



Central Council of the Tlingit & Haida Indian Tribes of Alaska
Tidal Network
Physical Address: PO Box 25500 • Juneau, Alaska 99802
Mailing Address: PO Box 25500 • Juneau, Alaska 99802

March 28, 2025

Amy Ainslie
Planning & Community Development Director
City and Borough of Sitka Alaska
100 Lincoln Street, Sitka, AK 99835

RE: VAR 25-01 – Tidal Network Response to Public Comments of Zoning Variance Request

Ms. Ainslie,

The Central Council of the Tlingit and Haida Indian Tribes of Alaska (Tlingit & Haida) kindly requests approval of our zoning variance request (VAR 25-01) for the proposed communications tower at 116 Nancy Court. This project satisfies all legal and planning requirements, directly addresses a critical public need, aligns with federal infrastructure funding mandates, and supports a long-term sustainable model for broadband access in Sitka.

Tidal Network is a division of Tlingit & Haida, a federally recognized tribal government, whose primary mission is to provide fixed wireless broadband services to unserved and underserved communities in Southeast Alaska. As part of this, Tidal Network's first objective is to construct wireless infrastructure via the development of communications towers throughout Southeast Alaska which includes our proposed communications tower at 116 Nancy Court. In addition to this tower's ability to deliver fixed wireless broadband to Sitka residents, it can support public safety and governmental communication systems, including potential collocation for VHF services, tsunami warning systems, city emergency radios, and other public and private telecommunications carriers.

Further, as set forth by the City of Sitka Planning Office (City), we want to reiterate our principal use of the land as that of a public facility in that we are a private utility serving the public. Per the City's opinion, the Sitka Planning Commission (Commissions) may only rule on the variance based on aesthetic concerns. The Commission may not make findings based on environmental or health concerns and cannot expressly prohibit our provision of service so long as we adequately address visual impacts and demonstrate that our site is the least intrusive option. Therefore, our goal with this letter is to alleviate concerns raised regarding visual impacts and demonstrate why the property at 116 Nancy Court is the least intrusive option for our proposed communications tower.



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Coverage Gap

As illustrated in **Exhibit 1**, our coverage maps and radio frequency (RF) engineering analysis demonstrate a significant wireless service gap in Tidal Network's Sitka area, particularly in the region addressed by this proposed tower. These service deficiencies impact essential sectors such as healthcare, education, and economic development.

The project will provide dependable service using licensed 2.5 GHz spectrum attained from Sitka Tribe of Alaska and help close the digital divide in alignment with the objectives of the Tribal Broadband Connectivity Program (TBCP). This spectrum is a vital tribal asset that Tidal Network is actively working to defend and retain within tribal control, ensuring its long-term use for the benefit of tribal and non-tribal residents alike. Tidal Networks' services are available to ALL citizens.

Site Selection Process and Least Intrusive Means

Throughout Sitka, our goal is to build (5) communications towers demarked by (5) unique RF zones (**Exhibit 1**). To find suitable site locations for tower development, Tidal Network conducted an extensive site search and community-wide outreach of Sitka, contacting approximately 129 property owners via mailed letters and met with the City Planning Office on numerous occasions to understand the jurisdictional parameters for tower development. A sample engagement letter can be seen in **Exhibit 2**, and a due diligence package can be seen in **Exhibit 3**.

Of the 129 initial sites, most sites were reviewed and eliminated based on financial, environmental, or coverage constraints. One of the biggest constraints was that very few landowners were not willing to subdivide or outright sell their land.

Tidal Network's business plan and federal grant requirements for sustainability mandate ownership of infrastructure and land. TBCP funds can be used for capital expenditures (CapEx). Recurring lease payments, which are categorized as operational expenses (OpEx) are not allowed longer than the life of the grant. Leasing land or tower space is incompatible with both grant compliance and the financial sustainability of the network. Further, the ability to control and monetize the infrastructure over time is central to Tidal Network's goal of achieving self-sufficiency while delivering affordable broadband to all citizens. Therefore, potential properties, that were suitable otherwise, were not viable options for Tidal Network.

Of the few properties that were affordable and owned by willing to sale landowners, even fewer were suitable from a signal propagation and coverage perspective. For example, of the 129 investigated properties, Tidal Network currently has (2) active properties that meet their coverage, financial, and development criteria.



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Concerning the subject property in question at 116 Nancy Court, it falls within our Zone 2. It represents a site that not only meets all our coverage objectives but was also the only piece of vacant, real estate for sale within Zone 2 when going under contract. Other options explored include the existing macro site located on Raptor Way. Further discussion on this option is discussed later in the letter. Additionally, of the commercial and industrial zoned lands, no engaged landowners had land they were willing to sale or subdivide. Only leasing options were discussed. Any other properties that may have been suitable were either not for sale, not vacant, or inadequate for coverage. Therefore, the 116 Nancy Court property was our only option within this Zone.

Commentary on Macro Collocation – Raptor Way

It is noted that there is an existing SBA Tower located on Raptor Way which is nearby to 116 Nancy Court. Tidal Network investigated and engaged SBA in collocating on the asset. Ultimately, it was determined to be infeasible due to inadequate height, inability to meet coverage objectives, and sustainability concerns. Further, as mentioned earlier in this letter, any leasing structure is incompatible with Tidal Network's model. That said, even if this stipulation didn't exist for us, a 30-year term lease on this tower would be more than \$1.3 million, which is more than the cost of ownership and development at 116 Nancy Court. Moreover, leased tower space can result in other carriers auctioning down Tidal's equipment position, reducing or eliminating performance.

Mediating Visual Impacts

Tidal Network will make efforts to mediate visual impacts of the proposed communications tower located at 116 Nancy Court. First off, the site is on high ground, located in the far NE corner of the area, and naturally shielded by existing terrain. No residences reside uphill of the prospective communications tower and no current viewshed of the waterfront would be tampered if it were constructed. Moreover, part of the land acquisition of 116 Nancy Court also includes the lot identified as 112 Nancy Court. Tidal Network has no plans to develop 112 Nancy to ensure a natural, landscape buffer remains between current residences in the area.

In addition to naturally produced mediation to visual impacts, Tidal Networks plans on designing the tower to mediate visual impacts. First off, Tidal Network is moving forward with a monopole type tower to limit visual impacts. Additionally, the tower will be painted brown in color to better blend into the existing landscape. Further, Tidal Network will paint their tower mounted antenna and equipment, including the mount itself, brown. Future, prospective tenants of the



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tower will be required to comply with this standard, as well. Concerning, the equipment area on the ground, though the natural terrain should shield any viewshed, Tidal Network is prepared to install their compound fencing with black or brown privacy slats to provide an extra visual barrier. Last, we have also moved the tower north fifteen feet relative to the position reviewed at the March Planning Commission meeting to assist in getting further out of any potential viewshed. This adjustment can be seen in **Exhibit 4**.

A full photo simulation package can be found in **Exhibit 5**. It should be noted that (2) additional views are added to the package from the previous submittal. One view is from the vantage of a parking lot at the intersection of Sawmill Creek Road and Price Street. It is Tidal Network's opinion that the tower from this vantage produces a near negligible visual impact. The other view is from the southernly intersection of Eliason Loop and Vitskari Street. This simulation was provided to include a view from the center of the residential area. The tower was not observed to be visible from this vantage point.

Acknowledgement of Other Concerns

Though it has been established that the Commission may only rule on visual impacts, Tidal Network would like to reiterate to the Public that the prospective tower will be built in compliance with all authorities having jurisdiction on the matter including the FCC, FAA, NTIA and Sitka Building Office. It is not Tidal Network's goal to build wireless infrastructure that is not engineered appropriately, considerate of environmental impacts, or that ultimately adversely affects public safety.

Summary

In summary, the 116 Nancy Court site has been selected with intention to support the long-term sustainability of broadband and cellular access in Sitka, resolve a current coverage gap, while minimizing visual and aesthetic impacts. The 116 Nancy court location meets the unique financial, legal, and coverage criteria Tidal Network must meet. We believe our letter and associated exhibits sufficiently demonstrate our intentionality in limiting visual impacts and explain why the property at 116 Nancy Court is the least intrusive option for our proposed communications tower in Zone 2. With this, we respectfully request approval of the zoning variance, VAR 25-01.

Respectfully,

Richard. J Peterson
President – The Central Council of the Tlingit & Haida Indian Tribes of Alaska



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Exhibit 1 – Coverage Maps

SITKA, ALASKA

TIDAL NETWORK BROADBAND DEPLOYMENT COVERAGE AREA OVERVIEW

PROJECT OVERVIEW

PROJECT DESCRIPTION	TIDAL NETWORK BROADBAND DEPLOYMENT COVERAGE AREA OVERVIEW
NETWORK OPERATOR	TIDAL NETWORK
LOCATION	SITKA, AK
POPULATION ESTIMATE (TOTAL)	8,490 (Approximate)
TLINGIT & HAIDA CITIZEN ESTIMATE	1350
ESTIMATED HOUSEHOLDS	4025

DESIGN NARRATIVE

PHASE 1 & 2 RF DESIGN COMPLETE WITH PURPOSE OF GENERATING BASELINE DATA SET USED FOR NETWORK OPERATOR AND SITE ACQUISITION (SAQ) COORDINATION, IN ADDITION TO THE EVALUATION OF EXISTING CELLULAR INFRASTRUCTURE PERFORMANCE.

CURRENT DESIGN FOCUSES EVALUATION ON HIGH LEVEL COVERAGE OBJECTIVES & PERFORMANCE EVALUATION PER COVERAGE ZONE.

TOTAL RF ZONES

- ZONES TOTAL: 7
- ZONES 1,2, & 4 ARE AREA OF FOCUS FOR PHASE 2 RF DESIGN
- ZONES 6 & 7 EXCLUDED FROM DAY-01 COVERAGE AREA OBJECTIVES.
- ZONES 3 & 5 HAVE LIMITED VIABILITY FOR SITE ACQUISITION.

TOTAL EXISTING CELL SITES

- CELLULAR MACRO SITES (TOWER): 3
- CELLULAR MACRO SITES (ROOFTOP): 1
- CELLULAR SMALL CELL SITES: APPROX (5) LOCATIONS.

EXPECTED TOTAL SITES

5 SITES TOTAL

FREQUENCY BAND (PRIMARY)	N41: BRS / 2.5GHz
BAND 41 SPECTRUM (OVERALL)	2496 - 2690 MHz
LICENSED BAND 41 SPECTRUM (IN DESIGN)	ARFCN 508400 - 80MHz
TECHNOLOGY IN DESIGN	5G NR
RADIO MODEL & HIGH LEVEL SPECS	4T4R / 40W PER TRX (160W total) / 256 QAM
RADIO CHANNEL BANDWIDTH & COMPLIANCE	Band-41 (DL/UL: 2496 - 2690MHz) / 3GPP NR TDD / FCC

RECEPTION EQUIPMENT (FWA Receiver)

BEC 8232: 4x4 MIMO DL / 2x2 MIMO UL
RECEIVER GAIN: 10dBI
Class 2: TX (26 dBm +2/-3 dB)

RF PREDICTION MODEL

FORSK ATOLL ASTER PREDICTION MODULE

GEODATA DESCRIPTION

HIGH RESOLUTION 2M GEODATA WITH RASTER AND VECTOR TERRAIN FEATURES

RF PREDICTION HEIGHT

15' AGL OR ROOFTOP - PREDICTION INCLUDES RECEIVER ANTENNA GAIN.



SITKA – DIGITAL ELEVATION MODEL



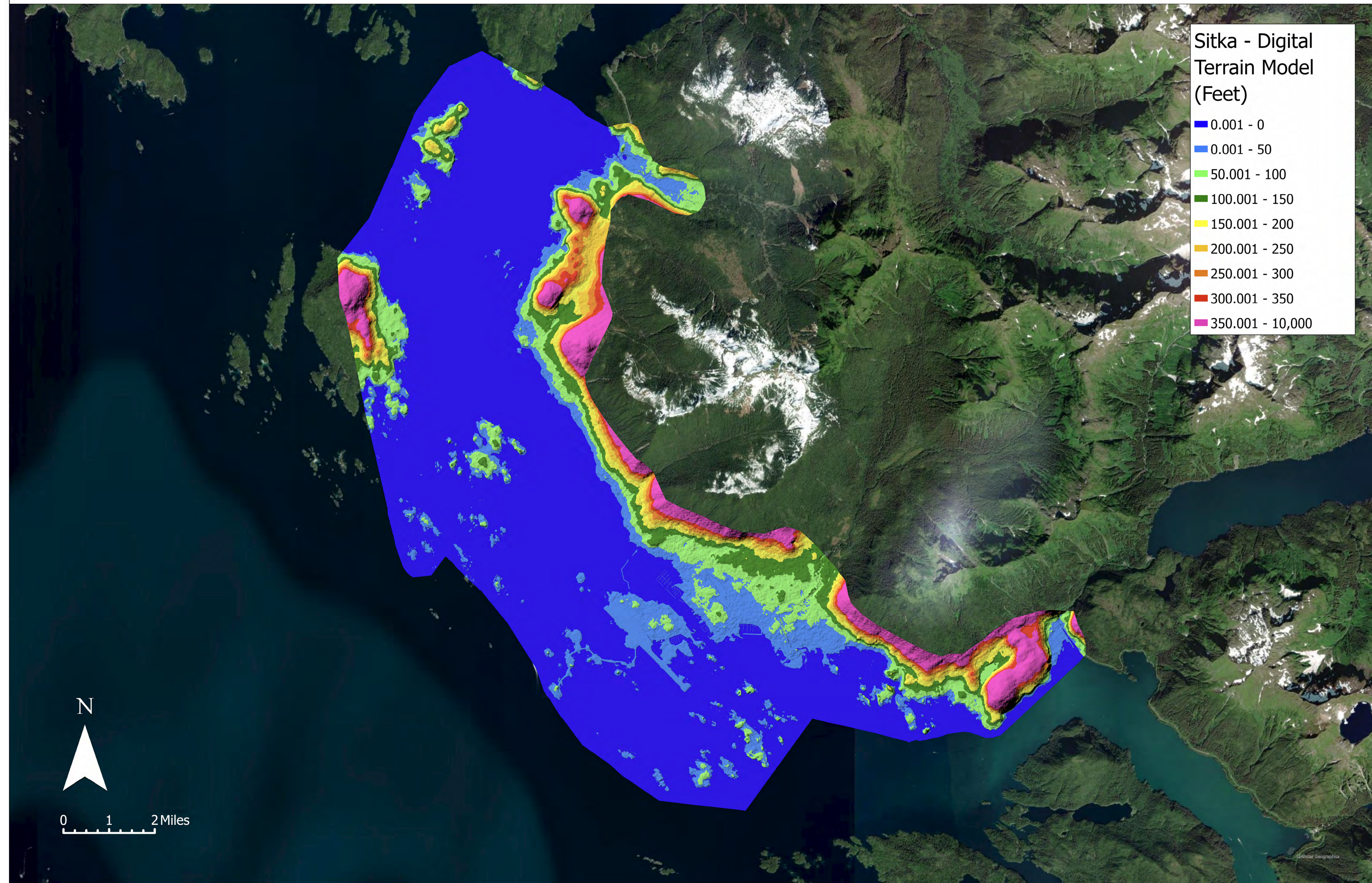
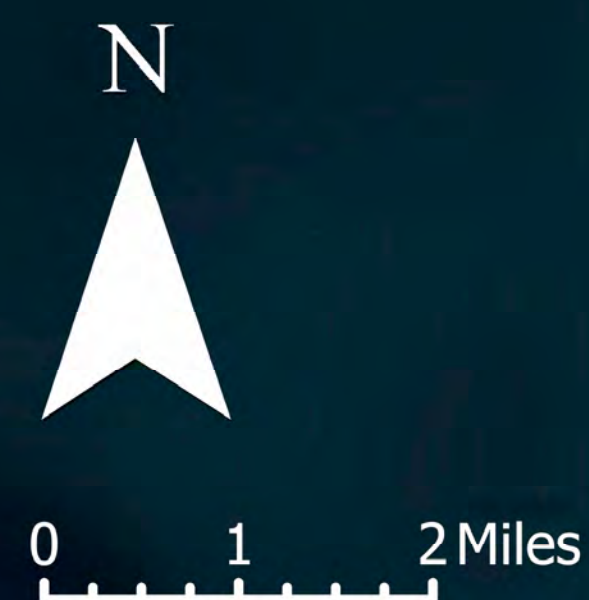
PROJECT LOCATION

SHEET TITLE

SHEET NUMBER

Sitka - Digital
Terrain Model
(Feet)

- 0.001 - 0
- 0.001 - 50
- 50.001 - 100
- 100.001 - 150
- 150.001 - 200
- 200.001 - 250
- 250.001 - 300
- 300.001 - 350
- 350.001 - 10,000



SITKA - CLUTTER DATA / LAND USE CLASSIFICATIONS



PROJECT LOCATION

SHEET TITLE

SHEET NUMBER

Sitka - Clutter

- Sea
- Inland Water
- Barren
- Low Vegetation
- Forest
- Village
- Residential with Trees
- Dense Residential
- Urban
- High Buildings
- Comm-Indus
- Airport
- Open in Urban



SITKA - CLUTTER HEIGHTS



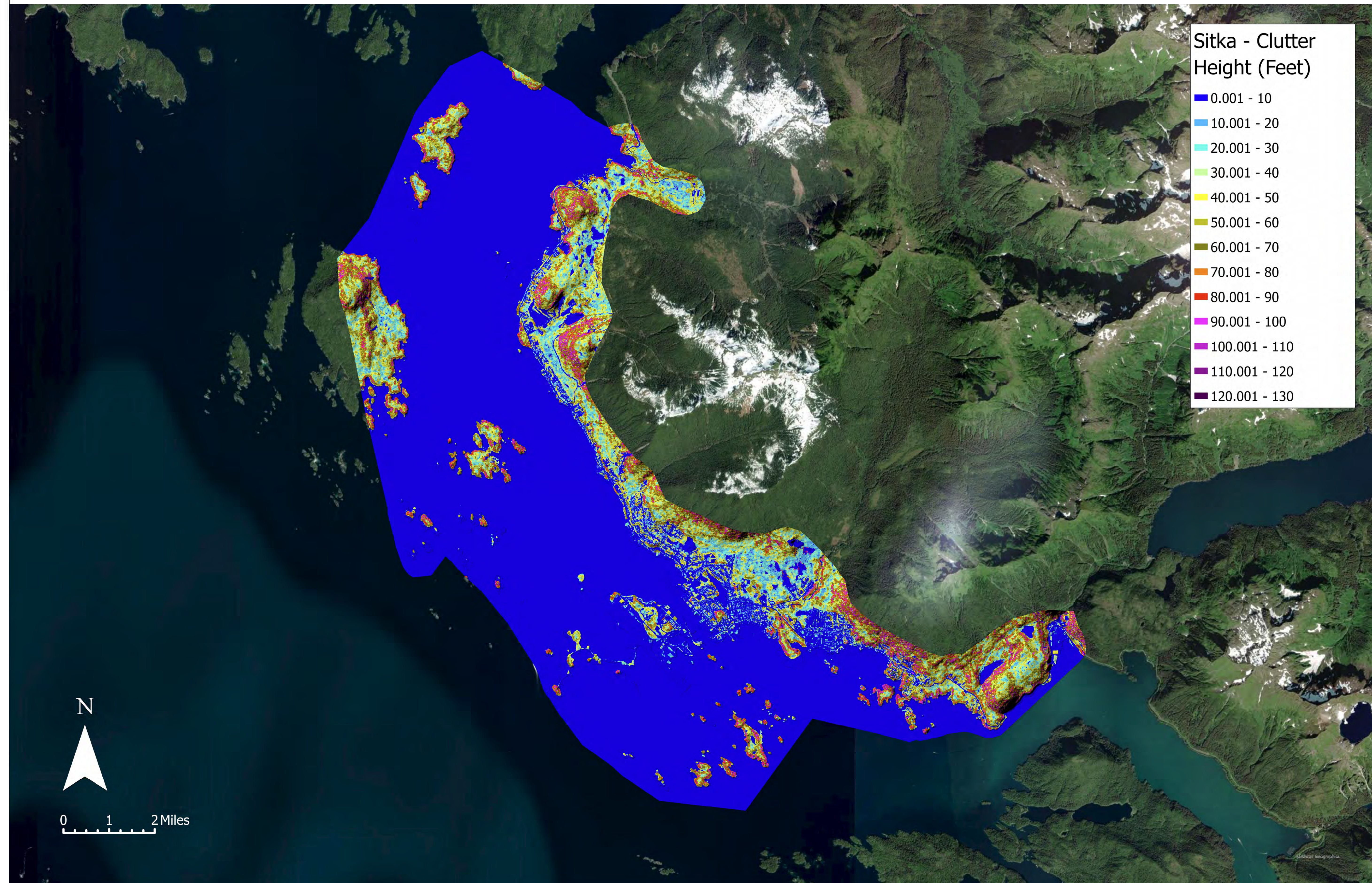
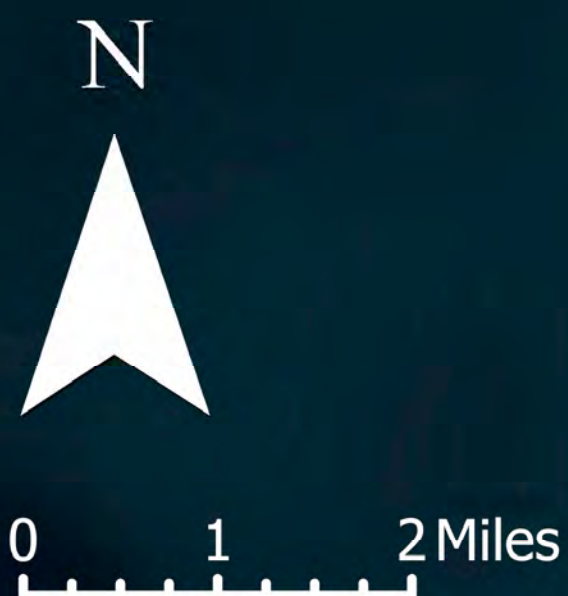
PROJECT LOCATION

SHEET TITLE

SHEET NUMBER

Sitka - Clutter
Height (Feet)

- 0.001 - 10
- 10.001 - 20
- 20.001 - 30
- 30.001 - 40
- 40.001 - 50
- 50.001 - 60
- 60.001 - 70
- 70.001 - 80
- 80.001 - 90
- 90.001 - 100
- 100.001 - 110
- 110.001 - 120
- 120.001 - 130



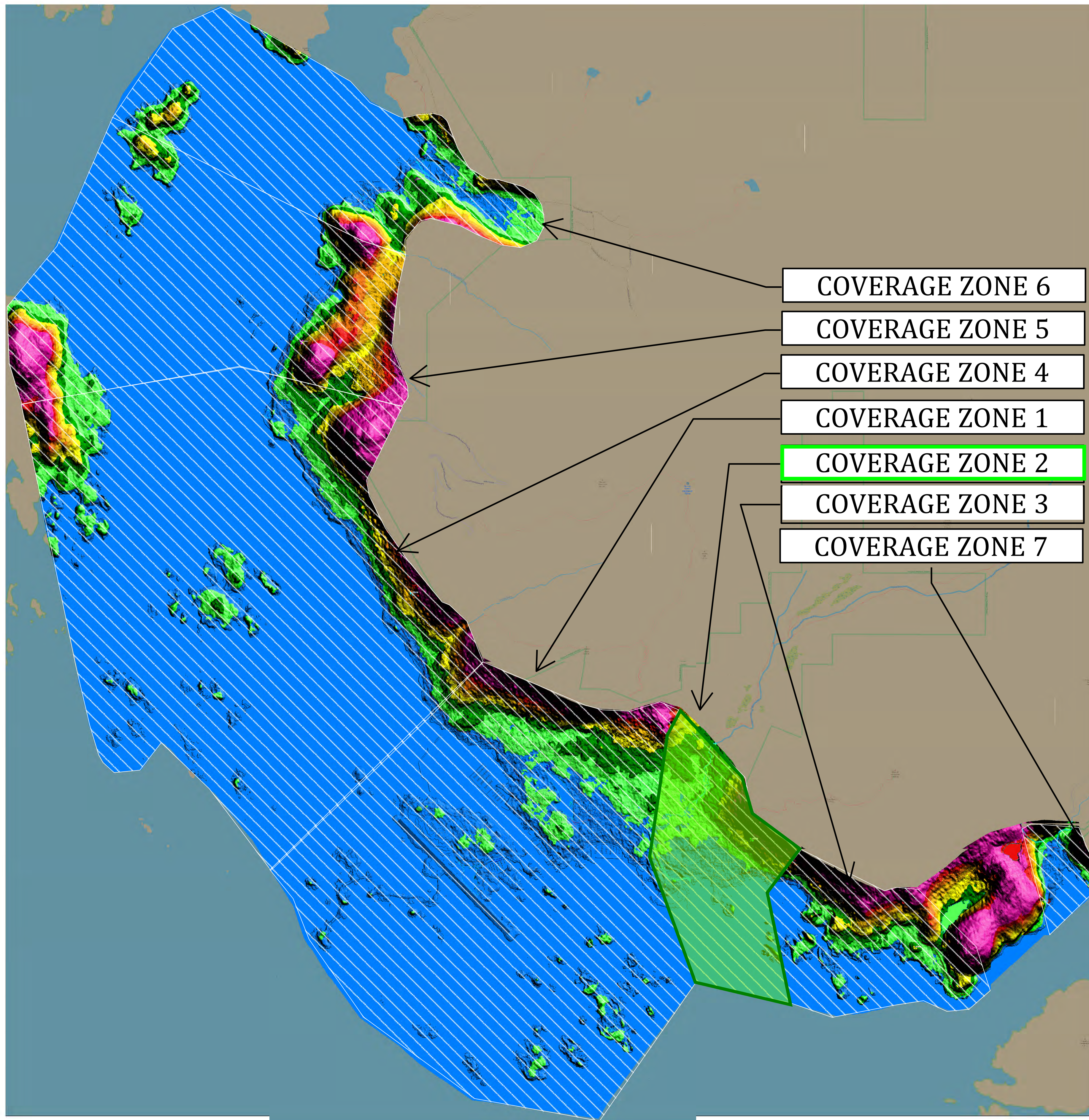
SITKA – TIDAL NETWORK COVERAGE ZONES



PROJECT LOCATION

SHEET TITLE

SHEET NUMBER



COVERAGE ZONE	OVERVIEW	Description
Zone 1	<ul style="list-style-type: none"> Population Center Downtown Business District Population Center Schools 	<ul style="list-style-type: none"> Zone is determined via population density and geological boundaries to Zone 4. New Build locations in Zone 1 has potential coverage for overlap into other zones. (Ideal configuration for network capacity and overlapping coverage to support and future handoff capabilities)
Zone 2	<ul style="list-style-type: none"> Buisness District Residential Population 	<ul style="list-style-type: none"> Zone is determined via population density and geological boundaries to Zone 3. New Build locations in Zone 2 has potential for overlap into other zones. (Ideal configuration for network capacity and overlapping coverage to support and future handoff capabilities)
Zone 3	Primarily Residential	<ul style="list-style-type: none"> Zone is determined in response to geological boundaries and RF propegation / link budget. Zone (5) may have small overlap with Zone 4.
Zone 4	Primarily Residential	<ul style="list-style-type: none"> Zone is determined in response to geological boundaries and RF propegation / link budget. Zone (4) generally will not support RF propegation from other zones.
Zone 5	<ul style="list-style-type: none"> Light Residential Cruise Ship Port 	<ul style="list-style-type: none"> Zone is determined in response to geological boundaries. Zone (5) does not support RF propegation from other zones.
Zone 6	<ul style="list-style-type: none"> No residential. Public Land / Campgrounds 	<ul style="list-style-type: none"> Zone is determined in response geological boundaries. Zone (6) does not support RF propegation from other zones.
Zone 7	<ul style="list-style-type: none"> Industrial Only - High population of Seasonal workers 	<ul style="list-style-type: none"> Zone is determined in response geological boundaries. Zone (7) does not support RF propegation from other zones.

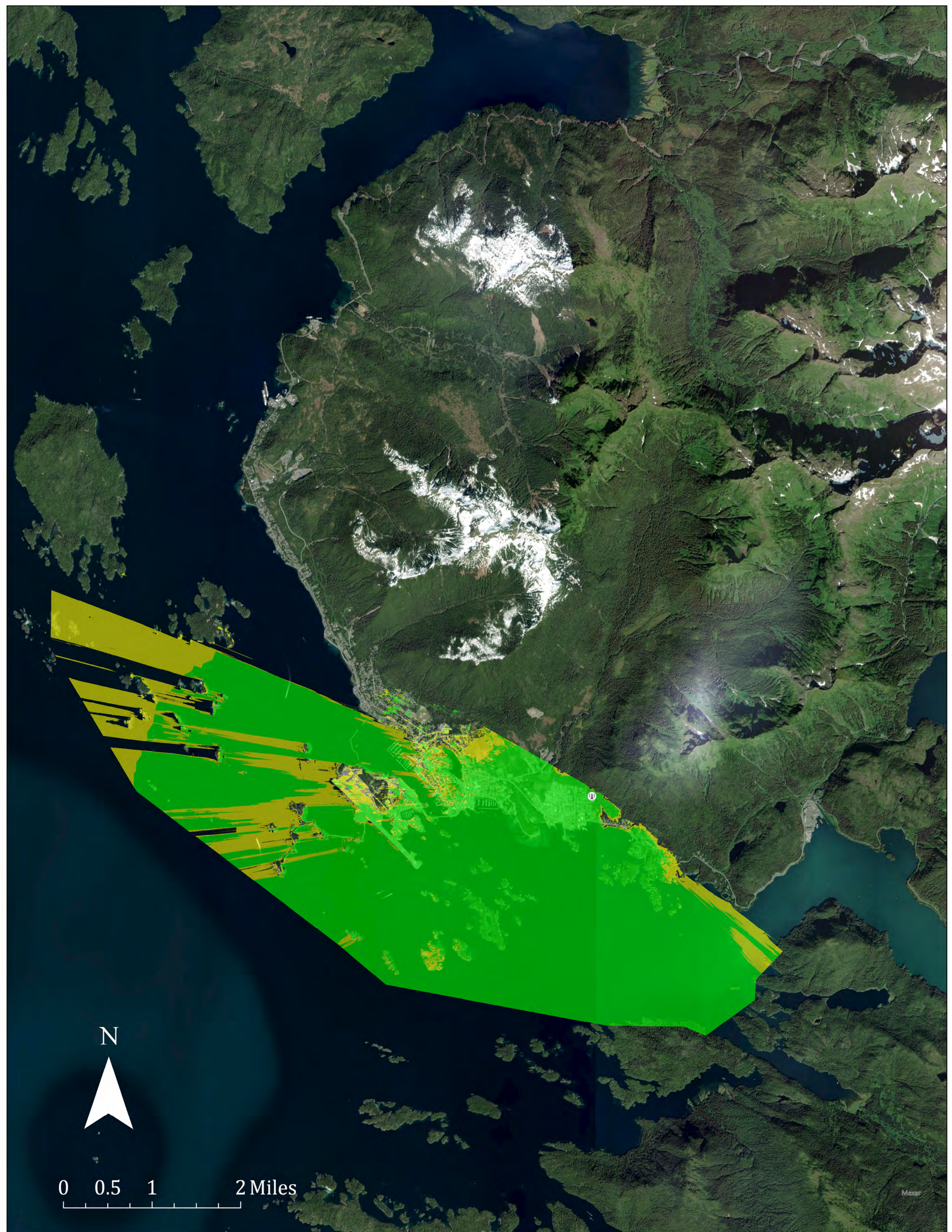
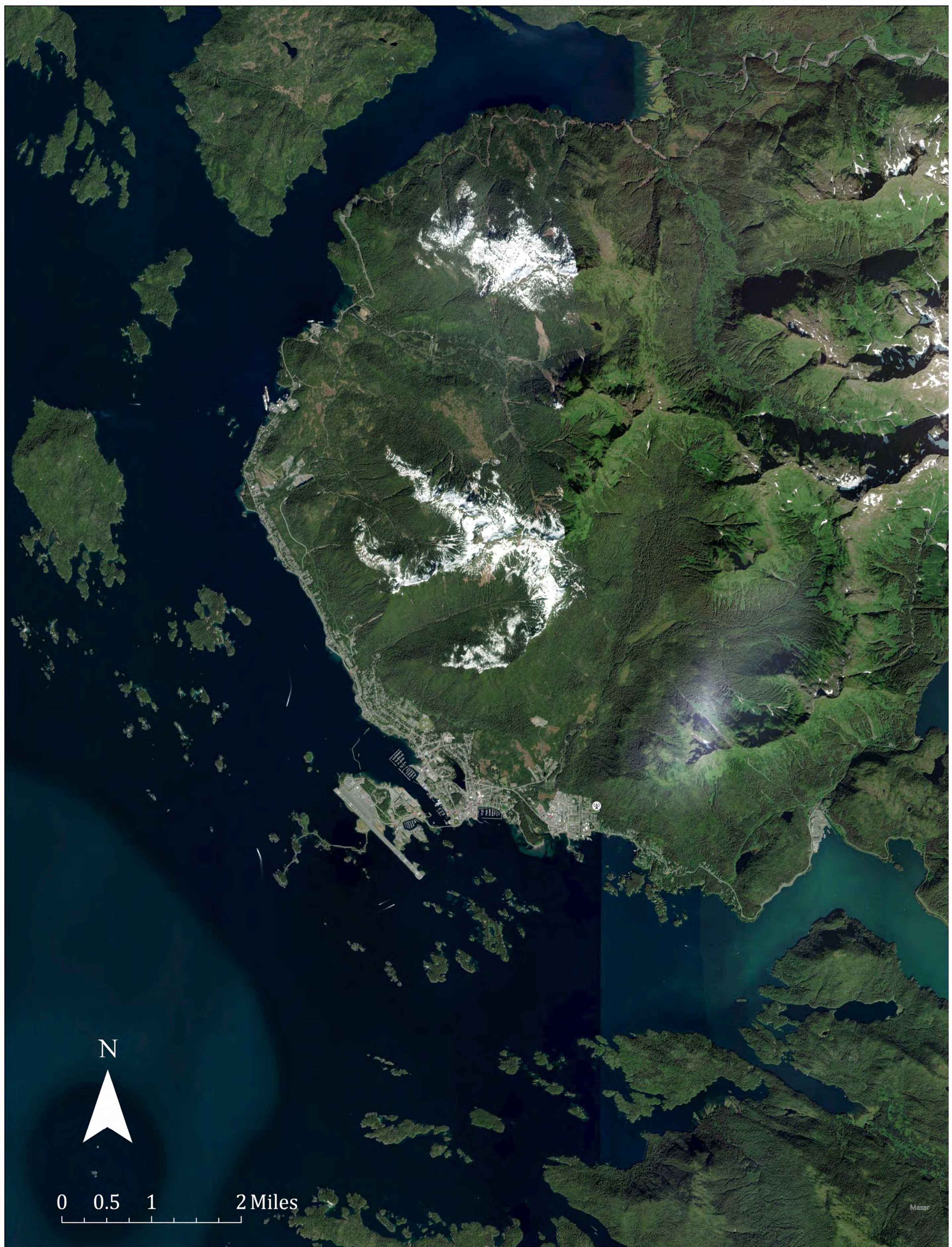
TIDAL NETWORK COVERAGE RANGE SIMULATION @ 116 NANCY COURT



PROJECT LOCATION

SHEET TITLE

SHEET NUMBER

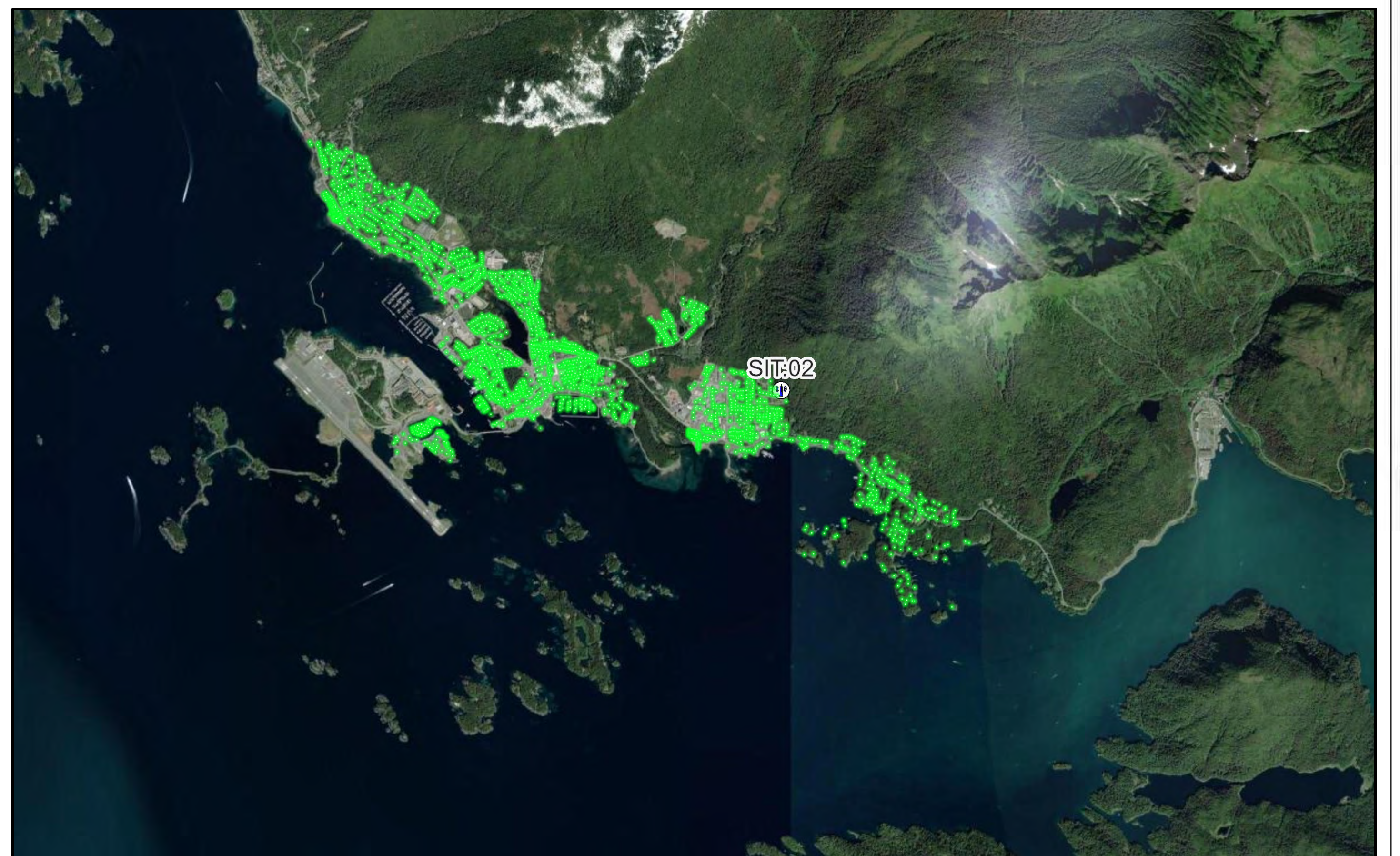
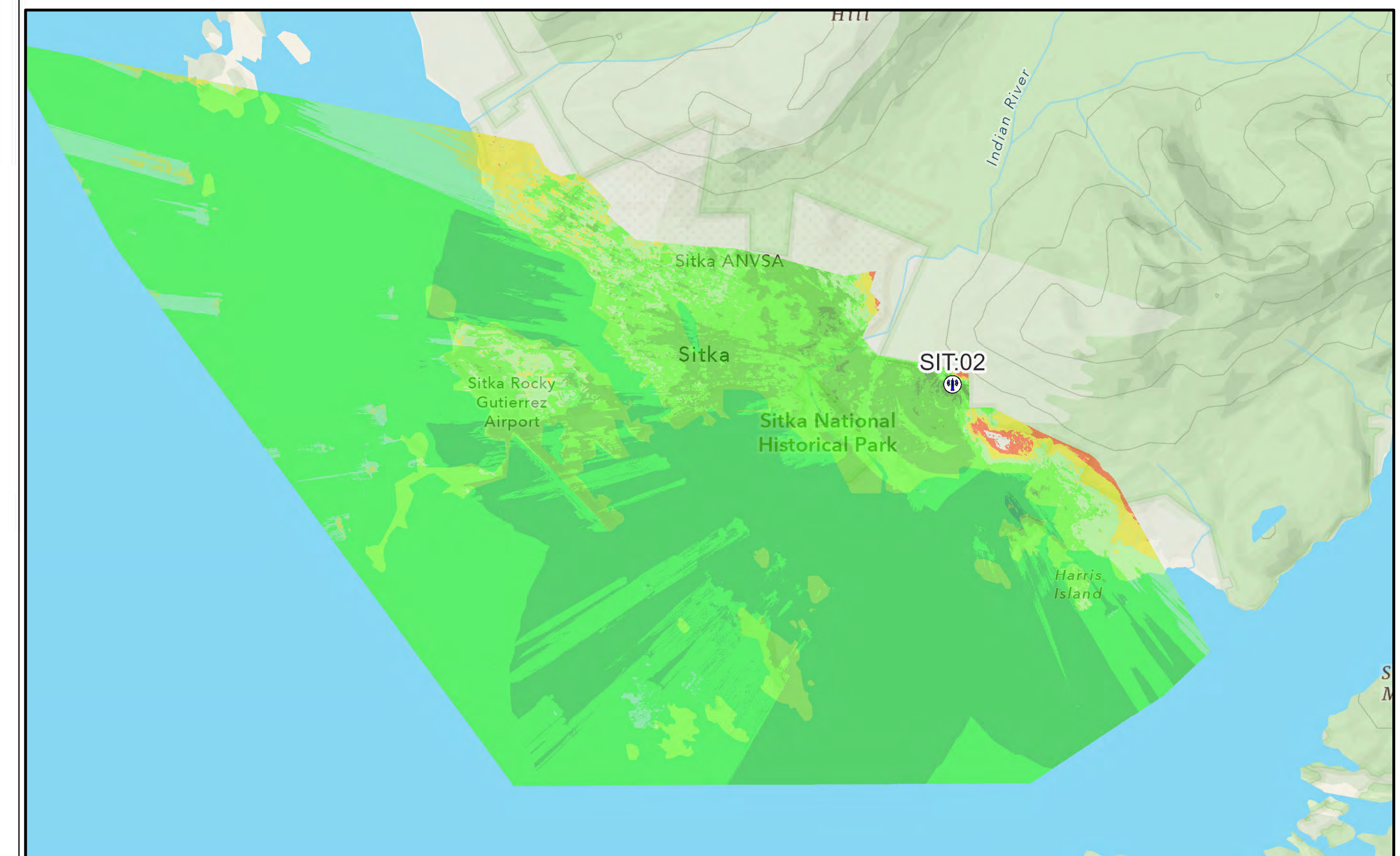


116 NANCY COURT COVERAGE AREA STUDY – BEST PERFORMING SITE LOCATION IN SITKA

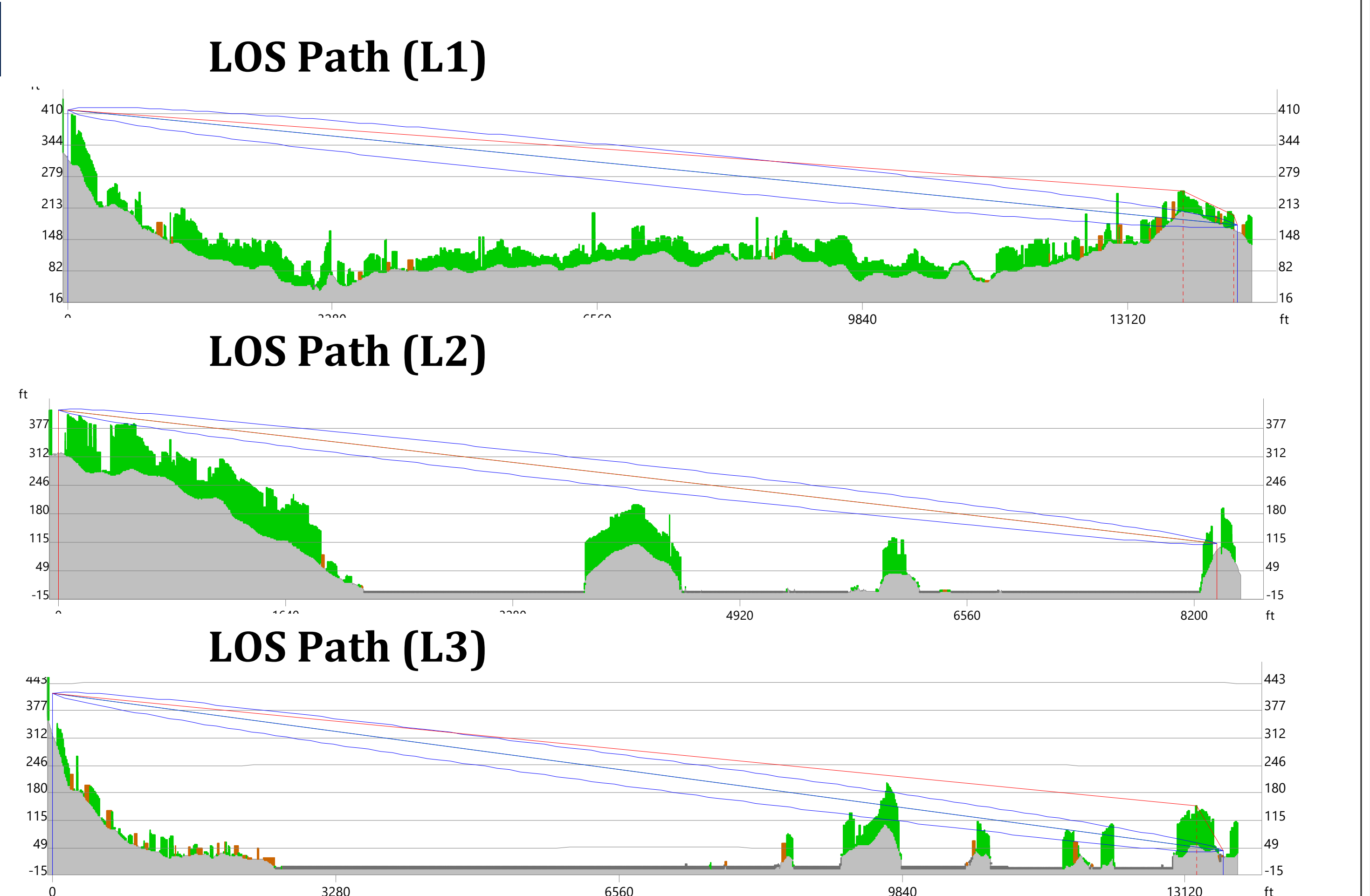


COVERAGE AREA STUDY – SITKA OUTDOOR CONNECTIVITY

COVERAGE AREA STUDY – SITKA INDOOR CONNECTIVITY

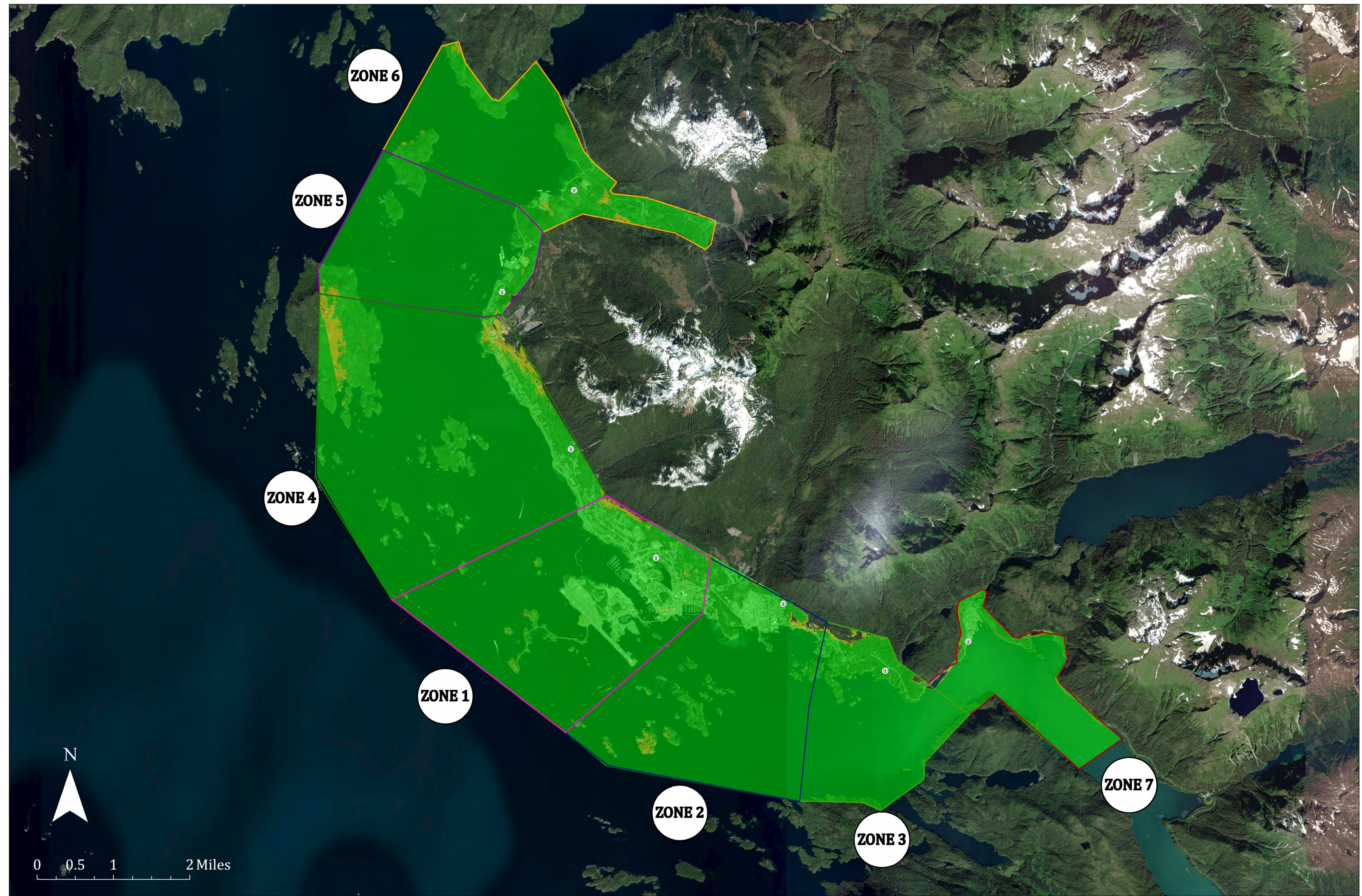


COVERAGE AREA STUDY – LINE OF SIGHT (LOS) NEAR CELL EDGE



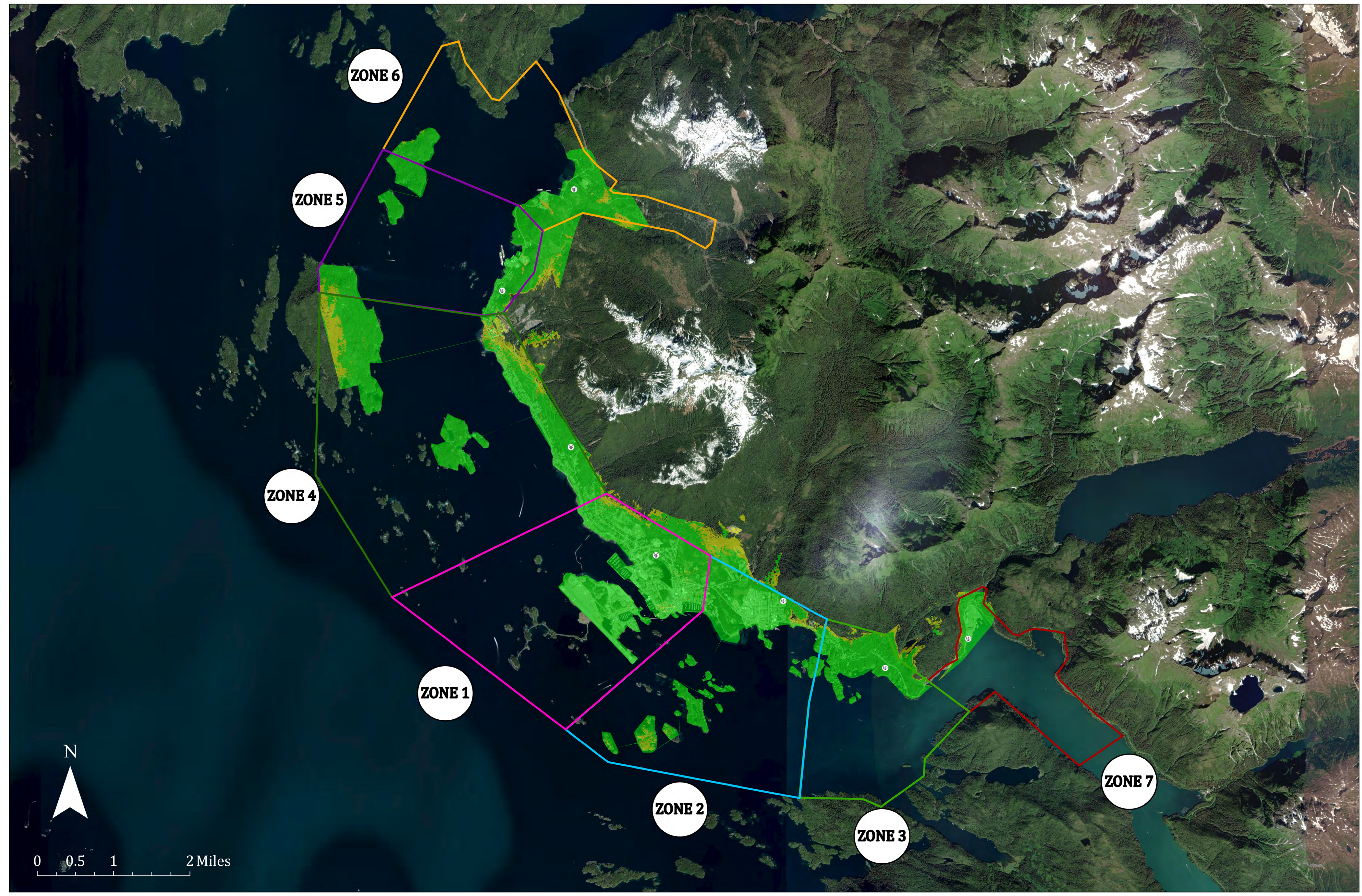
SHEET NUMBER

TIDAL NETWORK RF COVERAGE: ALL ZONES ACTIVE – LAND AND MARINE COVERAGE SIMULATION



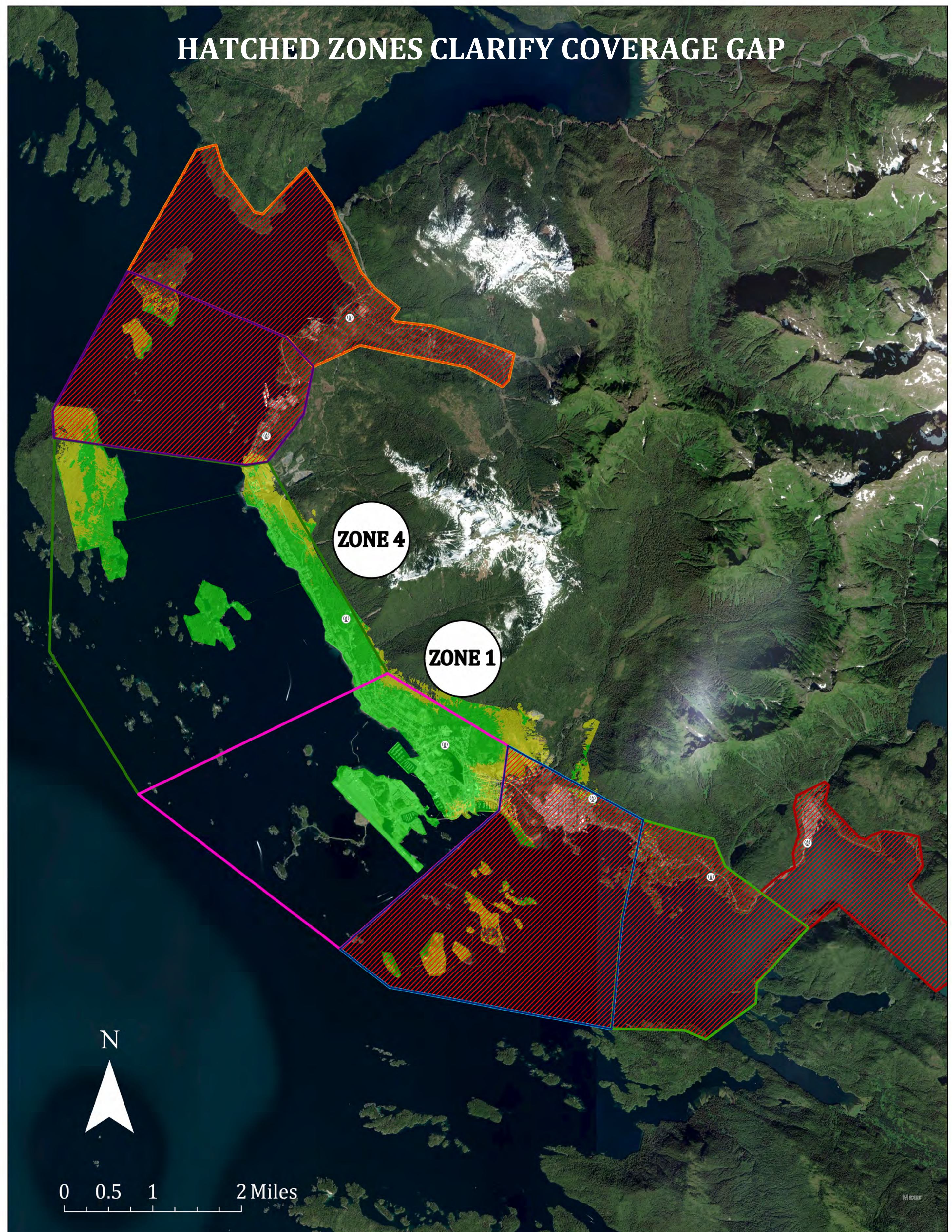
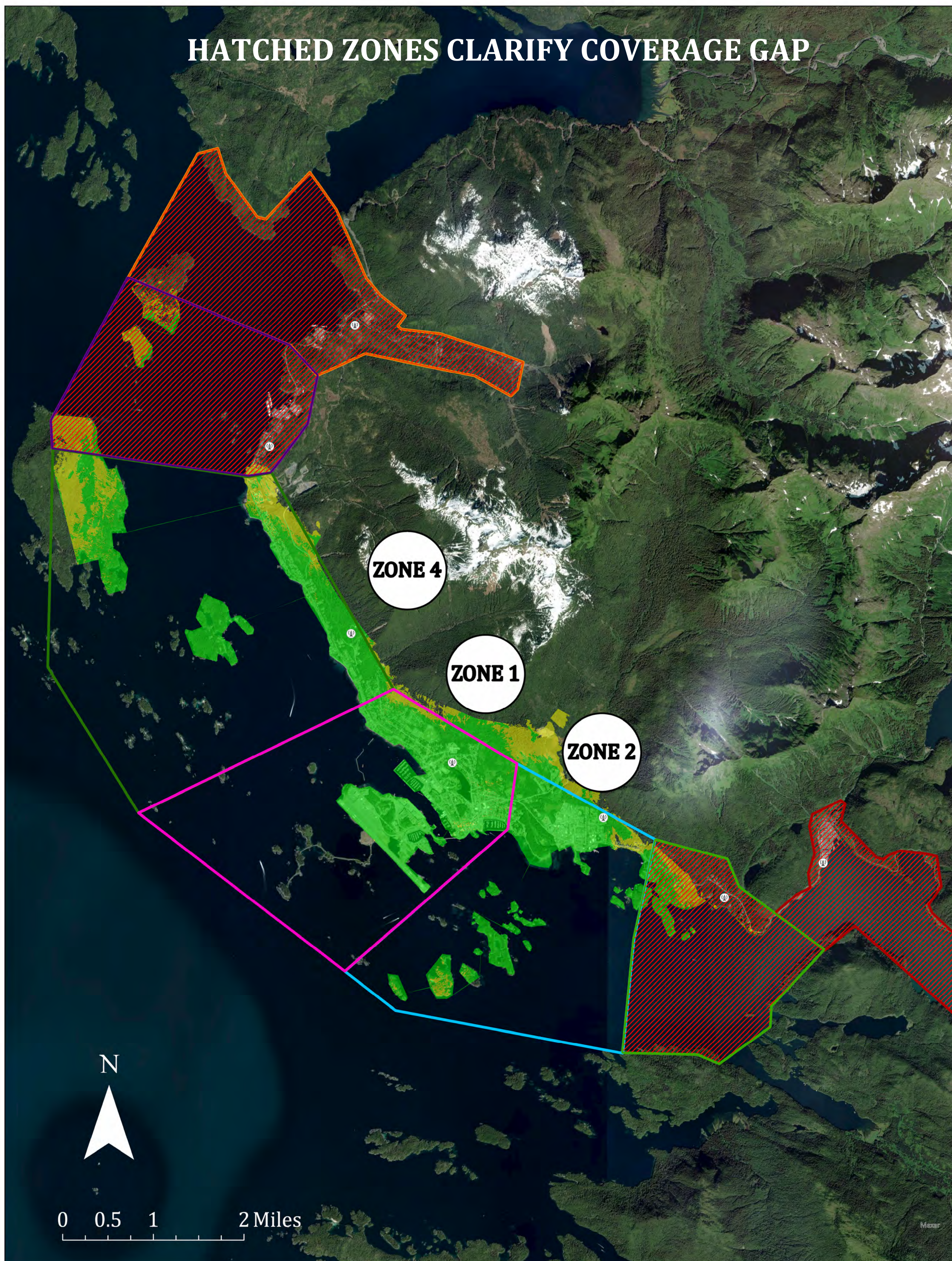
SHEET NUMBER

TIDAL NETWORK RF COVERAGE: ALL ZONES ACTIVE - COVERAGE SIMULATION



SHEET NUMBER

TIDAL NETWORK RF COVERAGE: PRIORITY AREAS & COVERAGE GAPS





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Exhibit 2 – Sample Engagement Letter



MONTH DAY, YEAR

NAME

STREET

CITY STATE ZIP

RE: Proposed Broadband Cellular Tower

To Property Owners Name,

Tidal Network is a broadband service provider committed to providing affordable high-speed internet to underserved communities throughout Southeast Alaska.

On behalf of our client, Tlingit & Haida Central Council Indian Tribes of Alaska's broadband division Tidal Network, we are seeking a location to build a new cellular tower for improved broadband connectivity in [City], Alaska. Your property, Parcel ID XXXXXXXXX is within our desired location.

If you are interested in discussing compensation for the acquisition of your property, please contact me at trevor.newton@kimley-horn.com or (470) 299-7052.

Your consideration is greatly appreciated!

Sincerely,
KIMLEY-HORN AND ASSOCIATES, INC.
Trevor Newton



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Exhibit 3 – Due Diligence Report

Zoning Site Scrub of:



Prepared For:

T I D A L  N E T W O R K



Kimley-Horn Job Number: 017619000

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 City and Borough of Sitka General Application
 City and Borough of Sitka Variance Application

INTRODUCTION

At the request of Pierson Wireless and Tidal Network (Collectively the “Client”), Kimley-Horn and Associates, Inc. performed a zoning site scrub of the City and Borough of Sitka Alaska to understand the various zoning and permitting processes, constraints, and timelines that may affect development of a cell tower. The following document outlines the findings based on conversations with Kim Davis (Planner 1, City and Borough of Sitka Planning Department) and reading and interpretation of the City and Borough of Sitka General Code.

SUMMARY OF FINDINGS

- Section 22.20.055 provides City and Borough of Sitka’s standard on Communications antennas and Towers.
 - Communication antennas and towers are permitted accessory uses within the following zoning districts as long as the tower height does not exceed the allowable height within the specific zoning district.
 - R-1 – Maximum Height of 35’
 - R-2 MH – Maximum Height of 35’
 - R-1 LDMH – Maximum Height of 35’
 - R-2 – Maximum Height of 40’
 - R-2 MHP – Maximum Height of 40’
 - Towers exceeding the allowable height for that specific zoning district will require a variance. This variance would qualify as a “Variance involving major structures or expansions” (Section 22.30.160(D)2) which has an application fee of \$75 + sales tax.
 - Towers to be located on a parcel zoned outside the above listed zoning districts will require owner permission and application for a Conditional Use Permit as well as the same above-mentioned height variance.
- Conditional Use Permit – Section 22.24.010
 - Towers not in the above stated zoning districts will likely need a Conditional Use Permit.
 - Argument could be made based on Table 22.16.015-6 that a tower falls within “Communication Services” as a business use, which would expand the permitted zones.
 - General Process
 - Table 22.24.010-1 Details the requirements as follows:
 - Applicant to be willing and able to communicate with other agencies deemed necessary for certain portions of the project review.
 - Provide legal description of all properties involved in the project
 - Provide statement of objectives
 - Provide detailed description of all aspects of the project (i.e. Land Use, Building Types, parking/traffic information)
 - Provide drawings showing site grading and drainage plan as well as industry standard site plan requirements
 - Provide preliminary subdivision plat (if required)
 - Provide answers and clarification to comments and questions submitted as response from planning review
 - Issuance of conditional use permit by zoning administrator.
 - Permit expires after two (2) year if no construction has occurred.
- This permitting process will trigger a thorough review by the planning commission followed by a scheduled public hearing. City and Borough of Sitka will send an announcement of the planned

tower by mail to all property owners within 300' of the subject parcel at least 2 weeks prior to the meeting.

- Issuance of conditional use permit by zoning administrator.
 - Permit expires after two (2) year if no construction has occurred.
- Building and Electrical Permits will be last step before construction can commence.

TIMELINES

- Conditional Use Permit and Variance – 3 months
 - Public Hearing – 60 days
 - Planning Commission Decision – 30 days
- Building Permits – 2-4 weeks
- **Total – 8 months**
 - Assuming approvals granted at each step on first attempt.
 - Assuming high end of Sitka provided timelines

MISCELLANEOUS

- Construction Documents (CDs) and survey will be needed for CUP.
 - Shortened Zoning Drawings (ZDs) may do the trick for these steps.
- Additional fees may be incurred in the variance process to be determined during review
- Kim Davis – Planner 1 – City and Borough of Sitka
 - Address: 100 Lincoln Street, Sitka AK 99835
 - Phone: (907) 747-1814
 - Email: kim.davis@cityofsitka.org