WITHIN F.E.M.A. DEFINED FLOOD ZONE "AE" (BASE FLOOD ELEVATION OF 254.2') AS SHOWN ON FLOOD INSURANCE RATE MAP NUMBER 51109C0160C, EFFECTIVE DATE: JULY 22, 2020.

DETAIL
(SCALE: 1" = 50')

PROPERTY LINE TABLE		
LINE	BEARING	DISTANCE
L1	N 39°05'22" W	99.50'
L2	N 35°30'28" W	45.70'
L3	N 64°41'16" E	133.20'
L4	N 87°21'17" E	149.09'
L5	N 77°16'31" E	172.40'
L6	N 64°01'55" W	312.40'
L7	N 38°54'28" E	2.58'

PROPOSED C-2 ZONING LINE TABLE		
LINE	BEARING	DISTANCE
L13	S 38°08'07" E	45.31'
L14	N 44°44'25" E	78.42'

ZONING AREA TABULATION			
	R-2 ZONING	A-2 ZONING	C-2 ZONING
EXISTING	7.275 ACRES	13.278 ACRES	0.000 ACRES
PROPOSED	11.236 ACRES	0.000 ACRES	9.318 ACRES

CURVE TABLE						
CURVE	RADIUS	ARC LENGTH	TANGENT	DELTA	CHORD BEARING	CHORD
C1	3859.75'	880.23'	442.03'	13°04'00"	N 47°09'11" W	878.33'
C2	2824.79'	208.65'	104.37'	4°13'55"	N 51°34'13" W	208.60'

NO.	DATE	REVISION
1	08-14-25	NEW LAYOUT FOR ZONING
2	10-02-25	BUILDING SETBACKS

COMMONWEALTH OF VIRGINIA
ANTHONY D. WALTERS
LIC. No. 002868
10/02/25
LAND SURVEYOR

MANAGER: ADW | DESIGN BY: | CHKD BY: | DRAWN BY: ROW | CHKD BY: ZJT | SURV. CHIEF: OBJr | DATE: 07.17.2025 | FIELDBOOK NO. N/A

CLIENT
SAMMY & EMILY KELLEY
MANAGER@CHRISTOPHERRUNCAMPGROUND.COM
540-604-7360

SCALE 1" = 100'
0 50 100' 200 300

AXIS LAND SURVEY, INC.
5753 COURTHOUSE ROAD
SPOTSYLVANIA, VA 22551
OFFICE@AXISLS.NET
(540) 895-5011

PLAT SHOWING PROPOSED REZONING
TAX MAP 16, PARCEL 31
ASHTON PROMISE, LLC PROPERTY
MINERAL MAGISTERIAL DISTRICT
LOUISA COUNTY, VIRGINIA

SHEET No. 1 OF 1

JOB No. 25-094

COUNTY OF LOUISA
COMMUNITY DEVELOPMENT

(540) 967-3430 Fax (540) 967-3486

www.louisacounty.com

MEMORANDUM

TO: Members, Louisa County Planning Commission

FROM: Staff, Community Development Department

SUBJECT: TRANSMITTAL OF VARIANCE APPLICATIONS

DATE: October 2, 2025

In accordance with the State Code of Virginia, Section 15.2-2310 (included), please find following the application documents for the items listed below; which are scheduled for public hearing with the Board of Zoning Appeals on November 19, 2025

VAR2025-07, Garry & Darlene Johnson, Applicants/Owners – Variance Request
Garry & Darlene Johnson, Applicants/Owners, requests a variance from the requirements of Sec. 86-115(b) Setback Regulations for Buildings and Structures - generally for a 66.9' setback where 100' is normally required for an existing storage building. The property is located on Jefferson Highway (Route 33) and is further identified as tax map parcel 92-2-1A, in the Jackson Election District. The 2040 Louisa County Comprehensive Plan designates this area as rural, outside of the Growth Areas.

VAR2025-08, Richard & Patricia Gillespie, Applicants/Owners – Variance Request
Richard & Patricia Gillespie, Applicants/Owners, requests a variance from the requirements of Sec. 86-200 (3) yard regulations for a 1' setback where 5' is required for an existing concrete pad that is more than 8" in height. The property is located on Park Run, in the Lakeshore Woods Subdivision, and is further identified as tax map parcel 30H-1-13, in the Cuckoo Election District. The 2040 Louisa County Comprehensive Plan designates this area as Low Density Residential, in the Lake Anna Growth Area.

As indicated by the State Code of Virginia, the Planning Commission may send a recommendation to the Board of Zoning Appeals or appear as a party at the hearing.

If you have questions or need additional information, please contact our office.

§ 15.2-2310. Applications for special exceptions and variances

Applications for special exceptions and variances may be made by any property owner, tenant, government official, department, board or bureau. Applications shall be made to the zoning administrator in accordance with rules adopted by the board. The application and accompanying maps, plans or other information shall be transmitted promptly to the secretary of the board who shall place the matter on the docket to be acted upon by the board. No special exceptions or variances shall be authorized except after notice and hearing as required by § 15.2-2204. The zoning administrator shall also transmit a copy of the application to the local planning commission which may send a recommendation to the board or appear as a party at the hearing. Any locality may provide by ordinance that substantially the same application will not be considered by the board within a specified period, not exceeding one year.

Code 1950, §§ 15-828 through 15-830, 15-832, 15-833, 15-850, 15-968.10; 1950, p. 176; 1962, c. 407, § 15.1-496; 1966, c. 256; 1975, cc. 521, 641; 1989, c. 407; 1997, c. 587.

The chapters of the acts of assembly referenced in the historical citation at the end of this section(s) may not constitute a comprehensive list of such chapters and may exclude chapters whose provisions have expired.

Reviewer: DJ Case # VAR2025-07
Fee Rcv'd: _____ Rcpt # _____
Date & Time Rcv'd: 8/29/2025
Pre-App Meeting: _____

LAND USE AMENDMENT APPLICATION

Board of Supervisors of Louisa County, Virginia

The following information shall be typed or printed and completed in full. Attach additional pages where necessary.

1. **IDENTIFICATION OF REQUEST:**

A: REZONING: From _____ ( ) to _____ ( )

B: CONDITIONAL USE: _____

C: TEMPORARY CONDITIONAL USE: _____

D: VARIANCE: Storage Building SetBack

E: PROFFER AMENDMENT: _____

F: COMP PLAN AMENDMENT: _____

G: COMP PLAN REVIEW FOR CONFORMANCE: _____

H: SPECIAL EXCEPTION: _____

2. **APPLICANT, PROPERTY OWNER, AGENT**

A. NAME OF APPLICANT: Garry + Darlene Johnson

If a corporation, name of agent: _____

B: MAILING ADDRESS: 14281 Jefferson Hwy, Bumpass VA 23024

Telephone # 443.952.0730

C: NAME OF PRESENT OWNER OF PROPERTY ON WHICH THIS REQUEST WILL OCCUR:
Same

D. MAILING ADDRESS: _____
Same Telephone # Same

If the applicant is not the owner of the property in question, explain: _____

A copy of pending contract or option agreement shall be attached hereto and made a part of this application.

E. NAME OF PERSON TO BE NOTIFIED IN ADDITION TO THE APPLICANT AND/OR PROPERTY OWNER: _____

_____

F. ADDRESS: _____

_____ Telephone #: _____

3. **LOCATION OF PROPERTY** (Assistance will be given in obtaining the following information upon request).

A. VOTING DISTRICT Jackson B. TAX MAP # 92(2)-1A

C. SUBDIVISION NAME _____ D. LOT/PARCEL# _____

E. PROPERTY LOCATION 14281 Jefferson Hwy, Bumpass VA 23024

_____

F. IS PARCEL UNDER LAND USE TAXATION PROGRAM? _____ YES ✓ NO

4. **EXPLAIN FULLY THE PROPOSED USE, TYPE OF DEVELOPMENT, OPERATION PROGRAM, ETC., AND THE REASON OF THIS REQUEST:**

existing storage building; storage building directly behind would need to be torn down; electrical wires directly behind existing building

(Attach applicable plans, renderings, elevations, photographs.)

5. **STATE HOW THIS REQUEST WILL NOT BE MATERIALLY DETRIMENTAL TO ADJACENT PROPERTY, THE SURROUNDING NEIGHBORHOOD OR THE COUNTY IN GENERAL. INCLUDE, WHERE APPLICABLE, INFORMATION CONCERNING: USE OF PUBLIC UTILITIES; EFFECT OF REQUEST ON PUBLIC SCHOOLS; EFFECT ON TRAFFIC--INCLUDE MEANS OF ACCESS TO THE NEAREST PUBLIC ROAD; EFFECT ON EXISTING AND FUTURE AREA DEVELOPMENT, ETC.**

farmland surrounding property, wooded lot directly across Rt 33

6. **EXPLAIN ANY EXISTING USE PERMIT, SPECIAL EXCEPTION, (Prior) CONDITIONAL USE PERMIT, TEMPORARY CONDITIONAL USE PERMIT OR VARIANCE PREVIOUSLY GRANTED ON THE PARCEL IN QUESTION:**

none

7. **INDICATE THE FOLLOWING WITH RESPECT TO THE SUBJECT PARCEL:**

A. EXISTING LAND USE(S): Single family home

B. EXISTING STRUCTURE(S): 2 Smaller Storage Sheds, new storage bldg

C. EXISTING ZONING: A2

D. ACREAGE OF REQUEST: 3.04

E. UTILITIES: Well, septic

(Intended use, example: public water and/or sewer; individual well and/or septic tank; other source.)

F. IS THIS PROJECT IN OR NEAR A PINE PLANTATION? no

G. IS THIS PROJECT IN AN AG/FORESTAL DISTRICT? no

8. **IF REQUESTING A VARIANCE, EXPLAIN THE UNIQUE PHYSICAL HARDSHIP OR EXTRAORDINARY SITUATION THAT IS THE JUSTIFICATION FOR THE VARIANCE:**

Storage building directly behind new structure would need to be torn down, electrical wires run thru property directly behind building

9. **GIVE COMPLETE NAMES AND ADDRESSES (INCLUDING ZIP CODES) OF ALL OWNERS ADJACENT, ACROSS THE ROAD OR HIGHWAY FACING THE PROPERTY AND ACROSS ANY RAILROAD RIGHT-OF-WAY, CREEK, OR RIVER FROM SUCH PROPERTY, EVEN IF SUCH PROPERTY LIES IN ANOTHER COUNTY OR TOWN. (THIS INFORMATION MUST BE OBTAINED BY THE APPLICANT).**

* PROPERTY OWNER'S NAME: Clarence Borden Jr

MAILING ADDRESS: 14256 Jefferson Hwy, Bumpass VA 23024

TAX MAP #

SUBDIVISIONNAME LOT/PARCEL#

ACREAGE ZONING

* PROPERTY OWNER'S NAME: Kyle + Kendra Hayden

MAILING ADDRESS: 356 Wickham Rd, Bumpass VA 23024

TAX MAP #

SUBDIVISION NAME: LOT/PARCEL#

ACREAGE ZONING

* PROPERTY OWNER'S NAME: Vicki Stanley Beckley

MAILING ADDRESS: 737 Windy Knight Rd, Montpelier VA 23192

TAX MAP #

SUBDIVISION NAME:____________________________LOT/PARCEL#__________

ACREAGE________________ ZONING________________

* PROPERTY OWNER'S NAME: ________________________________

MAILING ADDRESS:_____________________________________

____________________________________TAX MAP #__________

SUBDIVISION NAME:____________________________LOT/PARCEL#__________

ACREAGE________________ ZONING________________

* PROPERTY OWNER'S NAME: ________________________________

MAILING ADDRESS:_____________________________________

____________________________________TAX MAP #__________

SUBDIVISION NAME:____________________________LOT/PARCEL#__________

ACREAGE________________ ZONING________________

* PROPERTY OWNER'S NAME: ________________________________

MAILING ADDRESS:_____________________________________

____________________________________TAX MAP #__________

SUBDIVISION NAME:____________________________LOT/PARCEL#__________

ACREAGE________________ ZONING________________

* PROPERTY OWNER'S NAME: ________________________________

MAILING ADDRESS:_____________________________________

____________________________________TAX MAP #__________

SUBDIVISION NAME:____________________________LOT/PARCEL#__________

ACREAGE________________ ZONING________________

* PROPERTY OWNER'S NAME: ________________________________

MAILING ADDRESS:_____________________________________

____________________________________TAX MAP #__________

SUBDIVISION NAME:____________________________LOT/PARCEL#__________

ACREAGE________________ ZONING________________

* PROPERTY OWNER'S NAME: ________________________________

MAILING ADDRESS:_____________________________________

____________________________________TAX MAP #__________

SUBDIVISION NAME:____________________________LOT/PARCEL#__________

ACREAGE________________ ZONING________________

* PROPERTY OWNER'S NAME: ________________________________

MAILING ADDRESS:_____________________________________

______________________________ TAX MAP # __________

SUBDIVISION NAME: ______________________ LOT/PARCEL# __________

ACREAGE ______________ ZONING ______________

* PROPERTY OWNER'S NAME: ______________________________

MAILING ADDRESS: ______________________________

______________________________ TAX MAP # __________

SUBDIVISION NAME: ______________________ LOT/PARCEL# __________

ACREAGE ______________ ZONING ______________

* PROPERTY OWNER'S NAME: ______________________________

MAILING ADDRESS: ______________________________

______________________________ TAX MAP # __________

SUBDIVISION NAME: ______________________ LOT/PARCEL# __________

ACREAGE ______________ ZONING ______________

* PROPERTY OWNER'S NAME: ______________________________

MAILING ADDRESS: ______________________________

______________________________ TAX MAP # __________

SUBDIVISION NAME: ______________________ LOT/PARCEL# __________

ACREAGE ______________ ZONING ______________

* PROPERTY OWNER'S NAME: ______________________________

MAILING ADDRESS: ______________________________

______________________________ TAX MAP # __________

SUBDIVISION NAME: ______________________ LOT/PARCEL# __________

ACREAGE ______________ ZONING ______________

* PROPERTY OWNER'S NAME: ______________________________

MAILING ADDRESS: ______________________________

______________________________ TAX MAP # __________

SUBDIVISION NAME: ______________________ LOT/PARCEL# __________

ACREAGE ______________ ZONING ______________

* PROPERTY OWNER'S NAME: ______________________________

MAILING ADDRESS: ______________________________

______________________________ TAX MAP # __________

SUBDIVISION NAME: ______________________ LOT/PARCEL# __________

ACREAGE ______________ ZONING ______________

* PROPERTY OWNER'S NAME: ______________________________

MAILING ADDRESS:_____

_____TAX MAP #_____

SUBDIVISION NAME:_____LOT/PARCEL#_____

ACREAGE_____ ZONING_____

* PROPERTY OWNER'S NAME: _____

MAILING ADDRESS:_____

_____TAX MAP #_____

SUBDIVISION NAME:_____LOT/PARCEL#_____

ACREAGE_____ ZONING_____

10. HEREWITH IS DEPOSITED THE FEE REQUIRED. CHECKS OR MONEY ORDERS MADE PAYABLE TO <u>TREASURER , COUNTY OF LOUISA.</u>

A. REZONING	Tiered System
B. CONDITIONAL USE PERMIT	Tiered System
C. TEMPORARY CONDITIONAL USE PERMIT	$325.00*
Temporary Housing* Extension or Amendment* Other*	
D. VARIANCE	$1,250.00*
E. PROFFER AMENDMENT	$1,500.00*
F. COMP PLAN AMENDMENT	$650.00*

<u>IN ADDITION TO THE STANDARD FEE, AN ADDITIONAL **$75.00 WILL BE CHARGED FOR EACH REQUEST AS A DEPOSIT ON A ZONING SIGN AND WILL BE REFUNDED UPON THE RETURN OF THE SIGN BY THE APPLICANT ONCE THE REQUEST HAS BEEN ACTED UPON.</u>*

<u>THERE WILL BE A **$25.00 FEE CHARGED PER ADJACENT/ADJOINING PROPERTY OWNER FOR NOTIFICATION AND ADVERTISEMENT. THERE WILL ALSO BE A RE-ADVERTISEMENT FEE EACH TIME AN APPLICATION IS DELAYED OR POSTPONED AT THE REQUEST OF THE APPLICANT OR NECESSARY DUE TO SOME FAILURE TO ACT ON THE PART OF THE APPLICANT, PLUS A **$25.00** FEE CHARGED PER ADJACENT/ADJOINING PROPERTY OWNER FOR RENOTIFICATION.</u>*

**<u>THERE IS AN ADDITIONAL CHARGE FOR PUBLIC NOTICE ADVERTISEMENT.</u>*

11. ENCLOSED WITH THIS APPLICATION IS A SITE PLAN OR TENTATIVE PLAN.

12. ENCLOSED WITH THIS APPLICATION IS THE APPROPRIATE COUNTY TAX MAP WITH THE PROPERTY MARKED AND A SURVEYED PLAT OF THE ENTIRE PARCEL.

****

13. I/WE HEREBY CERTIFY THAT TO THE BEST OF MY/OUR KNOWLEDGE ALL OF THE ABOVE STATEMENTS AND THE STATEMENTS CONTAINED IN ANY EXHIBITS TRANSMITTED ARE TRUE AND THAT THE ADJACENT PROPERTY OWNERS LIST HEREWITH ARE THE OWNERS OF RECORD AS OF THE DATE OF APPLICATION.

NOTE: INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED. ANY REQUEST WHICH REQUIRES PLANS MUST BE ACCOMPANIED BY THOSE PLANS AT THE TIME OF SUBMISSION OF THE APPLICATION.

DATE: August 27, 2025.

Darlene Johnson
Garry W Johnson

SIGNATURE OF APPLICANT
(Same Name as Used in Item 2-A, Page 1)

Darlene Johnson
Garry W Johnson

APPLICANT'S NAME
(Typed or Printed)

Darlene Johnson
Garry W Johnson

SIGNATURE OF OWNER
(Same Name as Used in Item 2-C, Page 1)

Darlene Johnson
Garry W Johnson

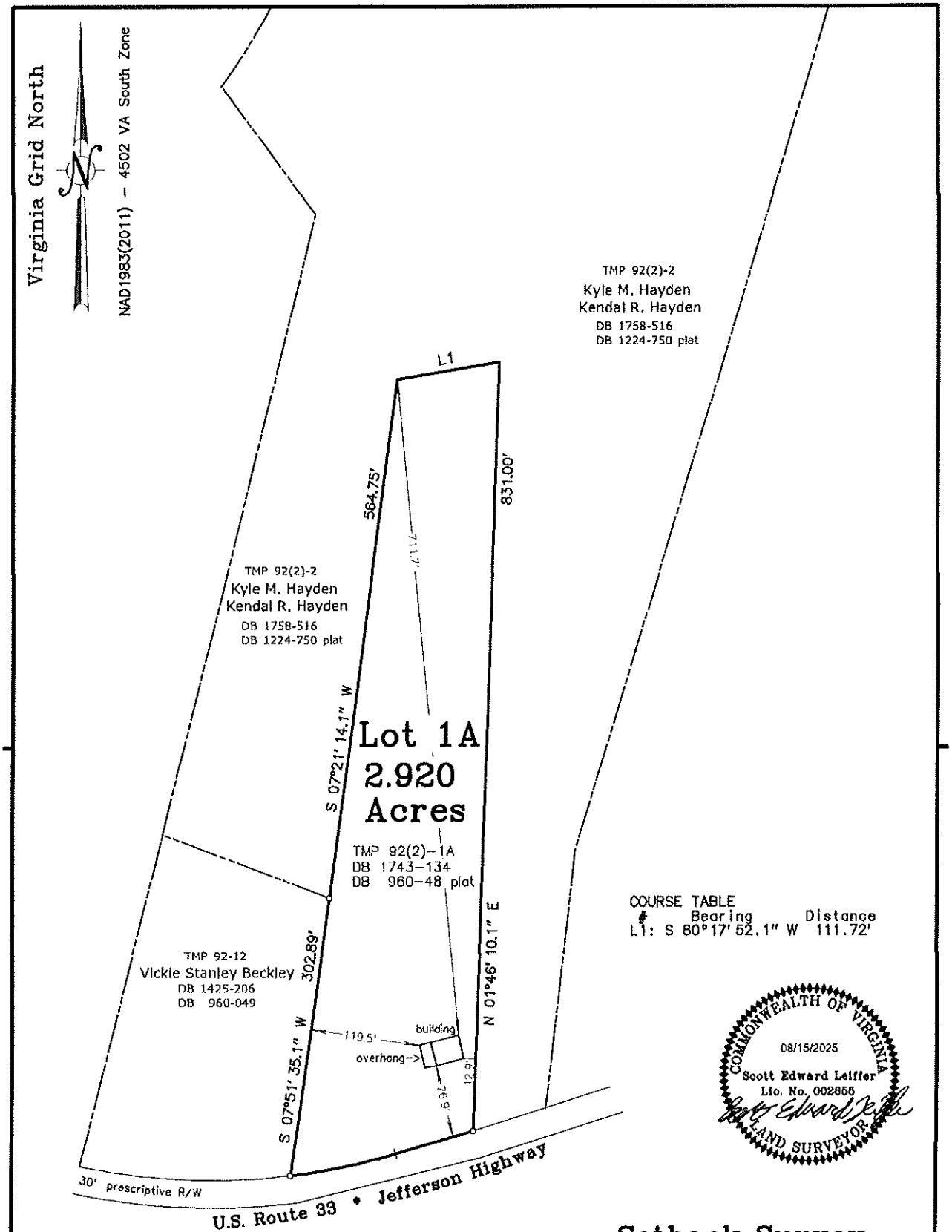
OWNER'S NAME
(Typed or Printed)

SIGNATURE OF AGENT
(Name of Person Other Than, but Acting for the Applicant, Responsible for this Application)

AGENT'S NAME
(Typed or Printed)

NOTICE TO TEMPORARY CONDITIONAL USE PERMIT APPLICANTS

In accordance with Section 86-91. of the Louisa County Zoning Ordinance, any Temporary Conditional Use Permit granted shall be considered canceled if the applicant does not avail himself/herself of the privilege within ninety (90) days from the date of issuance of the Temporary Conditional Use Permit.



COURSE TABLE

#	Bearing	Distance
L1	S 80°17' 52.1" W	111.72'

COMMONWEALTH OF VIRGINIA
08/15/2025
Scott Edward Leiffer
Lic. No. 002866
LAND SURVEYOR

General Notes:
No current title report has been provided.

Boundary shown is based on a current field survey.

—o— denotes rod fnd unless otherwise stated.

Measurements are shown to the outermost corners of the eaves or overhang.

Scale in Feet
0 50 100 200 300 400

Setback Survey

Foundation

TMP 92(2)-1A, 2.920 Acres

Jackson Magisterial District
Louisa County, Virginia
Scale: 1"=100' • 28 July 2025

Bell Land Surveys LLC
PO Box 116, Louisa, VA 23093
(540)967-1514 • bell@bellsurveys.com

Job No.: Louisa-1851

[00-SURVEY]LOUISA County Jobs[Louisa-1851]Setback-FND-TMP_92(2)-1A.sc]

Reviewer: DJ Case # VAR2025-08
Fee Rcv'd: _____ Rcpt # _____
Date & Time Rcv'd: 9/16/2025
Pre-App Meeting: _____

LAND USE AMENDMENT APPLICATION

Board of Supervisors of Louisa County, Virginia

The following information shall be typed or printed and completed in full. Attach additional pages where necessary.

1. **IDENTIFICATION OF REQUEST:**

A: REZONING: From _____( ) to _____( )

B: CONDITIONAL USE: _____

C: TEMPORARY CONDITIONAL USE: _____

(D): VARIANCE: Request a Variance to Allow us to Keep a concrete pad that we did not Know needed a permit

E: PROFFER AMENDMENT: _____

F: COMP PLAN AMENDMENT: _____

G: COMP PLAN REVIEW FOR CONFORMANCE: _____

H: SPECIAL EXCEPTION: _____

2. **APPLICANT, PROPERTY OWNER, AGENT**

A. NAME OF APPLICANT: Richard + Patricia Gillespie

If a corporation, name of agent: N/A

B: MAILING ADDRESS: 14046 ERIE court, Gainesville VA 20155

Telephone # 703-926-8530

C: NAME OF PRESENT OWNER OF PROPERTY ON WHICH THIS REQUEST WILL OCCUR: Richard + Patricia Gillespie

D. MAILING ADDRESS: 14046 ERIE court, Gainesville VA 20155

Telephone # 703-926-8530

If the applicant is not the owner of the property in question, explain: N/A

A copy of pending contract or option agreement shall be attached hereto and made a part of this application. N/A

E. NAME OF PERSON TO BE NOTIFIED IN ADDITION TO THE APPLICANT AND/OR PROPERTY OWNER: William Gillespie (SON)

F. ADDRESS: 9336 Devlins Grove Place
Bristow VA-20136 Telephone #: 571-224-7856

3. **LOCATION OF PROPERTY** (Assistance will be given in obtaining the following information upon request).

A. VOTING DISTRICT COCO B. TAX MAP #: ?

C. SUBDIVISION NAME Lakeshore Woods D. LOT/PARCEL# 13 30H-1-13

E. PROPERTY LOCATION 224 Park Run
Mineral VA-23117

F. IS PARCEL UNDER LAND USE TAXATION PROGRAM? ? YES ? NO

4. **EXPLAIN FULLY THE PROPOSED USE, TYPE OF DEVELOPMENT, OPERATION PROGRAM, ETC., AND THE REASON OF THIS REQUEST:**
We wanted to move our RV, from one side of our Home to Behind the garage. We spoke w/ our neighbor and they said they were okay with it. Our HOA is NOT
(Attach applicable plans, renderings, elevations, photographs.)

5. **STATE HOW THIS REQUEST WILL NOT BE MATERIALLY DETRIMENTAL TO ADJACENT PROPERTY, THE SURROUNDING NEIGHBORHOOD OR THE COUNTY IN GENERAL. INCLUDE, WHERE APPLICABLE, INFORMATION CONCERNING: USE OF PUBLIC UTILITIES; EFFECT OF REQUEST ON PUBLIC SCHOOLS; EFFECT ON TRAFFIC--INCLUDE MEANS OF ACCESS TO THE NEAREST PUBLIC ROAD; EFFECT ON EXISTING AND FUTURE AREA DEVELOPMENT, ETC.**
This side of our garage has only Electric services which are buried + in conduits from the street. We Have planted 6 Large trees next to this Slab to help hide the RV. our neighbors Home does not have windows on this side of their Home, they park trailer + Boats there

6. **EXPLAIN ANY EXISTING USE PERMIT, SPECIAL EXCEPTION, (Prior) CONDITIONAL USE PERMIT, TEMPORARY CONDITIONAL USE PERMIT OR VARIANCE PREVIOUSLY GRANTED ON THE PARCEL IN QUESTION:**
I Request through Renee Mawyer in CDD and She Recommended this Form be Filled out.

7. **INDICATE THE FOLLOWING WITH RESPECT TO THE SUBJECT PARCEL:**

A. EXISTING LAND USE(S): Residential

B. EXISTING STRUCTURE(S): Home | Garage | Shed

C. EXISTING ZONING: _____

D. ACREAGE OF REQUEST: 0.93

E. UTILITIES: well & septic

(Intended use, example: public water and/or sewer; individual well and/or septic tank; other source.)

F. IS THIS PROJECT IN OR NEAR A PINE PLANTATION? NO

G. IS THIS PROJECT IN AN AG/FORESTAL DISTRICT? NO

8. **IF REQUESTING A VARIANCE, EXPLAIN THE UNIQUE PHYSICAL HARDSHIP OR EXTRAORDINARY SITUATION THAT IS THE JUSTIFICATION FOR THE VARIANCE:**

We put in a extension of our driveway - a slab to hold our RV for storage. We did NOT know we could NOT have the slab so close to the property line + height

9. **GIVE COMPLETE NAMES AND ADDRESSES (INCLUDING ZIP CODES) OF ALL OWNERS ADJACENT, ACROSS THE ROAD OR HIGHWAY FACING THE PROPERTY AND ACROSS ANY RAILROAD RIGHT-OF-WAY, CREEK, OR RIVER FROM SUCH PROPERTY, EVEN IF SUCH PROPERTY LIES IN ANOTHER COUNTY OR TOWN. (THIS INFORMATION MUST BE OBTAINED BY THE APPLICANT).**

* PROPERTY OWNER'S NAME: Gregory + Jennifer Rosenboom

MAILING ADDRESS: 252 Park Run

Mineral VA. 23117 TAX MAP #: _____

SUBDIVISIONNAME Lakeshore Woods LOT/PARCEL# 30H-1-12

ACREAGE 0.94 ZONING R2

* PROPERTY OWNER'S NAME: Same as above

MAILING ADDRESS: _____

_____ TAX MAP #: _____

~~SUBDIVISION~~ NAME: _____ LOT/PARCEL#: _____

ACREAGE _____ ZONING _____

* PROPERTY OWNER'S NAME: N/A

MAILING ADDRESS: _____

_____ TAX MAP #: _____

MAILING ADDRESS:_____

_____TAX MAP #_____

SUBDIVISION NAME:_____LOT/PARCEL#_____

ACREAGE_____ ZONING_____

* PROPERTY OWNER'S NAME: _____

MAILING ADDRESS:_____

_____TAX MAP #_____

SUBDIVISION NAME:_____LOT/PARCEL#_____

ACREAGE_____ ZONING_____

10. HEREWITH IS DEPOSITED THE FEE REQUIRED. CHECKS OR MONEY ORDERS MADE PAYABLE TO TREASURER , COUNTY OF LOUISA.

A. REZONING	Tiered System
B. CONDITIONAL USE PERMIT	Tiered System
C. TEMPORARY CONDITIONAL USE PERMIT	$325.00*
Temporary Housing* Extension or Amendment* Other*	
D. VARIANCE	$1,250.00*
E. PROFFER AMENDMENT	$1,500.00*
F. COMP PLAN AMENDMENT	$650.00*

IN ADDITION TO THE STANDARD FEE, AN ADDITIONAL **$75.00 WILL BE CHARGED FOR EACH REQUEST AS A DEPOSIT ON A ZONING SIGN AND WILL BE REFUNDED UPON THE RETURN OF THE SIGN BY THE APPLICANT ONCE THE REQUEST HAS BEEN ACTED UPON.*

THERE WILL BE A **$25.00 FEE CHARGED PER ADJACENT/ADJOINING PROPERTY OWNER FOR NOTIFICATION AND ADVERTISEMENT. THERE WILL ALSO BE A RE-ADVERTISEMENT FEE EACH TIME AN APPLICATION IS DELAYED OR POSTPONED AT THE REQUEST OF THE APPLICANT OR NECESSARY DUE TO SOME FAILURE TO ACT ON THE PART OF THE APPLICANT, PLUS A **$25.00** FEE CHARGED PER ADJACENT/ADJOINING PROPERTY OWNER FOR RENOTIFICATION.*

**THERE IS AN ADDITIONAL CHARGE FOR PUBLIC NOTICE ADVERTISEMENT.*

11. **ENCLOSED WITH THIS APPLICATION IS A SITE PLAN OR TENTATIVE PLAN.** ✓

12. **ENCLOSED WITH THIS APPLICATION IS THE APPROPRIATE COUNTY TAX MAP WITH THE PROPERTY MARKED AND A SURVEYED PLAT OF THE ENTIRE PARCEL.** ✓

****

13. **I/WE HEREBY CERTIFY THAT TO THE BEST OF MY/OUR KNOWLEDGE ALL OF THE ABOVE STATEMENTS AND THE STATEMENTS CONTAINED IN ANY EXHIBITS TRANSMITTED ARE TRUE AND THAT THE ADJACENT PROPERTY OWNERS LIST HEREWITH ARE THE OWNERS OF RECORD AS OF THE DATE OF APPLICATION.**

NOTE: INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED. ANY REQUEST WHICH REQUIRES PLANS MUST BE ACCOMPANIED BY THOSE PLANS AT THE TIME OF SUBMISSION OF THE APPLICATION.

DATE: August 21ST, 2025.

Richard T Gillespie — Richard T Gillespie

SIGNATURE OF APPLICANT (Same Name as Used in Item 2-A, Page 1) | APPLICANT'S NAME (Typed or Printed)

Patricia E Gillespie — Patricia E Gillespie

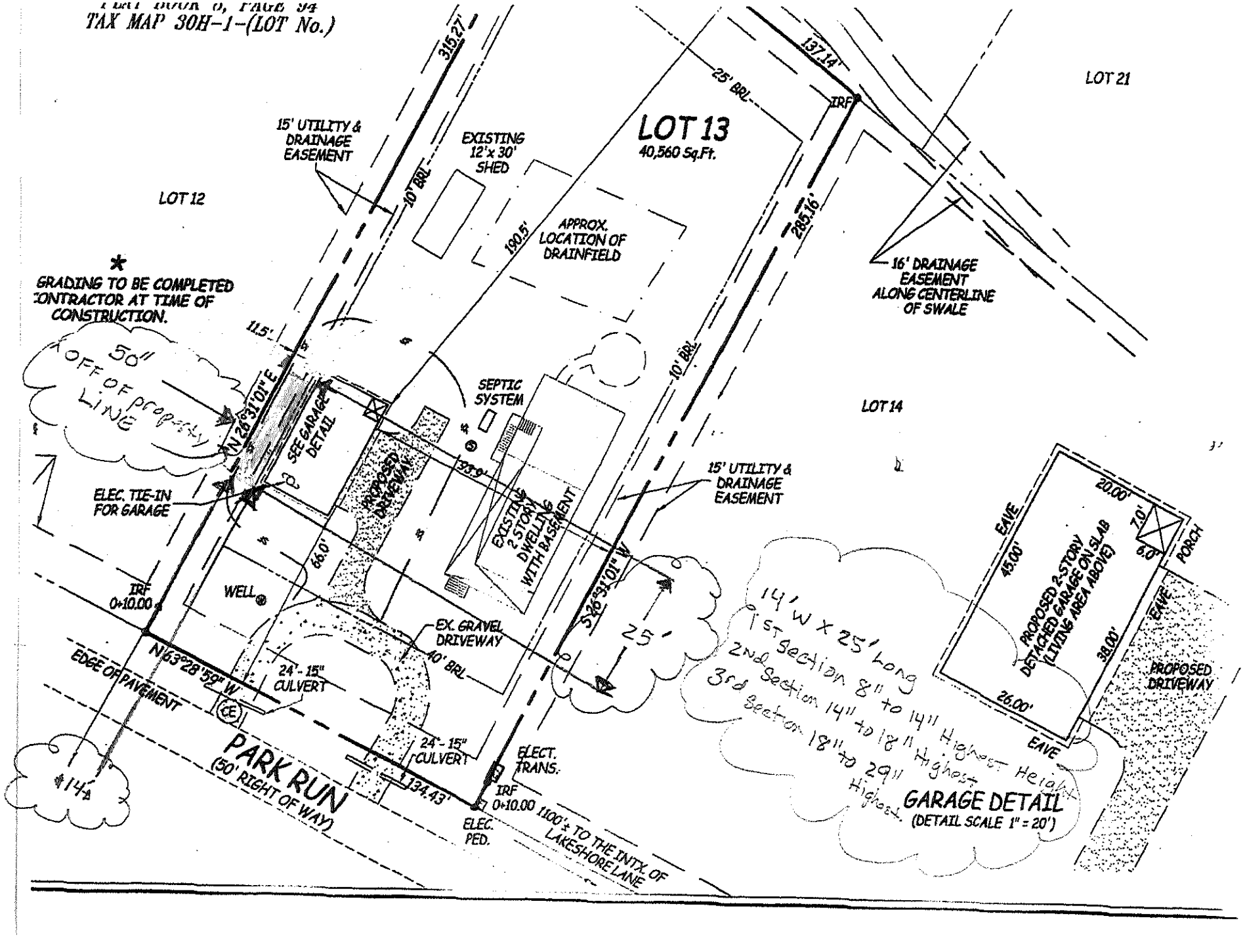
SIGNATURE OF OWNER (Same Name as Used in Item 2-C, Page 1) | OWNER'S NAME (Typed or Printed)

N/A

SIGNATURE OF AGENT (Name of Person Other Than, but Acting for the Applicant, Responsible for this Application) | AGENT'S NAME (Typed or Printed)

NOTICE TO TEMPORARY CONDITIONAL USE PERMIT APPLICANTS

In accordance with Section 86-91. of the Louisa County Zoning Ordinance, any Temporary Conditional Use Permit granted shall be considered canceled if the applicant does not avail himself/herself of the privilege within ninety (90) days from the date of issuance of the Temporary Conditional Use Permit.


TAX MAP 30H-1-(LOT No.)
LOT 13
40,560 Sq.Ft.
LOT 12
LOT 14
LOT 21
315.27'
137.14'
25' BRL
10' BRL
15' UTILITY & DRAINAGE EASEMENT
EXISTING 12'x 30' SHED
APPROX. LOCATION OF DRAINFIELD
190.5'
285.16'
16' DRAINAGE EASEMENT ALONG CENTERLINE OF SWALE
GRADING TO BE COMPLETED CONTRACTOR AT TIME OF CONSTRUCTION.
50' OFF OF property LINE
11.5'
N 26°31'01" E
SEE GARAGE DETAIL
SEPTIC SYSTEM
PROPOSED DRIVEWAY
33.9'
ELEC. TIE-IN FOR GARAGE
EXISTING 2 STORY DWELLING WITH BASEMENT
66.0'
S 26°31'01" W
25'
IRF 0+10.00
WELL
EX. GRAVEL DRIVEWAY
10' BRL
N 63°28'59" W
EDGE OF PAVEMENT
24"-15" CULVERT
PARK RUN
(50' RIGHT OF WAY)
1134.43'
ELECT. TRANS.
IRF 0+10.00
1100'± TO THE INTX. OF LAKESHORE LANE
ELEC. PED.
14' W x 25' Long
1st Section 8" to 14" Highest Height
2nd Section 14" to 18" Highest
3rd Section 18" to 29" Highest.
GARAGE DETAIL
(DETAIL SCALE 1" = 20')
20.00'
EAVE
45.00'
PROPOSED 2-STORY DETACHED GARAGE ON SLAB (LIVING AREA ABOVE)
7.0'
6.0'
PORCH
38.00'
26.00'
PROPOSED DRIVEWAY