



Truro Planning Board Agenda

Remote Meeting

Wednesday, January 6, 2021 – 5:00 pm

www.truro-ma.gov

AMENDED

Open Meeting

This will be a remote meeting. Citizens can view the meeting on Channel 18 in Truro and on the web on the "Truro TV Channel 18" button under "Helpful Links" on the homepage of the Town of Truro website (www.truro-ma.gov). Click on the green "Watch" button in the upper right corner of the page. Please note that there may be a slight delay (approx. 15-30 seconds) between the meeting and the television broadcast/live stream.

Citizens can join the meeting to listen and provide public comment via the link below, which can also be found on the calendar of the Board's webpage along with the meeting Agenda and Packet, or by calling in toll free at [1-877-309-2073](tel:1-877-309-2073) and entering the following access code when prompted: [816-045-909](tel:816-045-909). Citizens will be muted upon entering the meeting until the public comment portion of the hearing. If you are joining the meeting while watching the television broadcast/live stream, please lower or mute the volume on your computer or television during public comment so that you may be heard clearly. Citizens may also provide written comment via postal mail or by emailing the Town Planner at planner1@truro-ma.gov.

Meeting link: <https://global.gotomeeting.com/join/816045909>

Public Comment Period

The Commonwealth's Open Meeting Law limits any discussion by members of the Board of an issue raised to whether that issue should be placed on a future agenda. Speakers are limited to no more than 5 minutes.

Public Hearing – Continued

2020-005/SPR – Katherine S. Cook and Christine Van Genderen for property located at 38 Cliff Road (Atlas Map 32, Parcel 19, Registry of Deeds title reference: Book 33307, Page 344). Applicants seek a Residential Site Plan Review under Section 70 of the Truro Zoning Bylaw for an addition to the east side of the house, reconfiguration of the interior space, and a new screened porch with second floor deck to the north side of the house to an existing 28,010 sq. ft. parcel in the Seashore District.

Public Hearing

2020-014/PB – T-Mobile Northeast, LLC for property located at 344 Route 6 (Atlas Map 39, Parcel 172A). Applicant seeks a Special Permit under Section 40.5 of the Truro Zoning Bylaw to modify its existing antenna facility on the tower located at 344 Route 6, by replacing three (3) existing panel antennas with three (3) new panel antennas. The new antennas will be installed to be consistent with the original decision by the Planning Board.

2020-006/SPR – Anne Labouisse Peretz; William T. Burdick & Richard C. Vanison, Trustees, Dune House Nom. Tr. for property located at 112 North Pamet Road (Atlas Map 48, Parcel 1). Applicants seek a Residential Site Plan Review under Section 70 of the Truro Zoning Bylaw for demolition and removal of existing single-family dwelling in the Seashore Zoning District and construction of new smaller dwelling at a new location, set back from the coastal bank. The existing dwelling is at risk of sudden destruction due to storm-driven coastal bank erosion in its current location.

Board Action/Review

2020-011/PB – Samantha Perry, Hillside Farm, LLC seeks approval of Form A – Application for Determination that Plan Does Not Require Approval (ANR) pursuant to Section 2.2 of the Town of Truro Rules and Regulations Governing the Subdivision of Land with respect to property at 23 Perry Road, Truro MA, Map 45, Parcel 131.

- ◆ Extension Agreement presented at December 2, 2020 meeting; Title information requested by Board

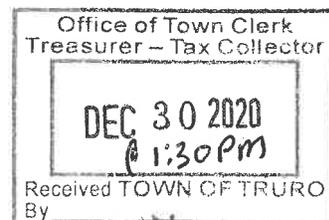
2020-012/PB – Nathan A. Nickerson III seeks approval of a Definitive Subdivision Plan of Land, pursuant to G.L. c. 41, §81L and §2.5 of the Town of Truro Rules and Regulations Governing the Subdivision of Land with respect to property at 4-H Bay View Road and 3 Laura’s Way, Truro, MA, Map 39, Parcels 77 and 325.

- ◆ Review Draft Decision
- Cloverleaf update
- Housing Initiative:
 - ◆ “How do we create a more diverse housing stock in Truro that includes a range of year-round housing options for populations including seniors, young families, and members of the local workforce while protecting our water and environment?”
 - ◆ Basic data on existing house stock for Board and Public questions/comments (attachment – Data Packet)
- Board public workshops:
 - ◆ Next workshop: Wednesday, January 13, 2021 at 2:00 pm with Habitat for Humanity; Discussion of Certified Abutters List Request Form
 - ◆ Next workshop: Wednesday, January 27, 2021 at 2:00 pm – Planning Board and Climate Action Committee Joint Project
- Board future workshop: Potential Warrant Articles for ATM 2021 [*Warrant closes 2/26/2021*]
 - ◆ 2020 ATM postponed Warrant Articles
 - ◆ Zoning Bylaw 40.6
 - ◆ Update on review of the effect of Section 50.2 of the Zoning Bylaw upon the Town of Truro to submit a report to the 2021 Truro Annual Town Meeting

Minutes – None

Next Meeting – Wednesday, January 20, 2021, at 5:00 p.m.

Adjourn



STAFF MEMORANDUM

To: Truro Planning Board
From: Barbara Carboni, Interim Town Planner/Town Counsel, KP Law
Date: December 28, 2020
Re: Meeting January 6, 202

2020-005/SPR – 38 Cliff Road (Map 32, Parcel 19). Application of Katherine S. Cook and Christine Van Genderen for Residential Site Plan Review for alterations to dwelling on property located in the Seashore District **CONTINUED HEARING**

Update:

CCNS email dated December 16, 2020, stating preference “to see adherence to the town zoning to the maximum extent.” Could reference in draft decision.

Applicant to provide zoning table including gross floor area

Draft decision previously prepared

2020-014/PB – 344 Route 6 (Map 39, Parcel 172A). Application of T-Mobile Northeast, LLC for a Special Permit under Section 40.5 of the Truro Zoning Bylaw to modify its existing antenna facility on the tower on this property.

Existing Conditions, Proposed Project

T-Mobile has an existing set of three panel antennas and related equipment (remote radio units and tower mounted amplifiers) on the tower located on this Town-owned property located in a General Business District. The existing T-Mobile antennas and related equipment are located at a height of 97’ on the tower. New T-Mobile antennas and related equipment are proposed to replace the existing ones at the same height.¹ Specifically, T-Mobile describes its proposal:

- replace three panel antennas with three like kind panel antennas;
- replace three remote radio units with three like kind RRUs;
- replace six tower mounted amplifiers with three like kind TMAs; and
- replace two radio cabinets with two like kind radio cabinets currently installed at the base of the tower.

Extensive technical materials on the equipment and its installation is supplied. See Tabs 6-8. As required by Section 40.5 (B)(22), these reports and other materials appear to be signed by

¹ Sheet T-1 of the plans provided (Tab 5) states that three new panel antennas will be installed. Sheet T-2 states that six new panel antennas will be installed. This should be clarified.

appropriate licensed professionals. In addition, the consent of the Town (provided by Select Board Chair Robert Weinstein) for the project is supplied. See Tab 9.

Prior Permits

A special permit was originally granted in 2000 for Sprint to construct the 170 foot lattice tower and for Sprint and Nextell to install antennas. See Tab 10. Modifications to the special permit in 2003 and 2006 allowed for AT&T, then Omnipoint/T-Mobile to collocate on the tower. In 2016, the Board granted a special permit with conditions to T-Mobile under Zoning Bylaw Section 40.5 to replace equipment on the tower. In that decision, the Board waived a number of Bylaw application requirements. The conditions imposed by the Board related to compliance with electrical and building codes, and compliance with the original 2000 permit. See page 4 of 2016 decision, Tab 10.

Application under Section 40.5, Communications Structures, Buildings and Appurtenances

T-Mobile has presented this application as one for a special permit under Section 40.5, and/or for “renewal” of the existing special permit. I see this as a modification to the 2016 special permit, but the relief requested could be granted in any of these ways.

Waivers

In the 2016 special permit to T-Mobile, the Board granted waivers from certain requirements of Section 40.5, including B.17 (pre-application meeting); B.19 (certain written information); B.20 (additional written information). Such waivers are allowed under Section 40.5 (B)(24) where the Board finds that the requested waiver “would not be detrimental to the public interest, cause the Town any expense, or be inconsistent with the intent and purpose of this bylaw.” A 2018 Special Permit issued to New Cingular Wireless likewise waived many requirements of Section 40.5(B).

Due to the limited nature of the project, in discussion with counsel for the applicant, I suggested it would be appropriate for the applicant to seek similar waivers. Counsel’s letter dated December 3, 2020 (Tab 2) provides a sufficient basis for all waivers requested, with the exception of (B)(20)(a), which requires the submission of “a draft contract, including requirements for removal of all structures and for complete site restoration in the case of discontinued use, between the applicant and the owner (if different from the applicant).”

Satisfaction of requirements not waived

Counsel’s narrative describes sufficient compliance with the requirements of Section 40.5(B) not appropriate for waiver, or identifies such requirements as not applicable. Note that Section (B)16 requires the execution of a covenant; the applicant states it will comply and this will be a condition in the special permit.

Application under Section 30.8

Pursuant to Bylaw Section 30.8(C), the Board may approve the proposal only if it finds that “the proposed use is in the opinion of the Board in harmony with the general public good and intent of this bylaw.”

Application as Eligible Facilities Request

As the Board is aware, telecommunications facilities are regulated in the first instance by Federal law. The “Spectrum Act,” 47 U.S.C. s. 1455, contains provisions relevant to permitting of new and modified telecommunications facilities. A streamlined process is set out for seeking approval of modifications to existing facilities; this is accomplished through the submission of an Eligible Facilities Request Application Form (See Tab 3). If the proposal meets the criteria for an Eligibility Facilities Request (essentially determinations the changes are minor), it must be granted.

With the more detailed Bylaw special permit process in place, the Eligible Facilities Request process would seem redundant. Nevertheless, compliance with the formalities is recommended. Counsel’s letter dated December 3, 2020 suggests a basis for each of the required findings. The only criterion that might merit further attention is the following:

2. The modifications to the Transmission Equipment do not protrude from the edge of the support structure by more than six (6) feet.

The explanation provided is that the replacement equipment “will not protrude from the edge of the tower further than they are currently located, and therefore will not exceed the six (6) foot limitation.” See Tab 3, page 3. This is true only if the existing equipment *currently* does not protrude from the structure by more than 6 feet. Confirmation is warranted.

A draft decision is attached. Conditions drawn from prior permits under Section 40.5 have been included as placeholders and for discussion.

2020-00/SPR – 112 North Pamet Road (Map 48, Parcel 1). Application of William T. Burdick & Richard C. Vanison, Trustees, Dune House Nom Tr. For Residential Site Plan Review for alterations to dwelling on property located in the Seashore District

Existing Conditions and Proposed Project.

This property is located in the Seashore District, containing 3.3 acres, conforming as to setbacks. The property has no frontage on North Pamet Road or any street; it is accessed by a dirt road.² According to Assessor’s records, the existing house was constructed in 1991. It is located close to the top of coastal bank and is proposed to be demolished due to threat from ongoing coastal erosion. A new residence will be constructed away from the bank and close to the property’s southern boundary. The lot is surrounded by National Seashore property and has no residential abutters.

The Total Gross Floor area of the existing dwelling is 3,167 sq ft, according to the Site Plan Zoning Table (see Sheet C2.1.1). The Total Gross Floor Area of the proposed dwelling is not provided (“X,XXX S.f.”). The proposed setback from the southern lot line is five feet for a

² As the proposed project is a reconstruction of a dwelling on a nonconforming lot, the nonconformity is increased and a special permit is required under G.L. c. 40A, s. 6. See Zoning Compliance below and Bjorklund v. Zoning Board of Appeals of Norwell, 450 Mass. 357 (2008).

deck and twelve feet for the dwelling, both of which are nonconforming. A variance will be required for this new nonconformity. The height of the existing dwelling is reported as 30.3 feet (nonconforming); the proposed is 30.1 feet (nonconforming). The elevations submitted indicate a peak ridge height of 90.3 feet. The dwelling itself has a modest footprint, but a terrace, screened porch, deck and covered porch add significantly to it.

As reported in the Zoning Table, paved areas will remain at 1,500 square feet; walkways and terrace areas will increase from 0 to 322 square feet. Lot coverage will decrease from 4,441 to 3,870 square feet, or from 3.1% to 2.7%. A new paved drive and gravel parking area are proposed. Regrading in the area of the new house site, and re-landscaping of the abandoned house site will occur.

Floor plans indicate that there will be a “main level”; “lower level” and “basement” (partially finished) and that the house will have two bedrooms. The elevations suggest a half-story above the “main level” but no information is provided. Exterior material is indicated to be red cedar shingles.

The lighting proposed may merit some attention. The three bollards proposed for the parking area (see Sheet A1, bollards identified as “1”) have an option for a “very long but narrow downward illumination” and another for a “forward throw beam pattern.” The tier lights proposed between the parking area and the house (“2” on Sheets A1 and A2) and other locations outside the house should be confirmed as illuminating downward only. The Mouse lights (“3”) and Mast lights (“4”) mounted on the exterior of the house appear to conform to the Town’s requirements.

Sufficiency of Application

Gross Floor Area for the new dwelling is not provided. The floor plans provided are not stamped and do not include square footage. The elevations provided are not stamped and provide little detail. A limit of work is not indicated. The Checklist indicates that NHESP jurisdictional information is provided, but that does not appear to be the case. This property is located within mapped Priority Habitat (PH945). The Board may wish to ask the Applicant for at least initial correspondence with the Division regarding the project.

Review Criteria under Section 70.4D

The Application adequately addresses the Review Criteria of Section 70.4D. The Board may determine based on its site visit and further knowledge of the area whether the project meets applicable Criteria. The lot is surrounded by National Seashore property.

Zoning Compliance

Seashore District Total Gross Floor Area

The Zoning Table indicates the current Gross Floor Area as 3,167 square feet; the proposed Gross Floor Area is not provided. At 3.3 acres, the maximum Gross Floor Area as of right for the lot would be approximately 3660 square feet. The Applicant must demonstrate compliance.

Expansion of a Nonconforming Structure

Alteration, extension, or reconstruction of a dwelling on a nonconforming lot increases the existing nonconformity and requires a special permit under G.L. c. 40A, s. 6. Bjorklund v. Zoning Board of Appeals of Norwell, 450 Mass. 357 (2008)(nonconforming area). The Applicant has filed with the ZBA for a special permit under G.L. c. 40A, s. 6 and Section 30.7 of the Zoning Bylaw. Hearing has not yet opened.

The height of the existing dwelling is nonconforming at 30.4 feet, and so the ZBA must also make a determination as to whether the proposed structure would intensify this existing nonconformity. See Deadrick v. Zoning Board of Appeals of Chatham, 85 Mass. 539, 549 (2014). Although the height of the proposed structure is 30.1 feet, it does not follow automatically that the new structure does not intensify the existing nonconformity; this turns on the siting of the respective houses and topography, and is a matter of judgment for the ZBA. If the ZBA finds that the proposal increases the intensity of this nonconformity, it would consider whether a special permit may be granted.

Variance

The existing house conforms to setbacks; the proposed house is located within five feet of the southern lot line. This creates a new nonconformity, requiring a variance under G.L. c. 40A, s. 10. The Applicant has filed with the ZBA for a variance under G.L. c. 40A, s. 10. Hearing has not yet opened.

Draft Decision

A draft decision is circulated with this Staff Memo. For the sake of convenience only, it is in the form of a permit grant, in case the Board approves the proposal.

2020-011/PB – 23 Perry Road (Map 45, Parcel 131). Application of Samantha Perry, Hillside Farm, LLC for a determination that submitted Plan does not require approval under the Subdivision Control Law (endorsement as “Approval Not Required” under G.L. c. 41, s. 81).
CONTINUED HEARING – EXTENSION GRANTED - BOARD ACTION DUE BY JANUARY 20TH

Update:

Counsel for the Applicant to provide more robust title evidence supporting argument that the land subject to the ANR has not been in common ownership or control on or after September 30, 1994, with additional acreage totaling 30 contiguous acres or more. If this argument is not sufficiently supported, then the application is subject to referral to the Cape Cod Commission as a DRI.



Town of Truro Planning Board

P.O. Box 2030, Truro, MA 02666

APPLICATION FOR RESIDENTIAL SITE PLAN REVIEW

To the Town Clerk and the Planning Board of the Town of Truro, MA Date November 9, 2020

The undersigned hereby files an application with the Truro Planning Board for the following:

- Site Plan Review** pursuant to §70 of the Truro Zoning Bylaw
- Waiver of Site Plan Review** pursuant to §70.9 of the Truro Zoning Bylaw
(Note: **Site Plan Review shall not be waived in the Seashore District**)

1. General Information

Description of Property and Proposed Project Locus is a 28,010 sq. ft. parcel in the Seashore District improved with a two story single family dwelling. Applicants propose an addition to the east side of the house, reconfiguration of the interior space, and a new screened porch with second floor deck to the north side of the house.

Property Address 38 Cliff Road Map(s) and Parcel(s) 32-19

Registry of Deeds title reference: Book 33307, Page 344, or Certificate of Title Number N/A and Land Ct. Lot # N/A and Plan # N/A

Applicant's Name Katherine S. Cook and Christine Van Genderen

Applicant's Legal Mailing Address 171 Imperial Avenue, Westport, CT 03840

Applicant's Phone(s), Fax and Email (203) 247-7242; cvangen171@gmail.com

Applicant is one of the following: (please check appropriate box) *Written Permission of the owner is required for submittal of this application.

- Owner
- Prospective Buyer*
- Other*

Owner's Name and Address (same)

Representative's Name and Address Benjamin E. Zehnder / La Tanzi, Spaulding & Landreth P.O. Box 2300 Orleans, MA 02653

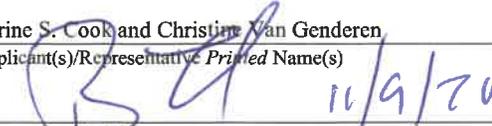
Representative's Phone(s), Fax and Email (508) 255-2133 ext. 128 (508) 255-3786; bzehnder@latanzi.com

2. Waiver(s) Request – The Planning Board may, upon the request of the applicant, pursuant to §70.4.F, waive requirements of §70.4.C, provided that in the opinion of the Planning Board such a waiver would not be detrimental to the public interest, cause the Town any expense, or be inconsistent with the intent and purpose of this Bylaw. A request for a waiver by the applicant shall be accompanied by a reasonable explanation as to why the waiver is being requested. If multiple waivers are requested, the applicant shall explain why each waiver is requested.

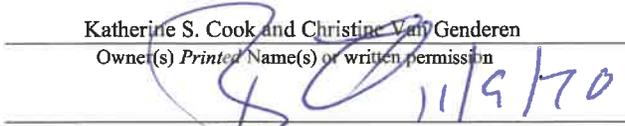
- The applicant is **advised** to consult with the Building Commissioner, Planning Department, Conservation Department, and/or Health Department prior to submitting this application.

Signature(s)

Katherine S. Cook and Christine Van Genderen
Applicant(s)/Representative Printed Name(s)

 11/9/20
Applicant(s)/Representative Signature(s)

Katherine S. Cook and Christine Van Genderen
Owner(s) Printed Name(s) or written permission

 11/9/20
Owner(s) Signature(s) or written permission

Your signature on this application authorizes the Members of the Planning Board and town staff to visit and enter upon the subject property.

Elizabeth Sturdy

From: Benjamin E. Zehnder <BZehnder@latanzi.com>
Sent: Monday, January 4, 2021 12:05 PM
To: Elizabeth Sturdy; 'Barbara Huggins Carboni'
Subject: FW: 38 Cliff Road
Attachments: 38 Cliff Road Plans stamped.pdf

e2DraftID: b907d25228

Hi Liz:

I am attaching for the Planning Board files a copy of the architectural plans with the architect's stamp on them.

My best,

Ben

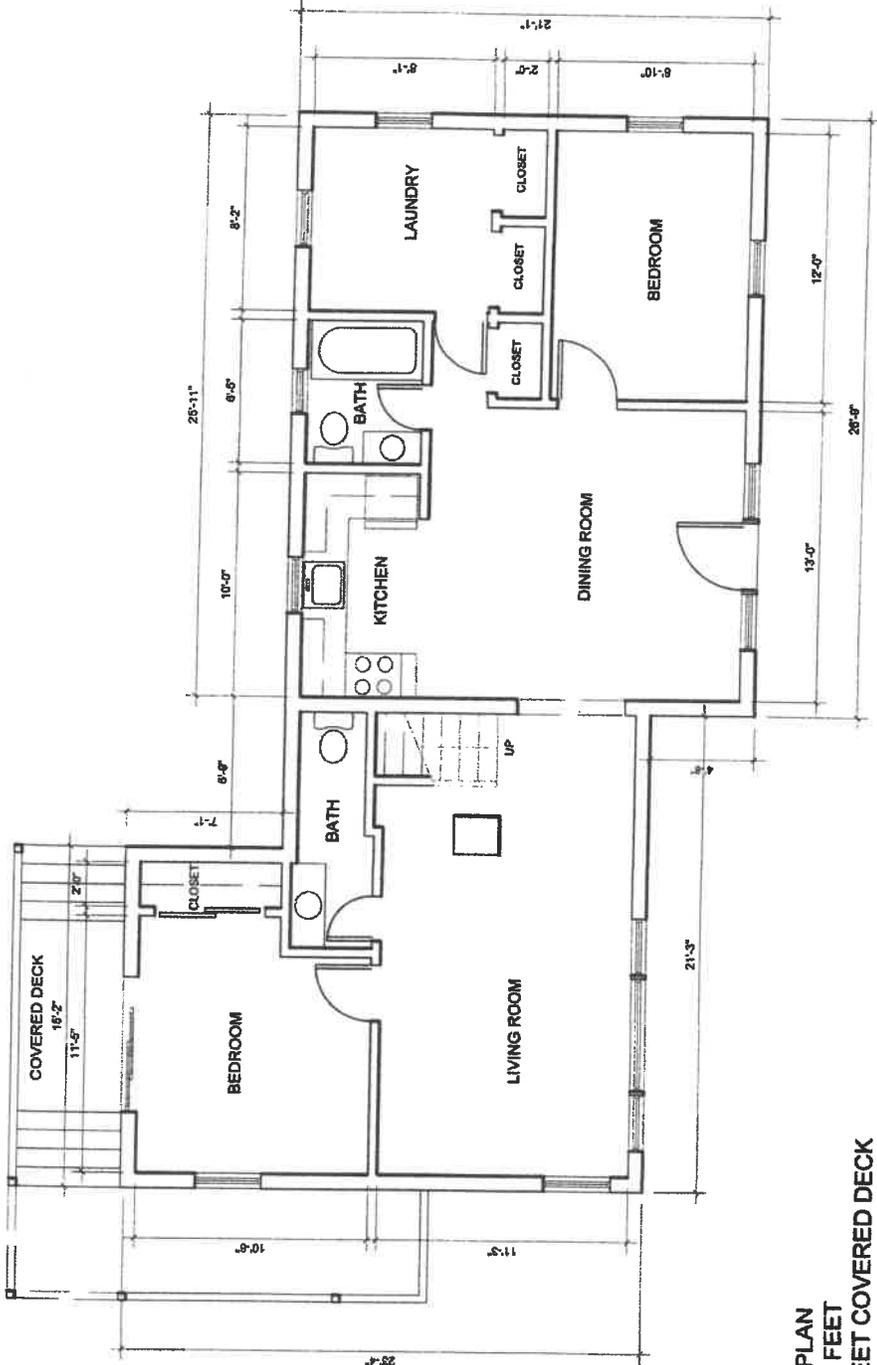
Benjamin E. Zehnder
La Tanzi, Spaulding & Landreth
8 Cardinal Lane; P.O. Box 2300
Orleans, MA 02653
(508) 255-2133
(508) 255-3786 (fax)
(508) 246-4064 (mobile)
bzehnder@latanzi.com
Orleans/Provincetown/Barnstable



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Office of Town Clerk
 Treasurer - Tax Collector
 2020-005/SRR
 JAN 04 2021
 Supplemental
 Received TOWN OF TRURO
 By *Thomas J. Dwyer*

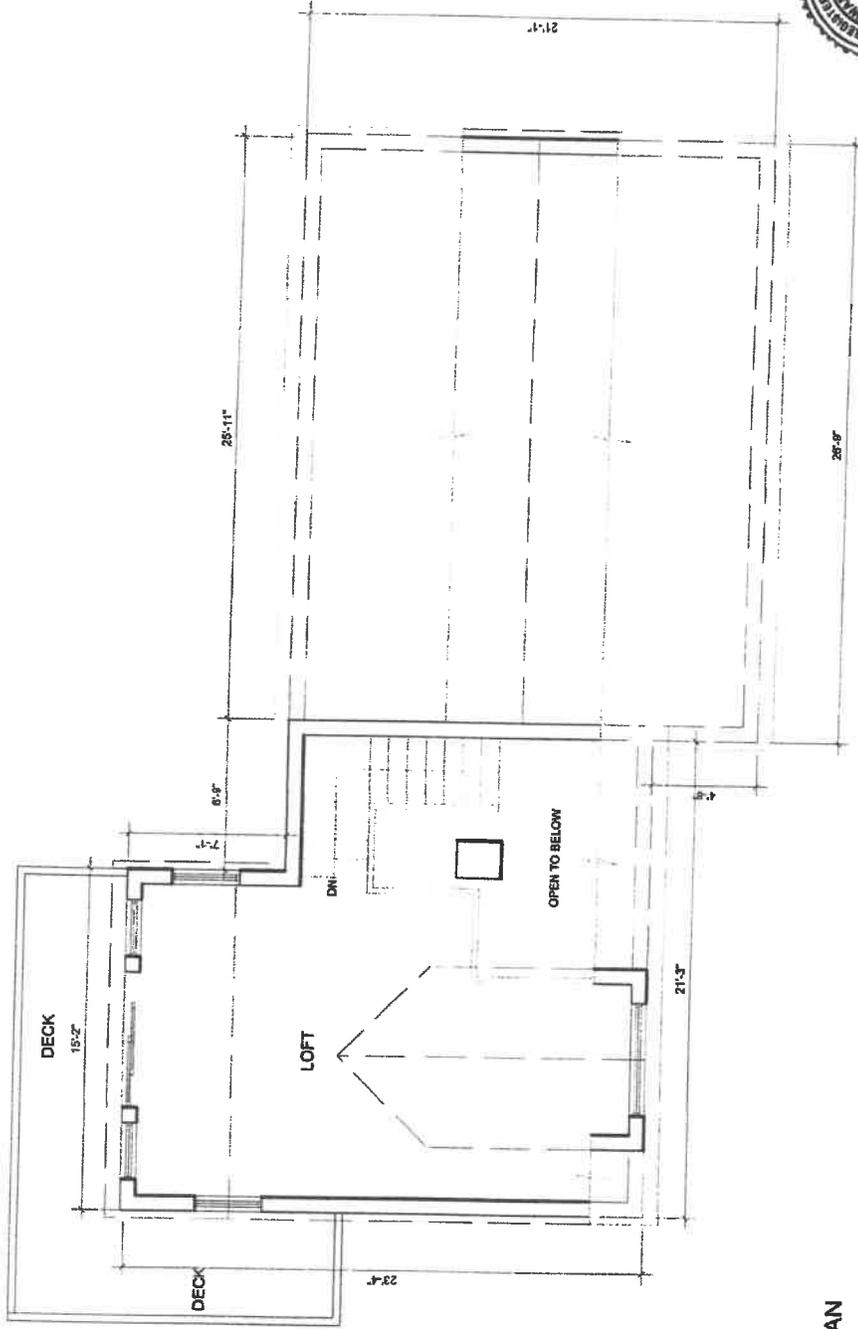


FIRST FLOOR PLAN
 1,020 SQUARE FEET
 76 SQUARE FEET COVERED DECK



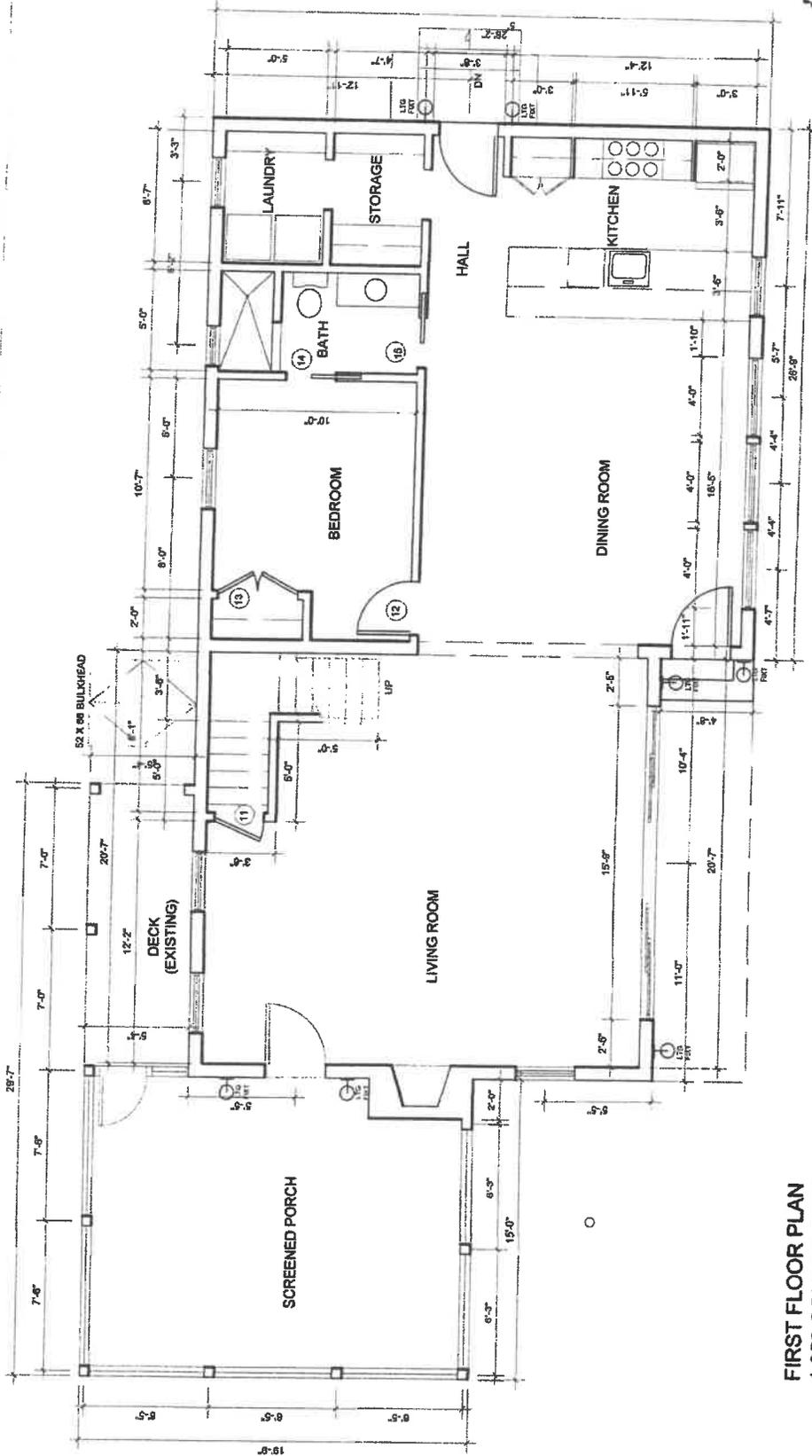
Ted Smith

PROJECT TITLE 38 CLIFF ROAD Truro, Massachusetts	DRAWING TITLE EXISTING FIRST FLOOR PLAN		SHEET NO. E1.1
	SCALE 3/16" = 1'-0"	DATE 26 OCTOBER 2020	
PROJECT TITLE TED SMITH Architect, LLC 12 Dismouth Place, Boston 422 Commers 617 343 0020 TEDSMITHARCHITECT@GMAIL.COM			



**SECOND FLOOR PLAN
369 SQUARE FEET**

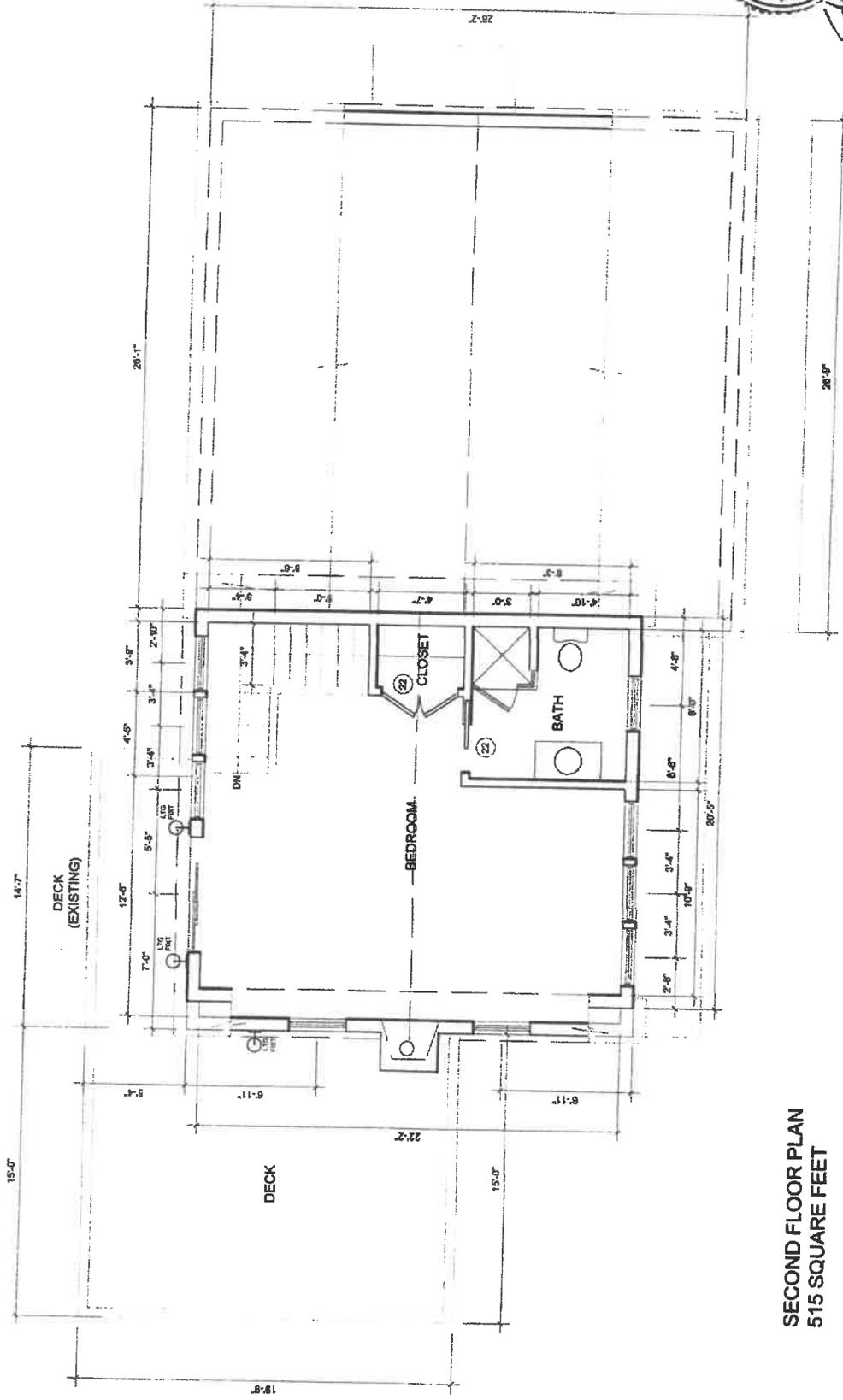
<p>TED SMITH Architect, LLC 12 Danvers Park Place, Boston 422 Commercial Street, Provincetown 019 TEDSMITHARCHITECT@GMAIL.COM</p>	<p>PROJECT TITLE</p> <p>38 CLIFF ROAD Truro, Massachusetts</p>	<p>DRAWING TITLE</p> <p>EXISTING SECOND FLOOR PLAN</p>	<p>SCALE</p> <p>3/16" = 1'-0"</p> <p>DATE</p> <p>26 OCTOBER 2020</p>	<p>SHEET NO</p> <p>E1.2</p>
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FIRST FLOOR PLAN
1,252 SQUARE FEET
373 SQUARE FEET PORCH / DECK



<p>TED SMITH Architect, LLC 12 Dummer@ Place - Boston 422 Commercial Street - Provincetown TELSMITH@ARCHITECT@GMAIL.COM</p>	<p>PROJECT TITLE 38 CLIFF ROAD Truro, Massachusetts</p>	<p>DRAWING TITLE PROPOSED FIRST FLOOR PLAN</p>	<p>SCALE 3/16" = 1'-0"</p>	<p>SHEET NO A1.1</p>
			<p>DATE 26 OCTOBER 2020</p>	



**SECOND FLOOR PLAN
515 SQUARE FEET**

TED SMITH
 Architect, LLC
 12 Darnmouth Place, Boston
 422 Commercial Street, Provenance
 MA 02117, 02220
 TEDSMITHARCHITECT@GMAIL.COM

PROJECT TITLE

**38 CLIFF ROAD
 Truro, Massachusetts**

DRAWING TITLE

PROPOSED SECOND FLOOR PLAN

SCALE 3/16" = 1'-0"

DATE 26 OCTOBER 2020

REVISION

A1.2

Elizabeth Sturdy

From: Benjamin E. Zehnder <BZehnder@latanzi.com>
Sent: Monday, January 4, 2021 6:09 PM
To: Elizabeth Sturdy
Subject: FW: 38 Cliff Road
Attachments: 933001 Dec 16 2020- CONTOURS Layout1.pdf

e2DraftID: 789ef2eb7b

Hi Liz:

I am attaching for the Board the contour plan that they asked for. Please see below also the engineer's note that the grade change is minimal.

I will drop off hard copies of both this and the architects stamped plan in Wednesday morning.

My best,

Ben

Benjamin E. Zehnder
La Tanzi, Spaulding & Landreth
8 Cardinal Lane; P.O. Box 2300
Orleans, MA 02653
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(508) 255-3786 (fax)
(508) 246-4064 (mobile)
bzehnder@latanzi.com
Orleans/Provincetown/Barnstable



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From: Donald T. Poole PLS <dpoole@outermostlandsurvey.com>

Sent: Monday, January 4, 2021 4:06 PM

To: Benjamin E. Zehnder <BZehnder@latanzi.com>

Subject: RE: 38 Cliff Road

Good afternoon,

Attached is a pdf of the plan with contours. We will drop the signed and stamped plan off at your office tomorrow.

I did take a look at the shed and potential grading. It doesn't appear that a grading plan would be necessary as it's a very small area with little grade change.

Dtp

Donald T. Poole PLS
Outermost Land Survey, Inc.
46 Main Street, Brewster MA 02631
508-255-0477

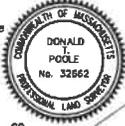
BEWARE! WIRE FRAUD IS ON THE RISE.

Accepting wire and disbursement instructions by email is dangerous, especially changes to those instructions. Verify by calling the originator of the email using previously known contact information prior to sending funds.

I hereby certify that the structures shown hereon are located as they exist on the ground.

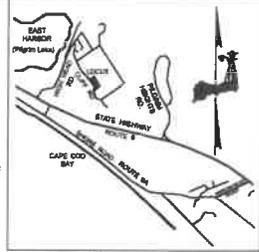
Donald T. Poole PLS #32662 Date

Cape Cod National Seashore
USA Dept. of the Interior



PLAN NOTES:

- 1) Property is located within the Seashore Zoning District
- 2) Bearings are based on MA Coordinate System NAD83
- 3) Elevations are based on NAVD88
- 4) Existing Grade = $61.8+60.5+63.0+63.3+63.5+64.1+63.0 = 439.2 / 7 = 62.7'$ NAVD88
- 5) Existing Ridge Height = $84.8' - 62.7' = 22.1'$
- 6) Proposed Ridge Height = Fin Fir ($65.9'$) + $22.9'$ (Proposed Ridge) = $88.8' - 62.7' = 26.1'$



LOCUS Map Not to Scale

Cape Cod National Seashore
USA Dept. of the Interior

R = 10.00'
A = 15.71'

Holden Avenue ~ 30' Way
N 54°37'26" E 123.58'

#38 Cliff Road
Area = 28,010 ± Sq.Ft.
or 0.64 Acres

R = 10.00'
A = 16.08'

100' from the Zone AE Elex. Fr.
From FEMA Map#25001C0134J

Cliff Road ~ 40' Way
N 37°09'12" W 189.76'

Mayflower Road ~ 30' Way
S 35°22'34" E 190.00'

Chatham Avenue ~ 30' Way
S 54°37'26" W 136.59'

#40 Cliff Road
Peter R. Clemons et al
Deed Book 32632, Page 23
Lot 511 Plan Book 20, Page 5

100' from the Edge of
Wetland from DEP

Cape Cod National Seashore
USA Dept. of the Interior

Top of Bank



Plan of Land
#38 Cliff Road, Truro
prepared for
Katherine S. Cook & Christine Van Genderen
Deed Book 333507, Page 344
Lots 507, 508, 509, 510
Plan Book 20, Page 5
Scale 1" = 20' Dec. 23, 2020
ols #933001

Elizabeth Sturdy

From: McKean, Lauren <Lauren_McKean@nps.gov>
Sent: Wednesday, December 16, 2020 3:50 PM
To: Benjamin E. Zehnder; Elizabeth Sturdy; Barbara Huggins Carboni
Cc: Charles B. Zehnder; Ted Smith (tedsmitharchitect@gmail.com); Kaye McFadden (capetip1967@icloud.com); Carlstrom, Brian; Poole, Don (dpoole@outermostlandsurvey.com)
Subject: Re: [EXTERNAL] RE: Truro PB Site Plan Review application / 38 Cliff Road (Assessor's Parcel ID 32-19)

Barbara, Elizabeth, and Ben,

Our concerns are for the scale and massing in prominent viewpoint locations, such as High Head. We ask that the Truro boards give this issue due consideration in plan review. Additionally, our files yield:

This property has been found to be ineligible for a Certificate of Suspension from Condemnation as it was built after the Sept. 1, 1959 cutoff date established by the park's legislation.

The NPS can acquire the property without the owner's consent, and acquisition by the federal government would be at fair market value determined by a contracted appraisal.

In a quick review of our records, the house was expanded in 1977 and 1983. In 1983 a 240 square foot barn was constructed. A 80 square foot shed was constructed in 1985. And, another house expansion occurred in 1989.

As there is no Certificate of Suspension from Condemnation for this property because it is ineligible, we prefer to see adherence to the town zoning to the maximum extent.

Thank you,
Lauren

Lauren McKean, AICP
Park Planner
Cape Cod National Seashore
508-957-0731

From: Benjamin E. Zehnder <BZehnder@latanzi.com>
Sent: Tuesday, December 8, 2020 5:35 PM
To: Elizabeth Sturdy <ESturdy@truro-ma.gov>
Cc: Barbara Huggins Carboni <BHugginsCarboni@k-plaw.com>; Charles B. Zehnder <CZehnder@latanzi.com>; Ted Smith (tedsmitharchitect@gmail.com) <tedsmitharchitect@gmail.com>; Kaye McFadden (capetip1967@icloud.com) <capetip1967@icloud.com>; McKean, Lauren <Lauren_McKean@nps.gov>; Carlstrom, Brian <Brian_Carlstrom@nps.gov>; Poole, Don (dpoole@outermostlandsurvey.com) <dpoole@outermostlandsurvey.com>
Subject: [EXTERNAL] RE: Truro PB Site Plan Review application / 38 Cliff Road (Assessor's Parcel ID 32-19)

38 Cliff Road, Parcel 32-19

Planning Board Site Plan Review - 2020-005/SPR

Zoning Board of Appeals – 2020-007/ZBA

Prepared by B. Zehnder for Applicant

BZ.

Supplemental Narrative – December 15, 2020

1. The existing foundation will be maintained as is and repaired if necessary. The existing foundation is a crawl space under the main portion of the house and a full 8' foundation under the north ell housing the furnace. The proposed screen porch will be constructed on sonotubes and the rear addition will be constructed on a new poured concrete 4' wall.
2. There will be no habitable space in the basement.
3. The work limit will be 12' around the rear of the new structure limits.
4. Existing vegetation within the work limit will be removed and following construction the area will be graded and seeded to prevent weed growth.
5. The area to the rear of the house on the southwest side will be regraded down to the level of the existing shed and seeded.

END

STAFF MEMORANDUM

To: Truro Planning Board

From: Barbara Carboni, Interim Town Planner/Town Counsel, KP Law

Date: December 15, 2020

Re: Meeting December 16, 2020

2020-001/PB – Property at 4-H Bay View Road (Map 39, Parcel 77) and 3 Laura’s Way (Map 39, Parcel 325). Application of Nathan A. Nickerson III for approval of a Definitive Subdivision Plan of Land **CONTINUED HEARING**

Updates

On December 14, 2020, counsel for the Applicant submitted a “request, without confirmation of applicability, waiver for relief from applicability for a waiver of Subdivision Rules and Regulations,” in particular, 3.6.6 Dead-end streets. This Regulation limits dead-end streets to 1,000 feet (and imposes other requirements).

Chief Collins has reached out to the State Division of Fire Safety (Department of Fire Services) for input.

2020-005/SPR – 38 Cliff Road (Map 32, Parcel 19). Application of Katherine S. Cook and Christine Van Genderen for a Residential Site Plan Review for alterations to dwelling on property located in the Seashore District

Existing Conditions and Proposed Project.

This property is located in the Seashore District, nonconforming as to lot area (.64 acres where 3 acres required) and as to setback of the existing house from Cliff Road (16.5 feet where 50 feet required). A shed encroaches into the side yard setback from the property boundary with 40 Cliff Road. Cliff Road is unpaved. According to Assessor’s records, the house was constructed in 1950.

According to the plans submitted, the existing first floor contains 1,020 square feet plus a 76 square feet covered deck, and the second floor contains 369 square feet, for a total of 1,389 square feet (plus the 76 sq ft deck). Based on the application materials and the applicant’s presentation to the ZBA on December 14, 2020 (for a special permit), the proposed project removes most of the existing dwelling and reconstructs it on a somewhat enlarged footprint. According to the plans submitted, a screened porch of 296 square feet will be constructed on the north side of the house, and an additional 213 square feet of living space will be constructed on the east side of the house (rear). The plans provide a proposed square footage of 1,252 square

feet, plus 373 square feet porch/deck, for the first floor, and 515 square feet for the second floor, for a total of 1,767 square feet plus the 373 sq ft porch/deck. The height of the dwelling will increase from an existing ridge height of 22.1 feet above grade to 26.1 feet above grade (see Site Plan Notes). As indicated on the elevations provided, there are additional alterations to the structure that might be best described at the hearing.

Sufficiency of Application

The Plan of Land submitted does not contain a Zoning Table, but most relevant dimensions are provided on a separate “Zoning Table” submitted. Waivers are requested in the Checklist from certain requirements (e.g., topography and grading plan; existing and proposed lighting; existing landscape; limit of work area; landscaping plan). The Board’s site visit will inform the Board’s opinion as to whether any of this additional information should be provided.

Review Criteria under Section 70.4D

The Application adequately addresses the Review Criteria of Section 70.4D. The Board may determine based on its site visit and further knowledge of the area whether the project meets applicable Criteria.

Zoning Compliance

Seashore District Total Gross Floor Area

In the Applicant’s separate Zoning Table, Site Coverage is stated as “3126 sf by right.” It appears this is the Applicant’s calculation of Gross Floor Area by right on the .64 acre parcel as this lines up with the illustrative limits contained in Bylaw section 30.3. 1.A.1 (3,100 sq ft for .5 acres; 3,150 sq.ft for .75 acres). Gross Floor Area is not the same as site or lot coverage, but in any event the proposed 2,140 sq ft falls well within the limit of Gross Floor Area as of right for the lot.

ZBA Proceedings - Expansion of a Nonconforming Structure

Alteration of a dwelling on a lot nonconforming as to area increases the existing nonconformity and requires a special permit under G.L. c. 40A, s. 6. Bjorklund v. Zoning Board of Appeals of Norwell, 450 Mass. 357 (2008). The Applicant has filed for a special permit under G.L. c. 40A, s. 6 and Section 30.7 of the Zoning Bylaw. Hearing opened on December 14, 2020. No major issues were flagged, but the ZBA expressed interest in this Board’s review of the proposal and continued public hearing on the special permit until January 25, 2021.

Draft Decision

A draft decision is circulated with this Staff Memo. For the sake of convenience only, it is in the form of a permit grant, in case the Board approves the proposal.

RESIDENTIAL DEVELOPMENT SITE PLAN REVIEW DECISION

Atlas Map 32 Parcel 19

Address 38 Cliff Road

Case Reference No.: 2020-005/SPR

Applicants: Katherine S. Cook and Christine Van Genderen

Hearing Date: December 16, 2020

Decision Date: December 16, 2020

Sitting: *Anne Greenbaum, Chair; Vice Chair; Jack Riemer, Clerk; Paul Kiernan; Bruce Boleyn; Steve Sollog; Peter Herridge*

Following a duly posted and noticed Truro Planning Board hearing held on December 16, 2020, the Board voted to approve the application for Residential Development Site Plan Review pursuant to Section 70.4 of the Truro Zoning Bylaw for additions to an existing residence on property located at 38 Cliff Road, Map 32, Parcel 19, in the Seashore District.

The following materials were submitted as part of the complete application for review:

- Application for Site Plan Review (Residential)
- Certified Abutters List
- “Plan of Land, #38 Cliff Road, Truro, prepared for Katherine S. Cook & Christine Van Genderen, Deed Book 333507, Page 344, Lots 507, 508, 509, 510, Plan Book 20, Page 5” prepared by Outermost Land Survey, Inc., Scale 1”= 20’ dated October 23, 2020
- “38 Cliff Road, Truro, Massachusetts,” prepared by Ted Smith Architect, LLC, Scale 3/16th= 1’ 0” dated October 26, 2020, Sheets E1.1-E1.2; E2.1-E2.4, inclusive; A1.1 (revised December 12, 2020), A1.2 (revised December 12, 2020); A2.1, A2.s, A2.3, A2.5.
- “38 Cliff Road – Planning Board Site Plan Review Zoning Table” dated November 9, 2020
- Review Criteria form, completed
- Residential Site Plan Review Checklist
- Product specifications for lighting fixture
- Town of Truro Assessor’s Records and photographs
- Pilgrim Heights Plan
- Quitclaim Deed

Board Vote:

At the December 16, 2020 meeting, M. made a motion, seconded by M. , to approve the application for residential development site plan. Vote was 0-0 in favor.

The application of Katherine S. Cook and Christine Van Genderen for Residential Site Plan approval pursuant to s. 70.4 of the Truro Zoning Bylaw was granted by the Planning Board.

This decision is pursuant to the following facts and conditions:

Findings:

1. This is an application by Katherine S. Cook and Christine Van Genderen for Residential Site Plan Review pursuant to Section 70.4 of the Truro Zoning Bylaw (“Bylaw”). Residential Site Plan Review is required under Section 70.4 of the Zoning Bylaw, as the project is an addition to an existing single-family dwelling in the Seashore District.
2. The Property is located at 38 Cliff Road and is shown on Truro Assessor’s Map 32, Parcel 19. The Property contains .64 acres and is located in the Seashore District. The lot is nonconforming as to lot area where three acres are required, and as to front setback from Cliff Road (16.5 feet where 50 feet required).
3. The existing single-family house is located toward the southwest corner of the property. It contains a total of 1,389 square feet, plus a 76 foot covered deck. The first floor contains 1,020 square feet plus the deck; the second floor contains 369 square feet.
4. The proposed project removes most of the existing dwelling and reconstructs it on a somewhat enlarged footprint. A screened porch of 296 square feet will be constructed on the north side of the house, and an additional 213 square feet of living space will be constructed on the east side of the house (rear). The total [GROSS FLOOR AREA?] will be 1,767 square feet plus a 373 square foot porch/deck. The first floor will contain 1,252 square feet, plus the deck; the second floor will contain 515 square feet. The height of the dwelling will increase from an existing ridge height of 22.1 feet above grade to 26.1 feet above grade.
5. No additional alterations to the property are proposed.
6. The Board has reviewed all plans with respect to this Application and has found that they comply with all requirements set forth in Section 70.4(C) of the Bylaw.
7. The Board found that the house will be reconstructed in a manner that is in keeping with the scale of the existing building and other buildings in the neighborhood. This contributes to preserving the characteristics of the Seashore District.
8. Pursuant to Section 70.4(D) of the Bylaw, the Board found:

- a. Relation of Buildings and Structures to the Environment. The Board finds that the reconstructed dwelling relates to the existing terrain and lot, as it modestly expands the footprint of the existing house and preserves the scale of the existing building.
- b. Building Design and Landscaping. The Board finds that the reconstructed house is in an updated vernacular style consistent with other dwellings in the Seashore District and complementary to the landscape, particularly in its compactness on an undersized Seashore lot. The materials are likewise complementary and appropriate to the location.
- c. Preservation of Landscape. The Board finds that the landscape will be preserved as the house is being expanded only modestly and no new parking areas or other appurtenances will be created.
- d. Circulation. The Board finds that the existing driveway and parking area will adequately and safely serve the expanded house.
- e. Lighting. The Board finds that the lighting proposed for the structure will be consistent with General Bylaw Chapter IV, Section 6, and that adjacent properties and the night sky will be protected from intrusive lighting.

Conditions

1. The use of the Property shall be in strict conformance with the Town of Truro Bylaw;
2. Construction shall conform to the plans referenced in this decision; and
3. The Applicant must obtain a special permit from the Zoning Board of Appeals under Section 30.7 and 30.8, and G.L. c. 40A s. 6, to expand a nonconforming structure.

This Site Plan Approval for a Residential Site Plan shall expire two (2) years from the date of approval.

Pursuant to Zoning Bylaw Section 70.6, it is the responsibility of the applicant to obtain a true attested copy of this decision from the Town Clerk and to record this decision in the Barnstable Registry of Deeds or Land Court, as applicable. Prior to the issuance of building permit, the applicant shall present evidence of such recording to the Building Commissioner and the Planning Board Secretary.

Anne Greenbaum, Chair. Truro Planning Board

Date

Received, Office of the Town Clerk

Signature

Date

DRAFT

Jeffrey Ribeiro

From: bensonclemons@aol.com
Sent: Wednesday, December 2, 2020 2:57 PM
To: Town Planner; Jeffrey Ribeiro
Cc: bensonclemons@aol.com; drewclemons@gmail.com; tomjohnclemons@gmail.com
Subject: 38 Cliff Road

Date: Dec 2, 2020
From: Peter Clemons, Marianne Benson
To: Truro Planning and Zoning Boards
Re: 38 Cliff Road, North Truro (2020-005/SPR)

As neighbors and immediate abutters at 40 Cliff Road, Marianne and I would like to go on record with our support for the plans that Katherine Cook and Christine Van Genderen have submitted to the Truro Planning and Zoning Board.

We have reviewed the planned renovations and we have no problem with an addition to the east side of their house, a reconfiguration of interior space, and a new screened porch with second floor deck to the north side of the home. We hope the Planning Board will find these changes acceptable and thus allow this work to go proceed.

The project definitely meets with our approval. The renovations to the property at 38 Cliff Road seem very appropriate. With respect, Peter Clemons and Marianne Benson

Cell: 617-519-3362
E-Mail: Bensonclemons@aol.com
Snail: 15 Kidder Avenue, Somerville MA 02144

70.4 - RESIDENTIAL SITE PLAN REVIEW CHECKLIST - Applicant

Address: 38 Cliff Road					Applicant Name: Katherine S. Cook and Christine Van Genderen					Date: 11/9/2020				
No.	Requirement	Included	Not Included	Explanation, if needed										
C. Procedures and Plan Requirements														
1a.	An original and 14 copies of the Application for Site Plan Review	X												
1b.	15 copies of the required plans and other required information including this Checklist	X												
1c.	Completed Criteria Review	X												
1d.	Certified copy of the abutters list obtained from the Truro Assessors Office	X												
1e.	Applicable filing fee	X												
	Site Plans													
2a.	Site Plans shall be prepared, stamped and signed by a Registered Land Surveyor and Professional Engineer	X												
2b.	Site Plans shall be prepared at a scale of one inch equals forty feet (1"=40') or larger	X												
3	Site Plan shall include the following:													
3a. 1	North Arrow and a locus plan containing sufficient information to locate the subject property, such as streets bounding or providing access to the property.	X												
3a. 2	Zoning Information: All applicable Zoning Bylaw information regarding the site's development, both existing and proposed conditions. This information shall be placed in a table format which must list all setbacks; percent of lot coverage, broken out between building, pavement, landscape coverage, etc.; number of buildings; total amount of square feet; and any other applicable zoning information necessary for the proper review of the site plan.	X							Zoning information which is not listed on Site Plan is included on separate table prepared by applicants' attorney filed herewith.					
	<u>Existing:</u>													
	All setbacks	X												
	Percent (%) of lot coverage broken out between building, pavement, landscape coverage, etc.;	X							See separate table filed herewith.					
	Number of buildings	X												
	Total number of square feet	X												
	Any other applicable zoning information necessary for the proper review of the site plan													

70.4 - RESIDENTIAL SITE PLAN REVIEW CHECKLIST - Applicant

Address: 38 Cliff Road					Applicant Name: Katherine S. Cook and Christine Van Genderen					Date: 11/9/2020				
No.	Requirement	Included	Not Included	Explanation, if needed										
	Proposed:													
	All setbacks	X												
	Percent (%) of lot coverage broken out between building, pavement, landscape coverage, etc.;	X		See separate table filed herewith.										
	Number of buildings	X												
	Total number of square feet													
	Any other applicable zoning information necessary for the proper review of the site plan													
3a. 3	Assessor and Deed Information: The Truro Assessors Atlas Map(s) and Parcel(s) numbers and all plan and deed references.	X												
3a. 4	Graphic Scale	X												
3a. 5	Title Block - Including:	X												
	name and description of the project;	X												
	address of the property;	X												
	names of the record owner(s) and the applicant(s); and	X												
	date of the preparation of the plan(s) and subsequent revision dates	X												
3a. 6	Legend of All Symbols		X	Waiver requested.										
3a. 7	Property boundaries, dimensions and lot area	X												
3a. 8	Topography and grading plan		X	Waiver requested.										
3a. 9	Location, including setbacks of all existing and proposed buildings and additions	X												
3a. 10	Septic system location	X												
3a. 11	Location of (as applicable):													
	wetlands	X												
	the National Flood Insurance Program flood hazard elevation, and	X												
	Massachusetts Natural Heritage Endangered Species Act jurisdiction		X	None.										
3a. 12	Driveway(s) and driveway opening(s)	X												
3a. 13	Existing and proposed lighting		X	Waiver requested.										
3a. 14	Existing landscape features both vegetative and structural		X	Waiver requested.										
3a. 15	Limit of work area (area to be disturbed during construction, including parking and storage of vehicles and equipment) and work staging area(s)		X	Waiver requested.										

70.4 - RESIDENTIAL SITE PLAN REVIEW CHECKLIST - Applicant

Address: <u>38 Cliff Road</u>					Applicant Name: <u>Katherine S. Cook and Christine Van Genderen</u>					Date: <u>11/9/2020</u>				
No.	Requirement	Included	Not Included	Explanation, if needed										
	Architectural Plans													
3b.	Architectural plans with all dimensions at a scale of no less than 1/8" = 1'-0", including:	X												
	elevations	X												
	floor plans	X												
3c.	Lighting specification, including style and wattage(s)	X		See lighting specification sheets.										
	Neighborhood Context:													
3d.	Photographs or other readily available data concerning the location and size of buildings on lots adjacent to or visible from the lot under consideration in order to provide a neighborhood context for the property under consideration	X												
3e.	Re-vegetation/Landscaping plan , including both vegetative and structural features		X	Waiver requested.										

ADDRESSING THE REVIEW CRITERIA

§ 70.1 PURPOSE

The purpose of Site Plan Review for Commercial Development and for Residential Development is to protect the health, safety, convenience and general welfare of the inhabitants of the Town. It provides for a review of plans for uses and structures which may have significant impacts, both within the site and in relation to adjacent properties and streets; including the potential impact on public services and infrastructure; pedestrian and vehicular traffic; significant environmental and historic resources; abutting properties; and community character and ambiance.

Instructions: Please provide the Planning Board with a short explanation of how your application meets each of the review criteria of §70.4D of the Truro Zoning Bylaw. If you require extra space for your answers, please attach the additional information to your application in no more than two pages. This is to provide the Planning Board with an overview of your rationale prior to the meeting.

§70.4D – REVIEW CRITERIA

The Planning Board shall review Residential Site Plans and their supporting information. It is the intent of Residential Site Plan Review that all new construction shall be sited and implemented in a manner that is in keeping with the scale of other buildings and structures in its immediate vicinity in order to preserve the characteristics of existing neighborhoods. Such an evaluation shall be based on the following standards and criteria:

1. Relation of Buildings and Structures to the Environment. Proposed development relates to the existing terrain and lot and provides for solar and wind orientation which encourages energy conservation because:

Applicants do not propose any change to the placement or orientation of the existing dwelling structure or to the existing terrain and topography. The proposed design will increase the structure's energy efficiency by renovating the building and re-configuring the internal layout to provide additional glazing to the southwest in order to provide solar gain, and the open floor plan layout will promote better heating, cooling, and airflow. In addition, the proposed screened porch will promote airflow through the house from the northwest, which will provide natural cooling in the summer and promote energy conservation.

2. Building Design and Landscaping. Proposed development is consistent with the prevailing character and scale of the buildings and structures in the neighborhood through the use of appropriate scale, massing, building materials, screening, lighting and other architectural techniques because:

Please see attached Assessing map detail and photographs of existing dwellings in the closest developed neighborhood to locus, which is the area northeast of Bradford Road. The applicants' proposal involves minimal change to the scale and massing of the existing structure and is consistent with the scale, massing, type of building materials and architectural styles in the High Head area. The applicants do not propose any new vegetative screening or lighting.

3. **Preservation of Landscape.** The landscape will be preserved in its natural state insofar as practicable by minimizing any grade changes and removal of vegetation and soil because:

The applicants intend to preserve the landscape in its existing condition. They do not propose any grade changes or vegetation or soil removal, other than the minimal removals necessary to construct the proposed addition and screened porch.

4. **Circulation.** Curb cuts and driveways will be safe and convenient and will be consistent with Chapter I, Section 9 of the General Bylaws of the Town of Truro because:

The property and existing dwelling have a simple driveway which is accessed via Cliff Road, a dirt way. The existing access is safe and convenient for the neighborhood, and the applicants do not propose any new curb cuts, driveways, or changes to the existing road conditions.

5. **Lighting.** Lighting will be consistent with Chapter IV, Section 6 of the General Bylaws of the Town of Truro. There will be protection of adjacent properties and the night sky from intrusive lighting because:

Please see lighting specification sheets filed herewith. The applicants propose a limited number of downward cast exterior fixtures at the entrances to the dwelling, for safety. These will not intrude on the night sky or impact adjacent properties.

38 Cliff Road – Planning Board Site Plan Review Zoning Table
November 9, 2020

	<u>Required</u>	<u>Existing</u>	<u>Proposed</u>
<u>Lot Area</u>	3 Acres	27,443 sf	27,443 sf
<u>Street Yard Setback</u>	50 feet	16.5 ft.	16.5 ft.
<u>Interior Yard Setback</u>	25 feet	33.1 feet	32.1 feet
<u>Lot Coverage - Building</u>	NA	1096 sf	1252 sf
<u>Site Coverage</u>	3126 sf by right	1465 sf	2140 sf
<u>Number of Buildings</u>	NA	2	2

PRODUCT SPECIFICATIONS

Item #	A2949
Finish	Carbon
Socket Type	E26
Projection	18"
Shade	B1700-16 in-AJ
Shade SKU	B1700-16 in-AJ
Wire Bulb Guard	None
Maximum fixture wattage per socket	300 W
UL Listing	UL Listed Wet
Canopy	5"
Overall fixture width	16"
Length	20-7/8"
Overall fixture depth	26"
Shade height	7"



11:40

5G

rejuvenation.com



\$499.00

1



ADD TO CART

You're all set.

You've made your selections for the Carson Gooseneck Wall Sconce.

Your custom product is ready to be added to your cart.



PROJECTION

18 inches wall to center socket

SHADE

16" Matte Black Deep Dome



TOWN OF TRURO COPY

Assessors Office

Certified Abutters List

Request Form



DATE: November 3, 2020

NAME OF APPLICANT: Katherine S. Cook and Christine Van Genderen

NAME OF AGENT (if any): Benjamin E. Zehnder / La Tanzi, Spaulding & Landreth P.O. Box 2300 Orleans, MA 02653

MAILING ADDRESS: 171 Imperial Avenue, Westport, CT 03840

CONTACT: HOME/CELL (203) 247-7232 EMAIL cvangen171@gmail.com

PROPERTY LOCATION: 38 Cliff Road
(street address)

PROPERTY IDENTIFICATION NUMBER: MAP 32 PARCEL 19 EXT. _____
(if condominium)

ABUTTERS LIST NEEDED FOR:
(please check all applicable)

FEE: **\$15.00 per checked item**
(Fee must accompany the application unless other arrangements are made)

- | | | |
|---|---|---|
| <input type="checkbox"/> Board of Health ⁵ | <input type="checkbox"/> Planning Board (PB) | <input type="checkbox"/> Zoning Board of Appeals (ZBA) |
| <input type="checkbox"/> Cape Cod Commission | <input type="checkbox"/> Special Permit ¹ | <input checked="" type="checkbox"/> Special Permit ¹ |
| <input type="checkbox"/> Conservation Commission ⁴ | <input checked="" type="checkbox"/> Site Plan² | <input type="checkbox"/> Variance ¹ |
| <input type="checkbox"/> Licensing | <input type="checkbox"/> Preliminary Subdivision ³ | |
| Type: _____ | <input type="checkbox"/> Definitive Subdivision ³ | |
| | <input type="checkbox"/> Accessory Dwelling Unit (ADU) ² | |
| <input type="checkbox"/> Other _____ | | |
- (Please Specify) (Fee: Inquire with Assessors)

Note: Per M.G.L., processing may take up to 10 calendar days. Please plan accordingly.

THIS SECTION FOR ASSESSORS OFFICE USE ONLY

Date request received by Assessors: Nov 5, 2020 3:15 Date completed: 11/6/2020

List completed by: [Signature] Date paid: Cash/Check 13089

¹Abutters, owners of land directly opposite on any public or private street or way, and abutters to the abutters within 300 feet of the property line.

²Abutters to the subject property, abutters to the abutters, and owners of properties across the street from the subject property.

³Landowners immediately bordering the proposed subdivision, landowners immediately bordering the immediate abutters, and landowners located across the streets and ways bordering the proposed subdivision. **Note:** For Definitive Subdivision only, responsibility of applicant to notify abutters and produce evidence as required.

⁴All abutters within 300 feet of parcel, except Beach Point between Knowles Heights Road and Provincetown border, in which case it is all abutters within 100 feet. **Note:** Responsibility of applicant to notify abutters and produce evidence as required.

⁵A butters sharing any boundary or corner in any direction – including land across a street, river or stream. **Note:** Responsibility of applicant to notify abutters and produce evidence as required.



TRURO ASSESSORS OFFICE
PO Box 2012 Truro, MA 02666
Telephone: (508) 214-0921
Fax: (508) 349-5506

Date: November 6, 2020

To: Katherine Cook & Christine Van Genderen
c/o Benjamin Zehnder & La Tanzi, Spaulding & Landreth
PO Box 2300
Orleans, MA 02653

From: Assessors Department

Certified abutters list application for: 38 Cliff Rd Map 32 Parcel 19.

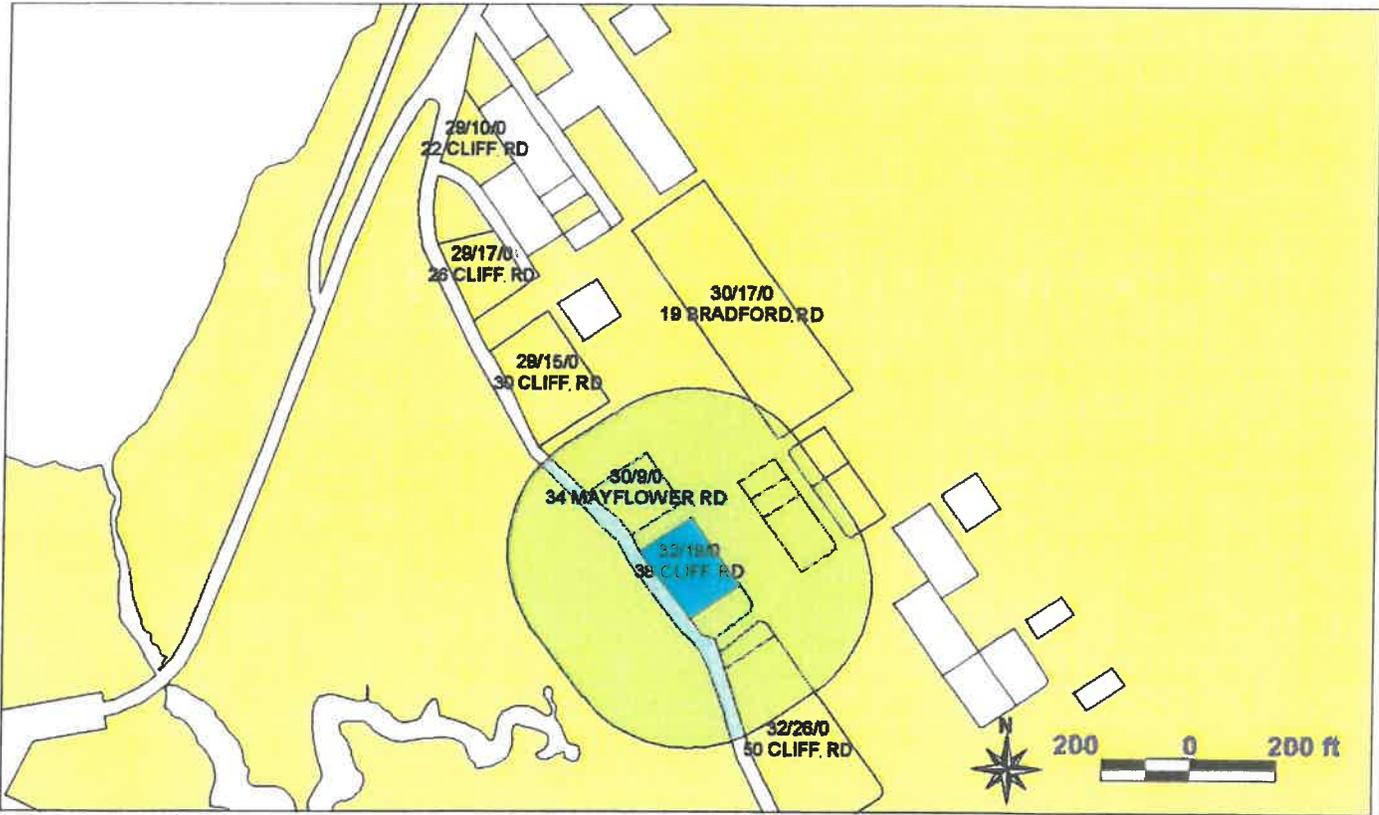
Site Plan-Planning Board:

Attached is a list of Truro abutters for the property located at 38 Cliff Rd. Due to the fact that besides the National Seashore there is only one abutter within 300 feet of the parcel, we have included the property owners along Cliff Rd. The current owner of the property is the Catherine Cook & Christine Van Genderen. The names and addresses of the abutters are as of October 30, 2020 according to the most recent documents received from the Barnstable County Registry of Deeds.

Certified by: _____

Jon Nahas
Principal Assessor
Town of Truro
24 Town Hall Rd
PO Box 2012
Truro, MA 02666
508.214.0917
jnahas@truro-ma.gov

Abutters List Within 300 feet of Parcel 32/19/0



Key	Parcel ID	Owner	Location	Mailing Street	Mailing City	ST	ZipCd/Country
643	29-8-0-R	TWENTY CLIFF ROAD NOM TRUST TRS: MICERA ANNE M ET AL	20 CLIFF RD	29 NEPERA PLACE	HASTINGS ON HUDSON	NY	10706
645	29-10-0-R	STELLO ROBERT & JENNIFER	22 CLIFF RD	PO BOX 776	SO CHATHAM	MA	02659
648	29-13-0-R	RESIKA PAUL & BLAIR	24 CLIFF RD	175 RIVERSIDE DR #6E	NEW YORK	NY	10024
650	29-15-0-E	U S A DEPT OF THE INTERIOR	30 CLIFF RD	CAPE COD NATIONAL SEASHORE 99 MARCONI SITE RD	WELLFLEET	MA	02667
6294	29-17-0-E	U S A DEPT OF THE INTERIOR	26 CLIFF RD	CAPE COD NATIONAL SEASHORE 99 MARCONI SITE RD	WELLFLEET	MA	02667
659	30-9-0-E	U S A DEPT OF THE INTERIOR	34 MAYFLOWER RD	CAPE COD NATIONAL SEASHORE 99 MARCONI SITE RD	WELLFLEET	MA	02667
660	30-10-0-E	U S A DEPT OF THE INTERIOR	13 HOLDEN AVE	CAPE COD NATIONAL SEASHORE 99 MARCONI SITE RD	WELLFLEET	MA	02667
661	30-11-0-E	U S A DEPT OF THE INTERIOR	15 HOLDEN AVE	CAPE COD NATIONAL SEASHORE 99 MARCONI SITE RD	WELLFLEET	MA	02667
662	30-12-0-E	TOWN OF TRURO	39 ALDEN RD	PO BOX 2030	TRURO	MA	02666-2030
663	30-13-0-E	U S A DEPT OF THE INTERIOR	43 ALDEN RD	CAPE COD NATIONAL SEASHORE 99 MARCONI SITE RD	WELLFLEET	MA	02667
664	30-14-0-E	U S A DEPT OF THE INTERIOR	44 ALDEN RD	CAPE COD NATIONAL SEASHORE 99 MARCONI SITE RD	WELLFLEET	MA	02667
667	30-17-0-E	U S A DEPT OF THE INTERIOR	19 BRADFORD RD	CAPE COD NATIONAL SEASHORE 99 MARCONI SITE RD	WELLFLEET	MA	02667
685	32-19-0-R	COOK KATHARINE S & VAN GENDEREN CHRISTINE	38 CLIFF RD	171 IMPERIAL AVE	WESTPORT	CT	03840
700	32-19-A-R	CLEMONS PETER ET AL	40 CLIFF RD	15 KIDDER AVE	SOMERVILLE	MA	02143
691	32-24-0-R	CLEMONS PETER & BENSON MARIANNE	42 CLIFF RD	15 KIDDER AVE	SOMERVILLE	MA	02143

11/6/2020 jr

Key	Parcel ID	Owner	Location	Mailing Street	Mailing City	ST	ZipCd/Country
693	32-26-0-E	U S A DEPT OF THE INTERIOR	50 CLIFF RD	CAPE COD NATIONAL SEASHORE 99 MARCONI SITE RD	WELLFLEET	MA	02667
7292	40-999-0-E	USA-DEPT OF INTERIOR Cape Cod National Seashore	0 CAPE COD NATIONAL SEASHORE	99 Marconi Site Rd	Wellfleet	MA	02667

11/6/2020 jr

<p>TWENTY CLIFF ROAD NOM TRUST TRS: MICERA ANNE M ET AL 29 NEPERA PLACE HASTINGS ON HUDSON, NY 10706</p>	29-8-0-R	<p>STELLO ROBERT & JENNIFER PO BOX 776 SO CHATHAM, MA 02659</p>	29-10-0-R	<p>RESIKA PAUL & BLAIR 175 RIVERSIDE DR #6E NEW YORK, NY 10024</p>	29-13-0-R
<p>U S A DEPT OF THE INTERIOR CAPE COD NATIONAL SEASHORE 99 MARCONI SITE RD WELLFLEET, MA 02667</p>	29-15-0-E	<p>U S A DEPT OF THE INTERIOR CAPE COD NATIONAL SEASHORE 99 MARCONI SITE RD WELLFLEET, MA 02667</p>	29-17-0-E	<p>U S A DEPT OF THE INTERIOR CAPE COD NATIONAL SEASHORE 99 MARCONI SITE RD WELLFLEET, MA 02667</p>	30-9-0-E
<p>U S A DEPT OF THE INTERIOR CAPE COD NATIONAL SEASHORE 99 MARCONI SITE RD WELLFLEET, MA 02667</p>	30-10-0-E	<p>U S A DEPT OF THE INTERIOR CAPE COD NATIONAL SEASHORE 99 MARCONI SITE RD WELLFLEET, MA 02667</p>	30-11-0-E	<p>TOWN OF TRURO PO BOX 2030 TRURO, MA 02666-2030</p>	30-12-0-E
<p>U S A DEPT OF THE INTERIOR CAPE COD NATIONAL SEASHORE 99 MARCONI SITE RD WELLFLEET, MA 02667</p>	30-13-0-E	<p>U S A DEPT OF THE INTERIOR CAPE COD NATIONAL SEASHORE 99 MARCONI SITE RD WELLFLEET, MA 02667</p>	30-14-0-E	<p>U S A DEPT OF THE INTERIOR CAPE COD NATIONAL SEASHORE 99 MARCONI SITE RD WELLFLEET, MA 02667</p>	30-17-0-E
<p>COOK KATHARINE S & VAN GENDEREN CHRISTINE 171 IMPERIAL AVE WESTPORT, CT 03840</p>	32-19-0-R	<p>CLEMONS PETER ET AL 15 KIDDER AVE SOMERVILLE, MA 02143</p>	32-19-A-R	<p>CLEMONS PETER & BENSON MARIANNE 15 KIDDER AVE SOMERVILLE, MA 02143</p>	32-24-0-R
<p>U S A DEPT OF THE INTERIOR CAPE COD NATIONAL SEASHORE 99 MARCONI SITE RD WELLFLEET, MA 02667</p>	32-26-0-E	<p>USA-DEPT OF INTERIOR Cape Cod National Seashore 99 Marconi Site Rd Wellfleet, MA 02667</p>	40-999-0-E		

Key: 685

Town of TRURO - Fiscal Year 2021

10/9/2020 9:05 am SEQ #: 599

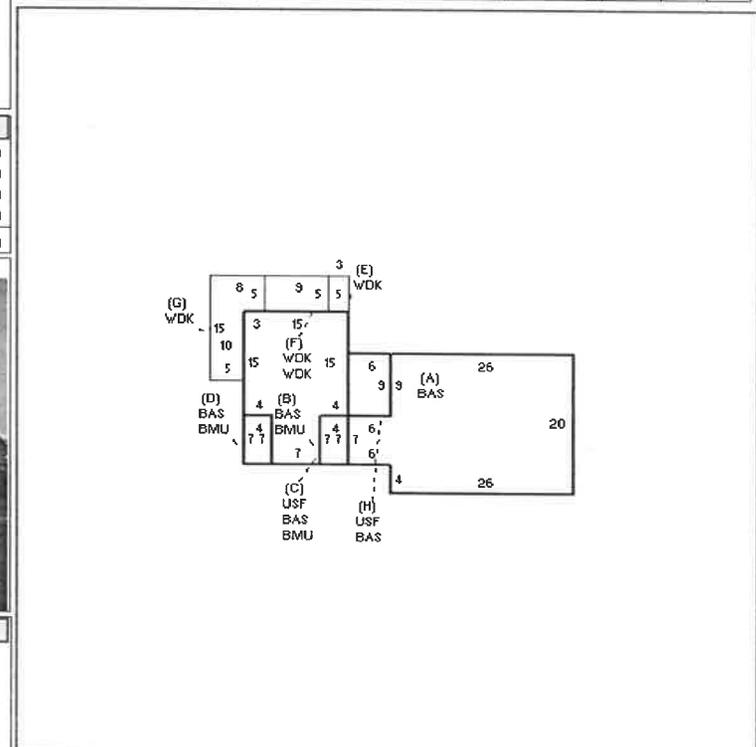
LEGALS LAND

CURRENT OWNER				PARCEL ID				LOCATION			
ERNEST N DICKINSON REV LIV TR C/O COOK KATHARINE S & 171 IMPERIAL AVE WESTPORT, CT 03840				32-19-0				38 CLIFF RD			
TRANSFER HISTORY				DOS	T	SALE PRICE	BK-PG (Cert)				
COOK KATHARINE S & ERNEST N DICKINSON REV L				09/29/2020	QS	925,000	33307-344				
DICKINSON ERNEST N				01/17/2002	99	14711-1	9550-262				
DICKINSON ERNEST N				02/07/1995	99	9550-262					

CLASS	CLASS%	DESCRIPTION		BN ID	BN	CARD		
1010	100	SINGLE FAMILY			1	1 of 1		
PMT NO	PMT DT	TY	DESC	AMOUNT	INSP	BY	1st	%
FY2018		35	RES EXEMPT		10/01/2017		0	0
12-172	07/10/2012	90	BP NVC	5,700	02/06/2013	FC	100	100
89-019	03/03/1989	2	ADDITION		12/31/1989	SW	100	100

CD	T	AC/SF/UN	Nbhd	Infl1	Infl2	ADJ BASE	SAF	Infl3	Lpi	VC	CREDIT AMT	ADJ VALUE
100	A	0.630 16	1.00	1	1.00	1,889,300	1.15	1	1.00	SV5	7.00	1,373,440
TOTAL		27,443 SF	ZONING	NSD	FRNT	0	ASSESSED		CURRENT	PREVIOUS		
Nbhd	NAT'L SEASHORE	NOTE	LAND		1,373,400	1,359,700	BUILDING		172,600	173,500		
Infl1	NO ADJ		DETACHED		500	500	OTHER		0	0		
Infl2	NO ADJ		TOTAL		1,546,500	1,533,700						

TY	QUAL	COND	DIM/NOTE	YB	UNITS	ADJ PRICE	RCNLD
SHF	A	1.00	P 0.45 8*10		80	14.77	500



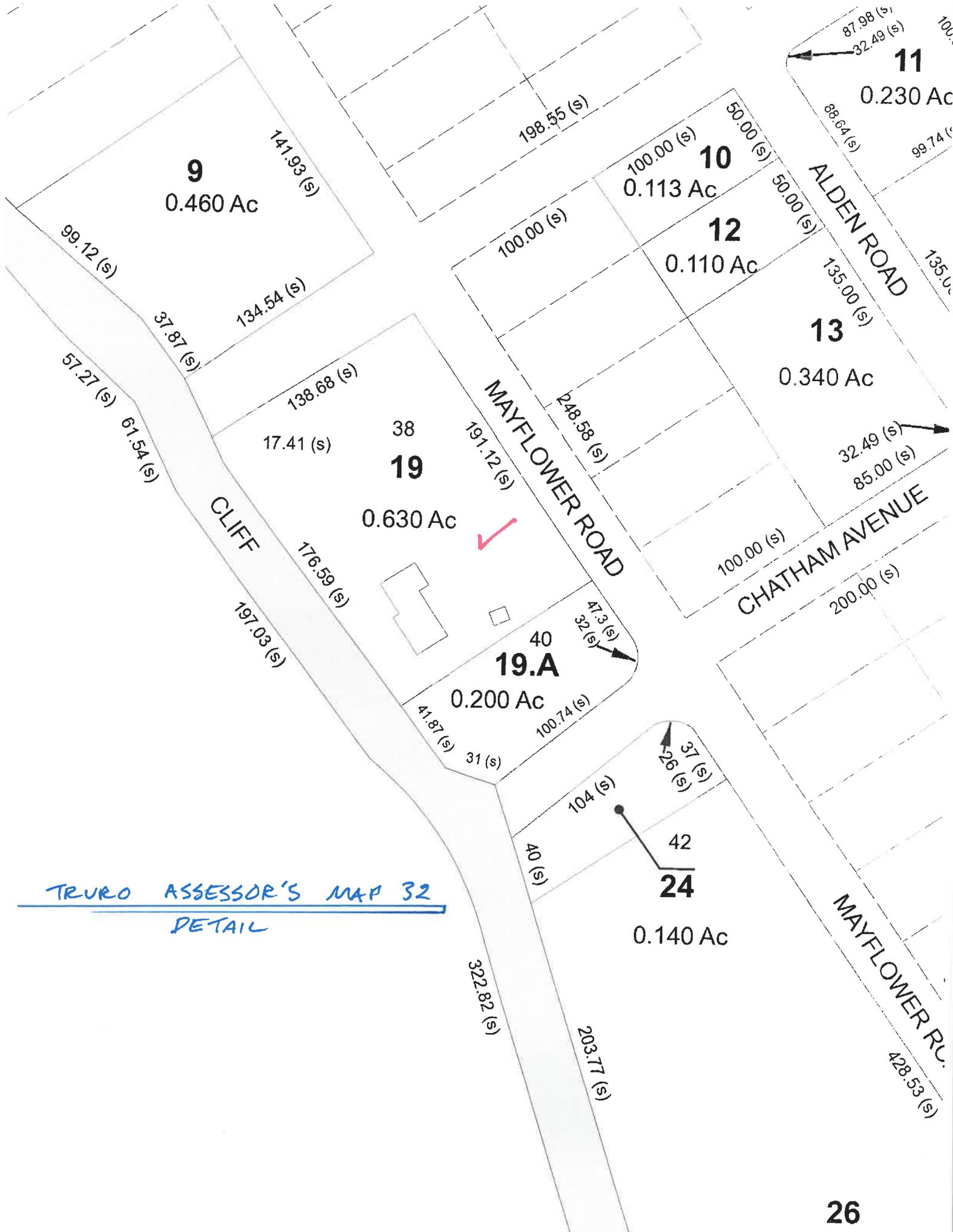
BUILDING	CD	ADJ	DESC	MEASURE	2/6/2013	FC
MODEL	1		RESIDENTIAL	LIST	8/12/2014	FC
STYLE	4	1.10	CAPE [100%]	REVIEW	12/15/2010	MR
QUALITY	A	1.00	AVERAGE [100%]			
FRAME	1	1.00	WOOD FRAME [100%]			

BLDG COMMENTS

DETACHED

BUILDING

YEAR BLT	1950	SIZE ADJ	1.000	ELEMENT	CD	DESCRIPTION	ADJ	S	BAT	T	DESCRIPTION	UNITS	YB	ADJ PRICE	RCN	TOTAL RCN	261,535
NET AREA	1,274	DETAIL ADJ	1.000	FOUNDATION	4	BSMT WALL	1.00	+	BAS	L	BAS AREA	946	1950	192.49	182,100	CONDITION ELEM	CD
\$NLA(RCN)	\$205	OVERALL	1.120	EXT. COVER	1	WOOD SHINGLES	1.00	+	BMU	N	BSMT UNFINISHED	330		51.65	17,043		
CAPACITY		UNITS	ADJ	ROOF SHAPE	1	GABLE	1.00	+	USF	L	UP-STRY FIN	328	1950	152.23	49,931		
STORIES(FAR)	1.75	1.00		ROOF COVER	1	ASPHALT SHINGLE	1.00	+	WDK	N	ATT WOOD DECK	195		36.18	7,055		
ROOMS	5	1.00		FLOOR COVER	1	HARDWOOD	1.00		MST	O	MASONRY STACK	1		1,906.20	1,906		
BEDROOMS	2	1.00		INT. FINISH	2	DRYWALL	1.00										
BATHROOMS	1.5	1.00		HEATING/COOLING	2	HOT WATER	1.02										
FIXTURES	5	\$3,500		FUEL SOURCE	1	OIL	1.00										
UNITS	1	1.00															
EFF YR/AGE																1974 / 45	
COND																34 34 %	
FUNC																0	
ECON																0	
DEPR																34 % GD 66	
RCNLD																\$172,600	



TRURO ASSESSOR'S MAP 32
DETAIL

MASSACHUSETTS STATE EXCISE TAX
BARNSTABLE COUNTY REGISTRY OF DEEDS
Date: 09-29-2020 @ 01:39pm
Ctl#: 1039 Doc#: 52080
Fee: \$3,163.50 Cons: \$925,000.00

BARNSTABLE COUNTY EXCISE TAX
BARNSTABLE COUNTY REGISTRY OF DEEDS
Date: 09-29-2020 @ 01:39pm
Ctl#: 1039 Doc#: 52080
Fee: \$2,830.50 Cons: \$925,000.00

QUITCLAIM DEED

I, ERNEST N. DICKINSON, Trustee of the Restatement of the Ernest N. Dickinson Revocable Living Trust Agreement, said Restatement dated December 10, 1999 and recorded with Barnstable County Registry of Deeds in Book 14710, Page 338, with a mailing address of 36 Trask Road, Vienna, ME 04360, ("Grantor")

for consideration paid in the amount of **NINE HUNDRED TWENTY-FIVE THOUSAND and 00/100 (\$925,000.00) DOLLARS,**

grant to **KATHARINE S. COOK and CHRISTINE VAN GENDEREN,** a married couple, as Tenants by the Entirety, with a mailing address of 171 Imperial Avenue, Westport, CT 03840, ("Grantees"),

WITH QUITCLAIM COVENANTS, the land in Truro, Barnstable County, Massachusetts, together with the buildings thereon, described as follows:

PARCEL I - the land in Truro, Barnstable County, Massachusetts being shown as **Lots 507 and 508** on a plan hereinafter mentioned and being bounded and described as follows:

Beginning at Cliff Road and running in an Easterly direction by Lot 509 one hundred (100) feet more or less to Mayflower Road, thence;

NORTHERLY along said Mayflower Road one hundred (100) feet more or less, thence;

WESTERLY one hundred (100) feet more or less to said Cliff Road and thence;

SOUTHERLY one hundred (100) feet more or less along said Cliff Road to the point of beginning.

Said Lots shown as 507 and 508 on Plan of Pilgrim Heights at High Head in Truro, Massachusetts, dated June, 1924, by John S. Crossman, filed at the Barnstable Registry of Deeds.

PARCEL II - the land in Truro, Barnstable County, Massachusetts being shown as **Lot 510** on a plan hereinafter mentioned as Plan of Pilgrim Heights at High Head in Truro, Massachusetts, dated June 1924, by John S. Crossman, which plan is filed in Barnstable Registry of Deeds and bounded and described as follows beginning at the point of intersection of Cliff Road and Chatham Avenue as shown on said plan, thence;

EASTERLY along said Chatham Avenue one hundred (100) feet more or less to the intersection of Chatham Avenue and Mayflower Road, thence;

Property Address: 38 Cliff Road, Truro, Massachusetts 02666

NORTHERLY along said Mayflower Road one hundred (100) feet more or less, thence;
WESTERLY by land now or formerly of Frank Rich one hundred feet (100 ft) more or less to said Cliff Road, and thence;
SOUTHERLY one hundred (100) feet more or less along Cliff Road.

PARCEL III - the land in Truro, Barnstable County, Massachusetts, being Lot 509 on plan of Pilgrim Heights at High Head in Truro, Massachusetts, dated June, 1924 by John S. Crossman recorded in Barnstable Registry of Deeds and bounded and described as follows:

Beginning at Cliff Road, thence;

EASTERLY by Lot 510 one hundred (100) feet more or less to Mayflower Road, thence;
NORTHERLY along said Mayflower Road fifty (50) feet more or less, thence;
WESTERLY by Lot 508 one hundred (100 feet) more or less to said Cliff Road, and thence;
SOUTHERLY fifty (50) feet more or less along said Cliff Road to the point of beginning.

The undersigned Trustee hereby certifies that:

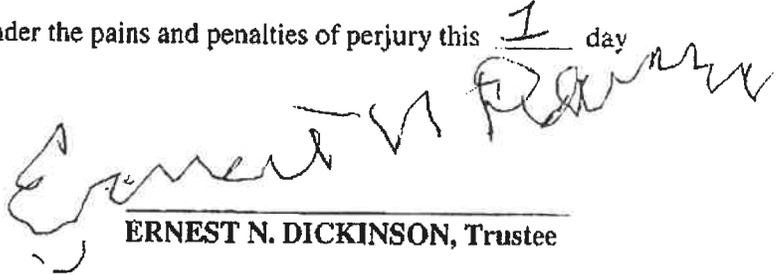
1. Said Trust is in full force and effect.
2. All beneficiaries are of full age.
3. All the beneficiaries are competent.
4. All the beneficiaries of said Trust have authorized and directed me as Trustee to convey the herein described premises for the consideration stated above.

Meaning and intending to convey those same premises described in deed dated December 10, 2001 and recorded with Barnstable County Registry of Deeds in Book 14711, Page 1.

Grantor hereby releases any and all rights of homestead in the above property, created either automatically by operation of law or by written declaration that is recorded, and further certifies under the pains and penalties of perjury that there are no other individuals entitled to homestead rights to the property conveyed herein.

SIGNATURE ON FOLLOWING PAGE

Executed as a sealed instrument under the pains and penalties of perjury this 1 day of September, 2020.

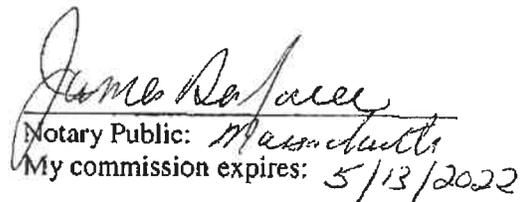

ERNEST N. DICKINSON, Trustee

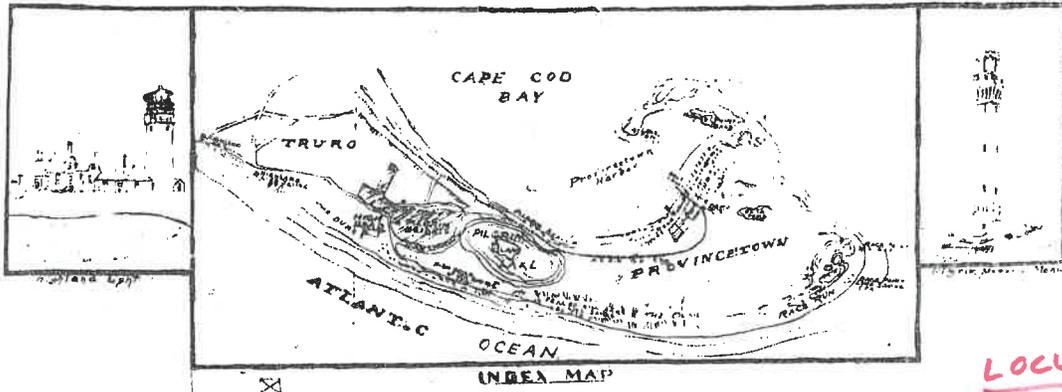
COMMONWEALTH OF MASSACHUSETTS

Barnstable, ss.
County

September 1, 2020

On the above date, before me, the undersigned Notary Public, personally appeared ERNEST N. DICKINSON, Trustee as aforesaid, who proved to me through satisfactory evidence of identification, which was Personal Knowledge to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily for its stated purpose and who swore or affirmed to me that the contents of the attached document are truthful and accurate to the best of his knowledge and belief.


Notary Public: Massachusetts
My commission expires: 5/13/2022



LOCUS

PLAN of PILGRIM HEIGHTS.

AT HIGH HEAD IN TRURO MASS.



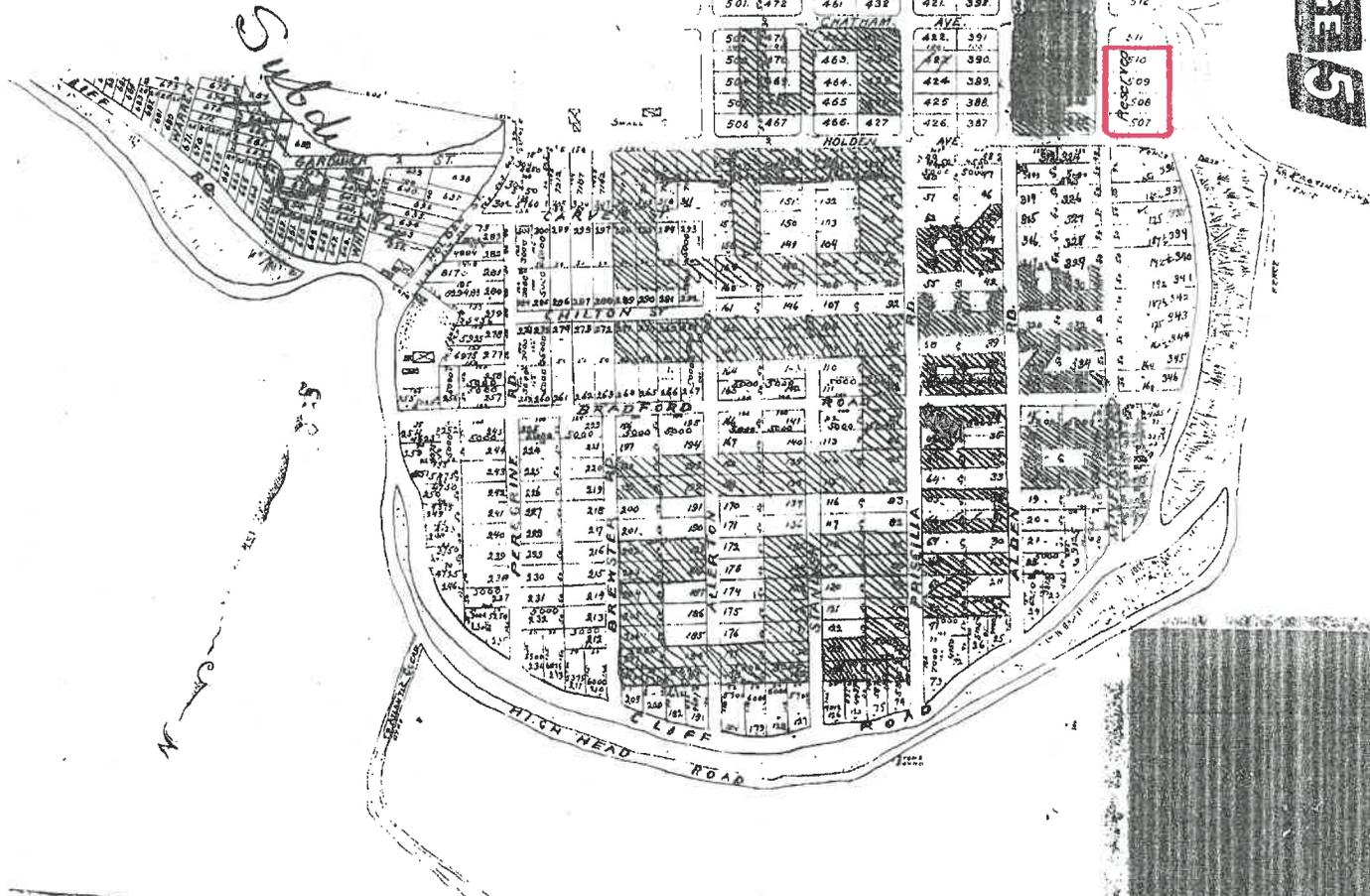
SCALE ONE INCH = 100 FT.

Pilgrim Heights Trust
Provincetown 1922.
OWNERS and DEVELOPERS
June, 1924
Member of
National Association Real Estate Boards

JOHN S. CROSSMAN
ARCHITECT & C.E.
167 TREMONT ST.
BOSTON

571	562	561	552	531
570	561	560	551	530
569	560	559	550	529
568	559	558	549	528
567	558	557	548	527
487	486	485	484	526
488	485	484	483	525
485	484	483	482	524
490	489	488	487	523
491	490	489	488	522
406	405	404	403	521
407	406	405	404	520
408	407	406	405	519
409	408	407	406	518
410	409	408	407	517
411	410	409	408	516
412	411	410	409	515
413	412	411	410	514
414	413	412	411	513
415	414	413	412	512
416	415	414	413	511
417	416	415	414	510
418	417	416	415	509
419	418	417	416	508
420	419	418	417	507

PLAN BOOK 20 PAGE 5



20-5

ATLANTIC

OC

20-5

Owner's Authorization

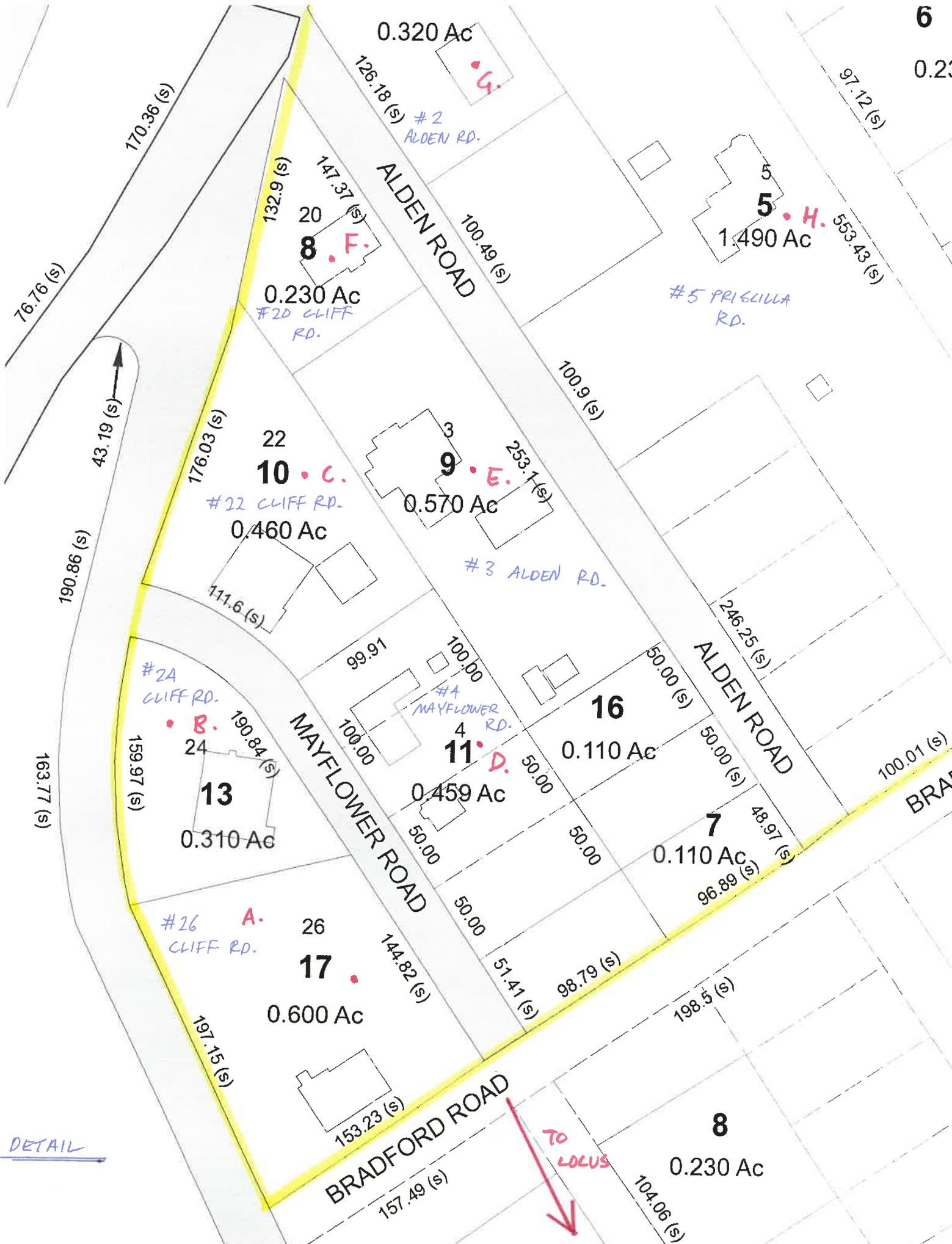
Re: 38 Cliff Road, Parcel 32-19

November 4, 2020

We give Ben Zehnder and his firm of La Tanzi, Spaulding & Landreth, LLP permission and authorization to prosecute zoning, planning and other applications for development at 38 Cliff Road on our behalf.


Christine Van Genderen

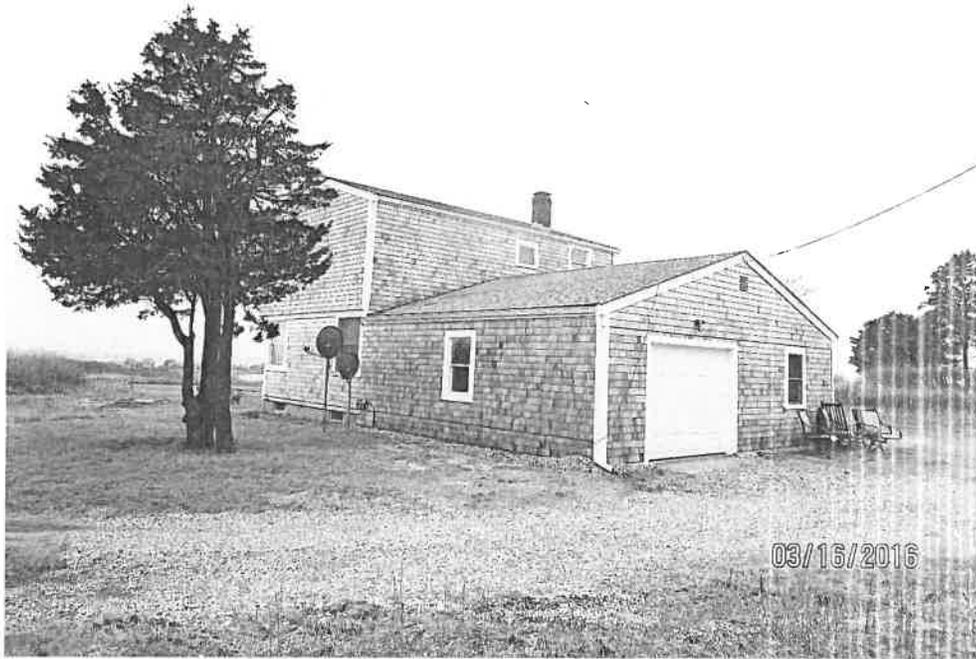
Katherine Cook



DETAIL

TO
LOLUS

A. 26 Cliff Road:



B. 24 Cliff Road:



C. 22 Cliff Road:



D. 4 Mayflower Road:



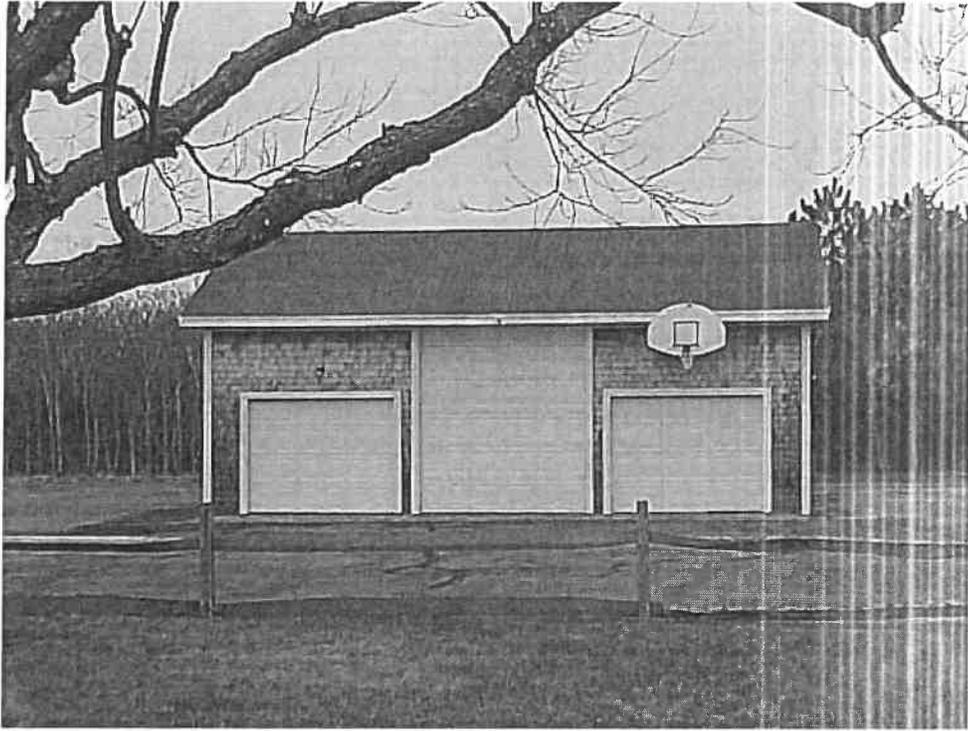
E. 3 Alden Road:



F. 20 Cliff Road:



G. 2 Alden Road:



H. 5 Priscilla Road:



A.

Key: 6294

Town of TRURO - Fiscal Year 2021

10/9/2020 11:00 am SEQ #: 528

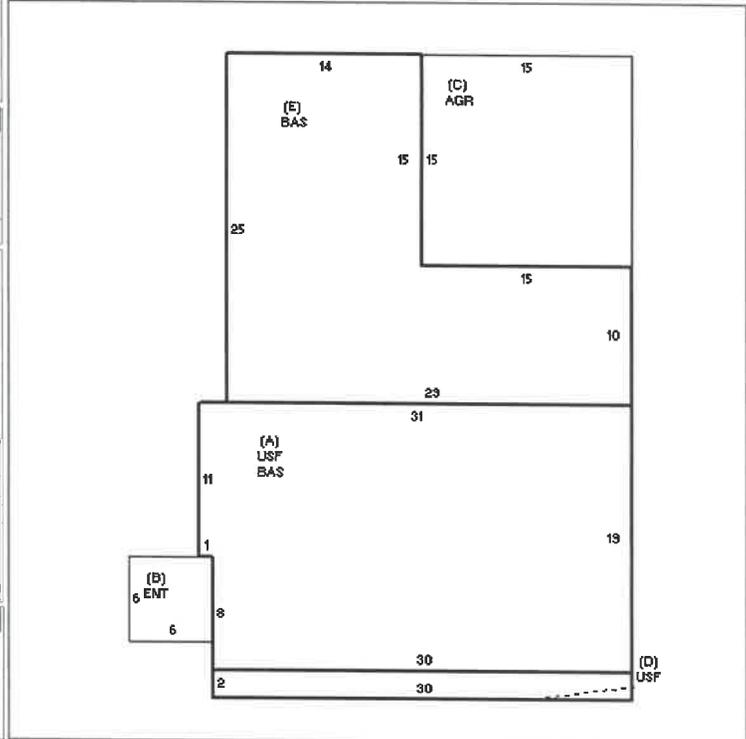
LAND

CURRENT OWNER				PARCEL ID				LOCATION				
U S A DEPT OF THE INTERIOR CAPE COD NATIONAL SEASHORE 99 MARCONI SITE RD WELLFLEET, MA 02867				29-17-0				26 CLIFF RD				
TRANSFER HISTORY				DOS	T	SALE PRICE	BK-PG (Cert)					
U S A				05/26/1971	99	96,000	1512-071					
CD	T	AC/SF/UN	Nbhd	Inf1	Inf2	ADJ BASE	SAF	Inf3	Lpi	VC	CREDIT AMT	ADJ VALUE
100	A	0.600	16	1.00	1	1,889,300	1.19	1	1.00	SV5	7.00	1,353,040

CLASS	CLASS%	DESCRIPTION			BN ID	BN	CARD
9000	100	U S GOV				1	1 of 1
PMT NO	PMT DT	TY	DESC	AMOUNT	INSP	BY	1st %
	01/01/2007	50	SPLIT SUB				100 100

TOTAL	26,136 SF	ZONING	NSD	FRNT	0	ASSESSED	CURRENT	PREVIOUS
Nbhd	NAT'L SEASHORE	N WAS NEW PCL#16 FY05 PER LIST OF IMPRV PROPS O IN NSS. FY08 CHNGD PCL #16 TO #17 (#16 ALREADY T EXISTED ON MAP ONLY).				LAND	1,353,000	1,339,500
Inf1	NO ADJ					BUILDING	161,800	160,200
Inf2	NO ADJ					DETACHED	0	0
						OTHER	0	0
						TOTAL	1,514,800	1,499,700

TY	QUAL	COND	DIM/NOTE	YB	UNITS	ADJ PRICE	RCNLD	PHOTO
								03/16/2016



BUILDING	CD	ADJ	DESC	MEASURE	3/16/2016	RJM
MODEL	1		RESIDENTIAL	LIST	3/16/2016	EST
STYLE	8	1.10	CONTEMPORARY [100%]	REVIEW	3/17/2016	RJM
QUALITY	-	0.75	AVE-/LOW+ [100%]			
FRAME	1	1.00	WOOD FRAME [100%]			

YEAR BLT	1959	SIZE ADJ	1.000	ELEMENT	CD	DESCRIPTION	ADJ
NET AREA	1,722	DETAIL ADJ	1.000	FOUNDATION	2	SLAB	0.95
\$NLA(RCN)	\$134	OVERALL	1.050	EXT. COVER	1	WOOD SHINGLES	1.00
				ROOF SHAPE	1	GABLE	1.00
				ROOF COVER	1	ASPHALT SHINGLE	1.00
				FLOOR COVER	1	HARDWOOD	1.00
				INT. FINISH	2	DRYWALL	1.00
				HEATING/COOLING	1	FORCED AIR	1.00
				FUEL SOURCE	1	OIL	1.00

S	BAT	T	DESCRIPTION	UNITS	YB	ADJ PRICE	RCN	TOTAL RCN	231,108
+	BAS	L	BAS AREA	1,081	1959	135.35	146,310	CONDITION ELEM CD	
B	ENT	N	ENCL ENTRY	36		89.51	3,223		
C	AGR	N	ATTACHED GARAGE	225		46.67	10,501		
+	USF	L	UP-STRY FIN	641	1959	105.42	67,575		

DETACHED

BLDG COMMENTS

EFF.YR/AGE	1986 / 33
COND	30 30 %
FUNC	0
ECON	0
DEPR	30 % GD 70
RCNLD	\$161,800

B.

Key: 648

Town of TRURO - Fiscal Year 2021

10/9/2020 9:05 am SEQ #: 563

LAND

CURRENT OWNER				PARCEL ID				LOCATION			
RESIKA PAUL & BLAIR 175 RIVERSIDE DR #6E NEW YORK, NY 10024				29-13-0				24 CLIFF RD			
TRANSFER HISTORY				DOS	T	SALE PRICE	BK-PG (Cert)				
RESIKA PAUL & BLAIR				11/14/1984	99		4317-172				

CD	T	AC/SF/UN	Nbhd	Inf1	Inf2	ADJ BASE	SAF	Inf3	Lpi	VC	CREDIT AMT	ADJ VALUE
100	A	0.310	16	1.00	1	1.00	1	1.00	SV5	7.00		1,105,830

TOTAL	13,504 SF	ZONING	NSD	FRNT	0	ASSESSED	CURRENT	PREVIOUS
Nbhd	NAT'L SEASHORE	N FY08 VW INCR PER NBHD REVIEW 10/08 photos of view from ground level/1st fir veranda only - no access to 2nd fir.				LAND	1,105,800	1,094,800
Inf1	NO ADJ	E				BUILDING	244,500	254,200
Inf2	NO ADJ					DETACHED	0	0
						OTHER	0	0
						TOTAL	1,350,300	1,349,000

TY	QUAL	COND	DIM/NOTE	YB	UNITS	ADJ PRICE	RCNLD	PHOTO
								08/31/2018



BUILDING	CD	ADJ	DESC	MEASURE	8/31/2018	LG
MODEL	1		RESIDENTIAL	LIST	8/31/2018	LG
STYLE	7	1.20	OLD STYLE [100%]	REVIEW	12/15/2010	MR
QUALITY	+	1.10	GOOD-AVE+ [100%]			
FRAME	1	1.00	WOOD FRAME [100%]			

YEAR BLT	1905	SIZE ADJ	1.000	ELEMENT	CD	DESCRIPTION	ADJ	S	BAT	T	DESCRIPTION	UNITS	YB	ADJ PRICE	RCN	TOTAL RCN	611,300
NET AREA	2.513	DETAIL ADJ	1.000	FOUNDATION			1.00	A	BAS	L	BAS AREA	1,363	1905	228.39	311,293	CONDITION ELEM	CD
\$NLA(RCN)	\$243	OVERALL	1.220	EXT. COVER	7	STUCCO	1.00	+	USF	L	UP-STRY FIN	1,150	1905	175.98	202,382		
				ROOF SHAPE	2	HIP	1.00	+	OPA	N	OPEN PORCH	609		44.39	27,032		
				ROOF COVER	1	ASPHALT SHINGLE	1.00		BMU	N	BSMT UNFINISHED	910		54.62	49,704		
				FLOOR COVER	1	HARDWOOD	1.00	F22	O		FPL 2S ZOP	1		15,989.90	15,990		
				INT. FINISH	1	PLASTER	1.00										
				HEATING/COOLING	2	HOT WATER	1.02										
				FUEL SOURCE	1	OIL	1.00										

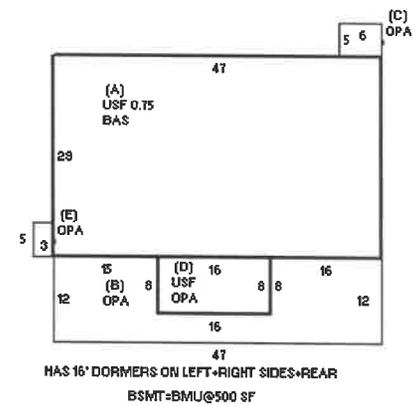
DETACHED

UNITS

LAND

BLDG COMMENTS

CLASS	CLASS%	DESCRIPTION	BN ID	BN	CARD			
1010	100	SINGLE FAMILY		1	1 of 1			
PMT NO	PMT DT	TY	DESC	AMOUNT	INSP	BY	1st	%
16-133X	06/22/2016	10	ALL OTHERS	1,200			100	100



EFF.YR/AGE	1951 / 68
COND	60 60 %
FUNC	0
ECON	0
DEPR	60 % GD 40
RCNLD	\$244,500

Key: 645

Town of TRURO - Fiscal Year 2021

10/9/2020 9:05 am SEQ #: 561

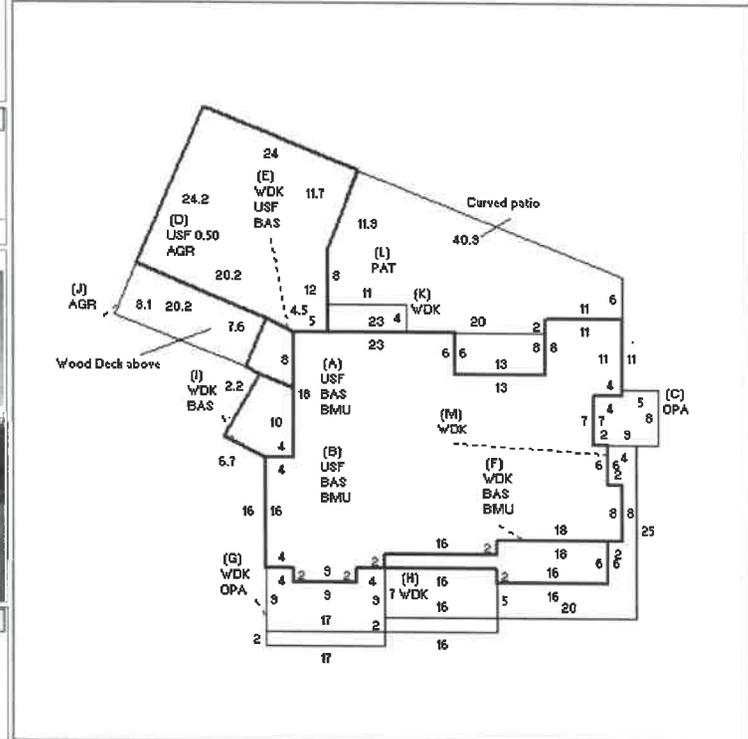
LEGAL LAND

CURRENT OWNER				PARCEL ID				LOCATION					
STELLO ROBERT & JENNIFER PO BOX 776 SO CHATHAM, MA 02659				29-10-0				22 CLIFF RD					
TRANSFER HISTORY				DOS	T	SALE PRICE	BK-PG (Cert)						
STELLO ROBERT & JENNIFER				08/05/2016	O	1,690,000	29845-313						
PAGE JOAN E &				03/06/2012	J		25849-99+						
PAGE JOAN E & CURRIER CHER				11/18/2011	99		25849-99						
CD	T	AC/SF/UN	Nbhd	Inf1	Inf2	ADJ BASE	SAF	Inf3	Lpi	VC	CREDIT AMT	ADJ VALUE	
100	A	0.460	16	1.00	1	1.00	1.00	1,889,300	1.44	1	1.00	SV5 7.00	1,247,130

CLASS	CLASS%	DESCRIPTION			BN ID	BN	CARD
1010	100	SINGLE FAMILY				1	1 of 1
PMT NO	PMT DT	TY	DESC	AMOUNT	INSP	BY	1st %
17-135	05/16/2017	1	SINGLE FAM R	1,000,000	02/26/2020	LG	100 100
17-043X	02/14/2017	5	DEMO	20,000	12/19/2017	LG	100 100

TOTAL	20.038 SF	ZONING	NSD	FRNT	0	ASSESSED	CURRENT	PREVIOUS
Nbhd	NAT'L SEASHORE	NOTE				LAND	1,247,100	1,234,700
Inf1	NO ADJ		BUILDING	1,826,000	1,175,400			
Inf2	NO ADJ		DETACHED	0	0			
			OTHER	0	0			
TOTAL							3,073,100	2,410,100

TY	QUAL	COND	DIM/NOTE	YB	UNITS	ADJ PRICE	RCNLD



BUILDING	CD	ADJ	DESC	MEASURE	12/19/2017	LG
MODEL	1		RESIDENTIAL	LIST	2/26/2020	EST
STYLE	16	1.30	NEW STYLE [100%]	REVIEW		
QUALITY	G	1.30	GOOD [100%]			
FRAME	1	1.00	WOOD FRAME [100%]			

BLDG COMMENTS
Interior data estimated pending Assess. access.

DETACHED

YEAR BLT	2017	SIZE ADJ	1.000	ELEMENT	CD	DESCRIPTION	ADJ	S	BAT	T	DESCRIPTION	UNITS	YB	ADJ PRICE	RCN	TOTAL RCN	1,863,231
NET AREA	6.537	DETAIL ADJ	1.000	FOUNDATION	3	CONTIN WALL	1.00	+	BMU	N	BSMT UNFINISHED	3,088		53.51	165,248		
\$NLA(RCN)	\$285	OVERALL	1.300	EXT. COVER	1	WOOD SHINGLES	1.00	+	USF	L	UP-STRY FIN	3,319	2017	207.77	689,584		
				ROOF SHAPE	1	GABLE	1.00	+	OPA	N	OPEN PORCH	203		67.08	13,616		
				ROOF COVER	1	ASPHALT SHINGLE	1.00	+	AGR	N	ATTACHED GARAGE	784		84.44	66,202		
				FLOOR COVER	1	HARDWOOD	1.00	+	BAS	L	BAS AREA	3,218	2017	267.68	861,391		
				INT. FINISH	2	DRYWALL	1.00	+	WDK	N	ATT WOOD DECK	779		43.10	33,572		
				HEATING/COOLING	1	FORCED AIR	1.00	L	PAT	N	PATIO	593		12.55	7,441		
				FUEL SOURCE	2	GAS	1.00	WDK	N	ATT WOOD DECK	96		66.09	6,344			
								GFP	O	GAS FIREPLACE	1		8,630.80	8,631			
								ODS	O	OUT DOOR SHOWER			0.00				
EFF.YR/AGE 2017 / 2																	
COND 02 02 %																	
FUNC 0																	
ECON 0																	
DEPR 2 % GD 98																	
RCNLD \$1,826,000																	

D.

Key: 646

Town of TRURO - Fiscal Year 2021

10/9/2020 9:05 am SEQ #: 562

LAND
BLDG
DETACHED

CURRENT OWNER				PARCEL ID				LOCATION			
RESIKA PAUL & BLAIR 175 RIVERSIDE DR #6E NEW YORK, NY 10024				29-11-0				4 MAYFLOWER RD			
TRANSFER HISTORY				DOS	T	SALE PRICE	BK-PG (Cert)				
RESIKA PAUL & BLAIR				11/14/1984	99		4317-172				

CLASS	CLASS%	DESCRIPTION			BN ID	BN	CARD	
1060	100	ACC	IMP				1 of 1	
PMT NO	PMT DT	TY	DESC	AMOUNT	INSP	BY	1st	%
SS2014-3 09-087 92-071	05/11/2009 07/01/1992	50 2 6	SPLIT SUB ADDITION SHED	25,000 600	02/11/2013 05/14/2010 05/17/1993	BE JH	100 100 100	100 100 100

CD	T	AC/SF/UN	Nbhd	Inf1	Inf2	ADJ BASE	SAF	Inf3	Lpi	VC	CREDIT AMT	ADJ VALUE
300	A	0.459 16	1.00 1	1.00 1	1.00 1	47,380	1.00 1	1.00	SR3	2.30		21,750

TOTAL	19,982 SF	ZONING	NSD	FRNT	0	ASSESSED	CURRENT	PREVIOUS
Nbhd	NAT'L SEASHORE	NOTE FY14 COMBINED 29-12 AND 29-14	LAND	21,800	21,500			
Inf1	NO ADJ		BUILDING	0	0			
Inf2	NO ADJ		DETACHED	82,300	81,500			
			OTHER	0	0			
			TOTAL	104,100	103,000			

TY	QUAL	COND	DIM/NOTE	YB	UNITS	ADJ PRICE	RCNLD
SHF	A	1.00 A	0.75 8*10	1992	80	14.77	900
ST1	+	1.10 A	0.75 40*20+10*20		1,000	94.27	70,700
CBN	+	1.10 A+	0.80 10*20	2	200	59.29	9,500
OPA	+	1.10 A+	0.80 10*14		140	10.89	1,200



BUILDING	CD	ADJ	DESC	MEASURE
MODEL				
STYLE				
QUALITY				
FRAME				

BLDG COMMENTS

YEAR BLT	NET AREA	\$NLA(RCN)	SIZE ADJ	DETAIL ADJ	OVERALL	ELEMENT	CD	DESCRIPTION	ADJ	S	BAT	T	DESCRIPTION	UNITS	YB	ADJ PRICE	RCN

TOTAL RCN	
CONDITION ELEM	CD
EFF YR/AGE	
COND	
FUNC	
ECON	
DEPR	% GD
RCNLD	

E.

Key: 644

Town of TRURO - Fiscal Year 2021

10/9/2020 9:05 am SEQ #: 559

CURRENT OWNER										PARCEL ID				LOCATION			
FEIDEN ENTERPRISES LLC 785 NEW LOUDON RD LATHAM, NY 12110										29-9-0				3 ALDEN RD			
TRANSFER HISTORY										DOS	T	SALE PRICE	BK-PG (Cert)				
FEIDEN ENTERPRISES LLC										02/27/2008	O	900,000	22704-74				
UNGERER RAYMOND MAYNARD J										02/27/2008	99		22704-72				
UNGERER RAYMOND MAYNARD J										06/15/2007	99		22112-213				

CD	T	AC/SF/UN	Nbhd	Inf1	Inf2	ADJ BASE	SAF	Inf3	Lpi	VC	CREDIT AMT	ADJ VALUE			
100	A	0.570	16	1.00	1	1.00	1.00	944,650	1.24	1	1.00	SV3	3.50		665,960

TOTAL	24,829 SF	ZONING	NSD	FRNT	0	ASSESSED	CURRENT	PREVIOUS
Nbhd	NATL SEASHORE	N	CORRECTED SIZE OF SHF FY09 PER 6/08			LAND	666,000	659,300
Inf1	NO ADJ	O	MSMT+CORRECTED YB FY10 PER BP#95-114.			BUILDING	464,600	460,000
Inf2	NO ADJ	T	FY10=CHGD CLASS (SEE NOTES ON SKETCH			DETACHED	1,800	1,800
		E	SCREEN) & VIEW PER REVIEW.			OTHER	54,900	55,200
						TOTAL	1,187,300	1,176,300

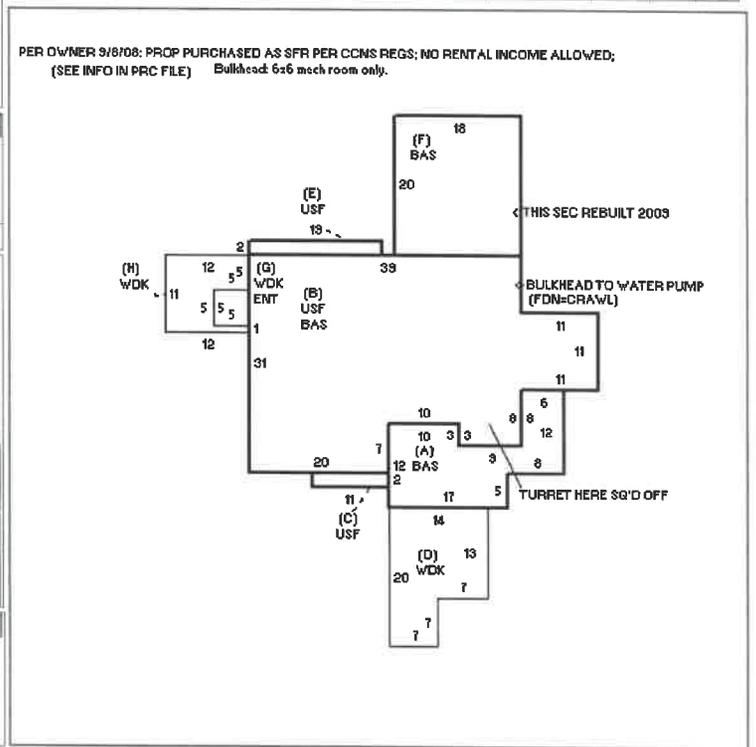
TY	QUAL	COND	DIM/NOTE	YB	UNITS	ADJ PRICE	RCNLD	PHOTO	
SHF	-	0.90	A 0.75	16*12	1995	192	12.54	1,800	10/23/2018



BUILDING	CD	ADJ	DESC	MEASURE	10/23/2017	LG
MODEL	1		RESIDENTIAL	LIST	9/8/2008	FC
STYLE	7	1.20	OLD STYLE [100%]	REVIEW	12/15/2010	MR
QUALITY	+	1.10	GOOD+AVE+ [100%]			
FRAME	1	1.00	WOOD FRAME [100%]			

YEAR BLT	1930	SIZE ADJ	1.000	ELEMENT	CD	DESCRIPTION	ADJ	S	BAT	T	DESCRIPTION	UNITS	YB	ADJ PRICE	RCN	TOTAL RCN	673,358
NET AREA	3,131	DETAIL ADJ	1.000	FOUNDATION	3	CONTIN WALL	1.00	+	BAS	L	BAS AREA	1,487	1930	221.60	329,525	CONDITION ELEM	CD
\$NLA(RCN)	\$215	OVERALL	1.220	EXT. COVER	1	WOOD SHINGLES	1.00	+	USF	L	UP-STRY FIN	1,284	1930	173.24	222,434		
				ROOF SHAPE	5	MANSARD	1.00	+	WDK	N	ATT WOOD DECK	363		38.78	14,079		
				ROOF COVER	1	ASPHALT SHINGLE	1.00	F	BAS	L	BAS AREA	360	2009	221.61	79,778		
				FLOOR COVER	3	WW CARPET	1.00	G	ENT	N	ENCL ENTRY	25		189.38	4,735		
				INT. FINISH	2	DRYWALL	1.00	GFP	O	GAS	FIREPLACE	2		6,853.60	13,707		
				HEATING/COOLING	2	HOT WATER	1.02										
				FUEL SOURCE	2	GAS	1.00										

CLASS	CLASS%	DESCRIPTION	BN ID	BN	CARD			
1010	100	SINGLE FAMILY		1	1 of 2			
PMT NO	PMT DT	TY	DESC	AMOUNT	INSP	BY	1st	%
09-036	03/16/2009	2	ADDITION	5,000	05/14/2010	JH	100	100
	07/01/2008	30	CHECK DATA		09/08/2008	FC	100	100
08-051	03/20/2008	3	REPAIR/REMOD	10,000	05/19/2009	JH	100	100
08-012	01/23/2008	10	ALL OTHERS	300	09/08/2008	FC	100	100
03-115	07/11/2003	9	DECK	2,291	02/10/2004	RS	100	100



YEAR BLT	1930	SIZE ADJ	1.000	ELEMENT	CD	DESCRIPTION	ADJ	S	BAT	T	DESCRIPTION	UNITS	YB	ADJ PRICE	RCN	TOTAL RCN	673,358
NET AREA	3,131	DETAIL ADJ	1.000	FOUNDATION	3	CONTIN WALL	1.00	+	BAS	L	BAS AREA	1,487	1930	221.60	329,525	CONDITION ELEM	CD
\$NLA(RCN)	\$215	OVERALL	1.220	EXT. COVER	1	WOOD SHINGLES	1.00	+	USF	L	UP-STRY FIN	1,284	1930	173.24	222,434		
				ROOF SHAPE	5	MANSARD	1.00	+	WDK	N	ATT WOOD DECK	363		38.78	14,079		
				ROOF COVER	1	ASPHALT SHINGLE	1.00	F	BAS	L	BAS AREA	360	2009	221.61	79,778		
				FLOOR COVER	3	WW CARPET	1.00	G	ENT	N	ENCL ENTRY	25		189.38	4,735		
				INT. FINISH	2	DRYWALL	1.00	GFP	O	GAS	FIREPLACE	2		6,853.60	13,707		
				HEATING/COOLING	2	HOT WATER	1.02										
				FUEL SOURCE	2	GAS	1.00										

EFF.YR/AGE	1980 / 39
COND	31 31 %
FUNC	0
ECON	0
DEPR	31 % GD 69
RCNLD	\$464,600

Key: 644

Town of TRURO - Fiscal Year 2021

10/9/2020 9:05 am SEQ #: 560

E.

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CURRENT OWNER				PARCEL ID				LOCATION			
FEIDEN ENTERPRISES LLC 785 NEW LOUDON RD LATHAM, NY 12110				29-9-0				3 ALDEN RD			
TRANSFER HISTORY				DOS	T	SALE PRICE		BK-PG (Cert)			

CLASS	CLASS%	DESCRIPTION			BN ID	BN	CARD	
1010	100	SINGLE FAMILY				2	2 of 2	
PMT NO	PMT DT	TY	DESC	AMOUNT	INSP	BY	1st	%

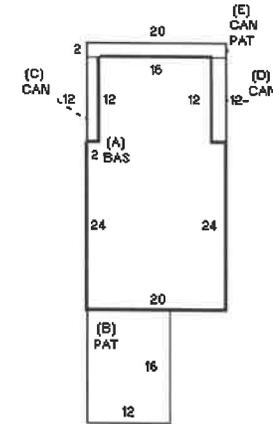
LAND

CD	T	AC/SF/UN	Nbhd	Inf1	Inf2	ADJ BASE	SAF	Inf3	Lpi	VC	CREDIT AMT	ADJ VALUE

TOTAL	ZONING	FRNT	ASSESSED	CURRENT	PREVIOUS
Nbhd	NOTE		LAND	54,900	
Inf1		BUILDING			
Inf2		DETACHED			
			OTHER		
			TOTAL		

DETACHED

TY	QUAL	COND	DIM/NOTE	YB	UNITS	ADJ PRICE	RCNLD	PHOTO
								10/23/2018
								



BUILDING

BUILDING	CD	ADJ	DESC	MEASURE	10/23/2018	LG	BLDG COMMENTS
MODEL	1		RESIDENTIAL				RINNAI GAS WALL HEATER IN 1 BR ONLY. Has ODS.
STYLE	14	0.90	DET BLDG [100%]	LIST	9/8/2008	FC	
QUALITY	-	0.75	AVE-/LOW+ [100%]	REVIEW	12/15/2010	MR	
FRAME	1	1.00	WOOD FRAME [100%]				

LAND

YEAR BLT	1930	SIZE ADJ	1.000	ELEMENT	CD	DESCRIPTION	ADJ	S	BAT	T	DESCRIPTION	UNITS	YB	ADJ PRICE	RCN	TOTAL RCN	81,928
NET AREA	672	DETAIL ADJ	1.000	FOUNDATION	2	SLAB	0.95	A	BAS	L	BAS AREA	672	1930	106.99	71,897	CONDITION ELEM	CD
\$NLA(RCN)	\$122	OVERALL	0.830	EXT. COVER	1	WOOD SHINGLES	1.00	+	PAT	N	PATIO	232		5.55	1,287		
				ROOF SHAPE	1	GABLE	1.00	+	CAN	N	CANOPY	88		16.25	1,430		
				ROOF COVER	1	ASPHALT SHINGLE	1.00	F11	O		FPL 1S 10P	1		3,814.70	3,815		
				FLOOR COVER	5	VINYL	1.00										
				INT. FINISH	3	WOOD PANEL	1.00										
				HEATING/COOLING	7	FL./WALL FURN.	0.98										
				FUEL SOURCE	2	GAS	1.00										
CAPACITY		UNITS	ADJ														
STORIES(FAR)		1	1.00														
ROOMS		4	1.00														
BEDROOMS		2	1.00														
BATHROOMS		1	1.00														
FIXTURES		5	\$3,500														
UNITS		1	1.00														
																EFF.YR/AGE	1975 / 44
																COND	33 33 %
																FUNC	0
																ECON	0
																DEPR	33 % GD 67
																RCNLD	\$54,900

F.

Key: 643

Town of TRURO - Fiscal Year 2021

10/9/2020 9:05 am SEQ #: 558

LAND

DETACHED

BUILDING

CURRENT OWNER				PARCEL ID				LOCATION			
TWENTY CLIFF ROAD NOM TRUST				29-8-0				20 CLIFF RD			
TRS: MICERA ANNE M ET AL				TRANSFER HISTORY				DOS	T	SALE PRICE	BK-PG (Cert)
29 NEPERA PLACE				TWENTY CLIFF ROAD NOM TRU				12/08/2014	A		28557-298
HASTINGS ON HUDSON, NY 10706				MICERA ANNE M & GERARD PE				09/30/2014	A		28415-175
				TWENTY CLIFF ROAD NOM TRU				10/16/2007	F		22406-32

CD	T	AC/SF/UN	Nbhd	Infl1	Infl2	ADJ BASE	SAF	Infl3	Lpi	VC	CREDIT AMT	ADJ VALUE
100	A	0.230	16	1.00	1	1.00	1	1.00	SV5	7.00		1,010,090

TOTAL	10,019 SF	ZONING	NSD	FRNT	0	ASSESSED	CURRENT	PREVIOUS
Nbhd	NAT'L SEASHORE	NOTE				LAND	1,010,100	1,000,000
Infl1	NO ADJ		BUILDING	254,900	256,100			
Infl2	NO ADJ		DETACHED	400	400			
			OTHER	0	0			
						TOTAL	1,265,400	1,256,500

TY	QUAL	COND	DIM/NOTE	YB	UNITS	ADJ PRICE	RCNLD
PTD	A	1.00	A 0.75 7*33		231	2.10	400



BLDG COMMENTS
Upper floor heated by electric basebrd. Per Oct 09 List, xtra kitchen with oven/stove on upper floor.

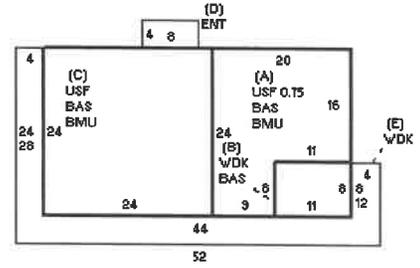
BUILDING	CD	ADJ	DESC	MEASURE	8/31/2018	LG
MODEL	1		RESIDENTIAL	LIST	10/9/2018	LG
STYLE	5	1.00	COLONIAL [100%]	REVIEW	12/15/2010	MR
QUALITY	A	1.00	AVERAGE [100%]			
FRAME	1	1.00	WOOD FRAME [100%]			

ELEMENT	CD	DESCRIPTION	ADJ	S	BAT	T	DESCRIPTION	UNITS	YB	ADJ PRICE	RCN
FOUNDATION			1.00	+	BMU	N	BSMT UNFINISHED	968		40.70	39,398
EXT. COVER			1.00	+	USF	L	UP-STRY FIN	870	1957	132.50	115,277
ROOF SHAPE			1.00	+	BAS	L	BAS AREA	1,056	1957	171.87	181,495
ROOF COVER			1.00	D	ENT	N	ENCL ENTRY	32		113.69	3,638
FLOOR COVER			1.00	+	WDK	N	ATT WOOD DECK	424		27.20	11,533
INT. FINISH			1.00	F21	O		FPL 2S 1OP	1		8,511.00	8,511
HEATING/COOLING			1.00	KIT	O		XTRA KITCHEN	1		9,377.00	9,377
FUEL SOURCE			1.00								

TOTAL RCN	374,829
CONDITION ELEM	CD
EFF.YR/AGE	1979 / 40
COND	32 32 %
FUNC	0
ECON	0
DEPR	32 % GD 68
RCNLD	\$254,900

CLASS	CLASS%	DESCRIPTION	BN ID	BN	CARD			
1010	100	SINGLE FAMILY		1	1 of 1			
PMT NO	PMT DT	TY	DESC	AMOUNT	INSP	BY	1st	%
89-149	10/16/1989	2	ADDITION	58,000	12/31/1989		100	100

SEC A HAS SALTBOX ROOF+SEC C HAS GABLE ROOF



9.

Key: 642

Town of TRURO - Fiscal Year 2021

10/9/2020 9:05 am SEQ #: 557

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CURRENT OWNER										PARCEL ID				LOCATION			
TWENTY CLIFF ROAD NOM TRUST TRS: MICERA ANNE M ET AL 29 NEPERA PLACE HASTINGS ON HUDSON, NY 10706										29-7-0				2 ALDEN RD			
TRANSFER HISTORY										DOS	T	SALE PRICE	BK-PG (Cert)				
TWENTY CLIFF ROAD NOM TRU										12/08/2014	A		28557-298				
MICERA ANNE M & GERARD PE										09/30/2014	A		28415-175				
TWENTY CLIFF ROAD NOM TRU										10/16/2007	99		22406-32				

CLASS	CLASS%	DESCRIPTION			BN ID	BN	CARD	
1060	100	ACC IMP					1 of 1	
PMT NO	PMT DT	TY	DESC	AMOUNT	INSP	BY	1st	%

L
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CD	T	AC/SF/UN	Nbhd	Infl1	Infl2	ADJ BASE	SAF	Infl3	Lpi	VC	CREDIT AMT	ADJ VALUE
300	A	0.320	16	1.00	1	1.00	1	1.00	SR3	2.30		15,160

TOTAL	13,939 SF	ZONING	NSD	FRNT	0	ASSESSED	CURRENT	PREVIOUS
Nbhd	NAT'L SEASHORE	N FY11 DGF QUAL/COND CHGS PER 10/26/09 MEAS O (=SUBSTANTIAL OVERSIZED GAR). fy08=land code to T 200 (like 30-6=per NSS "can build secondary struct only" - E considered excess land (contig to 29-8 w/dwlg). FY11 OFFICE REV = SAME nbhd/Lpi.				LAND	15,200	15,000
Infl1	NO ADJ					BUILDING	0	0
Infl2	NO ADJ					DETACHED	16,200	13,900
						OTHER	0	0
						TOTAL	31,400	28,900

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TY	QUAL	COND	DIM/NOTE	YB	UNITS	ADJ PRICE	RCNLD	PHOTO
DGF	G	1.18 A+	0.80 26*36		936	21.62	16,200	10/23/2018



BLDG COMMENTS

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BUILDING	CD	ADJ	DESC	MEASURE
MODEL				LIST
STYLE				REVIEW
QUALITY				
FRAME				

YEAR BLT	SIZE ADJ	ELEMENT	CD	DESCRIPTION	ADJ	S	BAT	T	DESCRIPTION	UNITS	YB	ADJ PRICE	RCN	TOTAL RCN
NET AREA	DETAIL ADJ													CONDITION ELEM
\$NLA(RCN)	OVERALL													CD
CAPACITY	UNITS	ADJ												

EFF.YR/AGE	
COND	
FUNC	
ECON	
DEPR	% GD
RCNLD	

H.

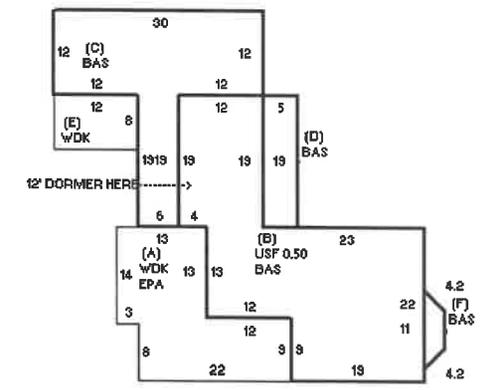
Key: 640

Town of TRURO - Fiscal Year 2021

10/9/2020 9:05 am SEQ #: 555

CURRENT OWNER													PARCEL ID				LOCATION				CLASS	CLASS%	DESCRIPTION			BN ID	BN	CARD									
GIESE GRAHAM SHERWOOD TRUST TRS: GIESE GRAHAM SHERWOOD PO BOX 231 NO TRURO, MA 02652-0231													29-5-0				5 PRISCILLA RD				1010	100	SINGLE FAMILY				1	1 of 1									
TRANSFER HISTORY													DOS	T	SALE PRICE		BK-PG (Cert)		PMT NO	PMT DT	TY	DESC	AMOUNT	INSP	BY	1st	%										
GIESE GRAHAM SHERWOOD TRU													05/09/2002	99			15139-99		FY2018		35	RES EXEMPT		11/13/2017			0	0									
GIESE GRAHAM SHERWOOD													10/18/1995	F			9888-300		17-106X	04/19/2017	4	REHAB	20,000	02/09/2018	LG	100	100										
GIESE GRAHAM SHERWOOD													05/05/1992	99			8004-015		13-100	04/30/2013	90	BP NVC	1,850	05/03/2013		100	100										
GIESE GRAHAM SHERWOOD																			94-017	03/14/1994	2	ADDITION	15,000	06/10/1994		100	100										
GIESE GRAHAM SHERWOOD																			94-006	02/02/1994	4	REHAB	15,000	06/10/1994		100	100										
CD	T	AC/SF/UN	Nbhd	Inf1	Inf2	ADJ BASE	SAF	Inf3	Lpi	VC	CREDIT AMT	ADJ VALUE																									
100	A	0.775	16	1.00	1	1.00	1	1.00	620,770	1.00	1	1.00	SR3	2.30			481,100																				
300	A	0.715	16	1.00	1	1.00	1	1.00	47,380	1.00	1	1.00	SR3	2.30			33,880																				
TOTAL													ZONING		NSD	FRNT	0	ASSESSED	CURRENT	PREVIOUS																	
TOTAL													1.490 Acres		ZONING		NSD	FRNT	0	ASSESSED	CURRENT	PREVIOUS															
Nbhd													NAT'L SEASHORE		N		FY10 VIEW CHG PER REVIEW. FY11=DELETED VW																				
Inf1													NO ADJ		O		PER 2009 M+L (OBSCURED BY WOODLANDS). FY11																				
Inf2													NO ADJ		T		Lpi INCR PER FIELD REV+ NBHD CHG 9B TO 9A PER																				
													E		OFFICE REV.																						
													LAND		515,000																						
													BUILDING		208,200																						
													DETACHED		3,000																						
													OTHER		0																						
													TOTAL		726,200																						
															722,700																						
TY	QUAL	COND	DIM/NOTE	YB	UNITS	ADJ PRICE	RCNLD	PHOTO	02/09/2018																												
DGF	-	0.90	P 0.45	13*20	260	23.64	2,800	[Image of house]																													
PTD	G	1.18	F 0.60	11*11	121	2.48	200																														
BUILDING													CD	ADJ	DESC		MEASURE	2/9/2018	LG	BLDG COMMENTS																	
MODEL													1		RESIDENTIAL		LIST	2/12/2018	LG	FY11 CHGS PER 2009 M+L.																	
STYLE													7	1.20	OLD STYLE (100%)		REVIEW	12/15/2010	MR																		
QUALITY													A	1.00	AVERAGE (100%)																						
FRAME													1	1.00	WOOD FRAME (100%)																						
YEAR BLT	1840	SIZE ADJ	1.000	ELEMENT		CD	DESCRIPTION	ADJ	S	BAT	T	DESCRIPTION	UNITS	YB	ADJ PRICE	RCN	TOTAL RCN	424,887																			
NET AREA	1.796	DETAIL ADJ	1.000	FOUNDATION				1.00	A	EPA	N	ENCL PORCH	370		81.97	30,328	CONDITION ELEM		CD																		
\$NLA(RCN)	\$237	OVERALL	1.230	EXT. COVER		1	WOOD SHINGLES	1.00	+	BAS	L	BAS AREA	1,395	1840	209.33	292,012																					
CAPACITY				UNITS	ADJ	ROOF SHAPE		1.00	B	USF	L	UP-STRY FIN	401	1840	166.34	66,702																					
STORIES(FAR)				1.5	1.00	ROOF COVER		1.01	+	WDK	N	ATT WOOD DECK	466		33.46	15,590																					
ROOMS				8	1.00	FLOOR COVER		1.00	F21	O	FPL 2S 1OP	1		10,468.50	10,469																						
BEDROOMS				3	1.00	INT. FINISH		1.00	MST	O	MASONRY STACK			2,093.45	4,187																						
BATHROOMS				2	1.00	HEATING/COOLING		1.02	ODS	O	OUT DOOR SHOWER	2		0.00																							
FIXTURES				8	\$5,600	FUEL SOURCE		1.00																													
UNITS				0	1.00																																
																	EFF.YR/AGE		1959 / 60																		
																	COND		51 51 %																		
																	FUNC		0																		
																	ECON		0																		
																	DEPR		51 % GD 49																		
																	RCNLD		\$208,200																		

PER 2009 M+L: NO BSMT OR CRAWL



BLDG COMMENTS

FY11 CHGS PER 2009 M+L.

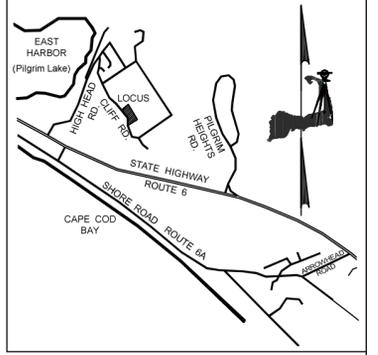
I hereby certify that the structures shown hereon are located as they exist on the ground.

Donald T. Poole PLS #32662 Date

Cape Cod National Seashore
USA Dept. of the Interior

PLAN NOTES:

- 1) Property is located within the Seashore Zoning District
- 2) Bearings are based on MA Coordinate System NAD83
- 3) Elevations are based on NAVD88
- 4) Existing Grade = $61.8+60.5+63.0+63.3+63.5+64.1+63.0 = 439.2/7 = 62.7'$ NAVD88
- 5) Existing Ridge Height = $84.8' - 62.7' = 22.1'$
- 6) Proposed Ridge Height = $\text{Fin Flr } (65.9') + 22.9' \text{ (Proposed Ridge)} = 88.8' - 62.7' = 26.1'$



Holden Avenue ~ 30' Way
N 54°37'26" E 123.58'

#38 Cliff Road
Area = 28,010± Sq.Ft.
or 0.64 Acres

R= 10.00'
A= 16.08'

100' from the Zone AE Elev. 13.3
From FEMA Map#25001C0136J

N 37°29'12" W 189.76'
Cliff Road ~ 40' Way

100' from the Edge of
Wetland from DEP

Zone AE Elev. 13.3 From FEMA
Map#25001C0136J

Cape Cod National Seashore
USA Dept. of the Interior

Top of Bank

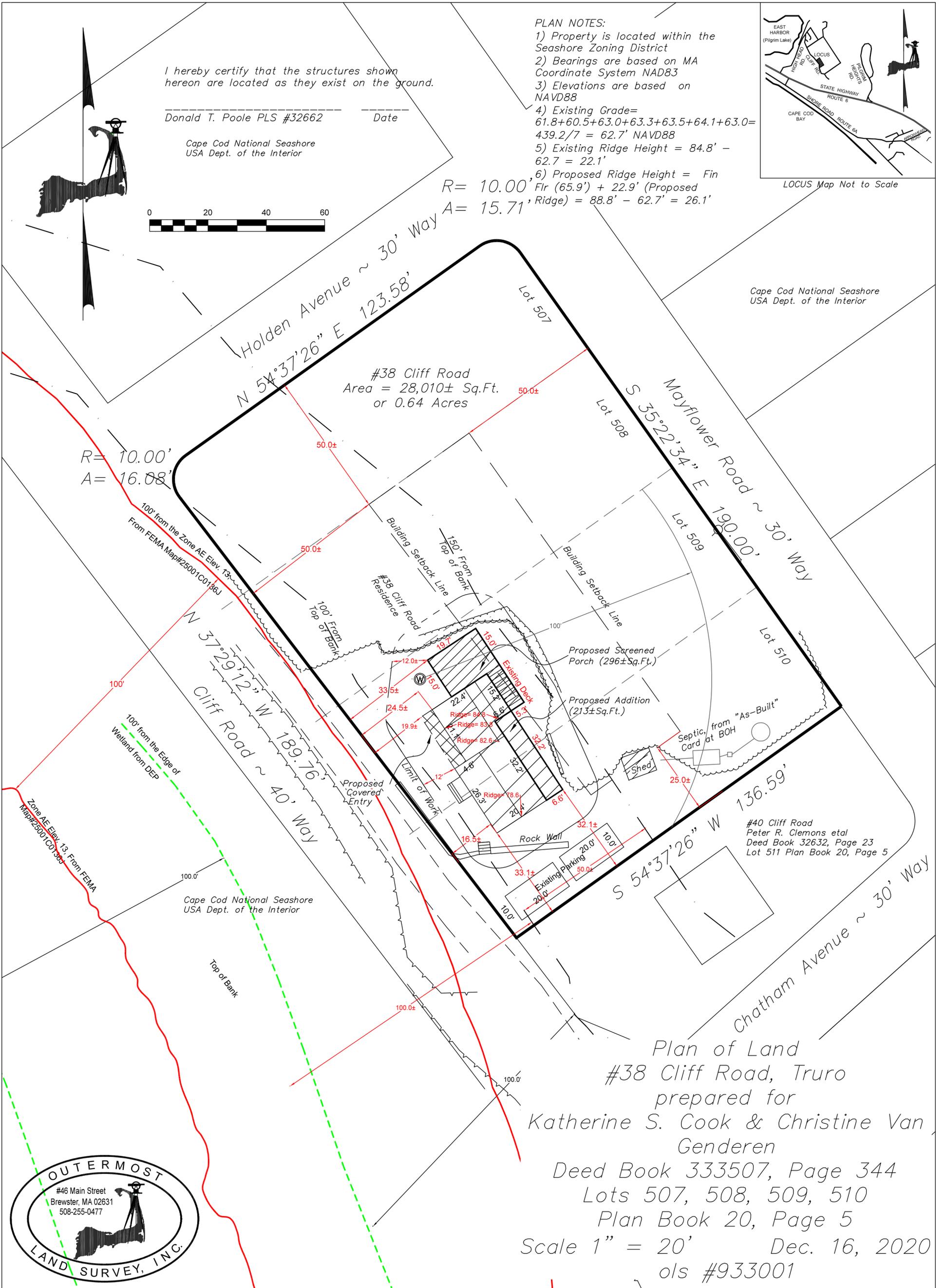


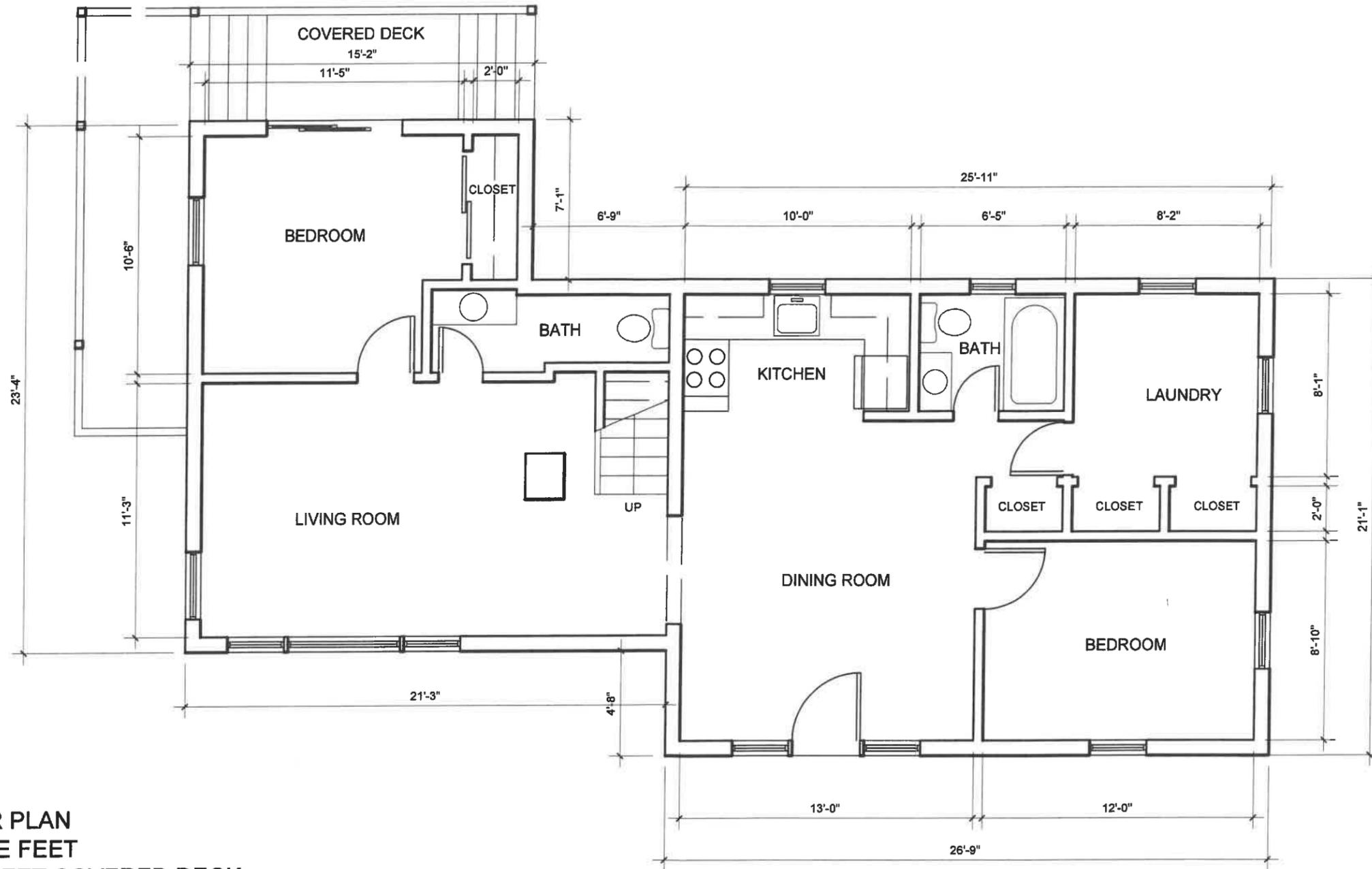
Plan of Land
#38 Cliff Road, Truro
prepared for
Katherine S. Cook & Christine Van
Genderen
Deed Book 333507, Page 344
Lots 507, 508, 509, 510
Plan Book 20, Page 5
Scale 1" = 20' Dec. 16, 2020
ols #933001

Cape Cod National Seashore
USA Dept. of the Interior

#40 Cliff Road
Peter R. Clemens et al
Deed Book 32632, Page 23
Lot 511 Plan Book 20, Page 5

Chatham Avenue ~ 30' Way





FIRST FLOOR PLAN
1,020 SQUARE FEET
76 SQUARE FEET COVERED DECK

TED SMITH
 Architect, LLC
 12 Dartmouth Place . Boston
 422 Commercial Street . Provincetown
 617 . 247 . 0023
 TEDSMITHARCHITECT@GMAIL.COM

PROJECT TITLE

38 CLIFF ROAD
Truro, Massachusetts

DRAWING TITLE

EXISTING FIRST FLOOR PLAN

SCALE

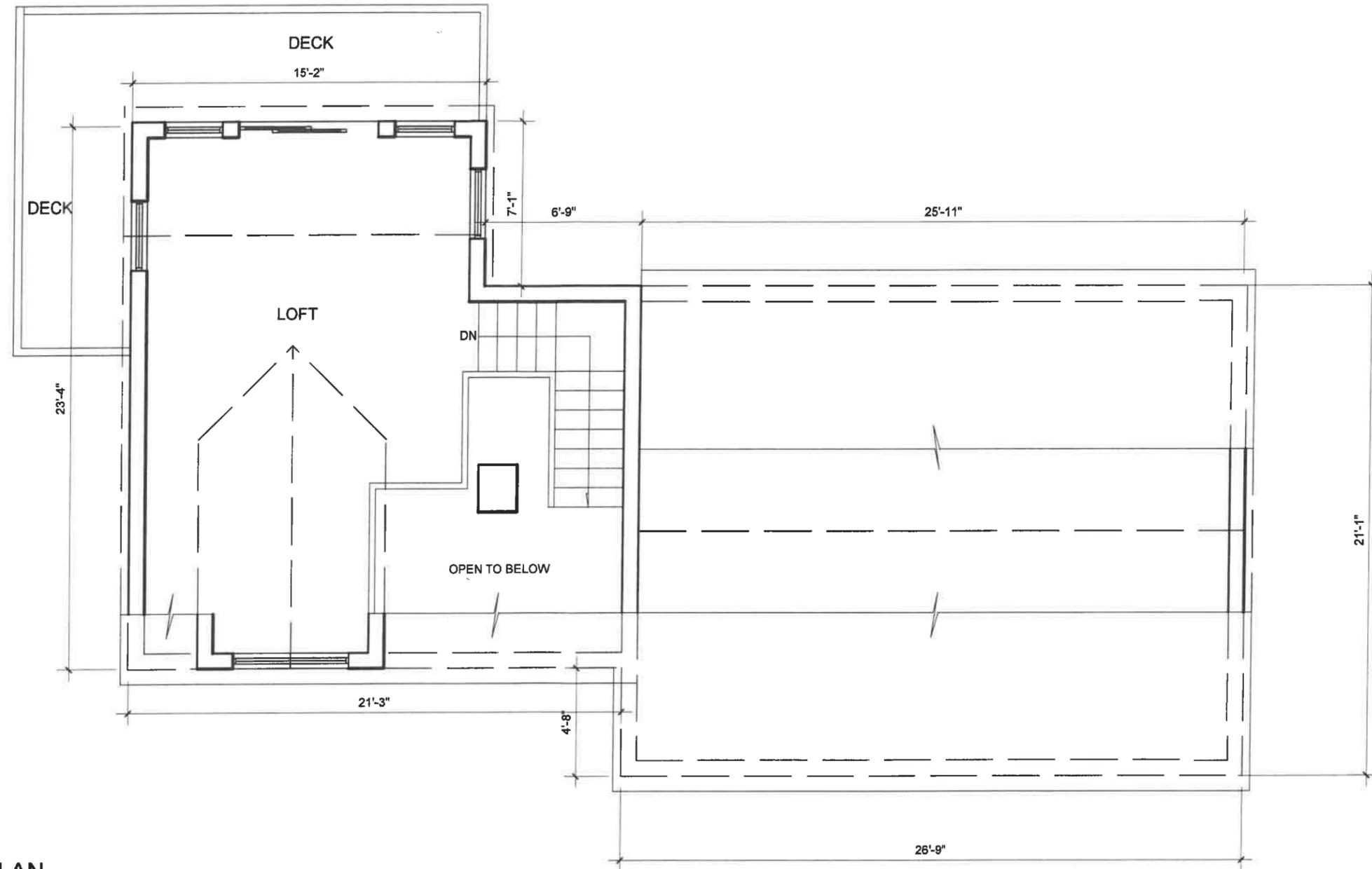
3/16" = 1'-0"

DATE

26 OCTOBER 2020

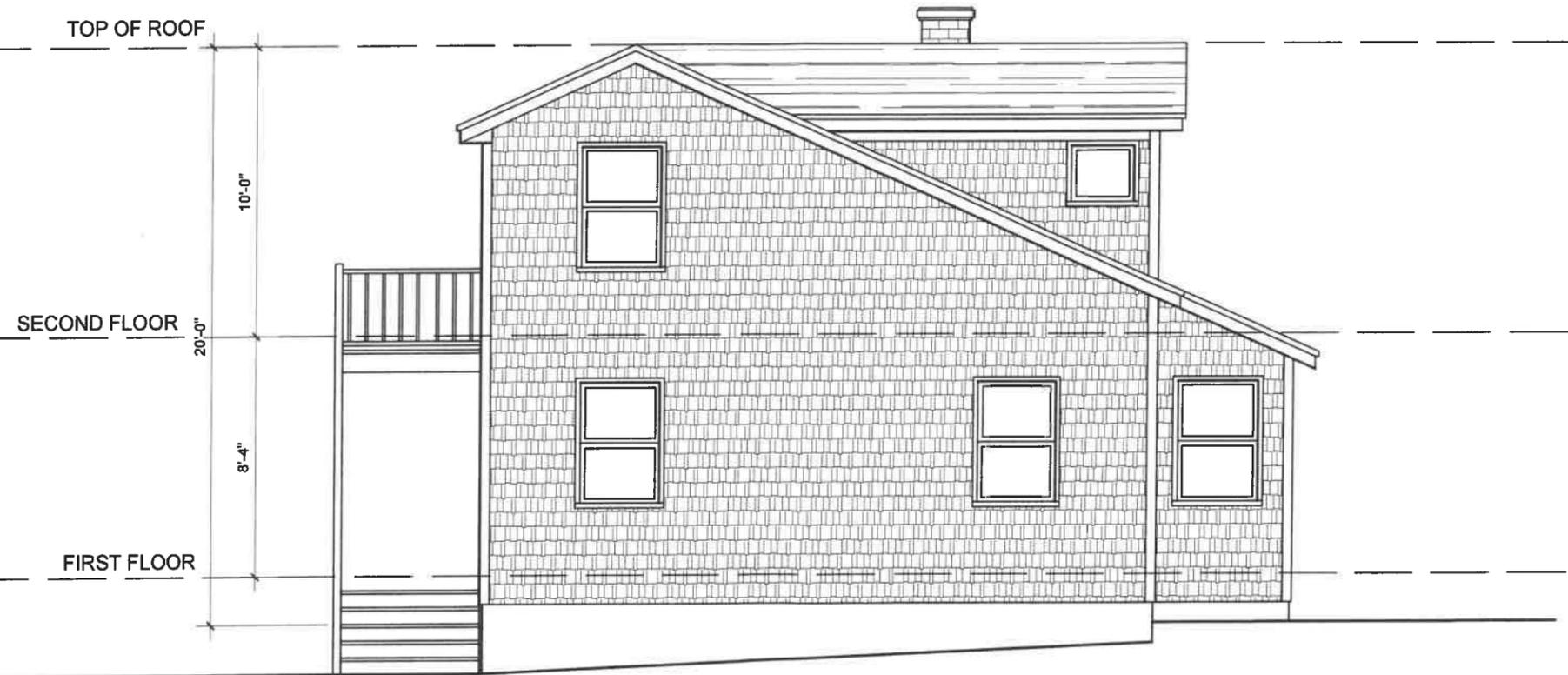
SHEET NO.

E1.1



SECOND FLOOR PLAN
369 SQUARE FEET

<p>TED SMITH Architect, LLC 12 Dartmouth Place . Boston 422 Commercial Street . Provincetown 617 . 247 . 0023 TEDSMITHARCHITECT@GMAIL.COM</p>	<p>PROJECT TITLE</p> <p>38 CLIFF ROAD Truro, Massachusetts</p>	<p>DRAWING TITLE</p> <p>EXISTING SECOND FLOOR PLAN</p>	<p>SCALE</p> <p>3/16" = 1'-0"</p> <p>DATE</p> <p>26 OCTOBER 2020</p>	<p>SHEET NO.</p> <p>E1.2</p>
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TED SMITH
 Architect, LLC
 12 Dartmouth Place . Boston
 422 Commercial Street . Provincetown
 617 . 247 . 0023
 TEDSMITHARCHITECT@GMAIL.COM

PROJECT TITLE
38 CLIFF ROAD
 Truro, Massachusetts

DRAWING TITLE
EXISTING NORTH ELEVATION

SCALE
 3/16" = 1'-0"
 DATE
 26 OCTOBER 2020

SHEET NO.
E2.4

TOP OF ROOF

10'-0"

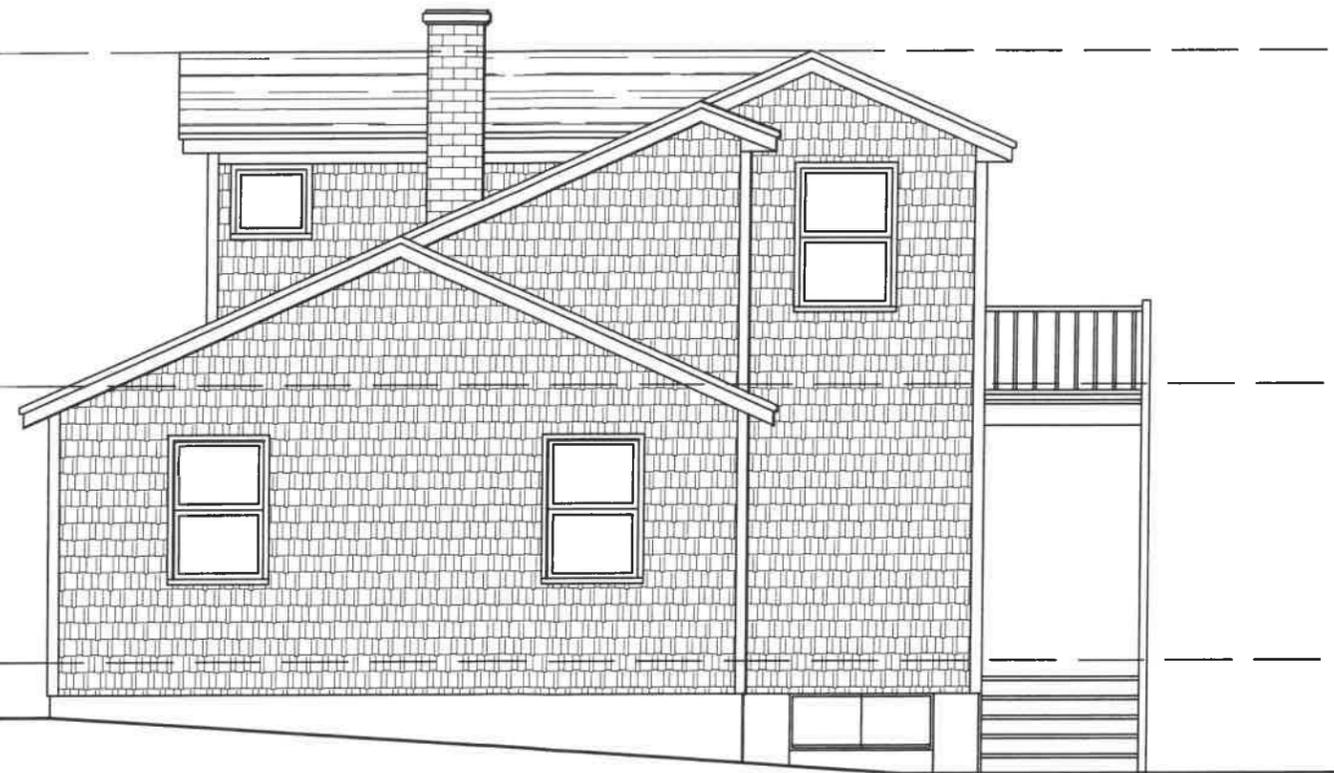
SECOND FLOOR

20'-0"

8'-4"

FIRST FLOOR

FIRST FLOOR



TED SMITH
 Architect, LLC
 12 Dartmouth Place . Boston
 422 Commercial Street . Provincetown
 617 . 247 . 0023
 TEDSMITHARCHITECT@GMAIL.COM

PROJECT TITLE

38 CLIFF ROAD
 Truro, Massachusetts

DRAWING TITLE

EXISTING SOUTH ELEVATION

SCALE

3/16" = 1'-0"

DATE

26 OCTOBER 2020

SHEET NO.

E2.2



<p>TED SMITH Architect, LLC 12 Dartmouth Place . Boston 422 Commercial Street . Provincetown 617 . 247 . 0023 TEDSMITHARCHITECT@GMAIL.COM</p>	<p>PROJECT TITLE</p> <p>38 CLIFF ROAD Truro, Massachusetts</p>	<p>DRAWING TITLE</p> <p>EXISTING EAST ELEVATION</p>	<p>SCALE</p> <p>3/16" = 1'-0"</p> <p>DATE</p> <p>26 OCTOBER 2020</p>	<p>SHEET NO.</p> <p>E2.3</p>
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TED SMITH
 Architect, LLC
 12 Dartmouth Place . Boston
 422 Commercial Street . Provincetown
 617 . 247 . 0023
 TEDSMITHARCHITECT@GMAIL.COM

PROJECT TITLE
38 CLIFF ROAD
Truro, Massachusetts

DRAWING TITLE
EXISTING WEST ELEVATION

SCALE
 3/16" = 1'-0"
 DATE
 26 OCTOBER 2020

SHEET NO.
E2.1



La Tanzi
Spaulding
& Landreth

8 Cardinal Lane
Orleans

14 Center Street, Suite 4
Provincetown

3010 Main Street, Suite 2E
Barnstable

Benjamin E. Zehnder
Direct Tel: 774-801-3048
bzehnder@latanzi.com

November 12 2020

Truro Town Clerk Cynthia Slade
24 Town Hall Road
P.O. Box 2012
Truro, MA 02666

Via hand delivery

Re: Revised floor plans for Planning Board Residential Site Plan Review
38 Cliff Road (Assessor's Parcel ID 32-19)

Dear Ms. Slade:

I previously filed with you an application for Planning Board Residential Site Plan Review for the property at 38 Cliff Road. The owners' architect has prepared revised proposed floor plans (two sheets) showing the locations of exterior lighting fixtures.

Please find attached fifteen sets of the revised floor plans for filing with the Planning Board in this matter.

Thank you as always for your assistance.

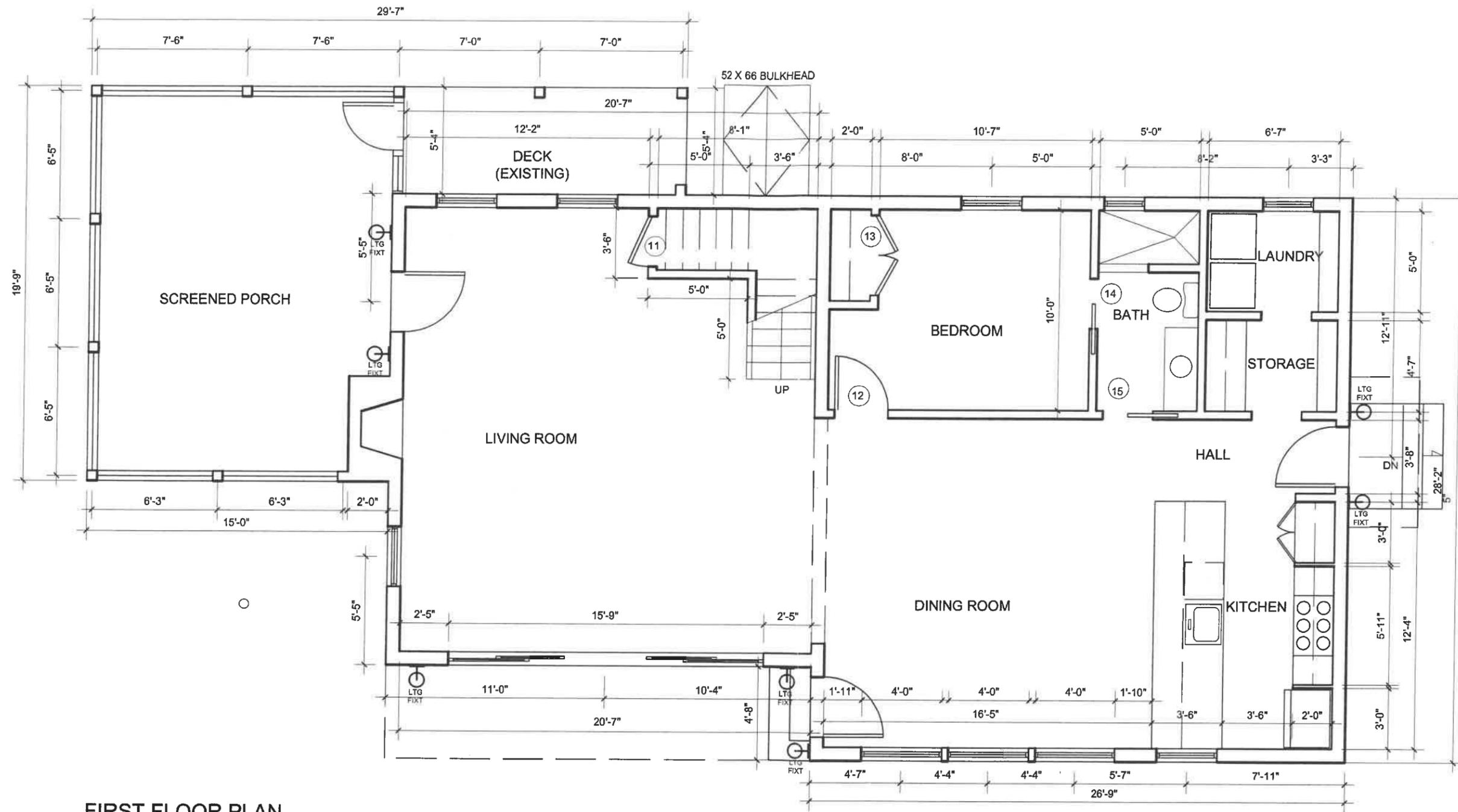
Very truly yours,

Benjamin E. Zehnder

Enc.

cc.: client
Donald T. Poole
Ted Smith
Truro Town Planner (via email to planner1@truro-ma.gov)

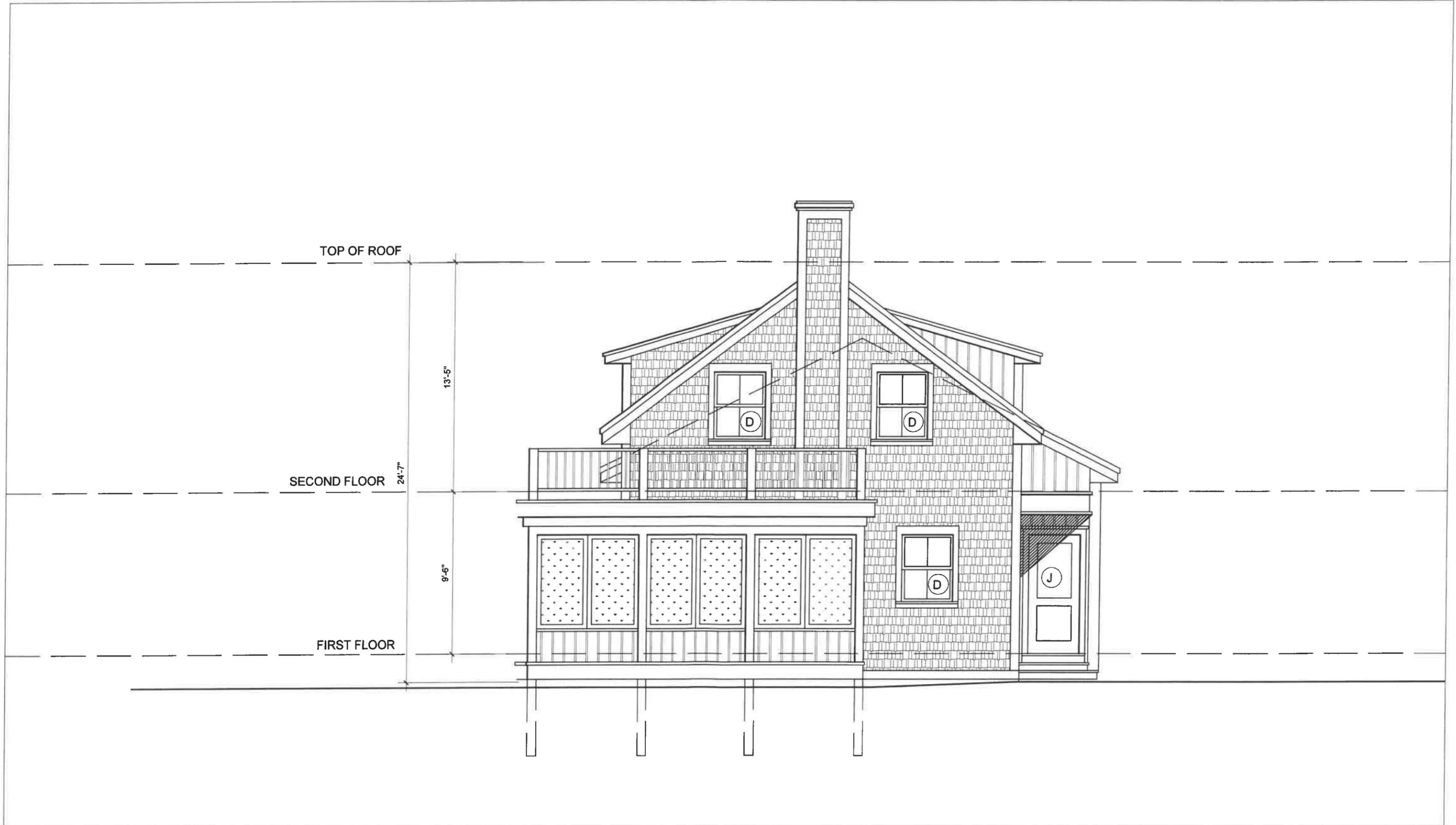
A Legal Beacon since 1969



FIRST FLOOR PLAN
1,252 SQUARE FEET
373 SQUARE FEET PORCH / DECK

<p>TED SMITH Architect, LLC 12 Dartmouth Place . Boston 422 Commercial Street . Provincetown 617 . 247 . 0023 TEDSMITHARCHITECT@GMAIL.COM</p>	<p>PROJECT TITLE 38 CLIFF ROAD Truro, Massachusetts</p>	<p>DRAWING TITLE PROPOSED FIRST FLOOR PLAN</p>	<p>SCALE 3/16" = 1'-0" DATE 26 OCTOBER 2020</p>	<p>SHEET NO. A1.1</p>
---	--	--	--	-----------------------------------

*REVISED - WITH EXTERIOR LIGHTING
 FILED 12/12/20*



TED SMITH
 Architect, LLC
 12 Dartmouth Place . Boston
 422 Commercial Street . Provincetown
 617 . 247 . 0023
 TEDSMITHARCHITECT@GMAIL.COM

PROJECT TITLE

38 CLIFF ROAD
 Truro, Massachusetts

DRAWING TITLE

PROPOSED NORTH ELEVATION

SCALE
 3/16" = 1'-0"
 DATE
 26 OCTOBER 2020

SHEET NO.

A2.5

TOP OF ROOF

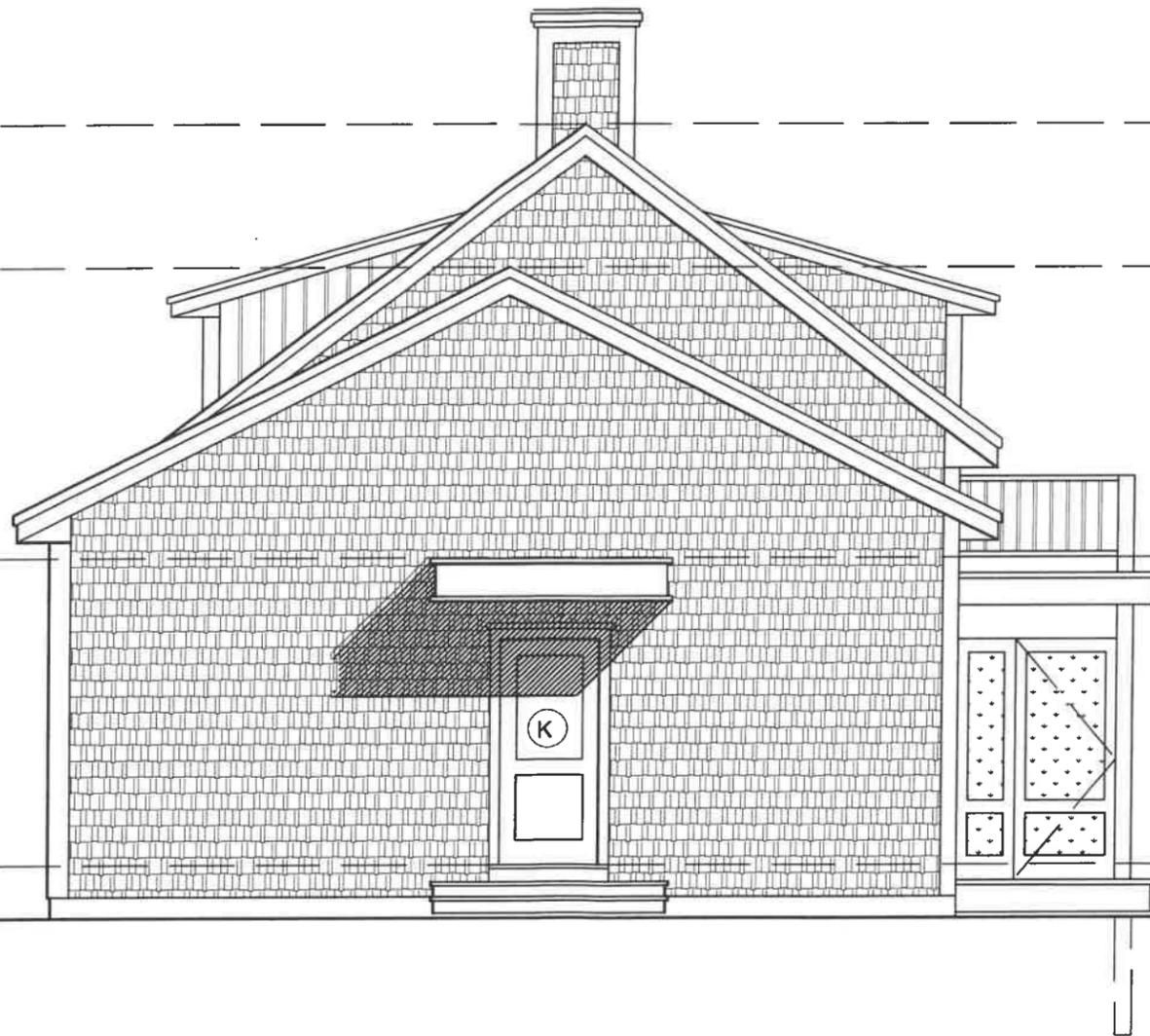
9'-0"

SECOND FLOOR

20'-2"

9'-6"

FIRST FLOOR



TED SMITH
Architect, LLC
12 Dartmouth Place . Boston
422 Commercial Street . Provincetown
617 . 247 . 0023
TEDSMITHARCHITECT@GMAIL.COM

PROJECT TITLE

38 CLIFF ROAD
Truro, Massachusetts

DRAWING TITLE

PROPOSED SOUTH ELEVATION

SCALE

3/16" = 1'-0"

DATE

26 OCTOBER 2020

SHEET NO.

A2.2



TED SMITH
 Architect, LLC
 12 Dartmouth Place . Boston
 422 Commercial Street . Provincetown
 617 . 247 . 0023
 TEDSMITHARCHITECT@GMAIL.COM

PROJECT TITLE

38 CLIFF ROAD
 Truro, Massachusetts

DRAWING TITLE

PROPOSED EAST ELEVATION

SCALE
 3/16" = 1'-0"
 DATE
 26 OCTOBER 2020

SHEET NO.

A2.3



<p>TED SMITH Architect, LLC 12 Dartmouth Place . Boston 422 Commercial Street . Provincetown 617 . 247 . 0023 TEDSMITHARCHITECT@GMAIL.COM</p>	<p>PROJECT TITLE</p> <p>38 CLIFF ROAD Truro, Massachusetts</p>	<p>DRAWING TITLE</p> <p>PROPOSED WEST ELEVATION</p>	<p>SCALE</p> <p>3/16" = 1'-0"</p> <p>DATE</p> <p>20 OCTOBER 2020</p>	<p>SHEET NO.</p> <p>A2.1</p>
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December 3, 2020

Town of Truro
Planning Board
24 Town Hall Road
P.O. Box 2030
Truro, MA 02666

Re: Application for an Eligible Facilities Request pursuant to Section 6409 of the Spectrum Act and an Application for a Special Permit, in the alternative.
Property Address: 330 Route 6, North Truro, MA 02652
Assessor's Map 39, Lot 172 (the "**Property**")
Applicant: T-Mobile Northeast, LLC (the "**Applicant**")

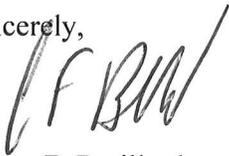
Dear Honorable Members of the Planning Board:

This firm represents the Applicant in connection with an application for an Eligible Facilities Request pursuant to Section 6409 of the Spectrum Act and an application for a Special Permit, in the alternative, from the Town of Truro Planning Board (the "**Board**").

The Applicants propose to modify T-Mobile's existing wireless telecommunications facility on the existing tower located on the Property (the "**Tower**"). As more specifically discussed in the application package, the proposed modifications of the Tower comply with Section 40.5 of the Town of Truro's zoning regulations, and with the Eligible Facilities Request requirements set forth in Section 6409 of the Spectrum Act. Therefore, the Applicant request the necessary relief in the form of a Special Permit and any other relief as the Board determines is necessary to the installation of the proposed modifications.

Enclosed herewith, please find one (1) original and eleven (11) copies of the aforementioned application package along with the application filing fee. Please contact me directly with any questions on this matter.

Sincerely,



Adam F. Braillard
Direct: 617-456-8153
Email: abraillard@princelobel.com

Enclosures



Town of Truro Planning Board

P.O. Box 2030, Truro, MA 02666

Office of Town Clerk
Treasurer – Tax Collector
2020-014/PB
DEC - 4 2020
\$50.00 Fee PAID
Received TOWN OF TRURO
By *[Signature]*

APPLICATION FOR SPECIAL PERMIT

To the Town Clerk of the Town of Truro, MA

Date December 3, 2020

The undersigned hereby files with specific grounds for this application:

1. General Information

Applicant seeks approval and authorization of uses under Section 40.5 of the Truro Zoning Bylaw concerning *(describe):*

T-Mobile Northeast, LLC proposes to modify its existing antenna facility on the tower located at 344 Route 6, by replacing three (3) existing panel antennas with three (3) new panel antennas. The new antennas will be installed to be consistent with the original decision by the Planning Board, also attached with this application.

Property Address 344 Route 6 Map(s) and Parcel(s) Map 39, Parcel 172 A

Registry of Deeds title reference: Book _____, Page _____, or Certificate of Title Number _____ and Land Ct. Lot # _____ and Plan # _____

Applicant's Name T-Mobile Northeast, LLC

Applicant's Legal Mailing Address 15 Commerce Way, Norton, MA

Applicant's Phone(s), Fax and Email 617-456-8153. abraillard@princelobel.com

Applicant is one of the following: *(please check appropriate box)*

*Written Permission of the owner is required for submittal of this application.

Owner Prospective Buyer* Other*

Owner's Name Southeastern Bell Mobile Systems, dba Cingular Wireless - AT&T Services

Owner's Address 344 Route 6, North Truro

Representative's Name and Address Adam F. Braillard, Esq. for T-Mobile, One International Place, Boston, MA

Representative's Phone(s), Fax and Email 617-456-8153, abraillard@princelobel.com

2. The completed application shall also be submitted electronically to the Town Planner at planner1@truro-ma.gov in its entirety (including all plans and attachments).

- The applicant is *advised* to consult with the Building Commissioner, Planning Department, Conservation Department, and/or Health Department prior to submitting this application.

Signature(s) Adam F. Braillard, Esq. of Prince Lobel Tye LLP, for T-Mobile NORtheast, LLC

Applicant(s)/Representative Printed Name(s)

Applicant(s)/Representative Signature

Please see attached consent letter agreement.

Owner(s) Printed Name(s) or written permission

Please see attached consent letter agreement.

Owner(s) Signature or written permission

Your signature on this application authorizes the Members of the Planning Board and town staff to visit and enter upon the subject property

**APPLICATION FOR A SPECIAL PERMIT and an
ELIGIBLE FACILITIES REQUEST under SECTION 6409(a) OF THE
SPECTRUM ACT
For a Modification to a
WIRELESS COMMUNICATION FACILITY**

T-Mobile Northeast LLC

**c/o Adam F. Brailard, Esq.
Prince Lobel Tye LLP
One International Place, Suite 3700
Boston, MA 02110**

Applicant

**Property Location:
344 Route 6
Truro, MA 02652**

**Prepared by: Adam F. Brailard, Esq.
Prince Lobel Tye LLP
One International Place, Suite 3700
Boston, MA 02110
Telephone: (617) 456-8153
Facsimile: (617) 456-8100**

December 3, 2020

TABLE OF CONTENTS

**APPLICATION FOR A SPECIAL PERMIT and an
ELIGIBLE FACILITIES REQUEST under SECTION 6409(a) OF THE
SPECTRUM ACT
For a Modification to a
WIRELESS COMMUNICATION FACILITY**

Property Location:

**344 Route 6
Truro, MA 02652**

Planning Board Special Permit Application	Tab 1
Special Permit Legal Brief and Supporting Statements.	Tab 2
Eligible Facilities Request Application and Forms	Tab 3
Abutters List	Tab 4
Plans	Tab 5
Structural Analysis	Tab 6
Mounting Analysis	Tab 7
FCC License	Tab 8
Consent from the Tower Owner	Tab 9
Prior Decisions	Tab 10

1



Town of Truro Planning Board

P.O. Box 2030, Truro, MA 02666

APPLICATION FOR SPECIAL PERMIT

To the Town Clerk of the Town of Truro, MA

Date December 3, 2020

The undersigned hereby files with specific grounds for this application:

1. General Information

Applicant seeks approval and authorization of uses under Section 40.5 of the Truro Zoning Bylaw concerning (*describe*): _____

T-Mobile Northeast, LLC proposes to modify its existing antenna facility on the tower located at 344 Route 6, by replacing three (3) existing panel antennas with three (3) new panel antennas. The new antennas will be installed to be consistent with the original decision by the Planning Board, also attached with this application.

Property Address 344 Route 6 Map(s) and Parcel(s) Map 39, Parcel 172 A

Registry of Deeds title reference: Book _____, Page _____, or Certificate of Title Number _____ and Land Ct. Lot # _____ and Plan # _____

Applicant's Name T-Mobile Northeast, LLC

Applicant's Legal Mailing Address 15 Commerce Way, Norton, MA

Applicant's Phone(s), Fax and Email 617-456-8153. abraillard@princelobel.com

Applicant is one of the following: (*please check appropriate box*)

*Written Permission of the owner is required for submittal of this application.

Owner Prospective Buyer* Other*

Owner's Name Southeastern Bell Mobile Systems, dba Cingular Wireless - AT&T Services

Owner's Address 344 Route 6, North Truro

Representative's Name and Address Adam F. Braillard, Esq. for T-Mobile, One International Place, Boston, MA

Representative's Phone(s), Fax and Email 617-456-8153, abraillard@princelobel.com

2. The completed application **shall also** be submitted **electronically** to the Town Planner at planner1@truro-ma.gov in its entirety (including all plans and attachments).

- The applicant is **advised** to consult with the Building Commissioner, Planning Department, Conservation Department, and/or Health Department prior to submitting this application.

Signature(s) Adam F. Braillard, Esq. of Prince Lobel Tye LLP, for T-Mobile NORtheast, LLC

Please see attached consent letter agreement.

Applicant(s)/Representative Printed Name(s)

Owner(s) Printed Name(s) or written permission

Please see attached consent letter agreement.

Applicant(s)/Representative Signature

Owner(s) Signature or written permission

Your signature on this application authorizes the Members of the Planning Board and town staff to visit and enter upon the subject property

2

December 3, 2020

Town of Truro
Planning Board
24 Town Hall Road
P.O. Box 2030
Truro, MA 02666

Re: Application for an Eligible Facilities Request pursuant to Section 6409 of the Spectrum Act and an Application to Renew the Existing Special Permit, in the alternative.

Property Address: 330 Route 6, North Truro, MA 02652
Assessor's Map 39, Lot 172 (the "**Property**")

Applicant: T-Mobile Northeast, LLC (the "**Applicant**")

Dear Honorable Members of the Planning Board:

On behalf of the Applicant, we submit this Eligible Facilities Request (as defined below) application and Special Permit application to the Town of Truro Planning Board (the "**Board**"), to modify its existing wireless communications facility located on the existing tower (the "**Tower**"), located at the Property. The Property is located in the Route 6 General Business zoning district, and pursuant to Section 40.5 of the Town of Truro Zoning Bylaw (the "**Bylaw**"), the use of the Property for a wireless telecommunications facility is permitted by special permit. Specifically, Section 40.5 of the Bylaw provides that communications antennas may be located on the existing Tower. Moreover, the Applicant's proposal satisfies the requirements for the grant of a special permit pursuant to Section 30.8 of the Bylaw.

The Applicant's Proposed Facility (as defined herein) is subject to Section 6409 of the Middle Class Tax Relief and Job Creation Act of 2012, more commonly known as the "Spectrum Act" (47 U.S.C. § 1455). The compliance with the Spectrum Act is shown on the Eligible Facilities Request permit application form attached hereto and incorporated herein by reference (the "**EFR**"). Nevertheless, we respectfully submit that in the event the Board determines that the application does not comply with the Spectrum Act, the Applicant hereby states that the special permit requirements set forth in the Bylaws are hereby met by the Applicant, and that relief must be granted to the Applicant.

The Applicant seeks to modify its existing wireless communications facility by replacing three (3) panel antennas mounted to the existing Tower, with three (3) like kind panel antennas, by replacing three (3) Remote Radio Head Units ("**RRU**") with three (3) like kind RRU antennas, and by removing six (6) tower mounted amplifiers ("**TMA**") radios with three (3) new TMA's, and supporting equipment (the "**Proposed Facility**"). All of the proposed antennas will be installed in the location of the removed antennas on the Tower. The

Applicant's Proposed Facility is shown on the Plans attached hereto and incorporated herein by reference (the "Plans").

I. Background

The Applicant is licensed by the Federal Communications Commission (the "FCC") to construct and operate a wireless telecommunications network in various markets throughout the country, including the Commonwealth of Massachusetts and in particular in the City of Cambridge. A copy of the Applicant's FCC license is attached hereto. The Applicant is in the process of designing and constructing a telecommunications system to serve all of the Commonwealth of Massachusetts. One of the key design objectives of its systems is to provide seamless coverage. Such a system requires a grid of radio transmitting and receiving links located approximately .5 to 2 miles apart, depending on the location of existing and proposed installations in the surrounding area, the existing use of the network and the existing topography. The radio transmitting and receiving facilities operate on a line-of-sight basis, requiring a clear path from the facility to the user on the ground. This dynamic requires the antennas to be located in a location where the signal is not obstructed or degraded by other buildings or by topographical features such as hills.

II. Project Description

As noted above, T-Mobile proposes to modify its existing wireless facility currently operating on the Tower by replacing three (3) panel antennas with three (3) like kind panel antennas, by replacing three (3) RRUs with three (3) like kind RRUs, and by replacing six (6) TMAs with three (3) like kind TMAs. Moreover, T-Mobile proposes to replace two (2) radio cabinets with two (2) like kind radio cabinets currently installed at the base of the Tower. All of the replacement antennas will be installed at the same locations as the replaced antennas on the Tower. All replaced antennas, cabinets, and supporting equipment will be installed to be consistent with all previous decisions of the Board for this facility. Consequently, the visual change to the Applicant's existing facility will be de minimis.

After installation, the Proposed Facility will be unmanned and will only require twice a month maintenance visits per carrier. The only utilities required to operate this Proposed Facility are standard 120-volt electrical power as well as telephone service. These are presently in place at the Property. The traffic generated by the Proposed Facility will be approximately two vehicle trips per month by maintenance personnel who will inspect the Proposed Facility to ensure it remains in good working order. The Proposed Facility will comply with all applicable local, state and federal safety codes.

III. Legal Arguments

- 1. The Applicant satisfies the Special Permit Requirements for Communications Structures, Buildings and Appurtenances as set forth under Section 40.5 of the By-law.**

A. Purpose. The purpose of this part of Section VIII of the Zoning Bylaw is to accommodate the communication needs of residents and businesses while protecting the public health, safety and general; welfare of the community; to establish guidelines, standards and procedures to regulate the permitting and installation of communication structures, buildings and appurtenances in order to:

- 1. facilitate the provision of wireless telecommunications services to the residents and businesses of the town;**
- 2. minimize adverse visual effects of towers through careful design and siting standards**
- 3. avoid potential damage to adjacent properties from tower failure through structural standards and setback requirements, and**
- 4. maximize the use of existing and approved towers and buildings to accommodate new wireless telecommunication antennas in order to reduce the number of towers needed to serve the community.**

The Applicant's Proposed Facility is consistent with the purpose of the Bylaw and will facilitate the provision of wireless and telecommunication services to residents and businesses within Truro. Through its utilization of its existing facility on the Tower, the Applicant will minimize the adverse visual effects of towers and maximize the use of existing structures.

B. Requirements:

- 1. All building permits for a communication structure, building or appurtenance shall require a special permit from the Planning Board.**

The Applicant is seeking relief in the form of an Eligible Facilities Request, and in the alternative, a special permit herein.

- 2. the minimum distance from the perimeter of the communication structure to any property line shall be the height of the structure including any antennas or appurtenances, plus ten (10) feet. The minimum distance from any guy wire, anchor or brace to any property line shall be the length of the guy wire or brace plus ten (10) feet. The setbacks for a communications building shall comply with the setback requirements of the zoning districts.**

The Applicant's proposed modifications to its equipment will be installed on an existing Tower and the radio equipment will continue to be located within an existing fenced compound.

- 3. The communication structure, building or Appurtenance shall be installed, maintained and operated in accordance with all applicable federal, state, country and local codes, standards and regulations and shall be designed to withstand sustained winds and gusts of a category 5 hurricane. If FAA or FCC regulations are changed, then the owner or operator shall bring the structure, building and appurtenances into compliance with the new regulations within six (6) months of the effective date of such regulations or earlier if a more stringent compliance schedule is included in the regulation. Failure to comply with any new regulations shall be grounds for the removal of non-complying structures, buildings and appurtenances at the owner's expense.**

The Applicant will comply with all federal, state, country and local standards and regulations.

- 4. The height of the communications structure (tower) shall be no greater than one hundred and fifty (150 feet) above ground level.**

Not applicable. The Applicant's antennas will be attached to an existing tower at a centerline height of 93' above ground level.

- 5. Communication antenna shall be located on pre-existing structures unless the applicant demonstrates that there are no feasible pre-existing structures. The installation shall preserve the character of such pre-existing structures.**

The Applicant satisfies this requirement. It is collocating its equipment on an existing Tower.

- 6. In the applicant has demonstrated that there are no feasible pre-existing structures to support antennas and appurtenances for the intended use, then any communication structure, building or appurtenance may be sited on public land.**

Not applicable, as the Applicant is proposing to modify its existing facility on the Tower.

- 7. To the extent lawful and feasible, all service providers shall co-locate on a single tower. Towers shall be designed to structurally accommodate the maximum number or foreseeable uses (within a ten-year period) technically practicable. The applicant is required to document all co-location tenants and provide a tower design indicating types and location of all facilities.**

The Applicant is modifying its facility currently collocated on the existing Tower and therefore complies with this requirement.

- 8. New facilities or structures shall be considered only upon a finding by the Planning Board that existing or approved facilities or structures cannot accommodate the wireless communications equipment planned for the proposed tower.**

Not applicable, as the Applicant is proposing to modify its existing facility on the Tower.

- 9. The installation of a communication structure, building or appurtenance shall be designed to minimize visual impact; the maximum amount of natural vegetation shall be preserved; details of construction and finished shall blend with the surroundings; additional vegetative screening shall be employed where practical and particularly to screen abutting residential property whether developed or not. A detailed landscape plan will be required with the application.**

By utilizing the existing Tower, the Applicant complies with this requirement.

- 10. Location and siting of facilities and structures shall be consistent with any regional location and siting criteria established by the Cape Cod Commission.**

Not applicable, as the Applicant is proposing to modify its existing facility on the Tower.

- 11. Under normal operating conditions, noise emanating from the communication structure, building or appurtenance shall not be greater at the boundary of the lot on which it is sited than would otherwise exist in the absence of these facilities.**

The Applicant proposed modifications to its facility complies with this provision of the Bylaw.

- 12. No hazardous waste shall be discharged on the site. Any storage of fuel shall be in compliance with the Board of Health regulations. Documentation shall be provided for the contents of all communication buildings and/or cabinets.**

The Applicants proposed modifications to its existing facility will comply with this provision of the bylaw.

- 13. All run-off of storm water from communication structures, buildings, and appurtenances, driveways and parking areas shall be contained on site; the amount of impervious surface on the site shall be minimized.**

The Applicant facility will continue to be within the existing fenced compound on the Property and will not create an impact to drainage.

- 14. Lighting, when required and permitted by the Federal Aviation Administration or the Planning Board, shall be directed inward so as not to project onto surrounding properties.**

The Applicant is proposing no changes to any lighting at its facility.

- 15. All structures, buildings or appurtenances must be secured to control access. fencing material shall be consistent with character of abutting properties, with a locked gate and proper warning signals. A sign must be displayed indicating the name of the owner(s) and a 24 hour contact number. Only signs limited to safety will be allowed. Fencing is not required for antennas or other appurtenances mounted on a pre-existing structure.**

The Applicant will comply with this requirement of the Bylaw.

- 16. As a condition of approval of the application the applicant shall agree, by execution of a covenant, to remove within six months any communication structure and building which has not operated for four consecutive months unless the cause is major damage which prohibits operation. In the event that major damage has rendered the facility inoperative, repair or removal of the facility shall begin within six months and be completed within an additional six months. Failure to comply with the conditions of the covenant shall be grounds for the removal of structures, buildings and appurtenances. Complete restoration of the site shall be at the owner(s) expense, secured by a bond from a**

recognized financial institution. The covenant shall include, also at the owners(s) expense, provision for liability insurance for any damage to any abutting property whether developed or not.

The Applicant will comply with this requirement of the Bylaw.

17. At least forty-five (45) days before submitting an application for a special permit for the installation of a communication structure, building or appurtenance the applicant shall consult with the Planning Board. The purpose of the consultation is to facilitate the permitting process by the exchange of information between the applicant and the Planning Board, and for the applicant to obtain a detailed description of the information and documentation required, in writing, by the Planning Board, in order to clarify and resolve concerns of the Board and minimize potential problems with the application.

The Applicant has discussed the proposed modifications with the acting Town Planner, Barbara Huggins Carboni, Esq., of KP Law. Therefore, and given the de minimis nature of the proposed modifications to its existing facility, and the fact that the proposal falls within the criteria of the EFR, the Applicant believes that it has met this requirement of the Bylaw.

18. The Planning Board shall hold a public hearing within sixty-five (65) days of the filing of an application and shall issue a decision within ninety (90) days following the date of the public hearing.

The Applicant respectfully requests that the Planning Board hear and render its decision within the timeframe as referenced in the EFR letter attached herewith, within sixty (60) days after a complete application is filed with the Board.

19. The applicant shall submit the following written information to the Planning Board:

The Applicant respectfully requests waivers to many of the written information as requested in this section of the Bylaws, as follows:

(a) A survey of all sites for the installation of communication structures, buildings or appurtenances which are feasible for providing the intended services. The survey shall include a rationale for the selection of a prime and at least one alternative site. All sites in Truro shall be located on the appropriate sheets(s) of the Truro Assessors's Atlas.

- (b) A survey of all pre-existing structures which are capable of supporting the equipment necessary to provide the intended service and a technical report which demonstrates why and such structure cannot be used by the applicant.
- (c) The radiation pattern of all proposed antennas showing the frequency and intensity of radiation at ground level and at 30 feet above ground level. At the expense of the applicant, EMF (Electro Magnetic Field) readings shall be provided to the Board of Health yearly and immediately after any addition to the facility.
- (d) The sound level in decibels at ground level, at 30 feet above ground level and at the top of the facility and 10, 50, 100 and 500 feet from the communication structure, building or appurtenances for wind velocities between calm and 100 miles per hour with all equipment operating at normal level, including before condition measured, after condition prediction and cumulative condition (with co-location) prediction;
- (e) A delineation of the Assessor's Atlas of all areas in Truro which will not be served by the proposed installation for the prime and an alternative site;
- (f) A statement of the services to be supported by the proposed communication structure, building or appurtenance;
- (g) Plans of special design features and material, including landscaping, to minimize the visual impact of proposed communication structures, buildings and appurtenances. Site plans, elevations and fall zone should be included;
- (h) A certification that the applicant has complied with all Federal (including FAA), State and Regional requirements to provide the proposed service and demonstration of compliance with the FCC guidelines for EMF's under NEPA, including copies of the FCC Form 600, plus Environmental Assessment/Environmental Impact Statements applicable;
- (i) Within thirty (30) days after the application filing, the applicant shall arrange to fly a three-foot-diameter balloon at the primary and an alternate site at the maximum height of the proposed installation. The date and location of the flights shall be advertised at least 14 days, but not more than 21 days before the flights, in a newspaper with a general circulation in Truro. Photos

shall be provided from all strategic viewing points, per agreement with the Planning Board prior to flight.

As noted above, the Applicant respectfully requests waivers to the written information as requested in this section of the Bylaws. Given the de minimus nature of the proposed modifications to its existing facility, and the fact that the proposal falls within the criteria of the EFR, the Applicant believes that the above written information is not required as part of its application.

20. If a communication structure, building or appurtenance is to be installed on a pre-existing private structure or on land or a structure owned, prior to the effective date of the Bylaw, by the Commonwealth of Massachusetts, or on land or a structure owned by the Town of Truro, the applicant shall submit the following written information to the Planning Board:

(a) A draft contract, including requirements for removal of all structures and for complete site restoration in the case of discontinued use, between the applicant and the owner (if different from the applicant).

Please see attached a letter from the Tower owner referencing the Applicant's proposed modifications to its existing facility.

(b) A description of the proposed facility at the proposed prime and alternate sites including:

- (i) Height of the facility and its associated equipment**
- (ii) Access roads and power supplies;**
- (iii) Type, size and number of transmitters;**
- (iv) A list of all fuels to be used on the site and detailed description of how each shall be contained.**

The Applicant respectfully requests waivers to this provision of the Bylaw. As noted, the Applicant proposes to only modify its existing facility by replacing antennas and equipment. There will be no change to the height of the Tower and access ways; the number of antennas will remain the same at nine (9) panel antennas; and there is no fuel proposed to be used on site by the Applicant.

(c) A site plan (scale not less than 1 inch = 40 feet), showing the proposed facility, fall zones, existing and proposed contour elevations, 100-year flood zones, water resources, Zones of Contribution, waterways, wetlands and all associated equipment and structures on the site, including

elevations off all equipment structures with sufficient detail to delineate the external finish of all structures and equipment; and

The Applicant respectfully request a waiver to this provision of the Bylaw. As noted, the Applicant proposes to only modify its existing facility by replacing antennas and equipment. There will be no change to the location and height of the Tower, and access ways, as well as no change in the Applicant's equipment area.

(d) A landscape plan showing the proposed site before and after development, including topography and screening proposed to protect abutters.

The Applicant respectfully request a waiver to this provision of the Bylaw. As noted, the Applicant proposes to only modify its existing facility by replacing antennas and equipment. There will be no change to the location and height of the Tower, and access ways, as well as no change in the Applicant's equipment area

2. The Applicant satisfies the General Special Permit Requirements set forth in Section 30.8 of the By-law.

Special permits may be approved only after a finding by the Board of Appeals or Planning Board (as applicable) that the proposed use is in the opinion of the Board in harmony with the general public good and intent of this By-law. The approval shall be subject to any other applicable provision of this By-law and the Board may impose conditions, safeguards, and limitations on time and use which in the Board's opinion are necessary to comply with the intent and purpose of this By-law.

A. The proposed facility satisfies the requirements of Section 30.8. of the Bylaw regarding special permits.

The Applicant's proposal is in harmony with the general public good and the intent of the Bylaw. The proposed modification of the existing wireless communications facility is required for the Applicant to continue to provide competitive services and meet the mandate of its FCC license. Moreover, by modifying its facility on an existing tower and within a Route 6 General Business zoning district, the neighborhood character will remain unaltered. The Wireless By-law favors the development of wireless facilities on existing structures over the construction of new towers. Finally, the facility will have a negligible impact on the natural

environment, traffic flow and safety and the fiscal well-being of the Town. For all of the foregoing reasons, the proposal satisfies the requirements of Section 30.8 of the By-law.

B. The proposed facility complies with the General Requirements for Issuance of a Special Permit Under Massachusetts General Laws, Chapter 40A.

i. The specific site is an appropriate location for such use or structure.

The subject Property contains an existing tower which will accommodate the Applicant's proposed telecommunications facility. The Applicant has a substantial gap in its coverage in the vicinity. The proposed facility will allow the Applicant to improve its wireless communications services in the area without having to build a new tower.

ii. The use as developed will not adversely affect the neighborhood and the relief may be granted without substantial detriment to the public good.

The proposed modifications to the facility will be located on the existing tower on the subject Property. The facility will be unmanned with no offensive lighting, noise, odors, dust, smoke, vibration, sewage, or refuse materials associated with it. There will be no discharge of hazardous wastes from the facility. The visual impact of the proposed equipment area is minimized by its design and location on an existing tower. The facility will meet all applicable state and federal environmental standards. Moreover, the proposed facility will enhance the safety, convenience and welfare of the people of Truro by providing improved wireless telephone services within the Town without having a negative impact on nearby properties or the Town as a whole.

iii. There will be no nuisance or serious hazard to vehicles or pedestrians and the desirable relief may be granted without nullifying or substantially derogating from the intent or purpose of the Zoning By-law.

The proposed modifications to the use generates no additional traffic since it has no employees, customers or regular visitors. After construction, the only traffic will be in connection with scheduled maintenance – approximately two vehicle trips per month – and emergency maintenance as needed. The facility is served by standard electrical and telephone service and requires no water, sewer or other Town services. The Town's Wireless By-law encourages utilizing existing structures and co-locating whenever possible rather than constructing new free-standing towers. The existing Tower located at the Property provides an

ideal solution to the Applicant as it enables the Applicant to meet the purpose and intent of the By-law as it fills its gap in coverage and improves its service in the Town of Truro.

iv. Adequate and appropriate facilities will be provided for the proper operation of the proposed use.

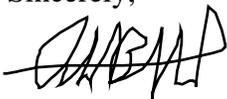
As shown on the Plans, the Applicant proposes to use the existing Tower, which is an appropriate facility for its use.

IV. Conclusion

The Applicant hereby request that the Board determine that the Town of Truro has the right to authorize the construction of the Proposed Facility through the issuance of a Building Permit, pursuant to Section 6409(a) of the Spectrum Act. Or, in the alternative, the Applicant requests the Board find that the proposed medications to the Applicant existing facility are in harmony with the general public good and intent of this Bylaw. The findings are made in view of the particular characteristics of the Property and Tower, and of the Applicant's proposed siting and equipment, as detailed above and herewith. This Property and existing Tower is the most appropriate location for the modification of the installation and continued operations of the Applicant's wireless communications facility.

For the foregoing reasons the Applicant respectfully requests that the Board grant the foregoing relief pursuant to Section 6409(a) of the Spectrum Act or, in the alternative, zoning relief in the form of a Special Permit approval, and such other relief as the Board deems necessary to allow the installation and operation of the Applicant's Proposed Facility.

Sincerely,



Adam F. Braillard
Direct: 617-456-8153
Email: abraillard@princelobel.com

Enclosures

3

December 3, 2020

Rich Stevens
Building Commissioner
Town of Truro
24 Town Hall Road
Truro, MA 02666

Re: Eligible Facilities Request to Modify Transmission Equipment at an Existing Base Station located at **344 Route 6, Truro, MA 02652**

Dear Honorable Members of the Planning Board:

A. T-Mobile is Filing an Eligible Facilities Request

Prince Lobel Tye LLP, on behalf of T-Mobile Northeast LLC is submitting the attached Eligible Facilities Request application to add, remove, modify, or replace Transmission Equipment at an Existing Base Station located at 344 Route 6, Truro, MA 02652.

This jurisdiction has not yet developed an Eligible Facilities Request permit application form that complies with Section 6409 of the Middle Class Tax Relief and Job Creation Act of 2012, commonly known as the “Spectrum Act” (Pub. Law No. 112-96, 126 Stat 156) (codified at 47 U.S.C. § 1455), therefore, this Eligible Facilities Request is attached to the Building Permit Application form which was customarily used by this jurisdiction when reviewing requests to collocate or modify wireless telecommunications facilities. Federal law now preempts many of the permit application requirements that this jurisdiction would previously have required from an applicant, therefore, this Eligible Facilities Request application provides only the information that federal law allows this jurisdiction to consider when reviewing an Eligible Facilities Request.

Section 6409(a) of the Spectrum Act mandates that state and local governments “*may not deny, and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station.*” Under Section 6409(a)(2)(A)-(C) an Eligible Facilities Request is any request to modify a Tower or Base Station that involves “collocations of new Transmission Equipment,” “removal,” or “replacement” of Transmission Equipment.

B. Why this Eligible Facilities Request Must Be Granted

This Eligible Facilities Request involves an effort to collocate, remove, modify, or replace Transmission Equipment at an existing Base Station operated by a Federal Communications Commission (“FCC”) licensed wireless carrier. The FCC has defined Base Station as “the equipment and non-tower supporting structure at a fixed location that enable Commission-licensed or authorized wireless communications between user equipment and a communications network . . . the term includes equipment associated with wireless communications service including, but not limited to, radio transceivers, antennas, coaxial or fiber-optic cable, regular and backup power supply, and comparable equipment.” The term existing base station also includes a structure that currently houses or supports an antenna, transceiver or other associated equipment that constitutes part of a Base Station at the time the application is filed even if the structure was not built solely or primarily to provide such support. The existing Base Station in this application is approximately one hundred and seventy four feet (174’) high and presently contains at least four (4) wireless facilities thereon. The existing Base Station meets the FCC definition of a Base Station.

The list of equipment identified in the Eligible Facilities Request application that will be collocated, removed, or replaced at the Base Station also is Transmission Equipment as determined by the FCC. The FCC has defined Transmission Equipment as “any equipment that facilitates transmission for any Commission-licensed or authorized wireless communication service, including, but not limited to, radio transceivers, antennas and other relevant equipment associated with and necessary to their operation, including coaxial or fiber-optic cable, and regular and back-up power supply. This definition includes equipment used in any technological configuration associated with any Commission-authorized wireless transmission, licensed or unlicensed, terrestrial or satellite, including commercial mobile, private mobile, broadcast and public safety services, as well as fixed wireless services such as microwave backhaul or fixed broadband.”

The FCC, in a Report and Order adopted on October 17, 2014, determined that any modification to an existing telecommunications Base Station that meets the following six criteria does not substantially change the physical dimensions of the existing Base Station and therefore is an Eligible Facilities Request which must be granted:

1. The modifications to the Transmission Equipment do not increase the height of the Base Station by more than 10 percent (10%) or ten (10) feet, whichever is greater.

- a. The height of the Base Station is approximately 174’ high. The proposed replacement of three (3) panel antennas, three (3) RRUs and three (3) TMAs will not affect the height of the Base Station.

2. ***The modifications to the Transmission Equipment do not protrude from the edge of the support structure by more than six (6) feet.***
 - a. The replacement of three (3) panel antennas, three (3) RRUs and three (3) TMAs will not protrude from the edge of the tower further than they are currently located, and therefore will not exceed the six (6) foot limitation. All of the proposed antennas will be mounted on the existing antenna mounts on the Tower. As such, the proposed modification will not protrude from the edge of the building by more than six (6) feet.

3. ***The modifications to the Transmission Equipment do not involve the installation of more than the standard number of equipment cabinets for the technology involved, not to exceed four.***
 - a. There are currently two (2) equipment cabinets existing at the Base Station. The Applicant proposes to replace the two (2) cabinets with two (2) new cabinets, and therefore the net total number of equipment cabinets will remain at two (2).

4. ***The modifications to the Transmission Equipment do not entail any excavation or deployment outside of the Base Station site.***
 - a. The Applicant is proposing to replace three (3) panel antennas with like kind panel antennas, three (3) RRUs with like kind RRUs, and six (6) TMAs with three (3) like kind TMAs. There will be no excavation or deployment outside of the Base Station site.

5. ***The modifications to the Transmission Equipment do not defeat any existing concealed or stealth-design.***
 - a. All prior decisions in connection with the existing Tower do not provide for conditions with respect to concealed or stealth designs. As such, the proposed modification will not defeat any existing concealed or stealth design.

6. ***The modifications to the Transmission Equipment comply with prior conditions of approval of the Base Station, unless the non-compliance is due to an increase in height, increase in width, addition of equipment cabinets, or new excavation that does not exceed the corresponding “substantial change” thresholds in numbers 1-4.***

- a. Based on the foregoing, the proposed modifications to the Base Station fully conform to Section 6409(a) of the Spectrum Act and comply with the prior conditions of approval of the Base Station.

There is a certification attached to the accompanying Eligible Facilities Request that identifies how each of the six review criteria identified by the FCC is met. The modifications to the Transmission Equipment at the Base Station located at 344 Route 6, Truro, MA contained in this Eligible Facilities Request fully conform to Section 6409(a) as enacted by Congress and as interpreted by the FCC. Accordingly, this Eligible Facilities Request must be approved within sixty (60) days, as required by federal law and FCC implementing regulations.

C. Notice of Federal Law Expedited Permit Processing and Deemed Granted

Under federal law, an Eligible Facilities Request is deemed granted sixty (60) days after a complete application is filed with a local jurisdiction. If sixty days pass after the submission of T-Mobile's accompanying Eligible Facilities Request and the Town of Truro has not acted to grant or deny the request, it will be deemed granted. At that time, the applicant may advise the Town that the application has been deemed granted. If the Town wishes to contest whether the Eligible Facilities Request has been deemed granted, the burden is on the Town to file a lawsuit in a court of competent jurisdiction within thirty (30) days after receipt of a written communication notifying it that the Eligible Facilities Request has been deemed granted. Failure to file a lawsuit in a timely manner may forever bar this jurisdiction from contesting that this Eligible Facilities Request has been deemed granted.

T-Mobile is committed to working cooperatively with you, and all jurisdictions around the country, to secure expeditious approval of requests to modify existing personal wireless service facilities. Please do not hesitate to contact me if you have questions.

Sincerely,



Adam F. Braillard

Direct: 617-456-8153

Email: abraillard@princelobel.com

**ELIGIBLE FACILITIES REQUEST CERTIFICATION FOR NON-SUBSTANTIAL
CHANGES
TO AN EXISTING BASE STATION**

“Base Station” means the equipment and non-tower supporting structure at a fixed location that allow Commission-licensed or authorized wireless communications between user equipment and a communications network. The term base station includes any equipment associated with wireless communications services including but not limited to radio transceivers, antennas, coaxial or fiber-optic cables, regular or back up power supply, and comparable equipment. The term existing base station also includes a structure that currently houses or supports an antenna, transceiver or other associated equipment that constitutes part of a base station at the time the application is filed even if the structure was not built solely or primarily to provide such support. “Base Station” includes the relevant equipment in any technological configuration, including small cells and DAS. Remember “Base Station” has two separate meanings: (1) the supporting structure that houses FCC licensed or authorized wireless equipment and (2) the wireless equipment itself. Keep this distinction in mind when calculating a substantial change in physical dimensions.

“Transmission Equipment” means any equipment that facilitates transmission for any FCC licensed or authorized wireless communication service, including but not limited to, radio transceivers, antennas and other relevant equipment associated with and necessary to their operation, including coaxial or fiber-optic cable, and regular and back-up power supply. This definition includes equipment used in any technological configuration associated with any Commission-authorized wireless transmission, licensed or unlicensed, terrestrial or satellite, including commercial mobile, private mobile, broadcast and public safety services, as well as fixed wireless services such as microwave backhaul or fixed broadband.

“Collocation” means the addition, removal or replacement of Transmission Equipment to an existing tower or a base station. This means that the existing support structure, be it a tower or a building or some other structure, must presently support FCC licensed or authorized wireless facilities. The FCC further requires that the site (tower, building, or other structure) was previously approved by the appropriate agency of government to house wireless facilities. Illegal wireless installations cannot be the basis for an eligible facilities request. However, if a communications Tower was erected at a time when it was exempt from zoning, the Tower can be modified through the Eligible Facilities Request process even if the Tower is no longer exempt from zoning.

Site Address: 344 Route 6, Truro, MA 02652

Existing Facilities

The Existing Facility is comprised of six (6) panel antennas all mounted to the existing tower, together with supporting equipment.

Height of Base Station

Height above ground level of the tallest point on the existing base station: 174' (feet)

Height above ground level of the tallest point of the existing base station after the installation of the *proposed* equipment: 174' (feet)

- 1) Does the height above ground level of the proposed equipment exceed the height of the tallest point on the existing base station by more than 10 percent (10%) or ten (10) feet, whichever is greater?

Yes No

Width of Base Station

- 2) Will any of the proposed equipment protrude from the edge of the support structure by more than six (6) feet?

Yes No

Excavation or Equipment Placement

- 3) Will the proposed changes in Transmission Equipment involve excavation or placement of new equipment outside the existing Base Station site or outside any access or utility easements currently related to the site?

Yes No

Equipment Cabinets

- 4) Will the proposed modification in Transmission Equipment involve installation of more than the standard number of new equipment cabinets for the technology involved, but not to exceed four?

Yes No

Concealed or Stealth-Designed Wireless Facilities

5)

- a) Is the existing wireless facility concealed or stealth- designed?

Yes No

- b) If the answer to 5a) is "Yes," will the proposed modification in Transmission Equipment defeat the existing concealed or stealth-design? **N/A**

Yes No

Compliance with Preexisting Conditions of Approval for the Base Station

6)

a) Were there any conditions of approval stated in the original government approval of the Base Station?

Yes No

b) Will the proposed modification in Transmission Equipment comply with conditions of approval imposed on the Base Station prior to February 22, 2012?

Yes No

c) If the answer to 6b) is “No,” is the non-compliance due solely to any of the conditions addressed in Questions 1-5 above? **N/A**

Yes No

If the answers to questions 1-4 are “No,” the answer to either 5a) or b) is “No,” and the answers to 6a) is “No” or the answers to either 6b) or 6c) are “Yes,” then the proposed modifications do not substantially change the physical dimensions of the existing Base Station.

Explanatory Comments:

This certification is dated this 3rd day of December, 2020.



Signature

Adam F. Braillard, Esq., Attorney for T-Mobile Northeast LLC.
Name & Title

Eligible Facilities Request (EFR) Application Form

[Attach this EFR form to the local jurisdiction form used to process cell site modifications.]

Date of Submittal: _____

Submitted by:

Name: _____

Title: _____

Contact information: _____

Name of Jurisdiction: _____

Address of Jurisdiction: _____

Contact Name for Jurisdiction: _____

Name of Local Government Permit Application: _____

Local Government File #: _____

Street Address of Site: _____

Tax Parcel # of Site: _____

Latitude/Longitude of Site: _____

List Each Piece of Transmission Equipment that will be Collocated or Added:

List Each Piece of Transmission Equipment that will be Removed:

List Cabinets that will be Collocated or Added at the Site:

List Cabinets that will be Removed at the Site:

4

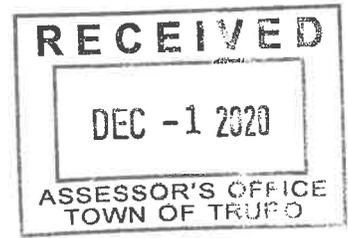


TOWN OF TRURO

Assessors Office

Certified Abutters List

Request Form



DATE: December 1, 2020

NAME OF APPLICANT: T-Mobile Northeast, LLC

NAME OF AGENT (if any): Adam Braillard, of Prince Lobel Tye LLP

MAILING ADDRESS: One International Place, Boston MA 02110

CONTACT: HOME/CELL 508-954-7702 EMAIL abraillard@princelobel.com

PROPERTY LOCATION: 344 Route 6, Truro, MA
(street address)

PROPERTY IDENTIFICATION NUMBER: MAP 39 PARCEL 172 EXT. _____
(if condominium)

ABUTTERS LIST NEEDED FOR: **FEE: \$15.00 per checked item**
(please check all applicable) (Fee must accompany the application unless other arrangements are made)

- | | | |
|---|---|--|
| <input type="checkbox"/> Board of Health ⁵ | <input type="checkbox"/> Planning Board (PB) | <input type="checkbox"/> Zoning Board of Appeals (ZBA) |
| <input type="checkbox"/> Cape Cod Commission | <input checked="" type="checkbox"/> Special Permit ¹ | <input type="checkbox"/> Special Permit ¹ |
| <input type="checkbox"/> Conservation Commission ⁴ | <input type="checkbox"/> Site Plan ² | <input type="checkbox"/> Variance ¹ |
| <input type="checkbox"/> Licensing | <input type="checkbox"/> Preliminary Subdivision ³ | |
| Type: _____ | <input type="checkbox"/> Definitive Subdivision ³ | |
| | <input type="checkbox"/> Accessory Dwelling Unit (ADU) ² | |
| <input type="checkbox"/> Other _____ | | (Fee: Inquire with Assessors) |
- (Please Specify)

Note: Per M.G.L., processing may take up to 10 calendar days. Please plan accordingly.

THIS SECTION FOR ASSESSORS OFFICE USE ONLY

Date request received by Assessors: 12/01/2020 Date completed: 12/01/2020
List completed by: [Signature] Date paid: DNE Cash/Check _____

¹Abutters, owners of land directly opposite on any public or private street or way, and abutters to the abutters within 300 feet of the property line.

²Abutters to the subject property, abutters to the abutters, and owners of properties across the street from the subject property.

³Landowners immediately bordering the proposed subdivision, landowners immediately bordering the immediate abutters, and landowners located across the streets and ways bordering the proposed subdivision. Note: For Definitive Subdivision only, responsibility of applicant to notify abutters and produce evidence as required.

⁴All abutters within 300 feet of parcel, except Beach Point between Knowles Heights Road and Provincetown border, in which case it is all abutters within 100 feet. Note: Responsibility of applicant to notify abutters and produce evidence as required.

⁵Abutters sharing any boundary or corner in any direction – including land across a street, river or stream. Note: Responsibility of applicant to notify abutters and produce evidence as required.



TRURO ASSESSORS OFFICE

PO Box 2012 Truro, MA 02666

Telephone: (508) 214-0921

Fax: (508) 349-5506

Date: December 1, 2020

To: Adam Brailard at Prince Lobel Tye LLP for T-Mobile Northeast, LLC

From: Assessors Department

Certified Abutters List: 344 Rt 6 (Map 39, Parcel 172, Extension A)

Planning Board/ Special Permit

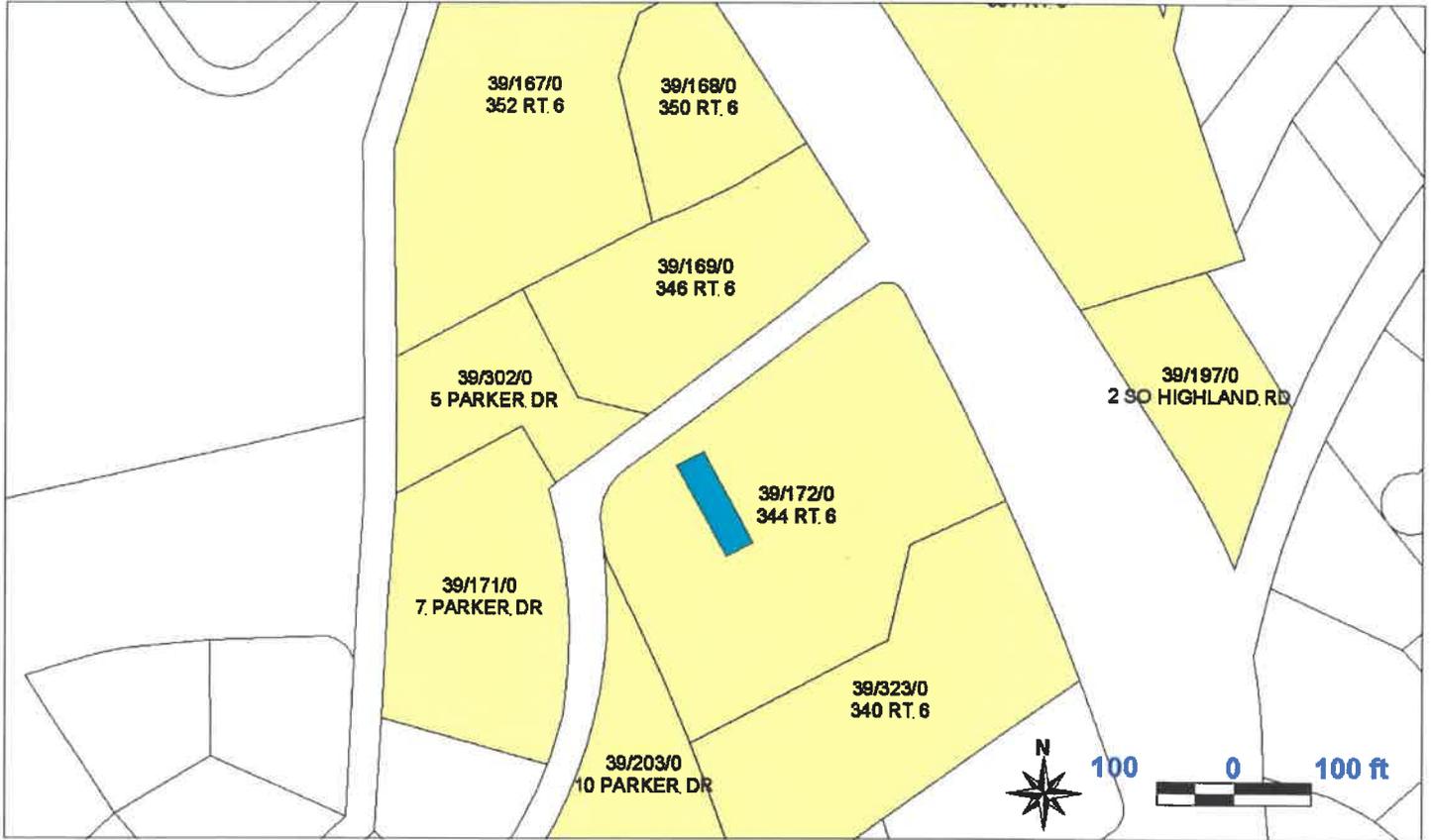
Attached is a combined list of abutters for the property located at 344 Route 6. The current owners are Southwestern Bell Mobile Systems D/B/A Cingular Wireless-AT&T Services.

The names and addresses of the abutters are as of November 27, 2020 according to the most recent documents received from the Barnstable County Registry of Deeds.

Certified by:

Olga Farrell
Assessing Clerk

Custom Abutters List



Key	Parcel ID	Owner	Location	Mailing Street	Mailing City	ST	ZipCd/Country
1291	39-167-0-R	TRI-S PROPERTIES LLC	352 RT 6	PO BOX 1081	TRURO	MA	02666-1081
1292	39-168-0-R	SEAMENS BANK	350 RT 6	PO BOX 74	NO TRURO	MA	02652
1293	39-169-0-R	SEAMENS BANK	346 RT 6	PO BOX 74	NO TRURO	MA	02652
1294	39-171-0-R	WESTVIEW COURT REALTY TRUST TRS: TRIBUNA MICHAEL A JR & SR	7 PARKER DR	192 MILTON ST	WOLLASTON	MA	02170-2504
1295	39-172-0-E	TOWN OF TRURO	344 RT 6	PO BOX 2030	TRURO	MA	02666-2030
1310	39-189-0-E	TOWN OF TRURO	351 RT 6	PO BOX 2030	TRURO	MA	02666-2030
1318	39-197-0-R	QUIST JAYSON C & LAZARUS BURT	2 SO HIGHLAND RD	PO BOX 609	NO TRURO	MA	02652
1324	39-203-0-R	COHEN JENNIFER S	10 PARKER DR	110 W 96TH ST #11A	NEW YORK	NY	10025
1421	39-302-0-R	PRIDEAUX-BRUNE DIANA & MAHONEY ANNE	5 PARKER DR	10 MUSEUM WAY, UNIT 1929	CAMBRIDGE	MA	02141
6429	39-323-0-E	TOWN OF TRURO	340 RT 6	PO BOX 2030	TRURO	MA	02666-2030

012 12/10/2020

39-167-0-R

TRI-S PROPERTIES LLC
PO BOX 1081
TRURO, MA 02666-1081

39-168-0-R

SEAMENS BANK
PO BOX 74
NO TRURO, MA 02652

SEAMENS BANK
PO BOX 74
NO TRURO, MA 02652

39-169-0-R

39-171-0-R

WESTVIEW COURT REALTY TRUST
TRS: TRIBUNA MICHAEL A JR & SR
192 MILTON ST
WOLLASTON, MA 02170-2504

39-172-0-E

~~TOWN OF TRURO
PO BOX 2030
TRURO, MA 02666-2030~~

~~TOWN OF TRURO
PO BOX 2030
TRURO, MA 02666-2030~~

39-189-0-E

39-197-0-R

QUIST JAYSON C & LAZARUS BURT
PO BOX 609
NO TRURO, MA 02652

39-203-0-R

COHEN JENNIFER S
110 W 96TH ST #11A
NEW YORK, NY 10025

PRIDEAUX-BRUNE DIANA &
MAHONEY ANNE
10 MUSEUM WAY, UNIT 1929
CAMBRIDGE, MA 02141

39-302-0-R

39-323-0-E

~~TOWN OF TRURO
PO BOX 2030
TRURO, MA 02666-2030~~

5



T-MOBILE SITE NAME:
HY568/CINGULAR TRURO

T-MOBILE SITE NUMBER:
4HY0568A

CROWN BU: 841273 / APP#: 479923
67D01D CONFIGURATION

344 ROUTE 6
TRURO, MA 02652

EXISTING 170'-0" SELF-SUPPORT TOWER



4HY0568A
BU #: 841273
HY568/CINGULAR TRURO
344 ROUTE 6
TRURO, MA 02652
EXISTING 170'-0" SELF-SUPPORT
TOWER

PROJECT NO: 100736.004.01
CHECKED BY: RPS

ISSUED FOR:			
REV	DATE	DRWN	DESCRIPTION
A	3/29/19	FWP	PRELIMINARY REVIEW
0	4/1/19	GEH	CONSTRUCTION
1	5/23/19	JJD	CONSTRUCTION

B&T ENGINEERING, INC.



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

SHEET NUMBER: **T-1** REVISION: **1**

PROJECT SUMMARY

SITE TYPE: EXISTING EQUIPMENT UPGRADE
SITE ADDRESS: 344 ROUTE 6 TRURO, MA 02652
JURISDICTION: TOWN OF TRURO

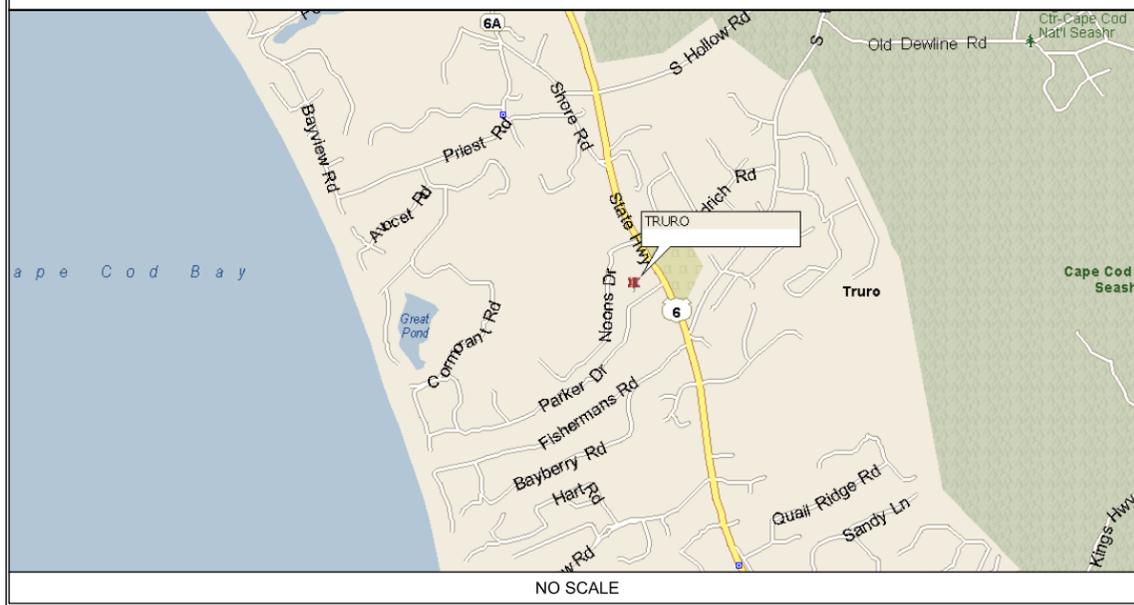
NAD83
LATITUDE: 42.02260° N
LONGITUDE: 70.07529° W

TOWER OWNER: CROWN CASTLE
12 GILL STREET, SUITE 5800
WOBURN, MA 01801

CUSTOMER/APPLICANT: T-MOBILE
15 COMMERCE WAY SUITE B
NORTON, MA 02766
(508) 286-2700

OCCUPANCY TYPE: UNMANNED
A.D.A. COMPLIANCE: FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION

LOCATION MAP



DRAWING INDEX

SHEET #	SHEET DESCRIPTION	REV. #
T-1	TITLE SHEET	1
A-1	OVERALL SITE PLAN	1
A-2	ENLARGED SITE PLAN	1
A-3	TOWER ELEVATION AND ANTENNA ORIENTATION	1
A-4	ANTENNA, RRH AND TMA SCHEDULE	1
E-1	FINAL T-MOBILE PANEL SCHEDULE	1

CONTACT INFORMATION

A&E FIRM: B+T GROUP
1717 S. BOULDER, STE. 300
TULSA, OK 74119
CONTACT: MIKE OAKES
PHONE: (918) 587-4630

ELECTRIC PROVIDER: N/A
TELCO PROVIDER: N/A

DRIVING DIRECTIONS

DEPART LOGAN INTERNATIONAL AIRPORT ON SERVICE RD. ROAD NAME CHANGES TO FRANKFORT ST. TURN LEFT ONTO NEPTUNE RD. ROAD NAME CHANGES TO RT-145 [NEPTUNE RD]. TAKE RAMP (LEFT) ONTO RT-1A [WILLIAM F MCCLELLAN HWY]. KEEP STRAIGHT ONTO I-90 [MASS PIKE]. *TOLL ROAD* STAY ON I-90 [MASS PIKE]. AT EXIT 20, TURN RIGHT ONTO RAMP. AT EXIT 20, KEEP LEFT ONTO LOCAL ROAD(S). TAKE RAMP (LEFT) ONTO I-90 [MASS PIKE]. AT EXIT 24A-B-C, TURN LEFT ONTO RAMP. KEEP LEFT TO STAY ON RAMP. KEEP LEFT TO STAY ON RAMP. STAY ON RAMP. MERGE ONTO I-93 [US-1]. KEEP LEFT ONTO RT-3 [PILGRIMS HWY]. ROAD NAME CHANGES TO US-44 [RT-3]. AT EXIT 6A, ROAD NAME CHANGES TO RT-3. AT EXIT 1A, ROAD NAME CHANGES TO US-6. AT ROUNDABOUT, TAKE THE SECOND EXIT ONTO US-6 [STATE HWY]. TURN LEFT ONTO PARKER DR. TURN RIGHT ONTO LOCAL ROAD(S) AND ARRIVE AT TRURO.

A/E DOCUMENT REVIEW STATUS

TITLE	SIGNATURE	DATE
T-MOBILE PROP:		
T-MOBILE R.F. MGR.:		
T-MOBILE NetOps:		
T-MOBILE CONST. MGR.:		
INTERCONNECT:		
T-MOBILE SITE DEV. MGR.:		
PROPERTY OWNER:		
PLANNING:		

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

CODE COMPLIANCE

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES:

CODE TYPE	CODE
BUILDING/DWELLING	MA NINTH EDITION
STRUCTURAL	MA NINTH EDITION
MECHANICAL	MA NINTH EDITION
ELECTRICAL	NEC 2017

PROJECT DESCRIPTION

THE PROPOSED PROJECT INCLUDES:

- REMOVE (3) EXISTING ANTENNAS AT 97'-0".
- REMOVE (3) EXISTING RRUS AT 97'-0".
- REMOVE (6) EXISTING TMAS AT 97'-0".
- REMOVE (1) DUS41 & (1) XMU.
- INSTALL (3) NEW ANTENNAS AT 97'-0".
- INSTALL (3) NEW RRUS AT 97'-0".
- INSTALL (3) NEW TMAS AT 97'-0".
- INSTALL (2) BB6630.

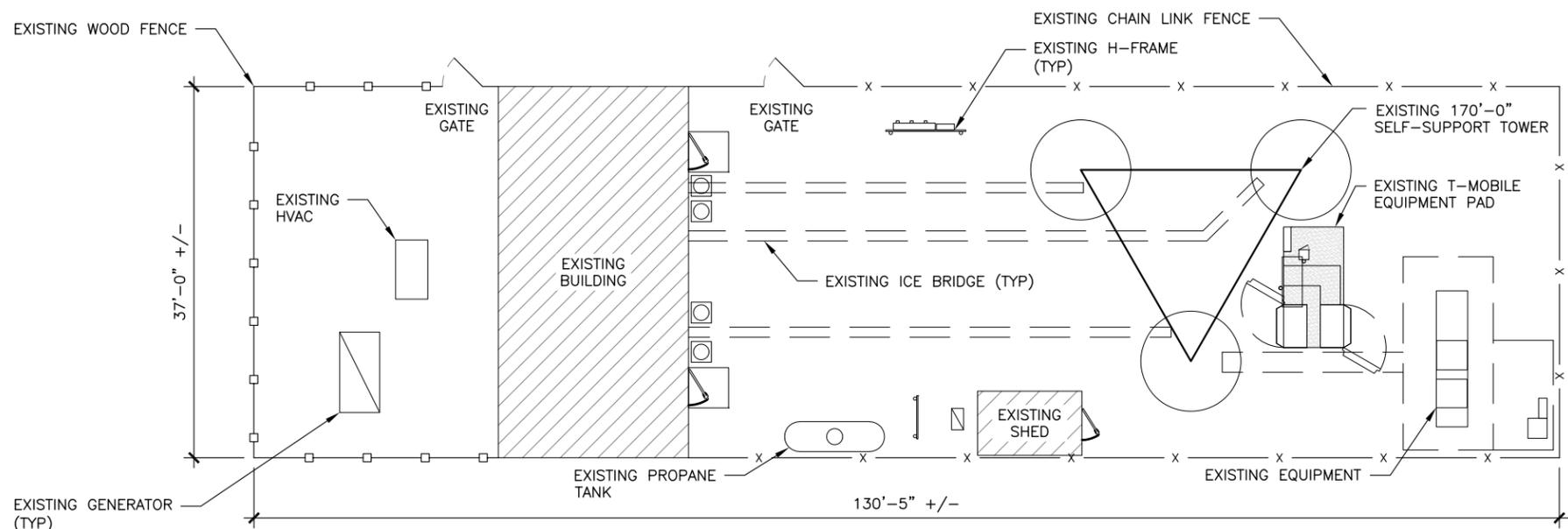
DO NOT SCALE DRAWINGS

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

SEE SHEET SP-1 & SP-2 FOR ADDITIONAL CONSTRUCTION NOTES

CALL MASSACHUSETTS ONE CALL (888) 344-7233 CALL 3 WORKING DAYS BEFORE YOU DIG!

100736_841273_Truro.dwg - SheetA-1 - User: ghayes - May 23, 2019 - 9:49am



1 OVERALL SITE PLAN
 SCALE: 0' 8' 16' 32' 48'



- GENERAL NOTES:**
- SUBJECT PROPERTY IS KNOWN AS BLOCK TBD LOT TBD AS SHOWN ON THE TRURO TOWNSHIP TAX MAP AND IS SITUATED AT 344 ROUTE 6, TRURO, MA 02652.
 - APPLICANT: T-MOBILE
 15 COMMERCE WAY, SUITE B
 NORTON, MA 02766
 OFFICE: (508) 286-2700

 TOWER OWNER: CROWN CASTLE INTERNATIONAL
 - THE APPLICANT IS TO UPDATED THEIR NETWORK BY INSTALLING SIX (6) NEW PANEL ANTENNAS, THREE (3) TMAS, THREE (3) RRUS, AND EIGHT (8) ADDITIONAL CABLES MOUNTED ON AN EXISTING SELF-SUPPORT TOWER.
 - THIS FACILITY SHALL BE VISITED ON THE AVERAGE OF ONCE A MONTH FOR MAINTENANCE AND SHALL BE MONITORED FROM A REMOTE FACILITY.
 - THE EXISTING SITE IS LOCATED AT LATITUDE OF 42.02260° N± AND LONGITUDE OF 70.07529° W±. THE HORIZONTAL DATUM ARE IN TERMS OF NORTH AMERICAN DATUM OF 1983 (NAD 83).
 - THIS SET OF PLANS HAS BEEN PREPARED FOR THE PURPOSES OF MUNICIPAL AND AGENCY REVIEW AND APPROVAL. THIS SET OF PLANS SHALL NOT BE UTILIZED AS CONSTRUCTION DOCUMENTS UNTIL ALL CONDITIONS OF APPROVAL HAVE BEEN SATISFIED AND EACH OF THE DRAWINGS HAVE BEEN REVISED TO INDICATED "ISSUED FOR CONSTRUCTION"
 - ALL MATERIALS, WORKMANSHIP, AND CONSTRUCTION FOR THE SITE IMPROVEMENTS SHOWN HEREON SHALL BE IN ACCORDANCE WITH:
 - CURRENT PREVAILING MUNICIPAL AND/OR COUNTY SPECIFICATIONS, STANDARDS, AND REQUIREMENTS.
 - CURRENT PREVAILING UTILITY COMPANY AUTHORITY SPECIFICATIONS, STANDARDS AND REQUIREMENTS.
 - THE CONTRACTOR SHALL NOTIFY B+T GROUP, P.A. IMMEDIATELY IF ANY FIELD-CONDITIONS ENCOUNTERED DIFFER FROM THOSE REPRESENTED HEREON, AND/OR IF SUCH CONDITIONS WOULD OR COULD RENDER THE DESIGNS SHOWN HEREON INAPPROPRIATE AND/OR INEFFECTIVE.
 - THE CONTRACTOR IS RESPONSIBLE TO PROTECT, REPAIR AND/OR REPLACE ANY DAMAGED STRUCTURES, UTILITIES OR LANDSCAPED AREA WHICH MAY BE DISTURBED DURING THE CONSTRUCTION OF THIS FACILITY.
 - THE CONSTRUCTION CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ALL CONSTRUCTION MEANS AND METHODS. THE CONSTRUCTION CONTRACTOR IS ALSO RESPONSIBLE FOR ALL JOB SITE SAFETY.
 - SITE INFORMATION SHOWN TAKEN FROM CROWN CASTLE SITE PLANS AND FROM CROWN CASTLE INSPECTION PHOTOS.
 - NO GUARANTEE IS MADE NOR SHOULD BE ASSUMED AS TO THE COMPLETENESS OR ACCURACY OF THE HORIZONTAL OR VERTICAL LOCATIONS. ALL PARTIES UTILIZING THIS INFORMATION SHALL FIELD VERIFY THE ACCURACY AND COMPLETENESS OF THE INFORMATION SHOWN PRIOR TO CONSTRUCTION ACTIVITIES.
 - ALL IMPROVEMENTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE TOWNSHIP ENGINEER WHO WILL BE GIVEN PROPER NOTIFICATION PRIOR TO THE START OF ANY CONSTRUCTION.



4HY0568A
 BU #: 841273
 HY568/CINGULAR TRURO
 344 ROUTE 6
 TRURO, MA 02652
 EXISTING 170'-0" SELF-SUPPORT TOWER

PROJECT NO: 100736.004.01
 CHECKED BY: RPS

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION
A	3/29/19	FWP	PRELIMINARY REVIEW
0	4/1/19	GEH	CONSTRUCTION
1	5/23/19	JJD	CONSTRUCTION

B&T ENGINEERING, INC.



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SHEET NUMBER: **A-1** REVISION: **1**



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 HY568/CINGULAR TRURO
 344 ROUTE 6
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B&T ENGINEERING, INC.

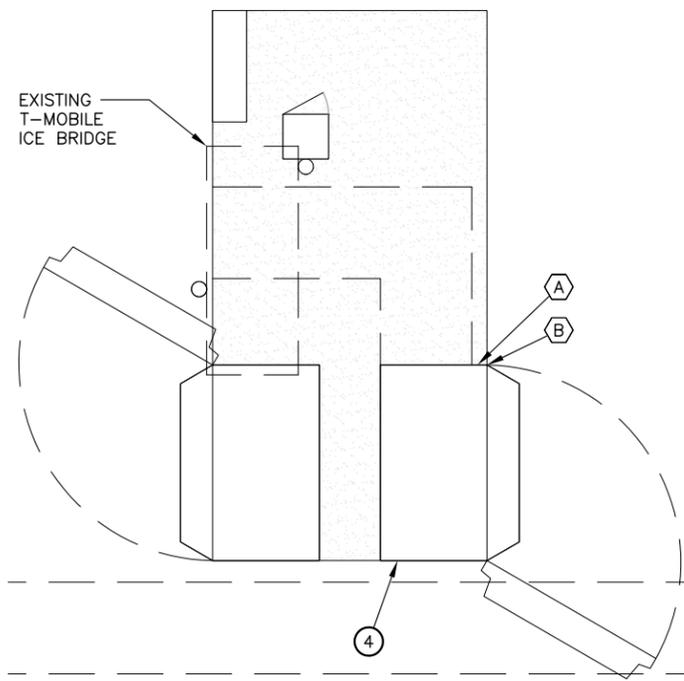


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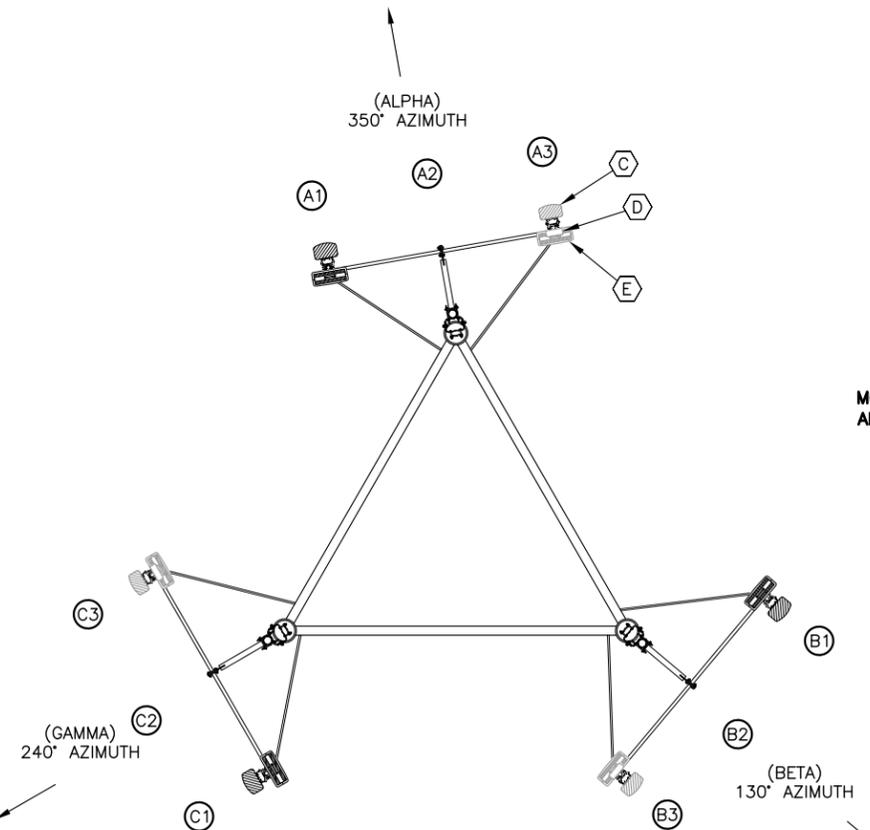
SHEET NUMBER: **A-2** REVISION: **1**

ANTENNA AND CABLE SCHEDULE											
SECTOR	POSITION	ANTENNAS	PROPOSED ANTENNA CONFIGURATION		E-TILT	M-TILT	ANTENNA CENTERLINE	TMA/RRH	CABLES	JUMPER TYPE	CABLE LENGTH
350° - ALPHA	A1	ERICSSON AIR 21 B4A B2P	LTE/UMTS	B2	4°/4°	0°	97'-0"	0/1	3x6 HCS	DC/FIBER & 1/2" COAX	147'-0"
	A2	-	-	-	-	-		-	-	-	-
	A3	RPS APXVAARR24_43-U-NA20	LTE/GSM	B12/71	4°/4°	0°		1/1	(2) 7/8" COAX	DC/FIBER & 1/2" COAX	110'-0"
130° - BETA	B1	ERICSSON AIR 21 B4A B2P	LTE/UMTS	B2	4°/4°	0°	97'-0"	0/1	3x6 HCS	DC/FIBER & 1/2" COAX	147'-0"
	B2	-	-	-	-	-		-	-	-	
	B3	RPS APXVAARR24_43-U-NA20	LTE/GSM	B12/71	4°/4°	0°		1/1	(2) 7/8" COAX	DC/FIBER & 1/2" COAX	110'-0"
240° - GAMMA	G1	ERICSSON AIR 21 B4A B2P	LTE/UMTS	B2	4°/4°	0°	97'-0"	0/1	3x6 HCS	DC/FIBER & 1/2" COAX	147'-0"
	G2	-	-	-	-	-		-	-	-	
	G3	RPS APXVAARR24_43-U-NA20	LTE/GSM	B12/71	4°/4°	0°		1/1	(2) 7/8" COAX	DC/FIBER & 1/2" COAX	110'-0"

LEGEND	
EXISTING/DEMOLITION NOTES	INSTALLATION NOTES
(A) EXISTING DUS41 TO BE REMOVED (TOTAL OF 1)	(1) INSTALL RPS APXVAARR24_43-U-NA20 (8 FT) ANTENNAS ON EXISTING MOUNT. PROVIDE NEW 2 7/8" OD SCH.40 PIPE MAST (LENGTH TO BE V.I.F) (TYP. OF 1 PER SECTOR, TOTAL OF 3)
(B) EXISTING XMU TO BE REMOVED (TOTAL OF 1)	(2) INSTALL NEW ATM1900D-1A20 TMA BEHIND ANTENNA (TYP. OF 1 PER SECTOR, TOTAL OF 3)
(C) EXISTING COMMSCOPE SBNH-1D65C ANTENNA TO BE REMOVED (TOTAL OF 3)	(3) INSTALL RADIO 4478 B12/B71 (TYP. OF 1 PER SECTOR, TOTAL OF 3)
(D) EXISTING KRY 112 144/1 TMA TO BE REMOVED (TYP OF 2 PER SECTOR, TOTAL OF 6)	(4) INSTALL (2) NEW BB6630
(E) EXISTING RRU 11 B12 TO BE REMOVED (TYP OF 1 PER SECTOR, TOTAL OF 3)	

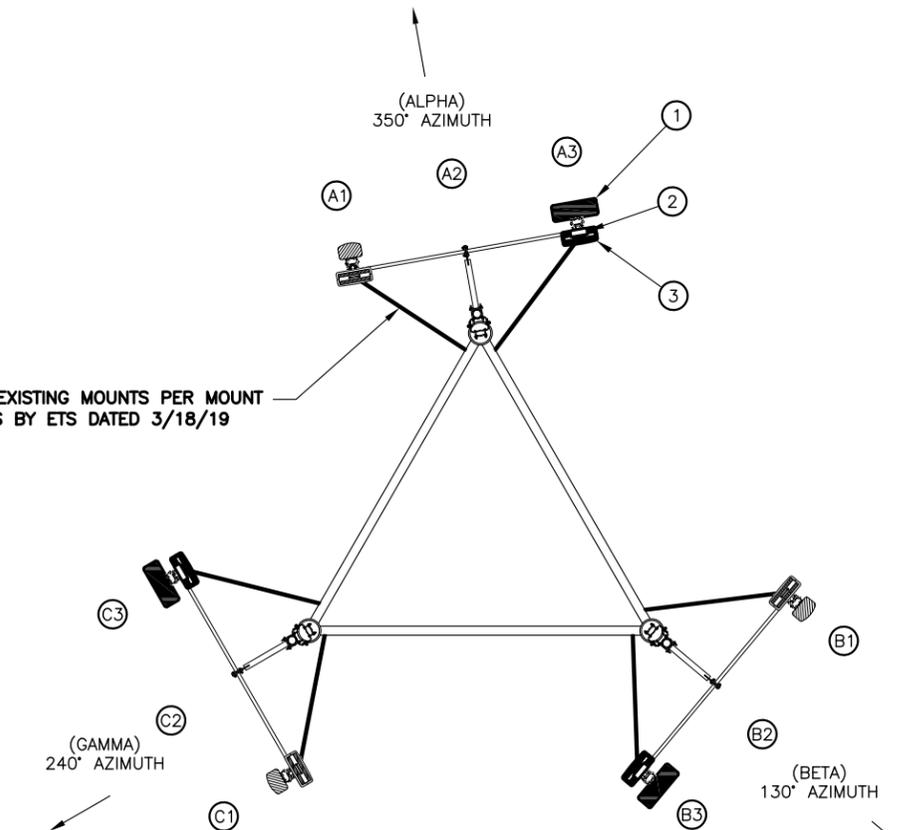


1 ENLARGED AREA PLAN
 SCALE: 0' 1' 2' 4' 10'



2 EXISTING ANTENNA ORIENTATION
 SCALE: 0' 1' 4' 8' 20'

MODIFY EXISTING MOUNTS PER MOUNT ANALYSIS BY ETS DATED 3/18/19



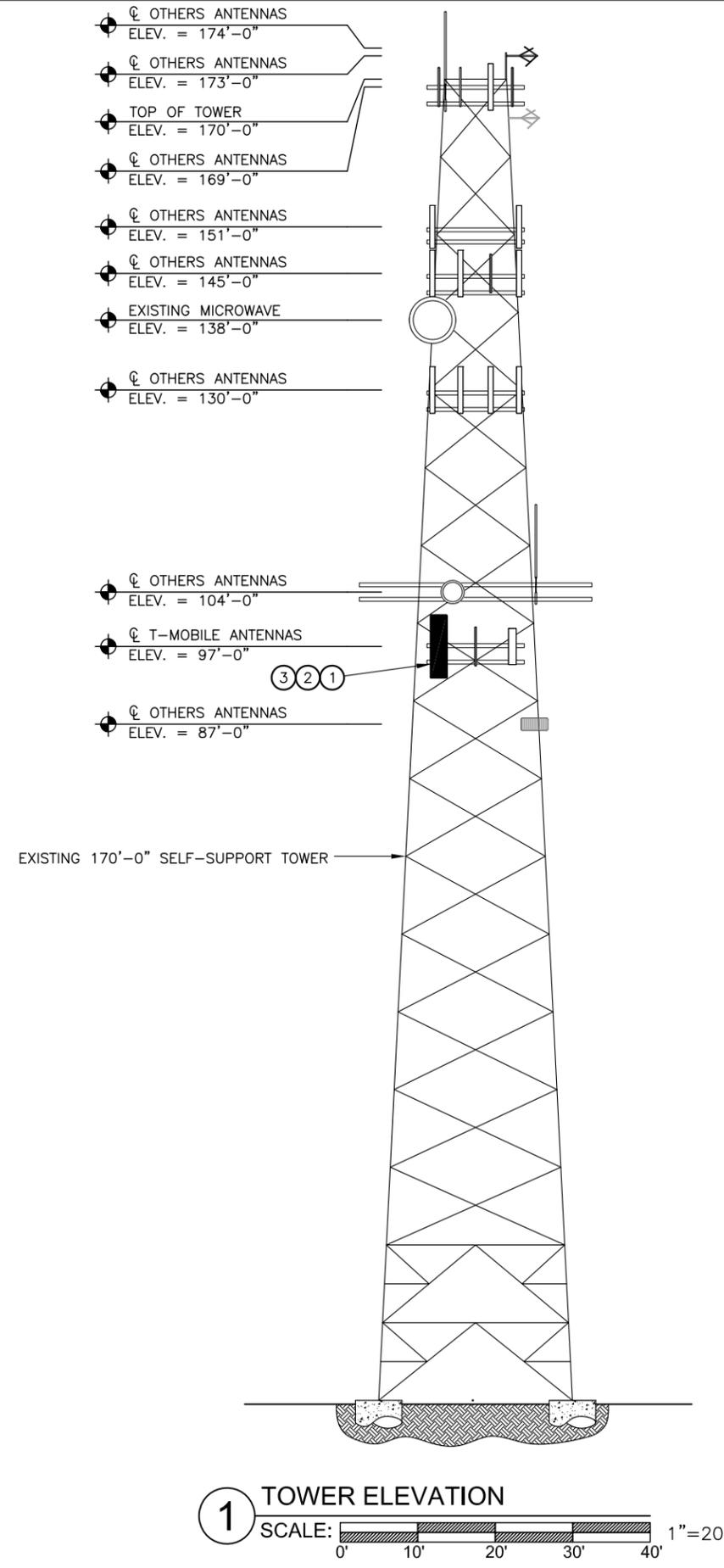
3 PROPOSED ANTENNA ORIENTATION
 SCALE: 0' 1' 4' 8' 20'

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LEGEND	
EXISTING/DEMOLITION NOTES	INSTALLATION NOTES
(A) EXISTING DUS41 TO BE REMOVED (TOTAL OF 1)	① INSTALL RPS APXVAARR24_43-U-NA20 (8 FT) ANTENNAS ON EXISTING MOUNT. PROVIDE NEW 2 7/8" OD SCH.40 PIPE MAST (LENGTH TO BE V.I.F) (TYP. OF 1 PER SECTOR, TOTAL OF 3)
(B) EXISTING XMU TO BE REMOVED (TOTAL OF 1)	② INSTALL NEW ATM1900D-1A20 TMA BEHIND ANTENNA (TYP. OF 1 PER SECTOR, TOTAL OF 3)
(C) EXISTING COMMSCOPE SBNH-1D65C ANTENNA TO BE REMOVED (TOTAL OF 3)	③ INSTALL RADIO 4478 B12/B71 (TYP. OF 1 PER SECTOR, TOTAL OF 3)
(D) EXISTING KRY 112 144/1 TMA TO BE REMOVED (TYP OF 2 PER SECTOR, TOTAL OF 6)	④ INSTALL (2) NEW BB6630
(E) EXISTING RRU 11 B12 TO BE REMOVED (TYP OF 1 PER SECTOR, TOTAL OF 3)	

STRUCTURAL ANALYSIS NOTE:
REFER TO STRUCTURAL ANALYSIS OR STRUCTURAL LETTER FOR APPROVAL OF ADDITIONAL NEW APPURTENANCES.

LEGEND:
 **NEW**
 **EXISTING**
 **FUTURE**



4HY0568A
BU #: 841273

HY568/CINGULAR TRURO
344 ROUTE 6
TRURO, MA 02652
EXISTING 170'-0" SELF-SUPPORT TOWER

PROJECT NO: 100736.004.01
CHECKED BY: RPS

ISSUED FOR:

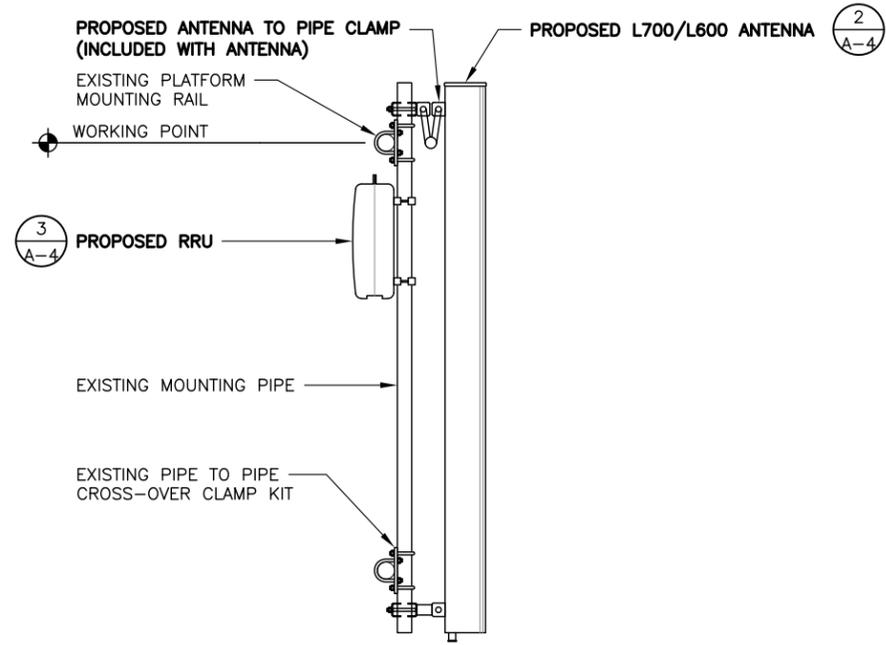
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B&T ENGINEERING, INC.



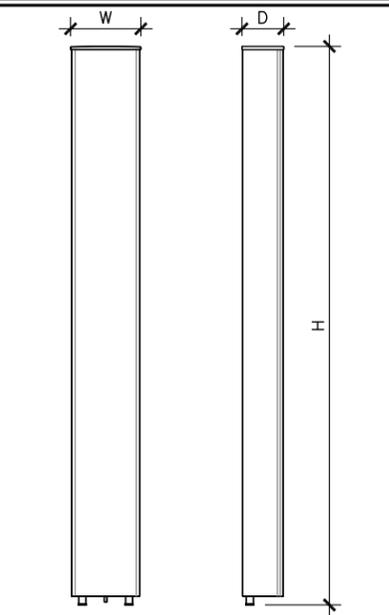
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SHEET NUMBER: **A-3** REVISION: **1**



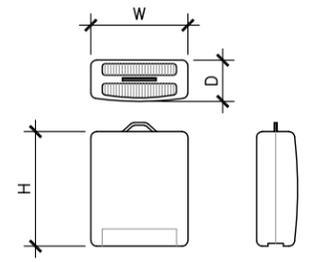
1 PROPOSED L1900 ANTENNA & RRU MOUNTING DETAIL
SCALE: N.T.S.

NOTES:
 1. TAG ALL EXISTING AND PROPOSED CABLES/JUMPERS PER T-MOBILE SPECIFICATIONS.
 2. SEE RF SCHEDULE FOR CABLE AND JUMPER LENGTHS.
 3. REFER TO ANTENNA ORIENTATION ON SHEET C-3 FOR EXACT ANTENNA POSITIONING.



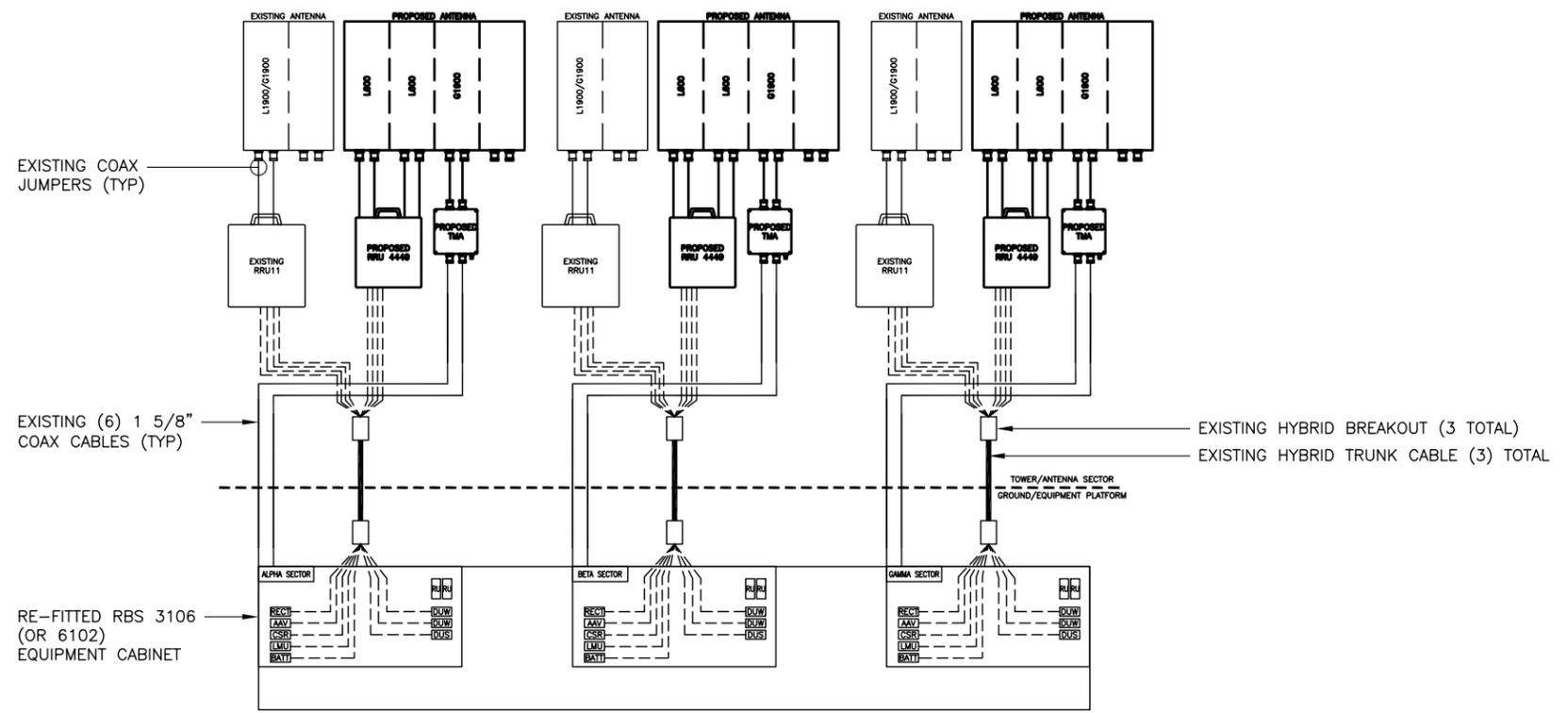
ANTENNA SPECS	
MANUFACTURER	RFS
MODEL #	APXVAARR24_43-U-NA20
WIDTH	24.0"
DEPTH	8.7"
HEIGHT	95.9"
WEIGHT	128.0 LBS

2 L700/L600 ANTENNA DETAIL
SCALE: N.T.S.



RRU SPECIFICATIONS	
MANUFACTURER	ERICSSON
MODEL #	4449
WIDTH	13.2"
DEPTH	10.4"
HEIGHT	14.9"
WEIGHT	74 LBS

3 REMOTE RADIO UNIT (RRU)
SCALE: N.T.S.



4 ANTENNA & CABLING SCHEMATIC
SCALE: N.T.S.



4HY0568A
 BU #: 841273
 HY568/CINGULAR TRURO
 344 ROUTE 6
 TRURO, MA 02652
 EXISTING 170'-0" SELF-SUPPORT TOWER

PROJECT NO: 100736.004.01
 CHECKED BY: RPS

ISSUED FOR:			
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SHEET NUMBER: A-4
 REVISION: 1



4HY0568A
 BU #: 841273
 HY568/CINGULAR TRURO
 344 ROUTE 6
 TRURO, MA 02652
 EXISTING 170'-0" SELF-SUPPORT
 TOWER

PROJECT NO: 100736.004.01
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B&T ENGINEERING, INC.



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SHEET NUMBER: E-1
 REVISION: 1

FINAL PANEL SCHEDULE							
LOAD	POLES	AMPS	BUS		AMPS	POLES	LOAD
			L1	L2			
SURGE ARRESTER	2	60A	1	2	20A	1	GFI
			3	4	10A	2	BOOSTER
BTS-1	2	125A	5	6			
			7	8			

RATED VOLTAGE: 120/240 _____ 1 PHASE, 4 WIRE
 BRANCH POLES: 12 24 30 42
 APPROVED MF'RS
 RATED AMPS: 100 200 400 _____
 CABINET: SURFACE FLUSH
 NEMA 1 3R 4X
 MAIN LUGS ONLY MAIN 200 AMPS BREAKER FUSED SWITCH
 HINGED DOOR
 KEYPED DOOR LATCH
 FUSED CIRCUIT BREAKER BRANCH DEVICES
 _____ TO BE GFCI BREAKERS
 FULL NEUTRAL BUS GROUND BAR
 ALL BREAKERS MUST BE RATED TO INTERRUPT A SHORT CIRCUIT ISC OF 10,000 AMPS SYMMETRICAL

REPLACE EXISTING BREAKER IN POSITION 5 AND 7 WITH A NEW 2P 125A BREAKER
 REPLACE EXISTING WIRES FOR EXISTING 3106 CABINET WITH (3) 1/0 AWG THWN (COPPER) AND (1) #6G AWG. MINIMUM CONDUIT SIZE TO BE 2".
 IF 125A BREAKER WILL NOT PROPERLY FIT IN EXISTING PANEL OR PANEL MAIN CAPACITY IS EXCEEDED, REPLACE (E) PANEL WITH SQUARE D PANEL Q0142MQ225RB (OR APPROVED EQUAL).
 FINAL PANEL DESIGN AND CALCULATIONS FOR WIRE SIZE WERE BASED OFF OF EXISTING DOCUMENTS AND PHOTOS

1 FINAL T-MOBILE PANEL DETAIL
 SCALE: N.T.S.

6



B+T Group
 1717 S. Boulder, Suite 300
 Tulsa, OK 74119
 (918) 587-4630

Date: **March 27, 2019**

Denice Nicholson
 Crown Castle
 46 Broadway
 Albany, NY 12204

Subject: Rigorous Structural Analysis Report

Carrier Designation: *T-Mobile Co-Locate*
Carrier Site Number: 4HY0568A
Carrier Site Name: HY568/Cingular Truro

Crown Castle Designation:
Crown Castle BU Number: 841273
Crown Castle Site Name: Truro
Crown Castle JDE Job Number: 559264
Crown Castle Work Order Number: 1707955
Crown Castle Order Number: 479923 Rev. 0

Engineering Firm Designation: B+T Group Project Number: 100736.005.01

Site Data: 344 Route 6, North Truro, Barnstable County, MA 02652
 Latitude 42° 1' 18.00", Longitude -70° 4' 30.00"
 170 Foot - Self Support Tower

Dear Denice Nicholson,

B+T Group is pleased to submit this "**Structural Analysis Report**" to determine the structural integrity of the above mentioned tower.

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

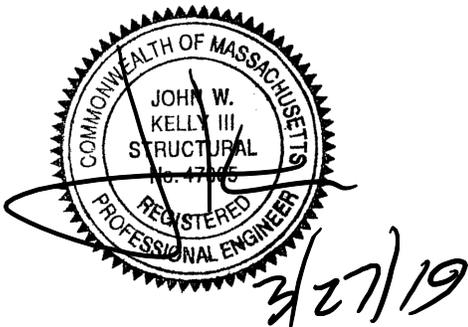
LC7: Proposed Equipment Configuration

Sufficient Capacity

This analysis utilizes an ultimate 3-second gust wind speed of 139 mph as required by the Massachusetts State Building Code, Ninth Edition. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Structural analysis prepared by: Saurav Shrestha, E.I.T.

Respectfully submitted by: B+T Engineering, Inc.



John W. Kelly, P.E.

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1) INTRODUCTION

This tower is a 170 ft. Self-Support tower designed by Sabre in September of 2000 and mapped by GPD Group in January of 2015. The tower was originally designed for a wind speed of 150 mph per TIA/EIA-222-F.

2) ANALYSIS CRITERIA

TIA-222 Revision:	TIA-222-H
Risk Category:	II
Wind Speed:	139 mph
Exposure Category:	C
Topographic Factor:	1
Ice Thickness:	1.5 in
Wind Speed with Ice:	50 mph
Service Wind Speed:	60 mph

Table 1 - Proposed Equipment Configuration

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
96.0	97.0	3	Ericsson	ERICSSON AIR 21 B4A B2P	3 6 2	1-1/4 7/8 3/8
		3	Ericsson	RADIO 4449 B12/B71		
		3	Ericsson	RRUS 11 B2		
		3	RFS Celwave	APXVAARR24_43-U-NA20		
		3	RFS Celwave	ATM1900D-1A20		
	96.0	1	--	Sector Mount [SM 403-3]*		

*See Mount Analysis Report by ETS, dated 03/18/2019 for Recommendations on Mount Configuration.

Table 2 - Other Considered Equipment

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
170.0	174.0	1	Decibel	DB806-XC	1	1/2
169.0	169.0	2	Alcatel Lucent	1900MHZ 4X40W RRH	4	1-1/4
		4	Alcatel Lucent	800MHZ 2X50W RRH W/FILTER		
		2	Alcatel Lucent	TD-RRH8X20-25		
		2	Commscope	DT465B-2XR		
		6	RFS Celwave	ACU-A20-N		
		2	RFS Celwave	APXVSPP18-C-A20		
165.0	173.0	1	Bext	TFC2K	1	7/8
	165.0	1	Bext	TFC2K		
		1	--	Side Arm Mount [SO 203-1]		
151.0	151.0	4	Powerwave Tech.	P65.15.XL.0	2	1-1/4
		2	--	Sector Mount [SM 602-1]		
145.0	145.0	6	Ericsson	RRUS 11	12 4 2	1-5/8 5/8 3/8
		3	Ericsson	RRUS 32		
		3	Ericsson	RRUS 32 B66		
		6	Kaelus	DBC0061F1V51-2		

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
		3	Kathrein	800 10122		
		12	Kathrein	860 10025		
		3	KMW Comm.	AM-X-CD-16-65-00T-RET		
		6	Powerwave Tech.	LGP21401		
		3	Quintel Tech.	QS66512-2		
		2	Raycap	DC6-48-60-18-8F		
		1	--	Sector Mount [SM 702-3]		
139.0	138.0	1	Andrew	PAR6-59A	1	EW52
130.0	131.0	3	Alcatel Lucent	RRH2X60-AWS	19	1-5/8
		3	Commscope	HBXX-6516DS-A2M		
		3	Commscope	LNK-6514DS-A1M		
		3	Commscope	SBNHH-1D65B		
		2	CSS	X7C-665-2		
		1	CSS	X7C-680-2		
	2	RFS Celwave	DB-B1-6C-12AB-0Z			
	130.0	1	--	Sector Mount [SM 702-3]		
104.0	117.0	1	RFS Celwave	PD220-5	10 8	7/8 3/8
	116.0	1	Telewave	ANT150F6		
	114.0	1	Sinclair	SRL-210C-4		
	113.0	1	Decibel	DB540K-F		
	112.0	2	RFS Celwave	AO8610-5T0		
	107.0	1	Kathrein	K751221		
	106.0	2	Commscope	VHLPX4-11W-6WH		
		1	RFS Celwave	10191		
		1	Telewave	ANT150F2		
104.0	1	--	Sabre 30' Specialty Platform			
87.0	87.0	1	Scala	PR-950	1	1/2
		1	--	Side Arm Mount [SO 201-1]		
71.0	73.0	1	Pctel	GPS-TMG-HR-26N	1	1/2
	71.0	1	--	Side Arm Mount [SO 601-1]		

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Remarks	Reference	Source
Online Order Information	T-Mobile Co-Locate, Rev# 0	479923	CCI Sites
Tower Manufacturer Drawing	Sabre, Date: 09/05/2000	4287353	CCI Sites
	GPD Group, Date: 01/18/2015		
Mount Analysis Report	ETS, Date: 03/18/2019	8290341	CCI Sites
Foundation Drawing	Sabre, Job No: 01-06094	4468581	CCI Sites
Geotech Report	CHA, Date: 03/30/2000	4287355	CCI Sites
Antenna Configuration	Crown CAD Package	Date: 03/12/2019	CCI Sites

3.1) Analysis Method

tnxTower (version 8.0.5.0), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A.

3.2) Assumptions

- 1) The tower and structures were built and have been maintained in accordance with the manufacturer's specification.
- 2) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.
- 3) Mount areas and weights are assumed based on photographs provided.

This analysis may be affected if any assumptions are not valid or have been made in error. B+T Group should be notified to determine the effect on the structural integrity of the tower.

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
T1	170 - 160	Leg	Sabre 3.5" x 0.216"	2	-8.195	86.635	9.5	Pass
T2	160 - 140	Leg	Sabre 4.5" x 0.438"	20	-35.238	210.881	16.7	Pass
T3	140 - 120	Leg	Sabre 6.625" x 0.432"	41	-82.613	360.255	22.9	Pass
T4	120 - 100	Leg	Sabre 8.625" x 0.5"	62	-137.862	569.808	24.2	Pass
T5	100 - 80	Leg	Sabre 10.750" x 0.500"	83	-196.730	702.092	28.0	Pass
T6	80 - 60	Leg	Sabre 12.75" x 0.5"	98	-261.799	859.488	30.5	Pass
T7	60 - 40	Leg	Sabre 16" x 0.5"	113	-326.454	1110.690	29.4	Pass
T8	40 - 20	Leg	Sabre 18" x 0.5"	128	-390.333	1263.528	30.9	Pass
T9	20 - 0	Leg	Sabre 18" x 0.5"	144	-435.845	1289.925	33.8	Pass
T1	170 - 160	Diagonal	L2x2x3/8	10	-4.040	18.112	22.3 28.0 (b)	Pass
T2	160 - 140	Diagonal	L3x3x3/8	25	-7.114	40.506	17.6 35.0 (b)	Pass
T3	140 - 120	Diagonal	L3 1/2x3 1/2x3/8	44	-10.677	51.321	20.8 49.8 (b)	Pass
T4	120 - 100	Diagonal	L3 1/2x3 1/2x1/2	65	-12.422	53.678	23.1 43.3 (b)	Pass
T5	100 - 80	Diagonal	L5x5x1/2	86	-16.963	105.471	16.1 61.4 (b)	Pass
T6	80 - 60	Diagonal	L5x5x5/8	104	-18.009	116.354	15.5 52.0 (b)	Pass
T7	60 - 40	Diagonal	L5x5x5/8	118	-19.285	101.338	19.0 57.4 (b)	Pass
T8	40 - 20	Diagonal	L5x5x5/8	133	-20.899	87.432	23.9 62.2 (b)	Pass
T9	20 - 0	Diagonal	L5x5x5/8	153	-27.826	123.179	22.6 37.5 (b)	Pass
T9	20 - 0	Horizontal	2L3 1/2x3 1/2x1/4x3/8	159	-19.745	41.165	48.0	Pass
T1	170 - 160	Top Girt	L2 1/2x2 1/2x3/16	4	-0.448	8.385	5.3	Pass
T9	20 - 0	Redund Horz 1 Bracing	L3x3x5/16	157	-7.565	43.079	17.6	Pass
T9	20 - 0	Redund Diag 1 Bracing	L3x3x1/4	162	-4.805	23.979	20.0	Pass
T9	20 - 0	Inner Bracing	L3x3x3/16	167	-0.030	5.612	0.6	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
							Summary	
						Leg (T9)	33.8	Pass
						Diagonal (T8)	62.2	Pass
						Horizontal (T9)	48.0	Pass
						Top Girt (T1)	5.3	Pass
						Redund Horz 1 Bracing (T9)	17.6	Pass
						Redund Diag 1 Bracing (T9)	20.0	Pass
						Inner Bracing (T9)	0.6	Pass
						Bolt Checks	62.2	Pass
						RATING =	62.2	Pass

Table 5 - Tower Component Stresses vs. Capacity – LC7

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Redundant Connection	0-20	48.7	Pass
1	Anchor Rods	Base	31.4	Pass
1	Base Foundation (Structure)	Base	6.4	Pass
1	Base Foundation (Soil Interaction)	Base	56.8	Pass

Structure Rating (max from all components) =	62.2%
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Notes:

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

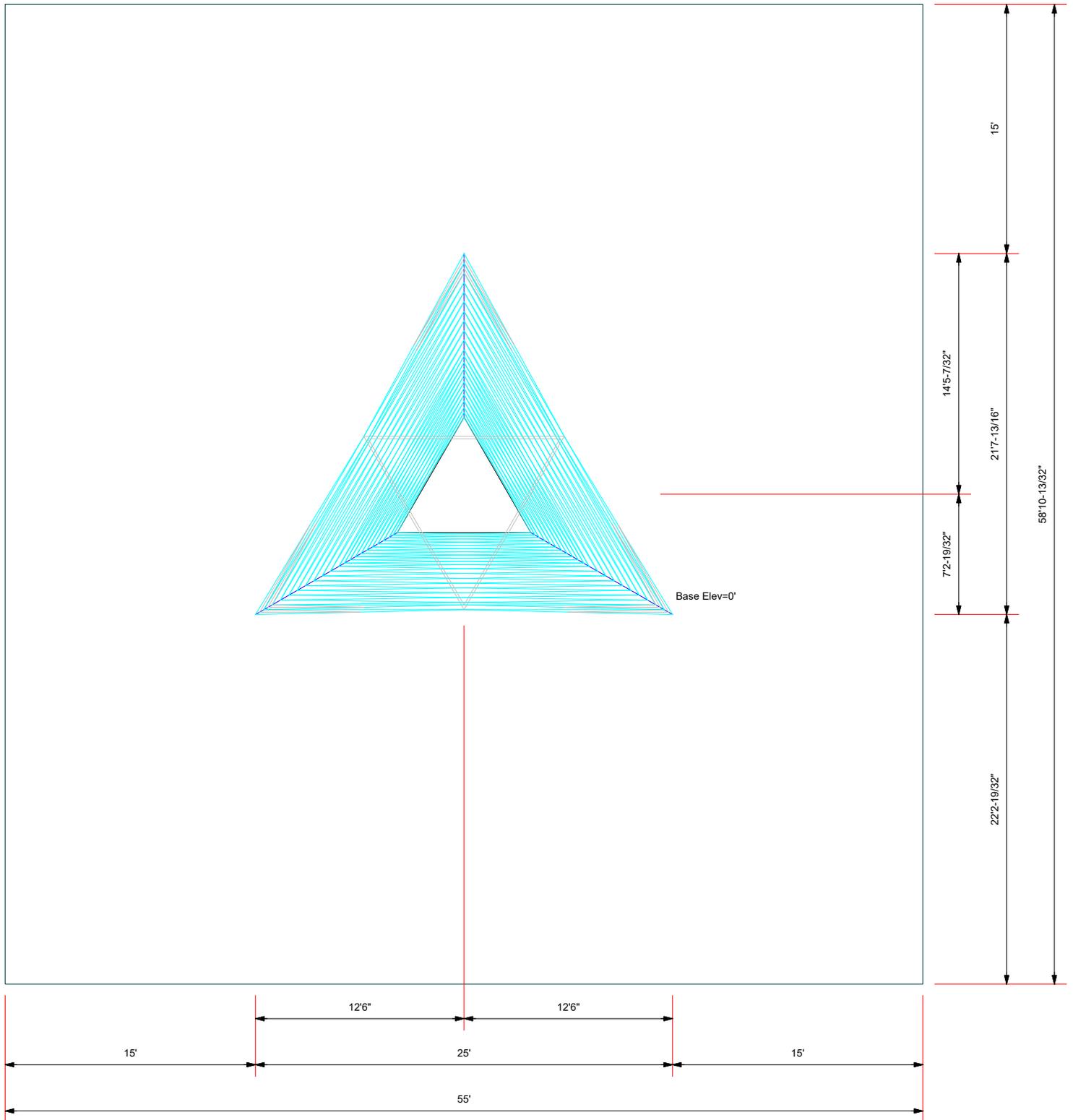
4.1) Recommendations

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

APPENDIX A

TNXTOWER OUTPUT

Plot Plan
Total Area - 0.07 Acres



B+T Group
1717 S Boulder, Suite 300
Tulsa, OK 74119
Phone: (918) 587-4630
FAX: (918) 295-0265

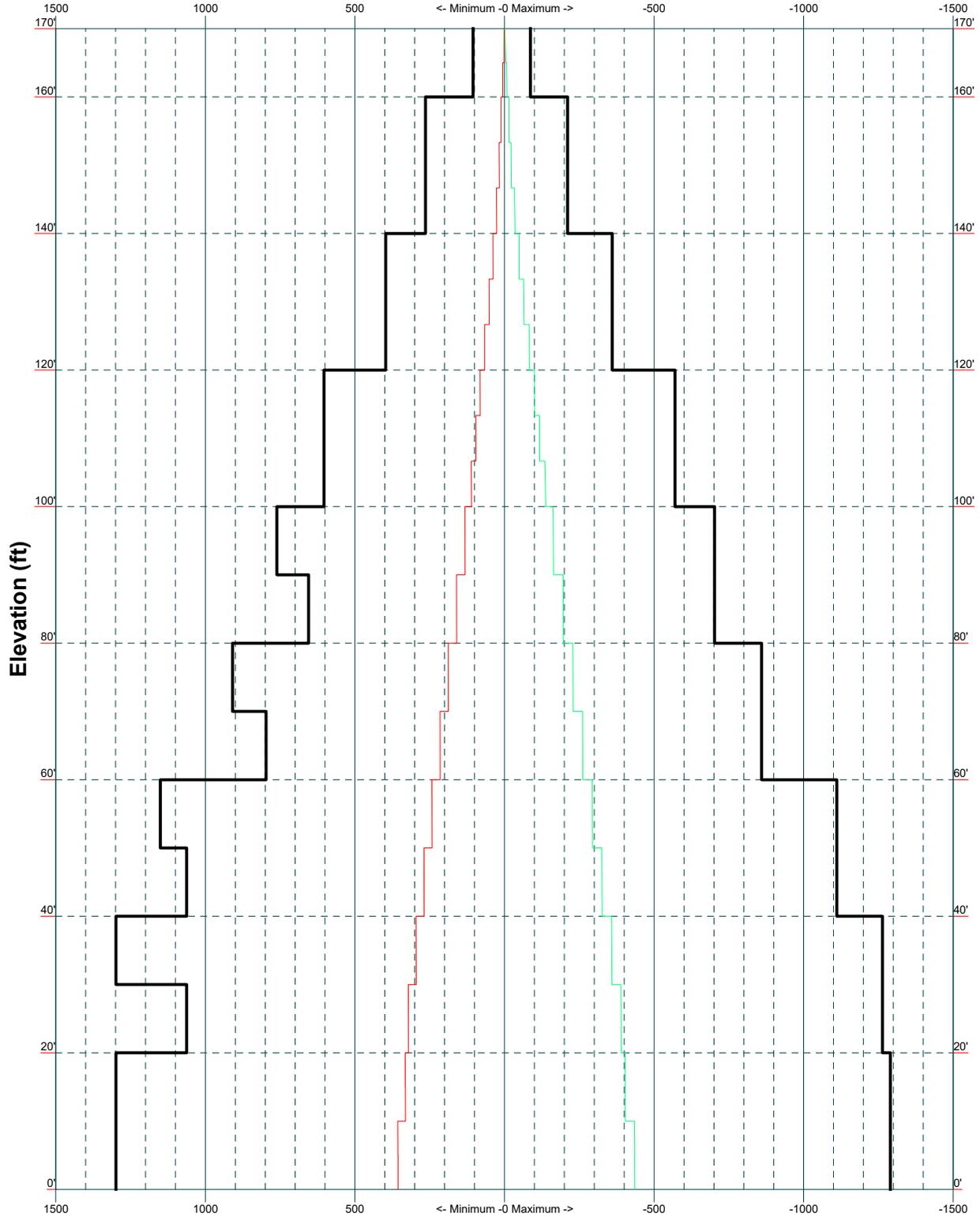
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Project:		
Client: Crown Castle	Drawn by: S Shrestha	App'd:
Code: TIA-222-H	Date: 03/27/19	Scale: NTS
Path:		Dwg No. E-2

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TIA-222-H - 139 mph/50 mph 1.500 in Ice Exposure C

Leg Capacity ———

Leg Compression (K)



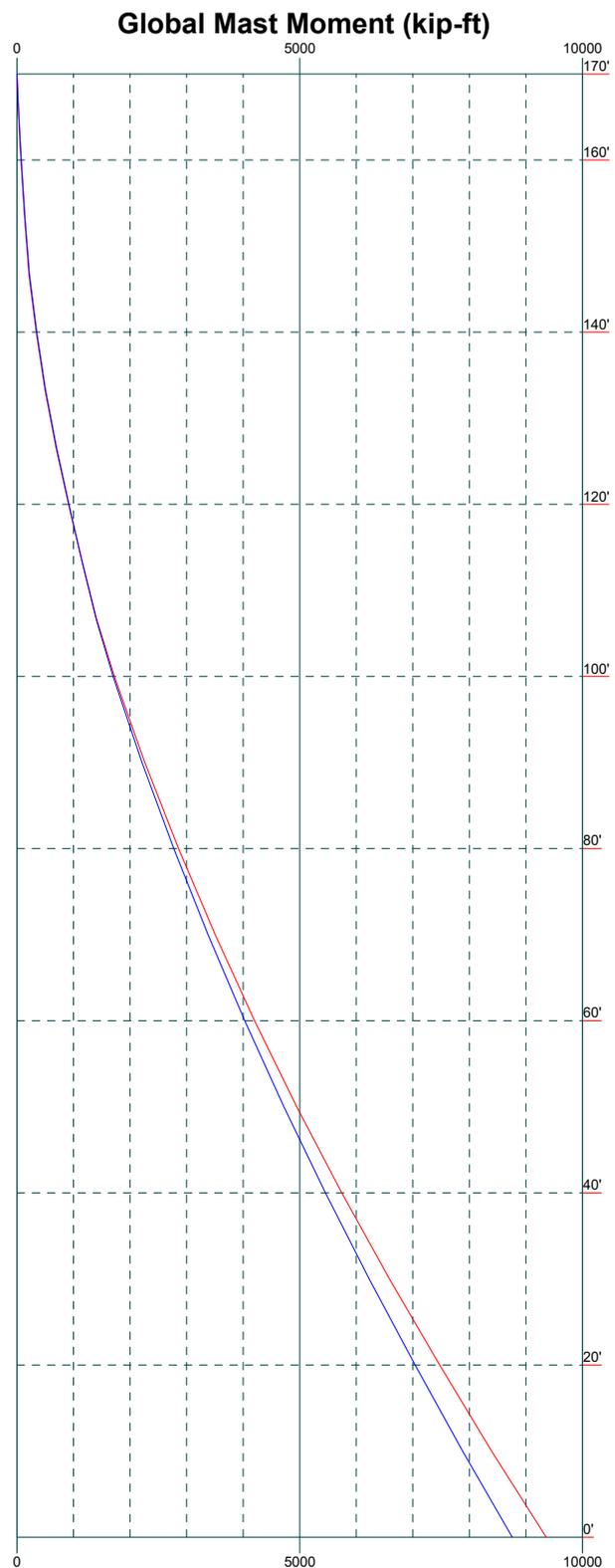
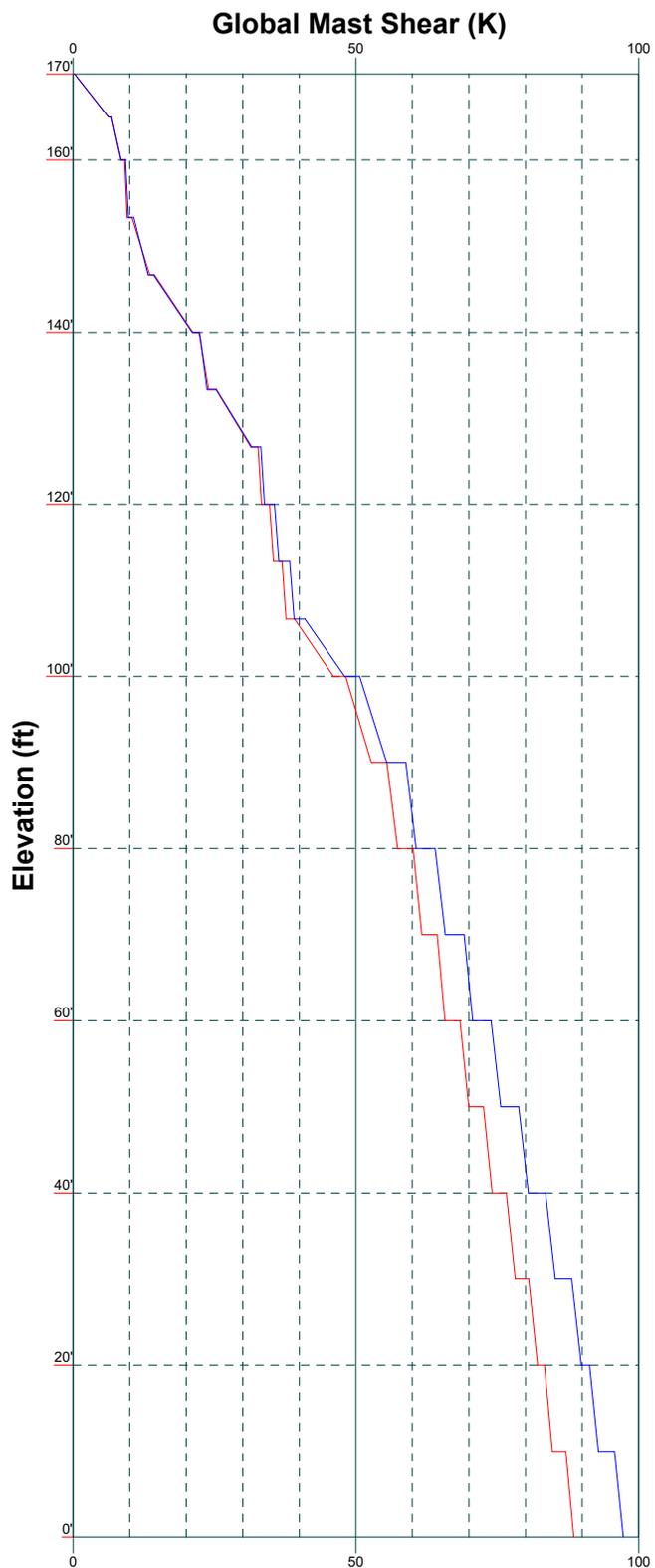
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Job: 100736.005.01 - TRURO, MA (BU# 841273)		
Project:		
Client: Crown Castle	Drawn by: S Shrestha	App'd:
Code: TIA-222-H	Date: 03/27/19	Scale: NTS
Path:	Dwg No. E-3	

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Vx Vz

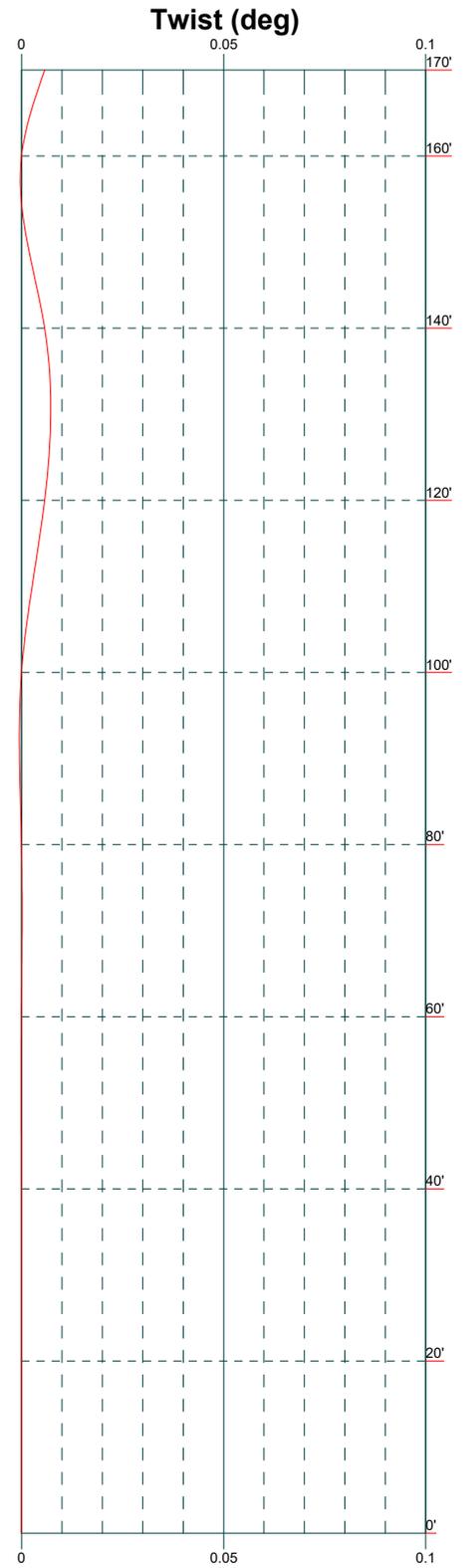
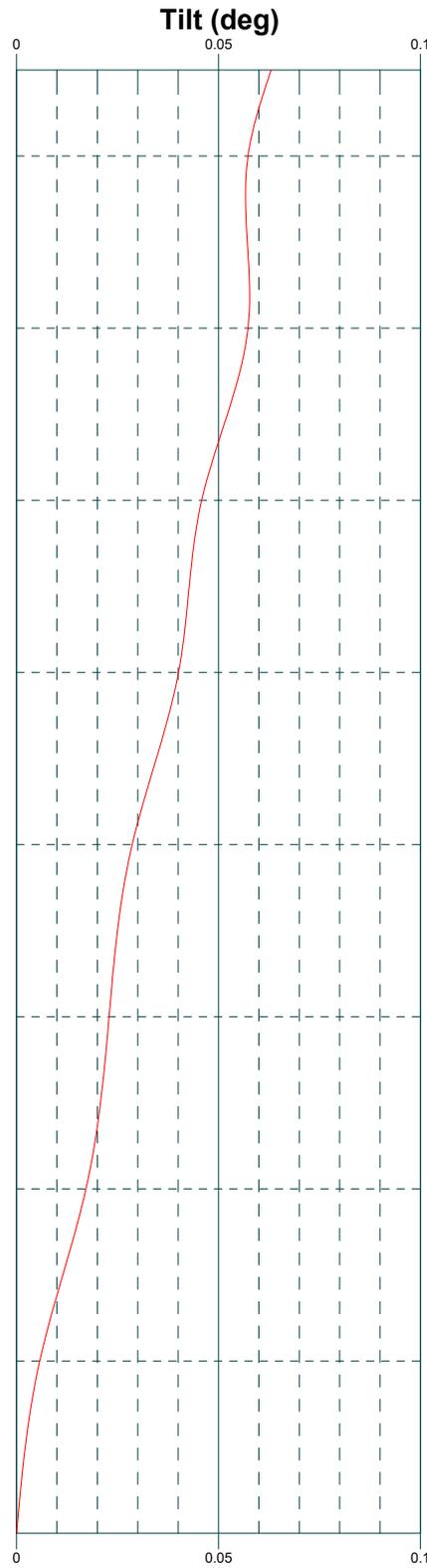
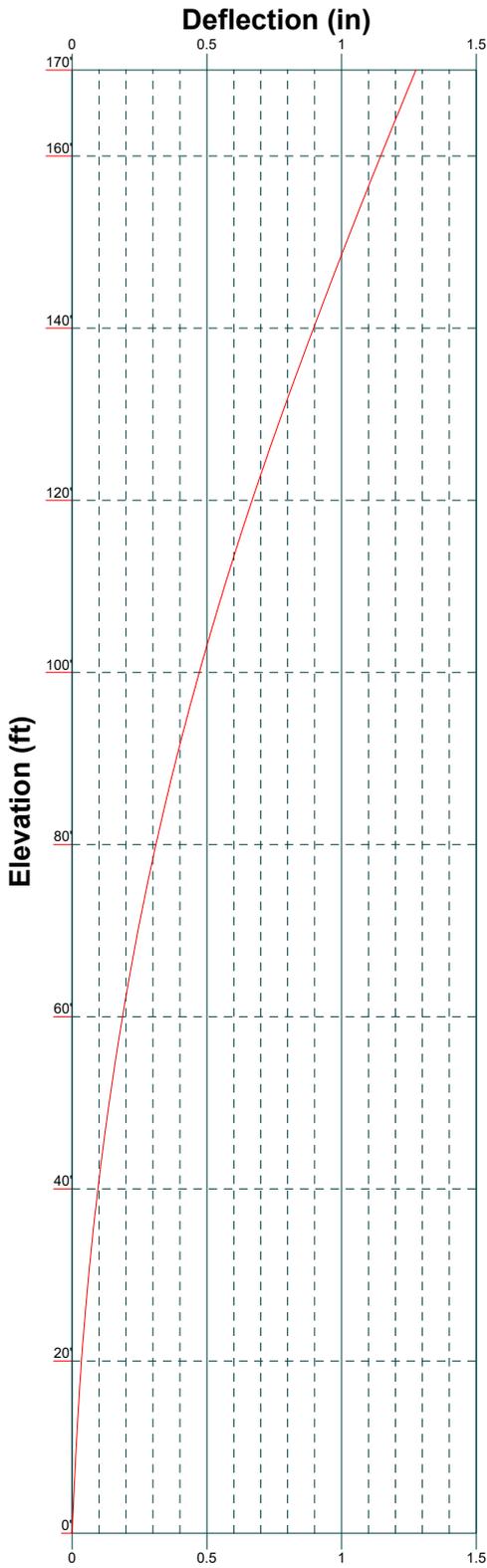
Mx Mz



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Job: 100736.005.01 - TRURO, MA (BU# 841273)		
Project:		
Client: Crown Castle	Drawn by: S Shrestha	App'd:
Code: TIA-222-H	Date: 03/27/19	Scale: NTS
Path:	Dwg No. E-4	

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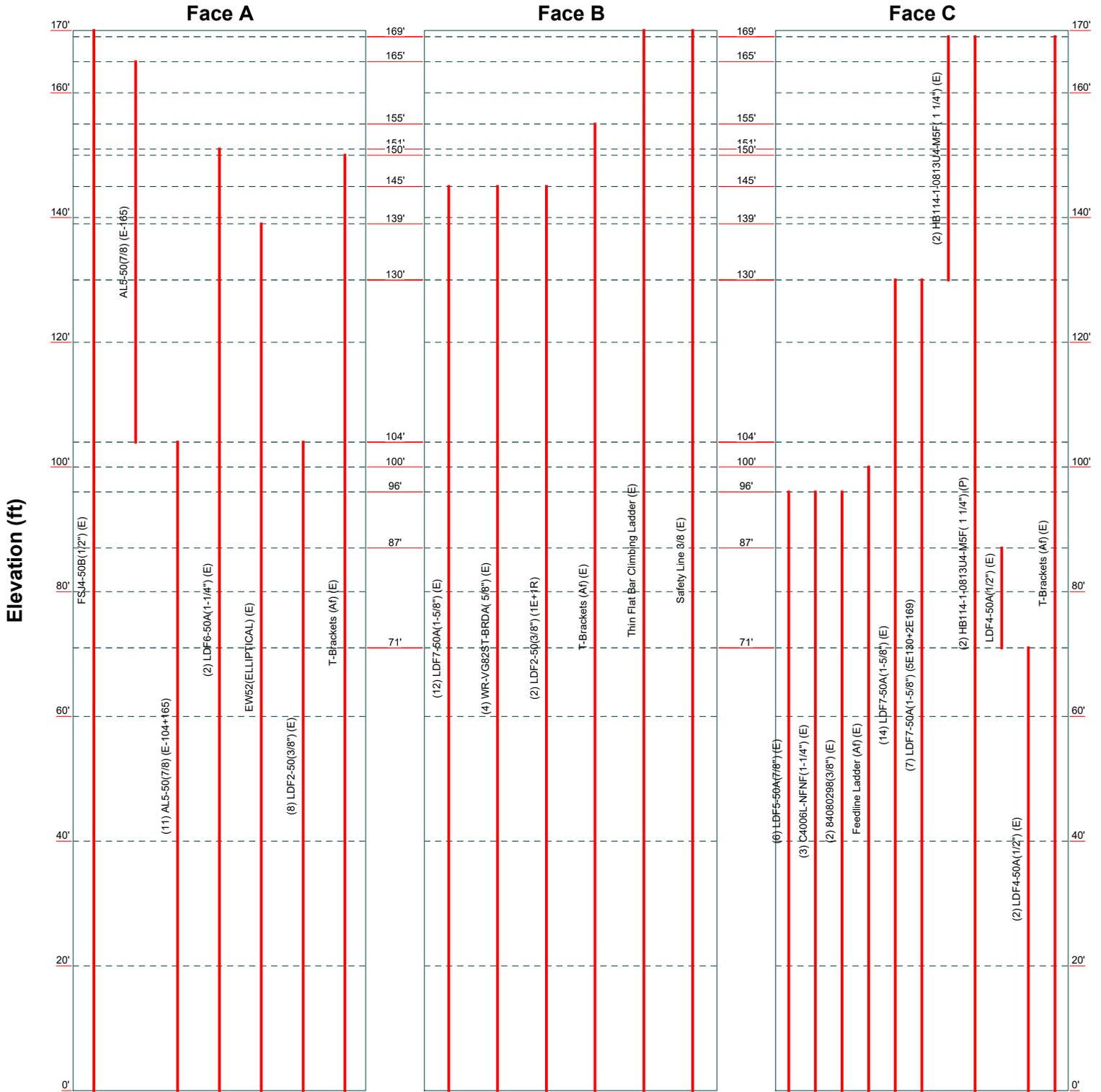

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Job: 100736.005.01 - TRURO, MA (BU# 841273)		
Project:		
Client: Crown Castle	Drawn by: S Shrestha	App'd:
Code: TIA-222-H	Date: 03/27/19	Scale: NTS
Path:	Dwg No. E-5	

Feed Line Distribution Chart

0' - 170'

— Round
 — Flat
 — App In Face
 — App Out Face
 — Truss Leg



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Project:		
Client: Crown Castle	Drawn by: S Shrestha	App'd:
Code: TIA-222-H	Date: 03/27/19	Scale: NTS
Path:		Dwg No. E-7

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	Project	Date 14:21:33 03/27/19
	Client Crown Castle	Designed by S Shrestha

Tower Input Data

The main tower is a 3x free standing tower with an overall height of 170' above the ground line.

The base of the tower is set at an elevation of 0' above the ground line.

The face width of the tower is 8' at the top and 25' at the base.

This tower is designed using the TIA-222-H standard.

The following design criteria apply:

Tower is located in Barnstable County, Massachusetts.

Tower base elevation above sea level: 107'.

Basic wind speed of 139 mph.

Risk Category II.

Exposure Category C.

Simplified Topographic Factor Procedure for wind speed-up calculations is used.

Topographic Category: 1.

Crest Height: 0'.

Nominal ice thickness of 1.500 in.

Ice thickness is considered to increase with height.

Ice density of 56.000 pcf.

A wind speed of 50 mph is used in combination with ice.

Temperature drop of 50.000 °F.

Deflections calculated using a wind speed of 60 mph.

TIA-222-H Annex S.

Pressures are calculated at each section.

Tower analysis based on target reliabilities in accordance with Annex S.

Load Modification Factors used: $K_{es}(F_w) = 0.95$, $K_{es}(t_i) = 0.85$.

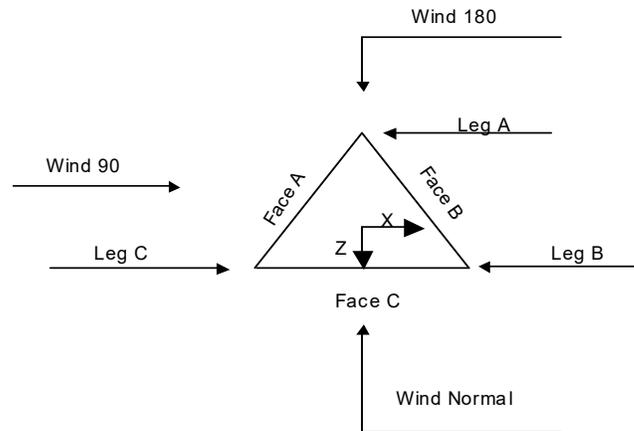
Stress ratio used in tower member design is 1.05.

Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

<ul style="list-style-type: none"> Consider Moments - Legs Consider Moments - Horizontals Consider Moments - Diagonals Use Moment Magnification Use Code Stress Ratios √ Use Code Safety Factors - Guys Escalate Ice Always Use Max Kz Use Special Wind Profile √ Include Bolts In Member Capacity Leg Bolts Are At Top Of Section √ Secondary Horizontal Braces Leg Use Diamond Inner Bracing (4 Sided) SR Members Have Cut Ends SR Members Are Concentric 	<ul style="list-style-type: none"> Distribute Leg Loads As Uniform Assume Legs Pinned √ Assume Rigid Index Plate √ Use Clear Spans For Wind Area √ Use Clear Spans For KL/r Retension Guys To Initial Tension √ Bypass Mast Stability Checks √ Use Azimuth Dish Coefficients √ Project Wind Area of Appurt. Autocalc Torque Arm Areas Add IBC .6D+W Combination √ Sort Capacity Reports By Component Triangulate Diamond Inner Bracing Treat Feed Line Bundles As Cylinder Ignore KL/r For 60 Deg. Angle Legs 	<ul style="list-style-type: none"> Use ASCE 10 X-Brace Ly Rules √ Calculate Redundant Bracing Forces Ignore Redundant Members in FEA √ SR Leg Bolts Resist Compression All Leg Panels Have Same Allowable Offset Girt At Foundation √ Consider Feed Line Torque √ Include Angle Block Shear Check Use TIA-222-H Bracing Resist. Exemption Use TIA-222-H Tension Splice Exemption <p style="text-align: center; background-color: #e0e0e0; margin: 5px 0;">Poles</p> <ul style="list-style-type: none"> Include Shear-Torsion Interaction Always Use Sub-Critical Flow Use Top Mounted Sockets Pole Without Linear Attachments Pole With Shroud Or No Appurtenances Outside and Inside Corner Radii Are Known
--	--	--

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	Project	Date 14:21:33 03/27/19
	Client Crown Castle	Designed by S Shrestha



Triangular Tower

Tower Section Geometry

Tower Section	Tower Elevation	Assembly Database	Description	Section Width	Number of Sections	Section Length
	<i>ft</i>			<i>ft</i>		<i>ft</i>
T1	170'-160'			8'	1	10'
T2	160'-140'			9'	1	20'
T3	140'-120'			11'	1	20'
T4	120'-100'			13'	1	20'
T5	100'-80'			15'	1	20'
T6	80'-60'			17'	1	20'
T7	60'-40'			19'	1	20'
T8	40'-20'			21'	1	20'
T9	20'-0'			23'	1	20'

Tower Section Geometry (cont'd)

Tower Section	Tower Elevation	Diagonal Spacing	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset	Bottom Girt Offset
	<i>ft</i>	<i>ft</i>				<i>in</i>	<i>in</i>
T1	170'-160'	5'	X Brace	No	No	0.000	0.000
T2	160'-140'	6'8"	X Brace	No	No	0.000	0.000
T3	140'-120'	6'8"	X Brace	No	No	0.000	0.000
T4	120'-100'	6'8"	X Brace	No	No	0.000	0.000
T5	100'-80'	10'	X Brace	No	No	0.000	0.000
T6	80'-60'	10'	X Brace	No	No	0.000	0.000
T7	60'-40'	10'	X Brace	No	No	0.000	0.000
T8	40'-20'	10'	X Brace	No	No	0.000	0.000
T9	20'-0'	10'	K1 Down	No	Yes	0.000	0.000

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	Project		Date	14:21:33 03/27/19
	Client	Crown Castle		Designed by

Tower Section Geometry (cont'd)

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T1 170'-160'	Pipe	Sabre 3.5" x 0.216"	A572-50 (50 ksi)	Equal Angle	L2x2x3/8	A36 (36 ksi)
T2 160'-140'	Pipe	Sabre 4.5" x 0.438"	A572-50 (50 ksi)	Equal Angle	L3x3x3/8	A36 (36 ksi)
T3 140'-120'	Pipe	Sabre 6.625" x 0.432"	A572-50 (50 ksi)	Equal Angle	L3 1/2x3 1/2x3/8	A36 (36 ksi)
T4 120'-100'	Pipe	Sabre 8.625" x 0.5"	A572-50 (50 ksi)	Equal Angle	L3 1/2x3 1/2x1/2	A36 (36 ksi)
T5 100'-80'	Pipe	Sabre 10.750" x 0.500"	A572-50 (50 ksi)	Equal Angle	L5x5x1/2	A36 (36 ksi)
T6 80'-60'	Pipe	Sabre 12.75" x 0.5"	A572-50 (50 ksi)	Equal Angle	L5x5x5/8	A36 (36 ksi)
T7 60'-40'	Pipe	Sabre 16" x 0.5"	A572-50 (50 ksi)	Equal Angle	L5x5x5/8	A36 (36 ksi)
T8 40'-20'	Pipe	Sabre 18" x 0.5"	A572-50 (50 ksi)	Equal Angle	L5x5x5/8	A36 (36 ksi)
T9 20'-0'	Pipe	Sabre 18" x 0.5"	A572-50 (50 ksi)	Equal Angle	L5x5x5/8	A36 (36 ksi)

Tower Section Geometry (cont'd)

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T1 170'-160'	Equal Angle	L2 1/2x2 1/2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)

Tower Section Geometry (cont'd)

Tower Elevation ft	No. of Mid Girts	Mid Girt Type	Mid Girt Size	Mid Girt Grade	Horizontal Type	Horizontal Size	Horizontal Grade
T9 20'-0'	None	Flat Bar		A36 (36 ksi)	Double Equal Angle	2L3 1/2x3 1/2x1/4x3/8	A36 (36 ksi)

Tower Section Geometry (cont'd)

Tower Elevation ft	Secondary Horizontal Type	Secondary Horizontal Size	Secondary Horizontal Grade	Inner Bracing Type	Inner Bracing Size	Inner Bracing Grade
T9 20'-0'	Equal Angle		A36 (36 ksi)	Equal Angle	L3x3x3/16	A36 (36 ksi)

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	Project	Date 14:21:33 03/27/19
	Client Crown Castle	Designed by S Shrestha

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight klf
FSJ4-50B(1/2")) (E) ***\$RB***	A	No	No	Ar (CaAa)	170' - 0'	-6.000	0.4	1	1	0.850 0.750	0.520		0.000
AL5-50(7/8) (E-165)	A	No	No	Ar (CaAa)	165' - 104'	-8.000	0.44	1	1	0.850 0.750	1.100		0.000
AL5-50(7/8) (E-104+165) ***\$RB***	A	No	No	Ar (CaAa)	104' - 0'	-8.000	0.44	11	9	0.850 0.750	1.100		0.000
LDF6-50A(1-1/4") (E) ***\$RB***	A	No	No	Ar (CaAa)	151' - 0'	-9.000	0.4	2	1	0.850 0.750	1.550		0.001
EW52(ELLIP TICAL) (E) ***\$RB***	A	No	No	Ar (CaAa)	139' - 0'	-12.000	0.4	1	1	0.850 0.750	2.250		0.001
LDF2-50(3/8") (E)	A	No	No	Ar (CaAa)	104' - 0'	-6.500	0.43	8	8	0.400	0.440		0.000
T-Brackets (Af) (E) ***\$RB***	A	No	No	Af (CaAa)	150' - 0'	-6.000	0.45	1	1	1.000	1.000		0.008
LDF7-50A(1-5/8") (E)	B	No	No	Ar (CaAa)	145' - 0'	-16.000	0.4	12	2	0.850 0.750	1.980		0.001
WR-VG82ST- BRDA(5/8") (E)	B	No	No	Ar (CaAa)	145' - 0'	-13.000	0.39	4	1	0.750	0.645		0.000
LDF2-50(3/8") (1E+1R)	B	No	No	Ar (CaAa)	145' - 0'	-11.000	0.39	2	1	0.750	0.440		0.000
T-Brackets (Af) (E) ***\$RB***	B	No	No	Af (CaAa)	155' - 0'	-7.000	0.43	1	1	1.000	1.000		0.008
LDF5-50A(7/8") (E)	C	No	No	Ar (CaAa)	96' - 0'	0.000	-0.03	6	6	0.850 0.750	1.090		0.000
C4006L-NFN F(1-1/4") (E)	C	No	No	Ar (CaAa)	96' - 0'	0.000	0.01	3	3	0.850 0.750	1.280		0.001
84080298(3/8")) (E)	C	No	No	Ar (CaAa)	96' - 0'	0.000	0.03	2	2	0.500	0.276		0.000
Feedline Ladder (Af) (E) ***\$RB***	C	No	No	Af (CaAa)	100' - 0'	0.000	0	1	1	3.000	3.000		0.008
LDF7-50A(1-5/8") (E)	C	No	No	Ar (CaAa)	130' - 0'	-16.000	0.42	14	8	0.500	1.980		0.001
LDF7-50A(1-5/8") (5E130+2E169) ***\$RB***	C	No	No	Ar (CaAa)	130' - 0'	-11.000	0.42	7	2	0.500	1.980		0.001
HB114-1-081	C	No	No	Ar (CaAa)	169' - 130'	-11.000	0.42	2	2	0.500	1.540		0.001

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Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight klf
3U4-M5F(1 1/4") (E)				Ar (CaAa)	169' - 0'	-2.000	0.415	2	1	0.500	1.540		0.001
HB114-1-081 3U4-M5F(1 1/4") (P) ***\$RB***	C	No	No	Ar (CaAa)	87' - 71'	-5.000	0.43	1	1	0.500	0.630		0.000
LDF4-50A(1/ 2") (E)	C	No	No	Ar (CaAa)	71' - 0'	-5.000	0.43	2	1	0.500	0.630		0.000
LDF4-50A(1/ 2") (E)	C	No	No	Ar (CaAa)	71' - 0'	-5.000	0.43	2	1	0.500	0.630		0.000
T-Brackets (Af) (E) ***\$RB***	C	No	No	Af (CaAa)	169' - 0'	-7.000	0.43	1	1	1.000	1.000		0.008
Thin Flat Bar Climbing Ladder (E) ***\$RB***	B	No	No	Af (CaAa)	170' - 0'	0.000	0	1	1	2.000	2.000		0.004
Safety Line 3/8 (E) ***\$RB***	B	No	No	Ar (CaAa)	170' - 0'	1.000	0.01	1	1	0.375	0.375		0.000

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	C _{AA} ft ² /ft	Weight klf
\$RB								

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _{AA} In Face ft ²	C _{AA} Out Face ft ²	Weight K
T1	170'-160'	A	0.000	0.000	1.070	0.000	0.003
		B	0.000	0.000	3.708	0.000	0.042
		C	0.000	0.000	7.044	0.000	0.119
T2	160'-140'	A	0.000	0.000	8.317	0.000	0.107
		B	0.000	0.000	23.527	0.000	0.267
		C	0.000	0.000	15.653	0.000	0.264
T3	140'-120'	A	0.000	0.000	17.048	0.000	0.214
		B	0.000	0.000	65.190	0.000	0.477
		C	0.000	0.000	54.153	0.000	0.412
T4	120'-100'	A	0.000	0.000	23.081	0.000	0.227
		B	0.000	0.000	65.190	0.000	0.477
		C	0.000	0.000	92.653	0.000	0.560
T5	100'-80'	A	0.000	0.000	46.313	0.000	0.279
		B	0.000	0.000	65.190	0.000	0.477

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	<p>Client</p> <p>Crown Castle</p>	<p>Designed by</p> <p>S Shrestha</p>

Tower Section	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _{AA} In Face ft ²	C _{AA} Out Face ft ²	Weight K
T6	80'-60'	C	0.000	0.000	120.584	0.000	0.789
		A	0.000	0.000	46.313	0.000	0.279
		B	0.000	0.000	65.190	0.000	0.477
T7	60'-40'	C	0.000	0.000	126.468	0.000	0.808
		A	0.000	0.000	46.313	0.000	0.279
		B	0.000	0.000	65.190	0.000	0.477
T8	40'-20'	C	0.000	0.000	127.035	0.000	0.809
		A	0.000	0.000	46.313	0.000	0.279
		B	0.000	0.000	65.190	0.000	0.477
T9	20'-0'	C	0.000	0.000	127.035	0.000	0.809
		A	0.000	0.000	46.313	0.000	0.279
		B	0.000	0.000	65.190	0.000	0.477
		C	0.000	0.000	127.035	0.000	0.809

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A _R ft ²	A _F ft ²	C _{AA} In Face ft ²	C _{AA} Out Face ft ²	Weight K
T1	170'-160'	A	1.498	0.000	0.000	5.563	0.000	0.063
		B		0.000	0.000	9.699	0.000	0.156
		C		0.000	0.000	22.168	0.000	0.345
T2	160'-140'	A	1.483	0.000	0.000	30.985	0.000	0.449
		B		0.000	0.000	47.779	0.000	0.885
		C		0.000	0.000	49.008	0.000	0.761
T3	140'-120'	A	1.462	0.000	0.000	54.251	0.000	0.826
		B		0.000	0.000	114.053	0.000	2.031
		C		0.000	0.000	86.071	0.000	1.438
T4	120'-100'	A	1.438	0.000	0.000	67.723	0.000	0.969
		B		0.000	0.000	113.274	0.000	2.001
		C		0.000	0.000	122.928	0.000	2.100
T5	100'-80'	A	1.410	0.000	0.000	120.862	0.000	1.547
		B		0.000	0.000	112.356	0.000	1.966
		C		0.000	0.000	197.141	0.000	3.018
T6	80'-60'	A	1.375	0.000	0.000	119.760	0.000	1.510
		B		0.000	0.000	111.232	0.000	1.924
		C		0.000	0.000	218.049	0.000	3.183
T7	60'-40'	A	1.329	0.000	0.000	118.328	0.000	1.462
		B		0.000	0.000	109.772	0.000	1.871
		C		0.000	0.000	218.847	0.000	3.132
T8	40'-20'	A	1.263	0.000	0.000	116.247	0.000	1.394
		B		0.000	0.000	107.649	0.000	1.795
		C		0.000	0.000	215.214	0.000	3.014
T9	0'-0'	A	1.132	0.000	0.000	112.126	0.000	1.264
		B		0.000	0.000	103.442	0.000	1.650
		C		0.000	0.000	208.016	0.000	2.785

Feed Line Center of Pressure

Section	Elevation ft	CP _x in	CP _z in	CP _x Ice in	CP _z Ice in
T1	170'-160'	-2.658	0.663	-4.052	-0.212
T2	160'-140'	0.890	0.535	-0.176	-1.028
T3	140'-120'	0.563	3.452	2.394	0.663
T4	120'-100'	-5.184	3.419	-1.523	0.032
T5	100'-80'	-4.710	-1.406	-1.583	-3.118

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Section	Elevation	CP _x	CP _z	CP _x Ice	CP _z Ice
	ft	in	in	in	in
T6	80'-60'	-5.073	-0.955	-2.376	-2.030
T7	60'-40'	-5.249	-0.858	-2.604	-1.955
T8	40'-20'	-5.441	-0.869	-2.752	-2.128
T9	20'-0'	-5.338	-0.839	-2.781	-2.274

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
T1	1	FSJ4-50B(1/2")	160.00 - 170.00	0.6000	0.6000
T1	3	AL5-50(7/8)	160.00 - 165.00	0.6000	0.6000
T1	28	HB114-1-0813U4-M5F(1/4")	160.00 - 169.00	0.6000	0.6000
T1	29	HB114-1-0813U4-M5F(1/4")	160.00 - 169.00	0.6000	0.6000
T1	33	T-Brackets (Af)	160.00 - 169.00	0.6000	0.6000
T1	35	Thin Flat Bar Climbing Ladder	160.00 - 170.00	0.6000	0.6000
T1	36	Safety Line 3/8	160.00 - 170.00	0.6000	0.6000
T2	1	FSJ4-50B(1/2")	140.00 - 160.00	0.6000	0.6000
T2	3	AL5-50(7/8)	140.00 - 160.00	0.6000	0.6000
T2	6	LDF6-50A(1-1/4")	140.00 - 151.00	0.6000	0.6000
T2	11	T-Brackets (Af)	140.00 - 150.00	0.6000	0.6000
T2	13	LDF7-50A(1-5/8")	140.00 - 145.00	0.6000	0.6000
T2	14	WR-VG82ST-BRDA(5/8")	140.00 - 145.00	0.6000	0.6000
T2	16	LDF2-50(3/8")	140.00 - 145.00	0.6000	0.6000
T2	17	T-Brackets (Af)	140.00 - 155.00	0.6000	0.6000
T2	28	HB114-1-0813U4-M5F(1/4")	140.00 - 160.00	0.6000	0.6000
T2	29	HB114-1-0813U4-M5F(1/4")	140.00 - 160.00	0.6000	0.6000
T2	33	T-Brackets (Af)	140.00 - 160.00	0.6000	0.6000
T2	35	Thin Flat Bar Climbing Ladder	140.00 - 160.00	0.6000	0.6000
T2	36	Safety Line 3/8	140.00 - 160.00	0.6000	0.6000
T3	1	FSJ4-50B(1/2")	120.00 - 140.00	0.6000	0.6000
T3	3	AL5-50(7/8)	120.00 - 140.00	0.6000	0.6000
T3	6	LDF6-50A(1-1/4")	120.00 - 140.00	0.6000	0.6000
T3	8	EW52(ELLIPTICAL)	120.00 - 139.00	0.6000	0.6000
T3	11	T-Brackets (Af)	120.00 -	0.6000	0.6000

tnxTower

B+T Group
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Client
Crown Castle
Designed by
S Shrestha

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
T3	13	LDF7-50A(1-5/8")	140.00 120.00 - 140.00	0.6000	0.6000
T3	14	WR-VG82ST-BRDA(5/8")	120.00 - 140.00	0.6000	0.6000
T3	16	LDF2-50(3/8")	120.00 - 140.00	0.6000	0.6000
T3	17	T-Brackets (Af)	120.00 - 140.00	0.6000	0.6000
T3	25	LDF7-50A(1-5/8")	120.00 - 130.00	0.6000	0.6000
T3	26	LDF7-50A(1-5/8")	120.00 - 130.00	0.6000	0.6000
T3	28	HB114-1-0813U4-M5F(1/4")	130.00 - 140.00	0.6000	0.6000
T3	29	HB114-1-0813U4-M5F(1/4")	120.00 - 140.00	0.6000	0.6000
T3	33	T-Brackets (Af)	120.00 - 140.00	0.6000	0.6000
T3	35	Thin Flat Bar Climbing Ladder	120.00 - 140.00	0.6000	0.6000
T3	36	Safety Line 3/8	120.00 - 140.00	0.6000	0.6000
T4	1	FSJ4-50B(1/2")	100.00 - 120.00	0.6000	0.6000
T4	3	AL5-50(7/8)	104.00 - 120.00	0.6000	0.6000
T4	4	AL5-50(7/8)	100.00 - 104.00	0.6000	0.6000
T4	6	LDF6-50A(1-1/4")	100.00 - 120.00	0.6000	0.6000
T4	8	EW52(ELLIPTICAL)	100.00 - 120.00	0.6000	0.6000
T4	10	LDF2-50(3/8")	100.00 - 104.00	0.6000	0.6000
T4	11	T-Brackets (Af)	100.00 - 120.00	0.6000	0.6000
T4	13	LDF7-50A(1-5/8")	100.00 - 120.00	0.6000	0.6000
T4	14	WR-VG82ST-BRDA(5/8")	100.00 - 120.00	0.6000	0.6000
T4	16	LDF2-50(3/8")	100.00 - 120.00	0.6000	0.6000
T4	17	T-Brackets (Af)	100.00 - 120.00	0.6000	0.6000
T4	25	LDF7-50A(1-5/8")	100.00 - 120.00	0.6000	0.6000
T4	26	LDF7-50A(1-5/8")	100.00 - 120.00	0.6000	0.6000
T4	29	HB114-1-0813U4-M5F(1/4")	100.00 - 120.00	0.6000	0.6000
T4	33	T-Brackets (Af)	100.00 - 120.00	0.6000	0.6000
T4	35	Thin Flat Bar Climbing Ladder	100.00 - 120.00	0.6000	0.6000
T4	36	Safety Line 3/8	100.00 - 120.00	0.6000	0.6000
T5	1	FSJ4-50B(1/2")	80.00 - 100.00	0.6000	0.6000
T5	4	AL5-50(7/8)	80.00 - 100.00	0.6000	0.6000
T5	6	LDF6-50A(1-1/4")	80.00 - 100.00	0.6000	0.6000
T5	8	EW52(ELLIPTICAL)	80.00 - 100.00	0.6000	0.6000
T5	10	LDF2-50(3/8")	80.00 - 100.00	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
T5	11	T-Brackets (Af)	80.00 - 100.00	0.6000	0.6000
T5	13	LDF7-50A(1-5/8")	80.00 - 100.00	0.6000	0.6000
T5	14	WR-VG82ST-BRDA(5/8")	80.00 - 100.00	0.6000	0.6000
T5	16	LDF2-50(3/8")	80.00 - 100.00	0.6000	0.6000
T5	17	T-Brackets (Af)	80.00 - 100.00	0.6000	0.6000
T5	19	LDF5-50A(7/8")	80.00 - 96.00	0.6000	0.6000
T5	20	C4006L-NFNF(1-1/4")	80.00 - 96.00	0.6000	0.6000
T5	22	84080298(3/8")	80.00 - 96.00	0.6000	0.6000
T5	23	Feedline Ladder (Af)	80.00 - 100.00	0.6000	0.6000
T5	25	LDF7-50A(1-5/8")	80.00 - 100.00	0.6000	0.6000
T5	26	LDF7-50A(1-5/8")	80.00 - 100.00	0.6000	0.6000
T5	29	HB114-1-0813U4-M5F(1 1/4")	80.00 - 100.00	0.6000	0.6000
T5	31	LDF4-50A(1/2")	80.00 - 87.00	0.6000	0.6000
T5	33	T-Brackets (Af)	80.00 - 100.00	0.6000	0.6000
T5	35	Thin Flat Bar Climbing Ladder	80.00 - 100.00	0.6000	0.6000
T5	36	Safety Line 3/8	80.00 - 100.00	0.6000	0.6000
T6	1	FSJ4-50B(1/2")	60.00 - 80.00	0.6000	0.6000
T6	4	AL5-50(7/8)	60.00 - 80.00	0.6000	0.6000
T6	6	LDF6-50A(1-1/4")	60.00 - 80.00	0.6000	0.6000
T6	8	EW52(ELLIPTICAL)	60.00 - 80.00	0.6000	0.6000
T6	10	LDF2-50(3/8")	60.00 - 80.00	0.6000	0.6000
T6	11	T-Brackets (Af)	60.00 - 80.00	0.6000	0.6000
T6	13	LDF7-50A(1-5/8")	60.00 - 80.00	0.6000	0.6000
T6	14	WR-VG82ST-BRDA(5/8")	60.00 - 80.00	0.6000	0.6000
T6	16	LDF2-50(3/8")	60.00 - 80.00	0.6000	0.6000
T6	17	T-Brackets (Af)	60.00 - 80.00	0.6000	0.6000
T6	19	LDF5-50A(7/8")	60.00 - 80.00	0.6000	0.6000
T6	20	C4006L-NFNF(1-1/4")	60.00 - 80.00	0.6000	0.6000
T6	22	84080298(3/8")	60.00 - 80.00	0.6000	0.6000
T6	23	Feedline Ladder (Af)	60.00 - 80.00	0.6000	0.6000
T6	25	LDF7-50A(1-5/8")	60.00 - 80.00	0.6000	0.6000
T6	26	LDF7-50A(1-5/8")	60.00 - 80.00	0.6000	0.6000
T6	29	HB114-1-0813U4-M5F(1 1/4")	60.00 - 80.00	0.6000	0.6000
T6	31	LDF4-50A(1/2")	71.00 - 80.00	0.6000	0.6000
T6	32	LDF4-50A(1/2")	60.00 - 71.00	0.6000	0.6000
T6	33	T-Brackets (Af)	60.00 - 80.00	0.6000	0.6000
T6	35	Thin Flat Bar Climbing Ladder	60.00 - 80.00	0.6000	0.6000
T6	36	Safety Line 3/8	60.00 - 80.00	0.6000	0.6000
T7	1	FSJ4-50B(1/2")	40.00 - 60.00	0.6000	0.6000
T7	4	AL5-50(7/8)	40.00 - 60.00	0.6000	0.6000
T7	6	LDF6-50A(1-1/4")	40.00 - 60.00	0.6000	0.6000
T7	8	EW52(ELLIPTICAL)	40.00 - 60.00	0.6000	0.6000
T7	10	LDF2-50(3/8")	40.00 - 60.00	0.6000	0.6000
T7	11	T-Brackets (Af)	40.00 - 60.00	0.6000	0.6000
T7	13	LDF7-50A(1-5/8")	40.00 - 60.00	0.6000	0.6000
T7	14	WR-VG82ST-BRDA(5/8")	40.00 - 60.00	0.6000	0.6000
T7	16	LDF2-50(3/8")	40.00 - 60.00	0.6000	0.6000
T7	17	T-Brackets (Af)	40.00 - 60.00	0.6000	0.6000
T7	19	LDF5-50A(7/8")	40.00 - 60.00	0.6000	0.6000
T7	20	C4006L-NFNF(1-1/4")	40.00 - 60.00	0.6000	0.6000
T7	22	84080298(3/8")	40.00 - 60.00	0.6000	0.6000
T7	23	Feedline Ladder (Af)	40.00 - 60.00	0.6000	0.6000
T7	25	LDF7-50A(1-5/8")	40.00 - 60.00	0.6000	0.6000
T7	26	LDF7-50A(1-5/8")	40.00 - 60.00	0.6000	0.6000
T7	29	HB114-1-0813U4-M5F(1 1/4")	40.00 - 60.00	0.6000	0.6000
T7	32	LDF4-50A(1/2")	40.00 - 60.00	0.6000	0.6000
T7	33	T-Brackets (Af)	40.00 - 60.00	0.6000	0.6000

<i>Tower Section</i>	<i>Feed Line Record No.</i>	<i>Description</i>	<i>Feed Line Segment Elev.</i>	<i>K_a No Ice</i>	<i>K_a Ice</i>
T7	35	Thin Flat Bar Climbing Ladder	40.00 - 60.00	0.6000	0.6000
T7	36	Safety Line 3/8	40.00 - 60.00	0.6000	0.6000
T8	1	FSJ4-50B(1/2")	20.00 - 40.00	0.6000	0.6000
T8	4	AL5-50(7/8)	20.00 - 40.00	0.6000	0.6000
T8	6	LDF6-50A(1-1/4")	20.00 - 40.00	0.6000	0.6000
T8	8	EW52(ELLIPTICAL)	20.00 - 40.00	0.6000	0.6000
T8	10	LDF2-50(3/8")	20.00 - 40.00	0.6000	0.6000
T8	11	T-Brackets (Af)	20.00 - 40.00	0.6000	0.6000
T8	13	LDF7-50A(1-5/8")	20.00 - 40.00	0.6000	0.6000
T8	14	WR-VG82ST-BRDA(5/8")	20.00 - 40.00	0.6000	0.6000
T8	16	LDF2-50(3/8")	20.00 - 40.00	0.6000	0.6000
T8	17	T-Brackets (Af)	20.00 - 40.00	0.6000	0.6000
T8	19	LDF5-50A(7/8")	20.00 - 40.00	0.6000	0.6000
T8	20	C4006L-NFNF(1-1/4")	20.00 - 40.00	0.6000	0.6000
T8	22	84080298(3/8")	20.00 - 40.00	0.6000	0.6000
T8	23	Feedline Ladder (Af)	20.00 - 40.00	0.6000	0.6000
T8	25	LDF7-50A(1-5/8")	20.00 - 40.00	0.6000	0.6000
T8	26	LDF7-50A(1-5/8")	20.00 - 40.00	0.6000	0.6000
T8	29	HB114-1-0813U4-M5F(1 1/4")	20.00 - 40.00	0.6000	0.6000
T8	32	LDF4-50A(1/2")	20.00 - 40.00	0.6000	0.6000
T8	33	T-Brackets (Af)	20.00 - 40.00	0.6000	0.6000
T8	35	Thin Flat Bar Climbing Ladder	20.00 - 40.00	0.6000	0.6000
T8	36	Safety Line 3/8	20.00 - 40.00	0.6000	0.6000
T9	1	FSJ4-50B(1/2")	0.00 - 20.00	0.6000	0.6000
T9	4	AL5-50(7/8)	0.00 - 20.00	0.6000	0.6000
T9	6	LDF6-50A(1-1/4")	0.00 - 20.00	0.6000	0.6000
T9	8	EW52(ELLIPTICAL)	0.00 - 20.00	0.6000	0.6000
T9	10	LDF2-50(3/8")	0.00 - 20.00	0.6000	0.6000
T9	11	T-Brackets (Af)	0.00 - 20.00	0.6000	0.6000
T9	13	LDF7-50A(1-5/8")	0.00 - 20.00	0.6000	0.6000
T9	14	WR-VG82ST-BRDA(5/8")	0.00 - 20.00	0.6000	0.6000
T9	16	LDF2-50(3/8")	0.00 - 20.00	0.6000	0.6000
T9	17	T-Brackets (Af)	0.00 - 20.00	0.6000	0.6000
T9	19	LDF5-50A(7/8")	0.00 - 20.00	0.6000	0.6000
T9	20	C4006L-NFNF(1-1/4")	0.00 - 20.00	0.6000	0.6000
T9	22	84080298(3/8")	0.00 - 20.00	0.6000	0.6000
T9	23	Feedline Ladder (Af)	0.00 - 20.00	0.6000	0.6000
T9	25	LDF7-50A(1-5/8")	0.00 - 20.00	0.6000	0.6000
T9	26	LDF7-50A(1-5/8")	0.00 - 20.00	0.6000	0.6000
T9	29	HB114-1-0813U4-M5F(1 1/4")	0.00 - 20.00	0.6000	0.6000
T9	32	LDF4-50A(1/2")	0.00 - 20.00	0.6000	0.6000
T9	33	T-Brackets (Af)	0.00 - 20.00	0.6000	0.6000
T9	35	Thin Flat Bar Climbing Ladder	0.00 - 20.00	0.6000	0.6000
T9	36	Safety Line 3/8	0.00 - 20.00	0.6000	0.6000

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Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _A A _A Front	C _A A _A Side	Weight
			Horz	Lateral Vert					
			ft	ft	°	ft	ft ²	ft ²	K
Lightning Rod 5/8" x 5' (E)	A	From Leg	0.000	0.000	170'	No Ice	0.313	0.313	0.031
			0'			1/2" Ice	0.826	0.826	0.035
			2'6"			1" Ice	1.322	1.322	0.041
						2" Ice	1.957	1.957	0.065
\$RB DB806-XC (E)	C	From Leg	0.000	0.000	170'	No Ice	1.140	1.140	0.021
			0'			1/2" Ice	1.675	1.675	0.030
			4'			1" Ice	2.025	2.025	0.043
						2" Ice	2.753	2.753	0.080
8' x 2.375" Mount Pipe (E-Per Photo)	C	From Leg	0.000	0.000	170'	No Ice	1.900	1.900	0.061
			0'			1/2" Ice	2.728	2.728	0.075
			0'			1" Ice	3.401	3.401	0.095
						2" Ice	4.396	4.396	0.150
\$RB (3) ACU-A20-N (E)	A	From Leg	4.000	0.000	169'	No Ice	0.078	0.136	0.001
			0'			1/2" Ice	0.121	0.189	0.002
			0'			1" Ice	0.173	0.251	0.004
						2" Ice	0.302	0.400	0.012
(3) ACU-A20-N (E)	B	From Leg	4.000	0.000	169'	No Ice	0.078	0.136	0.001
			0'			1/2" Ice	0.121	0.189	0.002
			0'			1" Ice	0.173	0.251	0.004
						2" Ice	0.302	0.400	0.012
DT465B-2XR w/ Mount Pipe (R-Reserved)	A	From Leg	4.000	-59.000	169'	No Ice	9.336	7.634	0.084
			0'			1/2" Ice	9.905	8.820	0.160
			0'			1" Ice	10.439	9.718	0.245
						2" Ice	11.530	11.543	0.442
DT465B-2XR w/ Mount Pipe (R-Reserved)	B	From Leg	4.000	-59.000	169'	No Ice	9.336	7.634	0.084
			0'			1/2" Ice	9.905	8.820	0.160
			0'			1" Ice	10.439	9.718	0.245
						2" Ice	11.530	11.543	0.442
APXVSPP18-C-A20 w/ Mount Pipe (R-Reserved)	A	From Leg	4.000	51.000	169'	No Ice	8.498	6.946	0.083
			0'			1/2" Ice	9.149	8.127	0.151
			0'			1" Ice	9.767	9.021	0.227
						2" Ice	11.031	10.844	0.406
APXVSPP18-C-A20 w/ Mount Pipe (R-Reserved)	B	From Leg	4.000	51.000	169'	No Ice	8.498	6.946	0.083
			0'			1/2" Ice	9.149	8.127	0.151
			0'			1" Ice	9.767	9.021	0.227
						2" Ice	11.031	10.844	0.406
1900MHZ 4X40W RRH (R-Reserved)	A	From Leg	4.000	0.000	169'	No Ice	2.322	2.236	0.060
			0'			1/2" Ice	2.527	2.439	0.083
			0'			1" Ice	2.739	2.648	0.109
						2" Ice	3.185	3.091	0.172
1900MHZ 4X40W RRH (R-Reserved)	B	From Leg	4.000	0.000	169'	No Ice	2.322	2.236	0.060
			0'			1/2" Ice	2.527	2.439	0.083
			0'			1" Ice	2.739	2.648	0.109
						2" Ice	3.185	3.091	0.172
(2) 800MHZ 2X50W RRH W/FILTER (R-Reserved)	A	From Leg	4.000	0.000	169'	No Ice	2.401	2.254	0.064
			0'			1/2" Ice	2.613	2.460	0.086
			0'			1" Ice	2.833	2.675	0.111
						2" Ice	3.300	3.132	0.172
(2) 800MHZ 2X50W RRH W/FILTER (R-Reserved)	B	From Leg	4.000	0.000	169'	No Ice	2.401	2.254	0.064
			0'			1/2" Ice	2.613	2.460	0.086
			0'			1" Ice	2.833	2.675	0.111
						2" Ice	3.300	3.132	0.172

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Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	CAAA Front	CAAA Side	Weight
			Horz	Lateral					
TD-RRH8X20-25 (R-Reserved)	A	From Leg	4.000	0.000	169'	No Ice	4.045	1.535	0.070
			0'	0'		1/2" Ice	4.298	1.714	0.097
			0'	0'		1" Ice	4.557	1.901	0.128
			0'	0'		2" Ice	5.098	2.295	0.201
TD-RRH8X20-25 (R-Reserved)	B	From Leg	4.000	0.000	169'	No Ice	4.045	1.535	0.070
			0'	0'		1/2" Ice	4.298	1.714	0.097
			0'	0'		1" Ice	4.557	1.901	0.128
			0'	0'		2" Ice	5.098	2.295	0.201
(2) 8' x 2" Pipe Mount (E-Empty)	A	From Leg	4.000	0.000	169'	No Ice	1.900	1.900	0.029
			0'	0'		1/2" Ice	2.728	2.728	0.044
			0'	0'		1" Ice	3.401	3.401	0.063
			0'	0'		2" Ice	4.396	4.396	0.119
(2) 8' x 2" Pipe Mount (E-Empty)	B	From Leg	4.000	0.000	169'	No Ice	1.900	1.900	0.029
			0'	0'		1/2" Ice	2.728	2.728	0.044
			0'	0'		1" Ice	3.401	3.401	0.063
			0'	0'		2" Ice	4.396	4.396	0.119
(2) 4' x 2" Pipe Mount (E-End pipes/Photo)	A	From Leg	4.000	0.000	169'	No Ice	0.785	0.785	0.029
			0'	0'		1/2" Ice	1.028	1.028	0.035
			0'	0'		1" Ice	1.281	1.281	0.044
			0'	0'		2" Ice	1.814	1.814	0.072
(2) 4' x 2" Pipe Mount (E-End pipes/Photo)	B	From Leg	4.000	0.000	169'	No Ice	0.785	0.785	0.029
			0'	0'		1/2" Ice	1.028	1.028	0.035
			0'	0'		1" Ice	1.281	1.281	0.044
			0'	0'		2" Ice	1.814	1.814	0.072
5' x 2" Pipe Mount (E-for TME/Photo)	B	From Leg	3.000	0.000	169'	No Ice	1.000	1.000	0.029
			0'	0'		1/2" Ice	1.393	1.393	0.037
			0'	0'		1" Ice	1.703	1.703	0.048
			0'	0'		2" Ice	2.351	2.351	0.082
5' x 2" Pipe Mount (E-for TME/Photo)	B	From Leg	3.000	0.000	169'	No Ice	1.000	1.000	0.029
			0'	0'		1/2" Ice	1.393	1.393	0.037
			0'	0'		1" Ice	1.703	1.703	0.048
			0'	0'		2" Ice	2.351	2.351	0.082
Pipe Mount [PM 601-1] (E-Mount support/Photo)	A	From Leg	0.500	0.000	169'	No Ice	3.000	0.900	0.065
			0'	0'		1/2" Ice	3.740	1.120	0.079
			0'	0'		1" Ice	4.480	1.340	0.093
			0'	0'		2" Ice	5.960	1.780	0.122
Pipe Mount [PM 601-1] (E-Mount support/Photo)	B	From Leg	0.500	0.000	169'	No Ice	3.000	0.900	0.065
			0'	0'		1/2" Ice	3.740	1.120	0.079
			0'	0'		1" Ice	4.480	1.340	0.093
			0'	0'		2" Ice	5.960	1.780	0.122
Sector Mount [SM 514-1] (E)	A	From Leg	2.000	0.000	169'	No Ice	21.260	27.040	0.448
			0'	0'		1/2" Ice	30.390	40.100	0.747
			0'	0'		1" Ice	39.520	53.160	1.046
			0'	0'		2" Ice	57.780	79.280	1.645
Sector Mount [SM 514-1] (E)	B	From Leg	2.000	0.000	169'	No Ice	21.260	27.040	0.448
			0'	0'		1/2" Ice	30.390	40.100	0.747
			0'	0'		1" Ice	39.520	53.160	1.046
			0'	0'		2" Ice	57.780	79.280	1.645
\$RB									
TFC2K (E)	C	From Leg	3.000	0.000	165'	No Ice	11.000	11.000	0.036
			0'	0'		1/2" Ice	19.800	19.800	0.047
			8'	0'		1" Ice	28.600	28.600	0.058
			0'	0'		2" Ice	46.200	46.200	0.079
TFC2K (E)	C	From Leg	3.000	0.000	165'	No Ice	11.000	11.000	0.036
			0'	0'		1/2" Ice	19.800	19.800	0.047
			0'	0'		1" Ice	28.600	28.600	0.058
			0'	0'		2" Ice	46.200	46.200	0.079

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Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	CAAA Front	CAAA Side	Weight
			Horz	Lateral Vert					
			ft	ft	°	ft	ft ²	ft ²	K
15' x 2" Pipe Mount (E-Per Photo)	C	From Leg	2.000	0.000	165'	No Ice	3.563	3.563	0.120
			0'			1/2" Ice	5.091	5.091	0.147
			0'			1" Ice	6.635	6.635	0.183
						2" Ice	9.775	9.775	0.284
Side Arm Mount [SO 203-1] (E)	C	From Leg	1.500	0.000	165'	No Ice	2.960	3.360	0.125
			0'			1/2" Ice	4.100	4.680	0.154
			0'			1" Ice	5.240	6.000	0.182
						2" Ice	7.520	8.640	0.239
\$RB									
(2) P65.15.XL.0 w/ Mount Pipe (E)	B	From Leg	4.000	0.000	151'	No Ice	5.304	3.665	0.040
			0'			1/2" Ice	5.692	4.278	0.084
			0'			1" Ice	6.087	4.902	0.134
						2" Ice	6.903	6.188	0.254
(2) P65.15.XL.0 w/ Mount Pipe (E)	C	From Leg	4.000	0.000	151'	No Ice	5.304	3.665	0.040
			0'			1/2" Ice	5.692	4.278	0.084
			0'			1" Ice	6.087	4.902	0.134
						2" Ice	6.903	6.188	0.254
Pipe Mount [PM 601-1] (E-Mount support/Photo)	B	From Leg	0.500	0.000	151'	No Ice	3.000	0.900	0.065
			0'			1/2" Ice	3.740	1.120	0.079
			0'			1" Ice	4.480	1.340	0.093
						2" Ice	5.960	1.780	0.122
Pipe Mount [PM 601-1] (E-Mount support/Photo)	C	From Leg	0.500	0.000	151'	No Ice	3.000	0.900	0.065
			0'			1/2" Ice	3.740	1.120	0.079
			0'			1" Ice	4.480	1.340	0.093
						2" Ice	5.960	1.780	0.122
Sector Mount [SM 602-1] (E)	B	From Leg	2.000	0.000	151'	No Ice	18.810	10.620	0.513
			0'			1/2" Ice	24.750	15.160	0.720
			0'			1" Ice	30.690	19.700	0.926
						2" Ice	42.570	28.780	1.338
Sector Mount [SM 602-1] (E)	C	From Leg	2.000	0.000	151'	No Ice	18.810	10.620	0.513
			0'			1/2" Ice	24.750	15.160	0.720
			0'			1" Ice	30.690	19.700	0.926
						2" Ice	42.570	28.780	1.338
\$RB									
800 10122 w/ Mount Pipe (E)	A	From Leg	4.000	0.000	145'	No Ice	7.855	6.653	0.086
			0'			1/2" Ice	8.462	7.876	0.150
			0'			1" Ice	9.099	8.848	0.222
						2" Ice	10.388	10.731	0.394
800 10122 w/ Mount Pipe (E)	B	From Leg	4.000	0.000	145'	No Ice	7.855	6.653	0.086
			0'			1/2" Ice	8.462	7.876	0.150
			0'			1" Ice	9.099	8.848	0.222
						2" Ice	10.388	10.731	0.394
800 10122 w/ Mount Pipe (E)	C	From Leg	4.000	0.000	145'	No Ice	7.855	6.653	0.086
			0'			1/2" Ice	8.462	7.876	0.150
			0'			1" Ice	9.099	8.848	0.222
						2" Ice	10.388	10.731	0.394
AM-X-CD-16-65-00T-RET w/ Mount Pipe (E)	A	From Leg	4.000	0.000	145'	No Ice	8.498	6.304	0.074
			0'			1/2" Ice	9.149	7.479	0.139
			0'			1" Ice	9.767	8.368	0.212
						2" Ice	11.031	10.179	0.385
AM-X-CD-16-65-00T-RET w/ Mount Pipe (E)	B	From Leg	4.000	0.000	145'	No Ice	8.498	6.304	0.074
			0'			1/2" Ice	9.149	7.479	0.139
			0'			1" Ice	9.767	8.368	0.212
						2" Ice	11.031	10.179	0.385
AM-X-CD-16-65-00T-RET w/ Mount Pipe (E)	C	From Leg	4.000	0.000	145'	No Ice	8.498	6.304	0.074
			0'			1/2" Ice	9.149	7.479	0.139
			0'			1" Ice	9.767	8.368	0.212

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Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	CAAA Front	CAAA Side	Weight
			Horz	Lateral					
(2) LGP21401 (E)	A	From Leg	4.000	0.000	145'	2" Ice	11.031	10.179	0.385
						No Ice	1.288	0.233	0.014
						1/2" Ice	1.445	0.313	0.021
						1" Ice	1.611	0.403	0.030
(2) LGP21401 (E)	B	From Leg	4.000	0.000	145'	2" Ice	1.969	0.608	0.055
						No Ice	1.288	0.233	0.014
						1/2" Ice	1.445	0.313	0.021
						1" Ice	1.611	0.403	0.030
(2) LGP21401 (E)	C	From Leg	4.000	0.000	145'	2" Ice	1.969	0.608	0.055
						No Ice	1.288	0.233	0.014
						1/2" Ice	1.445	0.313	0.021
						1" Ice	1.611	0.403	0.030
(4) 860 10025 (E)	A	From Leg	4.000	0.000	145'	2" Ice	1.969	0.608	0.055
						No Ice	0.163	0.136	0.001
						1/2" Ice	0.229	0.199	0.003
						1" Ice	0.302	0.270	0.005
(4) 860 10025 (E)	B	From Leg	4.000	0.000	145'	2" Ice	0.476	0.439	0.014
						No Ice	0.163	0.136	0.001
						1/2" Ice	0.229	0.199	0.003
						1" Ice	0.302	0.270	0.005
(4) 860 10025 (E)	C	From Leg	4.000	0.000	145'	2" Ice	0.476	0.439	0.014
						No Ice	0.163	0.136	0.001
						1/2" Ice	0.229	0.199	0.003
						1" Ice	0.302	0.270	0.005
(2) RRUS 11 (E)	A	From Leg	4.000	0.000	145'	2" Ice	0.476	0.439	0.014
						No Ice	3.249	1.373	0.048
						1/2" Ice	3.491	1.551	0.068
						1" Ice	3.741	1.738	0.092
(2) RRUS 11 (E)	B	From Leg	4.000	0.000	145'	2" Ice	4.268	2.138	0.150
						No Ice	3.249	1.373	0.048
						1/2" Ice	3.491	1.551	0.068
						1" Ice	3.741	1.738	0.092
(2) RRUS 11 (E)	C	From Leg	4.000	0.000	145'	2" Ice	4.268	2.138	0.150
						No Ice	3.249	1.373	0.048
						1/2" Ice	3.491	1.551	0.068
						1" Ice	3.741	1.738	0.092
DC6-48-60-18-8F (E)	A	From Leg	4.000	0.000	145'	2" Ice	4.268	2.138	0.150
						No Ice	1.910	1.910	0.033
						1/2" Ice	2.150	2.150	0.055
						1" Ice	2.401	2.401	0.080
QS66512-2 (R-Area per mail)	A	From Leg	4.000	0.000	145'	2" Ice	2.938	2.938	0.138
						No Ice	8.400	6.800	0.111
						1/2" Ice	8.949	7.267	0.168
						1" Ice	9.506	7.795	0.232
QS66512-2 (R-Area per mail)	B	From Leg	4.000	0.000	145'	2" Ice	10.647	8.905	0.378
						No Ice	8.400	6.800	0.111
						1/2" Ice	8.949	7.267	0.168
						1" Ice	9.506	7.795	0.232
QS66512-2 (R-Area per mail)	C	From Leg	4.000	0.000	145'	2" Ice	10.647	8.905	0.378
						No Ice	8.400	6.800	0.111
						1/2" Ice	8.949	7.267	0.168
						1" Ice	9.506	7.795	0.232
DC6-48-60-18-8F (R-Reserved)	A	From Leg	4.000	0.000	145'	2" Ice	10.647	8.905	0.378
						No Ice	1.910	1.910	0.033
						1/2" Ice	2.150	2.150	0.055
						1" Ice	2.401	2.401	0.080
						2" Ice	2.938	2.938	0.138

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Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	CAAA Front	CAAA Side	Weight
			Horz	Lateral					
RRUS 32 B66 (R-Reserved)	A	From Leg	4.000	0.000	145'	No Ice	3.200	1.851	0.053
			0'	0'		1/2" Ice	3.459	2.077	0.074
			0'	0'		1" Ice	3.727	2.312	0.098
			0'	0'		2" Ice	4.288	2.807	0.157
RRUS 32 B66 (R-Reserved)	B	From Leg	4.000	0.000	145'	No Ice	3.200	1.851	0.053
			0'	0'		1/2" Ice	3.459	2.077	0.074
			0'	0'		1" Ice	3.727	2.312	0.098
			0'	0'		2" Ice	4.288	2.807	0.157
RRUS 32 B66 (R-Reserved)	C	From Leg	4.000	0.000	145'	No Ice	3.200	1.851	0.053
			0'	0'		1/2" Ice	3.459	2.077	0.074
			0'	0'		1" Ice	3.727	2.312	0.098
			0'	0'		2" Ice	4.288	2.807	0.157
RRUS 32 (R-Reserved)	A	From Leg	4.000	0.000	145'	No Ice	3.333	1.983	0.055
			0'	0'		1/2" Ice	3.597	2.214	0.077
			0'	0'		1" Ice	3.869	2.453	0.103
			0'	0'		2" Ice	4.439	2.958	0.165
RRUS 32 (R-Reserved)	B	From Leg	4.000	0.000	145'	No Ice	3.333	1.983	0.055
			0'	0'		1/2" Ice	3.597	2.214	0.077
			0'	0'		1" Ice	3.869	2.453	0.103
			0'	0'		2" Ice	4.439	2.958	0.165
RRUS 32 (R-Reserved)	C	From Leg	4.000	0.000	145'	No Ice	3.333	1.983	0.055
			0'	0'		1/2" Ice	3.597	2.214	0.077
			0'	0'		1" Ice	3.869	2.453	0.103
			0'	0'		2" Ice	4.439	2.958	0.165
(2) DBC0061F1V51-2 (R-Reserved)	A	From Leg	4.000	0.000	145'	No Ice	0.413	0.433	0.025
			0'	0'		1/2" Ice	0.496	0.518	0.031
			0'	0'		1" Ice	0.586	0.609	0.038
			0'	0'		2" Ice	0.788	0.815	0.057
(2) DBC0061F1V51-2 (R-Reserved)	B	From Leg	4.000	0.000	145'	No Ice	0.413	0.433	0.025
			0'	0'		1/2" Ice	0.496	0.518	0.031
			0'	0'		1" Ice	0.586	0.609	0.038
			0'	0'		2" Ice	0.788	0.815	0.057
(2) DBC0061F1V51-2 (R-Reserved)	C	From Leg	4.000	0.000	145'	No Ice	0.413	0.433	0.025
			0'	0'		1/2" Ice	0.496	0.518	0.031
			0'	0'		1" Ice	0.586	0.609	0.038
			0'	0'		2" Ice	0.788	0.815	0.057
(2) 8' x 2" Pipe Mount (E-Empty+Quintel)	A	From Leg	4.000	0.000	145'	No Ice	1.900	1.900	0.029
			0'	0'		1/2" Ice	2.728	2.728	0.044
			0'	0'		1" Ice	3.401	3.401	0.063
			0'	0'		2" Ice	4.396	4.396	0.119
(2) 8' x 2" Pipe Mount (E-Empty+Quintel)	B	From Leg	4.000	0.000	145'	No Ice	1.900	1.900	0.029
			0'	0'		1/2" Ice	2.728	2.728	0.044
			0'	0'		1" Ice	3.401	3.401	0.063
			0'	0'		2" Ice	4.396	4.396	0.119
(2) 8' x 2" Pipe Mount (E-Empty+Quintel)	C	From Leg	4.000	0.000	145'	No Ice	1.900	1.900	0.029
			0'	0'		1/2" Ice	2.728	2.728	0.044
			0'	0'		1" Ice	3.401	3.401	0.063
			0'	0'		2" Ice	4.396	4.396	0.119
Pipe Mount [PM 601-3] (E-Mount support/Photo)	C	None		0.000	145'	No Ice	4.390	4.390	0.195
						1/2" Ice	5.480	5.480	0.237
						1" Ice	6.570	6.570	0.280
						2" Ice	8.750	8.750	0.365
Sector Mount [SM 702-3] (E-14' mount)	C	None		0.000	145'	No Ice	37.400	37.400	1.551
						1/2" Ice	54.200	54.200	2.352
						1" Ice	71.000	71.000	3.153
						2" Ice	104.600	104.600	4.755

\$RB

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Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	CAAA Front	CAAA Side	Weight
			Horz	Lateral Vert					
\$RB									
LNX-6514DS-A1M w/ Mount Pipe (E)	A	From Leg	4.000	0.000	130'	No Ice	8.411	7.082	0.065
						1/2" Ice	8.975	8.273	0.134
						1" Ice	9.505	9.185	0.211
						2" Ice	10.585	11.023	0.393
LNX-6514DS-A1M w/ Mount Pipe (E)	B	From Leg	4.000	0.000	130'	No Ice	8.411	7.082	0.065
						1/2" Ice	8.975	8.273	0.134
						1" Ice	9.505	9.185	0.211
						2" Ice	10.585	11.023	0.393
LNX-6514DS-A1M w/ Mount Pipe (E)	C	From Leg	4.000	0.000	130'	No Ice	8.411	7.082	0.065
						1/2" Ice	8.975	8.273	0.134
						1" Ice	9.505	9.185	0.211
						2" Ice	10.585	11.023	0.393
X7C-665-2 w/ Mount Pipe (E)	A	From Leg	4.000	0.000	130'	No Ice	8.988	6.946	0.053
						1/2" Ice	9.644	8.127	0.123
						1" Ice	10.266	9.021	0.201
						2" Ice	11.539	10.844	0.384
X7C-665-2 w/ Mount Pipe (E)	B	From Leg	4.000	0.000	130'	No Ice	8.988	6.946	0.053
						1/2" Ice	9.644	8.127	0.123
						1" Ice	10.266	9.021	0.201
						2" Ice	11.539	10.844	0.384
X7C-680-2 w/ Mount Pipe (E)	C	From Leg	4.000	0.000	130'	No Ice	8.988	7.296	0.055
						1/2" Ice	9.644	8.480	0.126
						1" Ice	10.266	9.378	0.206
						2" Ice	11.539	11.207	0.393
HBXX-6516DS-A2M w/ Mount Pipe (E)	A	From Leg	4.000	0.000	130'	No Ice	5.656	4.525	0.050
						1/2" Ice	6.064	5.205	0.099
						1" Ice	6.475	5.857	0.154
						2" Ice	7.322	7.198	0.287
HBXX-6516DS-A2M w/ Mount Pipe (E)	B	From Leg	4.000	0.000	130'	No Ice	5.656	4.525	0.050
						1/2" Ice	6.064	5.205	0.099
						1" Ice	6.475	5.857	0.154
						2" Ice	7.322	7.198	0.287
HBXX-6516DS-A2M w/ Mount Pipe (E)	C	From Leg	4.000	0.000	130'	No Ice	5.656	4.525	0.050
						1/2" Ice	6.064	5.205	0.099
						1" Ice	6.475	5.857	0.154
						2" Ice	7.322	7.198	0.287
SBNHH-1D65B w/ Mount Pipe (E)	A	From Leg	4.000	0.000	130'	No Ice	8.637	7.071	0.066
						1/2" Ice	9.293	8.260	0.135
						1" Ice	9.917	9.170	0.212
						2" Ice	11.190	11.006	0.394
SBNHH-1D65B w/ Mount Pipe (E)	B	From Leg	4.000	0.000	130'	No Ice	8.637	7.071	0.066
						1/2" Ice	9.293	8.260	0.135
						1" Ice	9.917	9.170	0.212
						2" Ice	11.190	11.006	0.394
SBNHH-1D65B w/ Mount Pipe (E)	C	From Leg	4.000	0.000	130'	No Ice	8.637	7.071	0.066
						1/2" Ice	9.293	8.260	0.135
						1" Ice	9.917	9.170	0.212
						2" Ice	11.190	11.006	0.394
DB-B1-6C-12AB-0Z (E)	A	From Leg	4.000	0.000	130'	No Ice	3.924	2.557	0.021
						1/2" Ice	4.197	2.794	0.050
						1" Ice	4.478	3.040	0.082
						2" Ice	5.066	3.557	0.158
DB-B1-6C-12AB-0Z (E)	C	From Leg	4.000	0.000	130'	No Ice	3.924	2.557	0.021
						1/2" Ice	4.197	2.794	0.050
						1" Ice	4.478	3.040	0.082
						2" Ice	5.066	3.557	0.158

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Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	CAAA Front	CAAA Side	Weight
			Horz	Lateral					
RRH2X60-AWS (E)	A	From Leg	4.000	0.000	130'	No Ice	3.957	1.816	0.060
			0'			1/2" Ice	4.272	2.075	0.083
			1'			1" Ice	4.596	2.360	0.109
						2" Ice	5.271	2.957	0.173
						No Ice	3.957	1.816	0.060
RRH2X60-AWS (E)	B	From Leg	4.000	0.000	130'	No Ice	3.957	1.816	0.060
			0'			1/2" Ice	4.272	2.075	0.083
			1'			1" Ice	4.596	2.360	0.109
						2" Ice	5.271	2.957	0.173
						No Ice	3.957	1.816	0.060
RRH2X60-AWS (E)	C	From Leg	4.000	0.000	130'	No Ice	3.957	1.816	0.060
			0'			1/2" Ice	4.272	2.075	0.083
			1'			1" Ice	4.596	2.360	0.109
						2" Ice	5.271	2.957	0.173
						No Ice	3.957	1.816	0.060
5' x 2" Pipe Mount (E-for TME/Photo)	A	From Leg	4.000	0.000	130'	No Ice	1.000	1.000	0.029
			0'			1/2" Ice	1.393	1.393	0.037
			0'			1" Ice	1.703	1.703	0.048
						2" Ice	2.351	2.351	0.082
						No Ice	1.000	1.000	0.029
5' x 2" Pipe Mount (E-for TME/Photo)	B	From Leg	4.000	0.000	130'	No Ice	1.000	1.000	0.029
			0'			1/2" Ice	1.393	1.393	0.037
			0'			1" Ice	1.703	1.703	0.048
						2" Ice	2.351	2.351	0.082
						No Ice	1.000	1.000	0.029
5' x 2" Pipe Mount (E-for TME/Photo)	C	From Leg	4.000	0.000	130'	No Ice	1.000	1.000	0.029
			0'			1/2" Ice	1.393	1.393	0.037
			0'			1" Ice	1.703	1.703	0.048
						2" Ice	2.351	2.351	0.082
						No Ice	1.000	1.000	0.029
Pipe Mount [PM 601-3] (E-Mount support/Photo)	C	None		0.000	130'	No Ice	4.390	4.390	0.195
						1/2" Ice	5.480	5.480	0.237
						1" Ice	6.570	6.570	0.280
						2" Ice	8.750	8.750	0.365
						No Ice	37.400	37.400	1.551
Sector Mount [SM 702-3] (E)	C	None		0.000	130'	No Ice	37.400	37.400	1.551
						1/2" Ice	54.200	54.200	2.352
						1" Ice	71.000	71.000	3.153
						2" Ice	104.600	104.600	4.755
						No Ice	37.400	37.400	1.551
SRB									
ANT150F2 (E)	A	From Face	4.000	0.000	104'	No Ice	1.227	1.227	0.013
			0'			1/2" Ice	1.530	1.530	0.022
			2'			1" Ice	1.842	1.842	0.035
						2" Ice	2.494	2.494	0.072
						No Ice	3.960	3.960	0.041
AO8610-5T0 (E)	A	From Face	4.000	0.000	104'	No Ice	3.960	3.960	0.041
			0'			1/2" Ice	5.638	5.638	0.071
			8'			1" Ice	7.333	7.333	0.111
						2" Ice	10.773	10.773	0.223
						No Ice	0.314	0.314	0.004
K751221 (E)	A	From Face	4.000	0.000	104'	No Ice	0.314	0.314	0.004
			0'			1/2" Ice	0.445	0.445	0.008
			3'			1" Ice	0.585	0.585	0.013
						2" Ice	0.894	0.894	0.028
						No Ice	1.000	1.000	0.059
SRL-210C-4 (E)	B	From Face	4.000	0.000	104'	No Ice	1.000	1.000	0.059
			0'			1/2" Ice	1.800	1.800	0.077
			10'			1" Ice	2.600	2.600	0.094
						2" Ice	4.200	4.200	0.130
						No Ice	4.800	4.800	0.030
ANT150F6 (E)	B	From Face	4.000	0.000	104'	No Ice	4.800	4.800	0.030
			0'			1/2" Ice	6.828	6.828	0.066
			12'			1" Ice	8.873	8.873	0.114
						2" Ice	13.013	13.013	0.249
						No Ice	6.050	6.050	0.023
PD220-5 (E)	B	From Face	4.000	0.000	104'	No Ice	6.050	6.050	0.023
			0'			1/2" Ice	8.281	8.281	0.067
			13'			1" Ice	10.529	10.529	0.125
						2" Ice	15.075	15.075	0.283
						No Ice	6.050	6.050	0.023

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Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	CAAA Front	CAAA Side	Weight
			Horz	Lateral					
AO8610-5T0 (E)	C	From Face	4.000	0' 8"	0.000	104'	No Ice 3.960 1/2" Ice 5.638 1" Ice 7.333 2" Ice 10.773	3.960 5.638 7.333 10.773	0.041 0.071 0.111 0.223
10191 (E)	C	From Face	4.000	0' 2"	0.000	104'	No Ice 0.640 1/2" Ice 0.941 1" Ice 1.191 2" Ice 1.720	0.640 0.941 1.191 1.720	0.005 0.010 0.018 0.043
DB540K-F (E)	C	From Face	4.000	0' 9"	0.000	104'	No Ice 4.500 1/2" Ice 6.329 1" Ice 8.175 2" Ice 11.917	4.500 6.329 8.175 11.917	0.066 0.099 0.144 0.268
(4) 6' x 2" Mount Pipe (E-Per Photo)	A	From Face	4.000	0' 0"	0.000	104'	No Ice 1.425 1/2" Ice 1.925 1" Ice 2.294 2" Ice 3.060	1.425 1.925 2.294 3.060	0.022 0.033 0.048 0.090
(4) 6' x 2" Mount Pipe (E-Per Photo)	B	From Face	4.000	0' 0"	0.000	104'	No Ice 1.425 1/2" Ice 1.925 1" Ice 2.294 2" Ice 3.060	1.425 1.925 2.294 3.060	0.022 0.033 0.048 0.090
(4) 6' x 2" Mount Pipe (E-Per Photo)	C	From Face	4.000	0' 0"	0.000	104'	No Ice 1.425 1/2" Ice 1.925 1" Ice 2.294 2" Ice 3.060	1.425 1.925 2.294 3.060	0.022 0.033 0.048 0.090
6' x 2.375" Mount Pipe (E-For Dish)	C	From Face	4.000	0' 0"	0.000	104'	No Ice 1.425 1/2" Ice 1.925 1" Ice 2.294 2" Ice 3.060	1.425 1.925 2.294 3.060	0.041 0.051 0.066 0.109
6' x 2.375" Mount Pipe (E-For Dish)	A	From Face	4.000	0' 0"	0.000	104'	No Ice 1.425 1/2" Ice 1.925 1" Ice 2.294 2" Ice 3.060	1.425 1.925 2.294 3.060	0.041 0.051 0.066 0.109
Sabre 30' Specialty Platform (E)	C	None			0.000	104'	No Ice 75.000 1/2" Ice 87.000 1" Ice 99.000 2" Ice 123.000	75.000 87.000 99.000 123.000	3.020 3.620 4.220 5.420
\$RB									
ERICSSON AIR 21 B4A B2P (E-Installed)	A	From Leg	4.000	0' 1"	0.000	96'	No Ice 6.588 1/2" Ice 7.033 1" Ice 7.488 2" Ice 8.422	4.297 4.703 5.130 6.010	0.092 0.133 0.180 0.290
ERICSSON AIR 21 B4A B2P (E-Installed)	B	From Leg	4.000	0' 1"	0.000	96'	No Ice 6.588 1/2" Ice 7.033 1" Ice 7.488 2" Ice 8.422	4.297 4.703 5.130 6.010	0.092 0.133 0.180 0.290
ERICSSON AIR 21 B4A B2P (E-Installed)	C	From Leg	4.000	0' 1"	0.000	96'	No Ice 6.588 1/2" Ice 7.033 1" Ice 7.488 2" Ice 8.422	4.297 4.703 5.130 6.010	0.092 0.133 0.180 0.290
RRUS 11 B2 (E-Installed)	A	From Leg	4.000	0' 1"	0.000	96'	No Ice 2.833 1/2" Ice 3.043 1" Ice 3.259 2" Ice 3.715	1.182 1.330 1.485 1.826	0.051 0.072 0.095 0.153
RRUS 11 B2 (E-Installed)	B	From Leg	4.000	0' 1"	0.000	96'	No Ice 2.833 1/2" Ice 3.043 1" Ice 3.259 2" Ice 3.715	1.182 1.330 1.485 1.826	0.051 0.072 0.095 0.153

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Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft	Aperture Area ft ²	Weight K
Andrew PAR6-59A (E)	C	Paraboloid w/Radome	From Leg	0.500 0' -1'	11.000		139'	6.000	No Ice 28.274 1/2" Ice 29.065 1" Ice 29.856 2" Ice 31.438	0.143 0.292 0.441 0.740
SRB										
COMMSCOPE VHLPX4-11W-6WH (E-face per photo)	C	Paraboloid w/Shroud (HP)	From Face	4.000 0' 2'	-19.000		104'	4.108	No Ice 13.256 1/2" Ice 13.800 1" Ice 14.343 2" Ice 15.429	0.088 0.159 0.230 0.371
COMMSCOPE VHLPX4-11W-6WH (E-face per photo)	A	Paraboloid w/Shroud (HP)	From Face	4.000 0' 2'	1.000		104'	4.108	No Ice 13.256 1/2" Ice 13.800 1" Ice 14.343 2" Ice 15.429	0.088 0.159 0.230 0.371
SRB										
PR-950 (E)	C	Grid	From Leg	1.500 0' 0'	1.000		87'	5.667	No Ice 25.220 1/2" Ice 25.967 1" Ice 26.714 2" Ice 28.209	0.038 0.171 0.305 0.571
SRB										

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice
6	1.2 Dead+1.0 Wind 60 deg - No Ice
7	0.9 Dead+1.0 Wind 60 deg - No Ice
8	1.2 Dead+1.0 Wind 90 deg - No Ice
9	0.9 Dead+1.0 Wind 90 deg - No Ice
10	1.2 Dead+1.0 Wind 120 deg - No Ice
11	0.9 Dead+1.0 Wind 120 deg - No Ice
12	1.2 Dead+1.0 Wind 150 deg - No Ice
13	0.9 Dead+1.0 Wind 150 deg - No Ice
14	1.2 Dead+1.0 Wind 180 deg - No Ice
15	0.9 Dead+1.0 Wind 180 deg - No Ice
16	1.2 Dead+1.0 Wind 210 deg - No Ice
17	0.9 Dead+1.0 Wind 210 deg - No Ice
18	1.2 Dead+1.0 Wind 240 deg - No Ice
19	0.9 Dead+1.0 Wind 240 deg - No Ice
20	1.2 Dead+1.0 Wind 270 deg - No Ice
21	0.9 Dead+1.0 Wind 270 deg - No Ice
22	1.2 Dead+1.0 Wind 300 deg - No Ice
23	0.9 Dead+1.0 Wind 300 deg - No Ice
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp

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Comb. No.	Description
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T1	170 - 160	Leg	Max Tension	7	5.932	0.136	0.035
			Max. Compression	10	-8.195	-0.114	-0.094
			Max. Mx	22	-0.366	1.470	-0.340
			Max. My	3	-0.612	-0.284	2.238
			Max. Vy	22	-1.528	0.000	0.000
			Max. Vx	3	-2.246	0.000	0.000
		Diagonal	Max Tension	12	4.052	0.000	0.000
			Max. Compression	24	-4.040	0.000	0.000
			Max. Mx	30	0.377	0.041	-0.005
			Max. My	24	0.093	0.014	-0.006
			Max. Vy	30	0.039	0.041	-0.005
			Max. Vx	38	0.002	0.000	0.000
		Top Girt	Max Tension	3	0.389	0.000	0.000
			Max. Compression	14	-0.448	0.000	0.000
			Max. Mx	26	-0.080	-0.105	0.000
			Max. My	26	-0.076	0.000	0.003
Max. Vy	26		0.052	0.000	0.000		
Max. Vx	26		-0.002	0.000	0.000		
T2	160 - 140	Leg	Max Tension	7	27.002	-1.492	-0.170
			Max. Compression	10	-35.238	0.874	0.026
			Max. Mx	14	25.884	1.535	0.004
			Max. My	20	-4.220	-0.056	1.633
			Max. Vy	22	-1.810	-1.518	0.178
			Max. Vx	20	-1.690	-0.037	-1.159
		Diagonal	Max Tension	24	6.964	0.000	0.000
			Max. Compression	24	-7.114	0.000	0.000
			Max. Mx	30	1.626	0.086	0.010
			Max. My	2	-6.759	0.025	-0.013
			Max. Vy	29	0.067	0.086	0.010
			Max. Vx	36	-0.004	0.000	0.000
T3	140 - 120	Leg	Max Tension	7	66.146	-1.266	0.022
			Max. Compression	10	-82.613	0.475	-0.046

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft		
T4	120 - 100	Diagonal	Max. Mx	14	48.084	2.117	0.004		
			Max. My	20	-6.603	-0.091	2.158		
			Max. Vy	14	1.074	-1.306	0.004		
			Max. Vx	21	1.108	-0.070	-1.403		
			Max Tension	8	10.577	0.000	0.000		
			Max. Compression	8	-10.677	0.000	0.000		
			Max. Mx	31	1.953	0.139	-0.017		
			Max. My	36	-2.702	0.117	0.017		
			Max. Vy	29	0.090	0.133	0.016		
		Leg	Max. Vx	36	-0.005	0.000	0.000		
			Max Tension	7	110.811	-1.175	-0.005		
			Max. Compression	10	-137.862	3.807	-0.015		
			Max. Mx	11	-134.710	3.820	-0.016		
			Max. My	12	-10.652	-0.079	-3.314		
			Max. Vy	22	1.247	-3.784	0.010		
			Max. Vx	24	1.307	-0.008	1.108		
			Max Tension	8	12.274	0.000	0.000		
			Max. Compression	8	-12.421	0.000	0.000		
T5	100 - 80	Diagonal	Max. Mx	33	2.046	0.192	0.023		
			Max. My	30	-2.992	0.174	-0.025		
			Max. Vy	33	0.118	0.192	0.023		
			Max. Vx	30	0.006	0.000	0.000		
			Max Tension	23	160.202	-1.981	0.092		
			Max. Compression	10	-196.730	3.154	-0.197		
			Max. Mx	11	-158.852	3.820	-0.016		
			Max. My	12	-11.132	-0.079	-3.314		
			Max. Vy	14	-1.103	-3.802	0.059		
		Leg	Max. Vx	9	0.938	-0.074	3.219		
			Max Tension	8	16.839	0.000	0.000		
			Max. Compression	8	-16.963	0.000	0.000		
			Max. Mx	31	3.486	0.402	0.047		
			Max. My	31	2.635	0.364	-0.048		
			Max. Vy	33	0.187	0.378	-0.048		
			Max. Vx	31	0.010	0.000	0.000		
			Max Tension	15	215.155	-2.818	-0.011		
			Max. Compression	10	-261.799	3.814	-0.025		
T6	80 - 60	Diagonal	Max. Mx	10	-261.799	3.814	-0.025		
			Max. My	12	-18.478	0.010	-3.689		
			Max. Vy	3	-0.342	3.777	0.024		
			Max. Vx	12	0.563	-0.191	-3.233		
			Max Tension	4	17.811	0.000	0.000		
			Max. Compression	4	-18.009	0.000	0.000		
			Max. Mx	31	3.431	0.525	-0.063		
			Max. My	37	-3.925	0.452	0.064		
			Max. Vy	33	0.234	0.513	-0.063		
		Leg	Max. Vx	37	-0.012	0.000	0.000		
			Max Tension	15	269.128	-5.252	0.005		
			Max. Compression	10	-326.454	6.185	-0.008		
			Max. Mx	10	-326.454	6.185	-0.008		
			Max. My	12	-22.008	-0.180	-5.072		
			Max. Vy	22	0.457	-5.283	0.045		
			Max. Vx	12	0.429	-0.180	-5.072		
			Max Tension	24	19.007	0.000	0.000		
			Max. Compression	24	-19.285	0.000	0.000		
T7	60 - 40	Diagonal	Max. Mx	33	2.654	0.601	-0.073		
			Max. My	37	-4.320	0.552	0.074		
			Max. Vy	33	0.255	0.601	-0.073		
			Max. Vx	37	-0.013	0.000	0.000		
			Max Tension	15	321.447	-7.078	0.023		
			Max. Compression	10	-390.333	1.427	0.314		
			Max. Mx	14	288.287	-7.135	0.021		
			Leg	Max. My	12	-22.008	-0.180	-5.072	
				Max. Vy	22	0.457	-5.283	0.045	
		Max. Vx		12	0.429	-0.180	-5.072		
		Max Tension		24	19.007	0.000	0.000		
		Max. Compression		24	-19.285	0.000	0.000		
		Max. Mx		33	2.654	0.601	-0.073		
		Max. My		37	-4.320	0.552	0.074		
		Max. Vy		33	0.255	0.601	-0.073		
		Max. Vx		37	-0.013	0.000	0.000		
		T8	40 - 20	Leg	Max Tension	15	321.447	-7.078	0.023
					Max. Compression	10	-390.333	1.427	0.314
Max. Mx	14				288.287	-7.135	0.021		

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft	
T9	20 - 0	Diagonal	Max. My	12	-25.848	-0.273	-9.616	
			Max. Vy	2	0.824	7.046	0.015	
			Max. Vx	12	0.751	-0.273	-9.616	
			Max Tension	24	20.585	0.000	0.000	
			Max. Compression	24	-20.899	0.000	0.000	
			Max. Mx	33	2.784	0.702	0.084	
			Max. My	32	3.112	0.702	-0.086	
			Max. Vy	33	0.274	0.702	0.084	
			Max. Vx	32	0.014	0.000	0.000	
			Max Tension	15	357.005	0.281	-0.058	
			Max. Compression	2	-435.845	0.000	0.000	
			Max. Mx	10	-435.484	18.070	0.276	
		Max. My	12	-30.302	-1.919	-9.205		
		Max. Vy	10	-4.466	18.070	0.276		
		Max. Vx	12	-2.241	-1.919	-9.205		
		Diagonal	Max Tension	25	26.061	0.012	0.021	
			Max. Compression	12	-27.826	0.000	0.000	
			Max. Mx	12	-13.369	0.339	-0.029	
			Max. My	37	-0.917	0.145	0.045	
			Max. Vy	30	-0.141	0.219	0.045	
			Max. Vx	27	0.010	0.000	0.000	
			Horizontal	Max Tension	25	19.533	0.000	0.000
				Max. Compression	2	-19.745	-0.286	-0.042
				Max. Mx	33	0.351	-0.451	-0.003
				Max. My	2	2.612	-0.227	0.106
				Max. Vy	33	-0.192	-0.411	-0.015
				Max. Vx	2	0.011	-0.227	0.106
		Redund Horz 1 Bracing	Max Tension	2	7.647	0.000	0.000	
			Max. Compression	2	-7.565	0.000	0.000	
			Max. Mx	26	1.213	-0.068	0.000	
			Max. My	26	1.293	0.000	0.002	
			Max. Vy	26	-0.045	0.000	0.000	
			Max. Vx	26	-0.001	0.000	0.000	
		Redund Diag 1 Bracing	Max Tension	2	4.891	0.000	0.000	
			Max. Compression	2	-4.891	0.000	0.000	
			Max. Mx	26	1.455	-0.074	0.000	
Max. My	26		1.506	0.000	-0.003			
Max. Vy	26		-0.039	0.000	0.000			
Max. Vx	26		0.001	0.000	0.000			
Inner Bracing	Max Tension	3	0.010	0.000	0.000			
	Max. Compression	14	-0.030	0.000	0.000			
	Max. Mx	26	-0.019	-0.218	0.000			
	Max. Vy	26	0.073	0.000	0.000			

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Leg C	Max. Vert	18	451.104	48.447	-27.972
	Max. H _x	18	451.104	48.447	-27.972
	Max. H _z	5	-324.135	-34.594	25.695
	Min. Vert	7	-366.298	-41.410	23.876
	Min. H _x	7	-366.298	-41.410	23.876
	Min. H _z	16	388.868	39.066	-28.191

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Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Leg B	Max. Vert	10	468.688	-51.303	-28.759
	Max. H _x	23	-380.632	43.897	24.545
	Max. H _z	25	-338.870	37.260	26.435
	Min. Vert	23	-380.632	43.897	24.545
	Min. H _x	10	468.688	-51.303	-28.759
Leg A	Min. H _z	12	406.383	-42.000	-29.126
	Max. Vert	2	469.395	-0.640	59.476
	Max. H _x	21	29.175	8.832	2.498
	Max. H _z	2	469.395	-0.640	59.476
	Min. Vert	15	-384.503	0.596	-51.070
	Min. H _x	8	34.545	-8.860	2.771
	Min. H _z	15	-384.503	0.596	-51.070

Tower Mast Reaction Summary

Load Combination	Vertical K	Shear _x K	Shear _z K	Overturning Moment, M _x kip-ft	Overturning Moment, M _z kip-ft	Torque kip-ft
Dead Only	93.521	0.000	-0.000	18.775	5.878	0.000
1.2 Dead+1.0 Wind 0 deg - No Ice	112.225	-0.161	-100.173	-9352.784	14.424	-28.404
0.9 Dead+1.0 Wind 0 deg - No Ice	84.169	-0.161	-100.173	-9358.416	12.661	-28.404
1.2 Dead+1.0 Wind 30 deg - No Ice	112.225	45.929	-79.816	-7610.347	-4405.931	-11.971
0.9 Dead+1.0 Wind 30 deg - No Ice	84.169	45.929	-79.816	-7615.979	-4407.695	-11.971
1.2 Dead+1.0 Wind 60 deg - No Ice	112.225	76.766	-43.789	-4199.640	-7429.173	0.277
0.9 Dead+1.0 Wind 60 deg - No Ice	84.169	76.766	-43.789	-4205.273	-7430.936	0.277
1.2 Dead+1.0 Wind 90 deg - No Ice	112.225	90.891	0.416	61.998	-8756.239	11.409
0.9 Dead+1.0 Wind 90 deg - No Ice	84.169	90.891	0.416	56.365	-8758.002	11.409
1.2 Dead+1.0 Wind 120 deg - No Ice	112.225	85.629	49.319	4662.286	-8090.224	31.802
0.9 Dead+1.0 Wind 120 deg - No Ice	84.169	85.629	49.319	4656.653	-8091.987	31.802
1.2 Dead+1.0 Wind 150 deg - No Ice	112.225	49.342	84.402	7930.044	-4645.949	32.721
0.9 Dead+1.0 Wind 150 deg - No Ice	84.169	49.342	84.402	7924.411	-4647.712	32.721
1.2 Dead+1.0 Wind 180 deg - No Ice	112.225	0.491	94.480	8937.798	-44.450	27.812
0.9 Dead+1.0 Wind 180 deg - No Ice	84.169	0.491	94.480	8932.165	-46.213	27.812
1.2 Dead+1.0 Wind 210 deg - No Ice	112.225	-45.866	79.279	7588.112	4405.481	11.088
0.9 Dead+1.0 Wind 210 deg - No Ice	84.169	-45.866	79.279	7582.479	4403.718	11.088
1.2 Dead+1.0 Wind 240 deg - No Ice	112.225	-81.147	46.545	4458.098	7768.495	1.167
0.9 Dead+1.0 Wind 240 deg - No Ice	84.169	-81.147	46.545	4452.465	7766.732	1.167
1.2 Dead+1.0 Wind 270 deg - No Ice	112.225	-90.454	-0.421	-18.581	8714.589	-10.902
0.9 Dead+1.0 Wind 270 deg - No Ice	84.169	-90.454	-0.421	-24.213	8712.826	-10.902

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Load Combination	Vertical K	Shear _x K	Shear _z K	Overturning Moment, M _x kip-ft	Overturning Moment, M _z kip-ft	Torque kip-ft
No Ice						
1.2 Dead+1.0 Wind 300 deg - No Ice	112.225	-80.537	-46.501	-4389.348	7681.518	-31.093
0.9 Dead+1.0 Wind 300 deg - No Ice	84.169	-80.537	-46.501	-4394.980	7679.754	-31.093
1.2 Dead+1.0 Wind 330 deg - No Ice	112.225	-49.040	-84.440	-7891.443	4615.542	-32.684
0.9 Dead+1.0 Wind 330 deg - No Ice	84.169	-49.040	-84.440	-7897.076	4613.778	-32.684
1.2 Dead+1.0 Ice+1.0 Temp	210.370	-0.000	-0.000	55.528	14.940	0.000
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	210.370	0.172	-21.084	-1992.248	-2.875	-3.320
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	210.370	10.059	-17.184	-1645.037	-984.496	-0.800
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	210.370	16.787	-9.601	-904.068	-1668.019	0.662
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	210.370	19.822	-0.066	48.311	-1956.361	0.823
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	210.370	18.311	10.321	1059.340	-1772.690	2.581
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	210.370	10.506	18.000	1801.913	-1008.741	4.410
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	210.370	0.043	20.351	2044.304	11.962	3.759
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	210.370	-9.913	17.107	1746.542	1000.456	1.548
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	210.370	-17.217	9.887	1036.423	1727.641	-0.402
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	210.370	-19.690	-0.048	52.682	1972.274	-1.559
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	210.370	-17.566	-10.106	-931.965	1740.483	-3.018
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	210.370	-10.449	-18.013	-1692.467	1031.073	-4.402
Dead+Wind 0 deg - Service	93.521	-0.032	-19.647	-1820.027	7.324	-5.571
Dead+Wind 30 deg - Service	93.521	9.008	-15.655	-1478.279	-859.651	-2.348
Dead+Wind 60 deg - Service	93.521	15.056	-8.588	-809.329	-1452.607	0.054
Dead+Wind 90 deg - Service	93.521	17.827	0.082	26.516	-1712.887	2.238
Dead+Wind 120 deg - Service	93.521	16.795	9.673	928.782	-1582.260	6.237
Dead+Wind 150 deg - Service	93.521	9.678	16.554	1569.695	-906.726	6.418
Dead+Wind 180 deg - Service	93.521	0.096	18.531	1767.348	-4.223	5.455
Dead+Wind 210 deg - Service	93.521	-8.996	15.549	1502.631	868.552	2.175
Dead+Wind 240 deg - Service	93.521	-15.915	9.129	888.734	1528.148	0.229
Dead+Wind 270 deg - Service	93.521	-17.741	-0.083	10.712	1713.708	-2.138
Dead+Wind 300 deg - Service	93.521	-15.796	-9.120	-846.537	1511.089	-6.098
Dead+Wind 330 deg - Service	93.521	-9.618	-16.561	-1533.411	909.752	-6.410

Solution Summary

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
1	0.000	-93.521	0.000	0.000	93.521	0.000	0.000%
2	-0.161	-112.225	-100.173	0.161	112.225	100.173	0.000%
3	-0.161	-84.169	-100.173	0.161	84.169	100.173	0.000%
4	45.929	-112.225	-79.816	-45.929	112.225	79.816	0.000%
5	45.929	-84.169	-79.816	-45.929	84.169	79.816	0.000%
6	76.766	-112.225	-43.789	-76.766	112.225	43.789	0.000%
7	76.766	-84.169	-43.789	-76.766	84.169	43.789	0.000%

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Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
8	90.891	-112.225	0.416	-90.891	112.225	-0.416	0.000%
9	90.891	-84.169	0.416	-90.891	84.169	-0.416	0.000%
10	85.629	-112.225	49.319	-85.629	112.225	-49.319	0.000%
11	85.629	-84.169	49.319	-85.629	84.169	-49.319	0.000%
12	49.342	-112.225	84.402	-49.342	112.225	-84.402	0.000%
13	49.342	-84.169	84.402	-49.342	84.169	-84.402	0.000%
14	0.491	-112.225	94.480	-0.491	112.225	-94.480	0.000%
15	0.491	-84.169	94.480	-0.491	84.169	-94.480	0.000%
16	-45.866	-112.225	79.279	45.866	112.225	-79.279	0.000%
17	-45.866	-84.169	79.279	45.866	84.169	-79.279	0.000%
18	-81.147	-112.225	46.545	81.147	112.225	-46.545	0.000%
19	-81.147	-84.169	46.545	81.147	84.169	-46.545	0.000%
20	-90.454	-112.225	-0.421	90.454	112.225	0.421	0.000%
21	-90.454	-84.169	-0.421	90.454	84.169	0.421	0.000%
22	-80.537	-112.225	-46.501	80.537	112.225	46.501	0.000%
23	-80.537	-84.169	-46.501	80.537	84.169	46.501	0.000%
24	-49.040	-112.225	-84.440	49.040	112.225	84.440	0.000%
25	-49.040	-84.169	-84.440	49.040	84.169	84.440	0.000%
26	0.000	-210.370	0.000	0.000	210.370	0.000	0.000%
27	0.172	-210.370	-21.084	-0.172	210.370	21.084	0.000%
28	10.059	-210.370	-17.184	-10.059	210.370	17.184	0.000%
29	16.787	-210.370	-9.601	-16.787	210.370	9.601	0.000%
30	19.822	-210.370	-0.066	-19.822	210.370	0.066	0.000%
31	18.311	-210.370	10.321	-18.311	210.370	-10.321	0.000%
32	10.506	-210.370	18.000	-10.506	210.370	-18.000	0.000%
33	0.043	-210.370	20.351	-0.043	210.370	-20.351	0.000%
34	-9.913	-210.370	17.107	9.913	210.370	-17.107	0.000%
35	-17.217	-210.370	9.887	17.217	210.370	-9.887	0.000%
36	-19.690	-210.370	-0.048	19.690	210.370	0.048	0.000%
37	-17.566	-210.370	-10.106	17.566	210.370	10.106	0.000%
38	-10.449	-210.370	-18.013	10.449	210.370	18.013	0.000%
39	-0.032	-93.521	-19.647	0.032	93.521	19.647	0.000%
40	9.008	-93.521	-15.655	-9.008	93.521	15.655	0.000%
41	15.056	-93.521	-8.588	-15.056	93.521	8.588	0.000%
42	17.827	-93.521	0.082	-17.827	93.521	-0.082	0.000%
43	16.795	-93.521	9.673	-16.795	93.521	-9.673	0.000%
44	9.678	-93.521	16.554	-9.678	93.521	-16.554	0.000%
45	0.096	-93.521	18.531	-0.096	93.521	-18.531	0.000%
46	-8.996	-93.521	15.549	8.996	93.521	-15.549	0.000%
47	-15.915	-93.521	9.129	15.915	93.521	-9.129	0.000%
48	-17.741	-93.521	-0.083	17.741	93.521	0.083	0.000%
49	-15.796	-93.521	-9.120	15.796	93.521	9.120	0.000%
50	-9.618	-93.521	-16.561	9.618	93.521	16.561	0.000%

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	170 - 160	1.276	43	0.062	0.003
T2	160 - 140	1.145	43	0.060	0.002
T3	140 - 120	0.896	43	0.055	0.003
T4	120 - 100	0.668	43	0.047	0.003
T5	100 - 80	0.472	43	0.039	0.002
T6	80 - 60	0.311	43	0.031	0.002
T7	60 - 40	0.187	43	0.023	0.002
T8	40 - 20	0.096	39	0.015	0.001
T9	20 - 0	0.035	39	0.008	0.001

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Critical Deflections and Radius of Curvature - Service Wind

<i>Elevation</i>	<i>Appurtenance</i>	<i>Gov. Load Comb.</i>	<i>Deflection</i>	<i>Tilt</i>	<i>Twist</i>	<i>Radius of Curvature</i>
<i>ft</i>			<i>in</i>	<i>°</i>	<i>°</i>	<i>ft</i>
170'	Lightning Rod 5/8" x 5'	43	1.276	0.062	0.003	394582
169'	(3) ACU-A20-N	43	1.263	0.061	0.003	394582
165'	TFC2K	43	1.210	0.061	0.002	394582
151'	(2) P65.15.XL.0 w/ Mount Pipe	43	1.031	0.058	0.003	239784
145'	800 10122 w/ Mount Pipe	43	0.957	0.056	0.003	265664
138'	Andrew PAR6-59A	43	0.872	0.054	0.003	248872
130'	LNx-6514DS-A1M w/ Mount Pipe	43	0.779	0.051	0.003	182838
106'	COMMSCOPE	43	0.527	0.042	0.003	137260
	VHLPX4-11W-6WH					
104'	ANT150F2	43	0.508	0.041	0.002	137381
96'	ERICSSON AIR 21 B4A B2P	43	0.437	0.038	0.002	135125
87'	PR-950	43	0.363	0.034	0.002	129804
71'	GPS-TMG-HR-26N	43	0.251	0.027	0.002	135749

Maximum Tower Deflections - Design Wind

<i>Section No.</i>	<i>Elevation</i>	<i>Horz. Deflection</i>	<i>Gov. Load Comb.</i>	<i>Tilt</i>	<i>Twist</i>
	<i>ft</i>	<i>in</i>		<i>°</i>	<i>°</i>
T1	170 - 160	6.464	10	0.307	0.018
T2	160 - 140	5.808	10	0.300	0.012
T3	140 - 120	4.554	10	0.276	0.017
T4	120 - 100	3.398	10	0.239	0.015
T5	100 - 80	2.402	10	0.200	0.012
T6	80 - 60	1.588	3	0.158	0.010
T7	60 - 40	0.958	3	0.114	0.008
T8	40 - 20	0.491	3	0.076	0.006
T9	20 - 0	0.177	2	0.038	0.003

Critical Deflections and Radius of Curvature - Design Wind

<i>Elevation</i>	<i>Appurtenance</i>	<i>Gov. Load Comb.</i>	<i>Deflection</i>	<i>Tilt</i>	<i>Twist</i>	<i>Radius of Curvature</i>
<i>ft</i>			<i>in</i>	<i>°</i>	<i>°</i>	<i>ft</i>
170'	Lightning Rod 5/8" x 5'	10	6.464	0.307	0.018	105167
169'	(3) ACU-A20-N	10	6.398	0.306	0.016	105167
165'	TFC2K	10	6.135	0.303	0.012	105167
151'	(2) P65.15.XL.0 w/ Mount Pipe	10	5.234	0.291	0.016	56629
145'	800 10122 w/ Mount Pipe	10	4.860	0.283	0.017	58116
138'	Andrew PAR6-59A	10	4.433	0.272	0.017	52123
130'	LNx-6514DS-A1M w/ Mount Pipe	10	3.960	0.258	0.016	37263
106'	COMMSCOPE	10	2.682	0.212	0.013	27239
	VHLPX4-11W-6WH					
104'	ANT150F2	10	2.587	0.208	0.013	27231
96'	ERICSSON AIR 21 B4A B2P	3	2.224	0.192	0.012	26694
87'	PR-950	3	1.852	0.173	0.011	25587
71'	GPS-TMG-HR-26N	3	1.283	0.138	0.009	26706

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Bolt Design Data

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load per Bolt K	Ratio Load Allowable	Allowable Ratio	Criteria
T1	170	Leg	A325N	1.000	4	1.496	54.517	0.027 ✓	1.05	Bolt Tension
		Diagonal	A325N	0.625	1	4.052	13.806	0.294 ✓	1.05	Bolt Shear
		Top Girt	A325N	0.625	1	0.389	9.914	0.039 ✓	1.05	Member Block Shear
T2	160	Leg	A325N	1.250	4	6.750	87.220	0.077 ✓	1.05	Bolt Tension
		Diagonal	A325N	0.750	1	6.964	18.922	0.368 ✓	1.05	Gusset Bearing
T3	140	Leg	A325N	1.250	6	11.024	87.220	0.126 ✓	1.05	Bolt Tension
		Diagonal	A325N	1.000	1	10.577	20.227	0.523 ✓	1.05	Member Bearing
T4	120	Leg	A325N	1.375	6	18.468	103.939	0.178 ✓	1.05	Bolt Tension
		Diagonal	A325N	1.000	1	12.274	26.970	0.455 ✓	1.05	Member Bearing
T5	100	Leg	A325N	1.375	6	26.700	103.939	0.257 ✓	1.05	Bolt Tension
		Diagonal	A325N	1.125	1	16.839	26.100	0.645 ✓	1.05	Member Bearing
T6	80	Leg	A325N	1.500	6	35.859	126.472	0.284 ✓	1.05	Bolt Tension
		Diagonal	A325N	1.125	1	17.811	32.625	0.546 ✓	1.05	Member Bearing
T7	60	Leg	A325N	1.500	8	33.641	126.472	0.266 ✓	1.05	Bolt Tension
		Diagonal	A325N	1.250	1	19.007	31.538	0.603 ✓	1.05	Member Bearing
T8	40	Leg	A325N	1.500	8	40.181	126.472	0.318 ✓	1.05	Bolt Tension
		Diagonal	A325N	1.250	1	20.585	31.538	0.653 ✓	1.05	Member Bearing
T9	20	Diagonal	A325N	1.000	2	13.913	35.343	0.394 ✓	1.05	Bolt Shear
		Horizontal	A325N	1.000	2	9.767	26.916	0.363 ✓	1.05	Member Block Shear

Compression Checks

Leg Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	170 - 160	Sabre 3.5" x 0.216"	10'7/32"	5'3/32"	51.7 K=1.00	2.228	-8.195	82.510	0.099 ¹ ✓
T2	160 - 140	Sabre 4.5" x 0.438"	20'13/32"	6'8-1/8"	55.5 K=1.00	5.589	-35.238	200.839	0.175 ¹ ✓
T3	140 - 120	Sabre 6.625" x 0.432"	20'13/32"	6'8-1/8"	36.5 K=1.00	8.405	-82.613	343.100	0.241 ¹ ✓
T4	120 - 100	Sabre 8.625" x 0.5"	20'13/32"	6'8-1/8"	27.8 K=1.00	12.763	-137.862	542.674	0.254 ¹ ✓
T5	100 - 80	Sabre 10.750" x 0.500"	20'13/32"	10'7/32"	33.1 K=1.00	16.101	-196.730	668.659	0.294 ¹ ✓
T6	80 - 60	Sabre 12.75" x 0.5"	20'13/32"	10'7/32"	27.7 K=1.00	19.242	-261.799	818.560	0.320 ¹ ✓
T7	60 - 40	Sabre 16" x 0.5"	20'13/32"	10'7/32"	21.9	24.347	-326.454	1057.800	0.309 ¹ ✓

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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T8	40 - 20	Sabre 18" x 0.5"	20'13/32"	10'7/32"	K=1.00 19.4	27.489	-390.333	1203.360	0.324 ¹ ✓
T9	20 - 0	Sabre 18" x 0.5"	20'13/32"	5'3/32"	K=1.00 9.7	27.489	-435.845	1228.500	0.355 ¹ ✓

¹ P_u / φP_n controls

Diagonal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	170 - 160	L2x2x3/8	10'15/16"	4'10-7/16"	150.2 K=1.00	1.360	-4.040	17.250	0.234 ¹ ✓
T2	160 - 140	L3x3x3/8	12'6-31/32"	6'1-7/16"	125.1 K=1.00	2.110	-7.114	38.577	0.184 ¹ ✓
T3	140 - 120	L3 1/2x3 1/2x3/8	14'3-25/32"	6'10-13/32"	120.0 K=1.00	2.480	-10.677	48.877	0.218 ¹ ✓
T4	120 - 100	L3 1/2x3 1/2x1/2	16'1-11/32"	7'8-1/8"	134.9 K=1.00	3.250	-12.422	51.122	0.243 ¹ ✓
T5	100 - 80	L5x5x1/2	19'3-9/16"	9'2-13/16"	114.5 K=1.02	4.750	-16.963	100.449	0.169 ¹ ✓
T6	80 - 60	L5x5x5/8	21'3/8"	10'5/32"	122.9 K=1.00	5.860	-18.009	110.813	0.163 ¹ ✓
T7	60 - 40	L5x5x5/8	22'9-23/32"	10'8-15/16"	131.8 K=1.00	5.860	-19.285	96.513	0.200 ¹ ✓
T8	40 - 20	L5x5x5/8	24'7-1/2"	11'6-13/16"	141.9 K=1.00	5.860	-20.899	83.268	0.251 ¹ ✓
T9	20 - 0	L5x5x5/8	16'1/8"	15'19/32"	118.8 K=1.00	5.860	-27.826	117.313	0.237 ¹ ✓

¹ P_u / φP_n controls

Horizontal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T9	20 - 0	2L3 1/2x3 1/2x1/4x3/8	24'	11'3"	155.5 K=1.00	3.380	-19.745	39.205	0.504 ¹ ✓
		2L 'a' > 64.466 in - 159							

¹ P_u / φP_n controls

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Top Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	170 - 160	L2 1/2x2 1/2x3/16	8'	7'5"	179.8 K=1.00	0.902	-0.448	7.986	0.056 ¹ ✓

¹ P_u / φP_n controls

Redundant Horizontal (1) Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T9	20 - 0	L3x3x5/16	6'	5'3"	107.0 K=1.00	1.780	-7.565	41.028	0.184 ¹ ✓

¹ P_u / φP_n controls

Redundant Diagonal (1) Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T9	20 - 0	L3x3x1/4	7'7-7/16'	6'7-17/32"	134.3 K=1.00	1.440	-4.805	22.837	0.210 ¹ ✓

¹ P_u / φP_n controls

Inner Bracing Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T9	20 - 0	L3x3x3/16	12'	12'	241.6 K=1.00	1.090	-0.030	5.344	0.006 ¹ ✓

¹ P_u / φP_n controls

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Tension Checks

Leg Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	170 - 160	Sabre 3.5" x 0.216"	10'7/32"	5'3/32"	51.7	2.228	5.986	100.281	0.060 ¹ ✓
T2	160 - 140	Sabre 4.5" x 0.438"	20'13/32"	6'8-1/8"	55.5	5.589	27.002	251.522	0.107 ¹ ✓
T3	140 - 120	Sabre 6.625" x 0.432"	20'13/32"	6'8-1/8"	36.5	8.405	66.146	378.222	0.175 ¹ ✓
T4	120 - 100	Sabre 8.625" x 0.5"	20'13/32"	6'8-1/8"	27.8	12.763	110.811	574.322	0.193 ¹ ✓
T5	100 - 80	Sabre 10.750" x 0.500"	20'13/32"	10'7/32"	33.1	16.101	160.202	724.530	0.221 ¹ ✓
T6	80 - 60	Sabre 12.75" x 0.5"	20'13/32"	10'7/32"	27.7	19.242	215.155	865.902	0.248 ¹ ✓
T7	60 - 40	Sabre 16" x 0.5"	20'13/32"	10'7/32"	21.9	24.347	269.128	1095.630	0.246 ¹ ✓
T8	40 - 20	Sabre 18" x 0.5"	20'13/32"	10'7/32"	19.4	27.489	321.447	1237.000	0.260 ¹ ✓
T9	20 - 0	Sabre 18" x 0.5"	20'13/32"	5'3/32"	9.7	27.489	357.005	1237.000	0.289 ¹ ✓

¹ P_u / φP_n controls

Diagonal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	170 - 160	L2x2x3/8	10'15/16"	4'10-7/16"	101.3	0.809	4.052	35.194	0.115 ¹ ✓
T2	160 - 140	L3x3x3/8	12'6-31/32"	6'1-7/16"	82.4	1.336	6.964	58.134	0.120 ¹ ✓
T3	140 - 120	L3 1/2x3 1/2x3/8	14'3-25/32"	6'10-13/32"	78.9	1.544	10.577	67.146	0.158 ¹ ✓
T4	120 - 100	L3 1/2x3 1/2x1/2	16'1-11/32"	7'8-1/8"	88.8	2.016	12.274	87.680	0.140 ¹ ✓
T5	100 - 80	L5x5x1/2	19'3-9/16"	9'2-13/16"	73.4	3.094	16.839	134.578	0.125 ¹ ✓
T6	80 - 60	L5x5x5/8	21'3/8"	10'5/32"	80.5	3.809	17.811	165.694	0.107 ¹ ✓
T7	60 - 40	L5x5x5/8	22'9-23/32"	10'8-15/16"	86.4	3.750	19.007	163.145	0.117 ¹ ✓
T8	40 - 20	L5x5x5/8	24'7-1/2"	11'6-13/16"	92.9	3.750	20.585	163.145	0.126 ¹ ✓
T9	20 - 0	L5x5x5/8	16'1/8"	15'19/32"	118.8	3.868	26.061	168.243	0.155 ¹ ✓

¹ P_u / φP_n controls

tnxTower B+T Group 1717 S Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job 100736.005.01 - TRURO, MA (BU# 841273)	Page 34 of 35
	Project	Date 14:21:33 03/27/19
	Client Crown Castle	Designed by S Shrestha

Horizontal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T9	20 - 0	2L3 1/2x3 1/2x1/4x3/8	24'	11'3"	123.9	2.113	19.533	91.921	0.212 ¹
2L 'a' > 64.466 in - 152									

¹ P_u / φP_n controls

Top Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	170 - 160	L2 1/2x2 1/2x3/16	8'	7'5"	118.9	0.571	0.389	24.840	0.016 ¹

¹ P_u / φP_n controls

Redundant Horizontal (1) Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T9	20 - 0	L3x3x5/16	5'9"	5'	65.1	1.780	7.647	57.672	0.133 ¹

¹ P_u / φP_n controls

Redundant Diagonal (1) Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T9	20 - 0	L3x3x1/4	7'5-7/32'	6'5-9/32'	83.1	1.440	4.891	46.656	0.105 ¹

¹ P_u / φP_n controls

Inner Bracing Design Data (Tension)

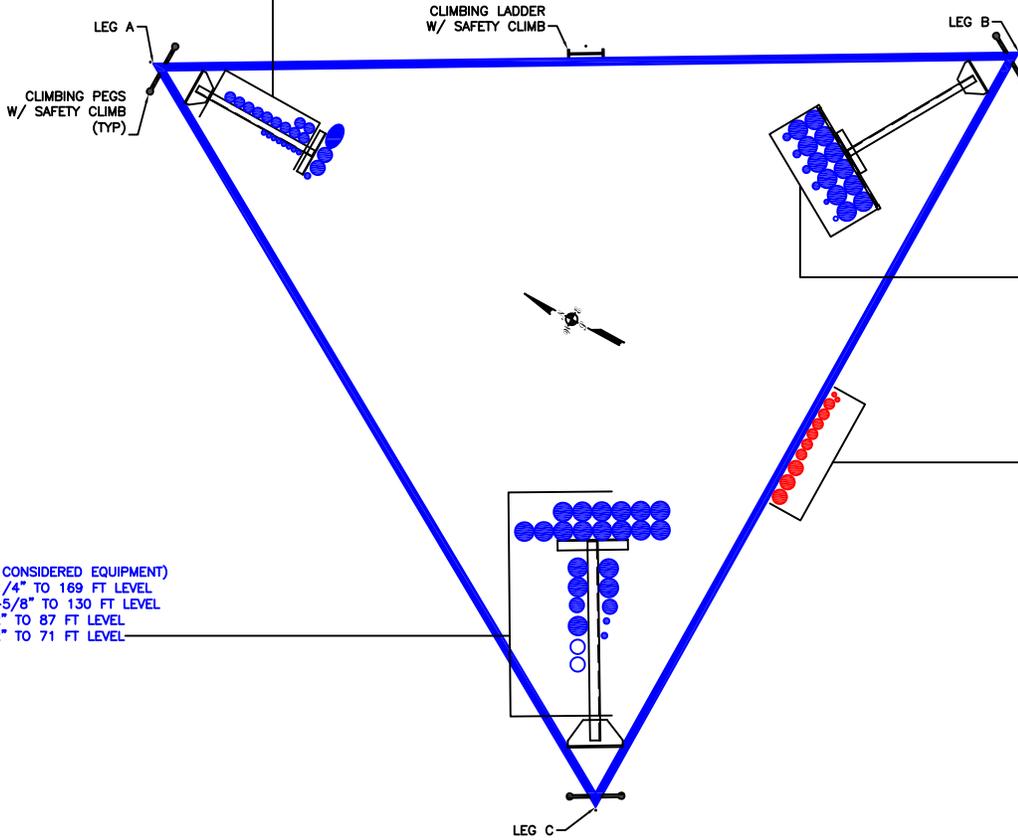
Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T9	20 - 0	L3x3x3/16	12'	12'	153.4	1.090	0.010	35.316	0.000 ¹

¹ P_u / φP_n controls

APPENDIX B
BASE LEVEL DRAWING

(OTHER CONSIDERED EQUIPMENT)

- (1) 7/8" TO 165 FT LEVEL
- (1) EWS2 TO 139 FT LEVEL
- (8) 3/8" TO 104 FT LEVEL
- (10) 7/8" TO 104 FT LEVEL
- (2) 1-1/4" TO 151 FT LEVEL
- (1) 1/2" TO 170 FT LEVEL



(OTHER CONSIDERED EQUIPMENT)

- (2) 3/8" TO 145 FT LEVEL
- (4) 5/8" TO 145 FT LEVEL
- (12) 1-5/8" TO 145 FT LEVEL

(PROPOSED EQUIPMENT CONFIGURATION)

- (2) 3/8" TO 96 FT LEVEL
- (6) 7/8" TO 96 FT LEVEL
- (3) 1-1/4" TO 96 FT LEVEL

(OTHER CONSIDERED EQUIPMENT)

- (4) 1-1/4" TO 169 FT LEVEL
- (19) 1-5/8" TO 130 FT LEVEL
- (1) 1/2" TO 87 FT LEVEL
- (1) 1/2" TO 71 FT LEVEL

BUSINESS UNIT : 841273

APPENDIX C
ADDITIONAL CALCULATIONS

PROJECT	100736.005.01 - TRURO, MA				
SUBJECT	Bolted Angle Connection Analysis				
DATE	03/27/19	PAGE	1	OF	1



V2.2.1

TIA-222 Rev.	H
Apply TIA-222-H Section 15.5?	Yes

Max Rating	48.7%
-------------------	--------------

Elevation (ft)	Component	Angle			Bolt						Coping Dimensions (in)					Tens. Load (k)	Comp. Load (k)	Tens. Capacity (k)	Comp. Capacity (k)	Rating	Limit State			
		Qty	Size	Grade	Qty	Size	Grade	Edge Dist. (in)	Gage (in)	Pitch (in)	Coping	A	B	C	D							E		
1	20 - 0	Redundant Horizontal (1)	1	L3x3x5/16	A36	1	1	A325N	1.25	1.75									7.65	7.57	14.95	30.36	48.7%	Tension - Mbr. Block Shear
2	20 - 0	Redundant Diagonal (1)	1	L3x3x1/4	A36	1	1	A325N	1.25	1.75									4.89	4.81	11.96	24.29	38.9%	Tension - Mbr. Bearing

CClplate

Project Information	
BU #	841273
Site Name	TRURO, MA
Order #	479923, Rev. 0

Tower Information	
Tower Type	Self Support
TIA-222 Rev	H

Apply TIA-222-H Section 15.5

Applied Loads		
	Comp.	Uplift
Axial (k)	469.00	385.00
Shear (k)	59.00	51.00

Anchor Rod Data	
Quantity:	12
Diameter (in):	2
<u>Material Grade:</u>	A572-50
Grout Considered:	No
l_{ar} (in):	1.25
Eta Factor, η :	0.5
Thread Type:	N-Included
Configuration:	Symmetrical

Fy=50 ksi Fu=65 ksi
Not Considered, $l_{ar} \leq 1(d)$

Anchor Rod Results	
Axial, Pu_c (kips)	39.08
Shear, Vu (kips)	4.92
Moment, Mu (kip-in)	-
Axial Cap., ϕPn_c (kips)	125.00
Shear Cap., ϕVn (kips)	37.50
Moment Cap., ϕMn (kip-in)	-
Stress Rating	31.4%

Pass

Drilled Pier Foundation



BU # :	841273
Site Name:	TRURO, MA
Order Number:	479923, Rev. 0

TIA-222 Revision:	H
Tower Type:	Self Support

Applied Loads		
	Comp.	Uplift
Moment (kip-ft)		
Axial Force (kips)	469	385
Shear Force (kips)	59	51

Material Properties		
Concrete Strength, f'c:	3	ksi
Rebar Strength, Fy:	60	ksi

Pier Design Data		
Depth	41.5	ft
Ext. Above Grade	0.5	ft
Pier Section 1		
<i>From 0.5' above grade to 41.5' below grade</i>		
Pier Diameter	10	ft
Rebar Quantity	46	
Rebar Size	10	
Clear Cover to Ties	3	in
Tie Size	4	

Analysis Results

Soil Lateral Capacity	Compression	Uplift
D _{v=0} (ft from TOC)	23.12	23.12
Soil Safety Factor	48.05	55.58
Max Moment (kip-ft)	940.26	812.77
Rating*	2.6%	2.3%

Soil Vertical Capacity	Compression	Uplift
Skin Friction (kips)	1274.19	1274.19
End Bearing (kips)	294.52	-
Weight of Concrete (kips)	467.32	350.49
Total Capacity (kips)	1568.72	1624.68
Axial (kips)	936.32	385.00
Rating*	56.8%	22.6%

Reinforced Concrete Capacity	Compression	Uplift
Critical Depth (ft from TOC)	24.02	22.30
Critical Moment (kip-ft)	938.13	811.25
Critical Moment Capacity	13873.03	13546.96
Rating*	6.4%	5.7%

Soil Interaction Rating*	56.8%
Structural Foundation Rating*	6.4%

*Rating per TIA-222-H Section 15.5

Check Limitation

Apply TIA-222-H Section 15.5:	<input checked="" type="checkbox"/>
N/A	<input type="checkbox"/>

Soil Profile					
Groundwater Depth	20	ft	# of Layers	6	

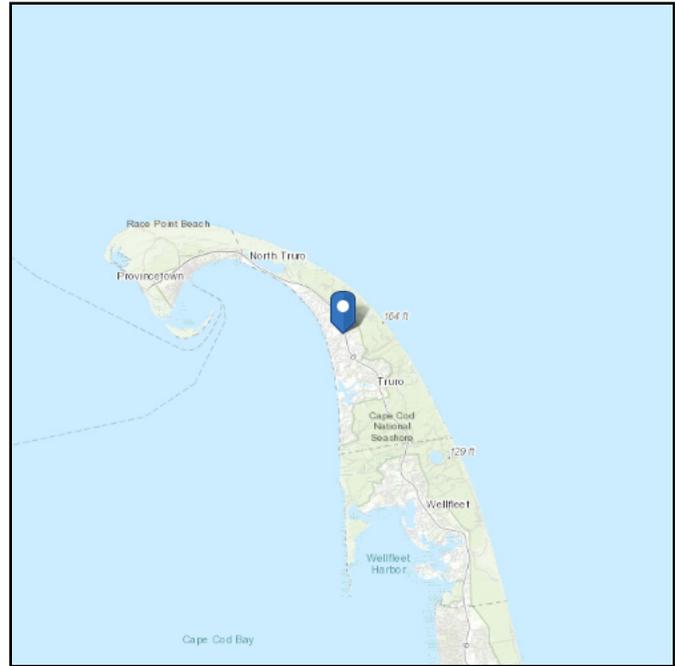
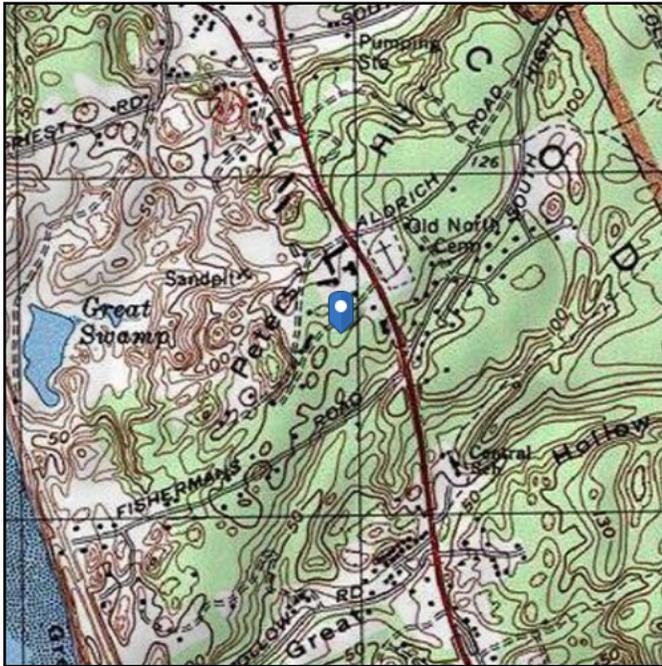
Layer	Top (ft)	Bottom (ft)	Thickness (ft)	γ _{soil} (pcf)	γ _{concrete} (pcf)	Cohesion (ksf)	Angle of Friction (degrees)	Calculated Ultimate Skin Friction Comp (ksf)	Calculated Ultimate Skin Friction Uplift (ksf)	Ultimate Skin Friction Comp Override (ksf)	Ultimate Skin Friction Uplift Override (ksf)	Ult. Gross Bearing Capacity (ksf)	SPT Blow Count	Soil Type
1	0	5	5	120	150	0	0	0.000	0.000	0.00	0.00			Cohesionless
2	5	20	15	120	150	0	32	0.000	0.000	2.15	2.15			Cohesionless
3	20	23.5	3.5	60	87.6	0	32	0.000	0.000	2.21	2.21			Cohesionless
4	23.5	28.5	5	60	87.6	0	62	0.000	0.000	2.27	2.27			Cohesionless
5	28.5	31	2.5	60	87.6	2	0	1.100	1.100	1.10	1.10			Cohesive
6	31	41.5	10.5	60	87.6	0	33	0.000	0.000	0.00	0.00	5		Cohesionless

ASCE 7 Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-10
Risk Category: II
Soil Class: D - Stiff Soil

Elevation: 107.04 ft (NAVD 88)
Latitude: 42.021667
Longitude: -70.075



Wind

Results:

Wind Speed:	139 Vmph
10-year MRI	81 Vmph
25-year MRI	93 Vmph
50-year MRI	103 Vmph
100-year MRI	115 Vmph

Data Source: ASCE/SEI 7-10, Fig. 26.5-1A and Figs. CC-1–CC-4, incorporating errata of March 12, 2014

Date Accessed: Tue Mar 26 2019

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-10 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is in a hurricane-prone region as defined in ASCE/SEI 7-10 Section 26.2. Glazed openings shall be protected against wind-borne debris as specified in Section 26.10.3.

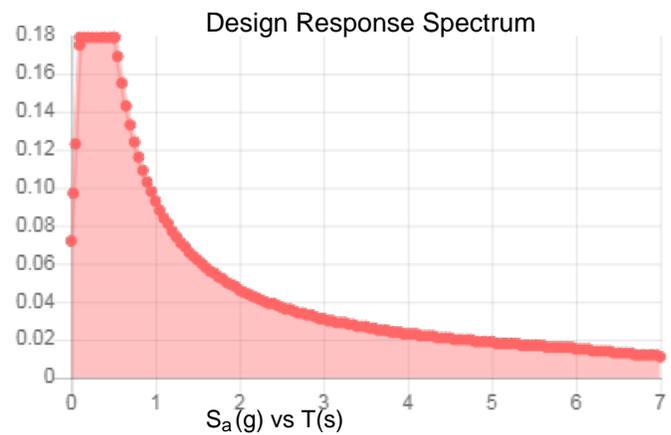
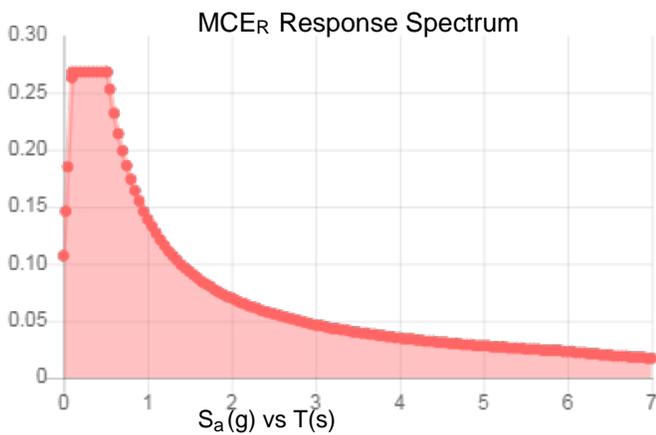
Mountainous terrain, gorges, ocean promontories, and special wind regions should be examined for unusual wind conditions.

Site Soil Class: D - Stiff Soil

Results:

S_s :	0.168	S_{DS} :	0.179
S_1 :	0.058	S_{D1} :	0.093
F_a :	1.6	T_L :	6
F_v :	2.4	PGA :	0.087
S_{MS} :	0.268	PGA _M :	0.14
S_{M1} :	0.139	F _{PGA} :	1.6
		I_e :	1

Seismic Design Category B



Data Accessed:

Tue Mar 26 2019

Date Source:

USGS Seismic Design Maps based on ASCE/SEI 7-10, incorporating Supplement 1 and errata of March 31, 2013, and ASCE/SEI 7-10 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-10 Ch. 21 are available from USGS.

Ice

Results:

Ice Thickness: 0.75 in.
Concurrent Temperature: 15 F
Gust Speed: 50 mph

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

Date Accessed: Tue Mar 26 2019

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

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 50-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

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

ASCE does not intend, nor should anyone interpret, the results provided by this Tool to replace the sound judgment of a competent professional, having knowledge and experience in the appropriate field(s) of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the contents of this Tool or the ASCE 7 standard.

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

7



Date: **March 18, 2019**

Charles McGuirt
Crown Castle
3530 Toringdon Way, Suite 300
Charlotte, NC 28277
(704) 405-6607

Engineered Tower Solutions, PLLC
8120 Sheridan Blvd, Suite A-311
Westminster, CO 80003
(919) 782-2710
brandon.little@ets-pllc.com

Subject: **Mount Analysis Report**

Carrier Designation: **T-Mobile Equipment Change-Out**
Carrier Site Number: 4HY0568A
Carrier Site Name: HY568/Cingular Truro

Crown Castle Designation: **Crown Castle BU Number:** 841273
Crown Castle Site Name: TRURO
Crown Castle JDE Number: 559264
Crown Castle Order Number: 479923 Rev. 0

Engineering Firm Designation: **ETS Report Designation:** 191474.14

Site Data: **344 Route 6, North Truro, Barnstable County, MA 02652**
Latitude: 42° 1' 18.00" Longitude: -70° 4' 30.00"

Structure Information: **Tower Height & Type:** 170.0-ft Self-Support Tower
Mount Elevation: 96.0-ft
Mount Type: 12.5 ft Sector Mount

Dear Charles McGuirt,

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

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

Sector Mount (Multiple) Sufficient*
***Sufficient upon completion of the changes listed in the "Recommendations" section of this report**

This analysis utilizes an ultimate 3-second gust wind speed of 139 mph as required by the 2015 IBC as amended by the Massachusetts State Building Code, Ninth Edition. Applicable Standard references and design criteria are listed in Section 2 – Analysis Criteria.

Mount structural analysis prepared by: Brandon R. Little, EI

Respectfully Submitted by:

Frederic G. Bost, PE, CWI, GC
Vice President
(919) 782-2710
Geoff.Bost@ets-pllc.com

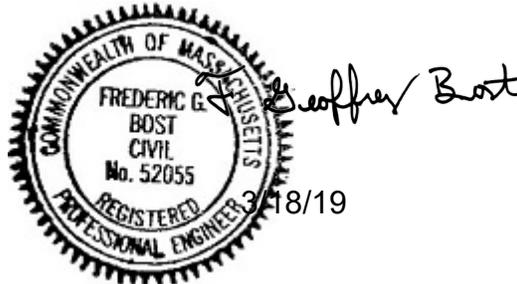


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7) APPENDIX C)

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9) APPENDIX E)

Mount Modification Details

1) INTRODUCTION

This mount is an existing 12.5 ft USF12-3XX-U Sector Mount designed by Site Pro 1. This mount is installed at the 96.0 ft elevation on (3) sectors of the 170.0 ft Self-Support tower.

2) ANALYSIS CRITERIA

Building Code:	2015 IBC
TIA-222 Revision:	TIA-222-H
Risk Category:	II
Wind Speed:	139 mph
Exposure Category:	C
Topographic Factor at Base:	1.000
Topographic Factor at Mount:	1.000
Ice Thickness:	1.50 in
Wind Speed with Ice:	50 mph
Seismic Ss:	0.168
Seismic S1:	0.058
Live Loading Wind Speed:	30 mph
Man Live Load at Mid/End-Points:	250 lb
Man Live Load at Mount Pipes:	500 lb

Table 1 – Proposed Equipment Configuration

Mount Centerline (ft)	Antenna Centerline (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Mount / Modification Details
96.0	97.0	3	Ericsson	RRUS 11 B2	(3) 12.5 ft Site Pro 1 USF12-3XX-U Sector Mounts
		3	Ericsson	Ericsson AIR 21 B4A B2P	
		3	RFS/Celwave	APXVAARR24_43-U-NA20	
		3	RFS/Celwave	ATM1900D-1A20	
		3	Ericsson	Radio 4449 B12/B71	

3) ANALYSIS PROCEDURE

Table 2 – Documents Provided

Document	Remarks	Reference	Source
Structure Level Drawings (Proposed)	T-Mobile Northeast LLC	03/12/2019	CCISites
Carrier Application	T-Mobile	03/11/2019	CCISites
4-Structural Analysis Report	B+T Group	7280600	CCISites
Mount Manufacturer Drawings	Site Pro 1 USF12-3XX-U	04/28/2011	Site Pro 1

3.1) Analysis Method

RISA-3D (version 17.0.2), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases.

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

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

3.2) Assumptions

- 1) The configuration of antennas, mounts and other appurtenances are as specified in Table 1 and the referenced drawings.
- 2) All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.
- 3) This Structural Analysis is not a condition assessment of the mount and is an evaluation of the theoretical structural capacity.
- 4) This analysis is based from the information supplied, and therefore, this report's results are as accurate as the supplied data.
- 5) Engineered Tower Solutions, PLLC makes no warranties, expressed and/or implied, in connection with this report, and disclaims any liability associated with material, fabrication, or erection of the mount. Engineered Tower Solutions, PLLC will not be held responsible from any consequential or incidental damages sustained by any person, firm, or organization as a result of the contents of this report. The maximum liability of Engineered Tower Solutions, PLLC pursuant to this report will be limited to the total fee received for compilation of this report.
- 6) It is the tower owner's responsibility to verify that the mount modeled and analyzed is the correct structure modeled.
- 7) The use of this report shall be limited to the purpose for which it was commissioned and may not be used for any other purposes without the written consent of Engineered Tower Solutions, PLLC.
- 8) Steel grades have been assumed as follows:

a) Channel, Solid Round, Angle, Plate	ASTM A36 (Gr 36)
b) HSS (Rectangular)	ASTM A500 (Gr B-46)
c) HSS (Round)	ASTM A500 (Gr B-42)
d) Pipe	ASTM A53 (Gr 35)
e) Connection Bolts	ASTM A325

This analysis may be affected if any assumptions are not valid or have been made in error. Engineered Tower Solutions, PLLC should be notified to determine the effect on the structural integrity of the tower.

4) ANALYSIS RESULTS

Table 3 – Mount Component Stresses vs. Capacity (Sector Mount, All Sectors)

Notes	Component	Critical Member	Centerline (ft)	% Capacity	Pass / Fail
1,3	Face Mount	FMBOT	96.0	87.4	PASS
1,3	Mount Pipe	MP1		75.0	PASS
1,3	Sidearm – Horizontal	SABOT		30.0	PASS
1,3	Sidearm – Vertical	SAV2		17.6	PASS
1,3	Tieback	STAB2		32.7	PASS
2,3	Mount to Tower Connection	N2		92.2	PASS

Notes:

- 1) See additional documentation in "Appendix C – Software Analysis Output" for calculations supporting the % capacity consumed.
- 2) See additional documentation in "Appendix D – Additional Calculations" for calculations supporting the % capacity consumed.
- 3) All sectors are typical.

Table 4 - Tieback Connection Data Table

Tower Connection Node No.	Existing / Proposed	Resultant End Reaction (lb)	Connected Member Type	Connected Member Size	Member Compressive Capacity (lb) ²	Notes
N34	Existing	975	Diagonal	L5x5x1/2	1157	1
N36	Existing	1542	Diagonal	L5x5x1/2	1157	1

Notes:

- 1) Tieback connection point is NOT within 25% of either end of the connected tower member
- 2) Reduced member compressive capacity according to CED-STD-10294 *Standard for Installation of Mounts and Appurtenances*

Tower Mount Rating (max from all components) =	92.2%
---	--------------

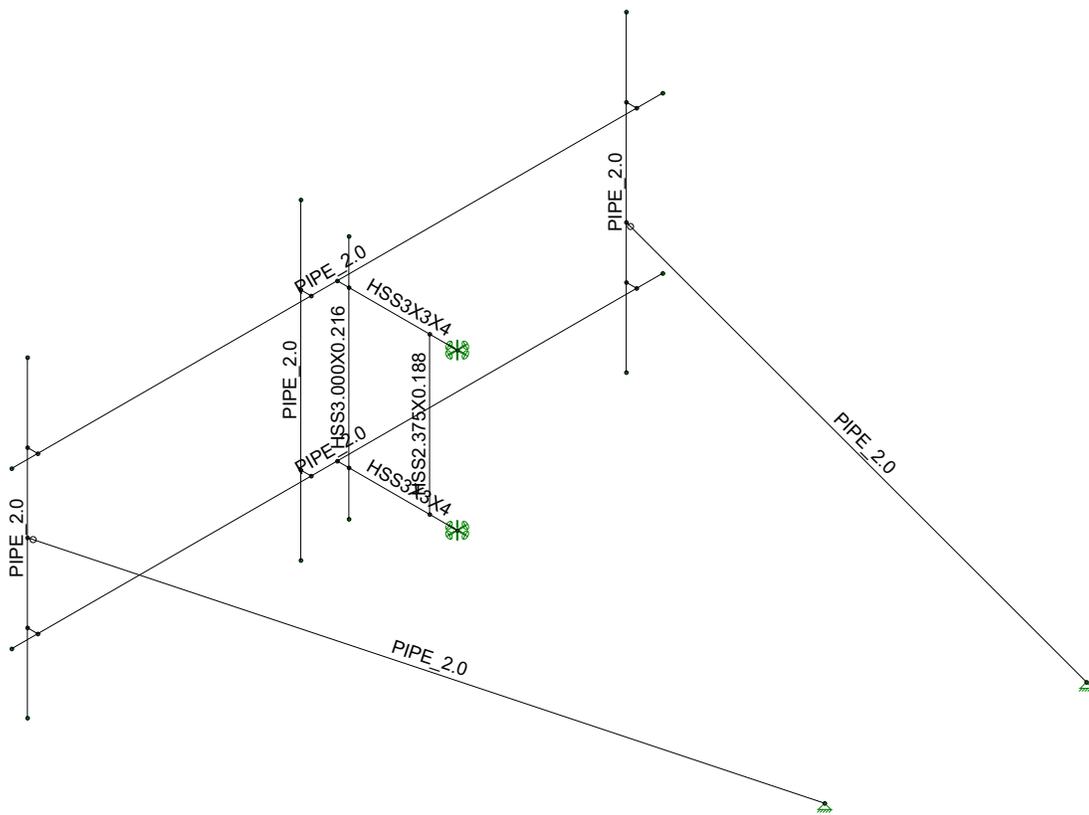
4.1) Recommendations

The mount has sufficient capacity to carry the proposed loading configuration. In order for the results of the analysis to be considered valid, the modifications listed below must be completed.

1. Shift existing leftmost tieback up to 18 inches above the bottom face mount member (see rendered view in Appendix E for additional details).
2. Shift existing rightmost tieback up to 12 inches above the bottom face mount member (see rendered view in Appendix E for additional details).

No additional structural modifications are required at this time, provided the above-listed changes are implemented.

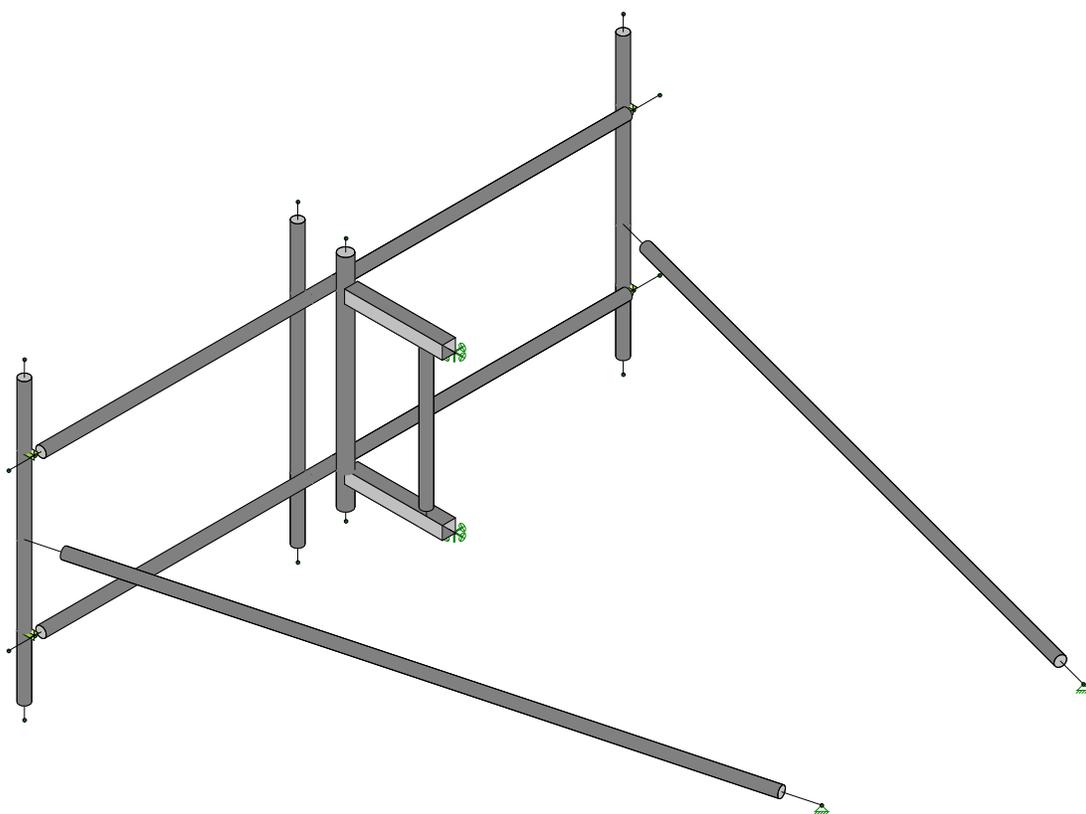
APPENDIX A
WIRE FRAME AND RENDERED MODELS



ETS, PLLC
BRL
191474.14

841273 - TRURO Mount Analysis

SK - 1
Mar 18, 2019 at 8:39 AM
TRURO_MODDED.r3d



ETS, PLLC

BRL

191474.14

841273 - TRURO Mount Analysis

SK - 2

Mar 18, 2019 at 8:39 AM

TRURO_MODDED.r3d

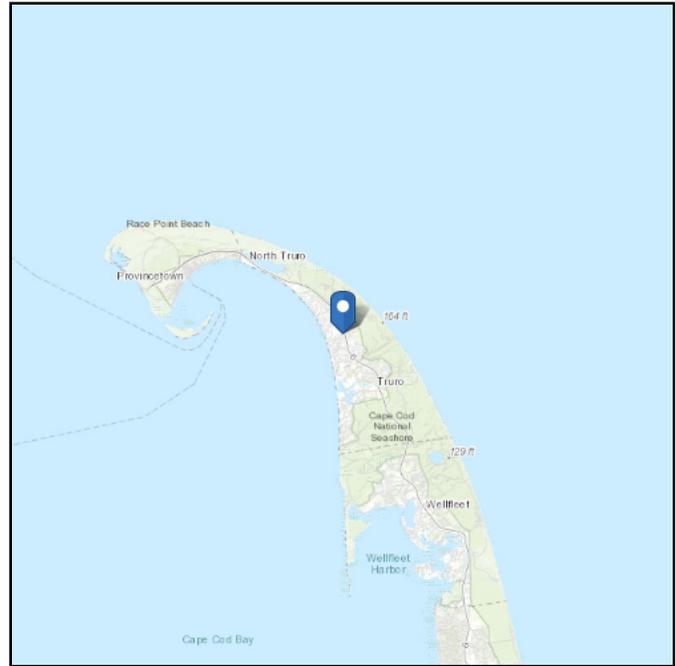
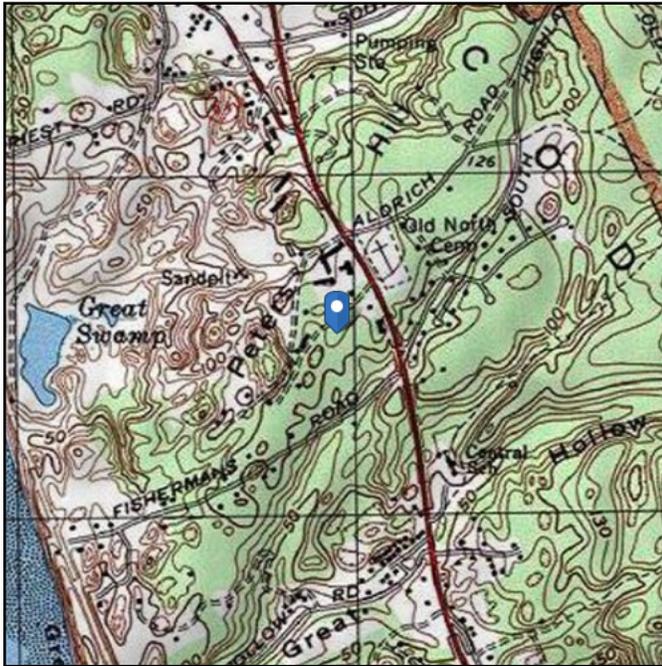
APPENDIX B
SOFTWARE INPUT CALCULATIONS

ASCE 7 Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-10
Risk Category: II
Soil Class: D - Stiff Soil

Elevation: 0 ft (NAVD 88)
Latitude: 42.021667
Longitude: -70.075



Wind

Results:

Wind Speed:	139 Vmph
10-year MRI	81 Vmph
25-year MRI	93 Vmph
50-year MRI	103 Vmph
100-year MRI	115 Vmph

Data Source: ASCE/SEI 7-10, Fig. 26.5-1A and Figs. CC-1–CC-4, incorporating errata of March 12, 2014

Date Accessed: Fri Mar 15 2019

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-10 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is in a hurricane-prone region as defined in ASCE/SEI 7-10 Section 26.2. Glazed openings shall be protected against wind-borne debris as specified in Section 26.10.3.

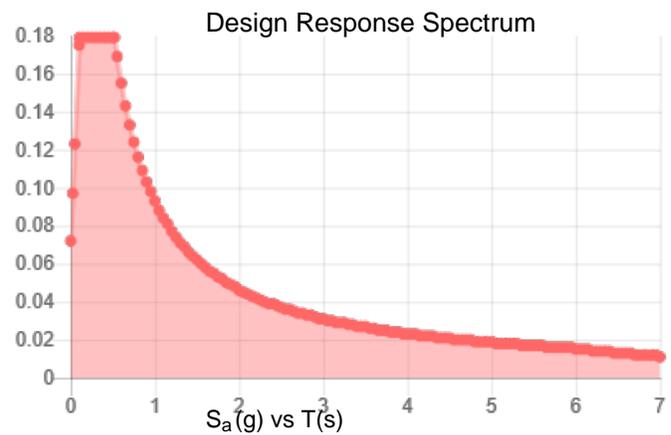
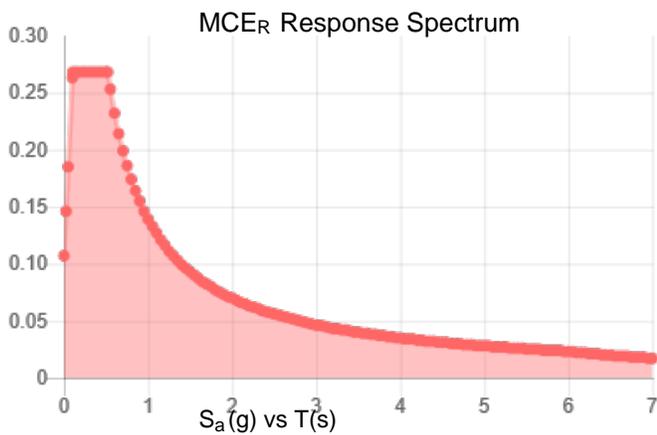
Mountainous terrain, gorges, ocean promontories, and special wind regions should be examined for unusual wind conditions.

Site Soil Class: D - Stiff Soil

Results:

S_S :	0.168	S_{DS} :	0.179
S_1 :	0.058	S_{D1} :	0.093
F_a :	1.6	T_L :	6
F_v :	2.4	PGA :	0.087
S_{MS} :	0.268	PGA _M :	0.14
S_{M1} :	0.139	F _{PGA} :	1.6
		I_e :	1

Seismic Design Category B



Data Accessed:

Fri Mar 15 2019

Date Source:

USGS Seismic Design Maps based on ASCE/SEI 7-10, incorporating Supplement 1 and errata of March 31, 2013, and ASCE/SEI 7-10 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-10 Ch. 21 are available from USGS.

Ice

Results:

Ice Thickness: 0.75 in.

Concurrent Temperature: 15 F

Gust Speed: 50 mph

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

Date Accessed: Fri Mar 15 2019

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

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 50-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

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Site Inputs	
Site Name	
Address	
City	
State	
Zip	
Latitude	
Longitude	
Altitude	
Wind Speed	
Temperature	
Humidity	
Pressure	
Soil Type	
Foundation	
Structure	
Material	
Color	
Finish	
Notes	

System Design Input/Output	
System Name	
System Type	
System Capacity	
System Voltage	
System Frequency	
System Power Factor	
System Efficiency	
System Losses	
System Components	
System Notes	

System Design Input/Output		System Design Input/Output										System Design Input/Output											
System Name		System Type		System Capacity		System Voltage		System Frequency		System Power Factor		System Efficiency		System Losses		System Components		System Notes		System Components		System Notes	

System Design Input/Output		System Design Input/Output										System Design Input/Output											
System Name		System Type		System Capacity		System Voltage		System Frequency		System Power Factor		System Efficiency		System Losses		System Components		System Notes		System Components		System Notes	

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System Notes	

System Design Input/Output	
System Name	
System Type	
System Capacity	
System Voltage	
System Frequency	
System Power Factor	
System Efficiency	
System Losses	
System Components	
System Notes	

APPENDIX C
SOFTWARE ANALYSIS OUTPUT



Joint Coordinates and Temperatures

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
1	N1	0	0	0	0	
2	N2	0	36	0	0	
3	N3	-25	0	0	0	
4	N4	-25	36	0	0	
5	N5	-6.4075	0	0	0	
6	N6	-6.4075	36	0	0	
7	N7	-25	46.25	0	0	
8	N8	-25	-10.25	0	0	
9	N9	-27.6875	0	0	0	
10	N10	-27.6875	36	0	0	
11	N11	-27.6875	0	75	0	
12	N12	-27.6875	36	75	0	
13	N13	-27.6875	0	-75	0	
14	N14	-27.6875	36	-75	0	
15	N15	-27.6875	0	69	0	
16	N16	-27.6875	36	69	0	
17	N17	-27.6875	0	-69	0	
18	N18	-27.6875	36	-69	0	
19	N19	-27.6875	0	6	0	
20	N20	-27.6875	36	6	0	
21	N21	-30.0625	0	69	0	
22	N22	-30.0625	36	69	0	
23	N23	-30.0625	0	-69	0	
24	N24	-30.0625	36	-69	0	
25	N25	-30.0625	0	6	0	
26	N26	-30.0625	36	6	0	
27	N27	-30.0625	54	69	0	
28	N28	-30.0625	54	-69	0	
29	N29	-30.0625	54	6	0	
30	N30	-30.0625	-18	69	0	
31	N31	-30.0625	-18	-69	0	
32	N32	-30.0625	-18	6	0	
33	N33	-30.0625	18	69	0	
34	N34	114.826374	18	30.177143	0	
35	N35	-30.0625	12	-69	0	
36	N36	114.826374	12	-30.177143	0	

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Ru...
1	FMBOT	N11	N13			PIPE 2.0	Beam	Pipe	A53 Gr.B	Typical
2	FMTOP	N12	N14			PIPE 2.0	Beam	Pipe	A53 Gr.B	Typical
3	MP1	N30	N27			PIPE 2.0	Column	Pipe	A53 Gr.B	Typical
4	MP2	N32	N29			PIPE 2.0	Column	Pipe	A53 Gr.B	Typical
5	MP3	N31	N28			PIPE 2.0	Column	Pipe	A53 Gr.B	Typical
6	R1	N3	N9			RIGID	None	None	RIGID	Typical
7	R2	N4	N10			RIGID	None	None	RIGID	Typical
8	R3	N15	N21			RIGID	None	None	RIGID	Typical
9	R4	N16	N22			RIGID	None	None	RIGID	Typical
10	R5	N19	N25			RIGID	None	None	RIGID	Typical
11	R6	N20	N26			RIGID	None	None	RIGID	Typical
12	R7	N17	N23			RIGID	None	None	RIGID	Typical
13	R8	N18	N24			RIGID	None	None	RIGID	Typical
14	SABOT	N1	N3			HSS3X3X4	Beam	Tube	A500 Gr.B Rect	Typical
15	SATOP	N2	N4			HSS3X3X4	Beam	Tube	A500 Gr.B Rect	Typical



Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Ru...
16	SAV1	N5	N6			HSS2.375X0.188	Column	HSS Pipe	A500 Gr.B RND	Typical
17	SAV2	N8	N7			HSS3.000X0.216	Column	HSS Pipe	A500 Gr.B RND	Typical
18	STAB1	N34	N33			PIPE 2.0	Beam	Pipe	A53 Gr.B	Typical
19	STAB2	N36	N35			PIPE 2.0	Beam	Pipe	A53 Gr.B	Typical

Material Takeoff

	Material	Size	Pieces	Length[in]	Weight[K]
1	General				
2	RIGID		8	19.6	0
3	Total General		8	19.6	0
4					
5	Hot Rolled Steel				
6	A500 Gr.B Rect	HSS3X3X4	2	50	0
7	A500 Gr.B RND	HSS3.000X0.216	1	56.5	0
8	A500 Gr.B RND	HSS2.375X0.188	1	36	0
9	A53 Gr.B	PIPE 2.0	7	816	.2
10	Total HR Steel		11	958.5	.3

Member Point Loads (BLC 1 : Dead Load)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	Y	-225.6	%66.7
2	MP2	Y	0	%50
3	MP3	Y	-128	%50

Member Point Loads (BLC 2 : Wind Load (0 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	211.1	%66.7
2	MP2	X	85.3	%50
3	MP3	X	0	%50
4	MP1	Z	0	%66.7
5	MP2	Z	0	%50
6	MP3	Z	0	%50

Member Point Loads (BLC 3 : Wind Load (30 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	189	%66.7
2	MP2	X	73.9	%50
3	MP3	X	18.5	%50
4	MP1	Z	109.1	%66.7
5	MP2	Z	42.6	%50
6	MP3	Z	10.7	%50

Member Point Loads (BLC 4 : Wind Load (60 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	116.3	%66.7
2	MP2	X	42.6	%50
3	MP3	X	32	%50
4	MP1	Z	201.5	%66.7
5	MP2	Z	73.9	%50
6	MP3	Z	55.4	%50



Member Point Loads (BLC 5 : Wind Load (90 deg))

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in. %]
1	MP1	X	0	%66.7
2	MP2	X	0	%50
3	MP3	X	0	%50
4	MP1	Z	239.9	%66.7
5	MP2	Z	85.3	%50
6	MP3	Z	85.3	%50

Member Point Loads (BLC 6 : Wind Load (120 deg))

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in. %]
1	MP1	X	-116.3	%66.7
2	MP2	X	-42.6	%50
3	MP3	X	-32	%50
4	MP1	Z	201.5	%66.7
5	MP2	Z	73.9	%50
6	MP3	Z	55.4	%50

Member Point Loads (BLC 7 : Wind Load (150 deg))

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in. %]
1	MP1	X	-189	%66.7
2	MP2	X	-73.9	%50
3	MP3	X	-18.5	%50
4	MP1	Z	109.1	%66.7
5	MP2	Z	42.6	%50
6	MP3	Z	10.7	%50

Member Point Loads (BLC 8 : Wind Load (180 deg))

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in. %]
1	MP1	X	-211.1	%66.7
2	MP2	X	-85.3	%50
3	MP3	X	0	%50
4	MP1	Z	0	%66.7
5	MP2	Z	0	%50
6	MP3	Z	0	%50

Member Point Loads (BLC 9 : Wind Load (210 deg))

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in. %]
1	MP1	X	-189	%66.7
2	MP2	X	-73.9	%50
3	MP3	X	-18.5	%50
4	MP1	Z	-109.1	%66.7
5	MP2	Z	-42.6	%50
6	MP3	Z	-10.7	%50

Member Point Loads (BLC 10 : Wind Load (240 deg))

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in. %]
1	MP1	X	-116.3	%66.7
2	MP2	X	-42.6	%50
3	MP3	X	-32	%50
4	MP1	Z	-201.5	%66.7
5	MP2	Z	-73.9	%50
6	MP3	Z	-55.4	%50

Member Point Loads (BLC 11 : Wind Load (270 deg))

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in. %]
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Member Point Loads (BLC 11 : Wind Load (270 deg)) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	0	%66.7
2	MP2	X	0	%50
3	MP3	X	0	%50
4	MP1	Z	-239.9	%66.7
5	MP2	Z	-85.3	%50
6	MP3	Z	-85.3	%50

Member Point Loads (BLC 12 : Wind Load (300 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	116.3	%66.7
2	MP2	X	42.6	%50
3	MP3	X	32	%50
4	MP1	Z	-201.5	%66.7
5	MP2	Z	-73.9	%50
6	MP3	Z	-55.4	%50

Member Point Loads (BLC 13 : Wind Load (330 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	189	%66.7
2	MP2	X	73.9	%50
3	MP3	X	18.5	%50
4	MP1	Z	-109.1	%66.7
5	MP2	Z	-42.6	%50
6	MP3	Z	-10.7	%50

Member Point Loads (BLC 14 : Ice Load)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	Y	-357.2	%66.7
2	MP2	Y	-53.7	%50
3	MP3	Y	-524.9	%50

Member Point Loads (BLC 15 : Wind on Ice (0 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	12.7	%66.7
2	MP2	X	8	%50
3	MP3	X	.4	%50
4	MP1	Z	0	%66.7
5	MP2	Z	0	%50
6	MP3	Z	0	%50

Member Point Loads (BLC 16 : Wind on Ice (30 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	12.3	%66.7
2	MP2	X	6.9	%50
3	MP3	X	2	%50
4	MP1	Z	7.1	%66.7
5	MP2	Z	4	%50
6	MP3	Z	1.2	%50

Member Point Loads (BLC 17 : Wind on Ice (60 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	8.6	%66.7
2	MP2	X	4	%50
3	MP3	X	3.1	%50



Member Point Loads (BLC 17 : Wind on Ice (60 deg)) (Continued)

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in. %]
4	MP1	Z	14.9	%66.7
5	MP2	Z	6.9	%50
6	MP3	Z	5.3	%50

Member Point Loads (BLC 18 : Wind on Ice (90 deg))

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in. %]
1	MP1	X	0	%66.7
2	MP2	X	0	%50
3	MP3	X	0	%50
4	MP1	Z	18.7	%66.7
5	MP2	Z	8	%50
6	MP3	Z	8	%50

Member Point Loads (BLC 19 : Wind on Ice (120 deg))

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in. %]
1	MP1	X	-8.6	%66.7
2	MP2	X	-4	%50
3	MP3	X	-3.1	%50
4	MP1	Z	14.9	%66.7
5	MP2	Z	6.9	%50
6	MP3	Z	5.3	%50

Member Point Loads (BLC 20 : Wind on Ice (150 deg))

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in. %]
1	MP1	X	-12.3	%66.7
2	MP2	X	-6.9	%50
3	MP3	X	-2	%50
4	MP1	Z	7.1	%66.7
5	MP2	Z	4	%50
6	MP3	Z	1.2	%50

Member Point Loads (BLC 21 : Wind on Ice (180 deg))

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in. %]
1	MP1	X	-12.7	%66.7
2	MP2	X	-8	%50
3	MP3	X	-4	%50
4	MP1	Z	0	%66.7
5	MP2	Z	0	%50
6	MP3	Z	0	%50

Member Point Loads (BLC 22 : Wind on Ice (210 deg))

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in. %]
1	MP1	X	-12.3	%66.7
2	MP2	X	-6.9	%50
3	MP3	X	-2	%50
4	MP1	Z	-7.1	%66.7
5	MP2	Z	-4	%50
6	MP3	Z	-1.2	%50

Member Point Loads (BLC 23 : Wind on Ice (240 deg))

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in. %]
1	MP1	X	-8.6	%66.7
2	MP2	X	-4	%50
3	MP3	X	-3.1	%50



Member Point Loads (BLC 23 : Wind on Ice (240 deg)) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
4	MP1	Z	-14.9	%66.7
5	MP2	Z	-6.9	%50
6	MP3	Z	-5.3	%50

Member Point Loads (BLC 24 : Wind on Ice (270 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	0	%66.7
2	MP2	X	0	%50
3	MP3	X	0	%50
4	MP1	Z	-18.7	%66.7
5	MP2	Z	-8	%50
6	MP3	Z	-8	%50

Member Point Loads (BLC 25 : Wind on Ice (300 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	8.6	%66.7
2	MP2	X	4	%50
3	MP3	X	3.1	%50
4	MP1	Z	-14.9	%66.7
5	MP2	Z	-6.9	%50
6	MP3	Z	-5.3	%50

Member Point Loads (BLC 26 : Wind on Ice (330 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	12.3	%66.7
2	MP2	X	6.9	%50
3	MP3	X	2	%50
4	MP1	Z	-7.1	%66.7
5	MP2	Z	-4	%50
6	MP3	Z	-1.2	%50

Member Point Loads (BLC 27 : Horizontal Seismic, Eh (0))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	225.6	%66.7
2	MP2	X	0	%50
3	MP3	X	128	%50
4	MP1	Z	0	%66.7
5	MP2	Z	0	%50
6	MP3	Z	0	%50

Member Point Loads (BLC 28 : Horizontal Seismic, Eh (30))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	195.4	%66.7
2	MP2	X	0	%50
3	MP3	X	110.9	%50
4	MP1	Z	112.8	%66.7
5	MP2	Z	0	%50
6	MP3	Z	64	%50

Member Point Loads (BLC 29 : Horizontal Seismic, Eh (60))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	112.8	%66.7
2	MP2	X	0	%50
3	MP3	X	64	%50



Member Point Loads (BLC 29 : Horizontal Seismic, Eh (60)) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
4	MP1	Z	195.4	%66.7
5	MP2	Z	0	%50
6	MP3	Z	110.9	%50

Member Point Loads (BLC 30 : Horizontal Seismic, Eh (90))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	0	%66.7
2	MP2	X	0	%50
3	MP3	X	0	%50
4	MP1	Z	225.6	%66.7
5	MP2	Z	0	%50
6	MP3	Z	128	%50

Member Point Loads (BLC 31 : Horizontal Seismic, Eh (120))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	-112.8	%66.7
2	MP2	X	0	%50
3	MP3	X	-64	%50
4	MP1	Z	195.4	%66.7
5	MP2	Z	0	%50
6	MP3	Z	110.9	%50

Member Point Loads (BLC 32 : Horizontal Seismic, Eh (150))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	-195.4	%66.7
2	MP2	X	0	%50
3	MP3	X	-110.9	%50
4	MP1	Z	112.8	%66.7
5	MP2	Z	0	%50
6	MP3	Z	64	%50

Member Point Loads (BLC 33 : Horizontal Seismic, Eh (180))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	-225.6	%66.7
2	MP2	X	0	%50
3	MP3	X	-128	%50
4	MP1	Z	0	%66.7
5	MP2	Z	0	%50
6	MP3	Z	0	%50

Member Point Loads (BLC 34 : Horizontal Seismic, Eh (210))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	-195.4	%66.7
2	MP2	X	0	%50
3	MP3	X	-110.9	%50
4	MP1	Z	-112.8	%66.7
5	MP2	Z	0	%50
6	MP3	Z	-64	%50

Member Point Loads (BLC 35 : Horizontal Seismic, Eh (240))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	-112.8	%66.7
2	MP2	X	0	%50
3	MP3	X	-64	%50



Member Point Loads (BLC 35 : Horizontal Seismic, Eh (240)) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
4	MP1	Z	-195.4	%66.7
5	MP2	Z	0	%50
6	MP3	Z	-110.9	%50

Member Point Loads (BLC 36 : Horizontal Seismic, Eh (270))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	0	%66.7
2	MP2	X	0	%50
3	MP3	X	0	%50
4	MP1	Z	-225.6	%66.7
5	MP2	Z	0	%50
6	MP3	Z	-128	%50

Member Point Loads (BLC 37 : Horizontal Seismic, Eh (300))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	112.8	%66.7
2	MP2	X	0	%50
3	MP3	X	64	%50
4	MP1	Z	-195.4	%66.7
5	MP2	Z	0	%50
6	MP3	Z	-110.9	%50

Member Point Loads (BLC 38 : Horizontal Seismic, Eh (330))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	195.4	%66.7
2	MP2	X	0	%50
3	MP3	X	110.9	%50
4	MP1	Z	-112.8	%66.7
5	MP2	Z	0	%50
6	MP3	Z	-64	%50

Member Point Loads (BLC 39 : Maintenance Load, Lm (MP1))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	Y	-500	%50

Member Point Loads (BLC 40 : Maintenance Load, Lm (MP2))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP2	Y	-500	%50

Member Point Loads (BLC 41 : Maintenance Load, Lm (MP3))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP3	Y	-500	%50

Member Point Loads (BLC 57 : Maintenance Load, Lv (Pos. 1))

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

Member Point Loads (BLC 58 : Maintenance Load, Lv (Pos. 2))

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

Member Point Loads (BLC 59 : Maintenance Load, Lv (Pos. 3))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
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Member Point Loads (BLC 59 : Maintenance Load, Lv (Pos. 3)) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	FMBOT	Y	-250	%100

Member Point Loads (BLC 60 : Maintenance Load, Lv (Pos. 4))

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

Member Point Loads (BLC 61 : Maintenance Load, Lv (Pos. 5))

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

Member Point Loads (BLC 62 : Maintenance Load, Lv (Pos. 6))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	FMTOP	Y	-250	%100

Member Point Loads (BLC 63 : Maintenance Load, Lv (Pos. 7))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	SABOT	Y	-250	%100

Member Point Loads (BLC 64 : Maintenance Load, Lv (Pos. 8))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	SATOP	Y	-250	%100

Member Distributed Loads (BLC 2 : Wind Load (0 deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in, %]	End Location[in, %]
1	FMBOT	X	14.2	14.2	0	0
2	FMTOP	X	14.2	14.2	0	0
3	SABOT	X	0	0	0	0
4	SATOP	X	0	0	0	0
5	SAV1	X	14.2	14.2	0	0
6	SAV2	X	18	18	0	0
7	STAB1	X	14.2	14.2	0	0
8	STAB2	X	14.2	14.2	0	0
9	FMBOT	Z	0	0	0	0
10	FMTOP	Z	0	0	0	0
11	SABOT	Z	0	0	0	0
12	SATOP	Z	0	0	0	0
13	SAV1	Z	0	0	0	0
14	SAV2	Z	0	0	0	0
15	STAB1	Z	0	0	0	0
16	STAB2	Z	0	0	0	0
17	MP1	X	84.1	84.1	%27.847	%100
18	MP2	X	0	0	0	0
19	MP3	X	202.3	202.3	%.069	%100
20	MP1	Z	0	0	0	0
21	MP2	Z	0	0	0	0
22	MP3	Z	0	0	0	0

Member Distributed Loads (BLC 3 : Wind Load (30 deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in, %]	End Location[in, %]
1	FMBOT	X	12.3	12.3	0	0
2	FMTOP	X	12.3	12.3	0	0
3	SABOT	X	25.9	25.9	0	0



Member Distributed Loads (BLC 3 : Wind Load (30 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[in, %]	End Location[in, %]
4	SATOP	X	25.9	25.9	0	0
5	SAV1	X	12.3	12.3	0	0
6	SAV2	X	15.5	15.5	0	0
7	STAB1	X	12.3	12.3	0	0
8	STAB2	X	12.3	12.3	0	0
9	FMBOT	Z	7.1	7.1	0	0
10	FMTOP	Z	7.1	7.1	0	0
11	SABOT	Z	15	15	0	0
12	SATOP	Z	15	15	0	0
13	SAV1	Z	7.1	7.1	0	0
14	SAV2	Z	9	9	0	0
15	STAB1	Z	7.1	7.1	0	0
16	STAB2	Z	7.1	7.1	0	0
17	MP1	X	67.5	67.5	%27.847	%100
18	MP2	X	0	0	0	0
19	MP3	X	150.6	150.6	%.069	%100
20	MP1	Z	39	39	%27.847	%100
21	MP2	Z	0	0	0	0
22	MP3	Z	87	87	%.069	%100

Member Distributed Loads (BLC 4 : Wind Load (60 deg))

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[in, %]	End Location[in, %]
1	FMBOT	X	7.1	7.1	0	0
2	FMTOP	X	7.1	7.1	0	0
3	SABOT	X	15	15	0	0
4	SATOP	X	15	15	0	0
5	SAV1	X	7.1	7.1	0	0
6	SAV2	X	9	9	0	0
7	STAB1	X	7.1	7.1	0	0
8	STAB2	X	7.1	7.1	0	0
9	FMBOT	Z	12.3	12.3	0	0
10	FMTOP	Z	12.3	12.3	0	0
11	SABOT	Z	25.9	25.9	0	0
12	SATOP	Z	25.9	25.9	0	0
13	SAV1	Z	12.3	12.3	0	0
14	SAV2	Z	15.5	15.5	0	0
15	STAB1	Z	12.3	12.3	0	0
16	STAB2	Z	12.3	12.3	0	0
17	MP1	X	32.8	32.8	%27.847	%100
18	MP2	X	0	0	0	0
19	MP3	X	58.6	58.6	%.069	%100
20	MP1	Z	56.8	56.8	%27.847	%100
21	MP2	Z	0	0	0	0
22	MP3	Z	101.5	101.5	%.069	%100

Member Distributed Loads (BLC 5 : Wind Load (90 deg))

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[in, %]	End Location[in, %]
1	FMBOT	X	0	0	0	0
2	FMTOP	X	0	0	0	0
3	SABOT	X	0	0	0	0
4	SATOP	X	0	0	0	0
5	SAV1	X	0	0	0	0
6	SAV2	X	0	0	0	0
7	STAB1	X	0	0	0	0
8	STAB2	X	0	0	0	0
9	FMBOT	Z	0	0	0	0



Member Distributed Loads (BLC 5 : Wind Load (90 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
10	FMTOP	Z	0	0	0	0
11	SABOT	Z	29.9	29.9	0	0
12	SATOP	Z	29.9	29.9	0	0
13	SAV1	Z	14.2	14.2	0	0
14	SAV2	Z	18	18	0	0
15	STAB1	Z	14.2	14.2	0	0
16	STAB2	Z	14.2	14.2	0	0
17	MP1	X	0	0	0	0
18	MP2	X	0	0	0	0
19	MP3	X	0	0	0	0
20	MP1	Z	59.3	59.3	%27.847	%100
21	MP2	Z	0	0	0	0
22	MP3	Z	88.8	88.8	%.069	%100

Member Distributed Loads (BLC 6 : Wind Load (120 deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
1	FMBOT	X	-7.1	-7.1	0	0
2	FMTOP	X	-7.1	-7.1	0	0
3	SABOT	X	-15	-15	0	0
4	SATOP	X	-15	-15	0	0
5	SAV1	X	-7.1	-7.1	0	0
6	SAV2	X	-9	-9	0	0
7	STAB1	X	-7.1	-7.1	0	0
8	STAB2	X	-7.1	-7.1	0	0
9	FMBOT	Z	12.3	12.3	0	0
10	FMTOP	Z	12.3	12.3	0	0
11	SABOT	Z	25.9	25.9	0	0
12	SATOP	Z	25.9	25.9	0	0
13	SAV1	Z	12.3	12.3	0	0
14	SAV2	Z	15.5	15.5	0	0
15	STAB1	Z	12.3	12.3	0	0
16	STAB2	Z	12.3	12.3	0	0
17	MP1	X	-32.8	-32.8	%27.847	%100
18	MP2	X	0	0	0	0
19	MP3	X	-58.6	-58.6	%.069	%100
20	MP1	Z	56.8	56.8	%27.847	%100
21	MP2	Z	0	0	0	0
22	MP3	Z	101.5	101.5	%.069	%100

Member Distributed Loads (BLC 7 : Wind Load (150 deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
1	FMBOT	X	-12.3	-12.3	0	0
2	FMTOP	X	-12.3	-12.3	0	0
3	SABOT	X	-25.9	-25.9	0	0
4	SATOP	X	-25.9	-25.9	0	0
5	SAV1	X	-12.3	-12.3	0	0
6	SAV2	X	-15.5	-15.5	0	0
7	STAB1	X	-12.3	-12.3	0	0
8	STAB2	X	-12.3	-12.3	0	0
9	FMBOT	Z	7.1	7.1	0	0
10	FMTOP	Z	7.1	7.1	0	0
11	SABOT	Z	15	15	0	0
12	SATOP	Z	15	15	0	0
13	SAV1	Z	7.1	7.1	0	0
14	SAV2	Z	9	9	0	0
15	STAB1	Z	7.1	7.1	0	0



Member Distributed Loads (BLC 7 : Wind Load (150 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
16	STAB2	Z	7.1	7.1	0	0
17	MP1	X	-67.5	-67.5	%27.847	%100
18	MP2	X	0	0	0	0
19	MP3	X	-150.6	-150.6	%.069	%100
20	MP1	Z	39	39	%27.847	%100
21	MP2	Z	0	0	0	0
22	MP3	Z	87	87	%.069	%100

Member Distributed Loads (BLC 8 : Wind Load (180 deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
1	FMBOT	X	-14.2	-14.2	0	0
2	FMTOP	X	-14.2	-14.2	0	0
3	SABOT	X	0	0	0	0
4	SATOP	X	0	0	0	0
5	SAV1	X	-14.2	-14.2	0	0
6	SAV2	X	-18	-18	0	0
7	STAB1	X	-14.2	-14.2	0	0
8	STAB2	X	-14.2	-14.2	0	0
9	FMBOT	Z	0	0	0	0
10	FMTOP	Z	0	0	0	0
11	SABOT	Z	0	0	0	0
12	SATOP	Z	0	0	0	0
13	SAV1	Z	0	0	0	0
14	SAV2	Z	0	0	0	0
15	STAB1	Z	0	0	0	0
16	STAB2	Z	0	0	0	0
17	MP1	X	-84.1	-84.1	%27.847	%100
18	MP2	X	0	0	0	0
19	MP3	X	-202.3	-202.3	%.069	%100
20	MP1	Z	0	0	0	0
21	MP2	Z	0	0	0	0
22	MP3	Z	0	0	0	0

Member Distributed Loads (BLC 9 : Wind Load (210 deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
1	FMBOT	X	-12.3	-12.3	0	0
2	FMTOP	X	-12.3	-12.3	0	0
3	SABOT	X	-25.9	-25.9	0	0
4	SATOP	X	-25.9	-25.9	0	0
5	SAV1	X	-12.3	-12.3	0	0
6	SAV2	X	-15.5	-15.5	0	0
7	STAB1	X	-12.3	-12.3	0	0
8	STAB2	X	-12.3	-12.3	0	0
9	FMBOT	Z	-7.1	-7.1	0	0
10	FMTOP	Z	-7.1	-7.1	0	0
11	SABOT	Z	-15	-15	0	0
12	SATOP	Z	-15	-15	0	0
13	SAV1	Z	-7.1	-7.1	0	0
14	SAV2	Z	-9	-9	0	0
15	STAB1	Z	-7.1	-7.1	0	0
16	STAB2	Z	-7.1	-7.1	0	0
17	MP1	X	-67.5	-67.5	%27.847	%100
18	MP2	X	0	0	0	0
19	MP3	X	-150.6	-150.6	%.069	%100
20	MP1	Z	-39	-39	%27.847	%100
21	MP2	Z	0	0	0	0



Member Distributed Loads (BLC 9 : Wind Load (210 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[in, %]	End Location[in, %]
22	MP3	Z	-87	-87	%.069	%100

Member Distributed Loads (BLC 10 : Wind Load (240 deg))

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[in, %]	End Location[in, %]
1	FMBOT	X	-7.1	-7.1	0	0
2	FMTOP	X	-7.1	-7.1	0	0
3	SABOT	X	-15	-15	0	0
4	SATOP	X	-15	-15	0	0
5	SAV1	X	-7.1	-7.1	0	0
6	SAV2	X	-9	-9	0	0
7	STAB1	X	-7.1	-7.1	0	0
8	STAB2	X	-7.1	-7.1	0	0
9	FMBOT	Z	-12.3	-12.3	0	0
10	FMTOP	Z	-12.3	-12.3	0	0
11	SABOT	Z	-25.9	-25.9	0	0
12	SATOP	Z	-25.9	-25.9	0	0
13	SAV1	Z	-12.3	-12.3	0	0
14	SAV2	Z	-15.5	-15.5	0	0
15	STAB1	Z	-12.3	-12.3	0	0
16	STAB2	Z	-12.3	-12.3	0	0
17	MP1	X	-32.8	-32.8	%27.847	%100
18	MP2	X	0	0	0	0
19	MP3	X	-58.6	-58.6	%.069	%100
20	MP1	Z	-56.8	-56.8	%27.847	%100
21	MP2	Z	0	0	0	0
22	MP3	Z	-101.5	-101.5	%.069	%100

Member Distributed Loads (BLC 11 : Wind Load (270 deg))

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[in, %]	End Location[in, %]
1	FMBOT	X	0	0	0	0
2	FMTOP	X	0	0	0	0
3	SABOT	X	0	0	0	0
4	SATOP	X	0	0	0	0
5	SAV1	X	0	0	0	0
6	SAV2	X	0	0	0	0
7	STAB1	X	0	0	0	0
8	STAB2	X	0	0	0	0
9	FMBOT	Z	0	0	0	0
10	FMTOP	Z	0	0	0	0
11	SABOT	Z	-29.9	-29.9	0	0
12	SATOP	Z	-29.9	-29.9	0	0
13	SAV1	Z	-14.2	-14.2	0	0
14	SAV2	Z	-18	-18	0	0
15	STAB1	Z	-14.2	-14.2	0	0
16	STAB2	Z	-14.2	-14.2	0	0
17	MP1	X	0	0	0	0
18	MP2	X	0	0	0	0
19	MP3	X	0	0	0	0
20	MP1	Z	-59.3	-59.3	%27.847	%100
21	MP2	Z	0	0	0	0
22	MP3	Z	-88.8	-88.8	%.069	%100

Member Distributed Loads (BLC 12 : Wind Load (300 deg))

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[in, %]	End Location[in, %]
1	FMBOT	X	7.1	7.1	0	0



Member Distributed Loads (BLC 12 : Wind Load (300 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[in, %]	End Location[in, %]
2	FMTOP	X	7.1	7.1	0	0
3	SABOT	X	15	15	0	0
4	SATOP	X	15	15	0	0
5	SAV1	X	7.1	7.1	0	0
6	SAV2	X	9	9	0	0
7	STAB1	X	7.1	7.1	0	0
8	STAB2	X	7.1	7.1	0	0
9	FMBOT	Z	-12.3	-12.3	0	0
10	FMTOP	Z	-12.3	-12.3	0	0
11	SABOT	Z	-25.9	-25.9	0	0
12	SATOP	Z	-25.9	-25.9	0	0
13	SAV1	Z	-12.3	-12.3	0	0
14	SAV2	Z	-15.5	-15.5	0	0
15	STAB1	Z	-12.3	-12.3	0	0
16	STAB2	Z	-12.3	-12.3	0	0
17	MP1	X	32.8	32.8	%27.847	%100
18	MP2	X	0	0	0	0
19	MP3	X	58.6	58.6	%.069	%100
20	MP1	Z	-56.8	-56.8	%27.847	%100
21	MP2	Z	0	0	0	0
22	MP3	Z	-101.5	-101.5	%.069	%100

Member Distributed Loads (BLC 13 : Wind Load (330 deg))

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[in, %]	End Location[in, %]
1	FMBOT	X	12.3	12.3	0	0
2	FMTOP	X	12.3	12.3	0	0
3	SABOT	X	25.9	25.9	0	0
4	SATOP	X	25.9	25.9	0	0
5	SAV1	X	12.3	12.3	0	0
6	SAV2	X	15.5	15.5	0	0
7	STAB1	X	12.3	12.3	0	0
8	STAB2	X	12.3	12.3	0	0
9	FMBOT	Z	-7.1	-7.1	0	0
10	FMTOP	Z	-7.1	-7.1	0	0
11	SABOT	Z	-15	-15	0	0
12	SATOP	Z	-15	-15	0	0
13	SAV1	Z	-7.1	-7.1	0	0
14	SAV2	Z	-9	-9	0	0
15	STAB1	Z	-7.1	-7.1	0	0
16	STAB2	Z	-7.1	-7.1	0	0
17	MP1	X	67.5	67.5	%27.847	%100
18	MP2	X	0	0	0	0
19	MP3	X	150.6	150.6	%.069	%100
20	MP1	Z	-39	-39	%27.847	%100
21	MP2	Z	0	0	0	0
22	MP3	Z	-87	-87	%.069	%100

Member Distributed Loads (BLC 14 : Ice Load)

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[in, %]	End Location[in, %]
1	FMBOT	Y	-8.9	-8.9	0	0
2	FMTOP	Y	-8.9	-8.9	0	0
3	SABOT	Y	-13	-13	0	0
4	SATOP	Y	-13	-13	0	0
5	SAV1	Y	-8.9	-8.9	0	0
6	SAV2	Y	-10.3	-10.3	0	0
7	STAB1	Y	-8.9	-8.9	0	0



Member Distributed Loads (BLC 14 : Ice Load) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...]	End Magnitude[lb/ft,...]	Start Location[in, %]	End Location[in, %]
8	STAB2	Y	-8.9	-8.9	0	0

Member Distributed Loads (BLC 15 : Wind on Ice (0 deg))

	Member Label	Direction	Start Magnitude[lb/ft,...]	End Magnitude[lb/ft,...]	Start Location[in, %]	End Location[in, %]
1	FMBOT	X	1.6	1.6	0	0
2	FMTOP	X	1.6	1.6	0	0
3	SABOT	X	0	0	0	0
4	SATOP	X	0	0	0	0
5	SAV1	X	1.6	1.6	0	0
6	SAV2	X	1.8	1.8	0	0
7	STAB1	X	1.6	1.6	0	0
8	STAB2	X	1.6	1.6	0	0
9	FMBOT	Z	0	0	0	0
10	FMTOP	Z	0	0	0	0
11	SABOT	Z	0	0	0	0
12	SATOP	Z	0	0	0	0
13	SAV1	Z	0	0	0	0
14	SAV2	Z	0	0	0	0
15	STAB1	Z	0	0	0	0
16	STAB2	Z	0	0	0	0
17	MP1	X	4.5	4.5	%27.847	%100
18	MP2	X	0	0	0	0
19	MP3	X	10.1	10.1	%.069	%100
20	MP1	Z	0	0	0	0
21	MP2	Z	0	0	0	0
22	MP3	Z	0	0	0	0

Member Distributed Loads (BLC 16 : Wind on Ice (30 deg))

	Member Label	Direction	Start Magnitude[lb/ft,...]	End Magnitude[lb/ft,...]	Start Location[in, %]	End Location[in, %]
1	FMBOT	X	1.4	1.4	0	0
2	FMTOP	X	1.4	1.4	0	0
3	SABOT	X	2.1	2.1	0	0
4	SATOP	X	2.1	2.1	0	0
5	SAV1	X	1.4	1.4	0	0
6	SAV2	X	1.6	1.6	0	0
7	STAB1	X	1.4	1.4	0	0
8	STAB2	X	1.4	1.4	0	0
9	FMBOT	Z	.8	.8	0	0
10	FMTOP	Z	.8	.8	0	0
11	SABOT	Z	1.2	1.2	0	0
12	SATOP	Z	1.2	1.2	0	0
13	SAV1	Z	.8	.8	0	0
14	SAV2	Z	.9	.9	0	0
15	STAB1	Z	.8	.8	0	0
16	STAB2	Z	.8	.8	0	0
17	MP1	X	3.7	3.7	%27.847	%100
18	MP2	X	0	0	0	0
19	MP3	X	7.6	7.6	%.069	%100
20	MP1	Z	2.1	2.1	%27.847	%100
21	MP2	Z	0	0	0	0
22	MP3	Z	4.4	4.4	%.069	%100

Member Distributed Loads (BLC 17 : Wind on Ice (60 deg))

	Member Label	Direction	Start Magnitude[lb/ft,...]	End Magnitude[lb/ft,...]	Start Location[in, %]	End Location[in, %]
1	FMBOT	X	.8	.8	0	0



Member Distributed Loads (BLC 17 : Wind on Ice (60 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
2	FMTOP	X	.8	.8	0	0
3	SABOT	X	1.2	1.2	0	0
4	SATOP	X	1.2	1.2	0	0
5	SAV1	X	.8	.8	0	0
6	SAV2	X	.9	.9	0	0
7	STAB1	X	.8	.8	0	0
8	STAB2	X	.8	.8	0	0
9	FMBOT	Z	1.4	1.4	0	0
10	FMTOP	Z	1.4	1.4	0	0
11	SABOT	Z	2.1	2.1	0	0
12	SATOP	Z	2.1	2.1	0	0
13	SAV1	Z	1.4	1.4	0	0
14	SAV2	Z	1.6	1.6	0	0
15	STAB1	Z	1.4	1.4	0	0
16	STAB2	Z	1.4	1.4	0	0
17	MP1	X	1.8	1.8	%27.847	%100
18	MP2	X	0	0	0	0
19	MP3	X	3.1	3.1	%.069	%100
20	MP1	Z	3.2	3.2	%27.847	%100
21	MP2	Z	0	0	0	0
22	MP3	Z	5.4	5.4	%.069	%100

Member Distributed Loads (BLC 18 : Wind on Ice (90 deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
1	FMBOT	X	0	0	0	0
2	FMTOP	X	0	0	0	0
3	SABOT	X	0	0	0	0
4	SATOP	X	0	0	0	0
5	SAV1	X	0	0	0	0
6	SAV2	X	0	0	0	0
7	STAB1	X	0	0	0	0
8	STAB2	X	0	0	0	0
9	FMBOT	Z	0	0	0	0
10	FMTOP	Z	0	0	0	0
11	SABOT	Z	2.4	2.4	0	0
12	SATOP	Z	2.4	2.4	0	0
13	SAV1	Z	1.6	1.6	0	0
14	SAV2	Z	1.8	1.8	0	0
15	STAB1	Z	1.6	1.6	0	0
16	STAB2	Z	1.6	1.6	0	0
17	MP1	X	0	0	0	0
18	MP2	X	0	0	0	0
19	MP3	X	0	0	0	0
20	MP1	Z	3.4	3.4	%27.847	%100
21	MP2	Z	0	0	0	0
22	MP3	Z	4.9	4.9	%.069	%100

Member Distributed Loads (BLC 19 : Wind on Ice (120 deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
1	FMBOT	X	-8	-8	0	0
2	FMTOP	X	-8	-8	0	0
3	SABOT	X	-1.2	-1.2	0	0
4	SATOP	X	-1.2	-1.2	0	0
5	SAV1	X	-8	-8	0	0
6	SAV2	X	-9	-9	0	0
7	STAB1	X	-8	-8	0	0



Member Distributed Loads (BLC 19 : Wind on Ice (120 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[in, %]	End Location[in, %]
8	STAB2	X	-8	-8	0	0
9	FMBOT	Z	1.4	1.4	0	0
10	FMTOP	Z	1.4	1.4	0	0
11	SABOT	Z	2.1	2.1	0	0
12	SATOP	Z	2.1	2.1	0	0
13	SAV1	Z	1.4	1.4	0	0
14	SAV2	Z	1.6	1.6	0	0
15	STAB1	Z	1.4	1.4	0	0
16	STAB2	Z	1.4	1.4	0	0
17	MP1	X	-1.8	-1.8	%27.847	%100
18	MP2	X	0	0	0	0
19	MP3	X	-3.1	-3.1	%.069	%100
20	MP1	Z	3.2	3.2	%27.847	%100
21	MP2	Z	0	0	0	0
22	MP3	Z	5.4	5.4	%.069	%100

Member Distributed Loads (BLC 20 : Wind on Ice (150 deg))

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[in, %]	End Location[in, %]
1	FMBOT	X	-1.4	-1.4	0	0
2	FMTOP	X	-1.4	-1.4	0	0
3	SABOT	X	-2.1	-2.1	0	0
4	SATOP	X	-2.1	-2.1	0	0
5	SAV1	X	-1.4	-1.4	0	0
6	SAV2	X	-1.6	-1.6	0	0
7	STAB1	X	-1.4	-1.4	0	0
8	STAB2	X	-1.4	-1.4	0	0
9	FMBOT	Z	.8	.8	0	0
10	FMTOP	Z	.8	.8	0	0
11	SABOT	Z	1.2	1.2	0	0
12	SATOP	Z	1.2	1.2	0	0
13	SAV1	Z	.8	.8	0	0
14	SAV2	Z	.9	.9	0	0
15	STAB1	Z	.8	.8	0	0
16	STAB2	Z	.8	.8	0	0
17	MP1	X	-3.7	-3.7	%27.847	%100
18	MP2	X	0	0	0	0
19	MP3	X	-7.6	-7.6	%.069	%100
20	MP1	Z	2.1	2.1	%27.847	%100
21	MP2	Z	0	0	0	0
22	MP3	Z	4.4	4.4	%.069	%100

Member Distributed Loads (BLC 21 : Wind on Ice (180 deg))

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[in, %]	End Location[in, %]
1	FMBOT	X	-1.6	-1.6	0	0
2	FMTOP	X	-1.6	-1.6	0	0
3	SABOT	X	0	0	0	0
4	SATOP	X	0	0	0	0
5	SAV1	X	-1.6	-1.6	0	0
6	SAV2	X	-1.8	-1.8	0	0
7	STAB1	X	-1.6	-1.6	0	0
8	STAB2	X	-1.6	-1.6	0	0
9	FMBOT	Z	0	0	0	0
10	FMTOP	Z	0	0	0	0
11	SABOT	Z	0	0	0	0
12	SATOP	Z	0	0	0	0
13	SAV1	Z	0	0	0	0



Member Distributed Loads (BLC 21 : Wind on Ice (180 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[in, %]	End Location[in, %]
14	SAV2	Z	0	0	0	0
15	STAB1	Z	0	0	0	0
16	STAB2	Z	0	0	0	0
17	MP1	X	-4.5	-4.5	%27.847	%100
18	MP2	X	0	0	0	0
19	MP3	X	-10.1	-10.1	%.069	%100
20	MP1	Z	0	0	0	0
21	MP2	Z	0	0	0	0
22	MP3	Z	0	0	0	0

Member Distributed Loads (BLC 22 : Wind on Ice (210 deg))

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[in, %]	End Location[in, %]
1	FMBOT	X	-1.4	-1.4	0	0
2	FMTOP	X	-1.4	-1.4	0	0
3	SABOT	X	-2.1	-2.1	0	0
4	SATOP	X	-2.1	-2.1	0	0
5	SAV1	X	-1.4	-1.4	0	0
6	SAV2	X	-1.6	-1.6	0	0
7	STAB1	X	-1.4	-1.4	0	0
8	STAB2	X	-1.4	-1.4	0	0
9	FMBOT	Z	-8	-8	0	0
10	FMTOP	Z	-8	-8	0	0
11	SABOT	Z	-1.2	-1.2	0	0
12	SATOP	Z	-1.2	-1.2	0	0
13	SAV1	Z	-8	-8	0	0
14	SAV2	Z	-9	-9	0	0
15	STAB1	Z	-8	-8	0	0
16	STAB2	Z	-8	-8	0	0
17	MP1	X	-3.7	-3.7	%27.847	%100
18	MP2	X	0	0	0	0
19	MP3	X	-7.6	-7.6	%.069	%100
20	MP1	Z	-2.1	-2.1	%27.847	%100
21	MP2	Z	0	0	0	0
22	MP3	Z	-4.4	-4.4	%.069	%100

Member Distributed Loads (BLC 23 : Wind on Ice (240 deg))

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[in, %]	End Location[in, %]
1	FMBOT	X	-8	-8	0	0
2	FMTOP	X	-8	-8	0	0
3	SABOT	X	-1.2	-1.2	0	0
4	SATOP	X	-1.2	-1.2	0	0
5	SAV1	X	-8	-8	0	0
6	SAV2	X	-9	-9	0	0
7	STAB1	X	-8	-8	0	0
8	STAB2	X	-8	-8	0	0
9	FMBOT	Z	-1.4	-1.4	0	0
10	FMTOP	Z	-1.4	-1.4	0	0
11	SABOT	Z	-2.1	-2.1	0	0
12	SATOP	Z	-2.1	-2.1	0	0
13	SAV1	Z	-1.4	-1.4	0	0
14	SAV2	Z	-1.6	-1.6	0	0
15	STAB1	Z	-1.4	-1.4	0	0
16	STAB2	Z	-1.4	-1.4	0	0
17	MP1	X	-1.8	-1.8	%27.847	%100
18	MP2	X	0	0	0	0
19	MP3	X	-3.1	-3.1	%.069	%100



Member Distributed Loads (BLC 23 : Wind on Ice (240 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
20	MP1	Z	-3.2	-3.2	%27.847	%100
21	MP2	Z	0	0	0	0
22	MP3	Z	-5.4	-5.4	%.069	%100

Member Distributed Loads (BLC 24 : Wind on Ice (270 deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
1	FMBOT	X	0	0	0	0
2	FMTOP	X	0	0	0	0
3	SABOT	X	0	0	0	0
4	SATOP	X	0	0	0	0
5	SAV1	X	0	0	0	0
6	SAV2	X	0	0	0	0
7	STAB1	X	0	0	0	0
8	STAB2	X	0	0	0	0
9	FMBOT	Z	0	0	0	0
10	FMTOP	Z	0	0	0	0
11	SABOT	Z	-2.4	-2.4	0	0
12	SATOP	Z	-2.4	-2.4	0	0
13	SAV1	Z	-1.6	-1.6	0	0
14	SAV2	Z	-1.8	-1.8	0	0
15	STAB1	Z	-1.6	-1.6	0	0
16	STAB2	Z	-1.6	-1.6	0	0
17	MP1	X	0	0	0	0
18	MP2	X	0	0	0	0
19	MP3	X	0	0	0	0
20	MP1	Z	-3.4	-3.4	%27.847	%100
21	MP2	Z	0	0	0	0
22	MP3	Z	-4.9	-4.9	%.069	%100

Member Distributed Loads (BLC 25 : Wind on Ice (300 deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
1	FMBOT	X	.8	.8	0	0
2	FMTOP	X	.8	.8	0	0
3	SABOT	X	1.2	1.2	0	0
4	SATOP	X	1.2	1.2	0	0
5	SAV1	X	.8	.8	0	0
6	SAV2	X	.9	.9	0	0
7	STAB1	X	.8	.8	0	0
8	STAB2	X	.8	.8	0	0
9	FMBOT	Z	-1.4	-1.4	0	0
10	FMTOP	Z	-1.4	-1.4	0	0
11	SABOT	Z	-2.1	-2.1	0	0
12	SATOP	Z	-2.1	-2.1	0	0
13	SAV1	Z	-1.4	-1.4	0	0
14	SAV2	Z	-1.6	-1.6	0	0
15	STAB1	Z	-1.4	-1.4	0	0
16	STAB2	Z	-1.4	-1.4	0	0
17	MP1	X	1.8	1.8	%27.847	%100
18	MP2	X	0	0	0	0
19	MP3	X	3.1	3.1	%.069	%100
20	MP1	Z	-3.2	-3.2	%27.847	%100
21	MP2	Z	0	0	0	0
22	MP3	Z	-5.4	-5.4	%.069	%100

Member Distributed Loads (BLC 26 : Wind on Ice (330 deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
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Member Distributed Loads (BLC 26 : Wind on Ice (330 deg)) (Continued)

Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]	
1	FMBOT	X	1.4	1.4	0	0
2	FMTOP	X	1.4	1.4	0	0
3	SABOT	X	2.1	2.1	0	0
4	SATOP	X	2.1	2.1	0	0
5	SAV1	X	1.4	1.4	0	0
6	SAV2	X	1.6	1.6	0	0
7	STAB1	X	1.4	1.4	0	0
8	STAB2	X	1.4	1.4	0	0
9	FMBOT	Z	-8	-8	0	0
10	FMTOP	Z	-8	-8	0	0
11	SABOT	Z	-1.2	-1.2	0	0
12	SATOP	Z	-1.2	-1.2	0	0
13	SAV1	Z	-8	-8	0	0
14	SAV2	Z	-9	-9	0	0
15	STAB1	Z	-8	-8	0	0
16	STAB2	Z	-8	-8	0	0
17	MP1	X	3.7	3.7	%27.847	%100
18	MP2	X	0	0	0	0
19	MP3	X	7.6	7.6	%0.069	%100
20	MP1	Z	-2.1	-2.1	%27.847	%100
21	MP2	Z	0	0	0	0
22	MP3	Z	-4.4	-4.4	%0.069	%100

Load Combinations

Description	Solve P...	SR...	BLC Fac...									
1	1.4D	Yes	Y	1	1.4							
2	1.2D + 1.0W (0 ...	Yes	Y	1	1.2	2	1					
3	1.2D + 1.0W (30...	Yes	Y	1	1.2	3	1					
4	1.2D + 1.0W (60...	Yes	Y	1	1.2	4	1					
5	1.2D + 1.0W (90...	Yes	Y	1	1.2	5	1					
6	1.2D + 1.0W (12...	Yes	Y	1	1.2	6	1					
7	1.2D + 1.0W (15...	Yes	Y	1	1.2	7	1					
8	1.2D + 1.0W (18...	Yes	Y	1	1.2	8	1					
9	1.2D + 1.0W (21...	Yes	Y	1	1.2	9	1					
10	1.2D + 1.0W (24...	Yes	Y	1	1.2	10	1					
11	1.2D + 1.0W (27...	Yes	Y	1	1.2	11	1					
12	1.2D + 1.0W (30...	Yes	Y	1	1.2	12	1					
13	1.2D + 1.0W (33...	Yes	Y	1	1.2	13	1					
14	1.2D + Di + Wi (...	Yes	Y	1	1.2	14	1	15	1			
15	1.2D + Di + Wi (...	Yes	Y	1	1.2	14	1	16	1			
16	1.2D + Di + Wi (...	Yes	Y	1	1.2	14	1	17	1			
17	1.2D + Di + Wi (...	Yes	Y	1	1.2	14	1	18	1			
18	1.2D + Di + Wi (...	Yes	Y	1	1.2	14	1	19	1			
19	1.2D + Di + Wi (...	Yes	Y	1	1.2	14	1	20	1			
20	1.2D + Di + Wi (...	Yes	Y	1	1.2	14	1	21	1			
21	1.2D + Di + Wi (...	Yes	Y	1	1.2	14	1	22	1			
22	1.2D + Di + Wi (...	Yes	Y	1	1.2	14	1	23	1			
23	1.2D + Di + Wi (...	Yes	Y	1	1.2	14	1	24	1			
24	1.2D + Di + Wi (...	Yes	Y	1	1.2	14	1	25	1			
25	1.2D + Di + Wi (...	Yes	Y	1	1.2	14	1	26	1			
26	1.2D + 1.0 Ev + ...	Yes	Y	1	1.2	1	.036	27	.09			
27	1.2D + 1.0 Ev + ...	Yes	Y	1	1.2	1	.036	28	.09			
28	1.2D + 1.0 Ev + ...	Yes	Y	1	1.2	1	.036	29	.09			
29	1.2D + 1.0 Ev + ...	Yes	Y	1	1.2	1	.036	30	.09			
30	1.2D + 1.0 Ev + ...	Yes	Y	1	1.2	1	.036	31	.09			



Load Combinations (Continued)

Description	Solve P...	SR...	BLC Fac...									
31 1.2D + 1.0 Ev + ...	Yes	Y	1	1.2	1	.036	32	.09				
32 1.2D + 1.0 Ev + ...	Yes	Y	1	1.2	1	.036	33	.09				
33 1.2D + 1.0 Ev + ...	Yes	Y	1	1.2	1	.036	34	.09				
34 1.2D + 1.0 Ev + ...	Yes	Y	1	1.2	1	.036	35	.09				
35 1.2D + 1.0 Ev + ...	Yes	Y	1	1.2	1	.036	36	.09				
36 1.2D + 1.0 Ev + ...	Yes	Y	1	1.2	1	.036	37	.09				
37 1.2D + 1.0 Ev + ...	Yes	Y	1	1.2	1	.036	38	.09				
38 1.2D + 1.5Lm1 + ...	Yes	Y	1	1.2	39	1.5	2	.129				
39 1.2D + 1.5Lm1 + ...	Yes	Y	1	1.2	39	1.5	3	.129				
40 1.2D + 1.5Lm1 + ...	Yes	Y	1	1.2	39	1.5	4	.129				
41 1.2D + 1.5Lm1 + ...	Yes	Y	1	1.2	39	1.5	5	.129				
42 1.2D + 1.5Lm1 + ...	Yes	Y	1	1.2	39	1.5	6	.129				
43 1.2D + 1.5Lm1 + ...	Yes	Y	1	1.2	39	1.5	7	.129				
44 1.2D + 1.5Lm1 + ...	Yes	Y	1	1.2	39	1.5	8	.129				
45 1.2D + 1.5Lm1 + ...	Yes	Y	1	1.2	39	1.5	9	.129				
46 1.2D + 1.5Lm1 + ...	Yes	Y	1	1.2	39	1.5	10	.129				
47 1.2D + 1.5Lm1 + ...	Yes	Y	1	1.2	39	1.5	11	.129				
48 1.2D + 1.5Lm1 + ...	Yes	Y	1	1.2	39	1.5	12	.129				
49 1.2D + 1.5Lm1 + ...	Yes	Y	1	1.2	39	1.5	13	.129				
50 1.2D + 1.5Lm2 + ...	Yes	Y	1	1.2	40	1.5	2	.129				
51 1.2D + 1.5Lm2 + ...	Yes	Y	1	1.2	40	1.5	3	.129				
52 1.2D + 1.5Lm2 + ...	Yes	Y	1	1.2	40	1.5	4	.129				
53 1.2D + 1.5Lm2 + ...	Yes	Y	1	1.2	40	1.5	5	.129				
54 1.2D + 1.5Lm2 + ...	Yes	Y	1	1.2	40	1.5	6	.129				
55 1.2D + 1.5Lm2 + ...	Yes	Y	1	1.2	40	1.5	7	.129				
56 1.2D + 1.5Lm2 + ...	Yes	Y	1	1.2	40	1.5	8	.129				
57 1.2D + 1.5Lm2 + ...	Yes	Y	1	1.2	40	1.5	9	.129				
58 1.2D + 1.5Lm2 + ...	Yes	Y	1	1.2	40	1.5	10	.129				
59 1.2D + 1.5Lm2 + ...	Yes	Y	1	1.2	40	1.5	11	.129				
60 1.2D + 1.5Lm2 + ...	Yes	Y	1	1.2	40	1.5	12	.129				
61 1.2D + 1.5Lm2 + ...	Yes	Y	1	1.2	40	1.5	13	.129				
62 1.2D + 1.5Lm3 + ...	Yes	Y	1	1.2	41	1.5	2	.129				
63 1.2D + 1.5Lm3 + ...	Yes	Y	1	1.2	41	1.5	3	.129				
64 1.2D + 1.5Lm3 + ...	Yes	Y	1	1.2	41	1.5	4	.129				
65 1.2D + 1.5Lm3 + ...	Yes	Y	1	1.2	41	1.5	5	.129				
66 1.2D + 1.5Lm3 + ...	Yes	Y	1	1.2	41	1.5	6	.129				
67 1.2D + 1.5Lm3 + ...	Yes	Y	1	1.2	41	1.5	7	.129				
68 1.2D + 1.5Lm3 + ...	Yes	Y	1	1.2	41	1.5	8	.129				
69 1.2D + 1.5Lm3 + ...	Yes	Y	1	1.2	41	1.5	9	.129				
70 1.2D + 1.5Lm3 + ...	Yes	Y	1	1.2	41	1.5	10	.129				
71 1.2D + 1.5Lm3 + ...	Yes	Y	1	1.2	41	1.5	11	.129				
72 1.2D + 1.5Lm3 + ...	Yes	Y	1	1.2	41	1.5	12	.129				
73 1.2D + 1.5Lm3 + ...	Yes	Y	1	1.2	41	1.5	13	.129				
74 1.2D + 1.5Lm4 + ...	Yes	Y	1	1.2	42	1.5	2	.129				
75 1.2D + 1.5Lm4 + ...	Yes	Y	1	1.2	42	1.5	3	.129				
76 1.2D + 1.5Lm4 + ...	Yes	Y	1	1.2	42	1.5	4	.129				
77 1.2D + 1.5Lm4 + ...	Yes	Y	1	1.2	42	1.5	5	.129				
78 1.2D + 1.5Lm4 + ...	Yes	Y	1	1.2	42	1.5	6	.129				
79 1.2D + 1.5Lm4 + ...	Yes	Y	1	1.2	42	1.5	7	.129				
80 1.2D + 1.5Lm4 + ...	Yes	Y	1	1.2	42	1.5	8	.129				
81 1.2D + 1.5Lm4 + ...	Yes	Y	1	1.2	42	1.5	9	.129				
82 1.2D + 1.5Lm4 + ...	Yes	Y	1	1.2	42	1.5	10	.129				
83 1.2D + 1.5Lm4 + ...	Yes	Y	1	1.2	42	1.5	11	.129				
84 1.2D + 1.5Lm4 + ...	Yes	Y	1	1.2	42	1.5	12	.129				
85 1.2D + 1.5Lm4 + ...	Yes	Y	1	1.2	42	1.5	13	.129				
86 1.2D + 1.5Lm5 + ...	Yes	Y	1	1.2	43	1.5	2	.129				
87 1.2D + 1.5Lm5 + ...	Yes	Y	1	1.2	43	1.5	3	.129				



Load Combinations (Continued)

Description	Solve P...	SR...	BLC Fac...										
88	1.2D + 1.5Lm5 +...	Yes	Y	1	1.2	43	1.5	4	.129				
89	1.2D + 1.5Lm5 +...	Yes	Y	1	1.2	43	1.5	5	.129				
90	1.2D + 1.5Lm5 +...	Yes	Y	1	1.2	43	1.5	6	.129				
91	1.2D + 1.5Lm5 +...	Yes	Y	1	1.2	43	1.5	7	.129				
92	1.2D + 1.5Lm5 +...	Yes	Y	1	1.2	43	1.5	8	.129				
93	1.2D + 1.5Lm5 +...	Yes	Y	1	1.2	43	1.5	9	.129				
94	1.2D + 1.5Lm5 +...	Yes	Y	1	1.2	43	1.5	10	.129				
95	1.2D + 1.5Lm5 +...	Yes	Y	1	1.2	43	1.5	11	.129				
96	1.2D + 1.5Lm5 +...	Yes	Y	1	1.2	43	1.5	12	.129				
97	1.2D + 1.5Lm5 +...	Yes	Y	1	1.2	43	1.5	13	.129				
98	1.2D + 1.5Lm6 +...	Yes	Y	1	1.2	44	1.5	2	.129				
99	1.2D + 1.5Lm6 +...	Yes	Y	1	1.2	44	1.5	3	.129				
100	1.2D + 1.5Lm6 +...	Yes	Y	1	1.2	44	1.5	4	.129				
101	1.2D + 1.5Lm6 +...	Yes	Y	1	1.2	44	1.5	5	.129				
102	1.2D + 1.5Lm6 +...	Yes	Y	1	1.2	44	1.5	6	.129				
103	1.2D + 1.5Lm6 +...	Yes	Y	1	1.2	44	1.5	7	.129				
104	1.2D + 1.5Lm6 +...	Yes	Y	1	1.2	44	1.5	8	.129				
105	1.2D + 1.5Lm6 +...	Yes	Y	1	1.2	44	1.5	9	.129				
106	1.2D + 1.5Lm6 +...	Yes	Y	1	1.2	44	1.5	10	.129				
107	1.2D + 1.5Lm6 +...	Yes	Y	1	1.2	44	1.5	11	.129				
108	1.2D + 1.5Lm6 +...	Yes	Y	1	1.2	44	1.5	12	.129				
109	1.2D + 1.5Lm6 +...	Yes	Y	1	1.2	44	1.5	13	.129				
110	1.2D + 1.5Lm7 +...	Yes	Y	1	1.2	45	1.5	2	.129				
111	1.2D + 1.5Lm7 +...	Yes	Y	1	1.2	45	1.5	3	.129				
112	1.2D + 1.5Lm7 +...	Yes	Y	1	1.2	45	1.5	4	.129				
113	1.2D + 1.5Lm7 +...	Yes	Y	1	1.2	45	1.5	5	.129				
114	1.2D + 1.5Lm7 +...	Yes	Y	1	1.2	45	1.5	6	.129				
115	1.2D + 1.5Lm7 +...	Yes	Y	1	1.2	45	1.5	7	.129				
116	1.2D + 1.5Lm7 +...	Yes	Y	1	1.2	45	1.5	8	.129				
117	1.2D + 1.5Lm7 +...	Yes	Y	1	1.2	45	1.5	9	.129				
118	1.2D + 1.5Lm7 +...	Yes	Y	1	1.2	45	1.5	10	.129				
119	1.2D + 1.5Lm7 +...	Yes	Y	1	1.2	45	1.5	11	.129				
120	1.2D + 1.5Lm7 +...	Yes	Y	1	1.2	45	1.5	12	.129				
121	1.2D + 1.5Lm7 +...	Yes	Y	1	1.2	45	1.5	13	.129				
122	1.2D + 1.5Lm8 +...	Yes	Y	1	1.2	46	1.5	2	.129				
123	1.2D + 1.5Lm8 +...	Yes	Y	1	1.2	46	1.5	3	.129				
124	1.2D + 1.5Lm8 +...	Yes	Y	1	1.2	46	1.5	4	.129				
125	1.2D + 1.5Lm8 +...	Yes	Y	1	1.2	46	1.5	5	.129				
126	1.2D + 1.5Lm8 +...	Yes	Y	1	1.2	46	1.5	6	.129				
127	1.2D + 1.5Lm8 +...	Yes	Y	1	1.2	46	1.5	7	.129				
128	1.2D + 1.5Lm8 +...	Yes	Y	1	1.2	46	1.5	8	.129				
129	1.2D + 1.5Lm8 +...	Yes	Y	1	1.2	46	1.5	9	.129				
130	1.2D + 1.5Lm8 +...	Yes	Y	1	1.2	46	1.5	10	.129				
131	1.2D + 1.5Lm8 +...	Yes	Y	1	1.2	46	1.5	11	.129				
132	1.2D + 1.5Lm8 +...	Yes	Y	1	1.2	46	1.5	12	.129				
133	1.2D + 1.5Lm8 +...	Yes	Y	1	1.2	46	1.5	13	.129				
134	1.2D + 1.5Lm9 +...	Yes	Y	1	1.2	47	1.5	2	.129				
135	1.2D + 1.5Lm9 +...	Yes	Y	1	1.2	47	1.5	3	.129				
136	1.2D + 1.5Lm9 +...	Yes	Y	1	1.2	47	1.5	4	.129				
137	1.2D + 1.5Lm9 +...	Yes	Y	1	1.2	47	1.5	5	.129				
138	1.2D + 1.5Lm9 +...	Yes	Y	1	1.2	47	1.5	6	.129				
139	1.2D + 1.5Lm9 +...	Yes	Y	1	1.2	47	1.5	7	.129				
140	1.2D + 1.5Lm9 +...	Yes	Y	1	1.2	47	1.5	8	.129				
141	1.2D + 1.5Lm9 +...	Yes	Y	1	1.2	47	1.5	9	.129				
142	1.2D + 1.5Lm9 +...	Yes	Y	1	1.2	47	1.5	10	.129				
143	1.2D + 1.5Lm9 +...	Yes	Y	1	1.2	47	1.5	11	.129				
144	1.2D + 1.5Lm9 +...	Yes	Y	1	1.2	47	1.5	12	.129				



Load Combinations (Continued)

Description	Solve P...	SR...	BLC Fac...									
145 1.2D + 1.5Lm9 +...	Yes	Y	1	1.2	47	1.5	13	.129				
146 1.2D + 1.5Lm10...	Yes	Y	1	1.2	48	1.5	2	.129				
147 1.2D + 1.5Lm10...	Yes	Y	1	1.2	48	1.5	3	.129				
148 1.2D + 1.5Lm10...	Yes	Y	1	1.2	48	1.5	4	.129				
149 1.2D + 1.5Lm10...	Yes	Y	1	1.2	48	1.5	5	.129				
150 1.2D + 1.5Lm10...	Yes	Y	1	1.2	48	1.5	6	.129				
151 1.2D + 1.5Lm10...	Yes	Y	1	1.2	48	1.5	7	.129				
152 1.2D + 1.5Lm10...	Yes	Y	1	1.2	48	1.5	8	.129				
153 1.2D + 1.5Lm10...	Yes	Y	1	1.2	48	1.5	9	.129				
154 1.2D + 1.5Lm10...	Yes	Y	1	1.2	48	1.5	10	.129				
155 1.2D + 1.5Lm10...	Yes	Y	1	1.2	48	1.5	11	.129				
156 1.2D + 1.5Lm10...	Yes	Y	1	1.2	48	1.5	12	.129				
157 1.2D + 1.5Lm10...	Yes	Y	1	1.2	48	1.5	13	.129				
158 1.2D + 1.5Lm11...	Yes	Y	1	1.2	49	1.5	2	.129				
159 1.2D + 1.5Lm11...	Yes	Y	1	1.2	49	1.5	3	.129				
160 1.2D + 1.5Lm11...	Yes	Y	1	1.2	49	1.5	4	.129				
161 1.2D + 1.5Lm11...	Yes	Y	1	1.2	49	1.5	5	.129				
162 1.2D + 1.5Lm11...	Yes	Y	1	1.2	49	1.5	6	.129				
163 1.2D + 1.5Lm11...	Yes	Y	1	1.2	49	1.5	7	.129				
164 1.2D + 1.5Lm11...	Yes	Y	1	1.2	49	1.5	8	.129				
165 1.2D + 1.5Lm11...	Yes	Y	1	1.2	49	1.5	9	.129				
166 1.2D + 1.5Lm11...	Yes	Y	1	1.2	49	1.5	10	.129				
167 1.2D + 1.5Lm11...	Yes	Y	1	1.2	49	1.5	11	.129				
168 1.2D + 1.5Lm11...	Yes	Y	1	1.2	49	1.5	12	.129				
169 1.2D + 1.5Lm11...	Yes	Y	1	1.2	49	1.5	13	.129				
170 1.2D + 1.5Lm12...	Yes	Y	1	1.2	50	1.5	2	.129				
171 1.2D + 1.5Lm12...	Yes	Y	1	1.2	50	1.5	3	.129				
172 1.2D + 1.5Lm12...	Yes	Y	1	1.2	50	1.5	4	.129				
173 1.2D + 1.5Lm12...	Yes	Y	1	1.2	50	1.5	5	.129				
174 1.2D + 1.5Lm12...	Yes	Y	1	1.2	50	1.5	6	.129				
175 1.2D + 1.5Lm12...	Yes	Y	1	1.2	50	1.5	7	.129				
176 1.2D + 1.5Lm12...	Yes	Y	1	1.2	50	1.5	8	.129				
177 1.2D + 1.5Lm12...	Yes	Y	1	1.2	50	1.5	9	.129				
178 1.2D + 1.5Lm12...	Yes	Y	1	1.2	50	1.5	10	.129				
179 1.2D + 1.5Lm12...	Yes	Y	1	1.2	50	1.5	11	.129				
180 1.2D + 1.5Lm12...	Yes	Y	1	1.2	50	1.5	12	.129				
181 1.2D + 1.5Lm12...	Yes	Y	1	1.2	50	1.5	13	.129				
182 1.2D + 1.5Lm13...	Yes	Y	1	1.2	51	1.5	2	.129				
183 1.2D + 1.5Lm13...	Yes	Y	1	1.2	51	1.5	3	.129				
184 1.2D + 1.5Lm13...	Yes	Y	1	1.2	51	1.5	4	.129				
185 1.2D + 1.5Lm13...	Yes	Y	1	1.2	51	1.5	5	.129				
186 1.2D + 1.5Lm13...	Yes	Y	1	1.2	51	1.5	6	.129				
187 1.2D + 1.5Lm13...	Yes	Y	1	1.2	51	1.5	7	.129				
188 1.2D + 1.5Lm13...	Yes	Y	1	1.2	51	1.5	8	.129				
189 1.2D + 1.5Lm13...	Yes	Y	1	1.2	51	1.5	9	.129				
190 1.2D + 1.5Lm13...	Yes	Y	1	1.2	51	1.5	10	.129				
191 1.2D + 1.5Lm13...	Yes	Y	1	1.2	51	1.5	11	.129				
192 1.2D + 1.5Lm13...	Yes	Y	1	1.2	51	1.5	12	.129				
193 1.2D + 1.5Lm13...	Yes	Y	1	1.2	51	1.5	13	.129				
194 1.2D + 1.5Lm14...	Yes	Y	1	1.2	52	1.5	2	.129				
195 1.2D + 1.5Lm14...	Yes	Y	1	1.2	52	1.5	3	.129				
196 1.2D + 1.5Lm14...	Yes	Y	1	1.2	52	1.5	4	.129				
197 1.2D + 1.5Lm14...	Yes	Y	1	1.2	52	1.5	5	.129				
198 1.2D + 1.5Lm14...	Yes	Y	1	1.2	52	1.5	6	.129				
199 1.2D + 1.5Lm14...	Yes	Y	1	1.2	52	1.5	7	.129				
200 1.2D + 1.5Lm14...	Yes	Y	1	1.2	52	1.5	8	.129				
201 1.2D + 1.5Lm14...	Yes	Y	1	1.2	52	1.5	9	.129				



Load Combinations (Continued)

Description	Solve P...	SR...	BLC Fac...									
202	1.2D + 1.5Lm14	Yes	Y	1	1.2	52	1.5	10	.129			
203	1.2D + 1.5Lm14	Yes	Y	1	1.2	52	1.5	11	.129			
204	1.2D + 1.5Lm14	Yes	Y	1	1.2	52	1.5	12	.129			
205	1.2D + 1.5Lm14	Yes	Y	1	1.2	52	1.5	13	.129			
206	1.2D + 1.5Lm15	Yes	Y	1	1.2	53	1.5	2	.129			
207	1.2D + 1.5Lm15	Yes	Y	1	1.2	53	1.5	3	.129			
208	1.2D + 1.5Lm15	Yes	Y	1	1.2	53	1.5	4	.129			
209	1.2D + 1.5Lm15	Yes	Y	1	1.2	53	1.5	5	.129			
210	1.2D + 1.5Lm15	Yes	Y	1	1.2	53	1.5	6	.129			
211	1.2D + 1.5Lm15	Yes	Y	1	1.2	53	1.5	7	.129			
212	1.2D + 1.5Lm15	Yes	Y	1	1.2	53	1.5	8	.129			
213	1.2D + 1.5Lm15	Yes	Y	1	1.2	53	1.5	9	.129			
214	1.2D + 1.5Lm15	Yes	Y	1	1.2	53	1.5	10	.129			
215	1.2D + 1.5Lm15	Yes	Y	1	1.2	53	1.5	11	.129			
216	1.2D + 1.5Lm15	Yes	Y	1	1.2	53	1.5	12	.129			
217	1.2D + 1.5Lm15	Yes	Y	1	1.2	53	1.5	13	.129			
218	1.2D + 1.5Lm16	Yes	Y	1	1.2	54	1.5	2	.129			
219	1.2D + 1.5Lm16	Yes	Y	1	1.2	54	1.5	3	.129			
220	1.2D + 1.5Lm16	Yes	Y	1	1.2	54	1.5	4	.129			
221	1.2D + 1.5Lm16	Yes	Y	1	1.2	54	1.5	5	.129			
222	1.2D + 1.5Lm16	Yes	Y	1	1.2	54	1.5	6	.129			
223	1.2D + 1.5Lm16	Yes	Y	1	1.2	54	1.5	7	.129			
224	1.2D + 1.5Lm16	Yes	Y	1	1.2	54	1.5	8	.129			
225	1.2D + 1.5Lm16	Yes	Y	1	1.2	54	1.5	9	.129			
226	1.2D + 1.5Lm16	Yes	Y	1	1.2	54	1.5	10	.129			
227	1.2D + 1.5Lm16	Yes	Y	1	1.2	54	1.5	11	.129			
228	1.2D + 1.5Lm16	Yes	Y	1	1.2	54	1.5	12	.129			
229	1.2D + 1.5Lm16	Yes	Y	1	1.2	54	1.5	13	.129			
230	1.2D + 1.5Lm17	Yes	Y	1	1.2	55	1.5	2	.129			
231	1.2D + 1.5Lm17	Yes	Y	1	1.2	55	1.5	3	.129			
232	1.2D + 1.5Lm17	Yes	Y	1	1.2	55	1.5	4	.129			
233	1.2D + 1.5Lm17	Yes	Y	1	1.2	55	1.5	5	.129			
234	1.2D + 1.5Lm17	Yes	Y	1	1.2	55	1.5	6	.129			
235	1.2D + 1.5Lm17	Yes	Y	1	1.2	55	1.5	7	.129			
236	1.2D + 1.5Lm17	Yes	Y	1	1.2	55	1.5	8	.129			
237	1.2D + 1.5Lm17	Yes	Y	1	1.2	55	1.5	9	.129			
238	1.2D + 1.5Lm17	Yes	Y	1	1.2	55	1.5	10	.129			
239	1.2D + 1.5Lm17	Yes	Y	1	1.2	55	1.5	11	.129			
240	1.2D + 1.5Lm17	Yes	Y	1	1.2	55	1.5	12	.129			
241	1.2D + 1.5Lm17	Yes	Y	1	1.2	55	1.5	13	.129			
242	1.2D + 1.5Lm18	Yes	Y	1	1.2	56	1.5	2	.129			
243	1.2D + 1.5Lm18	Yes	Y	1	1.2	56	1.5	3	.129			
244	1.2D + 1.5Lm18	Yes	Y	1	1.2	56	1.5	4	.129			
245	1.2D + 1.5Lm18	Yes	Y	1	1.2	56	1.5	5	.129			
246	1.2D + 1.5Lm18	Yes	Y	1	1.2	56	1.5	6	.129			
247	1.2D + 1.5Lm18	Yes	Y	1	1.2	56	1.5	7	.129			
248	1.2D + 1.5Lm18	Yes	Y	1	1.2	56	1.5	8	.129			
249	1.2D + 1.5Lm18	Yes	Y	1	1.2	56	1.5	9	.129			
250	1.2D + 1.5Lm18	Yes	Y	1	1.2	56	1.5	10	.129			
251	1.2D + 1.5Lm18	Yes	Y	1	1.2	56	1.5	11	.129			
252	1.2D + 1.5Lm18	Yes	Y	1	1.2	56	1.5	12	.129			
253	1.2D + 1.5Lm18	Yes	Y	1	1.2	56	1.5	13	.129			
254	1.2D + 1.5Lv (P...	Yes	Y	1	1.2	57	1.5					
255	1.2D + 1.5Lv (P...	Yes	Y	1	1.2	58	1.5					
256	1.2D + 1.5Lv (P...	Yes	Y	1	1.2	59	1.5					
257	1.2D + 1.5Lv (P...	Yes	Y	1	1.2	60	1.5					
258	1.2D + 1.5Lv (P...	Yes	Y	1	1.2	61	1.5					



Load Combinations (Continued)

Description	Solve P...	SR...	BLC Fac...									
259	1.2D + 1.5Lv (P...	Yes	Y	1	1.2	62	1.5					
260	1.2D + 1.5Lv (P...	Yes	Y	1	1.2	63	1.5					
261	1.2D + 1.5Lv (P...	Yes	Y	1	1.2	64	1.5					
262	1.2D + 1.5Lv (P...	Yes	Y	1	1.2	65	1.5					
263	1.2D + 1.5Lv (P...	Yes	Y	1	1.2	66	1.5					
264	1.2D + 1.5Lv (P...	Yes	Y	1	1.2	67	1.5					
265	1.2D + 1.5Lv (P...	Yes	Y	1	1.2	68	1.5					
266	1.2D + 1.5Lv (P...	Yes	Y	1	1.2	69	1.5					
267	1.2D + 1.5Lv (P...	Yes	Y	1	1.2	70	1.5					
268	1.2D + 1.5Lv (P...	Yes	Y	1	1.2	71	1.5					
269	1.2D + 1.5Lv (P...	Yes	Y	1	1.2	72	1.5					
270	1.2D + 1.5Lv (P...	Yes	Y	1	1.2	73	1.5					
271	1.2D + 1.5Lv (P...	Yes	Y	1	1.2	74	1.5					
272	1.2D + 1.5Lv (P...	Yes	Y	1	1.2	75	1.5					
273	1.2D + 1.5Lv (P...	Yes	Y	1	1.2	76	1.5					
274	1.2D + 1.5Lv (P...	Yes	Y	1	1.2	77	1.5					
275	1.2D + 1.5Lv (P...	Yes	Y	1	1.2	78	1.5					
276	1.2D + 1.5Lv (P...	Yes	Y	1	1.2	79	1.5					
277	1.2D + 1.5Lv (P...	Yes	Y	1	1.2	80	1.5					

Envelope Joint Reactions

Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC	
1	N34	max	948.741	9	82.039	21	193.21	3	0	277	0	277	0	277
2		min	-952.383	3	23.053	3	-186.334	9	0	1	0	1	0	1
3	N36	max	1490.899	8	82.272	19	374.646	8	0	277	0	277	0	277
4		min	-1493.05	2	24.025	13	-377.586	2	0	1	0	1	0	1
5	N1	max	-171.191	2	1076.931	14	1151.452	12	1049.159	71	0	277	-355.048	2
6		min	-862.841	15	357.521	8	-935.853	6	-1422.272	40	0	1	-1254.025	20
7	N2	max	898.775	19	1077.494	20	984.315	12	1049.242	71	0	277	-376.9	2
8		min	-268.192	2	362.044	2	-1189.186	6	-1421.893	40	0	1	-1252.832	19
9	Totals:	max	2710.797	8	2314.829	16	2017.981	10						
10		min	-2710.793	2	804.621	13	-2017.977	4						

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

Member	Shape	Code Check	Loc[in]	LC	Shear Ch...	Lo...	Dir	LC phi*Pn...	phi*P...	phi*M...	phi*M...	Cb	Eqn	
1	FMBOT	PIPE 2.0	.875	75	66	.191	75	49	20114...	32130	1871...	1871...	1....H1-1b	
2	FMTOP	PIPE 2.0	.860	75	70	.237	75	7	20114...	32130	1871...	1871...	1....H1-1b	
3	MP1	PIPE 2.0	.750	54	40	.150	36	3	20866...	32130	1871...	1871...	1....H1-1b	
4	MP3	PIPE 2.0	.711	18	66	.193	30	2	20866...	32130	1871...	1871...	1....H1-1b	
5	MP2	PIPE 2.0	.357	18	46	.151	18	38	20866...	32130	1871...	1871...	1....H1-1b	
6	STAB2	PIPE 2.0	.327	71.875	13	.009	0	12	6295.4...	32130	1871...	1871...	1....H1-1a	
7	SABOT	HSS3X3X4	.300	25	12	.222	0	z	48	97642...	101016	8556	8556	2....H1-1b
8	SATOP	HSS3X3X4	.297	25	4	.225	0	z	40	97642...	101016	8556	8556	2....H1-1b
9	STAB1	PIPE 2.0	.212	75	4	.009	150	10	6295.4...	32130	1871...	1871...	1....H1-1b	
10	SAV2	HSS3.000X...	.176	45.906	19	.208	10...	40	54808...	66906	4977	4977	1....H1-1b	
11	SAV1	HSS2.375X...	.093	36	20	.209	0	40	39818...	45360	2661.75	2661...	2....H1-1b	

APPENDIX D
ADDITIONAL CALCULATIONS

Connection Check

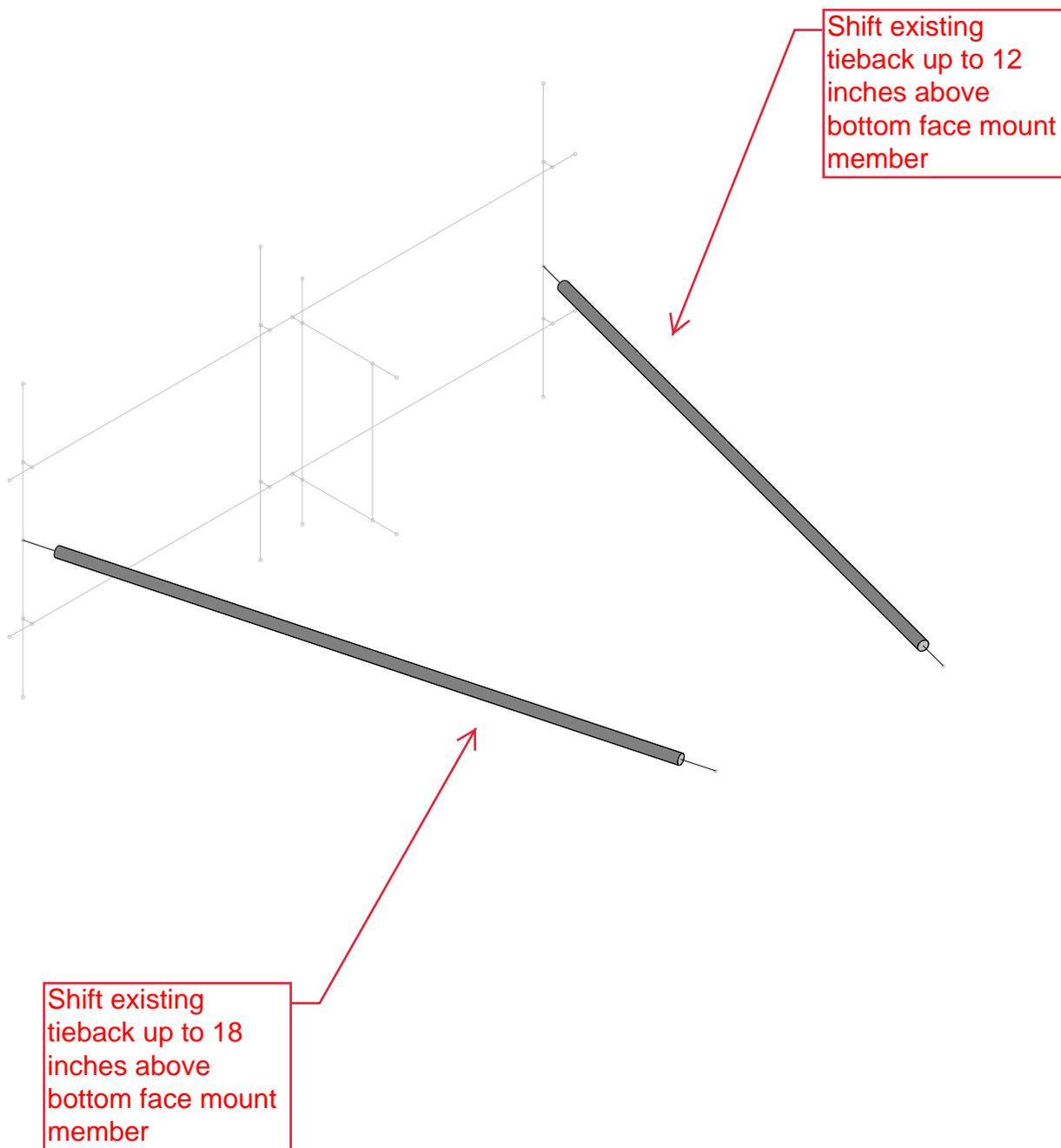
Max Reactions	
$T_{u,max}$:	5.7 kip
$V_{u,max}$:	.3 kip

Input		Notes
d_b :	0.500 in	Diameter of Bolt
# of Bolts:	4	
# of Threads/Inch, n:	13	Bolt Ultimate Stress
F_{ub} :	58 ksi	Bolt Nominal Tensile Stress
X:	9.500 in	Bolt Spacing X-axis
Y:	1.375 in	Bolt Spacing Y-axis

Available Capacity		Notes
ϕ :	0.75	Resistance Factor
A_{net} :	0.142 in ²	Net Area of Bolt
A_b :	0.196 in ²	Area of Bolt
ϕR_{nt} :	6.17 kip	Tension Capacity per Bolt
ϕR_{nv} :	4.27 kip	Shear Capacity per bolt

Bolt Capacity:	92.2% OK
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APPENDIX E
MOUNT MODIFICATION DETAILS



ETS, PLLC
BRL
191474.14

841273 - TRURO Mount Analysis

SK - 3
Mar 18, 2019 at 8:39 AM
TRURO_MODDED.r3d

8

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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: T-MOBILE LICENSE LLC

ATTN: FCC REGULATORY COMPLIANCE
T-MOBILE LICENSE LLC
12920 SE 38TH STREET
BELLEVUE, WA 98006

Table with Call Sign (WQGA731), File Number, and Radio Service (AW - AWS (1710-1755 MHz and 2110-2155 MHz)).

FCC Registration Number (FRN): 0001565449

Table with columns: Grant Date (11-29-2006), Effective Date (11-30-2017), Expiration Date (11-29-2021), Print Date, Market Number (REA001), Channel Block (D), Sub-Market Designator (5), Market Name (Northeast), 1st Build-out Date, 2nd Build-out Date, 3rd Build-out Date, 4th Build-out Date.

Waivers/Conditions:

This authorization is conditioned upon the licensee, prior to initiating operations from any base or fixed station, making reasonable efforts to coordinate frequency usage with known co-channel and adjacent channel incumbent federal users operating in the 1710-1755 MHz band whose facilities could be affected by the proposed operations. See, e.g., FCC and NTIA Coordination Procedures in the 1710-1755 MHz Band, Public Notice, FCC 06-50, WTB Docket No. 02-353, rel. April 20, 2006.

AWS operations must not cause harmful interference across the Canadian or Mexican Border. The authority granted herein is subject to future international agreements with Canada or Mexico, as applicable.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

Licensee Name: T-MOBILE LICENSE LLC

Call Sign: WQGA731

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: T-MOBILE LICENSE LLC

ATTN: DAN MENSER
T-MOBILE LICENSE LLC
12920 SE 38TH ST.
BELLEVUE, WA 98006

Call Sign WQGB373	File Number
Radio Service AW - AWS (1710-1755 MHz and 2110-2155 MHz)	

FCC Registration Number (FRN): 0001565449

Grant Date 11-29-2006	Effective Date 11-30-2017	Expiration Date 11-29-2021	Print Date
Market Number REA001	Channel Block E	Sub-Market Designator 11	
Market Name Northeast			
1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This authorization is conditioned upon the licensee, prior to initiating operations from any base or fixed station, making reasonable efforts to coordinate frequency usage with known co-channel and adjacent channel incumbent federal users operating in the 1710-1755 MHz band whose facilities could be affected by the proposed operations. See, e.g., FCC and NTIA Coordination Procedures in the 1710-1755 MHz Band, Public Notice, FCC 06-50, WTB Docket No. 02-353, rel. April 20, 2006.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at <http://wireless.fcc.gov/uls/index.htm?job=home> and select "License Search". Follow the instructions on how to search for license information.

Licensee Name: T-MOBILE LICENSE LLC

Call Sign: WQGB373

File Number:

Print Date:

The license is subject to compliance with the provisions of the January 12, 2001 Agreement between Deutsche Telekom AG, VoiceStream Wireless Corporation, VoiceStream Wireless Holding Corporation and the Department of Justice (DOJ) and the Federal Bureau of Investigation (FBI), which addresses national security, law enforcement, and public safety issues of the FBI and the DOJ regarding the authority granted by this license. Nothing in the Agreement is intended to limit any obligation imposed by Federal law or regulation including, but not limited to, 47 U.S.C. Section 222(a) and (c)(1) and the FCC's implementing regulations. The Agreement is published at VoiceStream-DT Order, IB Docket No. 00-187, FCC 01-142, 16 FCC Rcd 9779, 9853 (2001).

AWS operations must not cause harmful interference across the Canadian or Mexican Border. The authority granted herein is subject to future international agreements with Canada or Mexico, as applicable.

Licensee Name: T-MOBILE LICENSE LLC

Call Sign: WQGB373

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: T-MOBILE LICENSE LLC

ATTN: FCC REGULATORY COMPLIANCE
T-MOBILE LICENSE LLC
12920 SE 38TH STREET
BELLEVUE, WA 98006

Table with Call Sign (WQIZ578), File Number (0008577570), and Radio Service (WY - 700 MHz Lower Band (Blocks A, B & E)).

FCC Registration Number (FRN): 0001565449

Table with columns: Grant Date, Effective Date, Expiration Date, Print Date, Market Number, Channel Block, Sub-Market Designator, Market Name, 1st Build-out Date, 2nd Build-out Date, 3rd Build-out Date, 4th Build-out Date.

Waivers/Conditions:

If the facilities authorized herein are used to provide broadcast operations, whether exclusively or in combination with other services, the licensee must seek renewal of the license either within eight years from the commencement of the broadcast service or within the term of the license had the broadcast service not been provided, whichever period is shorter in length. See 47 CFR §27.13(b).

License renewal granted on a conditional basis, subject to the outcome of FCC proceeding WT Docket No. 10-112 (see FCC 10-86, paras. 113 and 126).

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

Licensee Name: T-MOBILE LICENSE LLC

Call Sign: WQIZ578

File Number: 0008577570

Print Date: 05-31-2019

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: T-MOBILE LICENSE LLC

ATTN: KATHLEEN O'BRIEN HAM
T-MOBILE LICENSE LLC
12920 SE 38TH STREET
BELLEVUE, WA 98006

Table with Call Sign (WQPZ969), File Number, and Radio Service (AW - AWS (1710-1755 MHz and 2110-2155 MHz)).

FCC Registration Number (FRN): 0001565449

Table with columns: Grant Date (08-23-2012), Effective Date (03-12-2014), Expiration Date (11-29-2021), Print Date, Market Number (REA001), Channel Block (F), Sub-Market Designator (9), Market Name (Northeast), 1st Build-out Date, 2nd Build-out Date, 3rd Build-out Date, 4th Build-out Date.

Waivers/Conditions:

This authorization is conditioned upon the licensee, prior to initiating operations from any base or fixed station, making reasonable efforts to coordinate frequency usage with known co-channel and adjacent channel incumbent federal users operating in the 1710-1755 MHz band whose facilities could be affected by the proposed operations. See, e.g., FCC and NTIA Coordination Procedures in the 1710-1755 MHz Band, Public Notice, FCC 06-50, WTB Docket No. 02-353, rel. April 20, 2006.

AWS operations must not cause harmful interference across the Canadian or Mexican Border. The authority granted herein is subject to future international agreements with Canada or Mexico, as applicable.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

Licensee Name: T-MOBILE LICENSE LLC

Call Sign: WQPZ969

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: T-MOBILE LICENSE LLC

T-MOBILE LICENSE LLC
12920 SE 38TH STREET
BELLEVUE, WA 98006

Call Sign WQZL852	File Number
Radio Service WT - 600 MHz Band	

FCC Registration Number (FRN): 0001565449

Grant Date 06-14-2017	Effective Date 06-15-2017	Expiration Date 06-14-2029	Print Date
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Market Number PEA007	Channel Block B	Sub-Market Designator 0
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Market Name Boston, MA

1st Build-out Date 06-14-2023	2nd Build-out Date 06-14-2029	3rd Build-out Date	4th Build-out Date
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Waivers/Conditions:

NONE

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

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Licensee Name: T-MOBILE LICENSE LLC

Call Sign: WQZL852

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: T-MOBILE LICENSE LLC

T-MOBILE LICENSE LLC
12920 SE 38TH STREET
BELLEVUE, WA 98006

Call Sign WQZL853	File Number
Radio Service WT - 600 MHz Band	

FCC Registration Number (FRN): 0001565449

Grant Date 06-14-2017	Effective Date 06-15-2017	Expiration Date 06-14-2029	Print Date
Market Number PEA007	Channel Block C	Sub-Market Designator 0	
Market Name Boston, MA			
1st Build-out Date 06-14-2023	2nd Build-out Date 06-14-2029	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

NONE

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

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Licensee Name: T-MOBILE LICENSE LLC

Call Sign: WQZL853

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: T-MOBILE LICENSE LLC

ATTN: FCC REGULATORY COMPLIANCE
T-MOBILE LICENSE LLC
12920 SE 38TH ST.
BELLEVUE, WA 98006

Table with Call Sign (WRAM889), File Number (0008585885), and Radio Service (CW - PCS Broadband).

FCC Registration Number (FRN): 0001565449

Table with columns: Grant Date, Effective Date, Expiration Date, Print Date, Market Number, Channel Block, Sub-Market Designator, Market Name, 1st Build-out Date, 2nd Build-out Date, 3rd Build-out Date, 4th Build-out Date.

Waivers/Conditions:

This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/United States), future coordination of any base station transmitters within 72 km (45 miles) of the United States/Canada border shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

License renewal granted on a conditional basis, subject to the outcome of FCC proceeding WT Docket No. 10-112 (see FCC 10-86, paras. 113 and 126).

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS).

Licensee Name: T-MOBILE LICENSE LLC

Call Sign: WRAM889

File Number: 0008585885

Print Date: 05-31-2019

Spectrum Lease associated with this license. See Spectrum Leasing Arrangement Letter dated 07/27/2004 and File No. 0001765259.

Reference Copy

Licensee Name: T-MOBILE LICENSE LLC

Call Sign: WRAM889

File Number: 0008585885

Print Date: 05-31-2019

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: T-MOBILE LICENSE LLC

ATTN: FCC REGULATORY COMPLIANCE
T-MOBILE LICENSE LLC
12920 S.E. 38TH STREET
BELLEVUE, WA 98006

Call Sign KNLH311	File Number 0007725350
Radio Service CW - PCS Broadband	

FCC Registration Number (FRN): 0001565449

Grant Date 06-08-2017	Effective Date 06-08-2017	Expiration Date 06-27-2027	Print Date 06-09-2017
Market Number BTA201	Channel Block D	Sub-Market Designator 0	
Market Name Hyannis, MA			
1st Build-out Date 06-27-2002	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/United States), future coordination of any base station transmitters within 72 km (45 miles) of the United States/Canada border shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

License renewal granted on a conditional basis, subject to the outcome of FCC proceeding WT Docket No. 10-112 (see FCC 10-86, paras. 113 and 126).

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

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Licensee Name: T-MOBILE LICENSE LLC

Call Sign: KNLH311

File Number: 0007725350

Print Date: 06-09-2017

This authorization is subject to the condition that the remaining balance of the winning bid amount will be paid in accordance with Part 1 of the Commission's rules, 47 C.F.R. Part 1.

Preferred
Copy

Licensee Name: T-MOBILE LICENSE LLC

Call Sign: KNLH311

File Number: 0007725350

Print Date: 06-09-2017

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: T-MOBILE LICENSE LLC

ATTN: FCC REGULATORY COMPLIANCE
T-MOBILE LICENSE LLC
12920 SE 38TH ST.
BELLEVUE, WA 98006

Table with Call Sign (WPOJ753), File Number (0008585870), and Radio Service (CW - PCS Broadband).

FCC Registration Number (FRN): 0001565449

Table with columns: Grant Date, Effective Date, Expiration Date, Print Date, Market Number, Channel Block, Sub-Market Designator, Market Name, 1st Build-out Date, 2nd Build-out Date, 3rd Build-out Date, 4th Build-out Date.

Waivers/Conditions:

This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/United States), future coordination of any base station transmitters within 72 km (45 miles) of the United States/Canada border shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

License renewal granted on a conditional basis, subject to the outcome of FCC proceeding WT Docket No. 10-112 (see FCC 10-86, paras. 113 and 126).

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS).

Licensee Name: T-MOBILE LICENSE LLC

Call Sign: WPOJ753

File Number: 0008585870

Print Date: 05-31-2019

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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9



3530 Toringdon Way Suite 300
Charlotte, NC 28277

Phone: (980) 430-8574
Fax: (724) 416-4476
www.crowncastle.com

March 14, 2019

VIA email: nscoullar@truro-ma.gov

TOWN OF TRURO
PO BOX 2012
COLLECTOR OF TAXES
TRURO, MA 02666

REC'D 2019 MAR 14 PM 12:53
ADMINISTRATIVE OFFICE
TOWN OF TRURO

Re: BU 841273 / TRURO / 344 ROUTE 6 NORTH TRURO, MA 02652 ("Site")
Wireless Communications Facilities Lease Agreement, dated, as amended ("Lease")
Consent for Modifications – T-Mobile

Dear Landlord,

Pursuant to an agreement between NCWPCS MPL 24 - Year Sites Tower Holdings LLC ("AT&T") and CCATT LLC ("CCATT"), CCATT manages and operates the tower site that is subject to the Lease on behalf of AT&T. CCATT is a Crown Castle company. CCATT and its affiliates and subsidiaries own, manage and operate shared wireless communication facilities.

In order to better serve the public and minimize the amount of towers in an area where the Site is located, T-Mobile plans to modify its equipment at the wireless communication facility by replacing three (3) antennas and (3) RRUs, removing six (6) TMAs and adding (3) new TMAs.

Pursuant to Paragraph 1 of the Lease, AT&T is required to obtain your consent. Under the Lease, consent cannot be unreasonably withheld, conditioned or delayed. Signing this consent letter does not eliminate the need for the customer to go through any jurisdictional and/or zoning/permitting procedures that may be required. In addition, this letter authorizes T-Mobile, their agents, servants, assigns, and/or employees, to apply for and obtain, any and all zoning and/or permits required for this specific install.

Please indicate your consent by executing this letter where indicated below. Thank you for your continued cooperation with AT&T and CCATT. If you have any questions concerning this request, please contact Zachary Plummer at (704) 405-6552 or Zachary.Plummer@CrownCastle.com.

Sincerely,

Zachary Plummer

Zachary Plummer
Real Estate Specialist

Agreed and accepted on 4-9-19
(Date)


(Lessor's signature)

ROBERT WEINSTEIN
(Print name)

10

**TOWN OF TRURO
PLANNING BOARD**

**P.O. Box 2030
Truro MA 02666-2030**

*Tel: 508-487-2702
Fax: 508-487-2762*

DECISION

On June 27, 2006, the Truro Planning Board, during a duly-posted meeting heard the request of Omnipoint Communications, Inc., a wholly-owned subsidiary of T-Mobile USA, Inc. to further modify a Special Permit Decision issued by the Truro Planning Board, dated May 19, 2000 and recorded in the Barnstable County Registry of Deeds on May 2, 2001, Book 13790, Page 306, which decision granted a Special Permit to Sprint Spectrum L.P. ("Sprint") and Nextel Communications of the Mid-Atlantic Inc. ("Nextel") for Sprint to construct a 170' lattice tower at certain property known and numbered as 344 Grand Army of the Republic Highway, Route 6, Truro, MA owned by the Town of Truro by order of taking recorded June 18, 1990 in Book 7197, Page 177. The Special Permit allowed for both carriers to install, operate and maintain their respective wireless communication antenna facilities on and next to the tower (the "May 19, 2000 Decision"). The May 19, 2000 Decision was then modified by the Truro Planning Board after a duly-posted public meeting on December 16, 2003 to specifically include and permit the co-location of AT&T Wireless PCS, LLC's equipment on the previously approved tower and within the previously approved equipment shelter compound. Said Modification was filed with the Truro Town Clerk on December 31, 2003 (the "December 31, 2003 Decision"). In its application for further modification of the May 19, 2000 Decision (as subsequently modified by the December 31, 2003 Decision), Omnipoint Communications, Inc., a wholly owned subsidiary of T-Mobile USA, Inc., sought to install up to nine (9) wireless telecommunications antennas mounted on the previously approved Tower and to install cables and appurtenant radio equipment within the previously approved equipment shelter compound, per plans prepared by MRC Engineering, dated 1/10/05. Said modification is requested with reference to current § 40.5 (formerly Sec VIII-L) of the Truro Zoning Bylaw.

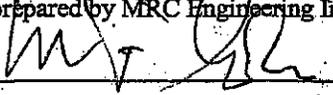
After a public meeting, the Board adopted the following findings:

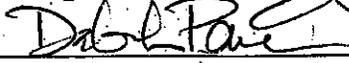
1. The intent of the May 19, 2000 Decision, as noted in Finding Nos. 4, 7 and 8, was, and remains, that the tower would accommodate the number of cellular communications providers then existing, a total of six (6) providers.
2. There are currently five (5) cellular communication providers located on the existing tower, making Omnipoint Communications, Inc. the sixth carrier, and thereby keeping with the Board's original intent to allow up to six (6) carriers on the previously approved tower.
3. Granting the requested modification is consistent with the Board's intent to encourage the co-location of the number of cellular communication providers existing as of the May 19, 2000 Decision on the tower and will continue to reflect the Board's original intention. Granting the requested modification will not constitute a "reversal of a conscious decision."
4. Granting the requested modification does not grant relief different from that originally sought.
5. Granting the requested modification does not change the result of the original decision.

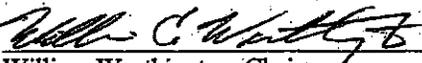
June 27, 2006

- 6. No one relying on the original decision will be prejudiced by the grant of this modification.

Accordingly, the Planning Board voted: 5-1 to modify the original May 19, 2000 Special Permit Decision (as subsequently modified by the December 31, 2003 Decision) to include and allow the co-location of Omnipoint Communications, Inc., a wholly owned subsidiary of T-Mobile USA, Inc.'s facility on the previously approved tower and equipment shelter compound, as depicted on the Site Plans prepared by MRC Engineering Inc., dated _____ and presented to the Board.




 William Worthington, Chairman

Received, Office of the Town Clerk:


 Signature

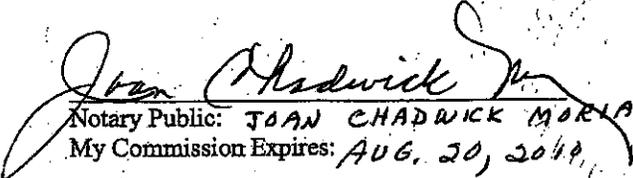
June 28, 2006
 Date

COMMONWEALTH OF MASSACHUSETTS

Barnstable, ss.

June 27, 2006

Then personally appeared before me the above-named William Worthington, Chairman of the Truro Planning Board, and acknowledged the foregoing instrument to be the free act and deed of the Truro Planning Board, before me,


 Notary Public: JOAN CHADWICK MORIARTY
 My Commission Expires: AUG. 20, 2011

**TOWN OF TRURO
PLANNING BOARD**

P.O. Box 2030
Truro MA 02666-2030

Tel: 508-349-7004
Fax: 508-349-5505

**MOTIONS OF THE TRURO PLANNING BOARD
ON THE REQUEST OF OMNIPOINT COMMUNICATIONS, INC.,
A WHOLLY OWNED SUBSIDIARY OF T-MOBILE USA, INC.
TO MODIFY ORIGINAL SPECIAL PERMIT
FOR POLICE FACILITY TOWER**

1. Move that the Planning Board adopt the following findings:
 - a. The intent of the May 19, 2000 Decision, as noted in Finding Nos. 4, 7 and 8, was, and remains, that the tower would accommodate the number of cellular communications providers then existing, a total of six (6) providers.
 - b. There are currently five (5) cellular communication providers located on the existing tower, making Omnipoint Communications, Inc. the sixth carrier, and thereby keeping with the Board's original intent to allow up to six (6) carriers on the previously approved tower.
 - c. Granting the requested modification is consistent with the Board's intent to encourage the co-location of the number of cellular communication providers existing as of the May 19, 2000 Decision on the tower and will continue to reflect the Board's original intention. Granting the requested modification will not constitute a "reversal of a conscious decision."
 - d. Granting the requested modification does not grant relief different from that originally sought.
 - e. Granting the requested modification does not change the result of the original decision.
 - f. No one relying on the original decision will be prejudiced by the grant of this modification.
2. Move that the Truro Planning Board modify the original May 19, 2000 Special Permit decision, as subsequently modified by the December 31, 2003 Decision to include and allow the co-location of AT&T Wireless' facility, to further allow the co-location of Omnipoint Communications, Inc., a wholly owned subsidiary of T-Mobile USA, Inc., on and within the previously approved tower and equipment shelter compound with reference to plans drawn by MRC Engineering, Inc., dated 11/10/05.



Truro Planning Board

TRURO, MASSACHUSETTS

HEARING AND DECISION

On May 17, 2000, the Truro Planning Board held a public hearing on the application of Sprint Spectrum, L.P. (hereinafter, "Sprint") and Nextel Communications of the Mid-Atlantic, Inc. (hereinafter, "Nextel") for a Special Permit pursuant to Section VIII of the Truro Zoning Bylaw, the Truro Zoning Bylaw for Communication Towers, for the siting of a tower at the Truro Public Safety Facility Site, 344 Route 6, North Truro, Massachusetts. Sprint sought approval to replace an existing 150 foot co-location lattice style tower with a comparative 170 foot lattice style tower with a design to allow for future expansion of said tower to 190 feet and associated base station equipment for use as a PCS communications facility. Nextel sought approval of the Board to construct its associated base station equipment at the site.

The Board heard the application with the following members sitting and deliberating: Chairman Paul Kiernan, Russell Weldon, Kathleen Crosby, Christopher Lucy, and Nicholas Brown.

After the hearing, the Truro Planning Board unanimously adopted (5-0) the following Findings of Fact:

1. Pursuant to the provisions of the Truro Zoning Bylaw for Communication Towers, Section VIII(L)(2)(a), the building permit for the cellular communications tower and associated base equipment proposed by Sprint Spectrum L.P. requires a special permit from the Planning Board. Pursuant to the provisions of the Truro Zoning Bylaw for Communication Towers, Section VIII(L)(2)(a), the building permit for Nextel's associated base station equipment requires a special permit, as well.

2. The proposed tower at 170 feet will have a 122 foot side setback and a 150 foot back lot line setback. As proposed, therefore, the tower does not meet the minimum setbacks contained in Subsection (b) of said Bylaw. The proposed tower will replace an existing 150 foot tower constructed prior to the adoption of the bylaw, when no minimum setbacks were required. The concerns for the "ice fall" stemmed from the possible impact from hurricane force winds and the potential of "ice fall" off the tower. The Board finds there are no reported incidents of tower failure due to hurricanes or experiences of "ice fall" off towers in the Massachusetts area and that the Truro Police Chief indicates there have been no incidents of "ice fall" off the existing tower. Furthermore, the Board finds that the tower's location next to the police station minimizes remaining public safety concerns in that the police can monitor any "ice fall" and protect the public from encountering it. The Board finds that pursuant to Subsection (x) of said Bylaw, a waiver of Subsection (b) is appropriate.

Cynthia A. Slade, Town Clerk, Town of Truro/ July 17, 2000

[Handwritten signature]

A true copy, attest:

Pages 1-8, each page bearing the official seal of the Town of Truro.

*N
2*

3. The proposed tower will meet the requirements of Subsection (c) of said Bylaw in that it will be installed, maintained and operated in accordance with all applicable federal, state, county and local codes, standards and regulations; it will be manufactured to withstand winds and gusts of a category 5 hurricane; and the permit holder shall bring the structure into compliance with any new or amended federal, state, county and local codes, standards and regulations within six (6) months of their promulgation.

4. The proposed structure is a 170 foot lattice-style tower with a design to allow for future expansion to 190 feet. Therefore, the proposed structure exceeds the maximum height requirements contained in Subsection (d) of said Bylaw. The Board finds that the proposed tower will replace an existing 150 foot tower while accommodating all cellular communications companies who wish to conduct business in the Town of Truro, thereby complying with the 1996 Federal Telecommunications Act and eliminating the possible proliferation of towers throughout the Town. The Board found that the Town specifically sought proposals for the Truro Public Safety Facility site because there was already an existing tower in that location and, therefore, construction of a new slightly taller tower would have the least impact on the community while reducing the number of towers needed to service the community. The Board finds that pursuant to Subsection (x) of said Bylaw, a waiver of Subsection (d) is appropriate.

5. The Board finds that applicants have demonstrated that there are no feasible pre-existing structures on which they could co-locate in accordance with Subsection (e) of said Bylaw.

6. The Board finds that the site for the proposed tower is owned by the Town of Truro in accordance with Subsection (f) of said Bylaw.

7. Pursuant to the provisions of Subsection (g) of said Bylaw, the Board finds that proposed tower shall accommodate the number of cellular communications providers who presently express a desire to do business in the Town of Truro, and contains an optional twenty (20) foot expansion which can be utilized in the future to accommodate the maximum number of foreseeable users, with further Truro Planning Board and Cape Cod Commission permission.

8. Pursuant to the provisions of Subsection (h) of said Bylaw, the Planning Board finds that the existing facility at the proposed site cannot accommodate the number of cellular communications providers who presently express a desire to do business in the Town of Truro. The proposed tower will have the capacity to accommodate these providers.

9. Pursuant to the provisions of Subsection (i) of said Bylaw, the Board finds that the new tower is designed to minimize the visual impact on the surrounding area, to disturb the least amount of existing vegetation in the area, to blend with the surroundings, and includes additional vegetative screening. Fencing and tree plantings shall be done in accordance with the notations on the plans submitted with the application and entitled, "Sprint Spectrum, L.P., Site ID# BS13XC597B3, Truro, Cell One Police Tower, 344 Route 6, North Truro, MA 02666," as prepared by Clough, Harbour & Associates, LLP, 450 Cottage Street, Springfield, MA 01104, dated November 1999, and as modified and approved by the Truro Planning Board at its hearing held April 19, 2000.

APR 17 2000

10. Pursuant to Subsection (j) of said Bylaw, the Board finds there is no mandatory regional and siting criteria established by the Cape Cod Commission for a tower of 170 feet at this location. The Board finds that pursuant to Subsection (x) of said Bylaw, a waiver of Subsection (j) is appropriate.

11. Pursuant to the provisions of Subsection (k) of said Bylaw, the Board finds that the proposed tower will generate noise, but that there will be no significant increase in noise over levels emanating from the current tower. The Board finds that the noise complaints stemming from the existing tower originated as a result of loose equipment, pipes and wires. The Board finds that noise on the proposed tower shall be minimized by cutting vertical mount pipes flush or below the antenna panel, capping the mount pipes, bundling wires where feasible, and utilizing other noise abatement measures where feasible. The Board finds that pursuant to Subsection (x) of said Bylaw, a waiver of Subsection (k) is appropriate.

12. Pursuant to the provisions of Subsection (l) of said Bylaw, and as required in the Lease Agreement for this site, the Board finds that no hazardous, inflammable, combustible or explosive fluid, material, chemical or substance, except standard cleaning fluid and the minimum necessary amount of fuel and /or batteries necessary for the operation of the emergency generators and/or ground based equipment is proposed to be brought onto or permitted on the site. The Board finds that documentation shall be provided for the contents of all communication buildings and/or cabinets.

13. Pursuant to the provisions of Subsection (m) of said Bylaw, the Board finds that all run-off of storm water from communication structures, buildings and appurtenances, driveways and parking areas is proposed to be contained on site. The amount of impervious surfaces shall be minimized by the installation of a crushed stone surface in the tower yard.

14. Pursuant to the provisions of Subsection (n) of said Bylaw, the Board finds that the FAA does not require lighting of a 170 or 190 foot tower. The Board finds that Sprint and Nextel propose to install lighting for maintenance purposes only and that all such lighting shall be directed inward so as not to project onto surrounding properties and shall be shielded.

15. Pursuant to the provisions of Subsection (o) of said Bylaw, the Board finds that all structures, buildings and appurtenances shall be secured to control access by the installation of a locked fence, six (6) feet in height, with appropriate warning signals which shall alert the applicant to any unauthorized entries. A sign displaying the name of the owner and a 24-hour emergency contact telephone number will be visibly mounted on the fencing.

16. Pursuant to the provisions of Subsection (p) of said Bylaw, a covenant regarding the removal of the structure after four months of nonuse shall be executed. The Board finds that pursuant to Subsection (x) of said Bylaw, a waiver of the portion of Subsection (p) requiring a bond is appropriate as a bond is already required under the terms of the Lease Agreement with the Town.

17. Pursuant to the provisions of Subsection (q) of said Bylaw, the applicant met with the Planning Board for a pre-hearing consultation on December 1, 1999.

18. Pursuant to the provisions of Subsection (r) of said Bylaw, the Planning Board held a public hearing within 65 days of the filing of the application and shall issue its decision within 90 days of the hearing.

19. Subsection (s)(1) and (2) of said Bylaw require the submission of certain surveys concerning the siting of this proposed tower. The Board finds that no such surveys were submitted nor required by the Board. The Board finds the Town of Truro solicited proposals specifically for the Truro Public Safety Facility Site. The Board finds that pursuant to Subsection (x) of said Bylaw, a waiver of Subsection (s)(1) and (2) is appropriate.

20. Pursuant to the provisions of Subsection (s)(3) of said Bylaw, the applicant has not submitted a Microwave propagation analysis showing the current frequency and intensity of radiation at ground level and at 30 feet above ground level. The Board finds that Sprint shall test the radio frequency emissions before and after the construction of the tower and shall reimburse the Town of Truro for its actual costs in an amount not to exceed \$2,000 annually, as adjusted by an escalation factor, to conduct annual radio frequency emissions testing and monitoring for purposes of comparing the results of the Monitoring to applicable Federal Communications Commissions ("FCC") standards, in accordance with Condition 8 set forth below. The Board finds that pursuant to Subsection (x) of said Bylaw, a waiver of Subsection (s)(3) is appropriate.

21. Pursuant to the provisions of Subsection (s)(4) of said Bylaw, the applicant must submit certain surveys regarding estimated sound levels emanating from the structure. The Board finds that such surveys were not provided or required by the Board. The Board finds that distinguishing and measuring the sound levels emanating from the tower as separate levels from those sounds associated with wind, tree and traffic noise heard at the perimeter of this particular site is complex and perhaps infeasible. The Board finds that the proposed design for this structure utilizes methods to minimize noise levels on the tower by cutting vertical mouth pipes flush or below the antenna panel, capping the mount pipes to minimize any additional wind noise resulting from the increased number of antennas on the tower, bundling the wires where feasible, and incorporating further noise abatement measurements where feasible. The Board finds that Sprint shall take benchmark measurements of the sound levels emanating from the tower at the four major compass points on the site both before and after tower construction. The Board finds that pursuant to Subsection (x) of said Bylaw, a waiver of Subsection (s)(4) is appropriate.

22. Pursuant to the provisions of Subsection (s)(5) of said Bylaw, the applicant must delineate all areas in Truro not served by the proposed installation for this site and an alternative site. No such delineation was made or required by the Board. The Board finds that the Town specifically sought proposals for the Truro Public Safety Facility Site. The Board finds that pursuant to Subsection (x) of said Bylaw, a waiver of Subsection (s)(5) is appropriate.

23. Pursuant to the provisions of Subsection (s)(6) of said Bylaw, the applicant has submitted a statement of the services to be supported by the proposed facility.

24. The applicant has submitted the plans required pursuant to the provisions of Subsection (s)(7) of said Bylaw.



25. Pursuant to the provisions of Subsection (s)(8) of said Bylaw, the Board finds that all of the federal filing required for this site have been submitted by Sprint. The Board finds that Sprint's Massachusetts Department of Public Health (MDPH) filing is currently pending and that it cannot operate until this filing is approved. Nextel's MDPH filing is approved and has been filed with the Board.

26. Pursuant to the provisions of Subsection (s)(9) of said Bylaw, the applicant is required to fly a three-foot-diameter balloon at the primary and alternate site. The Board finds that given the existing tower, the balloon test would not be beneficial. A photo simulation depicting the completed tower was submitted by the applicant and the Board has determined that the proposed tower will not have any further visual impact on the area than the existing tower. The Board finds that pursuant to Subsection (x) of said Bylaw, a waiver of Subsection (s)(9) is appropriate.

27. The applicant submitted all documents required pursuant to the provisions of Subsection (t) of said Bylaw.

28. The Board finds that Subsection (u) of said Bylaw is inapplicable to this application.

29. The Board finds that all plans submitted in connection with the application were certified by an appropriate licensed professional, pursuant to Subsection (v) of said Bylaw.

30. Pursuant to Subsection (w) of said Bylaw, the Board did not feel referrals to the Board of Health, Zoning Board of Appeals or Conservation Commission were required in this instance.

31. Pursuant to Subsection (y) of said Bylaw, the Board finds that the Lease negotiated with the Town of Truro requires that, upon completion of the construction of the tower and the transfer of the antennas and equipment from the old tower to the new tower, the Lease shall be assigned to Southwestern Bell Mobile Systems, Inc. d/b/a CellularOne and that, as part of said assignment, Sprint shall also assign the Special Permit and all of the permissions granted therein and obligations assumed thereunder. The Board finds that pursuant to Subsection (x) of said Bylaw, a waiver of Subsection (y) is appropriate to the extent that the assignment to CellularOne is hereby permitted and that any subsequent or alternative assignments must first receive approval from the Board.

32. The Board finds, pursuant to the provisions of Subsection (x) of said Bylaw, that the waivers of Subsections (b), (d), (j), (k), a portion of (p), (s)(1), (s)(2), (s)(3), (s)(4), (s)(5), (s)(9) and (y) of said Bylaw are not detrimental to the public interest, do not cause the Town any expense, and are not inconsistent with the intent and purpose of this Bylaw.

33. The Board finds that the application of Sprint and Nextel meet the general purpose and intent of the Bylaw as expressed in Section VIII (L)(1) of said Bylaw.



Based on the approved Findings of Fact set forth above, the Board voted unanimously (5-0) to impose the following conditions upon the Special Permit:

1. The proposed tower and appurtenances shall be constructed in accordance with the provisions of Section VIII of the Truro Zoning Bylaw, the Truro Zoning Bylaw for Communication Towers.
2. The proposed tower and appurtenances shall be constructed in accordance with the plans entitled, "Sprint Spectrum, L.P., Site ID# BS13XC597B3, Truro, Cell One Police Tower, 344 Route 6, North Truro, MA 02666," as prepared by Clough, Harbour & Associates, LLP, 450 Cottage Street, Springfield, MA 01104, dated November 1999, as modified and approved by the Truro Planning Board at its hearing held April 19, 2000, and as modified by the more detailed construction drawings and approved by the Town of Truro in accordance with the provisions of the Lease Agreement.
3. The proposed tower and appurtenances shall be constructed to minimize noise levels on the tower by cutting vertical mount pipes flush or below the antenna panel, capping the mount pipes to minimize any additional wind noise resulting from the increased number of antennas on the tower, bundling the wires where feasible, and utilizing any additional noise abatement measures where feasible.
4. Sprint shall take ground level benchmark measurements of the sound levels emanating from the tower at the four major compass points on the site before tower construction and upon completion of tower construction and removal of the existing tower. Sprint shall file these measurements with the Truro Planning Board and the Truro Board of Health.
5. The tower structure and all appurtenances shall be maintained so as to minimize noise levels.
6. The permit holder shall execute a covenant to remove within six months any communication structure and building which has not operated for four consecutive months unless the cause is major damage which prohibits operation. In the event that major damage has rendered the facility inoperative, repair or removal of the facility shall begin within six months and be completed within an additional six months. Failure to comply with the conditions of the covenant shall be grounds for the removal of structures, buildings and appurtenances. Complete restoration of the site shall be at the expense of the permit holder.
7. Sprint shall, at its own cost and expense, provide Electro Magnetic Field (EMF) readings before and after the completion of the facility. Sprint shall file these readings with the Truro Planning Board and the Truro Board of Health.
8. Sprint shall reimburse the Town of Truro for its actual costs incurred for testing and monitoring the radio frequency emissions at the Site ("the Monitoring") and comparing the results of the Monitoring to applicable Federal Communications Commissions ("FCC") and Massachusetts Department of Public Health ("MDPH") standards in an amount not to exceed \$2,000 annually, as increased annually by the increase, if any, in the Consumer Price Index - U.S. City Averages for Urban



Wage Earners and Clerical Workers (1982 - 84 = 100) published by the United States Department of Labor, Bureau of Labor Statistics (or a reasonably equivalent index if such index is discontinued). The reimbursement of said actual costs in an amount not to exceed \$2,000 as adjusted shall be paid by Sprint within thirty (30) days of being invoiced by the Town. If the radio frequency emissions at the Site exceed FCC or MDPH standards, the Town of Truro reserves its rights in law and equity, to the extent permissible under applicable law, to seek enforcement of violations thereof. Sprint Spectrum LP's obligations under this condition shall continue and extend for the entire time period during which Sprint remains connected to the tower and shall extend beyond the contemplated transfer of ownership of the tower and assignment of Lease and Special Permit to Southwestern Bell Mobile Systems, Inc. d/b/a CellularOne.

9. The Special Permit holder shall, at its own expense, provide Electro Magnetic Field (EMF) readings immediately before and after any addition to the facility. The Special Permit holder shall also be responsible for any actual costs which exceed the not to exceed contribution of Sprint Spectrum L.P. in the amount of Two Thousand (\$2,000.00) Dollars as adjusted for the required annual testing described in Condition 8 above.

10. Sprint shall construct the tower and related appurtenances so as to minimize visual impact and blend with the surroundings. In furtherance of said condition, Sprint shall construct a grey tower with a grey antenna array and grey cabinets to the extent feasible and shall utilize black cables. If technologically feasible, as determined by a design engineer, the cables shall be bundled, clustered, or otherwise designed so as to minimize visual impact and wind resistance.

After voting unanimously to impose the above-referenced conditions, the Board voted unanimously (5-0) to issue in accordance with the previously approved findings of fact and conditions set forth above, a Special Permit to Sprint Spectrum LP for the construction of a 170 foot lattice style tower with a design to allow for future expansion of said tower to 190 feet and to construct the associated base station equipment for use as a PCS communications facility, and to issue a Special Permit to Nextel Communications of the Mid-Atlantic, Inc. to construct its associated base station equipment at the site.

Members voting in favor: Chairman Paul Kiernan, Russell Weldon, Kathleen Crosby, Christopher Wacey, and Nicholas Brown.



Dated: MAY 19, 2000

Paul Kiernan
Paul Kiernan, Chair

Russell Weidon
Russell Weidon

Kathleen Crosby
Kathleen Crosby

Christopher Lucy
Christopher Lucy

Nicholas Brown
Nicholas Brown

Signature

May 19, 2000
Date

Received, Office of the Town Clerk:

This is to certify that more than twenty (20) days have elapsed since the filing of the foregoing decision in the office of the Clerk of the Town of Truro and no appeal from said decision has been filed.

A true Copy:

Attest:

Cynthia A. Slade
Cynthia A. Slade, Town Clerk June 9, 2000





TOWN OF TRURO

Planning Board

COMMONWEALTH OF MASSACHUSETTS
TOWN OF TRURO
PLANNING BOARD

SPECIAL PERMIT

Applicants: T-Mobile Northeast LLC

Case No.: 2016-012PB

Map 39 Parcel 172

344 Route 6, Truro

Hearing Dates: November 16, 2016

Decision Date: November 16, 2016

At a public hearing on November 16, 2016, the Town of Truro Planning Board, acting in the matter of Case No. 2016-012PB, voted to find that the proposed collocation and replacement of wireless communications transmission equipment on an existing tower located at 344 Route 6 (Map 39, Parcel 172) constituted an eligible facilities request under the Spectrum Act, and to **grant with conditions**, a Special Permit pursuant to § 40.5 (Communications Structures, Buildings, appurtenances) of the Truro Zoning By-law.

In its review of the matter the Planning Board considered the following information:

Letter to Truro Planning Board from Edward D. Pare, Jr., dated October 7, 2016 Re: T-Mobile Northeast LLC ("T-Mobile") – Eligible Facilities Request to Modify Transmission Equipment on a Communications Tower located at 344 Route 6, North Truro, MA 02652, (Assessor's Map 39, Parcel 172-A (T-Mobile Site 4HY0568A/Truro) and Renew the Special Permit, with accompanying application materials:

Tab 1: Application for Special Permit and fee payment; Letter from Collin Thompson of Crown Castle dated September 14, 2016 authorizing T-Mobile to seek permits, and certified list of abutters

Tab 2: Sec 6409 (a) from the Middle Class Tax Relief and Job Creation Act of 2012, Wireless Facilities Deployment,

Tab 3: Explanatory Information pertaining to the above cited federal law

Tab 4: Explanatory Information pertaining to the above cited federal law

Tab 5: Letter from Massachusetts Attorney General to Town Clerk of Reading dated February 29, 2016, re: [Special Town Meeting Articles Pertaining to Wireless Service Facilities]

Tab 6: Eligible Facilities Request Certification for Non-substantial changes to a wireless tower not located within a public right of way.

Cynthia A. Slade, Town Clerk, Town of Truro / December 27, 2016 / pages 1-4

A true copy, attest: *[Signature]*



Tab 7: Federal Communications Commission Wireless Telecommunications Bureau Radio Station Authorization to T-Mobile License LLC, dated June 26, 2008

Tab 8: Report of Compliance

Tab 9: Plans entitled: "Site Name: Truro, 344 Route 6, North Truro,, MA 02652, Barnstable County, Site Number: 4HY0568A, prepared for T-Mobile Northeast by Derek J. Creaser, P.E., approved by Ryan Monte de Ramos on May 6, 2016" including the following sheets: T-1: Title sheet, GN-1: General Notes, A-1: Compound and Equipment Plans, A-2: Antennae Layouts & Elevation, A-3 Equipment Details, E-1 One-Line Diagram and Grounding Details.

Tab 10: May 17, 2000 Planning Board Decision

Letter to Truro Planning Board from Edward D. Pare, Jr., dated November 3, 2016, re: Eligible Facilities Request to Modify Transmission Equipment on a Communications Tower located at 344 Route 6, North Truro, MA 02652, (Assessor's Map 39, Parcel 172-A (T-Mobile Site 4HY0568A/Truro) – Supplemental Information, with accompanying application materials:

Initial Construction Control Document concerning code compliance, stamped by Daniel P. Hamm, P.E., dated May 17, 2016.

Structural Analysis Report prepared by Jacobs Engineering Group, Inc., for T-Mobile Co-locate, dated April 13, 2016, submitted by Jonathan N. Rodriguez, EIT, Tower Structural Engineer, and reviewed and stamped by Walter M. Prather, P.E.

Plans entitled: "Site Name: Truro, 344 Route 6, North Truro,, MA 02652, Barnstable County, Site Number: 4HY0568A, prepared for T-Mobile Northeast by Derek J. Creaser, P.E., updated 9/16/16" including the following sheets: T-1: Title sheet, GN-1: General Notes, A-1: Compound and Equipment Plans, A-2: Antennae Layouts & Elevation, A-3 Equipment Details, E-1 One-Line Diagram and Grounding Details.

SPECIAL PERMIT DECISION

On a motion by Mr. Herridge and seconded by Mr. Kiernan, the Board voted that the installation constitutes an eligible facilities request under the Spectrum Act and does not substantially change the physical dimensions of the cell tower or base station located behind the Public Safety Facility at 344 Route 6 based on the following findings of fact:

1. The modifications to the Transmission Equipment do not increase the height of the Tower by 20 feet or ten percent, whichever is greater;
2. The modifications to the Transmission Equipment do not protrude from the edge of the Tower by 20 feet or more than the width of the tower (whichever of these two dimensions is greater) at the level where the transmission equipment modifications is made;
3. The modifications to the Transmission Equipment do not involve the installation of more than the standard number of cabinets for the technology involved, not to exceed four;

4. The modifications to the Transmission Equipment do not entail any excavation or deployment outside of the Tower site;
5. The modifications to the Transmission Equipment do not defeat any existing concealment elements of the Tower;
6. The modifications to the Transmission Equipment comply with prior conditions of approval of the Tower, unless the non-compliance is due to an increase in height, increase in width, addition of equipment cabinets, new excavation that does not exceed the corresponding “substantial change” thresholds in numbers 1-4.

The motion passed on a vote of 5-1-0, with Mr. Sollog, Mr. Riemer, Mr. Herridge, Mr. Boleyn and Mr. Kiernan voting in favor and Mr. Hopkins voting opposed.

Pursuant to § 40.5.B.24, the Planning Board also acted to grant waivers from the requirements of §40.5, finding that the granting of such waivers would not be detrimental to the public interest, cause the Town any expense or be inconsistent with the intent and purpose of the zoning bylaw, as follows:

On a motion by Mr. Herridge and seconded by Mr. Kiernan, the Board voted to approve the following waiver:

- § 40.5 B.17 - Pre-application meeting

The motion passed on a vote of 5-1-0, with Ms. Sollog, Mr. Riemer, Mr. Herridge, Mr. Boleyn and Mr. Kiernan voting in favor, and Mr. Hopkins against.

On a motion by Mr. Herridge and seconded by Mr. Kiernan, the Board voted to approve the following waiver:

- § 40.5 B.19 – Specific written information

The motion passed on a vote of 5-1-0, with Ms. Sollog, Mr. Riemer, Mr. Herridge, Mr. Boleyn and Mr. Kiernan voting in favor, and Mr. Hopkins against.

On a motion by Mr. Herridge and seconded by Mr. Mr. Boleyn, the Board voted to approve the following waiver:

- § 40.5 B. 20 – Specific written information

The motion passed on a vote of 5-1-0, with Ms. Sollog, Mr. Riemer, Mr. Herridge, Mr. Boleyn and Mr. Kiernan voting in favor, and Mr. Hopkins against.

Based on its determination that the proposed activity was an eligible facilities request under the Spectrum Act, and the granting of waivers, the Board voted to approve the Special Permit with conditions, as follows:

On a motion by Mr. Herridge and seconded by Mr. Kiernan, the Board voted to make the determination to grant the Special Permit pursuant to section 40.5 with the following conditions:

1. The 6 existing lines of 7/8" coax shown on plan sheet A-2 to be capped and wrapped, if disconnected, shall be grounded in compliance with all applicable electrical or building codes.
2. T-Mobile Northeast LLC will notify Crown Castle in writing with a copy to the Planning Board to request that they demonstrate full compliance with conditions #3 and #4 in the special permit decision issued for the tower, dated May 17, 2000.

The motion passed on a vote of 5-1-0, with Ms. Sollog, Mr. Riemer, Mr. Herridge, Mr. Boleyn and Mr. Kiernan voting in favor, and Mr. Hopkins against.

This Special Permit is valid for the applicant only and it may not be re-assigned, leased or sold. Pursuant to §30.8 of the Zoning Bylaw, this Special Permit shall lapse after one year if substantial use thereof has not sooner commenced except for good cause or, in the case of permit for construction, if construction has not begun by such date except for good cause.

Any person aggrieved by a decision of the Planning Board may appeal to the Superior or Land Court by bringing action within twenty days after the decision has been filed with the Town Clerk of Truro. (Massachusetts General Laws, Chapter 40A, Section 17.)


 Steven Sollog
 Chairman, Truro Planning Board

12/5/2016
 Date

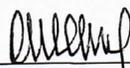
Received, Office of the Town Clerk:


 Signature

December 6, 2016
 Date

I hereby certify that this decision was filed with the Office of the Town Clerk on DECEMBER 6, 2016 and 20 (twenty) days have elapsed since the date of filing, and:

- No Appeal has been filed.
- ~~An Appeal has been filed and received in this office on:~~


 Signature

December 27, 2016
 Date

BARNSTABLE REGISTRY OF DEEDS
John F. Meade, Register

SPECIAL PERMIT
and
ELIGIBLE FACILITIES REQUEST APPROVAL

Atlas Map 39 Parcel 172A

Address: 344 Route 6

Case Reference No.: 2020-014/PB

Applicant: T-Mobile Northeast, LLC.

Hearing Date: January 6, 2021

Decision Date:

Sitting: *Anne Greenbaum, Chair; Steve Sollog, Vice Chair; Jack Riemer, Clerk; Paul Kiernan; Bruce Boleyn; Peter Herridge*

Following duly posted and noticed Truro Planning Board hearing held on January 6, 2021, the Board voted to approve the application for a Special Permit under Sections 40.5 and 30.8 of the Zoning Bylaw, and to approve the applicant's Eligible Facilities Request, for modifications to existing antennas and other equipment on the tower sited at this property.

The following materials were submitted as part of the complete application for review:

- Application for Special Permit dated December 3, 2020
- Cover Letter from Adam F. Braillard, Esq. December 3, 2020
- Eligible Facilities Request to Modify Transmission Equipment at an Existing Base Station (letter dated December 3, 2020)
- Application to Renew the Existing Special Permit (letter dated December 3, 2020)
- Certified Abutters List
- Plan Set, "HY568/Cingular Truro, 344 Route 6, Truro, MA 02652, Existing 170'-0" Self Support Tower," T1; A1-A-4, inclusive; E1.
- "Rigorous Structural Analysis Report" dated March 27, 2019 prepared by B+T GRP, stamped by John W. Kelley, PE
- "Mount Analysis Report" dated March 18, 2019 prepared by Engineered Tower Solutions, PLLC, stamped by Frederic G. Bost, PE, CWI, GC
- Radio Station Authorization, Federal Communications Commission, Wireless Telecommunications Bureau dated November 29, 2006 (expires November 29, 2021) issued to T-Mobile License LLC
- Consent for Modifications request by Crown Castle dated March 14, 2019, signed April 9, 2019 by Robert Weinstein, Chair, Select Board
- Special Permit dated issued to T-Mobile Northeast LLC dated December 8, 2016 and other prior decisions relating to site
- Lease, Lease Assignment and Site License Agreement

Proposed Project

T-Mobile has an existing set of three panel antennas and related equipment on the tower located on this Town-owned property in the General Business District. The existing T-Mobile antennas and related equipment are located at a height of 97' on the tower. New T-Mobile antennas and related equipment are proposed to replace the existing ones at the same height. Specifically, T-Mobile describes its proposal as:

- replacing three panel antennas with three like kind panel antennas;
- replacing three remote radio units (RRU) with three like kind RRUs;
- replacing six tower mounted amplifiers (TMA) with three like kind TMAs; and
- replacing two radio cabinets with two like kind radio cabinets currently installed at the base of the tower.

Prior Permits

A special permit was originally granted in 2000 for Sprint to construct the 170 foot lattice tower and for Sprint and Nextell to install antennas. A modification to the special permit in 2006 allowed Omnipoint/T-Mobile to collocate on the tower. In 2016, the Board granted a special permit with conditions to T-Mobile under Zoning Bylaw Section 40.5 to replace equipment on the tower.

Special Permit under Zoning Bylaw Section 40.5, Communication Structures, Buildings and Appurtenances, and Section 30.8

Waivers

The Applicant requests waivers of the requirements for written information under Section 40.5(B)(19)(a) – (i). Where the tower is existing, and the antennas and other equipment proposed will replace existing equipment at the same height, the Board finds strict compliance with these Bylaw requirements is unnecessary. The Board further finds pursuant to Section 40.5(B)(24) that waiver of these requirements would not be detrimental to the public interest, cause the Town any expense, or be inconsistent with the intent and purpose of the Bylaw. These waivers are granted.

On the same grounds, the Board grants waivers of Section 40.5(B)(20)(b), (c), and (d).

The motion to approve the requested waivers, made by M. X and seconded by M. X, passed on a vote of X-X, *Anne Greenbaum, Chair; Jack Riemer, Clerk; Paul Kiernan; Bruce Boleyn; Steve Sollog; Peter Herridge* voting in favor.

Findings under Bylaw Section 40.5 and Section 30.8

The Board makes the following findings:

1. The Board finds that the proposal complies with the Purpose of Section 40.5, in particular, where the proposed modifications “maximize the use of existing and approved towers and buildings to accommodate new wireless telecommunications antennas.”

2. The Board finds that in replacing existing equipment on the tower, the Applicant satisfies all applicable requirements of Section 40.5(B)(1-18).
3. With respect to Section 40.5(B)(16), execution of a covenant, the Applicant states that it will comply with this requirement, and compliance is required as a condition of this permit.
4. *With respect to Section 40.5(B)(20), submission of a draft contract, the Applicant has provided the original 2000 lease between Town and Sprint; 2004 assignment of lease by Sprint to Nextel/Southwestern/Cingular, and 2006 Site License Agreement between Cingular (now AT&T) as licensor and T-Mobile as licensee. The obligation addressed by Section 40.5(B)(20), removal of equipment and site restoration, is now held by AT&T pursuant to Section 11 of the original lease and the 2004 assignment.*
5. Pursuant to Bylaw Section 30.8(C), the Board finds that the proposed use is in the opinion of the Board in harmony with the general public good and intent of this bylaw.

Approval of Eligible Facilities Request

Pursuant to 47 U.S.C. s. 1455 (the “Spectrum Act”), the Board makes the following additional findings:

1. The modifications to the Transmission Equipment do not increase the height of the Base Station by more than ten (10) per cent or ten (10) feet, whichever is greater.
2. *The modifications to the Transmission Equipment do not protrude from the edge of the support structure by more than six (6) feet. CONFIRM*
3. The modifications to the Transmission Equipment do not involve the installation of more than the standard number of equipment cabinets for the technology involved, not to exceed four.
4. The modifications to the Transmission Equipment do not entail any excavation or deployment outside of the Base Station site.
5. The modifications to the Transmission Equipment do not defeat any existing concealed or stealth-design.
6. The modifications to the Transmission Equipment comply with prior conditions of approval of the Base Station, unless the non-compliance is due to an increase in height, increase in width, addition of equipment cabinets, or new excavation that does not exceed the corresponding “substantial change” thresholds in numbers 1-4.

On motion by M. X., seconded by M. X, the Board voted to grant the special permit under Sections 40.5 and 30.8 of the Zoning Bylaw, subject to the following condition, and to grant approval of the Eligible Facilities Request, to T-Mobile Northeast, LLC:

Conditions:

1. The Applicant shall execute the Covenant required under Section 40.5(B)(16) and file the same with the Town Clerk prior to recording this Decision in the Registry.
2. *Installation of the equipment shall ensure limitation of vibrational and wind noises to the maximum extent feasible.*
3. *The equipment shall be grounded.*

Signature

Date

NOTE: Any person aggrieved by a decision of the Zoning Board of Appeals may appeal to the Superior or Land Court by bringing action within twenty days after the decision has been filed with the Town Clerk of Truro. (Massachusetts General Laws, Chapter 40A, Section 17)

THE COPY OF THIS DECISION PROVIDED BY THE TOWN CLERK MUST BE FILED WITH THE REGISTER OF DEEDS OF BARNSTABLE COUNTY BY THE APPLICANT.

DRAFT



La Tanzi
Spaulding
& Landreth

8 Cardinal Lane
Orleans

14 Center Street, Suite 4
Provincetown

3010 Main Street, Suite 2E
Barnstable

Benjamin E. Zehnder
ext. 128
bzehnder@latanzi.com

December 7, 2020

Susan Joseph, Acting Town Clerk
Truro Town Hall
24 Town Hall Road
Truro, MA 02666

Re: New Planning Board Site Plan Review Application /
112 North Pamet Road (Assessor's Parcel ID 48-1)

Dear Ms. Joseph:

Please find enclosed for filing a new application to the Planning Board for residential site plan review for the property at 112 North Pamet Road. I have included an additional fourteen packet copies, as well as check no. 13114 in the amount of \$250.00 for the filing fee. My office will email a scan of the entire application to planner1@truro-ma.gov today.

Thank you for your assistance.

Very truly yours,

Benjamin E. Zehnder

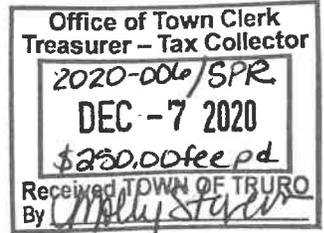
Enc.
cc via email only w attachments:
Barbara Huggins Carboni, Esq., Acting Town Planner
client
Daniel Costa
Bradford Malo
David Michniewicz

A Legal Beacon since 1969



Town of Truro Planning Board

P.O. Box 2030, Truro, MA 02666



APPLICATION FOR RESIDENTIAL SITE PLAN REVIEW

To the Town Clerk and the Planning Board of the Town of Truro, MA Date December 7, 2020

The undersigned hereby files an application with the Truro Planning Board for the following:

- Site Plan Review** pursuant to §70 of the Truro Zoning Bylaw
- Waiver of Site Plan Review** pursuant to §70.9 of the Truro Zoning Bylaw
(Note: *Site Plan Review shall not be waived in the Seashore District*)

1. General Information

Description of Property and Proposed Project Demolition and removal of existing single family dwelling in the Seashore Zoning District and construction of new smaller dwelling at a new location, setback from the coastal bank. The existing dwelling is at risk of sudden destruction due to storm-driven coastal bank erosion in its current location.

Property Address 112 North Pamet Road Map(s) and Parcel(s) 48-1

Registry of Deeds title reference: Book N/A, Page N/A, or Certificate of Title Number 208468 and Land Ct. Lot # 7 and Plan # 15097-H

Applicant's Name Anne Peretz

Applicant's Legal Mailing Address 39 Fayerweather Street, Cambridge, MA 02138

Applicant's Phone(s), Fax and Email (617) 460-2818; alperetz@aol.com

Applicant is one of the following: (please check appropriate box) Owner Prospective Buyer* Other*
*Written Permission of the owner is required for submittal of this application.

Owner's Name and Address William T. Burdick & Richard C. Vanison, Trustees, Dune House Nom. Tr.***

Representative's Name and Address Benjamin E. Zehnder / La Tanzi, Spaulding & Landreth P.O. Box 2300

Representative's Phone(s), Fax and Email Orleans, MA 02653; (508) 255-2133; (508) 255-3786; bzehnder@latanzi.com

2. Waiver(s) Request – The Planning Board may, upon the request of the applicant, pursuant to §70.4.F, waive requirements of §70.4.C, provided that in the opinion of the Planning Board such a waiver would not be detrimental to the public interest, cause the Town any expense, or be inconsistent with the intent and purpose of this Bylaw. A request for a waiver by the applicant shall be accompanied by a reasonable explanation as to why the waiver is being requested. If multiple waivers are requested, the applicant shall explain why each waiver is requested.

- The applicant is **advised** to consult with the Building Commissioner, Planning Department, Conservation Department, and/or Health Department prior to submitting this application.

Signature(s)

Anne Labouisse Peretz by Benjamin E. Zehnder
Applicant(s) Representative Printed Name(s)
[Signature] 12/7/20
Applicant(s) Representative Signature(s)

William T. Burdick & Richard C. Vanison, Trustees
Owner(s) Printed Name(s) or written permission
(see attached owners' authorization)
Owner(s) Signature(s) or written permission

Your signature on this application authorizes the Members of the Planning Board and town staff to visit and enter upon the subject property.

*** The Clark Estates, Inc. 1 Rockefeller Plaza, 31st Floor, New York, NY 10020



United States Department of the Interior

NATIONAL PARK SERVICE
Cape Cod National Seashore
99 Marconi Site Road
Wellfleet, MA 02667

IN REPLY REFER TO:

A-90 Tract 17-8597

January 6, 2021

Anne Greenbaum, Planning Board Chair
Truro Town Hall
24 Town Hall Road
P.O. Box 2030
Truro, MA 02666

Dear Ms. Greenbaum,

We are writing concerning the Planning Board hearing for the project proposal for 112 North Pamet Road in Truro, MA within Cape Cod National Seashore. The proposed setback of the replacement single-family house and deck is five feet from NPS land, where a 25 foot setback is the minimum zoning requirement. We understand the desire to move the house back due to coastal erosion; however, the lot is quite large, and erosion is not necessitating the proposed setback of five feet from the NPS land to the south.

We have just advised the new owner of 118 North Pamet Road that we can accept a 10 foot setback from the western property line provided that there are precautions in place, e.g. staked work limits and permanent boundary markers. We emphasize western boundary as the landowner's intent is to move as far from the coastal bluff to the east as possible.

We have agreed to 10' setback for structures and decks where a true hardship is presented. Due to the potential for encroachment and adverse impacts on to adjoining public NPS land, we feel that this is an important distance to maintain as an alternative minimum to the zoning bylaw. Construction activity requires some distance between the structure and adjacent land to regrade, install foundations, maneuver equipment, and accommodate construction worker activity.

We request that any project approval by the board for a reduced setback include the requirement for boundary monuments to demark NPS property at three locations along the southern boundary and establish firm work limits to assure that there will be no encroachment on NPS from construction. We also request that the required setback be no less than 10 feet, and that regrading does not extend all the way to the property line.

We provided similar comments on a comparable proposal by the applicant and their attorney in spring 2017, so NPS intentions have been clear for some time. Thank you for consideration of the national seashore's interest in protecting adjacent public land.

Sincerely,

A handwritten signature in blue ink that reads "Brian T. Carlstrom". The signature is written in a cursive style with a large initial "B" and a long, sweeping underline.

Brian T. Carlstrom
Superintendent

70.4 - RESIDENTIAL SITE PLAN REVIEW CHECKLIST - Applicant

Address: 112 North Pamet Road		Applicant Name: Anne Peretz	Date: December 7, 2020
No.	Requirement	Included	Not Included
C. Procedures and Plan Requirements			
1a.	An original and 14 copies of the Application for Site Plan Review	X	
1b.	15 copies of the required plans and other required information including this Checklist	X	
1c.	Completed Criteria Review	X	
1d.	Certified copy of the abutters list obtained from the Truro Assessors Office	X	
1e.	Applicable filing fee	X	
Site Plans			
2a.	Site Plans shall be prepared, stamped and signed by a Registered Land Surveyor and Professional Engineer	X	
2b.	Site Plans shall be prepared at a scale of one inch equals forty feet (1"=40') or larger	X	
3	Site Plan shall include the following:		
3a. 1	North Arrow and a locus plan containing sufficient information to locate the subject property, such as streets bounding or providing access to the property.	X	
3a. 2	Zoning Information: All applicable Zoning Bylaw information regarding the site's development, both existing and proposed conditions. This information shall be placed in a table format which must list all setbacks; percent of lot coverage, broken out between building, pavement, landscape coverage; etc.; number of buildings; total amount of square feet; and any other applicable zoning information necessary for the proper review of the site plan.	X	
Existing:			
	All setbacks	X	
	Percent (%) of lot coverage broken out between building, pavement, landscape coverage, etc.;	X	
	Number of buildings	X	
	Total number of square feet	X	
	Any other applicable zoning information necessary for the proper review of the site plan	X	

70.4 - RESIDENTIAL SITE PLAN REVIEW CHECKLIST - Applicant

Address: 112 North Pamet Road		Applicant Name: Anne Peretz	Date: December 7, 2020	
No.	Requirement	Included	Not Included	Explanation, if needed
	<u>Proposed:</u>			
	All setbacks	X		
	Percent (%) of lot coverage broken out between building, pavement, landscape coverage, etc.;	X		
	Number of buildings	X		
	Total number of square feet	X		
	Any other applicable zoning information necessary for the proper review of the site plan	X		
3a. 3	Assessor and Deed Information: The Truro Assessors Atlas Map(s) and Parcel(s) numbers and all plan and deed references.	X		
3a. 4	Graphic Scale	X		
3a. 5	Title Block - Including: name and description of the project; address of the property; names of the record owner(s) and the applicant(s); and date of the preparation of the plan(s) and subsequent revision dates	X		
3a. 6	Legend of All Symbols	X		
3a. 7	Property boundaries, dimensions and lot area	X		
3a. 8	Topography and grading plan	X		
3a. 9	Location, including setbacks of all existing and proposed buildings and additions	X		
3a. 10	Septic system location	X		
3a. 11	Location of (as applicable): wetlands the National Flood Insurance Program flood hazard elevation, and Massachusetts Natural Heritage Endangered Species Act jurisdiction	X	X	N/A
3a. 12	Driveway(s) and driveway opening(s)	X		
3a. 13	Existing and proposed lighting	X		
3a. 14	Existing landscape features both vegetative and structural	X		
3a. 15	Limit of work area (area to be disturbed during construction, including parking and storage of vehicles and equipment) and work staging area(s)	X		

70.4 - RESIDENTIAL SITE PLAN REVIEW CHECKLIST - Applicant

Address: 112 North Pamet Road		Applicant Name: Anne Peretz	Date: December 7, 2020	
No.	Requirement	Included	Not Included	Explanation, if needed
Architectural Plans				
3b.	Architectural plans with all dimensions at a scale of no less than 1/8" = 1'-0", including: elevations floor plans	X X		
3c.	Lighting specification, including style and wattage(s)	X		
	Neighborhood Context: Photographs or other readily available data concerning the location and size of buildings on lots adjacent to or visible from the lot under consideration in order to provide a neighborhood context for the property under consideration	X		
3e.	Re-vegetation/Landscaping plan , including both vegetative and structural features	X		

ADDRESSING THE REVIEW CRITERIA

§ 70.1 PURPOSE

The purpose of Site Plan Review for Commercial Development and for Residential Development is to protect the health, safety, convenience and general welfare of the inhabitants of the Town. It provides for a review of plans for uses and structures which may have significant impacts, both within the site and in relation to adjacent properties and streets; including the potential impact on public services and infrastructure; pedestrian and vehicular traffic; significant environmental and historic resources; abutting properties; and community character and ambiance.

Instructions: Please provide the Planning Board with a short explanation of how your application meets each of the review criteria of §70.4D of the Truro Zoning Bylaw. If you require extra space for your answers, please attach the additional information to your application in no more than two pages. This is to provide the Planning Board with an overview of your rationale prior to the meeting.

§70.4D – REVIEW CRITERIA

The Planning Board shall review Residential Site Plans and their supporting information. It is the intent of Residential Site Plan Review that all new construction shall be sited and implemented in a manner that is in keeping with the scale of other buildings and structures in its immediate vicinity in order to preserve the characteristics of existing neighborhoods. Such an evaluation shall be based on the following standards and criteria:

1. Relation of Buildings and Structures to the Environment. Proposed development relates to the existing terrain and lot and provides for solar and wind orientation which encourages energy conservation because:

The applicant proposes locating the replacement dwelling towards the higher, southeasterly side of the property. This location relates well to the existing terrain by avoiding the hollows to the north and west and situates the new structure where it will have much greater protection from coastal bank erosion and storm damage. The proposed site and house orientation will provide a long south-facing exposure allowing solar gain, and the proposed design includes a screened porch to east to provide natural ventilation. The dwelling design follows the sloping topography, which will provide additional natural ventilation and airflow due to having low windows on the lower north side and a bank of windows on the higher south side.

2. Building Design and Landscaping. Proposed development is consistent with the prevailing character and scale of the buildings and structures in the neighborhood through the use of appropriate scale, massing, building materials, screening, lighting and other architectural techniques because:

Please see architectural floor plans and elevations, and field cards for nearby developed properties, filed herewith. The proposed replacement dwelling is architecturally similar to the existing house, with gabled roofs, covered porches, dormers, natural red cedar shingling, and a brick chimney, however, the structure is significantly smaller. The proposed design is fit against the hill, so that the easterly face only appears to have one story from that direction. The design steps down to the north as the terrain does, and the visual massing of the structure is decreased by low eaves and broken up by dormers, windows, and porches. These features and the scale and massing are consistent with the architectural character and feel of nearby properties.

3. Preservation of Landscape. The landscape will be preserved in its natural state insofar as practicable by minimizing any grade changes and removal of vegetation and soil because:

Please see grading and landscape plans filed herewith. The applicant proposes no changes to the majority of the landscape. The proposed changes are to the location of the new dwelling, which needs to be regraded slightly to extend the topographical elevations around the building footprint to the north, to provide a more consistent, shallower slope for the house, and to relocate the driveway. The applicant proposes preserving the remainder of the landscape as is, removing the existing dwelling near the coastal bank and the section of paved driveway leading to it, and re-vegetating with native grasses and woody shrubs. Beachgrass, bearberry, bayberry, beach plum, beach rose, and rose are proposed for the area surrounding the new dwelling.

4. Circulation. Curb cuts and driveways will be safe and convenient and will be consistent with Chapter I, Section 9 of the General Bylaws of the Town of Truro because:

The applicant has proposed relocating a portion of her existing driveway, by removing the section leading to the current dwelling and installing a new section leading to the proposed dwelling. This driveway will have sufficient width, including clearance of vegetation, and height under the Section 9 General Bylaw requirements. The relocated driveway and the parking area and turnaround will be gravel, with a 90' paved section of driveway proposed for where the lot topography slopes upward. The driveway will continue to provide safe and convenient within the property. The applicant does not propose any change to the existing way which provides access to the property nor does she propose any curb cuts.

5. Lighting. Lighting will be consistent with Chapter IV, Section 6 of the General Bylaws of the Town of Truro. There will be protection of adjacent properties and the night sky from intrusive lighting because:

Please see lighting specification sheets filed herewith and building plans for fixture locations. The proposed lighting will be downward casting and will not intrude on the night sky or affect any adjacent property.

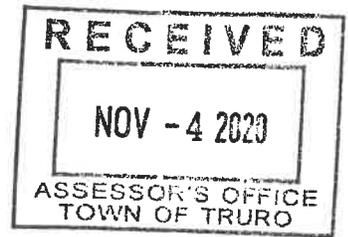


TOWN OF TRURO

Assessors Office

Certified Abutters List

Request Form



DATE: November 2, 2020

NAME OF APPLICANT: Anne Labouisse Peretz; William T. Burdick & Richard C. Vanison, Tr., Dune House Nom. Tr.

NAME OF AGENT (if any): Benjamin E. Zehnder / La Tanzi, Spaulding & Landreth P.O. Box 2300 Orleans, MA 02653

MAILING ADDRESS: 39 Fayerweather Street, Cambridge, MA 02138

CONTACT: HOME/CELL (617) 460-2818 EMAIL alperetz@aol.com

PROPERTY LOCATION: 112 North Pamet Road
(street address)

PROPERTY IDENTIFICATION NUMBER: MAP 48 PARCEL 1 EXT.
(if condominium)

ABUTTERS LIST NEEDED FOR:
(please check all applicable)

FEE: \$15.00 per checked item
(Fee must accompany the application unless other arrangements are made)

- | | | |
|--|---|---|
| <input type="checkbox"/> Board of Health ⁵ | <input type="checkbox"/> Planning Board (PB) | <input type="checkbox"/> Zoning Board of Appeals (ZBA) |
| <input type="checkbox"/> Cape Cod Commission | <input type="checkbox"/> Special Permit ¹ | <input checked="" type="checkbox"/> Special Permit ¹ |
| <input type="checkbox"/> Conservation Commission ⁴ | <input checked="" type="checkbox"/> Site Plan ¹ | <input checked="" type="checkbox"/> Variance ¹ |
| <input type="checkbox"/> Licensing | <input type="checkbox"/> Preliminary Subdivision ³ | |
| Type: <u> </u> | <input type="checkbox"/> Definitive Subdivision ³ | |
| <input type="checkbox"/> Other <u> </u> | <input type="checkbox"/> Accessory Dwelling Unit (ADU) ² | |
- (Fee: Inquire with Assessors)

(Please Specify)

Note: Per M.G.L., processing may take up to 10 calendar days. Please plan accordingly.

THIS SECTION FOR ASSESSORS OFFICE USE ONLY

Date request received by Assessors: Nov 4, 2020 3:45

Date completed: 11/6/2020

List completed by: [Signature]

Date paid: 11/4/20 Cash/Check 13087

¹ Abutters, owners of land directly opposite on any public or private street or way, and abutters to the abutters within 300 feet of the property line.

² Abutters to the subject property, abutters to the abutters, and owners of properties across the street from the subject property.

³ Landowners immediately bordering the proposed subdivision, landowners immediately bordering the immediate abutters, and landowners located across the streets and ways bordering the proposed subdivision. **Note:** For Definitive Subdivision only, responsibility of applicant to notify abutters and produce evidence as required.

⁴ All abutters within 300 feet of parcel, except Beach Point between Knowles Heights Road and Provincetown border, in which case it is all abutters within 100 feet. **Note:** Responsibility of applicant to notify abutters and produce evidence as required.

⁵ Abutters sharing any boundary or corner in any direction – including land across a street, river or stream. **Note:** Responsibility of applicant to notify abutters and produce evidence as required.



TRURO ASSESSORS OFFICE
PO Box 2012 Truro, MA 02666
Telephone: (508) 214-0921
Fax: (508) 349-5506

Date: November 5, 2020

To: Dune House Nominee Trust
c/o Benjamin Zehnder & La Tanzi, Spaulding & Landreth
PO Box 2300
Orleans, MA 02653

From: Assessors Department

Certified abutters list application for: 112 No Pamet Rd Map 48 Parcel 1.

Site Plan-Planning Board:

Attached is a list of Truro abutters for the property located at 112 No Pamet Rd. Due to the fact that the sole abutter within 300 feet is only the National Seashore, we have included the closest abutters surrounding the property within a reasonable distance. The current owner of the property is the Dune House Nominee Trust. The names and addresses of the abutters are as of October 30, 2020 according to the most recent documents received from the Barnstable County Registry of Deeds.

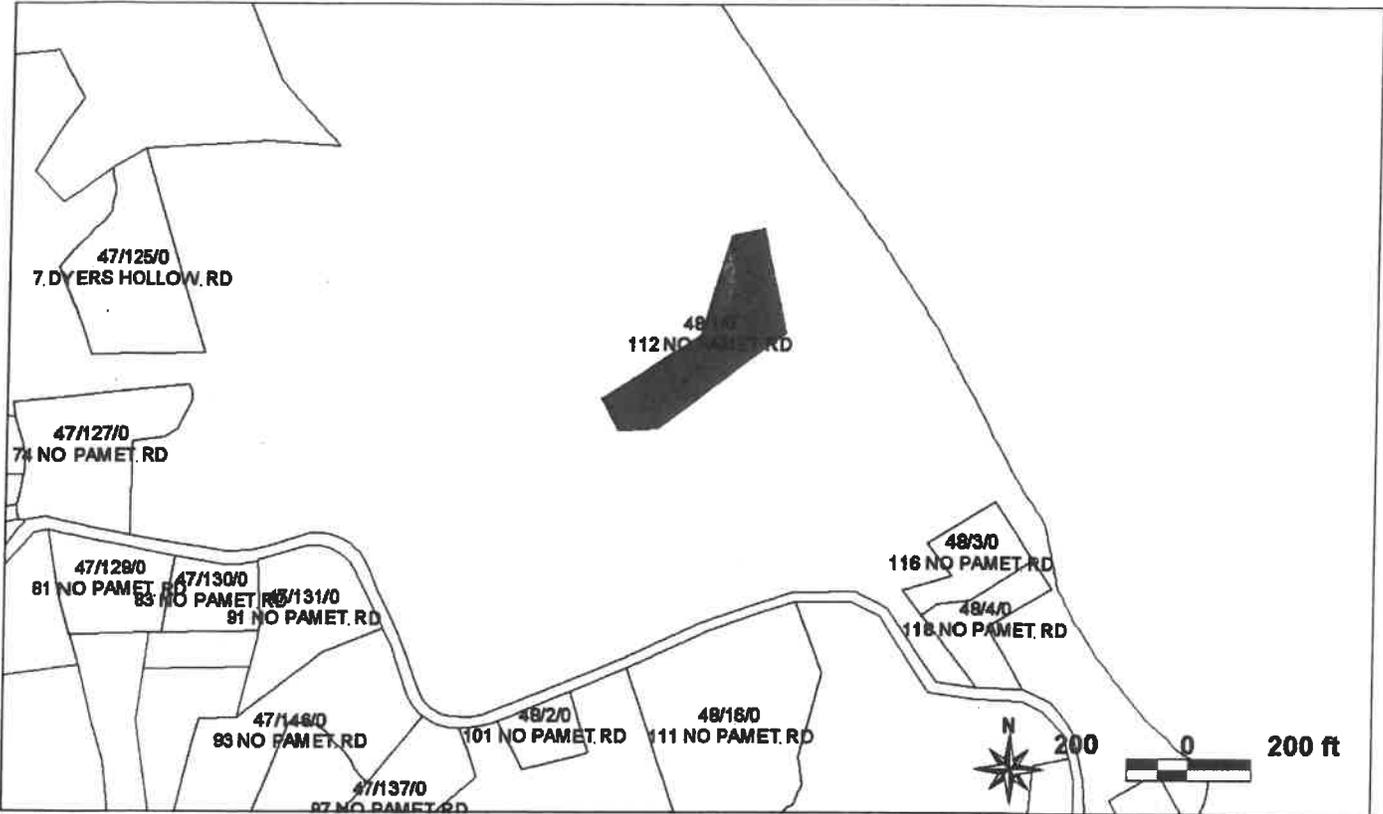
Certified by:  _____

Jon Nahas
Principal Assessor
Town of Truro
24 Town Hall Rd
PO Box 2012
Truro, MA 02666
508.214.0917
jnahas@truro-ma.gov

112 No Pamet Rd
 Map 48 Parcel 1
 Site Plan-Planning Board

TOWN OF TRURO, MA
 BOARD OF ASSESSORS
 P.O. BOX 2012, TRURO MA 02666

Custom Abutters List



Key	Parcel ID	Owner	Location	Mailing Street	Mailing City	ST	ZipCd/Country
7292	40-999-0-E	USA-DEPT OF INTERIOR Cape Cod National Seashore	0 CAPE COD NATIONAL SEASHORE	99 Marconi Site Rd	Wellfleet	MA	02667
2699	47-125-0-R	WEINSTEIN ROBERT M & KRAFT MONICA	7 DYERS HOLLOW RD	PO BOX 479	TRURO	MA	02666
2701	47-127-0-R	GREGORY ANDRE & KLEINE CINDY R	74 NO PAMET RD	455 WEST 20TH ST #4B	NEW YORK	NY	10011
2703	47-129-0-R	AIKEN FAMILY TRUST TRS: BARRINGTON SAMUEL C	81 NO PAMET RD	PO BOX 1130	TRURO	MA	02666-1130
2704	47-130-0-R	RICHARDS NOMINEE TRUST TRS: RICHARDS TIMOTHY J ET AL	83 NO PAMET RD	C/O RICHARDS JAMES F PO BOX 1	SOUTH KENT	CT	06785
2705	47-131-0-R	AIKEN ALISON REV LIV TRUST AGR TRS: AIKEN ALISON	91 NO PAMET RD	PO BOX 1041	TRURO	MA	02666-1041
2711	47-137-0-R	IRWIN ANNE L IRREV TRUST TRS: N J WOLFF & E C IRWIN	97 NO PAMET RD	PO BOX 846	TRURO	MA	02666-0846
2720	47-146-0-R	SULLIVAN DANIEL E & KATHERINE AIKEN	93 NO PAMET RD	1614 NE ALBERTA ST	PORTLAND	OR	97211
2738	48-1-0-R	DUNE HOUSE NOMINEE TRUST TRS BURDICK WILLIAM T ET AL	112 NO PAMET RD	C/O CLARK ESTATES INC 1 ROCKEFELLER PLAZA FLOOR 31	NEW YORK	NY	10020
2739	48-2-0-R	KINZER STEPHEN A & MARIANNE A	101 NO PAMET RD	33 UNION PARK	BOSTON	MA	02116
2740	48-3-0-R	FAY SHARON & SCHAFFER MAXINE	116 NO PAMET RD	46 MONROE PLACE	BROOKLYN	NY	11201
2741	48-4-0-R	GERSEN JACOB E & JEANNIE C SUK	118 NO PAMET RD	10 FAYERWEATHER ST	CAMBRIDGE	MA	02138
6555	48-16-0-E	U S A DEPT OF THE INTERIOR	111 NO PAMET RD	CAPE COD NATIONAL SEASHORE 99 MARCONI SITE RD	WELLFLEET	MA	02667

ju 11/6/2020

<p>40-999-0-E</p> <p>USA-DEPT OF INTERIOR Cape Cod National Seashore 99 Marconi Site Rd Wellfleet, MA 02667</p>	<p>40-999-0-E</p>	<p>WEINSTEIN ROBERT M & KRAFT MONICA PO BOX 479 TRURO, MA 02666</p>	<p>47-125-0-R</p>	<p>GREGORY ANDRE & KLEINE CINDY R 455 WEST 20TH ST #4B NEW YORK, NY 10011</p>	<p>47-127-0-R</p>
<p>47-129-0-R</p> <p>AIKEN FAMILY TRUST TRS: BARRINGTON SAMUEL C PO BOX 1130 TRURO, MA 02666-1130</p>	<p>47-129-0-R</p>	<p>RICHARDS NOMINEE TRUST TRS:RICHARDS TIMOTHY J ET AL C/O RICHARDS JAMES F PO BOX 1 SOUTH KENT, CT 06785</p>	<p>47-130-0-R</p>	<p>AIKEN ALISON REV LIV TRUST AGR TRS: AIKEN ALISON PO BOX 1041 TRURO, MA 02666-1041</p>	<p>47-131-0-R</p>
<p>47-137-0-R</p> <p>IRWIN ANNE L IRREV TRUST TRS: N J WOLFF & E C IRWIN PO BOX 846 TRURO, MA 02666-0846</p>	<p>47-137-0-R</p>	<p>SULLIVAN DANIEL E & KATHERINE AIKEN 1614 NE ALBERTA ST PORTLAND, OR 97211</p>	<p>47-146-0-R</p>	<p>DUNE HOUSE NOMINEE TRUST TRS BURDICK WILLIAM T ET.AL C/O CLARK ESTATES INC 1 ROCKEFELLER PLAZA FLOOR 31 NEW YORK, NY 10020</p>	<p>48-1-0-R</p>
<p>48-2-0-R</p> <p>KINZER STEPHEN A & MARIANNE A 33 UNION PARK BOSTON, MA 02116</p>	<p>48-2-0-R</p>	<p>FAY SHARON & SCHAFFER MAXINE 46 MONROE PLACE BROOKLYN, NY 11201</p>	<p>48-3-0-R</p>	<p>GERSEN JACOB E & JEANNIE C SUK 10 FAYERWEATHER ST CAMBRIDGE, MA 02138</p>	<p>48-4-0-R</p>
<p>48-16-0-E</p> <p>U S A DEPT OF THE INTERIOR CAPE COD NATIONAL SEASHORE 99 MARCONI SITE RD WELLFLEET, MA 02667</p>	<p>48-16-0-E</p>				

11/6/2020

*One Rockefeller Plaza
New York, N.Y. 10020-2102*

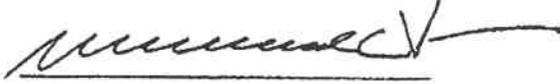
Telephone: 212-977-6900

November 17, 2020

**Re: Dune House Nominee Trust
112 North Pamet Road
Assessor's Map 48, Parcel 1**

We, William T. Burdick and Richard C. Vanison, as Trustees of the Dune House Nominee Trust u/d/t dated February 27, 2015, hereby authorize and give permission to Anne Labouisse Peretz and her representative, Benjamin E. Zehnder, Esq. of La Tanzi, Spaulding & Landreth, PC., to apply to the Zoning Board of Appeals and/or the Planning Board for the Town of Truro relative to property owned by us, as Trustees of the above-named Trust, at 112 North Pamet Road, Assessor's Map 48, Parcel 1.


William T. Burdick


Richard C. Vanison

- Percels
- Buildings
- Sidewalks
- Street Pavement
- Town Boundary
- MA Highways
- US Interstate
- US Highway
- Numbered Routes
- Street Centerlines
- Abutting Towns Labels
- Abutting Towns
- Waterbodies
- Major Streams
- Town Mask
- Bath Donut2
- 0-5 ft
- 5-10 ft
- 10-15 ft
- 15-20 ft
- 20-30 ft
- 30-40 ft
- 40-50 ft
- 50-60 ft
- 60-70 ft
- 70+ ft
- Bathymetry
- 0-5 ft
- 5-10 ft
- 10-15 ft
- 15-20 ft
- 20-30 ft
- 30-40 ft
- 40-50 ft
- 50-60 ft
- 60-70 ft
- 70+ ft
- Background



The data shown on this site are provided for informational and planning purposes only. The Town and its consultants are not responsible for the misuse or misrepresentation of the data.



Printed on 11/18/2020 at 10:20 AM

112 North Pamet Road - Truro, MA

Doc. No. 1,285,948
Ctf. No. 208468

TRANSFER CERTIFICATE OF TITLE

From Certificate No. 190783, Originally Registered February 24, 2010
in the Registry District of Barnstable County.

THIS IS TO CERTIFY that WILLIAM T BURDICK, RICHARD C VANISON, as trustees of the
Dune House Nominee Trust under a Declaration of Trust dated February 27, 2015 being
Document No. 1,285,947, of The Clark Estates Inc., 1 Rockefeller Plaza, 31st Floor,
New York, New York 10020,

the owner(s) in fee simple,

of that land situated in TRURO

in the county of Barnstable and the Commonwealth of Massachusetts, described as
follows:

LOT 7

PLAN 15097-H

Said land is subject to and has the benefit of the easements,
rights and conditions set forth or referred to in Certificate of Title No. 13090,
so far as the same are in force and applicable.

And it is further certified that said land is under the operation and provisions
of Chapter 185 of the General Laws, and that the title of said owner(s) to said
land is registered under said Chapter, subject, however, to any of the encumbrances
mentioned in Section forty-six of said Chapter, which may be subsisting

WITNESS JUDITH C. CUTLER, Chief Justice of the Land Court at Barnstable, in said
County of Barnstable,

the seventh day of January in the year two thousand and sixteen

at 1 o'clock and 42 minutes

Attest, with the Seal of said Court,

JOHN F. MEADE, Assistant Recorder.

Land Court Case No. 15097

MEMORANDA OF ENCUMBRANCES ON THE LAND DESCRIBED IN THIS CERTIFICATE

Ctf:208468

1,285,948

DOCUMENT NUMBER	KIND	RUNNING IN FAVOR OF	TERMS	DATE OF INSTRUMENT		SIGNATURE
				DATE AND TIME OF REGISTRATION	DISCHARGE	
6,728	N		SEE DECREE	01-20-1933		<i>John H. Hensh</i>
1				01-21-1933	9:15	
18,861	ES	PHILIP W CONRAD (&O)	SEE DOC	08-08-1946		<i>John H. Hensh</i>
1				09-26-1946	9:00	
31,135	N		RTS & CONDS - SEE CTF 13090	08-20-1951		<i>John H. Hensh</i>
1				08-30-1951	9:25	
477,916	ES	COMMONWEALTH ELECTRIC CO	7 15097-H	09-19-1988		<i>John H. Hensh</i>
1				02-07-1989	12:41	
492,891	O	TRURO CONSERVATION COMMISSION	7 15097-H	10-17-1988		<i>John H. Hensh</i>
1				10-12-1989	10:38	
559,789	C/CP		492,891 001			<i>John H. Hensh</i>
1				08-06-1992	2:28	
1,285,947	DL/TR	DUNE HOUSE NOMINEE TRUST	SEE DOC	02-27-2015		<i>John H. Hensh</i>
1				01-07-2016	1:42	

SUBDIVISION PLAN OF LAND IN TRURO

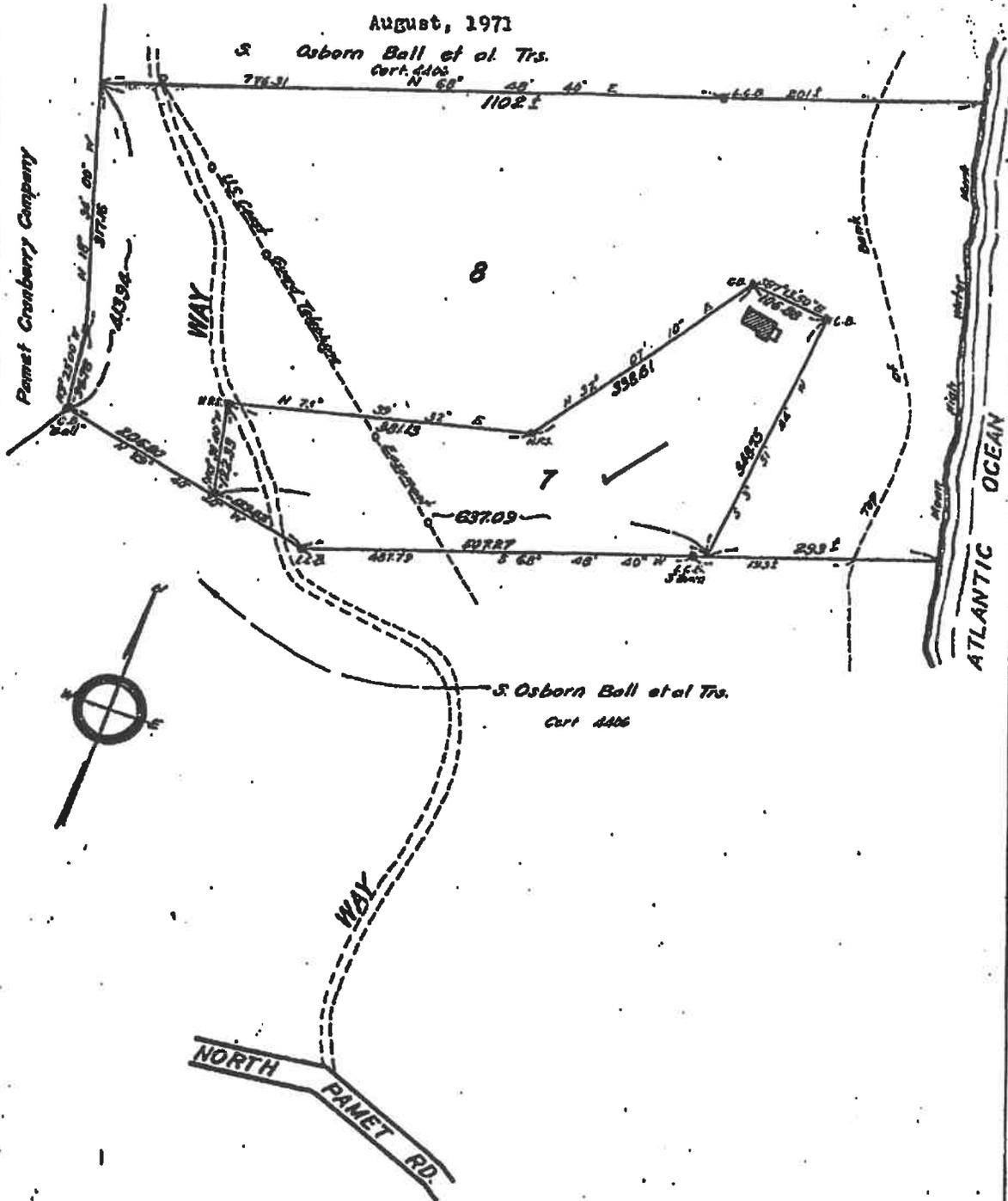
15097H

W. O. Slade, Surveyor

August, 1971

S Osborn Ball et al Trs.

Cert. 4106
N 68° 48' 48" E
1102.1



Pamet Cranberry Company

WAY

WAY

NORTH
PAMET RD.

ATLANTIC OCEAN

S. Osborn Ball et al Trs.
Cert 4406

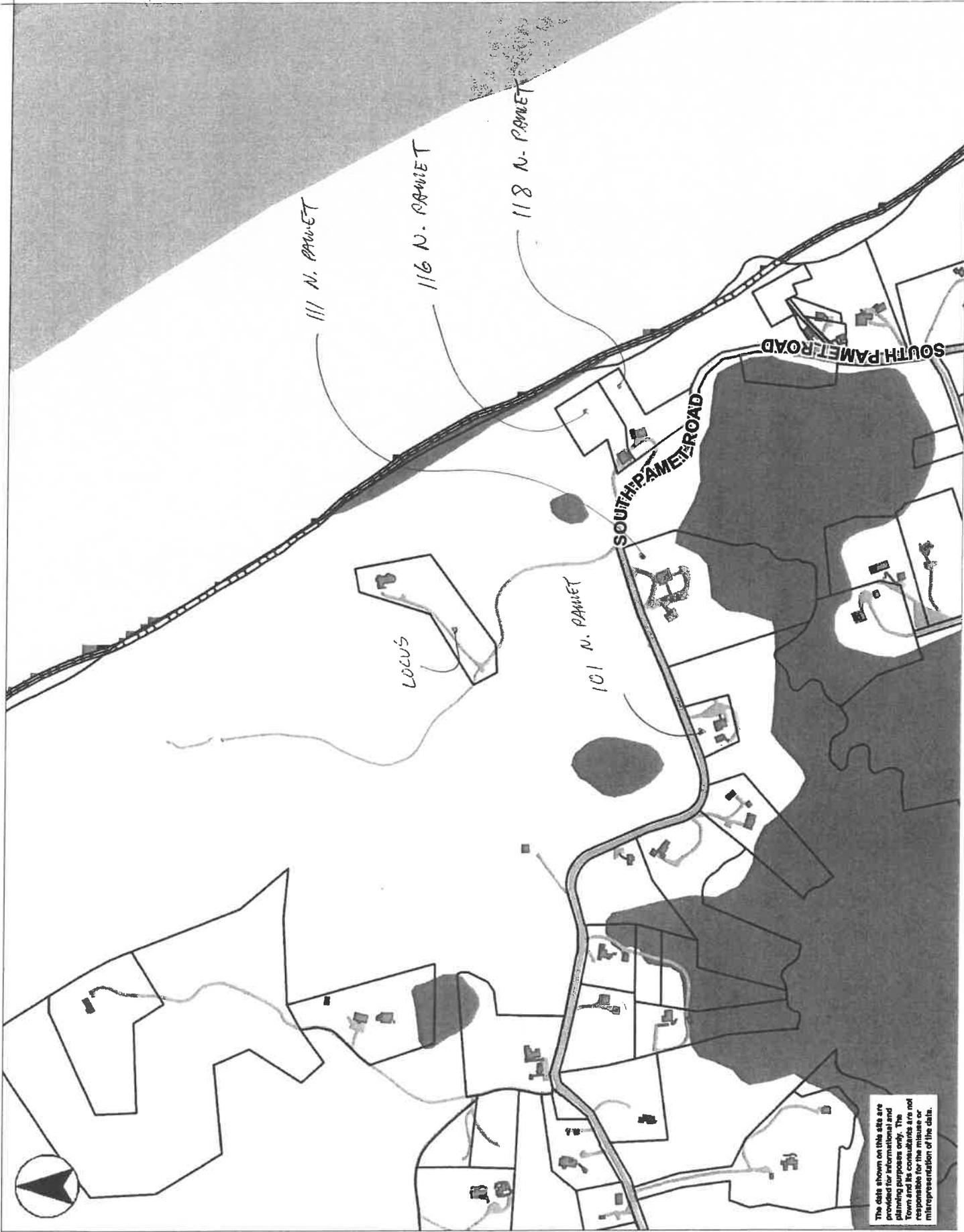
Subdivision of Lot 1^R
 Shown on Plan 15097^D
 Filed with Cert. of Title No. 6979
 Registry District of Parnstable County

Separate certificates of title may be issued for land
 shown hereon as Left. Z.R.R.
 By the Court.

OCT. 22. 1971. *James M. Woodbury*
 Deputy Recorder

Copy of part of plan
 filed in
LAND REGISTRATION OFFICE
 OCT. 22. 1971
 Scale of this plan 150 feet to an Inch
 R.L. Woodbury, Engineer for Court

- Parcels
- Buildings
- Streets
- Street Pavement
- Town Boundary
- MA Highways
- Interstate
- US Highways
- State Routes
- Street Centerlines
- Abutting Towns Labels
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- 40-50 ft
- 50-60 ft
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- Background



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Printed on 11/16/2020 at 11:28 AM

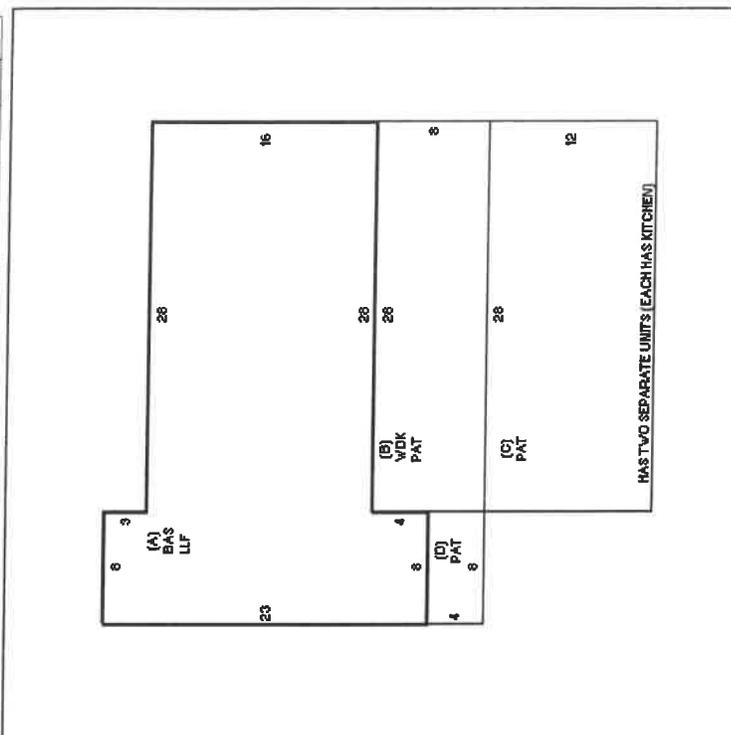
Key: 2739

Town of TRURO - Fiscal Year 2021

10/9/2020 9:05 am SEQ #: 2,796

CLASS	CLASS%	DESCRIPTION	BN ID	BN	CARD
1090	100	MULTIPLE HSES		2	2 of 2
PMT NO	PMT DT	TY	DESC	AMOUNT	INSP

CD	T	AC/SF/JN	Nbhd	Inf1	Inf2	VC	CREDIT AMT	ADJ VALUE



TOTAL	ZONING	FRNT	PREVIOUS
Nbhd	N O T E		
Inf1			134,000
Inf2			



TY	QUAL	COND	DIM/NOTE	YB	UNITS	ADJ PRICE	RCNLD

BLDG	CD	ADJ	DESC	SIZE ADJ	UNITS	ADJ
MODEL	1		RESIDENTIAL	1,000	1,000	
STYLE	1	1.00	RANCH [100%]	1,000	1,000	
QUALITY	A	1.00	AVERAGE [100%]			
FRAME	1	1.00	WOOD FRAME [100%]			

MEASURE	CD	DESCRIPTION	ADJ
FOUNDATION	4	BSMT WALL	1.00
EXT COVER	1	WOOD SHINGLES	1.00
ROOF SHAPE	4	FLAT/SHED	1.00
ROOF COVER	7	ROLL	1.00
FLOOR COVER	2	SOFTWOOD	1.00
INT FINISH	4	WALL BOARD	1.00
HEATING/COOLING	12	OTHER	1.00
FUEL SOURCE	8	NONE	1.00

YEAR BLT	COND	ADJ	UNITS	ADJ
1972			1,000	
NET AREA	1,264	DETAIL ADJ	1,000	
\$/LA/RCN	\$156	OVERALL	1,000	

STORIES (FAR)	ROOMS	BEDROOMS	BATHROOMS	FIXTURES	UNITS
1	3	2	2	6	2

BLDG	CD	ADJ	DESC	RCN	ADJ PRICE	YB	UNITS	RCN	TOTAL RCN
A	LLF		LOWER LEVEL FIN	632	115.54	1972	632	73,021	197,093
A	BAS		BAS AREA	632	171.87	1972	632	108,622	
B	WDK		ATT WOOD DECK	582	7.43		582	4,396	
B	WDK		ATT WOOD DECK	224	30.60		224	6,854	

EFF YR/AGE	COND	FUNC	ECON	DEPR	RCNLD
1979 / 40	32	32 %	0	0	68

Key: 2740

Town of TRURO - Fiscal Year 2021

10/9/2020 9:05 am SEQ # 2,797

CURRENT OWNER		PARCEL ID		LOCATION		CLASS%		DESCRIPTION		BN ID	BN	CARD
FAY SHARON & SCHAFFER MAXINE		48-3-0		116 NO PAMET RD		1010		SINGLE FAMILY		1	1	1 of 1
46 MONROE PLACE		TRANSFER HISTORY		DOS		T		SALE PRICE		BK-PG (Cert)		
BROOKLYN, NY 11201		FAY SHARON & SCHAFFER MAX		12/20/2006		QS		2,150,000		21631-328		
		KISLAK BARBARA M		08/30/1990		A		7278-190				
CD	T	AC/ISF/UN	Nbhd	Intf1	Intf2	Intf3	SAF	ADJ BASE	VC	CREDIT AMT	ADJ VALUE	
100	A	0.775	16	1.00	E40	0.80	1.00	1,214,550	1.00	1	941,280	
300	A	0.945	16	1.00	1	1.00	1.00	154,500	1.00	1	146,000	

TOTAL		1.720 Acres		ZONING		NSD		FRNT		0	
Nbhd	NATL SEASHORE	View from upper OPA is of stairs to deck. No water view									
Intf1	EROSION	O except to right side. Did not see 5x18 WDK 1/3/20.									
Intf2	NO ADJ										
TY	QUAL	COND	DIM	NOTE	YB	UNITS	ADJ PRICE	RCNLD			
WDK	G	1.18	G	0.90 ON BLUFF 10'	2011	100	11.68	1,100			

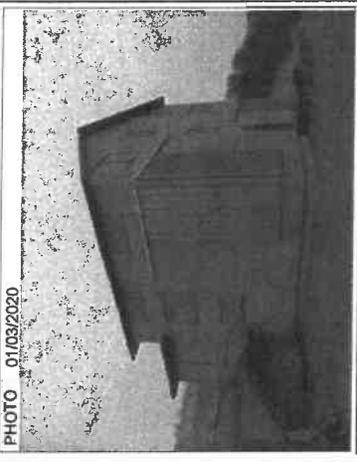
ASSESSED		CURRENT		PREVIOUS	
LAND	1,087,300	1,076,500			
BUILDING	726,200	705,400			
DETACHED	1,100	2,000			
OTHER	0	0			
TOTAL	1,814,600	1,783,900			

BUILDING		CD		ADJ		DESC	
MODEL	1	RESIDENTIAL					
STYLE	8	1.10		CONTEMPORARY [100%]			
QUALITY	V	1.50		VERY GOOD [100%]			
FRAME	1	1.00		WOOD FRAME [100%]			

MEASURE		1/3/2020		LG	
LIST	6/4/2010	JH			
REVIEW	12/15/2010	LVM			

ELEMENT		CD		DESCRIPTION		ADJ	
FOUNDATION	4	BSMT WALL		1.00			
EXT COVER	10	VERT. BOARD		1.00			
ROOF SHAPE	2	HIP		1.00			
ROOF COVER	9	OTHER		1.00			
FLOOR COVER	2	SOFTWOOD		1.00			
INT. FINISH	5	OTHER		1.00			
HEATING/COOLING	3	RADIANT		1.02			
FUEL SOURCE	2	GAS		1.00			

CAPACITY		UNITS		ADJ	
STORIES(FAR)	2	1.00			
ROOMS	0	1.00			
BEDROOMS	4	1.00			
BATHROOMS	2	1.00			
FIXTURES	6	\$4,200			
UNITS	0	1.00			



BLDG COMMENTS

CLASS		CLASS%		DESCRIPTION		BN ID	BN	CARD
5	(E) EPA	38						
5	(C) OPA EPA	38						
12	(B) USF BAS BMSJ	14	13	13	13	12	13	13
12	(D) USF OPA ASH	14		13		12	12	13
16	(A) USF BAS BBS	38						
	(F) WDK	38						6

TOTAL RCN		RCN		ADJ PRICE		UNITS		YB		EFF:YR/AGE	
193,721	193,721	245.22	790	2009	2009	10	10	2009	10	10	2009 / 10
228,105	228,105	288.74	790	2009	2009	10	10	2009	10	10	2009 / 10
174,043	174,043	220.31	790	2009	2009	10	10	2009	10	10	2009 / 10
12,086	12,086	77.47	156	1869	1869	10	10	1869	10	10	1869 / 10
45,044	45,044	288.74	156	1869	1869	10	10	1869	10	10	1869 / 10
66,736	66,736	220.31	312	1899	1899	10	10	1899	10	10	1899 / 10
42,543	42,543	111.95	380	380	380	10	10	380	10	10	380 / 10
21,790	21,790	62.98	346	346	346	10	10	346	10	10	346 / 10
6,211	6,211	39.81	156	156	156	10	10	156	10	10	156 / 10
7,540	7,540	57.12	132	132	132	10	10	132	10	10	132 / 10
2,859	2,859	2,859.40	1	1	1	10	10	1	10	10	1 / 10
0.00	0.00	0.00	1	1	1	10	10	1	10	10	1 / 10

TOTAL RCN		RCN		ADJ PRICE		UNITS		YB		EFF:YR/AGE	
806,877	806,877	245.22	790	2009	2009	10	10	2009	10	10	2009 / 10
228,105	228,105	288.74	790	2009	2009	10	10	2009	10	10	2009 / 10
174,043	174,043	220.31	790	2009	2009	10	10	2009	10	10	2009 / 10
12,086	12,086	77.47	156	1869	1869	10	10	1869	10	10	1869 / 10
45,044	45,044	288.74	156	1869	1869	10	10	1869	10	10	1869 / 10
66,736	66,736	220.31	312	1899	1899	10	10	1899	10	10	1899 / 10
42,543	42,543	111.95	380	380	380	10	10	380	10	10	380 / 10
21,790	21,790	62.98	346	346	346	10	10	346	10	10	346 / 10
6,211	6,211	39.81	156	156	156	10	10	156	10	10	156 / 10
7,540	7,540	57.12	132	132	132	10	10	132	10	10	132 / 10
2,859	2,859	2,859.40	1	1	1	10	10	1	10	10	1 / 10
0.00	0.00	0.00	1	1	1	10	10	1	10	10	1 / 10

RCNLD		RCNLD		ADJ PRICE		UNITS		YB		EFF:YR/AGE	
806,877	806,877	245.22	790	2009	2009	10	10	2009	10	10	2009 / 10
228,105	228,105	288.74	790	2009	2009	10	10	2009	10	10	2009 / 10
174,043	174,043	220.31	790	2009	2009	10	10	2009	10	10	2009 / 10
12,086	12,086	77.47	156	1869	1869	10	10	1869	10	10	1869 / 10
45,044	45,044	288.74	156	1869	1869	10	10	1869	10	10	1869 / 10
66,736	66,736	220.31	312	1899	1899	10	10	1899	10	10	1899 / 10
42,543	42,543	111.95	380	380	380	10	10	380	10	10	380 / 10
21,790	21,790	62.98	346	346	346	10	10	346	10	10	346 / 10
6,211	6,211	39.81	156	156	156	10	10	156	10	10	156 / 10
7,540	7,540	57.12	132	132	132	10	10	132	10	10	132 / 10
2,859	2,859	2,859.40	1	1	1	10	10	1	10	10	1 / 10
0.00	0.00	0.00	1	1	1	10	10	1	10	10	1 / 10

Key: 2741

Town of TRURO - Fiscal Year 2021

10/9/2020 9:05 am SEQ # 2,798

CLASS	CLASS%	DESCRIPTION	BN ID	BN	CARD
1010	100	SINGLE FAMILY		1	1 of 1
PMT NO	PMT DT	TY	DESC	AMOUNT	BY
17-138X	05/18/2017	4	REHAB	8,873	LG
08-036	02/27/2008	90	BP NVC	3,000	JH
07-281	12/11/2007	10	ALL OTHERS	15,000	JH
07-256	11/06/2007	7	GARAGE	10,000	JH
93-153	11/29/1993	10	ALL OTHERS	3,200	JH

LOCATION	PARCEL ID	TRANSFER HISTORY	DOS	T	SALE PRICE	BK-PG (Cert)
118 NO PAMET RD	48-4-0	GERSEN JACOB E & JEANNIE KISLAK JAY WARD IRREV TRU KISLAK JAY WARD ESTATE OF	10/19/2016 QS	A	825,000	30016-103
			06/28/2012 A		26457-11	
			10/31/1986 99		5378-303	

CD	T	AC/SF/JUN	Nbhd	Inf1	Inf2	ADJ BASE	SAF	Inf1	VC	CREDIT AMT	ADJ VALUE
100	A	0.775	16	1.00	ER2	0.35	1	1.00	SW1	7.50	549,080
300	A	0.824	16	1.00	1	1.00	1	1.00	SW1	7.50	127,310

TOTAL	1.599 Acres	ZONING	NSD	FRNT	0
Nbhd	NATL SEASHORE				
Inf1	EROSION				
Inf2	NO ADJ				

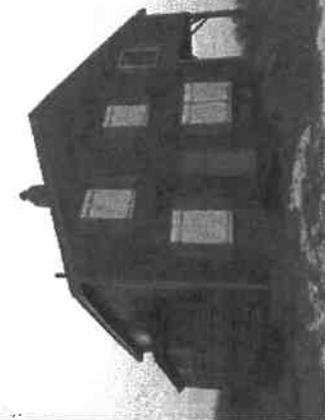
TY	QUAL	COND	DIM/NOTE	YB	UNITS	ADJ PRICE	RCNLD
DGF	A	1.00	G 0.90 14*25	2007	350	22.70	7,200
UTB	A	1.00	G 0.90 12*12		144	17.60	2,300
TOTAL						828,600	823,600

BUILDING MODEL	CD	ADJ	DESC	MEASURE LIST	8/15/2014	FC
RESIDENTIAL						
OLD STYLE [100%]						
GOOD-AVE+ [100%]						
WOOD FRAME [100%]						

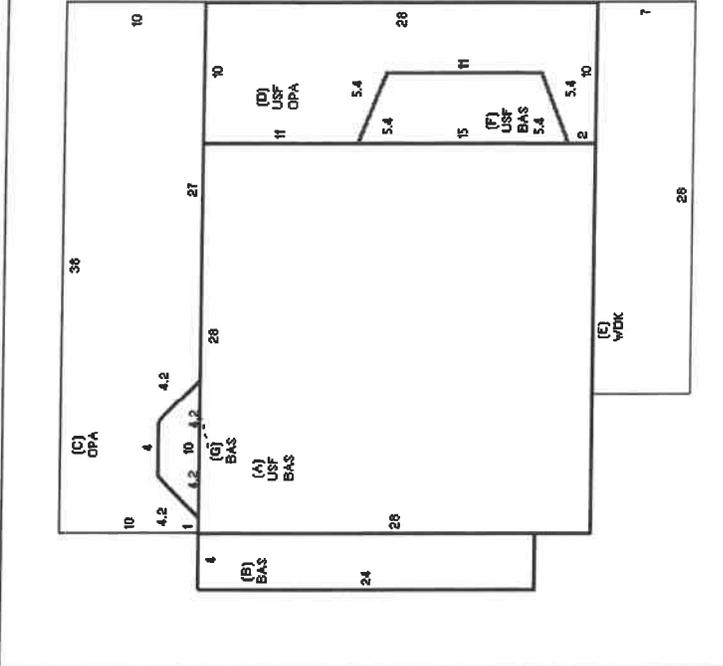
YEAR BLT	SIZE ADJ	1899	ADJ	1.000	ELEMENT	CD	DESCRIPTION	ADJ
NET AREA	2,030	DETAIL ADJ	1.000		FOUNDATION	1	PIER	1.00
\$/LA(RCN)	\$213	OVERALL	1.130		EXT COVER	1	WOOD SHINGLES	1.00
CAPACITY					ROOF SHAPE	1	GABLE	1.00
STORIES(FAR)	2				ROOF COVER	1	ASPHALT SHINGLE	1.00
ROOMS	7				FLOOR COVER	2	SOFTWOOD	1.00
BEDROOMS	4				INT FINISH	5	OTHER	1.00
BATHROOMS	1.5				HEATING/COOLING	13	NO HEAT	0.93
FIXTURES	6				FUEL SOURCE	8	NONE	1.00
UNITS	1							

ASSESSED	CURRENT	PREVIOUS
LAND	676,400	669,700
BUILDING	142,700	145,500
DETACHED	9,500	8,400
OTHER	0	0
TOTAL	828,600	823,600

PHOTO 01/22/2018



BLDG COMMENTS: HAS WOODSTOVE IN FPL OPENING. GFP=GAS-BURNING STOVE. HEAT=NONE (HAS ONLY 1 GAS RINNAI HEATER IN 1 BR).



UNITS	YB	ADJ PRICE	RCN	TOTAL RCN	CONDITION	ELEM	CD
966	1899	213.63	206,370	437,400			
1,064	1899	163.00	173,435				
574		41.11	23,598				
196		40.15	7,869				
1		10,579.20	10,579				
1		6,348.00	6,348				
		0.00					

EFF YR/AGE	1971 / 48
COND	37.37 %
FUNC	30 CTM
ECON	0
DEPR	67 % GD
RCNLD	33
	\$142,700

Bollard I-Beam ARCH

PROJECT: _____

TYPE: _____

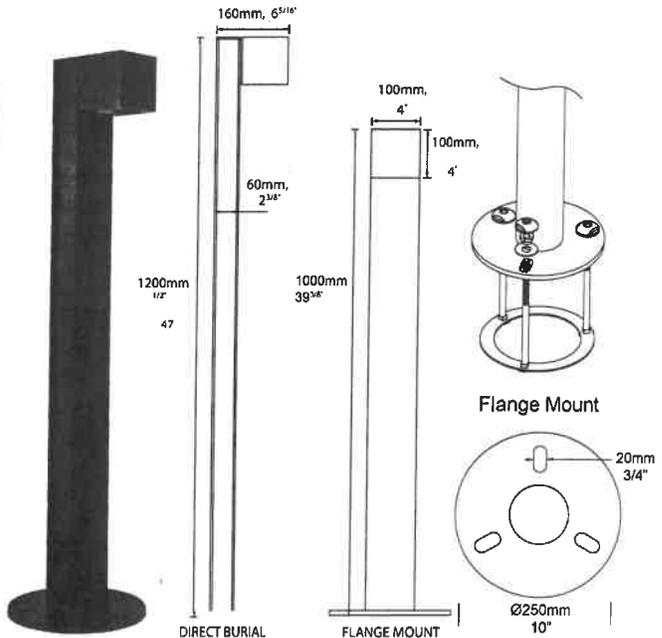
SOURCE: _____

NOTES: _____

SPECIFICATIONS



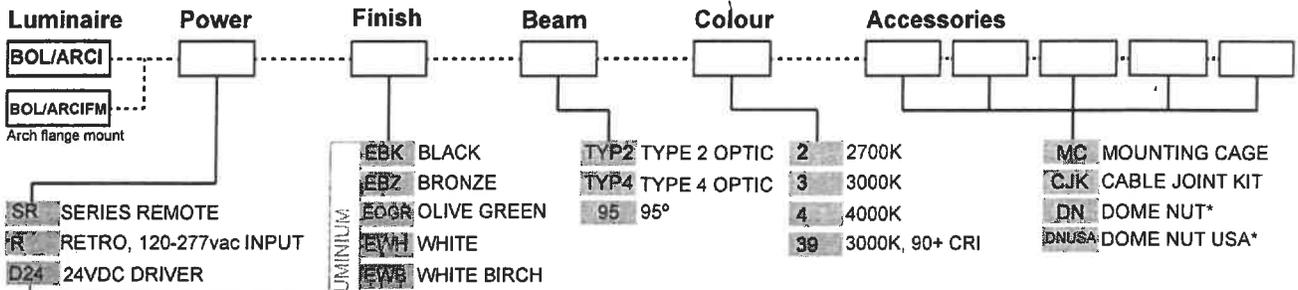
LED Chip	Cree CXA 1830 field replaceable LED board
Luminaire Output	3000 Lumens @ 700mA (26watts), Delivered from Luminaire with unobstructed beam.
Lumens Per Watt	100 Lumens minimum @ 26 watts, Delivered from Luminaire with unobstructed beam
CRI (3000K)	80 Standard, 90+ Optional
Colour Temperatures	2700K, 3000K, 4000K
Beam Angles	TYPE 2, TYPE 4 asymmetric, 95°
Ingress Protection	IP66
Warranty	Electronics = 5 years Body Aluminium = 5 years
Standards	BS/EN 60598.2.2 cUL 1598 CE



PRODUCT CONFIGURATION

Please fill in appropriate codes into boxes provided

Cat. No. BOL/ARCI



SERIES REMOTE DRIVER:
Constant current driver (included) individual fixtures require 37vdc @ 700mA maximum (non dimming). Dimming option available (0-10 volt).

RETRO 110-277vac DRIVER:
Constant current driver (included). Input: 120, 240, 227 volts. Output: 26 watts total 37vdc @ 700mA. Non dimming. Dimming option available (0-10 volt).

24VDC DRIVER:
Input: 24vdc. Output: 36vdc @ 700mA constant current (non dimming).
Note: not for USA.

*Only available for Flange Mount version

ADDITIONAL COMMENTS: _____

LUMINAIRE CONSTRUCTION

CNC machined from one of the following metals:

Aluminium:

Body: solid high corrosion resistant 101mm (4") aluminium rod.

Tube: high corrosion resistant 101mm (4") x 60mm (2^{3/8"}) x 3.18mm (1/8") aluminium I-Beam tube. Finished with chromate substrate, epoxy layer and a UV resistant polyester powder coat colour.

Fixings and Mechanism: made from 316 stainless steel

Colours:

Black, Bronze, Silver Star, White, Birch, Olive Green, Dark Grey, Corten.

Lens:

Extra clear optical silicone TIR.

Gaskets:

Silicone, iron impregnated 220°C (428°F)

Cable:

Water resistant rubber

Mounting:

Pole is set directly into concrete.

For flange mounting please refer to the Hunza website for mounting instructions.

Dome Nut - for use with M12 J-bolts.

Dome Nut USA - for use with 1/2" UNC 13 TPI J-bolts.

Luminaire Weight:

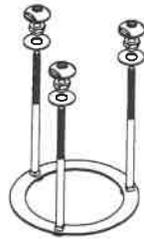
6kg (11lbs 4oz) without flange

ACCESSORIES



Dome Nut

(for use with M12 J-bolts or 1/2" UNC 13 TPI J-bolts)

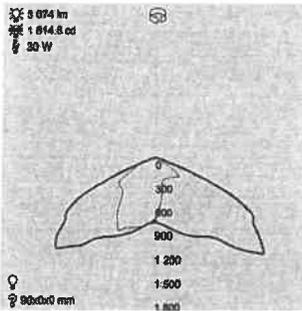


Mounting cage

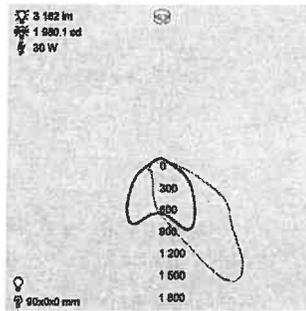
BEAM ANGLES

High efficiency Reflectors. Field replaceable

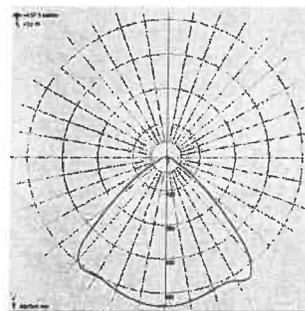
IES files available for download: hunzalighting.com/downloads



TYPE 2 OPTIC



TYPE 4 OPTIC

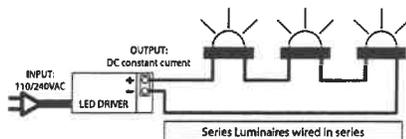


95° OPTIC

WIRING GUIDE

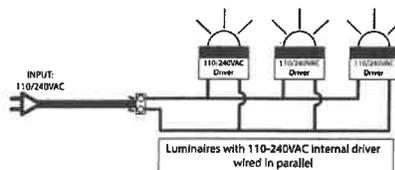
Available for download: hunzalighting.com/downloads

Series/remote driver

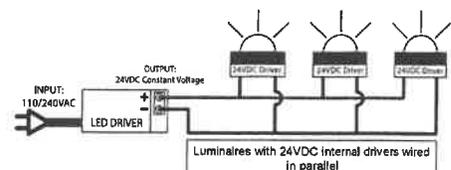


Diagrams are a guide only, wire colours and polarity may change depending on fixture and country

110/240v integral driver



24vdc integral driver





MOUSE LITE

Step Lighting, Wall Mount

CAT. NO MOUSE

The Mouse Lite is designed for vertical surface mounting in gardens and landscapes. The shape is pleasing to the eye and blends unobtrusively into any environment. A space in the wall behind the luminaire is not required for cable connection due to the design which includes a cable joint cavity. There is no light directed upward or forward into the eye.

Pure LED

LED Chip

Cree XPG-3 Plug and Play, field replaceable LED board

Output

120 Lumens @ 700mA

Lumens Per Watt

60 Lumens @ 2 watts

Colour Temperature

2700K, 3000K, 4000K

CRI Warm White (3000K)

90 standard

Beam Angles

120 degrees

Physical Properties

Materials

Solid Bronze or 316 Stainless Steel

Ingress Protection

IP66

Standards

AS/NZS 61046, EN60598, UL 1838, 2108, 1598, CSA C22.2 No. 250.7, 250.0-08, CE

Other Light Sources

Alternative Light Sources

G4 bi-pin 5, 10 or 20 watt, Promus G4JCLED

Power Supply Options

Recommended Power Supply

Remote (Series) Driver, Integral 12VAC Driver with Transformer

[View All LED Power Supplies →](#)

Downloads



IES
(7 Kb)



Installation Instructions Halogen
(202 Kb)



Installation Instructions Halogen USA
(135 Kb)



Installation Instructions PureLED
(2852 Kb)



Installation Instructions PureLED USA
(2101 Kb)



Product Diagram
(49 Kb)



Product Photo
(93 Kb)



Specification Sheet
(712 Kb)



TIER LITE

Pole Mount

CAT. NO TL

The Tier Lite is designed for illuminating medium level foliage. It provides 360 degree illumination on a horizontal plane and does not project any vertical light. The luminaire is mounted onto a 700mm pole to provide a soft pool of light suitable for a wide variety of landscape situations.

Pure LED

LED Chip

Cree XHP-50-2 Plug and Play field replaceable LED board

Output

510 Lumens @ 1050mA

Lumens Per Watt

85 Lumens @ 6 watts

Colour Temperature

2700K, 3000K, 4000K

CRI Warm White (3000K)

90 standard

Beam Angles

360 degrees

Physical Properties

Materials

Solid Powdercoated Aluminium, Copper or 316 Stainless Steel

Ingress Protection

IP56/IP66

Standards

As/NZS 61046, UL1838, CSA C22.2 No. 250.7

Other Light Sources

Alternative Light Sources

G4 bi-pin 5, 10 or 20 watt, Promus G4JCLED, Fluorescent 110/240V

Power Supply Options

Recommended Power Supply

[View All LED Power Supplies →](#)

Downloads



IES
(7 Kb)



Installation Instructions Halogen
(238 Kb)



Installation Instructions Halogen USA
(407 Kb)



Installation Instructions Halogen Retro USA
(135 Kb)



Installation Instructions PureLED
(998 Kb)



Installation Instructions PureLED USA
(1329 Kb)



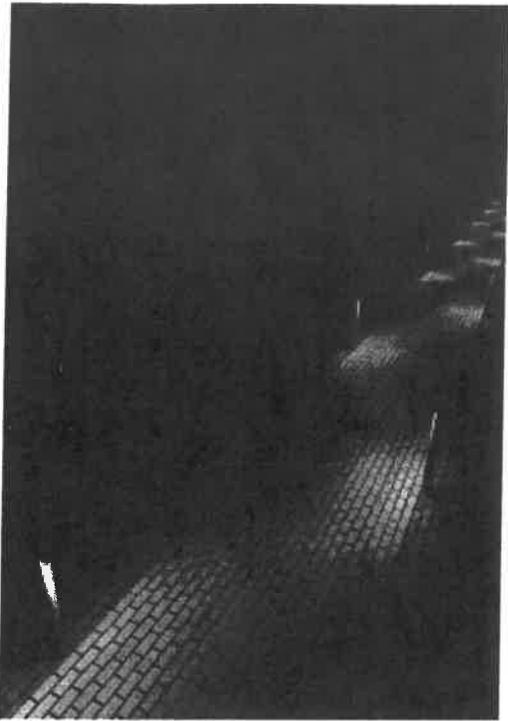
Product Diagram
(206 Kb)



Product Photo
(1208 Kb)



Specification Sheet
(796 Kb)



ARCH BOLLARD I-BEAM

Pole Mount, Architectural & Commercial

CAT. NO BOL/ARCI, BOL/ARCIFM

The Arch Bollard is ideal for commercial application. Best suited for ground lighting on driveways and pathways. It has a minimal, contemporary aesthetic that will blend into any architectural setting. This luminaire features a Type II optic that casts a very long but narrow downwards illumination, or Type IV optic which gives a forward throw beam pattern. The result is an extremely low glare light fitting with precise light placement.

Pure LED

LED Chip

Cree CXA 1830 Plug and Play, field replaceable LED

Output

3000 Lumens @ 700mA

Lumens Per Watt

100 Lumens @ 26 Watts

Colour Temperature

2700K, 3000K, 4000K

CRI Warm White (3000K)

80+ standard, 90+ optional

Beam Angles

Type II, Type IV

Physical Properties

Materials

Solid Powdercoated Aluminium

Ingress Protection

IP66

Standards

BS/EN 60598.2.2, UL1598, CE

Power Supply Options

Recommended Power Supply

Remote (Series) Driver, Retro 120-277VAC Driver, Integral 24VDC Driver

[View All LED Power Supplies →](#)

Downloads



Specification Sheet

(643 Kb)



IES

(112 Kb)



**Installation Instructions
PureLED**

(454 Kb)



Product Diagram

(207 Kb)



Product Photo

(1365 Kb)



SEARCH



Home (/ccrz__HomePage?cclcl=en_US&country=United%20States)

/ Wall Lights (https://www.originalbtc.com/Wall-Lights?cclcl=en_US&country=United%20States)

/ Mast Light, mains voltage, Sandblasted Weathered Bronze (?country=United%20States)



(https://d1kctr1sl44uaa.cloudfront.net/wall-lights/US/US-DP0749/US-DP0749_GM_SD_WE_Mast_Light.jpg?country=United%20States)



MAST LIGHT 0749

SANDBLASTED WEATHERED BRONZE

\$449.00

US-DP0749/GM/SD/WE



SANDBLASTED WEATHERED BRONZE ▼

-	1	+
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Dispatch Time: 2 - 3 Weeks

MAST LIGHT 0749

The 0749 LED Mast Light is a classic marine design that has been especially adapted to allow for an easy connection to a mains voltage circuit without a transformer. The installation requires a void or recess behind the fitting to make a connection to the supply. Where this is not possible (a masonry wall for example) a matching back box is available (code 0760) providing a suitable housing for making a connection. The supplied LED lamp has a comparable light output to a typical 35W Halogen, but draws considerably less power (4.6W), saving significant amounts of energy. The lifespan of the lamp is rated at up to 25,000 hours. Cast in bronze or aluminium, with several metal finishes; anodised, polished, weathered or sandblasted.

THE PROCESS

We use centuries-old techniques to create truly authentic, unprocessed lighting designs; some of which originate from East India Docks (London) in the 1880s where Davey Lighting was established. The process of sandcasting begins by preparing a mould; a sand mixture is packed around a 'pattern' and tamped down, binding the mixture together.

The pattern is subsequently removed, and molten metal is poured into the mould cavity. Once cool, the metal item is separated from the sand mixture. These castings are then machined, drilled, sanded and finished by sandblasting, weathering or polishing.

SPECIFICATIONS

Stock Type:	Made To Order
Suitability:	Bathroom, Outdoor, Indoor
Colour:	Weathered
Material:	Bronze, Glass
IP Rating:	IP54
Brand:	Davey Lighting
Category:	Mast Light Range
LUMENS (lm):	350.0
Country of Manufacture:	United Kingdom
Barcode Number:	5056002149853
Minimum Drop (inches):	0.00
Lamp Holder:	GU10
Lamp Shape:	PAR16

Lamp Shape:	Rectangular
Dimmable:	Yes
Transformer / Driver:	Not Required
Lamp Average Lifetime (hours):	25000
cUL Approved:	Yes
Type of Glass:	Clear glass
Voltage:	120 (AC)
Maximum Wattage:	35
Number of Lamps:	1
Maximum Drop (inches):	0.00
Weight (pounds):	3.31
Diameter (inches):	0.00
Height (inches):	6.00
Width (inches):	4.75
Lamp Supplied:	No

DOWNLOADS



PRODUCT FAMILY

(<https://www.originalbtc.com/Lights/US-DP0749-AL-AN-Mast-Light-mains-voltage--LED-lamp-Anodised-Aluminium?>)

(<https://www.originalbtc.com/Lights/US-DP0749-AL-PO-Mast-Light-mains-voltage--LED-lamp-Polished-Aluminium?>)

(https://www.originalbtc.com/Wall-Lights/US-DP0749-AL-SD-AN-Mast-Light-mains-voltage--LED-lamp-S-blast-Anodised-Aluminium?cclcl=en_US&country=United%20States)



COASTAL
engineering co.

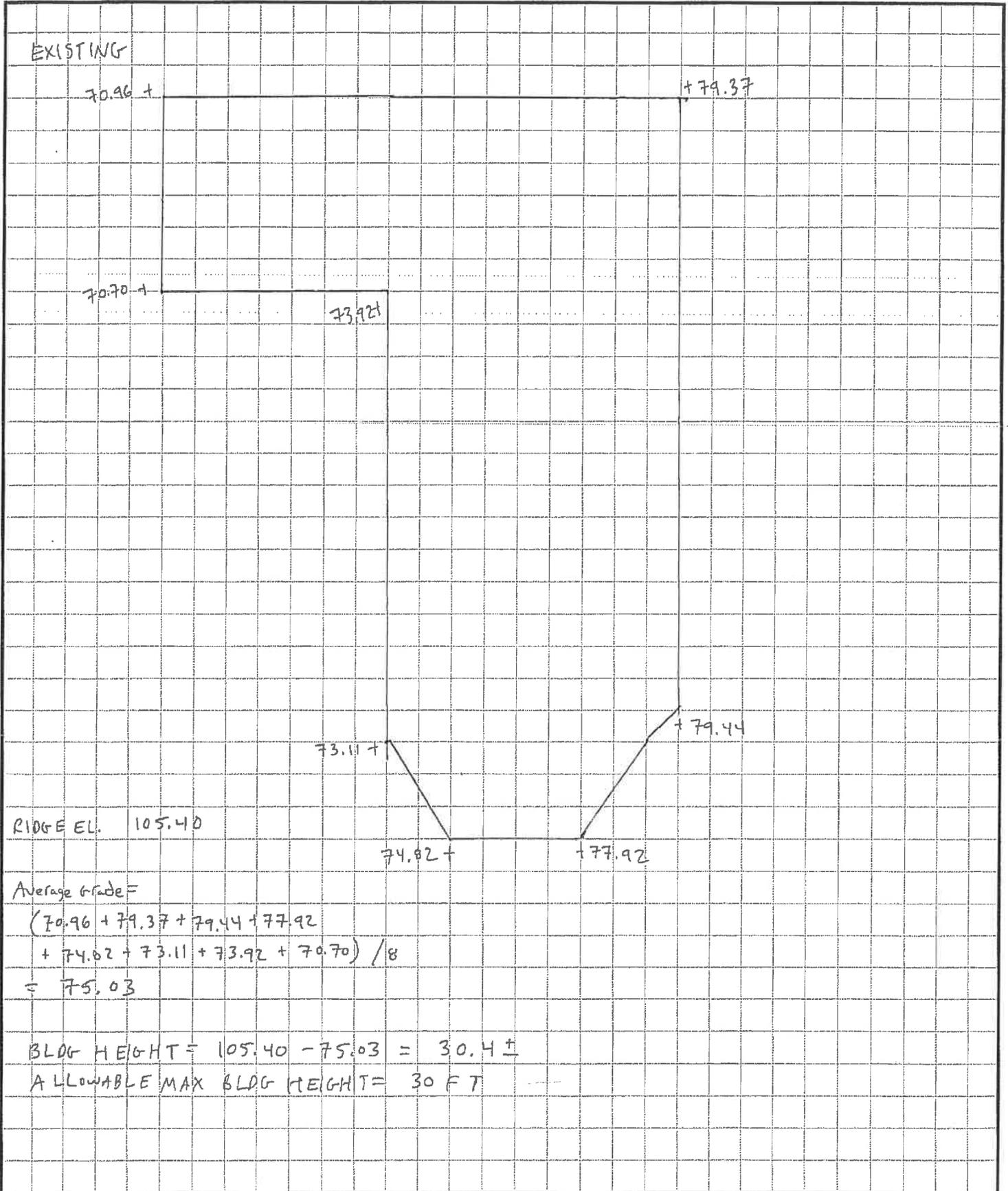
CIVIL, STRUCTURAL,
MARINE ENGINEERS
AND LAND SURVEYORS

260 Cranberry Highway, Orleans, MA 02653

Orleans | Sandwich | Nantucket

508.255.6511 P 508.255.6700 F coastalengineeringcompany.com

JOB C 11403.01
SHEET NO. _____ OF _____
CALCULATED BY SRM DATE 2/23/17
CHECKED BY _____ DATE _____
SCALE none





COASTAL
engineering co.

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MARINE ENGINEERS
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Orleans | Sandwich | Nantucket

508.255.6511 P 508.255.6700 F coastalengineeringcompany.com

JOB 011483.01 PEREZ

SHEET NO. 1 OF 1

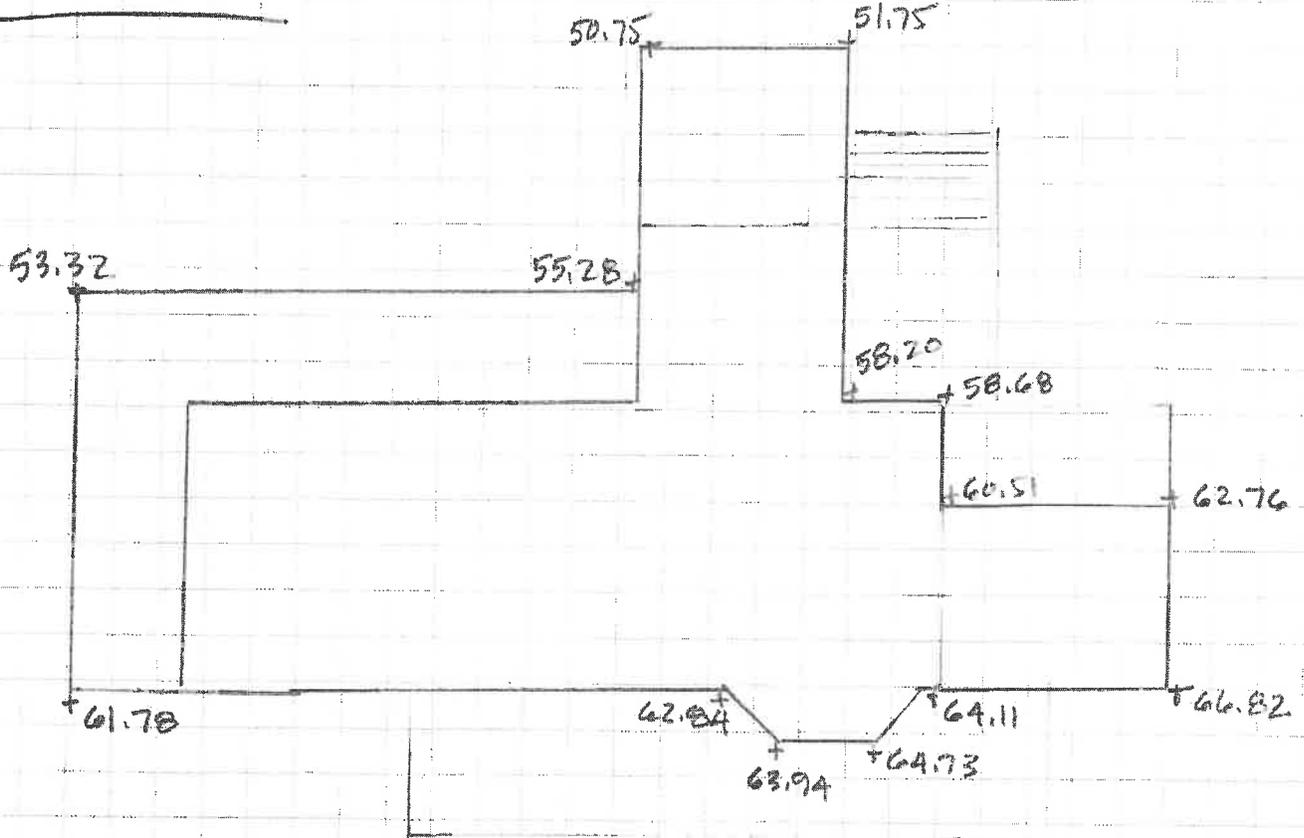
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CHECKED BY _____ DATE _____

SCALE NONE

PROPOSED

GRADE PLANS CALCULATION



AVG. GRADE

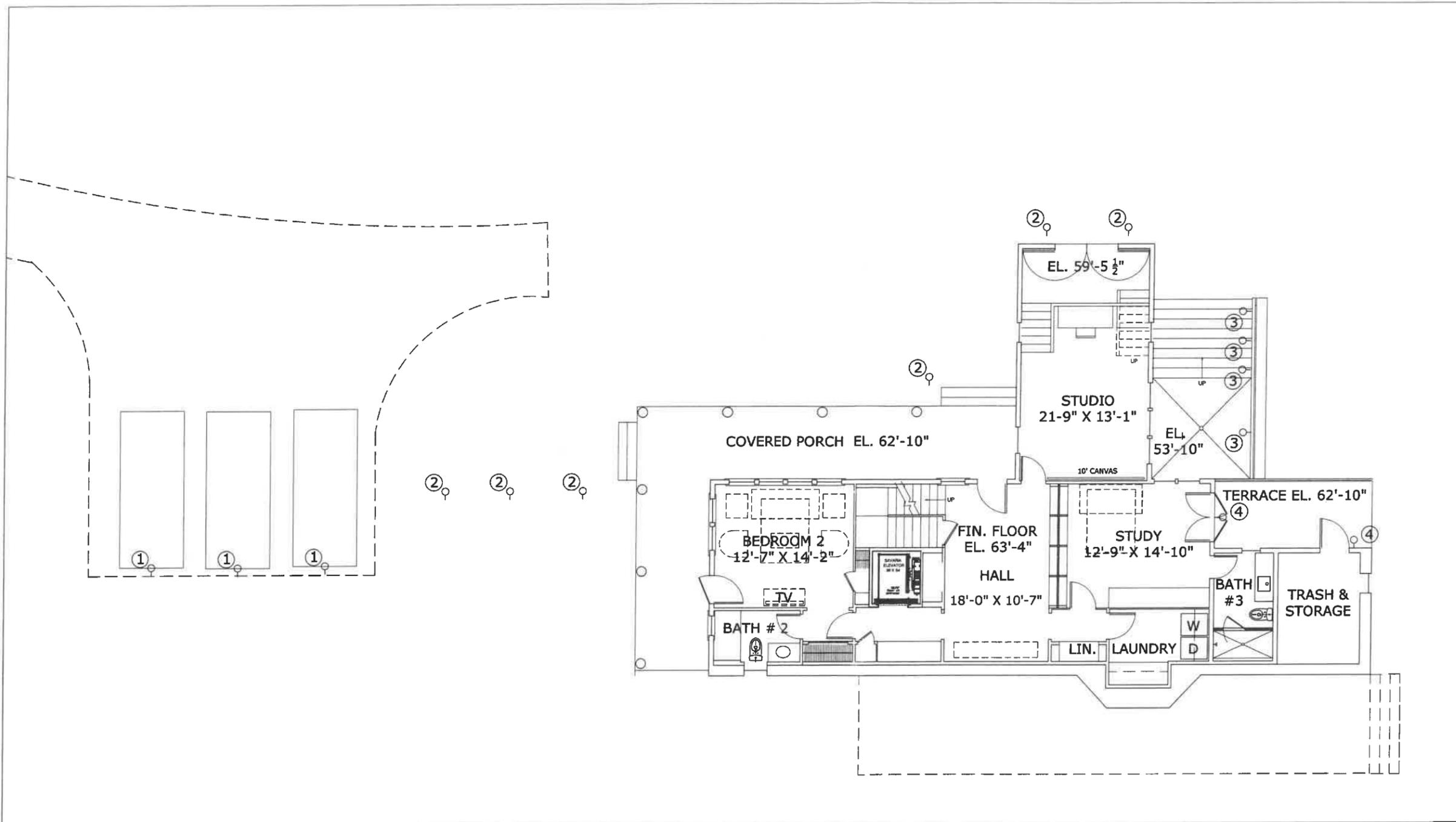
$$\frac{(53.32 + 55.28 + 50.75 + 51.75 + 58.20 + 58.68 + 60.51 + 62.76 + 66.82 + 64.11 + 64.73 + 63.94 + 62.84 + 61.78)}{14} = 59.67$$

AVG. EXISTING GRADE = 59.67

10/16/20 PLANS FROM COSTX -

$$\begin{array}{r} \text{Ridge Elev } 89.75 \\ - 59.67 \\ \hline \end{array}$$

30.07 PROPOSED BUILDING HEIGHT



LOWER, LEVEL FLOOR PLAN



PERETZ 112
112 NORTH PAMET RD.
TRURO, MA

DAN COSTA
P.O BOX 411
MYSTIC, CT 06355
617-448-9954

No.	Date	Revision

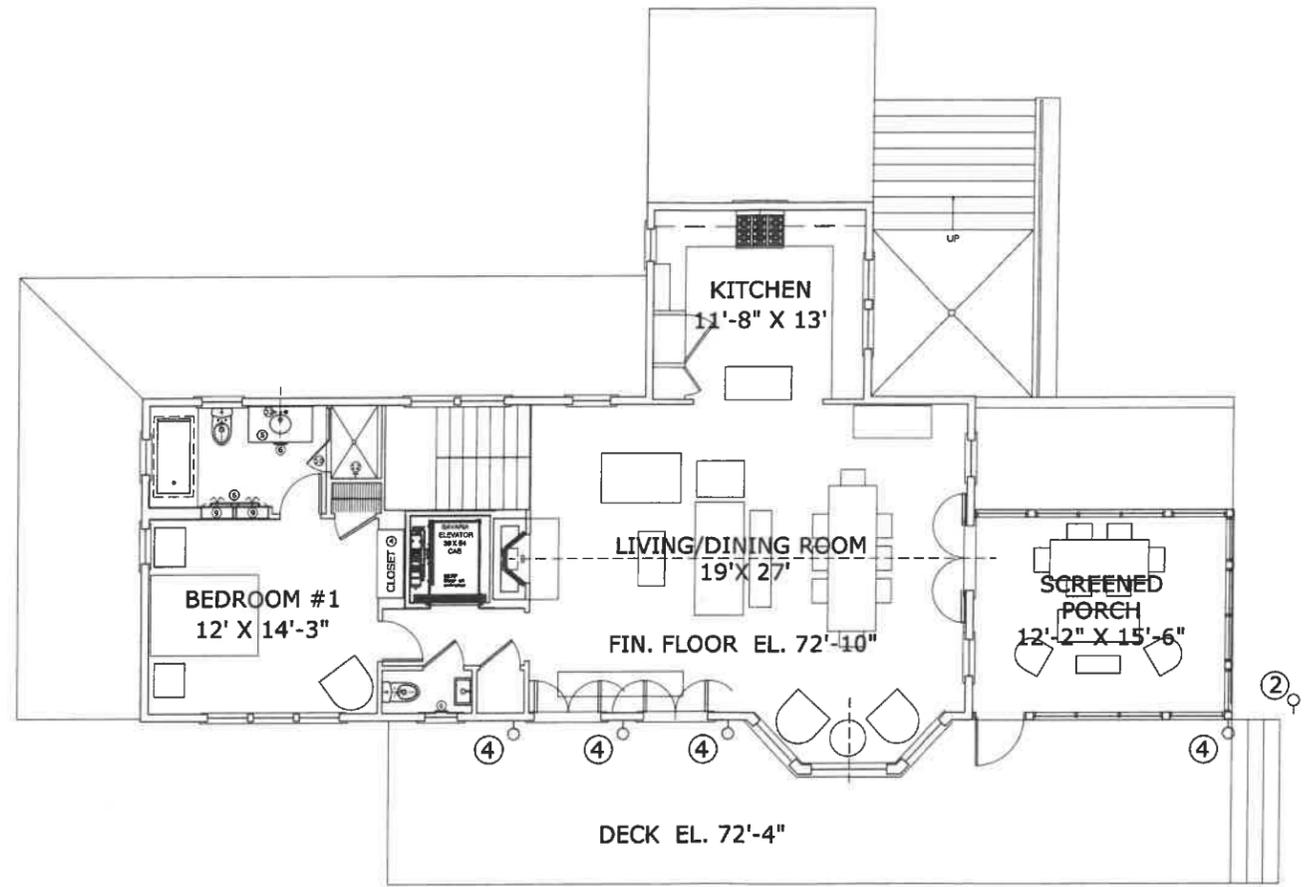
OWNER SIGN-OFF WITH DATE

**LOWER
LEVEL
PLAN**

GRAPHIC SCALE

DECEMBER 7, 2020

A1



MAIN LEVEL FLOOR PLAN



PERETZ 112
 112 NORTH PAMET RD.
 TRURO, MA

DAN COSTA
 P.O BOX 411
 MYSTIC, CT 06355
 617-448-9954

No.	Date	Revision

OWNER SIGN-OFF WITH DATE

**MAIN
 LEVEL
 PLAN**

GRAPHIC SCALE

DECEMBER 7, 2020

A2



SOUTH ELEVATION



PERETZ 112
 112 NORTH PAMET RD.
 TRURO, MA

DAN COSTA
 P.O BOX 411
 MYSTIC, CT 06355
 617-448-9954

No.	Date	Revision

OWNER SIGN-OFF WITH DATE

**SOUTH
 ELEVATION**

GRAPHIC SCALE

DECEMBER 7, 2020

A4



WEST ELEVATION



PERETZ 112
 112 NORTH PAMET RD.
 TRURO, MA

DAN COSTA
 P.O BOX 411
 MYSTIC, CT 06355
 617-448-9954

No.	Date	Revision

OWNER SIGN-OFF WITH DATE

WEST
 ELEVATION

GRAPHIC SCALE

DECEMBER 7, 2020

A5



NORTH ELEVATION



PERETZ 112
 112 NORTH PAMET RD.
 TRURO, MA

DAN COSTA
 P.O BOX 411
 MYSTIC, CT 06355
 617-448-9954

No.	Date	Revision

OWNER SIGN-OFF WITH DATE

**NORTH
 ELEVATION**

GRAPHIC SCALE

DECEMBER 7, 2020

A6



EAST ELEVATION



PERETZ 112
 112 NORTH PAMET RD.
 TRURO, MA

DAN COSTA
 P.O BOX 411
 MYSTIC, CT 06355
 617-448-9954

No.	Date	Revision

OWNER SIGN-OFF WITH DATE

**EAST
 ELEVATION**

GRAPHIC SCALE

DECEMBER 7, 2020

A7

EXTERIOR LIGHTING

ID TAG	LIGHTING FIXTURE
①	HUNZA Arch Bollard I Beam 2700 K Bronze Finish
②	HUNZA TIER LIGHT COPPER
③	HUNZA Mouse Light Step Light Copper
④	DAVEY LIGHTING Mast Light Weathered Bronze

EXTERIOR SHEATHING MATERIALS

WALL : RED CEDAR SHINGLES

ROOF: RED CEDAR SHINGLES

CHIMNEY: BRICK

PERETZ 112
112 NORTH PAMET RD.
TRURO, MA

DAN COSTA
P.O BOX 411
MYSTIC, CT 06355
617-448-9954

No.	Date	Revision

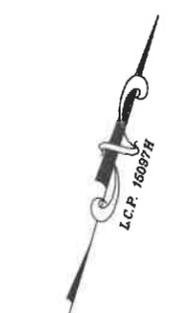
OWNER SIGN-OFF WITH DATE

**FINISH &
EXTERIOR
LIGHTING
SCHEDULES**

DECEMBER 7, 2020

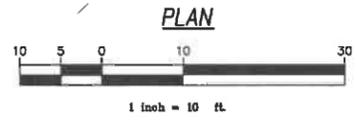
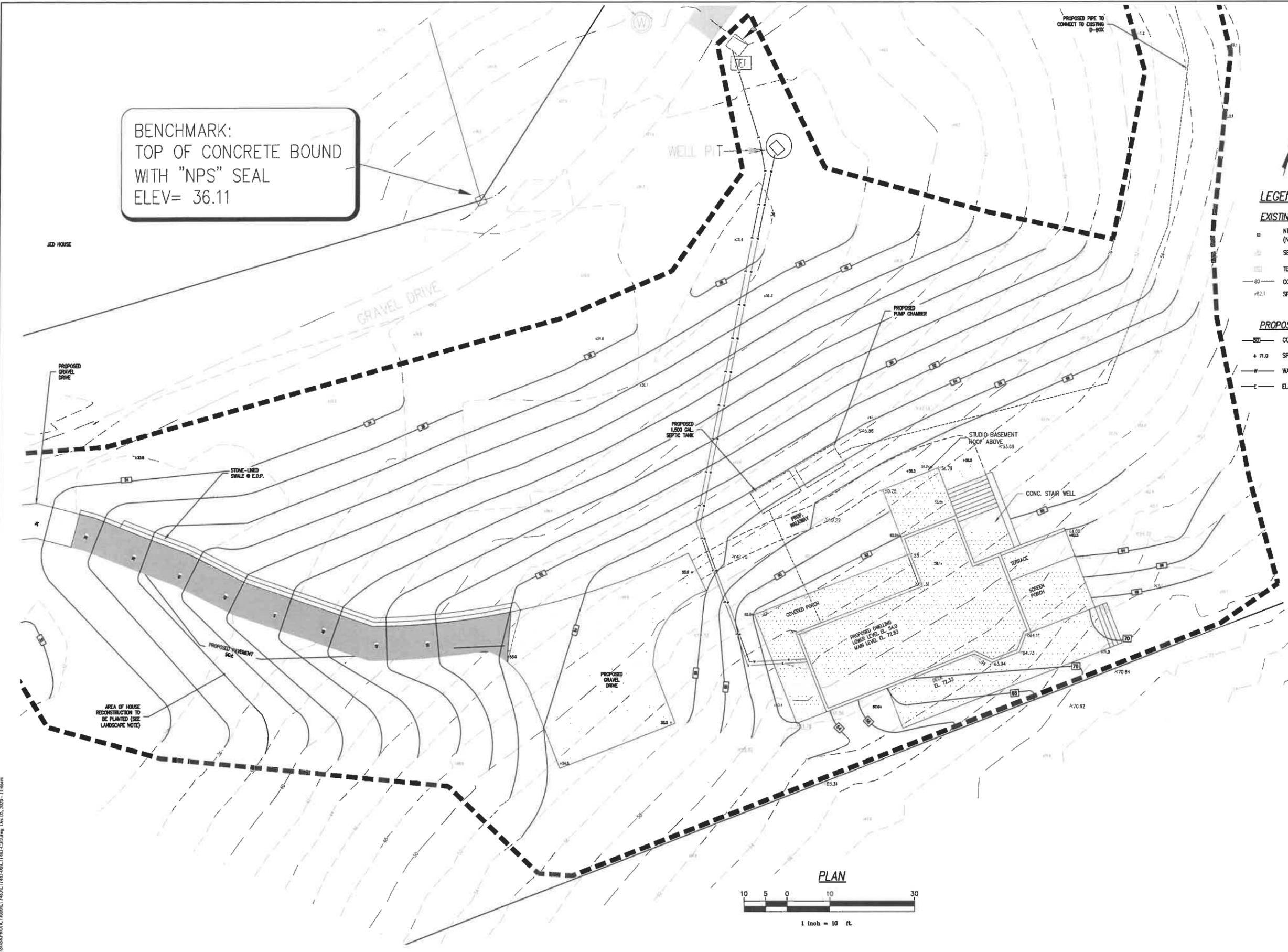
A8

BENCHMARK:
TOP OF CONCRETE BOUND
WITH "NPS" SEAL
ELEV= 36.11



LEGEND

- EXISTING**
- NPS BOUND (NATIONAL PARK SERVICE)
 - SEWER MANHOLE
 - TELEPHONE BOX
 - 80 — CONTOUR
 - +82.1 SPOT GRADE
- PROPOSED**
- 80 — CONTOUR
 - + 71.0 SPOT GRADE
 - W — WATER SERVICE
 - E — ELECTRIC SERVICE



NO.	DATE	REVISION	BY

SEAL

PROJECT
112 NORTH PAMET ROAD
TRURO, MA
SHEET TITLE
ANNE PERETZ
PROPOSED GRADING PLAN FOR
PROPOSED DWELLING RECONSTRUCTION

SCALE AS NOTED
DRAWING FILE C:\1483-C3D.dwg
DATE 12-07-2020
DRAWN BY bpm
CHECKED BY

PROJECT NO. C11483.01
C2.21
1 OF 1 SHEETS

F:\S05K\PROJECT\10806\1483\C11483-C3D.dwg, Dec 05, 2020 - 11:56am

Coastal Engineering Co., Inc. © 2020



BENCHMARK:
TOP OF CONCRETE BOUND
WITH "NPS" SEAL
ELEV= 36.11

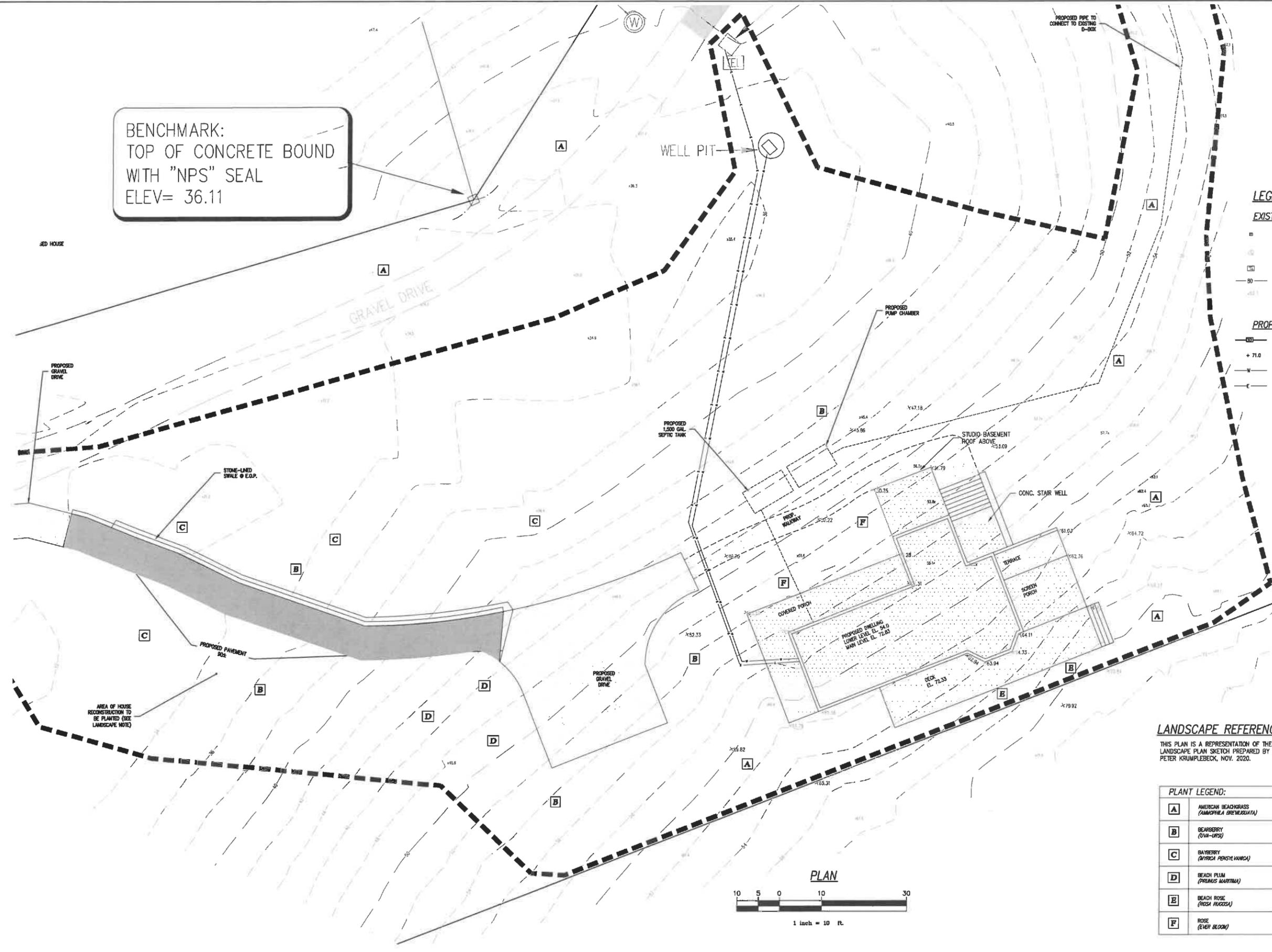
LEGEND

EXISTING

- NPS BOUND (NATIONAL PARK SERVICE)
- SEWER MANHOLE
- TELEPHONE BOX
- 80 - CONTOUR
- 36.1 - SPOT GRADE

PROPOSED

- 80 - CONTOUR
- + 71.0 - SPOT GRADE
- W - WATER SERVICE
- E - ELECTRIC SERVICE

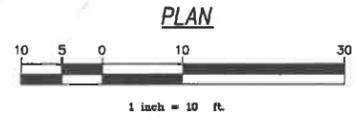


LANDSCAPE REFERENCE:

THIS PLAN IS A REPRESENTATION OF THE LANDSCAPE PLAN SKETCH PREPARED BY PETER KRUMPLEBECK, NOV. 2020.

PLANT LEGEND:

A	AMERICAN BEACHGRASS (AMPHIPHILA BREVELGATA)
B	BEARBERRY (VIBURNUM OPULIFOLIUM)
C	BAVBERY (MYRTICA PENNSYLVANICA)
D	BEACH PLUM (PRUNUS MARITIMA)
E	BEACH ROSE (ROSA FLORIDA)
F	ROSE (ROSA FLORIDA)



NO.	DATE	REVISION	BY

PROJECT: ANNE PERETZ LANDSCAPE PLAN
112 NORTH PAMLET ROAD TRURO, MA
SHEET TITLE

SCALE: AS NOTED
DRAWING FILE: C11483-C3D.dwg
DATE: 12-07-2020
DRAWN BY: bpm
CHECKED BY:

L1.11
1 of 1 SHEETS
PROJECT NO. C11483.01

P:\SUBPROJECTS\C11483\C11483-C3D.dwg, Dec 05, 2020 - 11:14am

RESIDENTIAL DEVELOPMENT SITE PLAN REVIEW DECISION

Atlas Map 48 Parcel 1

Address 112 North Pamet Road

Case Reference No.: 2020-006/SPR

Applicants: Anne Labouisse Peretz; William T. Burdick & Richard C. Vanison, Trustees, Dune House Nom. Trust

Hearing Date: January 6, 2021

Decision Date:

Sitting: *Anne Greenbaum, Chair; Vice Chair; Jack Riemer, Clerk; Paul Kiernan; Bruce Boleyn; Steve Sollog; Peter Herridge*

Following a duly posted and noticed Truro Planning Board hearing held on January 6, 2020, the Board voted to approve the application for Residential Development Site Plan Review pursuant to Section 70.4 of the Truro Zoning Bylaw for demolition of an existing residence, and construction in a landward location on property located at 112 North Pamet Road, Map 48, Parcel 1, in the Seashore District.

The following materials were submitted as part of the complete application for review:

- Application for Site Plan Review (Residential)
- Certified Abutters List
- “Plan Showing Existing Site Conditions, 112 North Pamet Road, Truro, MA” prepared for Anne Peretz by Coastal Engineering, dated August 20, 2009, Scale 1” = 30 ft.
- “Site Plan Showing Proposed Dwelling Reconstruction, 112 North Pamet Road, Truro, MA” prepared for Anne Peretz by Coastal Engineering, dated December 7, 2020, Scale 1” = 30 ft.
- “Proposed Grading Plan for Proposed Dwelling Reconstruction, 112 North Pamet Road, Truro, MA” prepared for Anne Peretz by Coastal Engineering, dated December 7, 2020, Scale 1” = 10 ft.
- “Landscape Plan, 112 North Pamet Road, Truro, MA” prepared for Anne Peretz by Coastal Engineering, dated December 7, 2020, Scale 1” = 10 ft.
- Floor Plans, “Peretz 112, 112 North Pamet Road, Truro, MA” prepared by Dan Costa dated December 7, 2020, Sheets A1-A3
- Elevations, “Peretz 112, 112 North Pamet Road, Truro, MA” prepared by Dan Costa dated December 7, 2020, Sheets A4-A7
- “Finish and Exterior Lighting Schedules, Peretz 112, 112 North Pamet, Truro, MA” prepared by Dan Costa dated December 7, 2020
- Review Criteria form, completed
- Residential Site Plan Review Checklist
- Product specifications for lighting fixture

- Transfer Certificate of Title and Land Court Plan
- Town of Truro Assessor's Records
- Elevation calculations, Coastal Engineering Co. dated February 23, 2017 and November 12, 2020

Board Vote:

At the 2020 meeting, M. made a motion, seconded by M. , to approve the application for residential development site plan. Vote was 0-0 in favor.

The application of Anne Labouisse Peretz, William T. Burdick & Richard C. Vanison, Trustees, Dune House Nom. Trust for Residential Site Plan approval pursuant to s. 70.4 of the Truro Zoning Bylaw was granted by the Planning Board.

This decision is pursuant to the following facts and conditions:

Findings:

1. This is an application by Anne Labouisse Peretz, William T. Burdick & Richard C. Vanison, Trustees, Dune House Nom. Trust for Residential Site Plan Review pursuant to Section 70.4 of the Truro Zoning Bylaw ("Bylaw"). Residential Site Plan Review is required under Section 70.4 of the Zoning Bylaw, as the project is new construction (replacement) of an existing single-family dwelling in the Seashore District.
2. The Property is located at 112 North Pamet Road and is shown on Truro Assessor's Map 48, Parcel 1. The Property contains 3.3 and is located in the Seashore District. The lot is nonconforming as to frontage, having no frontage on a street. It is accessed by a dirt road. The lot is surrounded by National Seashore property and has no residential abutters.
3. According to Assessor's records, the existing house was constructed in 1991. It is located close to the top of coastal bank and is proposed to be demolished due to threat from ongoing coastal erosion. A new residence will be constructed away from the bank and close to the property's southern boundary. This site was selected to avoid hollows to the north and west on the property, and to provide protection from coastal bank erosion and storm damage.
4. A new paved driveway and gravel parking area are proposed. Regrading in the area of the new house site, and re-landscaping of the abandoned house site will occur. The existing septic system will be removed and a new system installed to the north of the new house.
5. The new dwelling has roughly the same dimensions as the existing dwelling. The Total Gross Floor area of the existing dwelling is 3,167 sq ft.; it will *increase/decrease to [PROVIDE]*. The height of the existing dwelling is nonconforming at 30.4 feet (peak ridge height of 105.4 feet – average grade of 75.03). The height of the proposed dwelling is nonconforming at 30.1 feet (peak ridge height of 89.75-average grade of 59.67). Paved areas will remain at 1,500 square feet; walkways and terrace areas will increase from 0 to

322 square feet. Lot coverage will decrease from 4,441 to 3,870 square feet, or from 3.1% to 2.7%.

6. Floor plans indicate that there will be a “main level”; “lower level” and “basement” (partially finished) and that the house will have two bedrooms. The elevations suggest a half-story above the “main level”[PROVIDE INFO]. Exterior material is indicated to be red cedar shingles. A terrace, screened porch, deck and covered porch expand the dwelling’s footprint.
7. The existing dwelling conforms to Bylaw setbacks. As proposed, the new dwelling will have a setback from the southern lot line of five feet (to a deck). A variance is required for this new nonconformity.

[BOARD’S FINDINGS ON PROPOSED FIVE-FOOT SETBACK]

8. Reconstruction of a dwelling on a nonconforming lot – in this case, nonconforming as to frontage - increases the existing nonconformity, and requires a special permit under G.L. c. 40A, s. 6. Bjorklund v. Zoning Board of Appeals of Norwell, 450 Mass. 357 (2008)(nonconforming area). The Applicant has filed with the ZBA for a special permit under G.L. c. 40A, s. 6 and Section 30.7 of the Zoning Bylaw.
9. The height of the existing dwelling is nonconforming at 30.4 feet. and so the ZBA must also make a determination as to whether the proposed structure would intensify this existing nonconformity. If the ZBA finds that the proposal increases the intensity of this nonconformity, it would consider whether a special permit may be granted.
10. The Board has reviewed all plans with respect to this Application and has found that they comply with all requirements set forth in Section 70.4(C) of the Bylaw.
11. The Board found that the house will be reconstructed in a manner that is in keeping with the scale of the existing building and other buildings in the neighborhood. This contributes to preserving the characteristics of the Seashore District.
12. Pursuant to Section 70.4(D) of the Bylaw, the Board found:
 - a. Relation of Buildings and Structures to the Environment. The Board finds that the reconstructed dwelling relates to the existing terrain and lot, as it preserves the scale of the existing building; maximizes southern-facing exposure for solar gain; and follows the sloping topography of this area of the property. Ventilation is aided by a screened porch on the ocean-facing side of the house
 - b. Building Design and Landscaping. The Board finds that the reconstructed house is in a vernacular style and scale consistent with other dwellings in the Seashore District and complementary to the landscape. The materials are likewise complementary and appropriate to the location.

- c. Preservation of Landscape. The Board finds that the landscape will be preserved, where the location of the existing house and driveway will be revegetated with appropriate native plantings. Regrading in the area of the new dwelling site will be minimal, and the new driveway and gravel parking area are modest.
- d. Circulation. The Board finds that the relocated driveway and new gravel parking area will adequately and safely serve the relocated and reconstructed house.
- e. Lighting. The Board finds that as herein conditioned, the lighting proposed for the structure will be consistent with General Bylaw Chapter IV, Section 6, and that adjacent properties and the night sky will be protected from intrusive lighting.

Conditions

1. The use of the Property shall be in strict conformance with the Town of Truro Bylaw;
2. Construction shall conform to the plans referenced in this decision;
3. [CONDITION ON LIGHTING]
4. The Applicant must obtain a special permit from the Zoning Board of Appeals under Section 30.7 and 30.8, and G.L. c. 40A s. 6, to expand a nonconforming structure.
5. The Applicant must obtain a variance from the Zoning Board of Appeals pursuant to G.L. c. 40A, s. 10 for the newly-created nonconforming side setback to the southern lot line (five feet where twenty-five required).
6. The Applicant must obtain approval from the Conservation Commission for demolition of the existing house; removal of the existing septic system; planting and other landscaping, and any other activity taking place within jurisdictional resources under the Wetlands Protection Act and/or Truro Wetlands Protection Bylaw.

This Site Plan Approval for a Residential Site Plan shall expire two (2) years from the date of approval.

Pursuant to Zoning Bylaw Section 70.6, it is the responsibility of the applicant to obtain a true attested copy of this decision from the Town Clerk and to record this decision in the Barnstable Registry of Deeds or Land Court, as applicable. Prior to the issuance of building permit, the applicant shall present evidence of such recording to the Building Commissioner and the Planning Board Secretary.

—

 Anne Greenbaum, Chair. Truro Planning Board

_____ Date

Received, Office of the Town Clerk

Signature

Date

DRAFT

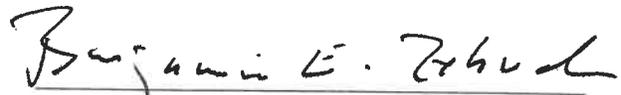
EXTENSION AGREEMENT

As the applicant or as authorized agent Benjamin E. Zehnder, Esquire on behalf of thereof, I agree to continue the public hearing in the matter of Case 2020-011/PB seeking approval of Form A – Approval Not Required (ANR) Plan Endorsement with respect to property at 23 Perry Road from December 2, 2020 for hearing and board action through January 20, 2021 under M.G.L. c.41, §81T.

December 2, 2020
Date



Signature of Applicant/Agent



Printed Name

Benjamin E. Zehnder as agent for The Claire A. Perry Living Trust Agreement

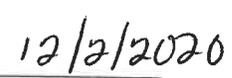
Filed with the Planning Department:

Name

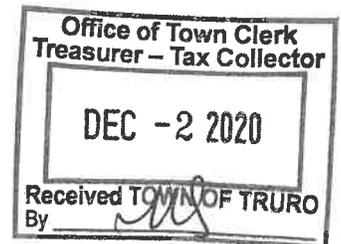
Date

Filed with the Town Clerk:

Name

Date





Town of Truro Planning Board

P.O. Box 2030, Truro, MA 02666

Office of Town Clerk
 Treasurer – Tax Collector
 2020-011/PB
 OCT -1 2020
 \$275.00 Fee Pd.
 Received TOWN OF TRURO
 By *Mely Stevens*

FORM A

APPLICATION FOR DETERMINATION THAT PLAN DOES NOT REQUIRE APPROVAL (ANR)

To the Planning Board of the Town of Truro, MA

Date September 10, 2020

The undersigned owners of all the land described herein submitted the accompanying plan entitled: Plan of Land 23 Perry Road Truro MA and dated August 10, 2020, requests a determination and endorsement by said Board that approval by it under the Subdivision Control Law is not required.

Property Location: 23 Perry Road Map(s) and Parcel(s): Map 45 Parcel 131

Number of Lots Created: 3 Total Land Area: 9.7 +/- acres

The owner's title to said land is derived under deed from The Claire A. Perry Living Trust Agreement, dated 5/6/19, and recorded in the Barnstable Registry of Deeds Book and Page 31999/350 or Land Court Certificate of Title No. _____ registered in Barnstable County.

The undersigned believes that such approval is not required for the following reasons: *(check as appropriate)*

- The accompanying plan is not a subdivision because the plan does not show a division of land.
- The division of the tract of land shown on the accompanying plan is not a subdivision because every lot shown on the plan has frontage of at least such distance as is presently required by the Truro Zoning Bylaw under Section 50.1(A) which requires 150 feet for erection of a building on such lot; and every lot shown on the plan has such frontage on:
 - a public way or way which the Town Clerk certifies is maintained and used as a public way, namely _____, or
 - a way shown on a plan theretofore approved and endorsed in accordance with the subdivision control law, namely Harding's Road on PB 630 Page 58 and subject to the following conditions _____; or
 - a private way in existence on December 8, 1955, the date when the subdivision control law became effective in the Town of Truro having, in the opinion of the Planning Board, sufficient width, suitable grades, and adequate construction to provide for the needs of vehicular traffic in relation to the proposed use of the land abutting thereon or served thereby, and for the installation of municipal services to serve such land and the buildings erected or to be erected thereon, namely _____.
- The division of the tract of land shown on the accompanying plan is not a "subdivision" because it shows a proposed conveyance/other instrument, namely _____ which adds to/takes away from/changes the size and shape of, lots in such a manner that no lot affected is left without frontage as required by the Truro Zoning Bylaw under Section 50.1(A), which requires 150 feet.

The division of the tract of land shown on the accompanying plan is not a subdivision because two or more buildings, specifically _____ buildings were standing on the property prior to December 8, 1955, the date when the subdivision control law went into effect in the Town of Truro and one of such buildings remains standing on each of the lots/said buildings as shown and located on the accompanying plan. Evidence of the existence of such buildings prior to the effective date of the subdivision control law as follows:

Other reasons or comments: (See M.G. L., c.41, §81-L)

All other information as required in the Rules and Regulations Governing Subdivisions of Land shall be submitted as part of the application.

Richard B. Perry
(Printed Name of Owner)

Richard B Perry
(Signature)

Cynthia J Perry
(Printed Name of Owner)

Cynthia J Perry
(Signature)

15 Perry Rd P.O. Box 127 Truro MA 02666
(Address of Owner(s))

15 Perry Rd P.O. Box 127 Truro MA 02666
(Address of Owner(s))

Hillside Farm LLC
(Printed Name of Agent)

Samantha Perry
(Signature)
P.O. Box 228, TRURO MA 02666

(Address of Agent)

File twelve (12) copies each of this form and applicable plan(s) with the Town Clerk; and a complete copy, including all plans and attachments, submitted electronically to the Town Planner at planner1@truro-ma.gov

EXTENSION AGREEMENT

As applicant or as authorized agent on behalf thereof, I agree to continue the public hearing in the matter of Case No. 2020-11/PB seeking approval of Form A – Approval Not Required (ANR) Plan Endorsement with respect to property at 23 Perry Road from January 6, 2021 to January 20, 2021 for hearing and for board action through February 3, 2021 under M.G.L. c. 41 § 81T.

Date – January 6, 2021



Signature of Applicant/Agent

Printed Name – Benjamin E. Zehnder as agent for
the Claire A. Perry Living Trust Agreement

Filed with the Planning Department:

Name Date

Filed with the Town Clerk:

Name Date

MEMORANDUM

Title History for Properties off of Perry Road, Truro

I. Overview:

The hillside lands off of Perry Road have been used for farming since the 1880s, when John B. Perry and his wife, Mary J. Perry, began farming the lands to the north and west of the Little Pamet River. John had purchased the lands from his wife's stepfather, Manuel Silva, who also left interests in the lands to Mary.

John B. and Mary had a son, Manuel J. Perry, who ran the family farm with his second wife Barbara. Manuel and his first wife, Adeline, had previously had two sons, John S. Perry and Mason E. Perry, and a daughter, Pulsenia J. Rowell.

Although John B. and Mary's son Manuel Perry, and their grandson John S. Perry, each worked the family farm, neither of them inherited it after John B. and Mary died. Instead, Mary left the farmland to her great-grandchildren, Stephen R. Perry and Richard B. Perry (who were the sons of Mary's grandson, John S. Perry), with only life estates to use the land in Manuel J. Perry and John S. Perry. As a later confirmation plan endorsed by the Massachusetts Land Court shows, the historic farmland which Stephen and Richard inherited contained a total of 27.84 acres of land area, including both upland and wetlands.

Because they did not own any farmland of their own, in the 1950s John S. Perry and his wife Lucy J. Perry purchased a contiguous area of land to the *south* of Perry Road and the *east* of the Little Pamet River. This land came out of a completely separate chain of title from the land which Stephen R. Perry and Richard B. Perry inherited from their great-grandmother Mary, and had instead been owned by Frances Joseph and then his son, Frank R. Joseph. Likewise, Stephen and Richard never owned the land which John and Lucy owned.

Because Manuel J. Perry and his son John S. Perry both worked the farmland to the north, and John S. Perry and Lucy J. Perry owned the farmland to the south, the area has often been referred to as a single entity, "Perry Farm." However, the two different land areas have not been held in common ownership, either before or after the September 30, 1994 cutoff date for Cape Cod Commission mandatory referrals for parcels containing thirty or more acres of land area.

The 27.84 acre northerly parcel which Stephen and Richard owned has been subdivided and there is now a contiguous 9.70 acre parcel owned in equal parts by Hillside Farm, LLC and The Perry Family Limited Partnership. Those two owners have filed an ANR plan to subdivide that parcel into three lots, so that the next generation may live in Truro and continue to farm the land.

1. Record title to Stephen R. Perry and Richard B. Perry's land prior to and as of September 30, 1994:

John B. Perry died intestate in 1938 and Mary J. Perry died testate in 1949. Under her will, Mary left life estates for the use of land she and John owned to their son, Manuel J. Perry, and their grandson, John S. Perry. See BCP 31696. Mary left the fee ownership to her great-grandsons, Stephen R. Perry and Richard B. Perry.

Manuel J. Perry died in 1965. To clear Stephen and Richard's title and John S. Perry's life estate, in the 1970s the surviving members of Manuel's family gave a series of deeds to them, releasing any claim to the farmland they may have had:

from Pulsenia J. Rowell	2362-171	1976
from Elizabeth Keehlwetter	2392-345	1976
from Donald S. Perry	2579-270	1977
from Mason E. Perry	2579-271	1977
from Daisy Houghton	2836-308	1978
from Manuel J. Perry et al.	2850-347	1979
from John S. Perry	2850-348	1979
from Manuel J. Perry et al.	2850-349	1979

Stephen and Richard subsequently sought confirmation without registration of their title to the land they inherited, as shown on January 8, 1997 Petitioner's Plan 43230-A. Per plan, the parcel the brothers sought to confirm contains 25.02 acres of upland and 2.82 acres of lowland, for a total land area of 27.84 acres. The plan also shows that the farmland to the south and east was not owned or claimed by Stephen and Richard, but was owned by their parents, John S. Perry and Lucy J. Perry.

On August 31, 2007 the Court confirmed Stephen and Richard's title, as shown on their Petitioner's Plan, as of January 15, 1997 (the date of filing). See also Plan Book 619, Pages 97 and 98. However, the brothers' title was unchanged since they inherited it in 1949 and they received release deeds in the 1970s, and Stephen R. Perry and Richard B. Perry therefore were the only fee owners of the former John B. Perry and Mary J. Perry land as of September 30, 1994. The area they owned is depicted as Parcel 2 on the sketch showing record title as of September 30, 1994 filed herewith.

2. Record title to John S. Perry and Lucy J. Perry's land prior to and as of September 30, 1994:

Between January 22 and February 14, 1955, John S. Perry and Lucy J. Perry took title to an assemblage of lands to the south of Perry Road and the east of the Little Pamet River. See deeds recorded in Book 900, Page 159; Book 915, Page 212; Book 915, Page 214. Their title was given by Gertrude F. Joseph, widow of former owner Frank R. Joseph, as well as the descendants of Manuel Joseph and Frances Joseph. It was originally subject to a life estate in Gertrude, however, that life estate was released by her in 1967 (see Book 1381, Page 47).

The land that John and Lucy took title to in the 1950s was adjacent to the land John's sons owned, but its title history was distinct, having been owned by the Joseph family since the 1870s and having coming out of that chain.

As of September 30, 1994, title to the southerly lands was in John S. Perry and Lucy J. Perry, as tenants by the entirety. The land they owned contained approximately 13.69 acres of area, including a large area of lowlands abutting the Little Pamet River. The area they owned is depicted as Parcel 1 on the sketch showing record title as of September 30, 1994 filed herewith.

3. **Record title conveyances from September 30, 1994 to present:**

Beginning in 1997, the owners of the northerly farmlands and the owners of the southerly farmlands have made a number of conveyances of their respective properties. These include subdivisions of the two parcels, subsequent conveyances of subdivided lots out to third parties, and conveyances of retained lands into trusts and other entities, and conveyances out to family members. However, none of these conveyances increased the area of ownership in Stephen R. Perry and Richard B. Perry above the 27.84 acres they originally owned or increased the area of ownership in John S. Perry and Lucy J. Perry above the 13.69 acres they originally owned. Instead, the conveyances decreased the respective northerly and southerly areas of ownership.

In chronological order, the post September 30, 1994 title conveyances are as follows below. The recorded plans showing the listed lots are included herewith for reference.

1. 1997: John S. Perry releases his life estate interest in Stephen R. Perry and Richard B. Perry's land (Book 10569, Page 200).
2. 1998: Lucy J. Perry releases her interests in Stephen R. Perry and Richard B. Perry's land (Book 11187, Page 164).
3. 2000: John S. Perry and Lucy J. Perry their land to Lucy J. Perry, individually (Book 13395, Page 108).
4. 2006: Lucy J. Perry deeds Lot 2 606/100 to Thomas J. Nadeau (Book 20969, Page 297).
5. 2007: Stephen R. Perry and Richard B. Perry deed Lot 6 596/91 to Thomas J. Nadeau (Book 21771, Page 276).
6. 2009: Stephen R. Perry and Richard B. Perry deed Lot 5B 630/57 to Kristin A. Perry (Book 23885, Page 152).

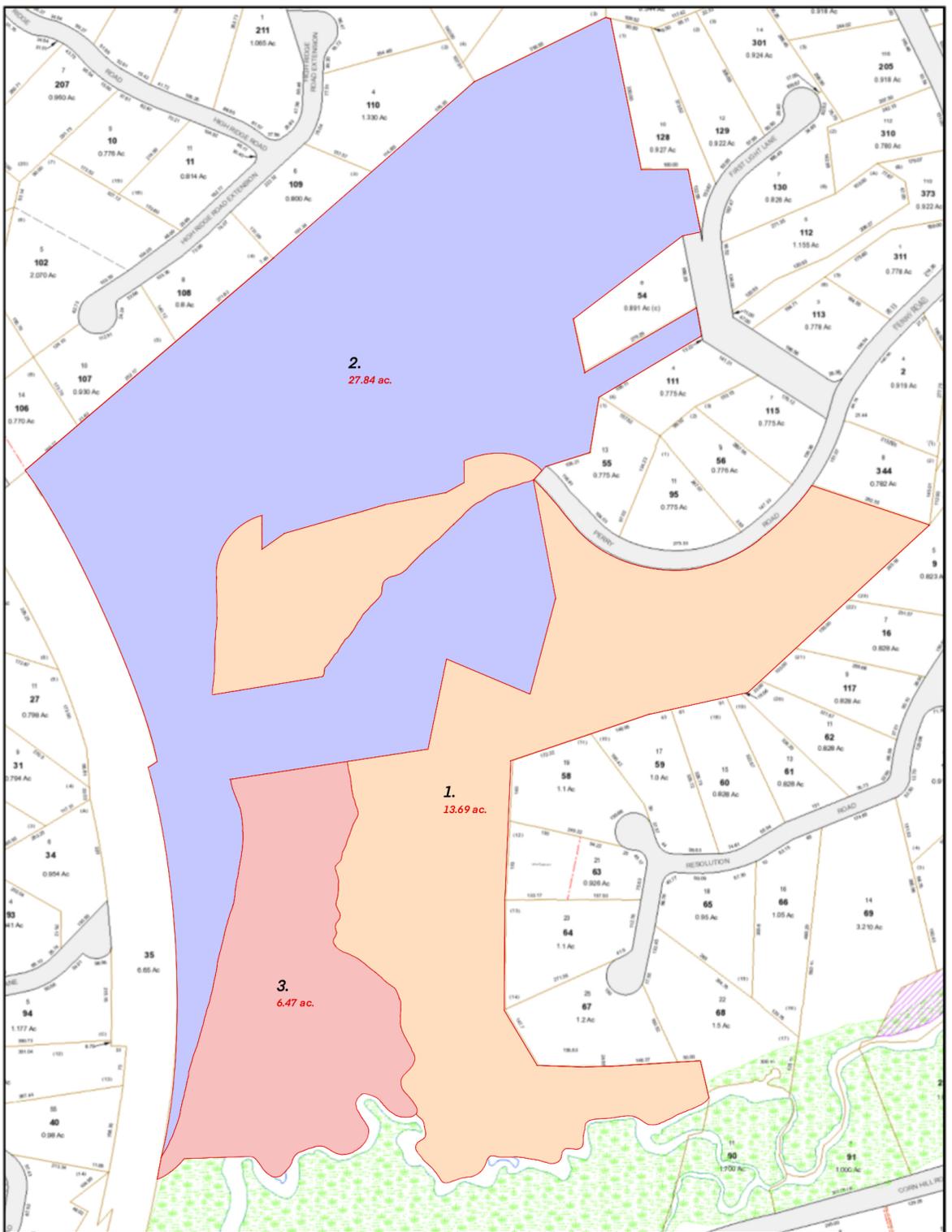
7. 2009: Stephen R. Perry and Richard B. Perry deed Lot 14 632/56 to Richard B. Perry and Cynthia J. Perry, husband and wife as tenants by the entirety (Book 24169, Page 112).
8. 2009: Stephen R. Perry and Richard B. Perry deed Lot 9, Lot 10 630/58 to Stephen R. Perry, individually (Book 24169, Page 114).
9. 2011: Stephen R. Perry deeds Lot 9, Lot 10 630/58 to Claire A. Perry as Trustee of The Stephen R. Perry Living Trust Agreement Dated March 23, 2011 (Book 25441, Page 147).
10. 2011: Stephen R. Perry deeds ½ interest in Lot 7 596/91, Lot 5A 630/57, Lot 3A, Lot 7, Lot 11, Lot 12 630/58, Lot 13 632/56 to Claire A. Perry as Trustee of The Stephen R. Perry Living Trust Agreement Dated March 23, 2011. The other ½ interest in those lots remains in Richard B. Perry (Book 25441, Page 151).
11. 2011: Lucy J. Perry deeds P.1 – P.6 to Claire A. Perry as Trustee of The Lucy J. Perry Living Trust Agreement Dated June 14, 2011 (Book 25515, Page 20).
12. 2012: Richard B. Perry and Cynthia J. Perry deed Lot 14 632/56 to The Perry Family Limited Partnership (Book 26582, Page 28).
13. 2013: Claire A. Perry as Trustee of The Stephen R. Perry Living Trust Agreement Dated March 23, 2011 deeds Lot 10 630/58 to Claire A. Perry as Trustee of The Claire A. Perry Living Trust Agreement Dated March 23, 2011 (Book 27251, Page 265).
14. 2013: Claire A. Perry as Trustee of The Stephen R. Perry Living Trust Agreement Dated March 23, 2011 deeds ½ interest in Lot 11, Lot 12 630/58, Lot 13 632/56 to Claire A. Perry as Trustee of The Claire A. Perry Living Trust Agreement Dated March 23, 2011. The other ½ interest in those lots remains in Richard B. Perry (Book 27251, Page 265).
15. 2013: Claire A. Perry as Trustee of The Stephen R. Perry Living Trust Agreement Dated March 23, 2011 deeds ½ interest in Lot 7 596/91 (section of road) to Claire A. Perry as Trustee of The Claire A. Perry Living Trust Agreement Dated March 23, 2011. The other ½ interest in that section of road remains in Richard B. Perry (Book 27277, Page 343).
16. 2014: Richard B. Perry, individually, and Claire A. Perry as Trustee of The Stephen R. Perry Living Trust Agreement Dated March 23, 2011, deed Lot 5A 630/57 to David W. Shapiro and Lee A. Shapiro (Book 28525, Page 64).
17. 2016: Claire A. Perry as Trustee of The Stephen R. Perry Living Trust Agreement Dated March 23, 2011 deeds Lot 9 630/58 to Claire A. Perry as Trustee of The Claire A. Perry Living Trust Agreement Dated March 23, 2011 (Book 30141, Page 60).

18. 2016: Claire A. Perry as Trustee of The Claire A. Perry Living Trust Agreement Dated March 23, 2011 deeds Lot 9 630/58 to Scott W. Perry (Book 30141, Page 64).
19. 2017: Richard B. Perry (as to ½ interest) and Claire A. Perry as Trustee of The Claire A. Perry Living Trust Agreement Dated March 23, 2011 (as to other ½ interest) deed Parcel A 672/35 to Claire A. Perry as Trustee of The Claire A. Perry Living Trust Agreement Dated March 23, 2011 (Book 30798, Page 235).
20. 2017: Claire A. Perry as Trustee of The Claire A. Perry Living Trust Agreement Dated March 23, 2011 deeds Lot 10B 672/35 to Claire A. Perry as Trustee of The Claire A. Perry Living Trust Agreement Dated March 23, 2011 and Samantha E. Perry as joint tenants with rights of survivorship (Book 30798, Page 238).
21. 2017: Claire A. Perry as Trustee of The Lucy J. Perry Living Trust Agreement Dated June 14, 2011 deeds ½ interest in Parcel B 672/35 to Richard B. Perry, and ½ interest in Parcel B 672/35 to Claire A. Perry as Trustee of The Claire A. Perry Living Trust Agreement Dated March 23, 2011, all as tenants in common (Book 30798, Page 240).
22. 2018: Claire A. Perry as Trustee of The Lucy J. Perry Living Trust Agreement Dated June 14, 2011 deeds ½ interest in Parcel D 672/35 to Richard B. Perry, and ½ interest in Parcel D 672/35 to Claire A. Perry as Trustee of The Claire A. Perry Living Trust Agreement Dated March 23, 2011, all as tenants in common (Book 31174, Page 72).
23. 2018: Claire A. Perry as Trustee of The Lucy J. Perry Living Trust Agreement Dated June 14, 2011 deeds Lot 2 674/90 to Thomas J. Nadeau (Book 31204, Page 59).
24. 2018: Richard B. Perry deeds a ½ interest in each of the following parcels to The Perry Family Limited Partnership: Lot 3A 630/58 (Parcel 3 672/35), Lot 12 630/58 (Parcel D 672/35), Lot 11 630/58 (Parcel D 672/35), Lot 13 632/56 (same on 672/35), Parcel B 672/35, 17 Harding's Way (Lot 7 630/58?). Note that other halves remain with respective owners (Book 31699, Page 134).
25. 2019: Claire A. Perry as Trustee of The Claire A. Perry Living Trust Agreement Dated March 23, 2011 deeds a ½ interest in each of the following parcels to Hillside Farm, LLC: Parcel C 672/35, Parcel D 672/35, Lot 11 630/58, Lot 13 632/56 (note that deed incorrectly states Lot 13 630/58; corrective affidavit recorded at 33001-176). Note that other halves remain with respective owners (Book 31999, Page 350).

26. 2019: Claire A. Perry as Trustee of The Lucy J. Perry Living Trust Agreement Dated June 14, 2011 deeds Lot 1 606/100, fresh meadow 512-277, triangle 395-20, garden and upland to the following persons: ½ interest to Richard B. Perry; 1/12 to Cheryl A. Costa; 1/12 to Debra Perry Locke; 1/12 to Scott W. Perry; 1/12 to Samantha E. Perry; 1/12 to Stephen O. Perry; 1/12 to Brandon Perry (Book 32407, Page 180, and corrective affidavit and deed recorded at Book 32944, Page 265 and Book 32944, Page 267).
27. 2020: Claire A. Perry as Trustee of The Stephen R. Perry Living Trust Agreement Dated March 23, 2011, Richard B. Perry and Cynthia J. Perry, and The Perry Family Limited Partnership deed LOT 7 630/58 to David W. Shapiro and Lee A. Shapiro.

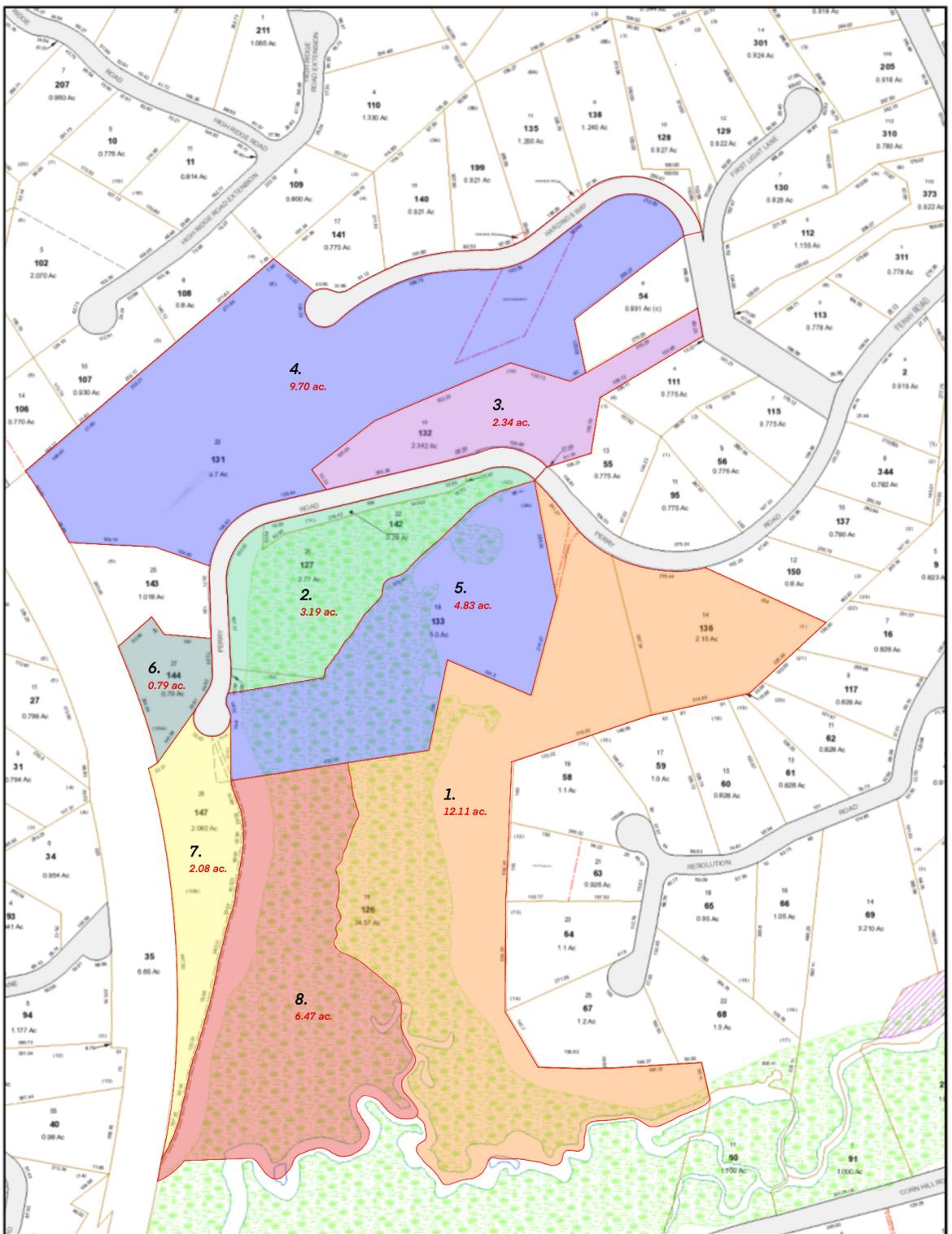
As a result of these conveyances, current record title to the remaining land in the northerly and southerly parcels originally owned by Stephen R. Perry and Richard B. Perry, and by John S. Perry and Lucy J. Perry, respectively, is as depicted and listed in chart form on the sketch of total lot areas and record title as of September 28, 2020 filed herewith. As the title history and sketches show, at no time from September 30, 1994 to the present date has there been common title ownership of the former John B. Perry and Mary J. Perry farmlands north of Perry Road and the former Joseph farmlands south of Perry Road, nor has there been common title ownership of an area of land equal to or more than 30.00 acres.

- END -



Total Lot Areas and Record Title as of September 30, 1994:

- 1. 13.69 ac.** *John S. Perry & Lucy J. Perry*
- 2. 27.84 ac.** *Stephen R. Perry & Richard B. Perry*
- 3. 6.47 ac.** *owners unknown*



Total Lot Areas and Record Title as of September 28, 2020:

- 1. 12.11 ac.** (1/2) Richard B. Perry
 (1/12) Cheryl A. Costa
 (1/12) Debra Perry Locke
 (1/12) Scott W. Perry
 (1/12) Samantha E. Perry
 (1/12) Stephen O. Perry
 (1/12) Brandon Perry

- 2. 3.19 ac.** (1/2) Hillside Farm, LLC
 (1/2) Richard B. Perry

- 3. 2.34 ac.** The Perry Family Limited Partnership

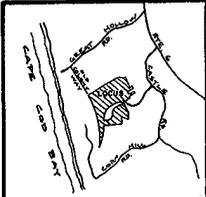
- 4. 9.70 ac.** (1/2) Hillside Farm, LLC
 (1/2) The Perry Family Limited Partnership

- 5. 4.83 ac.** (1/2) Hillside Farm, LLC
 (1/2) The Perry Family Limited Partnership

- 6. 0.79 ac.** Claire A. Perry as Trustee of The Claire A. Perry Living Trust

- 7. 2.08 ac.** Claire A. Perry as Trustee of The Claire A. Perry Living Trust & Samantha E. Perry

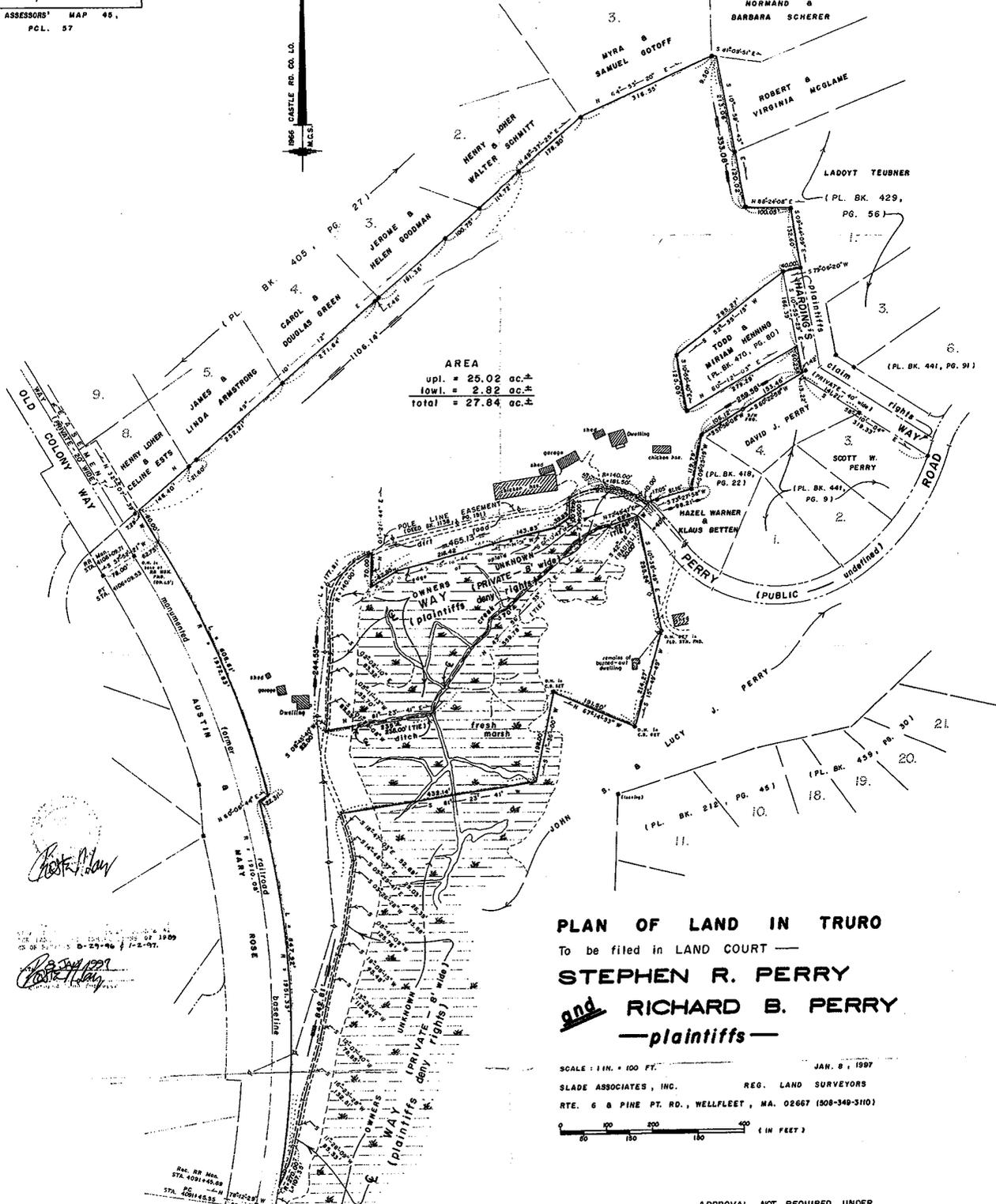
- 8. 6.47 ac.** owners unknown



ASSESSORS' MAP 46,
PCL. 57



(PL. BK. 213, PG. 115)



AREA
 upl. = 25.02 ac.±
 lowl. = 2.82 ac.±
 total = 27.84 ac.±

PLAN OF LAND IN TRURO
 To be filed in LAND COURT —
STEPHEN R. PERRY
and **RICHARD B. PERRY**
 —plaintiffs—

SCALE: 1 IN. = 100 FT.
 SLADE ASSOCIATES, INC. REG. LAND SURVEYORS
 RTE. 6 & PINE PT. RD., WELLFLEET, MA. 02667 (508-340-3110)
 JAN. 8, 1997

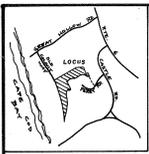


NOTE: ■ = D.H. IN C.B. FND., IN GOOD CONDITION, UNLESS OTHERWISE NOTED.
 ALL COURSES RUN WITH E.O.M. (ACCURACY ± 5 MM ± 3PPM)
 UNADJ. FIELD TRAVERSE: PRECISION = 1:114,770;
 L.E.C. = 0.056" D.E.C. = N 56°13'35"E

APPROVAL NOT REQUIRED UNDER THE SUBDIVISION CONTROL LAW
Paul J. Slade
Richard B. Perry
Stephen R. Perry
Barbara J. Perry

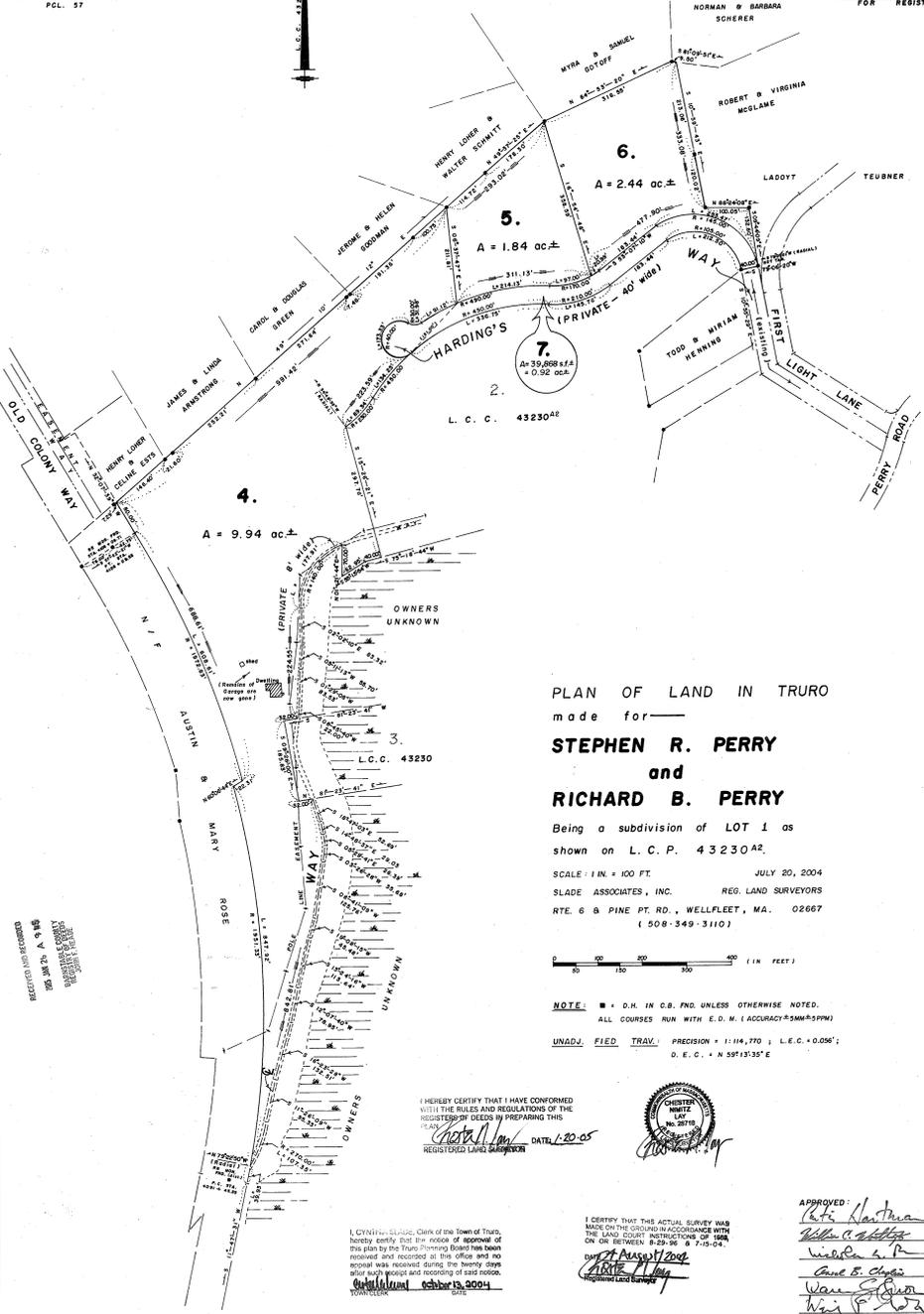
PETITIONER PLAN
 NOT SCANNED TO SCALE

TRURO PLANNING BOARD
 DATE: Jan. 22, 1997
 NO DETERMINATION OF COMPLIANCE WITH ZONING IS MADE OR IS INTENDED.



ASSESSORS' MAP 45,
PCL. 37

FOR REGISTRY USE



PLAN OF LAND IN TRURO
made for

STEPHEN R. PERRY
and
RICHARD B. PERRY

Being a subdivision of LOT 1 as
shown on L. C. P. 43230AR.

SCALE: 1 IN. = 100 FT. JULY 20, 2004
SLADE ASSOCIATES, INC. REG. LAND SURVEYORS
RTE. 6 & PINE PT. RD., WELLFLEET, MA. 02667
(508-349-3110)



NOTE: ■ = D.M. IN C.B. FND. UNLESS OTHERWISE NOTED.
ALL COURSES RUN WITH E.D.M. (ACCURACY ±3MM±3PPM)
UNADJ. FIELD TRAV. PRECISION ± 1:14,770 | L.C.C. ± 0.05%
D. E. C. ± N 55°13'35" E

I HEREBY CERTIFY THAT I HAVE CONFORMED
WITH THE RULES AND REGULATIONS OF THE
REGISTER OF DEEDS IN PREPARING THIS
PLAN.
Christina Law DATE: 1-20-05
REGISTERED LAND SURVEYOR



I, CYNTHIA CLARKE, Clerk of the Town of Truro,
hereby certify that the notice of approval of
this plan by the Truro Planning Board has been
received and recorded at this office and no
appeal was received during the twenty days
after such receipt and recording of said notice.
Cynthia Clarke October 13, 2004

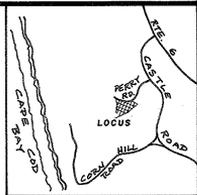
I CERTIFY THAT THIS ACTUAL SURVEY WAS
MADE ON THE GROUND IN ACCORDANCE WITH
THE LAND COURT INSTRUCTIONS OF 1984,
ON OR BETWEEN 8-29-96 & 7-15-04.
DATE: August 11, 2004
Richard Perry
REGISTERED LAND SURVEYOR

APPROVED:
Patricia Hartman
William C. Collins
William C. P.
Gene E. Clough
Walter J. Ryan
Walter J. Ryan

TOWN PLANNER (EXEMPT)
DATE: 10/13/04
(SEE COVENANT TO BE RECORDED HEREWITH)

BOOK 596 PAGE 91

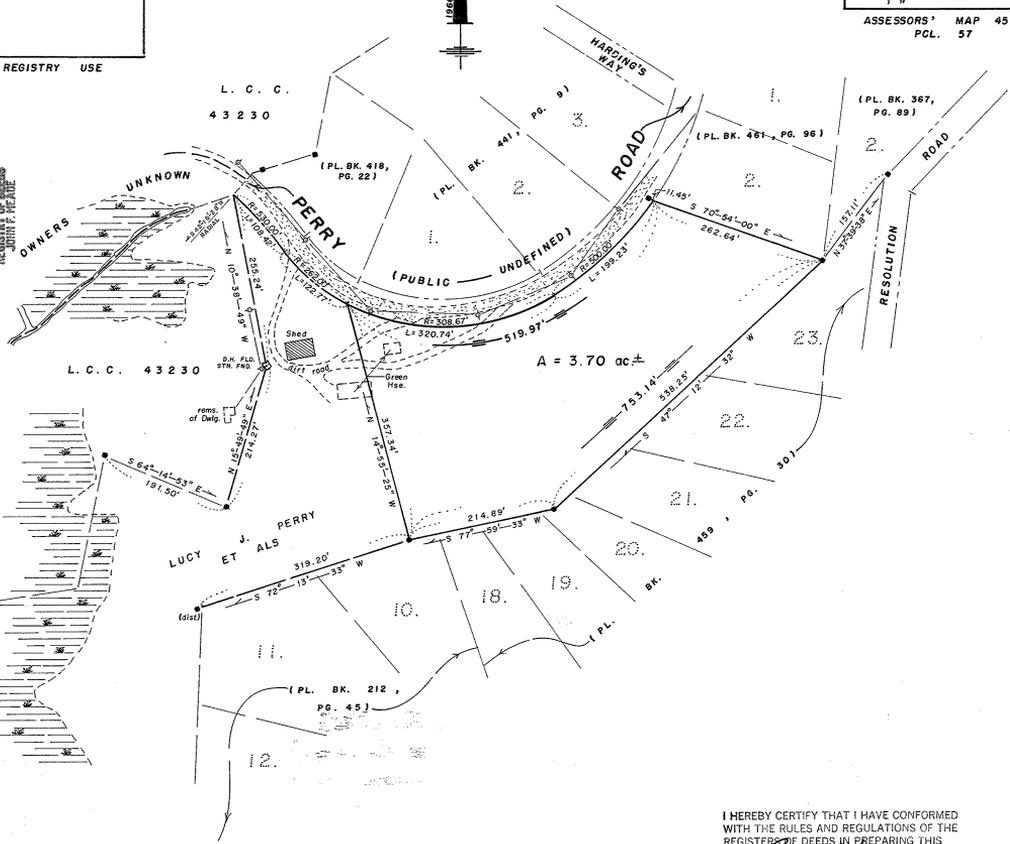
185



FOR REGISTRY USE

RECEIVED AND RECORDED
 1 205 APR 25 A 10 57
 DEPARTMENT OF CONVEYANCE
 REGISTER OF DEEDS
 JOHN F. HENNE

BOOK 598 PAGE 93



A = 3.70 ac ±

I HEREBY CERTIFY THAT I HAVE CONFORMED WITH THE RULES AND REGULATIONS OF THE REGISTER OF DEEDS IN PREPARING THIS PLAN
Robert A. Law DATE: 2/10/05
 REGISTERED LAND SURVEYOR

PLAN OF LAND IN TRURO
 made for _____
LUCY J. PERRY

SCALE : 1 IN. = 100 FT. FEB. 10, 2005
 SLADE ASSOCIATES, INC. REG. LAND SURVEYORS
 RTE. 6 & PINE PT. RD., WELLFLEET, MA. 02667



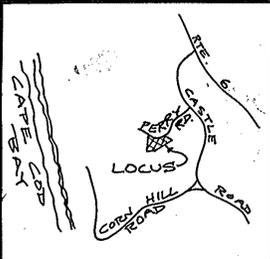
NOTE: ■ = D.H. IN C.B. FND.



I hereby certify that the property lines shown on this plan are the lines dividing existing ownerships and the lines of streets and ways shown are those of Public or Private street or ways already established and that no new lines for the division of existing ownership or for new ways are shown.
 DATE: 10 FEB 2005
Robert A. Law
 Registered Land Surveyor

598-93

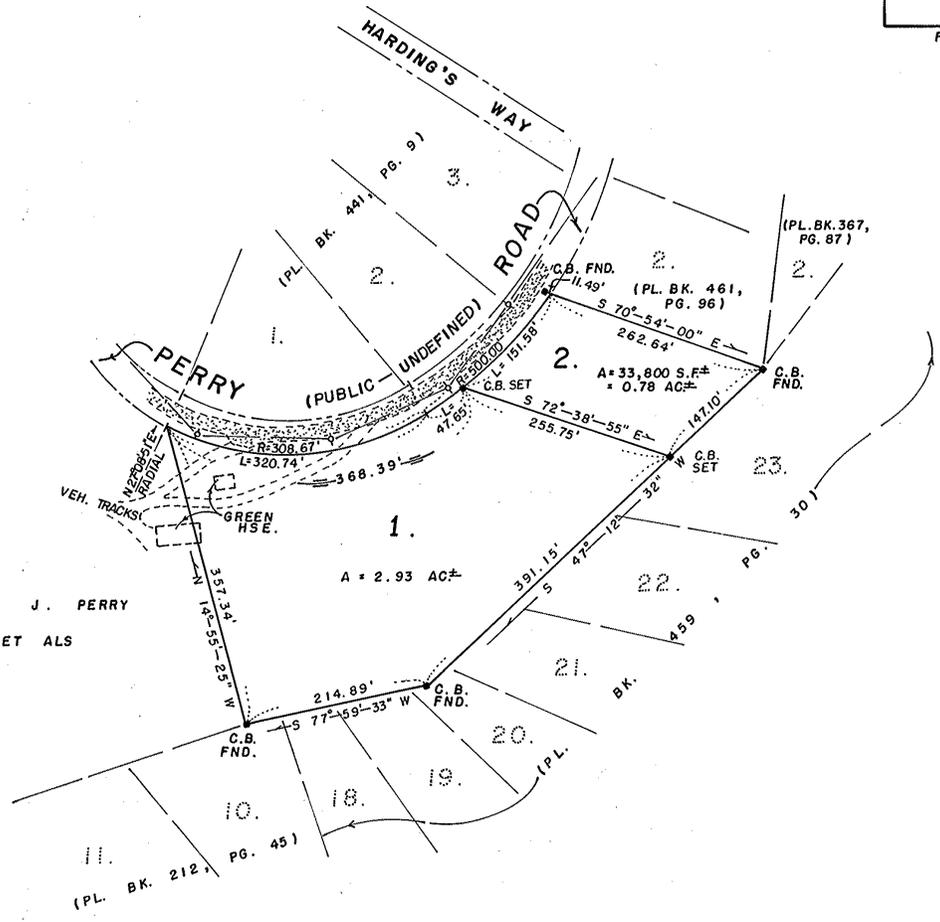
606-100



ASSRS! MAP 45,
PCL. 57

FOR REGISTRY USE

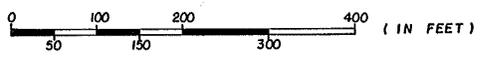
RECEIVED AND RECORDED
2005 MAR -7 P 12:13
BRANFORD COUNTY
REGISTER OF DEEDS
JOHN F. REASE



LUCY J. PERRY
ET ALS

PLAN OF LAND IN TRURO
Being a division of land as shown
in PLAN BK. 598, PG. 93.
made for _____
LUCY J. PERRY

SCALE: 1 IN. = 100 FT. JULY 28, 2005
SLADE ASSOCIATES, INC. REG. LAND SURVEYORS
RTE. 6 & PINE PT. RD., WELLFLEET, MA. 02667



Planning Board Approval Under
Subdivision Control Law Not Required.
No Determination Of Compliance With
Zoning Requirements Has Been Made
Or Is Intended.

Wane S. Snow
Sharon C. Miller
William C. Whitcomb
John F. Rease
Carl H. ...



I HEREBY CERTIFY THAT I HAVE CONFORMED
WITH THE RULES AND REGULATIONS OF THE
REGISTER OF DEEDS IN PREPARING THIS
PLAN.
Christina Lay DATE: 7-28-05
REGISTERED LAND SURVEYOR

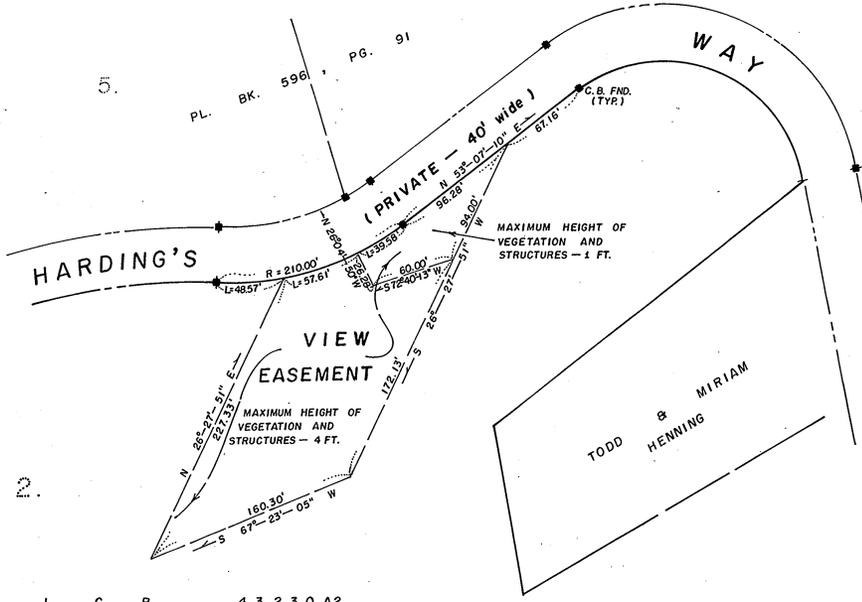
DATE: 09 August 2005

BOOK 606 PAGE 100

RECEIVED AND RECORDED
1 2001 FEB 21 P 12:47
DARNSTABLE COUNTY
REGISTRY OF DEEDS
JOHN T. HEADE



FOR REGISTRY USE

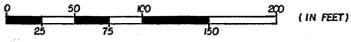


615-92

PLAN OF LAND IN TRURO
Showing a VIEW EASEMENT over
LOT 2, L.C.P. 43230 A2 (Confirmation).
made for _____

**STEPHEN R. PERRY
& RICHARD B. PERRY**

SCALE: 1 IN. = 50 FT. JAN. 17, 2007
SLADE ASSOCIATES, INC. REG. LAND SURVEYORS
RTE. 6 & PINE PT. RD., WELLFLEET, MA. 02667



I HEREBY CERTIFY THAT I HAVE CONFORMED
WITH THE RULES AND REGULATIONS OF THE
REGISTRY OF DEEDS IN PREPARING THIS
PLAN.
Richard B. Perry DATE: 1-17-07
REGISTERED LAND SURVEYOR

I hereby certify that the property lines
shown on this plan are the lines dividing
existing ownerships and the lines of alleys
and ways shown are those of Public or Private
street or ways already established and that no
new lines for the division of existing ownership
or for new ways are shown.
DATE: 1-17-07
Richard B. Perry
Registered Land Surveyor

43230A

SHEET 1 of 3

CONFIRMATION

PLAN OF LAND IN TRURO

Slade Associates, Inc., Surveyors

January 8, 1997

Carl Green et al.
Trustees of Indenture
of Trust 2/20/92

James Armstrong
and
Linda Armstrong

John M. Strand
and
Susan R. Strand

John S. Perry and Lucy J. Perry

RECEIVED AND RECORDED

2007 SEP -4 P 2 27

BARNSTABLE COUNTY
REGISTRY OF DEEDS
JOHN F. MEADE

Denotes d.h.C.B. unless otherwise noted

Abutters are not adjudicated.

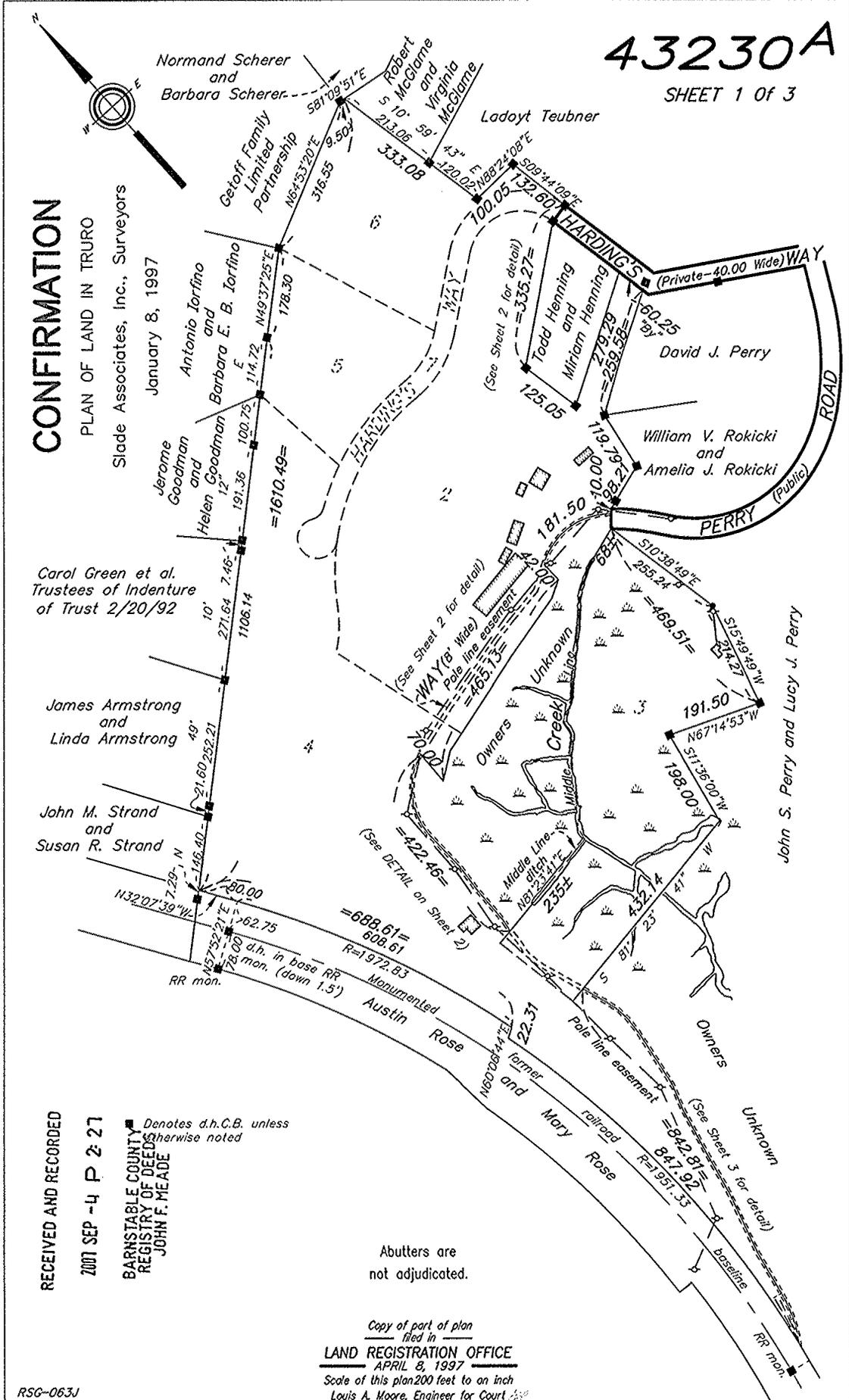
Copy of part of plan filed in
LAND REGISTRATION OFFICE
APRIL 8, 1997

Scale of this plan 200 feet to an inch
Louis A. Moore, Engineer for Court

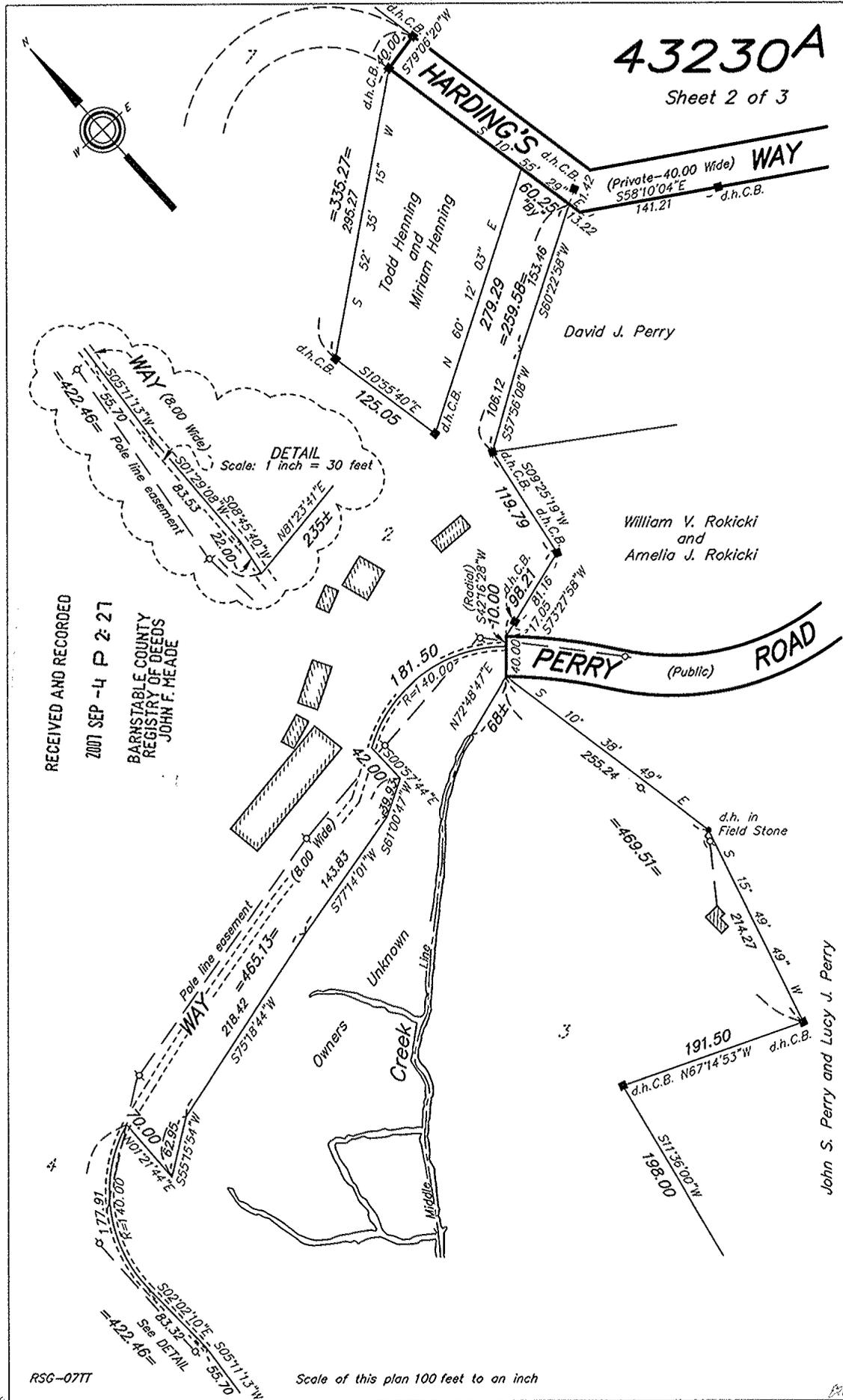
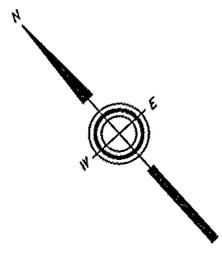
RS6-063J

CH 380 A'66

619-97



43230A
Sheet 2 of 3



619-98

RECEIVED AND RECORDED
2007 SEP -4 P 2 27
BARNSTABLE COUNTY
REGISTRY OF DEEDS
JOHN F. MEADE

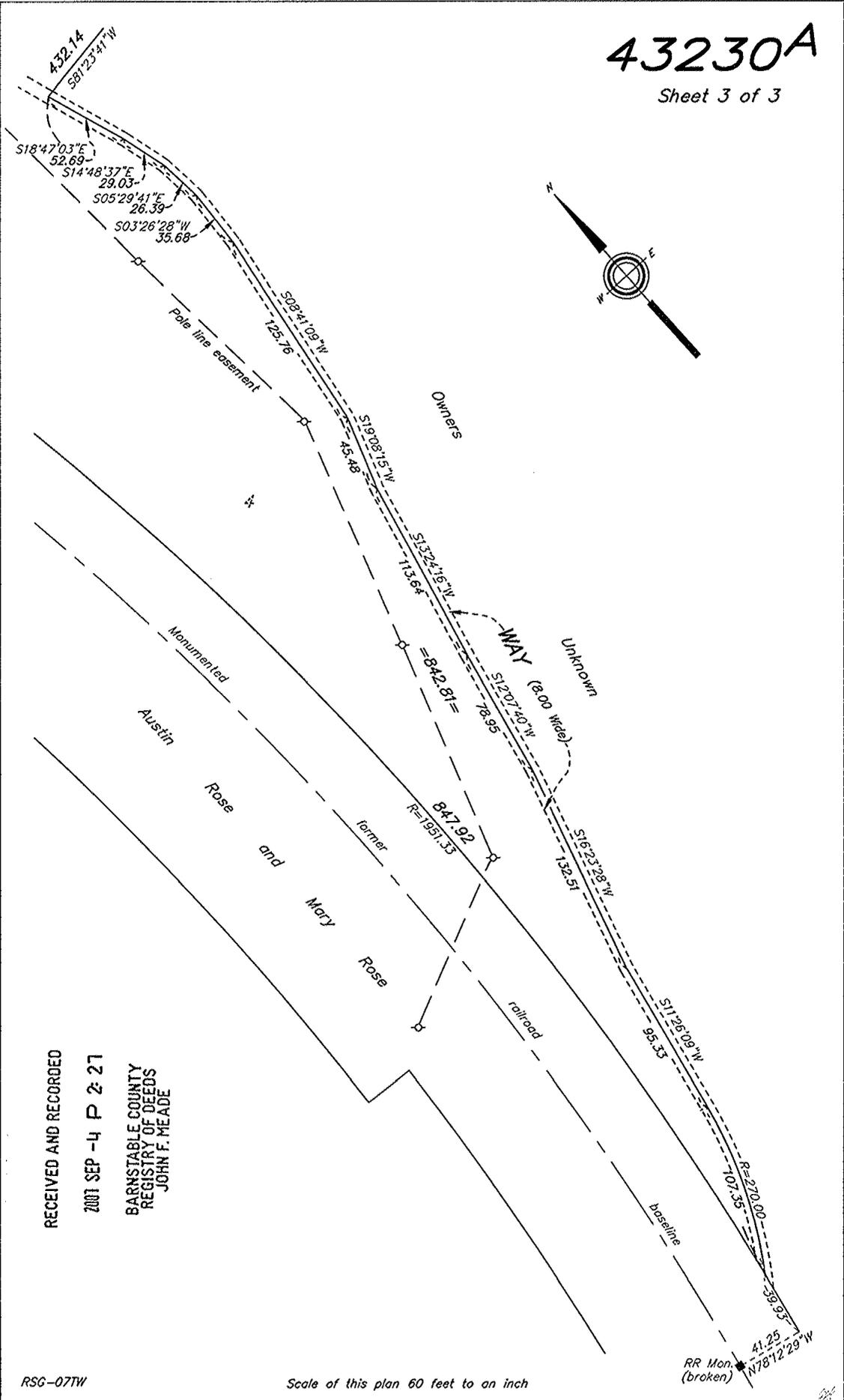
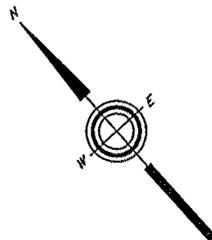
RSG-07TT

Scale of this plan 100 feet to an inch

John S. Perry and Lucy J. Perry

43230A

Sheet 3 of 3



619-99

619-99

RECEIVED AND RECORDED
2001 SEP -4 P 2: 21
BARNSTABLE COUNTY
REGISTRY OF DEEDS
JOHN F. MEADE

RSG-07TW

Scale of this plan 60 feet to an inch

43230 A'66

PLAN OF LAND IN TRURO

Being a division of LOT 5 as shown in PLAN BK. 596 , PG. 91.

made for _____

STEPHEN R. PERRY & RICHARD B. PERRY

SCALE : 1 IN. = 50 FT.

DEC. 14, 2007

SLADE ASSOCIATES, INC.

REG. LAND SURVEYORS

RTE. 6 & PINE PT. RD., WELLFLEET, MA. 02667



NOTE: ■ = D.H. C.B. FND. UNLESS OTHERWISE NOTED.

RECEIVED AND RECORDED

2007 JUL 14 A 8 27

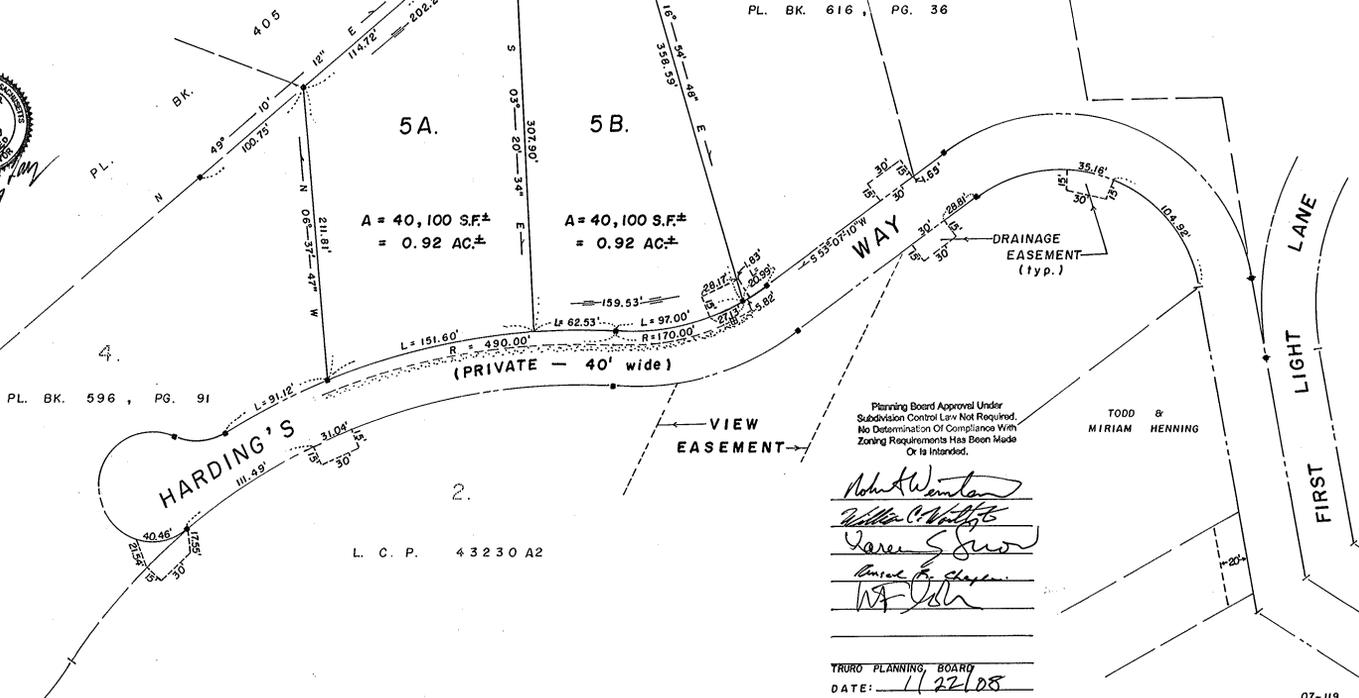
REGISTRY OF DEEDS
JOHN F. MEADE

PL. BK. 213 , PG. 115



FOR REGISTRY USE

I HEREBY CERTIFY THAT I HAVE CONFORMED WITH THE RULES AND REGULATIONS OF THE REGISTRY OF DEEDS IN PREPARING THIS PLAN.
Richard B. Perry
REGISTERED LAND SURVEYOR DATE: 12-11-07



A = 40,100 S.F. ±
= 0.92 AC. ±

A = 40,100 S.F. ±
= 0.92 AC. ±

(PRIVATE - 40' wide)

VIEW EASEMENT

DRAINAGE EASEMENT (typ.)

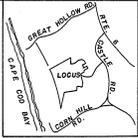
Planning Board Approved Under Subdivision Control Law Not Required. No Determination Of Compliance With Zoning Requirements Has Been Made Or Is Intended.

TODD & MIRIAM HENNING

Richard B. Perry
Stephen R. Perry
Richard B. Perry

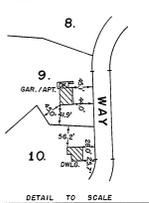
L. C. P. 43230 A2

TRURO PLANNING BOARD
DATE: 11/27/08



ASSESS' MAP 45,
P.L.S. 127 & 131-133
ZONE: RESIDENTIAL

FOR REGISTRY USE



RECEIVED AND RECORDED
 IN B. IN V. A. 821
 REGISTRY OF DEEDS
 COUNTY OF PLYMOUTH

OWNERS OF RECORD:
 STEPHEN R. PERRY
 P.O. BOX 1016
 TRURO, MA. 02666
 RICHARD B. PERRY
 76 R BAYBERRY AVE.
 PROVINCETOWN, MA. 02657
 LUCY J. PERRY
 P. O. BOX 127
 TRURO, MA. 02666

APPROVED:
[Signature]
 TRURO BOARD OF HEALTH
 DATE: 12.14.02

APPROVED:
[Signature]
 STEPHEN WILLIAMS
 DATE: 12.14.02

TRURO PLANNING BOARD
 DATE: March 10, 2009
 (SEE CONSENT TO BE RECORDED
 HEREWITH)

PRELIMINARY APPLICATION: MAR. 11, 2008
 " APPROVAL: JUNE 18, 2008
 DEFINITIVE APPLICATION: NOV. 4, 2008
 " APPROVAL: JAN. 13, 2009

NOTE: NO LOTS MAY BE CONVEYED AND NO BUILDING PERMITS SHALL BE ISSUED BY THE TOWN OF TRURO UNTIL ALL APPLICABLE REQUIREMENTS OF THE RULES AND REGULATIONS GOVERNING THE SUBDIVISION OF LAND HAVE BEEN MET.

THE TRAVELED HDG WITHIN THE EXTENSION OF PERRY ROAD SHOWN HEREON IS A FLAT, WELL GRADED DIRT ROAD BETWEEN 8 AND 10 FT. IN WIDTH. ANY FURTHER DIVISIONS OF LAND OFF PERRY ROAD EXT. SHALL REQUIRE FURTHER UPDATES OF SAID ROAD THIS REQUIRING FURTHER REVIEW AND APPROVALS FROM THE TRURO PLANNING BOARD.

ONCE LOT 9 OR 10 SEPARATE OWNERSHIP, THE APPLICANT MUST APPLY FOR A SHARED SYSTEM APPLICATION WITH 3 C.P.S., TRURO D.P.U. OR INSTALL A SEPTIC SYSTEM TO SERVE EACH LOT INDEPENDENTLY.

I, CYNTHIA SUZUKI, Clerk of the Town of Truro, hereby certify that the copies of approval of proposed and recorded at this office and no appeal was received during the twenty day period after each project and recording of said notice.
 CYNTHIA SUZUKI
 CLERK OF THE TOWN OF TRURO
 DATE: 12/23/2009

I HEREBY CERTIFY THAT I HAVE CONFORMED WITH THE RULES AND REGULATIONS OF THE REGISTRY OF DEEDS IN PREPARING THIS PLAN.
 REGISTERED LAND SURVEYOR
 DATE: 6/23/08

"DEFINITIVE PLAN"
SUBDIVISION PLAN OF LAND
IN TRURO
 made for —
STEPHEN R. PERRY,
RICHARD B. PERRY
& LUCY J. PERRY

SCALE: 1 IN. = 100 FT. JUNE 23, 2008*
 SLADE ASSOCIATES, INC. REG. LAND SURVEYORS
 RTE. 6 & PINE PT. RD., WELLFLEET, MA. 02687

LEGEND: ■ = D.J. IN C.B. F.D. UNLESS OTHERWISE NOTED.
 -○- = UTILITY POLE
 ▲ = WETLAND

FLOOD ELEV. DATA: F.I.R.M. ZONE 2A, SH. 7B, JULY 3, 1985.
 PERMANENT BOUNDS SHALL BE SET AT ALL ROAD POINTS AND LOT CORNERS, AS APPROPRIATE.

*REVISED: NOV. 10, 2008
 DEC. 3, 2008
 JAN. 15, 2009

GROSS AREAS
 TOT. SUBDIVISION: 1,121,494 S.F.# = 25.75 AC.#
 PERRY ROAD (EXT.): 47,762 S.F.# = 1.10 AC.#
 TOT. WETLANDS: 228,260 S.F.# = 5.24 AC.#
 WITHIN FLOOD PLAIN: 451,600 S.F.# = 10.09 AC.#

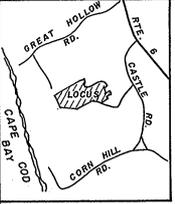
WAIVERS

1. SEC. 3.6.6.ø (DEAD END STREETS) ; to allow the extension of PERRY ROAD approximately 1,120 ft. from the westerly end of the TOWN layout.
2. SEC. 3.7 (RURAL ROAD ALTERNATIVE); to allow the traveled way within the extension of PERRY ROAD to remain as is.



62308

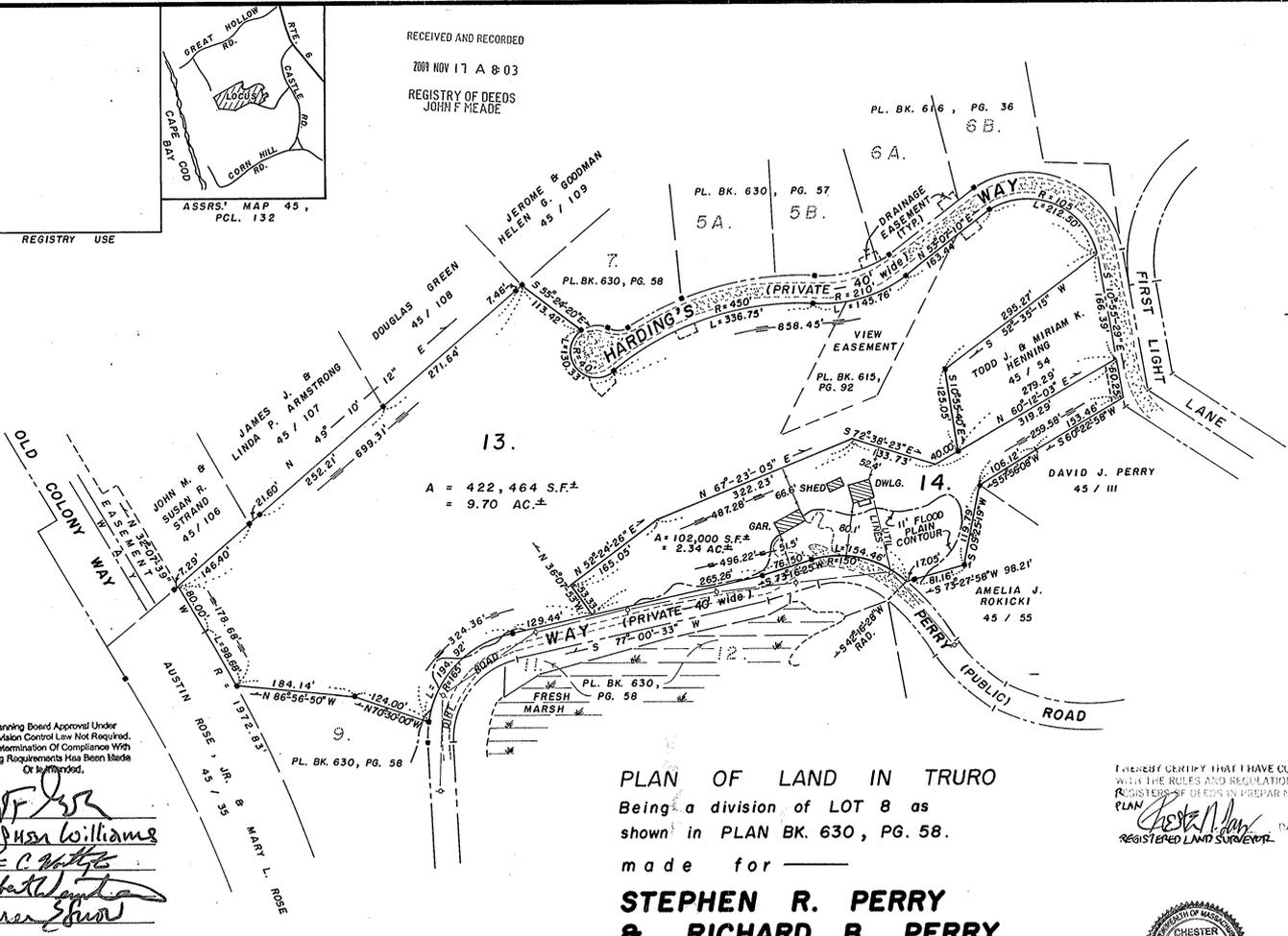
AG



RECEIVED AND RECORDED
 2009 NOV 17 A 8:03
 REGISTRY OF DEEDS
 JOHN F MEADE

ASSRS' MAP 45,
 PCL. 132

FOR REGISTRY USE



Planning Board Approval Under
 Subdivision Control Law Not Required.
 No Determination Of Compliance With
 Zoning Requirements Has Been Made
 Or Intended.

W.F. Williams
 Stephen Williams
W.C. Williams
 Robert Williams
W.C. Williams
 W.C. Williams

NOTE: ■ = D.H. IN C.B. FND.

TRURO PLANNING BOARD
 DATE: OCT. 13, 2009

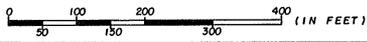
PLAN OF LAND IN TRURO

Being a division of Lot 8 as
 shown in PLAN BK. 630, PG. 58.

made for _____

**STEPHEN R. PERRY
 & RICHARD B. PERRY**

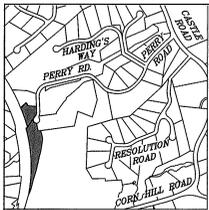
SCALE: 1 IN. = 100 FT. SEPT. 2, 2009
 SLADE ASSOCIATES, INC. REG. LAND SURVEYORS
 RTE. 6 & PINE PT. RD., WELLFLEET, MA. 02667



I HEREBY CERTIFY THAT I HAVE CONFORMED
 WITH THE RULES AND REGULATIONS OF THE
 REGISTERED PROFESSION OF SURVEYORS IN PREPARING THIS
 PLAN.
Richard B. Perry DATE: 9/18/09
 REGISTERED LAND SURVEYOR



Richard B. Perry
 9/18/09



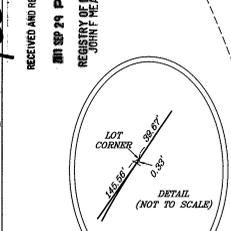
DATE OF PRELIMINARY APPLICATION: JUNE 6, 2016
DATE OF PRELIMINARY APPROVAL: JUNE 30, 2016
DATE OF DEFINITIVE APPLICATION: MAY 22, 2017
DATE OF DEFINITIVE APPROVAL:
DATE OF DEFINITIVE ENDORSEMENT:

I HEREBY CERTIFY THAT I HAVE CONFORMED WITH THE RULES AND REGULATIONS OF THE BOARD OF SURVEYORS IN PREPARING THIS PLAN.
DATE: 8-31-17
REGISTERED LAND SURVEYOR

LOCUS IS SHOWN AS PARCEL 144 ON SHEET 45 OF THE TRURO ASSESSORS' ATLAS.

GROSS AREA OF SUBDIVISION = 507,190 SQ. FT. ± = 11.64 AC. ±
AREA OF ROAD = 47,791 SQ. FT. ± = 1.10 AC. ±
PERMANENT MONUMENTS SHALL BE SET AT ALL POINTS OF CURVATURE AND CHANGES IN DIRECTION OF STREET SIDE LINES AND AT ALL LOT CORNERS, AS APPROPRIATE.

RECEIVED AND RECORDED:
SEP 11 10:01
REGISTRY OF DEEDS
JOHN W. HEALE



PLAN NOTES:
PCL. A IS TO BECOME AND REMAIN PART OF LOT 10 AS SHOWN ON A PLAN RECORDED IN BOOK 630, PAGE 58. TO BECOME LOT 10B. TOTAL AREA = 90,720 SQ. FT. ± = 2.085 AC. ±.
PCL. B IS TO BECOME AND REMAIN PART OF PCL. C. TOTAL AREA = 217,800 SQ. FT. ± = 5.00 AC. ±.

ZONING: RESIDENTIAL

CONDITIONAL APPROVAL:

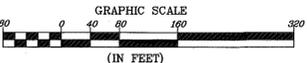
APPROVED WITH THE CONDITION THAT PERRY ROAD IS ADEQUATE ACCESS FOR LOTS 9, 10A, 10B & PCL. 45-132 ONLY. NO NEW LOTS MAY BE CREATED UTILIZING THIS WAY FOR FRONTAGE WITHOUT FURTHER APPLICATION TO THE PLANNING BOARD.

Signatures of town officials: Jason Sallong, John Heale, Paul Kerwin, Michael W. Root, Peter Hurley, etc.

NO LOTS MAY BE CONVEYED AND NO BUILDING PERMITS SHALL BE ISSUED BY THE TOWN OF TRURO UNTIL ALL APPLICABLE REQUIREMENTS OF THE RULES AND REGULATIONS GOVERNING THE SUBDIVISION OF LAND HAVE BEEN MET.
I, CYNTHIA SLADE, CLERK OF THE TOWN OF TRURO, HEREBY CERTIFY THAT THE NOTICE OF APPROVAL OF THIS PLAN BY THE TRURO PLANNING BOARD HAS BEEN RECEIVED AND RECORDED AT THE OFFICE AND NO APPEAL WAS RECEIVED DURING THE TWENTY DAYS AFTER SUCH RECEIPT AND RECORDING OF SUCH NOTICE.

APPROVED:
Signatures of Truro Board of Health members: Truro, Alan Silva, etc.
DATE: 9/15/2017

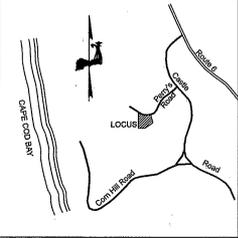
OWNER & APPLICANT:
CLAIRE A. PERRY, TRUSTEE OF THE CLARE A. PERRY LIVING TRUST
LEGEND:
■ DENOTES BELL HOLE IN CONCRETE MONUMENT FOUND UNLESS OTHERWISE INDICATED.
○ DENOTES UTILITY POLE
----- DENOTES CREEK



- 2.5.2a.6 DRAINAGE CALCULATIONS
2.5.2a.9 TRAFFIC IMPACT STUDY
2.5.2a.10 THREE PROPOSED ROAD NAMES
2.5.5b.1 SUBDIVISION NAME
2.5.2b5 EXISTING & PROPOSED METHODS OF PROVIDING ROAD DRAINAGE & UTILITIES
2.5.2b.10 TOPOGRAPHIC CONTOURS
2.5.2b.16 GRADES, WIDTHS, LOCATIONS, SIGHT DISTANCES, PHYSICAL CONDITION OF EXISTING ROADWAYS
2.5.2b22 TWO ON-SITE U.S.G.S. BENCHMARKS
2.5.2b.24 ALL INFORMATION REQUIRED ON A PRELIMINARY PLAN
2.5.2.b.30 LOCATION OF ALL TREES OF 10" DIA.
2.5.2c. PLAN, PROFILE AND CROSS SECTION
2.5.2.c.11 LIMITS OF CLEARING
2.5.2.c.15 LANDSCAPE PLAN
2.5.2.c.16 EROSION CONTROL PLAN
2.5.9 HOMEOWNERS' ASSOCIATION
3.4 THE SETTING OF THE MONUMENT AT THE EAST SIDE OF THE CURVE-SAC AS THIS IS IN AN AREA CURRENTLY UNDER CULTIVATION AND IS CONSTANTLY FLOWED. ALSO THE SETTING OF MONUMENTS AT THE ANGLE POINTS IN THE EASTERLY PROPERTY LINE (WITH THE EXCEPTION OF THE MOST SOUTHERLY CORNER OF LOT 9) AS THIS LINE IS DEFINED BY THE CENTER LINE OF THE ROAD.



DEFINITIVE SUBDIVISION PLAN OF LAND IN TRURO
SHOWING A SUBDIVISION OF LOTS 3A, 10 & 12 AS SHOWN ON A PLAN RECORDED IN PLAN BOOK 630, PAGE 58.
CLAIRE A. PERRY
SCALE 1"=80'
SLADE ASSOCIATES, INC., REGISTERED LAND SURVEYORS
10 PINE POINT ROAD, WELLSFLEET, MA 02667
"REVISED 06/12/17
REVISED 08/31/17
508-349-9110 PLAN #2016-45



I hereby certify that this plan was prepared in accordance with the Rules and Regulations of the Registers of Deeds.

Donald T. Poole PLS #32862

Date Dec 13, 2017



APPROVAL UNDER THE SUBDIVISION CONTROL LAW NOT REQUIRED

Date: Dec 20, 2017

Pete Hernandez
John Deane
John Deane

Note: Planning Board endorsement of this plan indicates only that the plan is not a subdivision under MGL Chp. 41, Sec 81-L, and does not indicate that a lot is buildable or that it meets Zoning, Health, or General Bylaw requirements.

For Registry Use

LOCUS MAP (not to scale)
 ASSESSORS MAP #45, PARCEL 136

PERRY'S ROAD - Undefined Public Way 50' Wide

$R = 500.00'$
 $A = 47.65'$

$R = 308.67'$
 $A = 320.79'$

$A = 218.44'$

$A = 102.35'$

Jeffery B. Segal & Bonnie J. Lipeles
 10 Perry's Road
 Deed Book 2238, Page 156
 Lot 2, Plan Book 606, Page 100

Joe F. Pryse & Beth A. Worell
 5 Resolution Road
 Deed Book 28862, Page 39
 Lot 23, Page 458, page 30

Lot 2
 33,800± Sq. Feet
 0.8 Acres

Howard Karen & Edward G. Christie
 7 Resolution Road
 Deed Book 8409, Page 64
 Lot 22, Plan Book 459, Page 80

Lot 1
 93,675± Sq.Ft.
 2.15± Acres

John J. Criticos & Molly Ward
 8 Resolution Road
 Deed Book 12689, Page 148
 Lot 21, Plan Book 459, Page 30

Alfred W. Fehiau
 17 Resolution Road
 Deed Book 30171, Page 314
 Lot 10, Plan Book 212, Page 45

Alfred W. Fehiau
 17 Resolution Road
 Deed Book 30171, Page 314
 Lot 10, Plan Book 212, Page 45

Samuel Kaffrisen & Jeanne Berkman
 13 Resolution Road
 Deed Book 11813, Page 54
 Lot 19, Plan Book 459, Page 30

Victor Degruittola & Robert Litwick
 15 Resolution Road
 Deed Book 11864, Page 335
 Lot 18, Plan Book 459, Page 30

Allyson T. McCabe, Trustee
 11 Resolution Road
 Deed Book 23595, Page 67
 Lot 20, Plan Book 459, Page 30

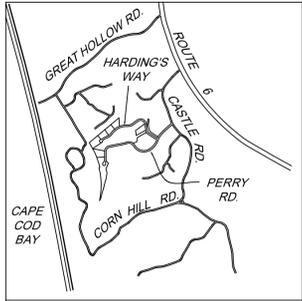
Plan of Land
 Perry's Road, Truro MA
 Being a Division of Lot 1 Plan Book 606,
 Page 100
 Prepared for
 Claire A. Perry,
 Deed Book 25515, Page 20
 Scale 1"=50' Dec. 11, 2017
 o/s#664001



RECEIVED AND RECORDED
 2018 APR -14 A 9 04
 REGISTRY OF DEEDS
 JOHN F. HEALD

674.90





LOCUS MAP (not to scale)
ASSESSORS MAP 45, PARCEL 131

For Registry Use

APPROVAL UNDER THE SUBDIVISION CONTROL LAW NOT REQUIRED
Date: _____

Note: Planning Board endorsement of this plan indicates only that the plan is not a Subdivision under MGL Chap. 41, Sec 81-L, and does not indicate that a lot is buildable or that it meets Zoning, Health, or General Bylaw requirements.

I hereby certify that this plan was prepared in accordance with the Rules and Regulations of the Registers of Deeds.

Donald T. Poole PLS #32662

Date: _____

James J Armstrong tr 12-23-05
trs. James & Linda Armstrong
Assessor's Pcl 045-107

Raj & Meena Rajgopal
Assessor's Pcl 045-106

Rose Investment Trust
trs. Austin L Jr & Mary L Rose
Assessor's Pcl 045-35

Scott W Perry
Assessor's Pcl 045-143

Douglas Green
Assessor's Pcl 045-108

Goodman Family Nominee trust
trs. Helen G & Ethan M Goodman
Assessor's Pcl 045-109

Stephen R Perry living trust &
Perry Family LTD Partnership
Assessor's Pcl 045-141

Perry Family LTD Partnership
Richard B Perry et al gen part
Assessor's Pcl 045-132

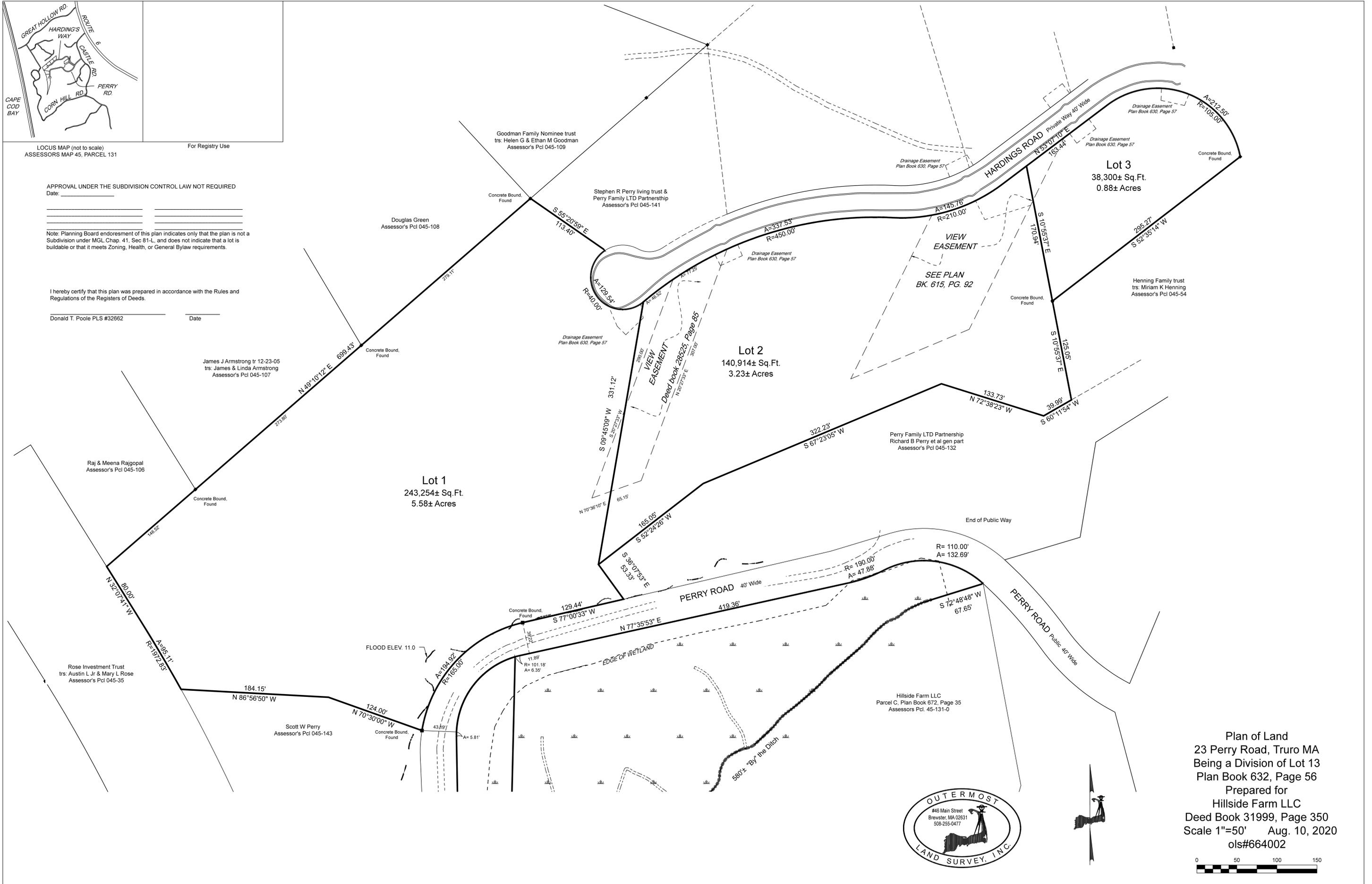
Hillside Farm LLC
Parcel C, Plan Book 672, Page 35
Assessor's Pcl. 45-131-0

Henning Family trust
trs. Miriam K Henning
Assessor's Pcl 045-54

Lot 1
243,254± Sq.Ft.
5.58± Acres

Lot 2
140,914± Sq.Ft.
3.23± Acres

Lot 3
38,300± Sq.Ft.
0.88± Acres



Plan of Land
23 Perry Road, Truro MA
Being a Division of Lot 13
Plan Book 632, Page 56
Prepared for
Hillside Farm LLC
Deed Book 31999, Page 350
Scale 1"=50' Aug. 10, 2020
ols#664002





Planning Board

Town of Truro

24 Town Hall Road

Truro, MA 02666

(508) 349-7004

DECISION OF THE PLANNING BOARD

Definitive Subdivision

Atlas Map 39 Parcel 325

Address: 3 Laura's Way

Atlas Map 39 Parcel 77

Address: 4H Bay View Road

Case Reference No.: 2020-012/PB

Applicant: Nathan A. Nickerson III

Meeting Dates: December 2, 2020 and December 16, 2020

Decision Date: December 16, 2020

Sitting: Anne Greenbaum, Chair; Jack Riemer, Clerk; Paul Kiernan; Bruce Boleyn; Steve Sollog; Peter Herridge

At a duly posted and noticed public hearing opened on December 2, 2020 and continued to December 16, 2020, the Town of Truro Planning Board, acting in the matter of Reference Number 2020-001/PB, and pursuant to G.L. c. 41, s. 81T and s. 81U and s. 2.5 of the Town of Truro Rules and Regulations Governing Subdivision of Land, voted to deny a waiver and to deny a Definitive Plan entitled "Definitive Subdivision Plan of Land, #4H Bay View Road and 3 Laura's Way, Truro, MA," Scale 1"=50,' prepared for Nathan A. Nickerson III by Outermost Land Surveying and dated September 28, 2020. The Board's vote was 6-0 to deny the requested waiver and deny the Definitive Plan.

In the Planning Board's deliberations, the following plans and submittals were reviewed:

1. Form C Application for Approval of a Definitive Plan, dated September 29, 2020, with attachments
2. "Definitive Subdivision Plan of Land, #4H Bay View Road and 3 Laura's Way, Truro, MA," Scale 1"=50,' prepared for Nathan A. Nickerson III by Outermost Land Surveying and dated September 28, 2020
3. "Tashmuit Lane Extension, Proposed Road Plan & Notes," prepared by GFM Enterprises, Inc. dated August 14, 2019, Subdivision Layout dated October 22, 2020, C1-C3, inclusive
4. Definitive Subdivision Plans Review Checklist
5. Certified Abutters List

6. Request for Waiver from Christopher S. Fiset, Esq. to Planning Board dated December 14, 2020
7. Letters from David Reid, Esq. dated November 16, 2020 and February 13, 2020, with attachments, submitted on behalf of Shelley Fischel, 15 Sawyer Grove Road
8. Letter from Diedra Dietter and Michael Schultz, 25 Sawyer Grove Road, North Truro
9. Email dated November 22, 2020 from Robert Carlson
10. Letter dated November 24, 2020 from Gary M. Cooper and Ronald D. Spinks
11. Memorandum dated February 16, 2016 from Jonathan Silverstein, Esq., Kopelman and Paige (Town Counsel) to Planning Board
12. Staff Report from February 19, 2020 Planning Board meeting

Findings

After testimony by the applicant and the applicant's representatives, and members of the public, the Planning Board deliberated on the merits of the request for approval of the Definitive Plan. In its deliberations, the Board found:

1. The Applicant proposes to create, through the Definitive Plan, a 6.3 acre Lot 1 (Hutchings parcel) served by "Tashmuit Lane," which is depicted as a 40' private way connecting to Sawyer Grove Road. Tashmuit Lane provides conforming frontage to the existing Lot 2A (Nickerson parcel) and terminates in a cul-de-sac providing frontage to Lot 1. Lot 2A also has frontage on Laura's Way.
2. Sawyer Grove Road was constructed pursuant to the Helen Sawyer Definitive Subdivision Plan, endorsed by the Planning Board on February 7, 1990, recorded at Book 468, Page 9. At the time of the vote approving the development, the Board found that Sawyer Grove Road was "insufficient and inadequate to serve development on any adjacent property, which will require additional and separate roads and access." Although posed as condition in the Board's vote, this finding was not recorded as part of the subdivision covenant.
3. However, reflecting the Board's intent to restrict use of Sawyer Grove Road to the Helen Sawyer Subdivision, and to prevent connection of other subdivisions through Sawyer Grove Road, a list of conditions attached to the recorded Form D covenant for the Helen Sawyer Subdivision stated:

"5. Approval of this definitive plan is limited to construction of Sawyer Grove Road as shown on said plan to provide access for the 17 lots shown on the plan and is not approval for construction of any ways to adjoining land."

This Attachment was recorded with the Covenant (Book 7061, Page 93) and rerecorded with an added limitation of time for construction on June 23, 1993 (Book 8642, Page 78).

4. A subdivision on land adjacent to the Helen Sawyer subdivision was found to have been constructively approved in 2007 (Cyoski Subdivision). This provided for the construction of Laura's Way, a dead-end road serving fifteen lots. Sawyer Grove, also a dead-end road, provides the sole access to Laura's Way. Sawyer Grove Road therefore currently serves thirty-two lots, almost twice the number originally intended.
5. The parcels that are the subject of the Definitive Plan under consideration have been the subject of previous applications. In 2015, a five-lot subdivision was proposed on the subject property (D'Arezzo Hutchings subdivision). This proposal was withdrawn in 2016.
6. In early 2020, an application for a 3-lot subdivision of the subject property was submitted to the Board. The configuration was similar to the current proposal: Lot 2A had frontage on the unnamed way and Laura's Lane, but with two lots on the Hutchings parcel served by the cul-de-sac. Hearing was continued several times and the application was withdrawn shortly before hearing on July 22, 2020.
7. Considerable public comment was received on the current proposal both in writing and at the public hearing. Concerns were raised regarding the capacity of Sawyer Road to serve additional lots, as well as other concerns regarding driver and pedestrian safety
8. Testimony at the hearing indicates that Sawyer Grove, a private way, is hilly, winding, and overgrown with trees and vegetation, causing poor visibility and sightlines.
9. The distance from Hughes Road along Sawyer Grove Road to the entrance of the proposed Tashmuit Lane is approximately 1,050 feet. Tashmuit Lane itself is 488.1 feet, for a total of 1,538.11 feet.
10. The Applicant did not originally request any waivers from the Board's Subdivision Rules and Regulations. On December 14, 2020, counsel for the Applicant submitted a request for a waiver from Section 3.6.6(a), which limits dead-end roads to 1,000 feet.

Decision

Section 3.9 of the Subdivision Rules and Regulations provides:

“The Board may disapprove a plan if it determines that access roads to the subdivision are inadequate to carry the volume of traffic reasonably anticipated. The applicant shall show to the satisfaction of the Board that the roads and ways to and from the proposed subdivision shall be adequate to provide emergency medial, fire and police protection as well as safe travel and adequate circulation for the project volume of traffic including, but not limited to a way or way having sufficient width, suitable grades and adequate construction to provide for vehicular traffic. . . .”

Under this Section, the burden is on the applicant to establish the adequacy and safety of access over roadways to the proposed lot(s). In this case the Applicant has not met this burden. First, the distance along Sawyer Grove Road (a dead-end road) from Hughes Road to Tashmuit Lane is approximately 1,050 feet; Tashmuit Lane (a dead-end road) is 488.1 feet, for a total of 1,538.11 feet of continuous dead-end road. Section 3.6.6(a) limits dead end roads to 1,000 feet. The distance proposed is more than 500 feet (or 50%) longer than the maximum allowed. This is presumptively inadequate under the Rules and Regulations, and the applicant, while requesting a waiver of this limit, has failed to provide justification for it.

Second, and only adding to this presumption, Sawyer Grove Road currently serves almost twice the number of lots originally intended in the approval of the Helen Sawyer Subdivision. Although imperfectly executed, it was the clear intent of the Board at that time for Sawyer Grove Road to serve only the seventeen lots of that Subdivision. The constructive grant of the Cyoski Subdivision Plan resulted in Laura's Way, and an additional fifteen lots served by Sawyer Grove Road. The addition of these lots to those served by Sawyer Grove Road did not arise from a conclusion by the Board that Sawyer Grove Road could provide safe and sufficient access to the new subdivision while continuing to serve the existing Helen Sawyer Subdivision. Rather, the addition of these lots arose from procedural error. The result is that Sawyer Grove Road, as it exists today, is overburdened.

Third, the proposed access over Tashmuit Lane is inconsistent with the buffer requirements of Rule 3.6.7 and incompatible with the established use of two existing Sawyer Grove Road properties. Rule 3.6.7 provides that "[p]roposed subdivision roads shall be separated from subdivision boundaries by a screening buffer of twenty-five (25) feet width or more." As proposed, Tashmuit Lane runs 488.11 feet between 13 Sawyer Grove Road and 15 Sawyer Grove Road, from Sawyer Grove to Lot 2A. This configuration does not allow for compliance with Rule 3.6.7. Tashmuit Lane is 40' wide and cannot accommodate the buffers required under the Rule to protect abutting property owners. The Applicant sought no relief from this Rule, nor provided any basis for its waiver.

In sum, the Applicant failed to establish that Sawyer Grove Road and the proposed Tashmuit Lane provides adequate and safe access to the lots as depicted on the Definitive Subdivision Plan; failed to establish a proper basis for waiver of the 1,000 limit on dead-end roads contained in Rule 3.6.6(a); and failed to establish that the Plan otherwise complies with the Subdivision Rules and Regulations. Accordingly, the Board denies the requested waiver and denies approval of the Definitive Subdivision Plan.

Board Vote

On a motion by Mr. Kiernan and seconded by Mr. Herridge, the Board voted 6-0 to deny the requested waiver and to deny approval of the Definitive Subdivision Plan pursuant to G.L. c. 41, s. 81T and s. 81U and Section 2.5 of the Town of Truro Rules and Regulations.

Anne Greenbaum, Chair

Date

Received, Office of the Town Clerk:

Signature

Date

DRAFT

HOUSING INITIATIVE BASIC DATA

December 28, 2020

There are 3 sets of data included in this packet. This is data helping us look at the question of what the current housing stock in Truro is.

- The first set of data is simply how many units of the different types of housing we have – single family, condo, multi-family etc.
- The next 2 sets of data look at specific types of housing
 - Set 2 uses the Housing Production Plan projections passed in 2017 to look at the current number of Affordable Housing units in Truro. Thanks to Kevin Grunwald, Chair of the Truro Housing Authority for reviewing & commenting on the updated numbers.
 - Set 3 looks at the year-round condo numbers

Each set of data generates follow-up questions, reactions & comments. The Planning Board needs to here from Truro residents to help us as we move forward in this process. Please share your thoughts either with brief comments during the public comment period at a Planning Board meeting or via email to the Board Chair Anne Greenbaum agreenbaum@truro-ma.gov

1. Existing Housing Stock in Truro – according to Truro Assessors Data
2. Current data on Truro Housing Production Plan (HPP) projections from July 2017. The HPP only looks at Affordable housing/
 - HPP only looks at units counting toward Subsidized Housing Inventory (SHI) which is used to measure a community's stock of deed-restricted Affordable Housing, for the purposes of M.G.L. Chapter 40B, the Comprehensive Permit Law. While housing developed under Chapter 40B is eligible for inclusion on the inventory, many other types of housing also qualify to count toward a community's affordable housing stock.
 - HPP does not include unsubsidized housing that is currently inexpensive or private market housing rented to low- and moderate-income households through housing vouchers. (MAPC – Metropolitan Area Planning Council)
<https://www.mapc.org/resource-library/whatishpp/>
 - Definitions of SHI & Affordable Housing on next page
3. Condominium Associations approved for Year-Round use – does NOT indicate number of units actually approved for year-round use

DEFINITIONS

Subsidized Housing Inventory (SHI)

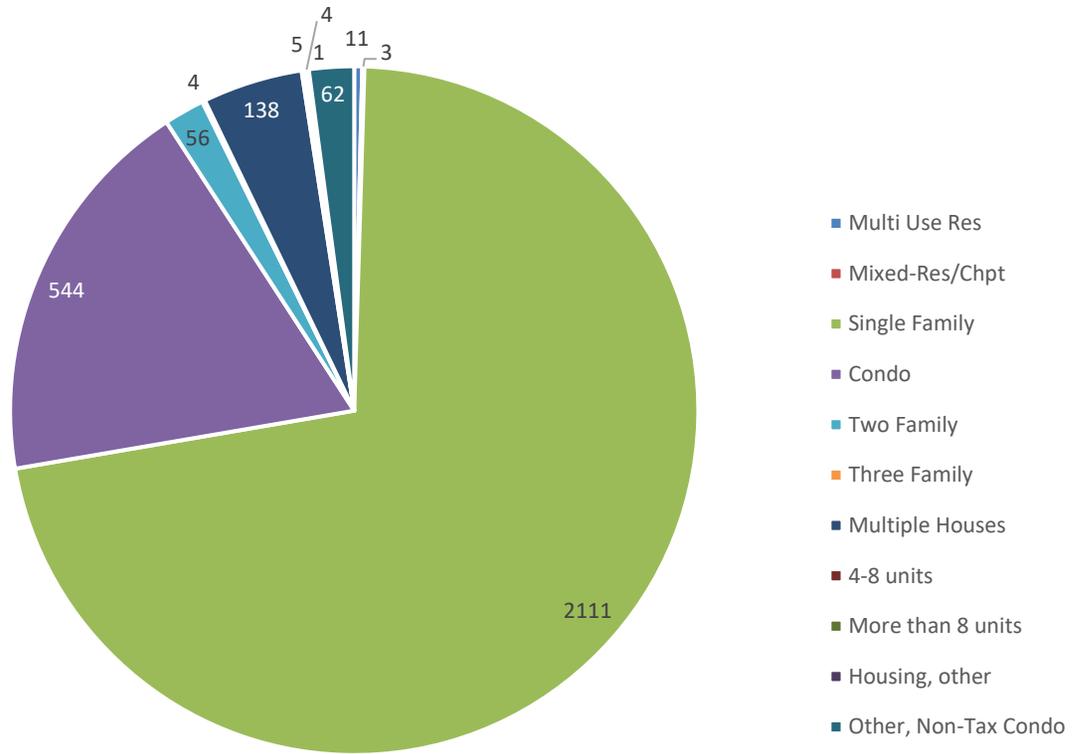
- used to measure each community's stock of deed-restricted Affordable Housing for the purposes of M.G.L. Chapter 40B. The SHI is maintained by the Department of Housing and Community Development. Importantly, the SHI
- does not include unsubsidized housing that is currently inexpensive or private market housing rented to low- and moderate-income households through housing vouchers. (MAPC – Metropolitan Area Planning Council) <https://www.mapc.org/resource-library/whatishpp/>)
- The SHI for each community is compared to the total housing stock (as counted in the latest US Census) to determine if the community is eligible for "Safe Harbor"
- Safe Harbor - Under Chapter 40B, a community can enforce their zoning and deny a developer a Comprehensive Permit by claiming "Safe Harbor." Communities have three mechanisms for asserting Safe Harbor.
 - 10% on the Subsidized Housing Inventory (SHI). If more than 10% of a community's total housing stock is deed-restricted Affordable Housing.
 - HPP Certification. If a municipality has a locally adopted and state approved HPP and is making measurable progress toward reaching the state goal of 10% Affordable Housing by producing Affordable Housing units at an annual rate of 0.5% or 1% of its year-round housing units (Safe Harbor is for a 1-year or 2-year period, respectively).
 - 5% General Land Area Minimum (GLAM). If 1.5% of the municipality's total area zoned for residential, commercial, or industrial use is dedicated to deed-restricted Affordable Housing.

Definitions

- A home is considered affordable when it costs 30% or less of a household's income and is deed-restricted to income-eligible low- or moderate-income residents. Affordable Housing has restrictions to preserve affordability for decades or in perpetuity, ensuring that income-eligible households can stay in their communities without having to make difficult financial decisions, such as skipping meals or doctor's appointments to have enough money to pay for their homes. Without deed restrictions, housing costs can go up as markets rise, making homes that were once inexpensive now costly. Deed-restricted Affordable Housing protects communities from skyrocketing costs and related displacement.

TRURO HOUSING STOCK - December 2020

StateClassDesc	Totals
Multi Use Res	11
Mixed-Res/Chpt	3
Single Family	2111
Condo	544
Two Family	56
Three Family	4
Multiple Houses	138
4-8 units	5
More than 8 units	4
Housing, other	1
Other, Non-Tax Condo	62



QUESTIONS/COMMENTS/CONCERNS

	From HPP Year						Current Status - Dec 2020 Year 3?					
	1	2	3	4	5	TOTALS	Built	Building	In Permitting	Delayed	No Action	TOTALS HAPPENING
Development of housing on town owned land – Cloverleaf Property				12		12			39			39
Development of housing on town owned land – Town Hall Hill					8	8	0	0	0		8	0
Small Scattered Site – non profits such as Highland Affordable Housing, Habitat for Humanity, as well as private developers												0
Habitat For Humanity of Cape Cod – 143 Rt 6 and 181 Rt 6	3		3			6	3			3		3
Highland Affordable Housing	2					2	2					2
Preserve existing affordability – monitor resales to ensure affordability remains/continue with CDBG rehabilitation programs												0
Units created through affordable zoning provisions and local incentives		5	3			8						?
TOTAL						36						44
Production – Units Not Eligible for Subsidized Housing Inventory							Current Status - Dec 2020 Year 3?					
AADUs and ADUs	3	2	2	2	2	11	8					8

QUESTIONS/REACTIONS/CONCERNS

YEAR ROUND CONDO DATA							
				TOTAL IN ASSOCIATION		ACTUAL UNITS APPROVED FOR YEAR ROUND	
APPROVAL DATE	CONDO ASSOC NAME	ADDRESS	NEIGHBORHOOD	UNITS	BDRMS	UNITS	BDRMS
1/22 & 11/19/2019	Stones Throw	6 Shore Rd	N. Truro	29	35		
4/23/19	Crow's Nest	496 Shore Rd	Beach Point	22	42		
7/23/19	Colonial Village	630 Shore Rd.	Beach Point	10		2	4
11/19/19	Sunrise Cottages	497 Shore Rd.	Beach Point	7	14		
7/28/20	Sea Haven	510 Shore Rd	Beach Point	4	8	3	6
11/10/20	Sutton Place	503 & 522 Shore Rd	Beach Point	29	47		
				101	146		

QUESTIONS/REACTIONS/CONCERNS