

Appendix G: Scenery Report

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KATLIAN BAY ROAD

Scenery Resource Report

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Prepared for:

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& Public Facilities**

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Table of Contents

1	INTRODUCTION.....	1
1.1	Introduction.....	1
1.2	Location.....	1
1.3	Purpose and Need	2
1.4	Proposed Action	2
1.5	Project Area and Analysis Area.....	5
1.6	Scenery Resources	5
2	METHODOLOGY.....	9
2.1	Regulatory and Management Framework	9
3	INVENTORY OF AFFECTED ENVIRONMENT.....	15
3.1	Landscape Character Types	15
3.2	Inherent Scenic Attractiveness Classes	15
3.3	Distance Zones	16
3.4	Existing Scenic Integrity	16
3.5	Visual Absorption Capacity	16
4	MANAGEMENT OBJECTIVES	19
4.1	Land Use Designations and Scenic Integrity Objectives	19
4.2	Other Scenery-related Goals and Objectives	21
	Design Activities	21
	Non-Conforming Exceptions	22
5	SCENERY EFFECTS.....	23
5.1	Effects under the Proposed Action.....	23
	Scenic Integrity Effects.....	23
	Anticipated Scenery Effects	23
5.2	Effects under the No Action Alternative.....	24
6	AVOIDANCE, MINIMIZATION, AND MITIGATION.....	25
7	REFERENCES.....	27

Tables

Table 1: Visual Priority Travel Routes and Use Areas for the Katlian Bay Road Project .. 12
Table 2: Inherent Scenic Attractiveness within the Katlian Bay Road Project..... 15
Table 3: Distance Zones: Katlian Bay Road Project..... 16
Table 4: Existing Scenic Integrity within the Katlian Bay Road Project 16
Table 5: Visual Absorption Capacity within the Katlian Bay Road Project 17
Table 6: Land Use Designations Related to Distance Zones within the Katlian Bay Road Project 19
Table 7: Adopted Scenic Integrity Objectives for Each Distance Zone Based on Land Use Designation 20
Table 8: Scenic Integrity Objective Classification for the Katlian Bay Road Project..... 20
Table 9: Forest Service Scenic Integrity Objective Classifications along the Katlian Bay Road Project..... 21

Figures

Figure 1: Katlian Bay Project Location 3
Figure 2: Katlian Bay Road Proposed Day Use Area 7

Appendices

- Appendix A: SCENERY RESOURCE MAPS
- Appendix B: VISUALIZATIONS

List of Acronyms

DOT&PF	Alaska Department of Transportation and Public Facilities
Forest Plan	Tongass Land and Resource Management Plan
Forest Service	United States Forest Service
GIS	Geographic Information System
LUD	Land use designation
mm	Millimeter
MP	Milepost
No.	Number
OHV	Off-highway vehicle
Shee Atiká	Shee Atiká, Incorporated
SLR	Single-lens reflex
SMS	Scenery Management System
TLRMP	Tongass Land and Resource Management Plan
USFS	United States Forest Service
VCU	Value comparison unit
VPR	Visual priority route

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1 INTRODUCTION

1.1 Introduction

The Alaska Department of Transportation and Public Facilities (DOT&PF) proposes a state-funded project (Katlian Bay Road) for construction of a new road on Baranof Island in the vicinity of Katlian Bay. The Katlian Bay Road Project (Proposed Action) would consist of approximately 8.8 miles of new single-lane, aggregate-surfaced road with 3 bridge crossings, and 0.6 miles of off-highway vehicle (OHV) trail. The road would begin at the northern end of Halibut Point Road (near Starrigavan Recreation Area), extend east along the south shoreline of Katlian Bay, cross the Katlian River, and terminate about 2 miles east of the Katlian Bay estuary.

Temporary construction access would include using a portion of a National Forest System (NFS) Road No. 7579 and NFS Road No. 75797 within Shee Atiká, Incorporated (Shee Atiká) lands, use of the Shee Atiká log transfer facility (LTF) in Katlian Bay, and construction of a bridge over Coxe River on a new spur to NFS Road No. 7579.

This scenery resource report was prepared to support the DOT&PF in its preparation of the Katlian Bay Road environmental assessment. It describes and analyzes the scenery resources and expected modifications by the Proposed Action on NFS-managed lands.

1.2 Location

The Katlian Bay Road Project would traverse lands owned and/or managed by the State of Alaska, NFS, Shee Atiká (surface), and Sealaska Corporation (subsurface) (Figure 1). The project is located in Township 55 South, Range 63 East, Section 2 and 3; Township 54 South, Range 63 East, Sections 25, 26, 34, and 35; and Township 54 South, Range 64 East, Sections 21, 22, 28, 29, and 30. Starting at the end of Halibut Point Road, which is 7 miles northeast of Sitka, the Katlian Bay Road Project crosses three land ownerships as described below:

- Milepost (MP) 0.00 to 1.23: State of Alaska
- MP 1.23 to 3.65: NFS, Tongass National Forest, Sitka Ranger District
- MP 3.65 to 9.20: Shee Atiká (surface) and Sealaska (subsurface).

Within NFS lands, the road corridor is located in a right-of-way easement as identified in a June 15, 2005 Memorandum of Understanding that was signed by the U.S. Forest Service (referred to as Forest Service or USFS), Alaska Department of Natural Resources, and State of Alaska (Forest Service et al. 2005). The right-of-way easement is for 55 years and is renewable. Its intent is to include those rights necessary for DOT&PF to conduct engineering and all other activities necessary or incident to highway and utility planning, design, environmental review, construction, operation, and maintenance.

The project area encompasses those lands and activities within 0.5 mile of the Proposed Action. In addition, existing logging roads (NFS Road No. 7579 and NFS Road No. 75797) located on Shee Atiká lands would be used for construction access.

1.3 Purpose and Need

The City and Borough of Sitka has a road system that currently provides limited passenger vehicle access for recreation and subsistence activities. Sitka has a shortage of developable material sources for future projects on its existing road system. The purpose of the proposed Katlian Bay Road Project is to provide:

- Increased recreational and subsistence opportunities on Baranof Island within NFS lands of the Tongass National Forest, Sitka Ranger District
- Access to Native Corporation (Shee Atiká) and Sealaska lands
- Opportunity for development of new material sources on state, federal, and Native Corporation lands.

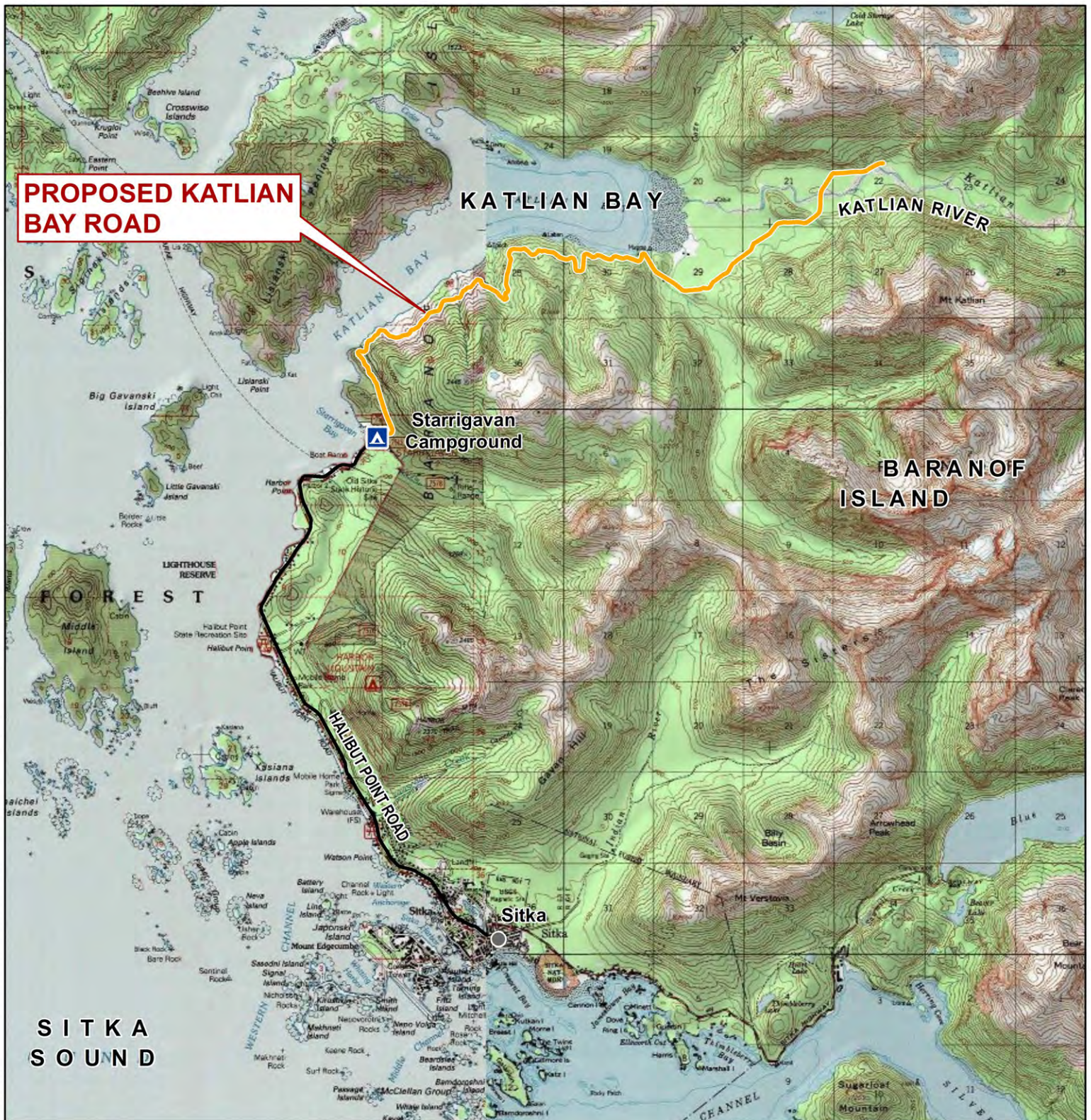
1.4 Proposed Action

The Proposed Action was selected to avoid steep and unstable slopes, marine areas with high ecological values, wetlands, and expansive river crossings. The proposed road alignment was developed based on field data collected during 2014 and 2015 by engineers and scientists.

As planned, the Proposed Action would include:

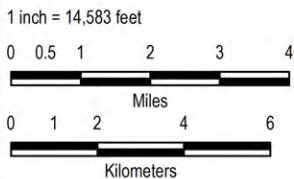
- 8.8 miles of a new aggregate-surfaced, single-lane road starting from the end of Halibut Point Road and terminating within the Katlian Bay watershed
- A speed limit of 25 miles per hour and 2-foot shoulders
- Use of existing logging roads and log transfer facility for temporary construction access and connection to OHV trails
- Intervisible road turnouts
- Scenic overlooks of Katlian Bay
- Intended permanent use, although winter maintenance is not planned (K. Karpstein, pers. comm., DOT&PF, Design Group Chief).

The new road would terminate with a day use area and OHV trail connection to NFS Trail No. 3175797 (Figure 2). The Proposed Action would terminate at the border between Shee Atiká and NFS lands. This day use area would include a turnaround, trailhead parking, and picnic area with a fire ring.



PROPOSED KATLIAN BAY ROAD

**FIGURE 1
KATLIAN BAY
PROJECT LOCATION**



- Populated Place
- ▲ Campground
- Existing Road
- Proposed Katlian Bay Road



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The project would cross primarily forested habitat. From initial field studies, the following road components would be required:

- 248 corrugated aluminum pipe (CAP) culverts ranging in diameter from 2 to 12 feet.
- 5 Structural Pipe Arches (SPA) culverts with spans ranging from 6 feet to 26 feet.
- 14 Structural Plate Pipe Arch (SPPA) culverts with spans ranging from 6 feet 8 inches to 19 feet 6 inches.
- 3 bridges consisting of pre-engineered structures with spans of approximately 66, 120, and 150 feet.

The project is planned for a 2-year construction period beginning in 2018.

1.5 Project Area and Analysis Area

Although the project area for the Proposed Action is defined as a 0.5-mile width on either side of the road corridor, this scenery report encompasses a wider analysis area to account for scenery impacts to NFS lands beyond the project area corridor. The Tongass Land and Resource Management Plan (Forest Plan) divides Tongass National Forest into unique study areas called value comparison units (VCUs) (Forest Service 2008). The Proposed Action passes through VCUs 3110, 3120, and 3130, and the analysis area for scenery resources is limited to NFS lands within these three VCUs as shown in Appendix A, Sheet 1. Total analysis area acreage is 54,005 acres. This scenery analysis does not apply to land owned or managed by landowners within these VCUs.

1.6 Scenery Resources

This scenery resources report verifies existing inventories and classifications, and analyzes the scenery resources and expected modifications by the Proposed Action on NFS lands. The report is organized as follows:

- **Section 2. Methodology:** Description of the methodology used for analysis and inventory of scenery resources.
- **Section 3. Inventory of Affected Environment (Existing Conditions):** Description of project area, landscape character types, inherent scenic attractive classes, visual priority routes, distance zones, key scenery view points, existing scenic integrity, site productivity, and visual absorption capacity for the project area. Where appropriate, the inventories and classifications were updated to reflect existing conditions.
- **Section 4. Management Objectives:** Description of desired landscape character, scenic integrity objectives, and other scenery-related goals and objectives.
- **Section 5. Scenery Effects:** Scenery effects under the Proposed Action and the No Action Alternative.
- **Section 6. Avoidance, Minimization, and Mitigation:** Description of avoidance and minimization measures to avoid scenery impacts along with recommended mitigation and scenery protection measures.

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**KATLIAN BAY ROAD
CONSTRUCTION**

FIGURE 2 - Katlian Bay
Road day use area



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2 METHODOLOGY

2.1 Regulatory and Management Framework

The Forest Service manages NFS lands that occur within and adjacent to the project area for scenery. The scenery standards and guidelines established in the Forest Plan and Forest Service Handbook for Scenery Management (Forest Service 1995) apply to all portions of the Proposed Action that occur on NFS land, as well as areas within NFS lands that may be directly or indirectly impacted by the Proposed Action.

The Forest Service Scenery Management System (SMS) (Forest Service 1995) establishes the overall framework for orderly inventory, analysis, and management of scenery on lands administered by the Forest Service. The Tongass National Forest implements the SMS as part of the forest planning process to determine the extent, magnitude, and duration of development impacts. The Forest Plan lists established scenery guidelines, goals, and objectives known as scenic integrity objectives to provide acceptable scenic modifications for human-based activities on NFS lands (Forest Service 1995). These visual objectives also establish a timeline of 1 year for the modifications to meet the scenery guidelines. In some instances mitigation measures may be required to meet the scenic integrity objectives.

Scenic Integrity Objectives

A major component of the SMS is the scenic integrity objective. These objectives are used to establish scenery standards for management and the degree to which the landscape must be retained as intact or can be perceived as modified by alterations from human activities (Forest Service 1995). In the Forest Plan, scenic integrity objectives provide direction and objectives for landscape scenery based on distance zones within each land use designation (LUD) that were adopted (Forest Service 2008, page 4-57). An LUD is a defined area of land specific to which Forest Service management direction is applied (Forest Service 1995). The long-term future scenic condition for each area is set as a scenic integrity level that defines maximum levels of visual impact desirable from human alterations to the natural landscape character. Associated with each objective is a set of recommended scenery standards and guidelines for each allowable use that generally defines how much modification can occur while allowing the landscape to still meet the scenic integrity objective. Each objective includes recommendations for each distance zone and the timeline to meet the scenic integrity objective (Forest Service 2008, pages 4-57 to 4-59).

The SMS and the Forest Plan identify four classifications of scenic integrity objectives:

- **High:** The characteristic landscape appears intact. Deviations may be present but must repeat form, line, color, texture, and pattern common to the landscape character so completely and at such a scale that they are not evident.
- **Moderate:** The landscape appears slightly altered. Noticeable deviations are visually subordinate to the character.
- **Low:** The landscape appears moderately altered. Deviations may be dominant but are shaped to borrow from the natural landform and other visual dominance

elements (line, form, texture, color) and are subordinate to the characteristic landscape when viewed as background.

- **Very low:** Deviations are dominant but borrow from the natural terrain and other elements common to the characteristic landscape.

Inherent Scenic Attractiveness

Inherent scenic attractiveness is the primary indicator of the intrinsic beauty of a landscape and of the positive responses it evokes in people. It helps determine landscapes that are important for scenic beauty, as well as those that are of lesser value, based on commonly held perceptions of the beauty of landform, vegetation pattern, composition, surface water characteristics, land use patterns, and cultural features (Forest Service 1995).

Each landscape character type defined in Section 3.1, Landscape Character Types, is subdivided into three scenic attractiveness classes: distinctive, typical, and indistinctive. Each landscape character type has its own indicators of inherent scenic attractiveness. Those landscapes that meet the descriptive landscape character type are classified as typical. Those landscapes with unique or a higher visual response are classified as distinctive, while those landscapes with less character receive the indistinctive classification (Forest Service 1995).

Existing Scenic Integrity

Existing scenic integrity is a measure of the degree to which the landscape is perceived as whole, complete, or intact without any alterations or modification to the scenery by human activities (Forest Service 1995). These human activities could include, but are not limited to, roadways, communities, timber harvest, quarries or mines, and recreation areas. Existing scenic integrity is an important tool in planning and understanding the regenerative rate of the forest and restoring landscape character back to its intact state. Understanding the ability and time required for the landscape to return back to its complete visual condition becomes an important factor in evaluating potential modifications and the longevity of the visual impacts on the landscape. The SMS outlines the five classifications of existing scenic integrity:

- **Very high:** The characteristic landscape is intact or unaltered.
- **High:** The characteristic landscape appears intact. Deviations may be present, but repeat form, line, color, texture, and pattern common to the landscape character are at such a scale that deviations are not evident.
- **Moderate:** The landscape appears slightly altered. Noticeable deviations are visually subordinate to the character.
- **Low:** The landscape appears moderately altered. Deviations begin to dominate the landscape character.
- **Very low:** The landscape appears heavily altered. Deviations are dominant to the characteristic landscape.

Visual Absorption Capacity

Visual absorption capacity is the ability of a landscape to absorb human alterations without changing the natural character or scenic condition of the landscape. Visual absorption capacity is an indicator of the ease or difficulty of maintaining the scenic quality of the seen landscape while applying modifications upon the landscape (Forest Service 1995). There are three classifications of visual absorption capacity.

- Low visual absorption capacity landscapes are generally those with steep slopes, minimal terrain variety, and minimal vegetative diversity. Without mitigation measures or design considerations, modifications to low visual absorption capacity landscapes tend to dominate the landscape character.
- Intermediate visual absorption capacity landscapes have some variety in terrain and vegetation and intermediate slopes. Depending on the modifications, mitigation and design considerations may or may not be necessary.
- High visual absorption capacity landscapes are those with gentle slopes and/or high terrain and vegetative diversity. Modifications in a high visual absorption capacity landscape tend to not be evident to the casual observer even without mitigation or special design considerations. Landscapes that are unseen or seldom seen from VPRs are assumed to have a high visual absorption capacity.

Visual absorption capacity is a planning tool that provides direction for understanding management activities and their impacts on scenery due to human alteration. Visual absorption capacity is an indicator of potential costs, mitigation, and efficiency when proposing management activities in the landscape. Those landscapes with a low visual absorption capacity tend to have higher costs and effort associated with the alteration resulting in higher impacts to the scenic character of the landscape. In contrast, modifications in a high visual absorption capacity area tend to be accomplished easily, at lower costs, and with minimal visual impacts to the scenery.

Visual Priority Travel Routes and Use Areas

Scenery is evaluated from locations and routes that an observer of the Tongass National Forest uses to gain physical and visual access to the Tongass National Forest. These travel ways and use areas are identified as VPRs. The VPRs are inventoried and catalogued by the Forest Service based on public input, validated through public participation, and then listed in the Forest Plan. VPRs for the Tongass National Forest can be water- or land-based and include water boating routes, roads, anchorages, recreation areas, communities, trails, and other listed areas used by the public. These routes are identified in Appendix F of the Forest Plan (Forest Service 1995). VPRs determine typical observer positions and locations where the public views the landscape and identify the areas of the landscape that can or cannot be observed by users. Land- and water-based travel ways tend to be linear in nature and allow for movement through large areas of the landscape typically at speed, while use areas are concentrated locations with high viewing use due to stationary or near-stationary viewing. Travel routes for water-based activities (Alaska Marine Highway, cruise ships, and small and mid-size boats) are catalogued from the middle channel (E. Ouder Kirk, pers. comm., Forest Service Region 10, Landscape Architect).

VPRs are used for performing visibility analysis and calculating the distance zones of the landscape scenery. The VPRs for the Proposed Action are listed in Table 1 and illustrated in Appendix A, Sheets 2-3. The scenery analysis area includes the viewshed surrounding the road corridor, which is 54,005 acres. The viewshed encompasses the existing resources in the area of direct disturbance and the adjacent seen areas surround the disturbance as viewed by an observer of the Tongass National Forest using travel routes and use areas to gain physical and visual access to the area.

Table 1: Visual Priority Travel Routes and Use Areas for the Katlian Bay Road Project

Travel Routes	Name
Alaska Marine Highway and large boat routes	Sitka to Chatham Strait via Olga and Neva Straits
Small boat and mid-size tour boat routes	Sitka to Chatham Strait via Olga and Neva Straits, Katlian Bay, Western Channel
Saltwater Use Areas	Katlian Bay
Developed Recreation Sites	Starrigavan Cabin
Small Boat Anchorages	Katlian Bay head, Cedar Cove

Source: Forest Plan (Forest Service 2008)

Key Scenery View Points

Scenery viewpoints are established to record and inventory the existing scenic conditions of the landscape at key locations along VPRs. Each time scenery analysis/inventories are developed for an area, these same scenery viewpoints are used to provide a record of the landscape, its characteristics, and how it has regenerated or been modified over the years. In total, five water-based scenery view points and two land-based scenery viewpoints were established (Appendix A, Sheet 3). Water-based points are from middle channel locations of marine routes, at anchorages, at saltwater-use areas, or where marine routes intersect another route or are adjacent to neighboring use areas. The latitude and longitude of each scenery view point for the Proposed Action were recorded, and a 360-degree panorama image was created for each scenery view point using a 35-millimeter [mm] digital single-lens reflex (SLR) camera. A 50-mm lens on a 35-mm SLR film camera replicates the human cone of vision (Forest Service 1974). The field of view on a digital camera is 1.5-2.0 times less than a film camera due to the formatting size of the digital image (Hirsch 2014). To obtain the same field of vision using a digital format SLR, a 32-mm lens was used to obtain the same field of vision that would have been obtained by a 50-mm lens on a 35-mm film camera (Hirsch 2014).

Distance Zones

Use of visual priority routes (VPRs) helps to describe how a user gains physical and visual access to the Tongass National Forest, as well as determining landscape visibility. From these VPRs, landscape visibility is subdivided into distance zones based on the distance of the landscape from the viewer. The SMS uses distance zones in the classification, analysis, and inventory of scenery. These distance zones consist of foreground, middleground, and background as identified in the Forest Plan (Forest Service 2008), and are shown for the analysis area in Appendix A, Sheet 2.

- **Foreground:** Visible landscape 0.5 mile and closer to the observer on a VPR. The limit of this zone is based upon the distance at which details can be perceived. Typically, objects in the foreground can clearly be identified, including details and texture. Individual boughs of trees and larger leaves form texture.
- **Middleground:** 0.5 to 5 miles of visible landscape from the observer on a VPR. Individual elements can still be perceived if unique to surroundings. Texture is typically characterized by the mass of trees rather than individual elements of the trees. Individual trees are usually only discernible in open landscapes.
- **Background:** 5 miles to the horizon of visible landscape from the observer on a VPR. Texture of uniform tree cover is generally very weak or non-existent. Texture is seen as large groups or patterns of trees.

Analysis and Inventory Methodology

The inventory phase is recorded through mapping that is developed from 35-mm photographs taken from key scenery view points along VPRs. Geographic Information System (GIS) tools provided assistance for mapping. The inventory is developed as a sequence of analysis based on SMS and scenery guidelines within the Forest Plan. Work begins as data collection of existing scenery-related documents and maps, and all information is field-verified from VPRs to reflect current existing conditions. The inventory phase consists of the following steps:

- Determine landscape character type for the analysis area.
- Determine scenic attractiveness of landscape based on character type.
- Verify distance zones from VPRs identified in Appendix F in the Forest Plan (Forest Service 2008).
- Analyze existing scenic integrity of current landscape conditions.
- Determine visual absorption capacity of the landscape.
- Determine scenic integrity objectives based on Forest Plan, distance zones, and LUDs.

To understand the effects of the Proposed Action on scenic integrity, three-dimensional digital visualizations were generated. The visualizations are based on site photos from established scenery view points along Forest Service-designated VPRs (Appendix B, Sheets 1–8). One visualization was created for each scenery view point to show the expected impacts based on the facilities and structures, clearing limits, terrain modifications, and impacts to the landscape. The visualizations were created using ESRI's ArcMap (GIS) and three-dimensional visualization software for outdoor environments. The visualizations were developed to show the expected visual impact of the Proposed Action at 1 year after construction is complete as indicated by the LUD scenery requirements.

Seven visualizations were developed from VPRs that would show the expected typical visual impacts upon the existing landscape as a result of the Proposed Action. The locations were

dispersed along the existing VPRs in an attempt to show the Proposed Action from typical locations where users would visually access Forest Service lands associated with the Proposed Action. Five water-based and two land-based visualizations were generated (Appendix A, Sheet 3 and Appendix B, Sheet 1). The water-based visualizations include a variety of locations along mid channel of Katlian Bay to the west of the Proposed Action (Appendix B, Sheets 2–7). Land-based visualizations include the Alaska Marine Highway ferry terminal dock and the end of Halibut Point Road to the southwest of the Proposed Action (Appendix B, Sheet 2 and 8).

The visualizations represent the expected effects of the Proposed Action to the character landscape, including landform patterns and features, vegetation patterns, surface water characteristics, and land use patterns or cultural features and determine the extent and magnitude of the deviation. The extent of these modifications to the landscape determines if the visual impacts as a result of the Proposed Action meet the scenic integrity objectives listed in the Forest Plan. Scenic integrity objectives establish the long-term future scenic condition of the landscape by defining maximum levels of visual impact allowable from human alterations to the natural landscape character for each allowable use.

3 INVENTORY OF AFFECTED ENVIRONMENT

This section describes existing conditions in the analysis area for scenery.

3.1 Landscape Character Types

According to the Forest Service publication Landscape Character Types of the Tongass National Forest (Forest Service 2005), the Proposed Action is located within Region 3, the Boundary Ranges/Icefields landscape character type. The visual character of VCUs 3110, 3120, and 3130 largely comprises lower elevation rounded mountains rising just over 3,000 feet with lowlands adjacent to saltwater. Upper elevations consist of rounded exposed rock and alpine vegetation with some brushy landslide and avalanche chutes providing textural contrast. The middle and lower elevation slopes are blanketed by western hemlock and Sitka spruce forests with forested wetlands and emergent wetlands populating the lowlands and gentler sloped areas. Shorelines are deficient of energy and transition from land to saltwater with no or little vertical exposed faces. Streams are steep gradient, clear water contained within the terrain. At the head of Katlian Bay is a large tidewater flat fed by the Katlian River. This landscape comprises a large flat muddy and gravel landscape dominated by grasses and sedges (Forest Service 2005; Nowacki et al. 2001).

3.2 Inherent Scenic Attractiveness Classes

The Proposed Action is located within the indistinctive classification, and the project terminates in an area that is classified as distinctive. While the majority of the landscape has a distinctive classification; the road corridor itself traverses largely an indistinctive classification landscape. A smaller portion of the Proposed Action around Starrigavan Recreation Area is within the typical classification (Table 2; Appendix A, Sheet 4).

Table 2: Inherent Scenic Attractiveness within the Katlian Bay Road Project

Inherent Scenic Attractiveness Classification	Forest Service Lands Acres (%)
Distinctive	26,408.1 (49.0)
Typical	14,823.1 (27.4)
Indistinctive	7,360.2 (13.6)
Undefined Area	5,413.6 (10.0)
Total	54,005 (100)

Source: Tongass National Forest Scenery geodatabase and Forest Plan (Forest Service 2008)

3.3 Distance Zones

A majority of the landscape is perceived as unseen or seldom seen due to the terrain and limited visual access to the Tongass National Forest within the project area (Table 3; Appendix A, Sheet 5). The road corridor itself is within a seen landscape and in the foreground distance zone on NFS-managed lands.

Table 3: Distance Zones: Katlian Bay Road Project

Distance Zone Classification	Forest Service Lands Acres (%)
Foreground	7,608.3 (14.1)
Middleground	18,451.5 (34.2)
Background	207.6 (0.3)
Unseen or Seldom Seen	27,737.6 (51.4)
Total	54,005 (100)

Source: Tongass National Forest Scenery geodatabase and Forest Plan (Forest Service 2008)

3.4 Existing Scenic Integrity

About 61.7 percent of the project area has a very high existing scenic integrity (Table 4; Appendix A, Sheet 5). The road corridor along Katlian Bay is within a moderate existing scenic integrity due to modifications to the landscape from previous timber harvests. The road corridor adjacent to Starrigavan Recreation Area traverses a low existing scenic integrity due to development of the recreation facilities.

Table 4: Existing Scenic Integrity within the Katlian Bay Road Project

Existing Scenic Integrity	Forest Service Lands Acres (%)
Very high	33,327.7 (61.7)
High	655.7 (1.2)
Moderate	703.5 (1.3)
Low	15,348.3 (28.4)
Very low	0 (0.0)
Undefined NFS Acreage	3,969.8 (7.4)
Total	54,005 (100)

Source: Tongass National Forest Scenery geodatabase and Forest Plan (Forest Service 2008)

3.5 Visual Absorption Capacity

The project area predominantly has a low visual absorption capacity; therefore it may be more challenging to obscure visual impacts from the adjacent VPRs (Table 5; Appendix A, Sheet 6). The terrain along Katlian Bay has moderate to steep gradation and is highly visible from the Katlian Bay small vessel VPR. Lack of vegetative diversity may make changes in texture and pattern due to project activities more noticeable. There is a small percentage of intermediate visual absorption capacity scattered along the lower and middle elevation slopes. This is attested to by natural openings in the forest and intermediate slopes

on which modifications will be less apparent than the low visual absorption capacity areas. All unseen or seldom seen areas have a high visual absorption capacity and are found largely in valleys screened from view by topography.

The road corridor itself is almost entirely located within a low visual absorption capacity due to being situated within a foreground distance zone with high gradation topography and lack of vegetative diversity (Appendix A, Sheet 6). A very small portion of the road corridor is located in an intermediate visual absorption capacity near the first bridge. The terrain in this area provides the diversity to designate this area with an intermediate visual absorption capacity.

Table 5: Visual Absorption Capacity within the Katlian Bay Road Project

Visual Absorption Capacity Classification	Forest Service Lands Acres (%)
High	22,843.0 (37.2)
Intermediate	8,541.1 (12.8)
Low	19,904.4 (50.0)
Total	54,005 (100)

Source: Tongass National Forest Scenery geodatabase and Forest Plan (Forest Service 2008)

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4 MANAGEMENT OBJECTIVES

The Forest Service SMS establishes management requirements for the project area, including the development of scenery goals and objectives. These management requirements reference the established guidelines, goals, and objectives in the Forest Plan to set standards and thresholds for acceptable levels of modifications to scenery. Management related to scenery is established through scenic integrity objectives.

4.1 Land Use Designations and Scenic Integrity Objectives

Scenic integrity objectives are based on distance zones and LUDs. The Forest Service VCU 3110, 3120, and 3130 that occur in the project area are defined by five LUDs: Semi-Remote Recreation, Timber Management, Municipal Watershed, Old-Growth Habitat, and Modified Landscape (Appendix A, Sheet 1). The Proposed Action is located within the Semi-Remote Recreation LUD and the northern end of the Proposed Action terminates at a Timber Management LUD (Appendix A, Sheet 1).

Table 6: Land Use Designations Related to Distance Zones within the Katlian Bay Road Project

Land Use Designation	Foreground Acres (%)	Middleground Acres (%)	Background Acres (%)	Seldom Seen Acres (%)
Semi-Remote Recreation*	7,195.6 (13.3)*	8,231.9 (15.2)	303.7 (<0.1)	12,662.3 (23.5)
Timber Management	2.5 (<0.1)	5,583.4 (10.3)	15.3 (<0.1)	9,776.3 (18.1)
Municipal Watershed	1,848.4 (3.4)	2,855.5 (5.3)	Not Applicable	563.1 (1.0)
Old-Growth Habitat	59.2 (<0.1)	877.7 (1.6)	Not Applicable	800.2 (1.5)
Modified Landscape	335.3 (<0.1)	224.9 (<0.1)	Not Applicable	5.5 (<0.1)

Notes: Percentage relates to the total analysis area of 54,005 acres. There are 2,664.2 acres (5%) that are undefined within the analysis area.

*Land use designation occurs within the area of the Proposed Action.

Source: Tongass National Forest Scenery geodatabase and Forest Plan (Forest Service 2008)

Within the Forest Plan, the LUDs and distance zones establish the scenery management prescriptions referred to as scenic integrity objectives. The Forest Plan sets specific guidelines for each of the four scenic integrity objective classifications (high, moderate, low, very low). Scenic integrity objectives are applied to an activity that has the potential to affect the scenic character of the landscape. The long-term desired future scenic condition for a specific area is the maintenance of a scenic integrity level that is at least as high as the adopted scenic integrity objective for that area.

The foreground, middleground, and background distance zones are used to establish the scenic integrity objectives as seen from VPRs. Non-priority travel routes and use areas, as well as those areas typically not seen from a VPR, are managed according to the Seldom Seen or Non-Priority classification. The guidelines also set specific durations after completion of the Proposed Action for the scenic integrity objective to be met. Adopted scenic integrity

objectives for each distance zone and LUD within the project area are shown in Table 7 and Table 8 (Forest Service 2008, page 4-57, Appendix A, Sheets 1, 2, 5 and 7).

Table 7: Adopted Scenic Integrity Objectives for Each Distance Zone Based on Land Use Designation

Land Use Designation	Foreground	Middleground	Background	Seldom Seen or Non-Priority
Semi-Remote Recreation*	Moderate*	Moderate	Very low	Moderate/Very low
Timber Management	None	Very Low	None	Very low
Municipal Watershed**	None	None	None	None
Old-Growth Habitat	High	High	None	High
Modified Landscape	Moderate	Low	None	None

Notes: *Land use designation occurs within area of the Proposed Action.

**Forest Service did not establish a scenic integrity objective or acceptable level of disturbance for this area. The Proposed Action has no visual impact on this LUD.

Source: Tongass National Forest Scenery geodatabase and Forest Plan (Forest Service 2008)

Table 8: Scenic Integrity Objective Classification for the Katlian Bay Road Project

Scenic Integrity Objective Classification	Forest Service Lands Acres (%)
High	1,738.2 (2.7)
Moderate*	28,744.3 (44.7)
Low	229.4 (0.4)
Very low	8,403.2 (23.9)
Undefined Acreage	14,889.9 (28.3)
Total	54,005 (100.0)

Note: *Scenic Integrity Objective occurs within area of the Proposed Action.

Source: Tongass National Forest Scenery geodatabase and Forest Plan (Forest Service 2008)

The Proposed Action transects the Semi-Remote Recreation LUD (Appendix A, Sheet 1) and is found in the foreground distance zone (Appendix A, Sheet 2), thereby receiving a moderate scenic integrity objective (Appendix A, Sheet 5). The length of the Proposed Action related to land ownership and scenic integrity objective is provided in Table 9.

Table 9: Forest Service Scenic Integrity Objective Classifications along the Katlian Bay Road Project

Scenic Integrity Objective Classification	Land Manager	VCU	Corridor Segment Length
Moderate	NFS	3110	<0.1 mile
N/A	State of Alaska	3110, 3120	1.2 miles
Moderate	NFS	3120	2.3 miles
N/A	Shee Atiká Incorporated	3120, 3130	5.5 miles
Total			9.0 miles

Source: Tongass National Forest Scenery geodatabase and Forest Plan (Forest Service 2008)

The following summarizes the scenery guidelines for the moderate scenic integrity objective related to facilities and transportation. In accordance with the monitoring component of the SMS, each objective sets a schedule or period of time after project completion or conclusion of construction in which the scenic integrity objective must be met on NFS-managed lands (Forest Service 1977; Forest Service 2008).

Moderate Scenic Integrity Objective: Semi-Remote Recreation Land Use Designation (All Distance Zones)

Design activities to be subordinate to the landscape character of the area. The landscape may appear slightly altered. Deviations may be noticeable, but are shaped to borrow from the natural landform and other visual dominance elements (line, form, texture, color) and are subordinate to the characteristic landscape. To meet this scenic integrity objective, the Project Area should be visually subordinate to the landscape character of the area within 1 year of project completion.

4.2 Other Scenery-related Goals and Objectives

Design Activities

To ensure activities are designed to meet specific scenic integrity objectives, the Forest Plan indicates that the existing scenic integrity and visual absorption capacity ratings must be considered. The landscape’s existing scenic integrity rating is an inventoried condition that rates the degree of change that has already occurred on the ground. It is important to compare the existing scenic integrity of the project area to the scenic integrity objectives assigned by the Forest Plan. Should there be existing conflicting conditions and the intent of the LUD is not presently met, it will be appropriate to consider either some specific rehabilitation measures or project deferral that will allow the landscapes in the project area time to regenerate sufficiently.

Visual absorption capacity is an estimate of the relative ability of a landscape to absorb management activities. High, intermediate, and low visual absorption capacity ratings reflect the degree of landscape variety in an area, viewing distance, and topographic characteristics. For example, a low visual absorption capacity setting generally has steep slopes with little landscape variety, while a high visual absorption capacity setting may be relatively flat and/or has a high degree of variety in the landscape.

Factors including size, shape, orientation to viewer, color, and texture are critical elements in determining whether or not an activity meets the adopted scenic integrity objective. Consideration for the scenery is essential early in the planning process, particularly in areas seen from a VPR. However, each landscape setting is different and should be evaluated on a case-by-case basis. There may be instances where the scenic integrity objective can be met even though the visual impact of the proposed activity exceeds the allowable impact set by the guideline, or there also may be cases where the activity must be redesigned to meet the intent of the scenic integrity objective.

Non-Conforming Exceptions

For non-conforming areas of the project, there are adopted scenic integrity objectives associated with each LUD. The Semi-Remote Recreation LUD has the following guidance for areas of non-conformance (Forest Service 2008, page 4-57 footnote 4):

Exceptions for small areas of non-conforming developments, such as recreational developments, transportation developments, log transfer facilities, and mining development, may be considered in these land use designations on a case-by-case basis.

5 SCENERY EFFECTS

The key objective for scenery resources is to identify human-based visual disturbances to the existing seen landscape resulting from the Proposed Action. The predicted effects of implementing the Proposed Action is described below, specifically the documentation and evaluation to determine the impacts to the existing landscape character and whether these impacts to the scenery are acceptable according to Forest Service guidelines.

5.1 Effects under the Proposed Action

Scenic Integrity Effects

The Proposed Action will likely lead to modifications to the character landscape, including landform patterns and features, vegetation patterns, surface water characteristics, and land use patterns or cultural features. The extent and magnitude of these modifications will determine if the visual impacts resulting from the Proposed Action meet the scenic integrity objectives listed in the Forest Plan. Scenic integrity objectives establish the long-term future scenic condition of the landscape by defining maximum levels of visual impact allowable from human alterations to the natural landscape character for each allowable use.

The effects of the Proposed Action related to the scenic integrity are determined by the extent, magnitude, and duration viewed. These effects are analyzed during the lifetime of the Proposed Action from initial construction to operation and maintenance and must consider reasonable expected actions and effects on scenery and identify impacts that do not meet the scenic integrity objectives.

Anticipated Scenery Effects

Seven visualizations were developed for the Proposed Action on NFS lands from VPRs 1 year after project completion (Appendix B, Sheets 2–8). The visualizations include the road bed, clearing limits of vegetation, and cut and fill associated with the road overlaid on the existing landscape.

The visualizations indicate that the road layout through NFS lands was such that the existing terrain and vegetation buffers would prevent the casual observer from seeing the placement of the road within the forested area with two exceptions. The first exception is the only segment of the roadway that would be visible from a VPR, which is the end of Halibut Point Road (Scenery View Point No. 7) where the existing road extends into the surrounding landscape for approximately 200 feet (Appendix B, Sheet 8).

The second exception is a small road segment that may also be visible at Scenery View Point No. 3 from Katlian Bay where the road transects a steep cliff area in VCU 3120 (Appendix B, Sheet 4) as described below. For all other areas, the existing lower elevation vegetation would screen the roadway. It is expected that these scenery effects would be consistent with a moderate scenic integrity objective for the area and meet Forest Service Forest Plan scenery requirements.

From Scenery View Point No. 3, cut and fill would be obvious at the steep cliff section in VCU 3120 from MP 1.2 to MP 1.7 with a total length of 2,235 feet (Appendix B, Sheet 4).

Road construction is expected to be full bench construction into the cliff face and result in exposed cliff faces, removal of vegetation, and possible viewing of the roadway from Scenery View Point No. 3. There are no other exposed cliff face conditions in the immediate area, and the modifications to the landscape would likely be obvious to the casual observer. It is expected that the scenery effects would be consistent with a low scenic integrity objective and not meet scenery requirements of a moderate scenic integrity objective. The Forest Plan and Semi-Remote Recreation LUD allow for small areas of non-conforming developments, including transportation developments, on a case-by-case basis and this area could be considered for this exception.

Overall, the narrow, single-lane road width; limited clearing limits width; undulating terrain; and existing vegetation minimize the visual effects from the Proposed Action based on the clearing limits associated with the road (Appendix B, Sheets 2, 3, 5, 6, and 7). Segments of the clearing limits associated with the road corridor would be visible to the casual observer; however, the broken and narrow width within the forest canopy would be consistent with a moderate scenic integrity objective and would meet scenery requirements.

5.2 Effects under the No Action Alternative

Under No Action, the project would not occur. Scenery resources would remain the same with the exception of the existing scenic integrity where landscapes modified previously by human activity are left undisturbed and would return to a whole, or intact, condition.

6 Avoidance, Minimization, and Mitigation

The Proposed Action was sited to minimize visual impacts to the extent possible (Appendix B, Sheets 2–8). The Proposed Action includes design features recommended in Forest Service landscape management guidelines to reduce the visual impact of roads through integrating roads into the surrounding landscape (Forest Service 1977). In addition, the Proposed Action road grading planned includes through-cuts as a method of screening the road bed in several places. Existing vegetation provides a visual buffer and minimizes the visual impacts of the road from the Katlian Bay VPR. It is recommended that vegetation clearing be kept to a minimum along the road corridor, especially in sections of steeper terrain where the road cuts would be more sensitive to visual exposure from Katlian Bay VPRs. Specific Forest Service (1977) recommendations and design features are below.

Design recommendations for Proposed Action Scenic Overlooks and Day Use Area:

- Enhancement of views from recreational facilities can occur by locating Proposed Action scenic overlooks along the corridor in flat areas above steeper terrain that minimizes viewing opportunity of the higher elevation facility from a VPR (Appendix B, Sheet 1).
- Select materials, textures, lines, and colors for the scenic overlooks and day use area that blend with those found in the natural surroundings.

The scenery effects associated with the exposed rock face and possible viewing of the roadbed could be lessened to obtain a moderate scenic integrity objective through the following design features and mitigation:

- Minimize disturbance of lower elevation vegetation by reducing rockfall from construction. Rockfall could potentially damage trees below the road that would otherwise screen visual impacts.
- Use natural materials for road construction where possible
- Perform roadside cleanup of ground disturbance activities. This may include adding topsoil and revegetating exposed surfaces that would be expected to hold soil.
- Design rock sources to be minimally apparent as seen from VPRs. Rehabilitation is usually necessary following closure of rock source developments. It may be necessary to modify some rock sources associated with ground-disturbing activities that may be seen from the foreground of VPRs (Katlian Bay VPRs).

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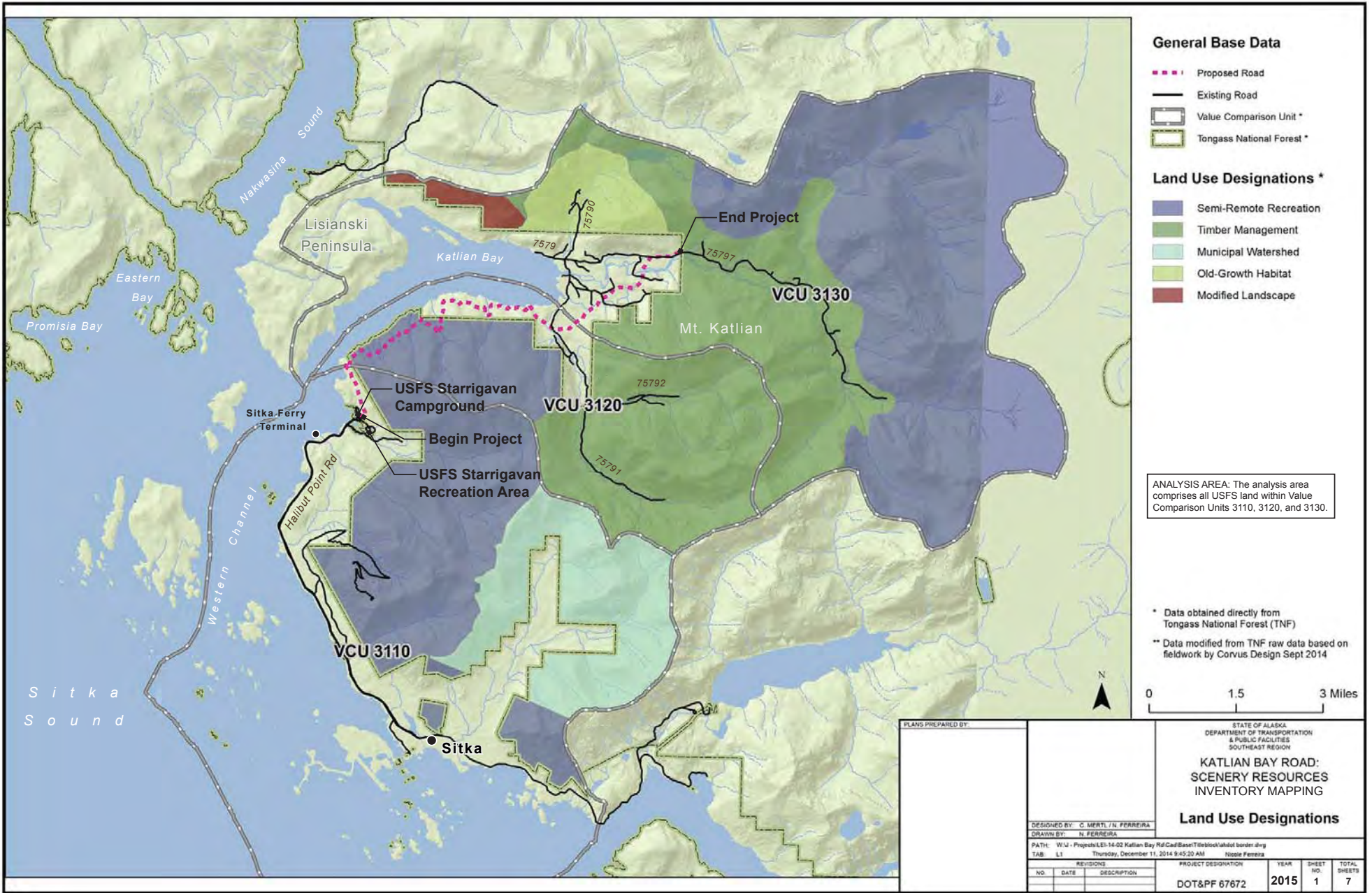
7 REFERENCES

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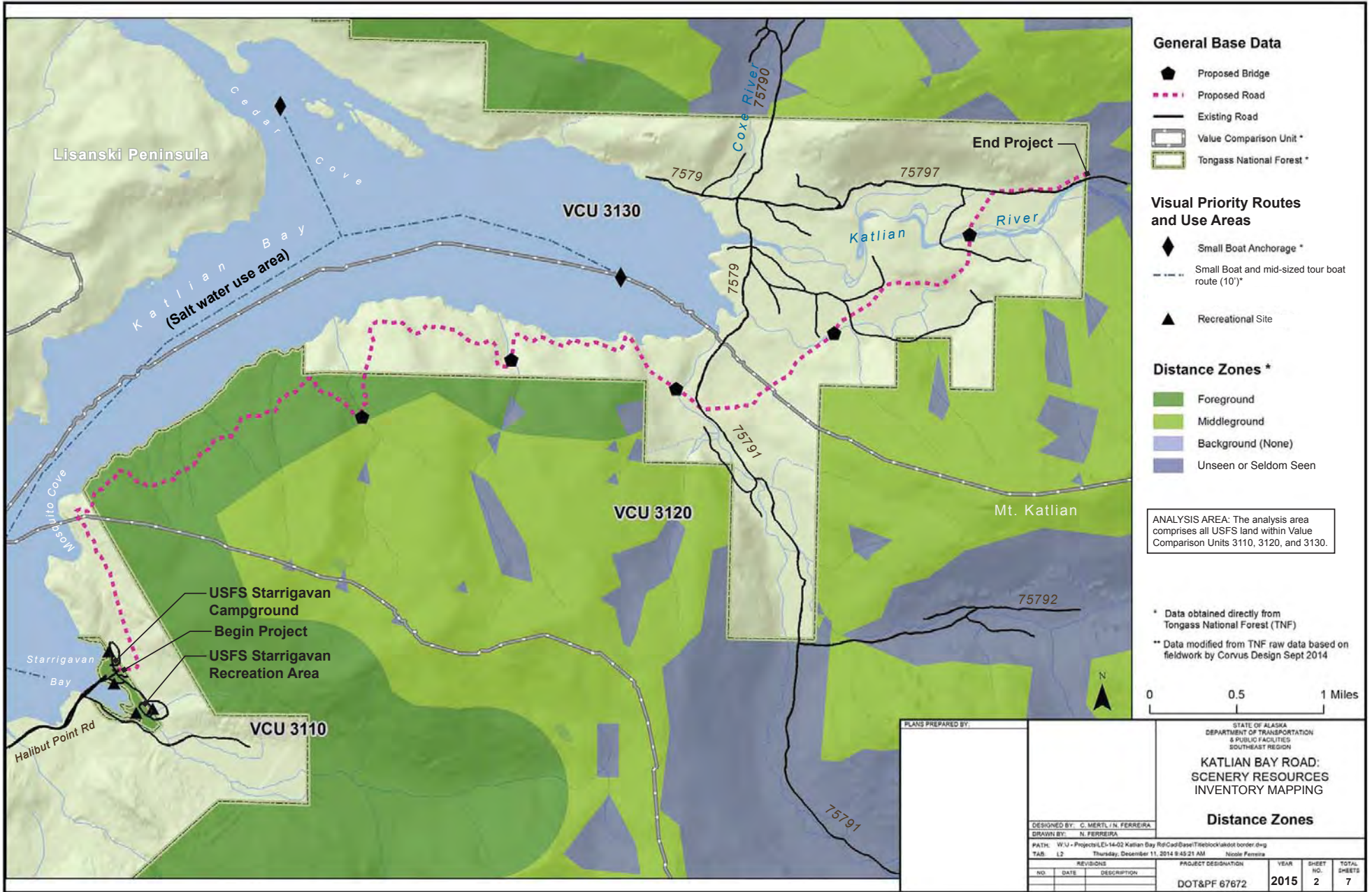
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Appendix A
SCENERY RESOURCE MAPS

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PLANS PREPARED BY:		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES SOUTHEAST REGION			
		KATLIAN BAY ROAD: SCENERY RESOURCES INVENTORY MAPPING			
		Land Use Designations			
DESIGNED BY: C. MERTI / N. FERREIRA		PROJECT DESIGNATION:		YEAR:	SHEET NO.:
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NO.	DATE	REVISIONS			
		DESCRIPTION			



General Base Data

- ◆ Proposed Bridge
- ◆◆ Proposed Road
- Existing Road
- ▭ Value Comparison Unit *
- ▭ Tongass National Forest *

Visual Priority Routes and Use Areas

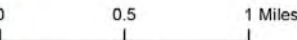
- ◆ Small Boat Anchorage *
- Small Boat and mid-sized tour boat route (10')*
- ▲ Recreational Site

Distance Zones *

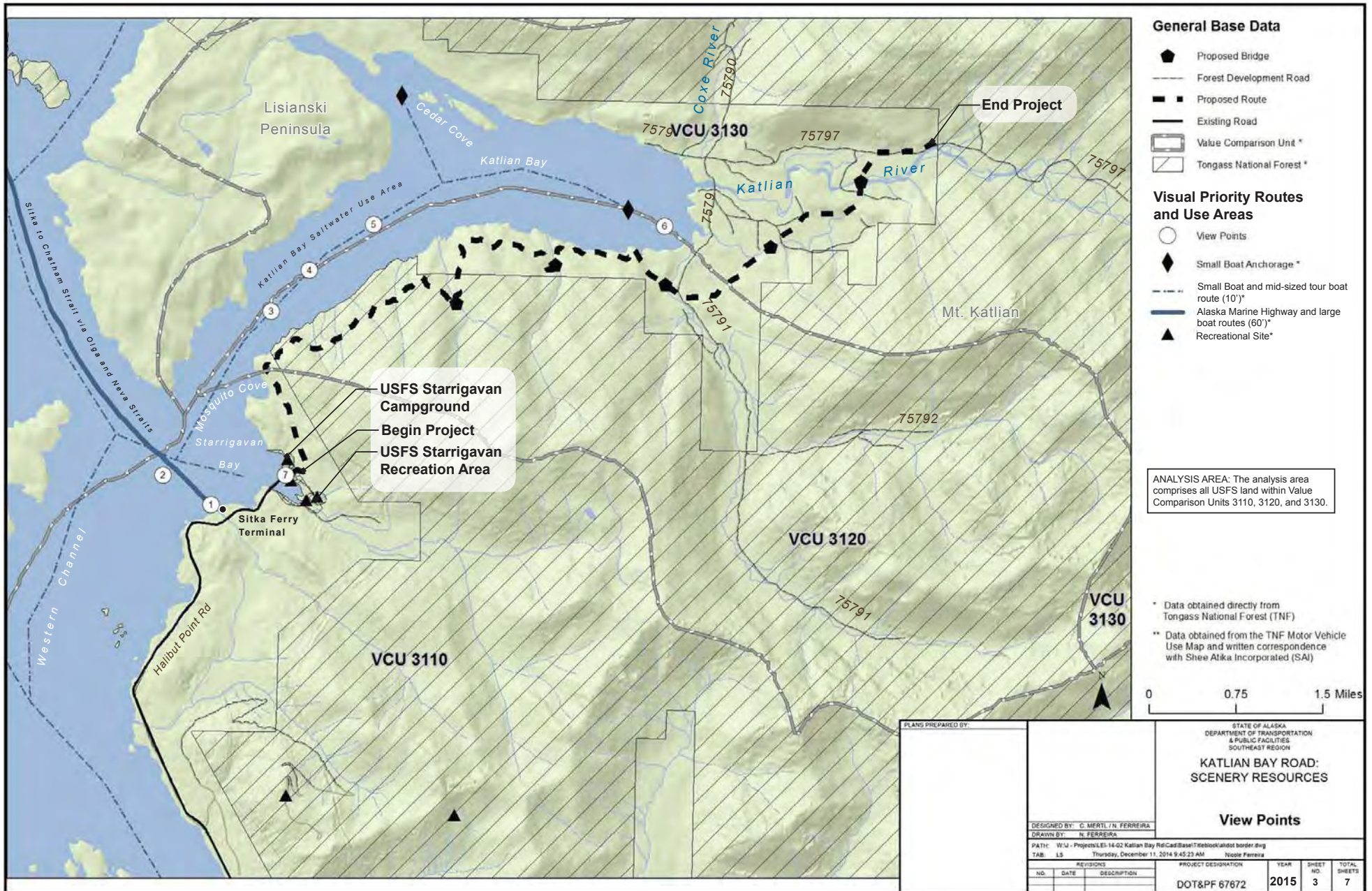
- Foreground
- Middleground
- Background (None)
- Unseen or Seldom Seen

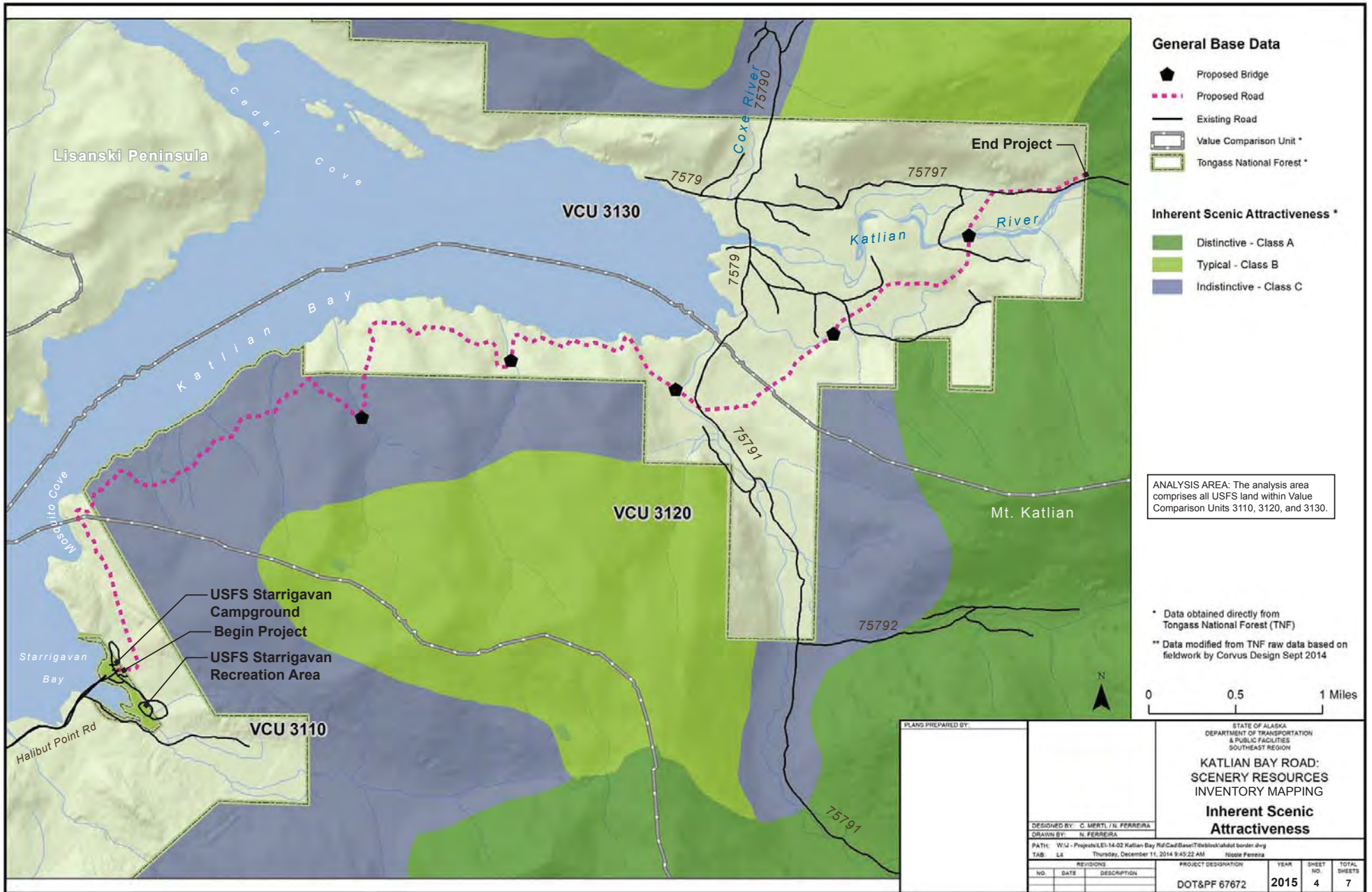
ANALYSIS AREA: The analysis area comprises all USFS land within Value Comparison Units 3110, 3120, and 3130.

* Data obtained directly from Tongass National Forest (TNF)
 ** Data modified from TNF raw data based on fieldwork by Corvus Design Sept 2014

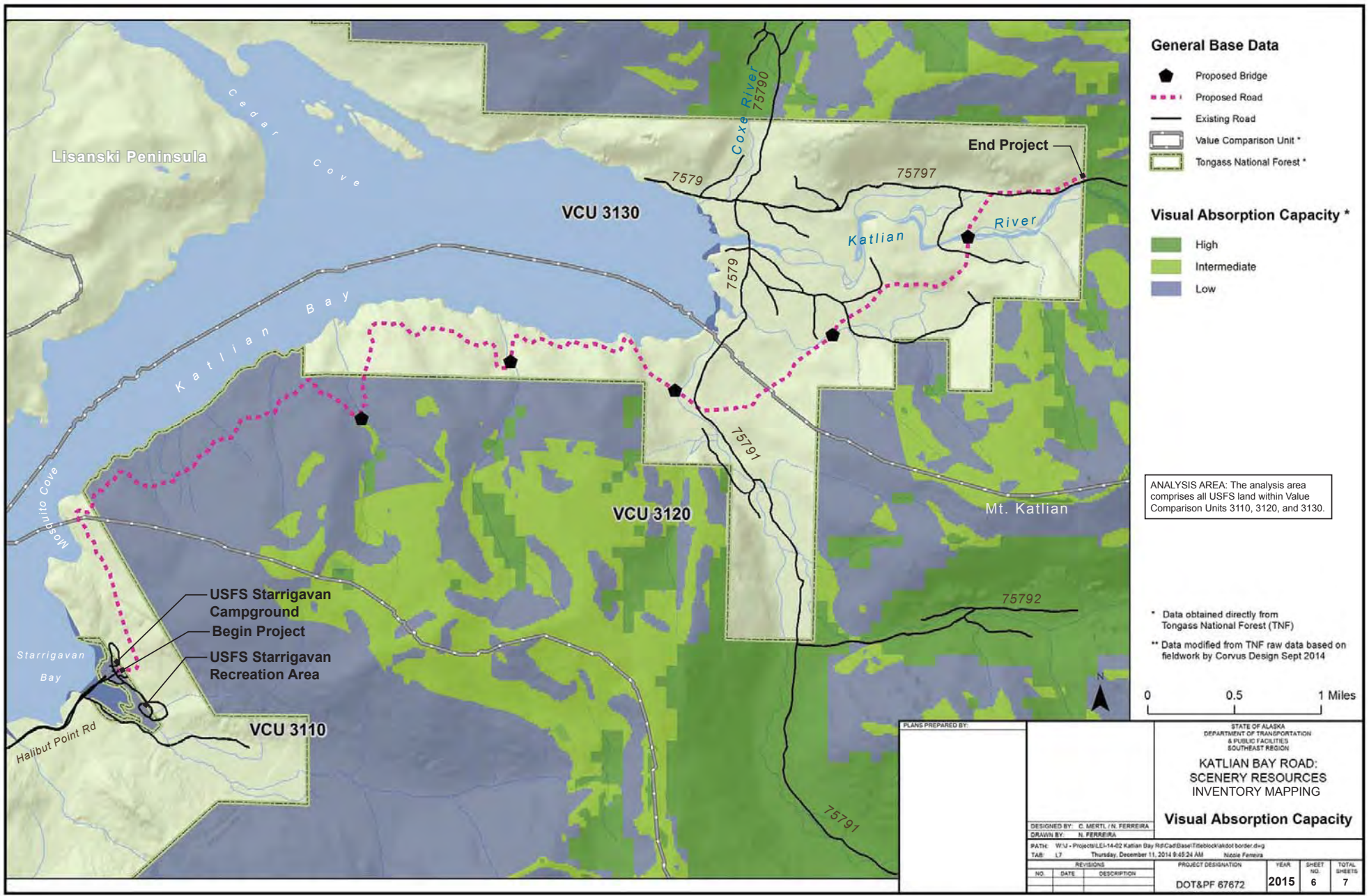


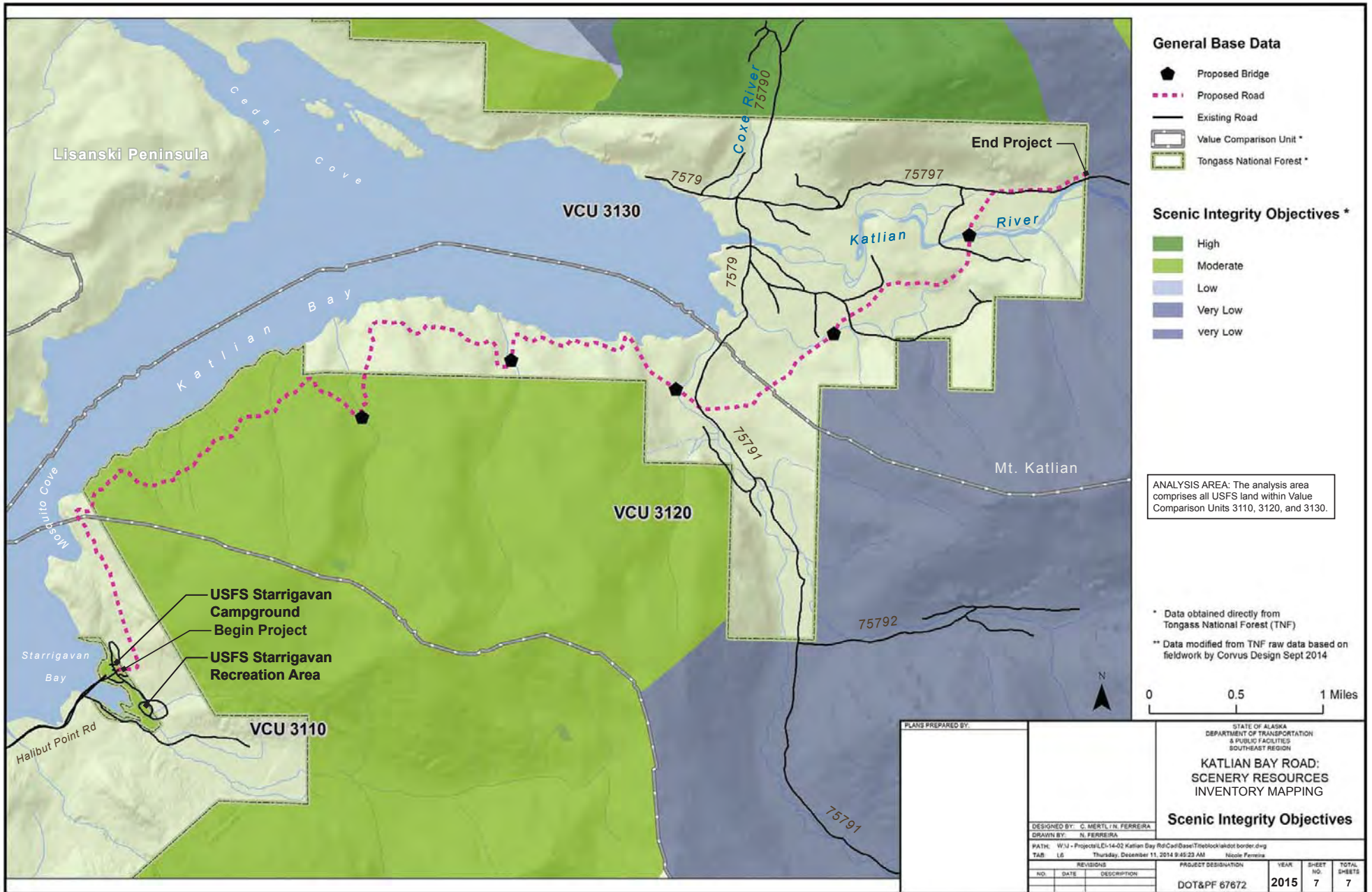
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		KATLIAN BAY ROAD: SCENERY RESOURCES INVENTORY MAPPING			
		Distance Zones			
DESIGNED BY: C. MERTL, N. FERREIRA					
DRAWN BY: N. FERREIRA					
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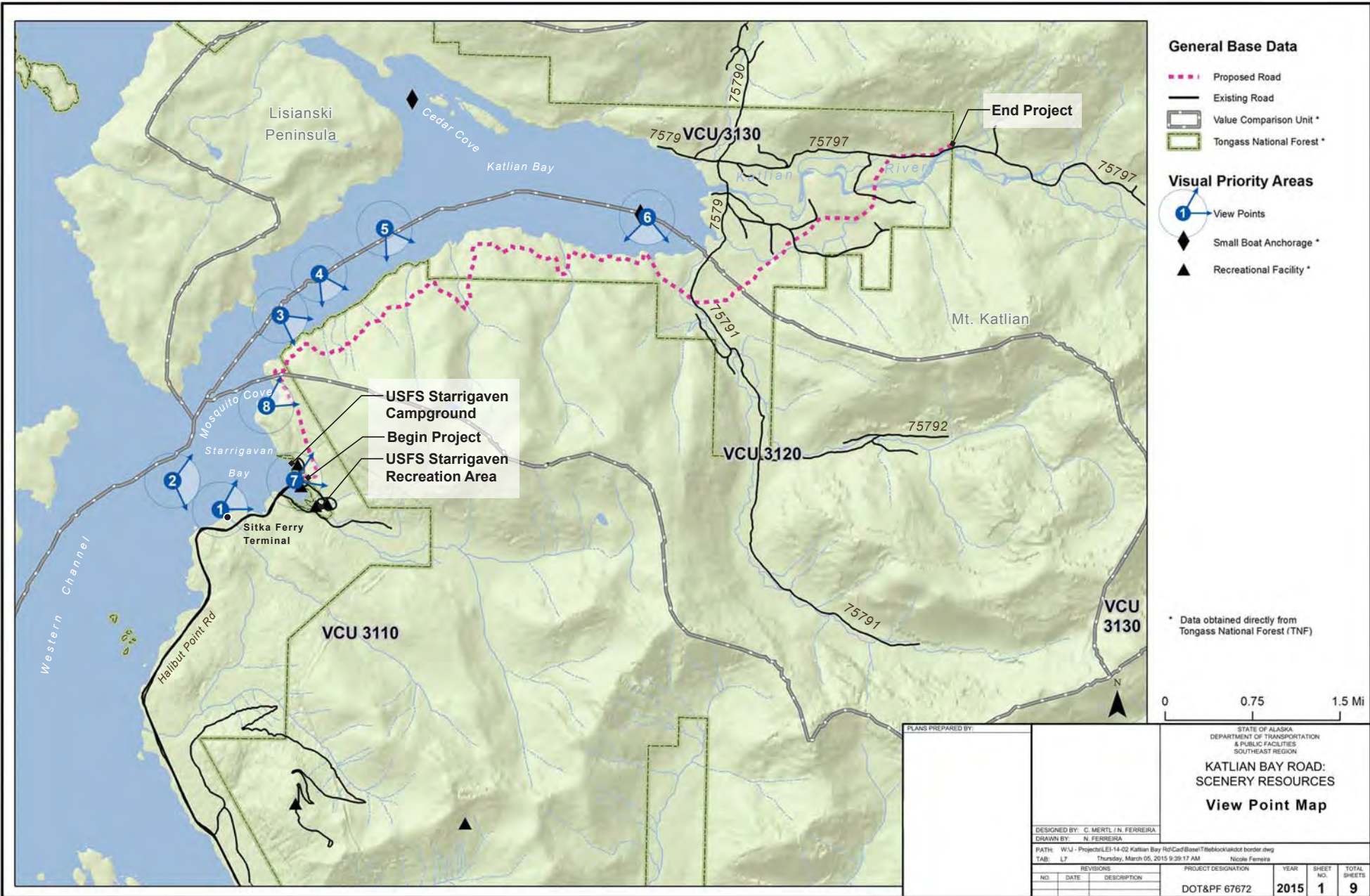




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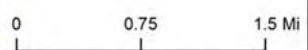
Appendix B
VISUALIZATIONS

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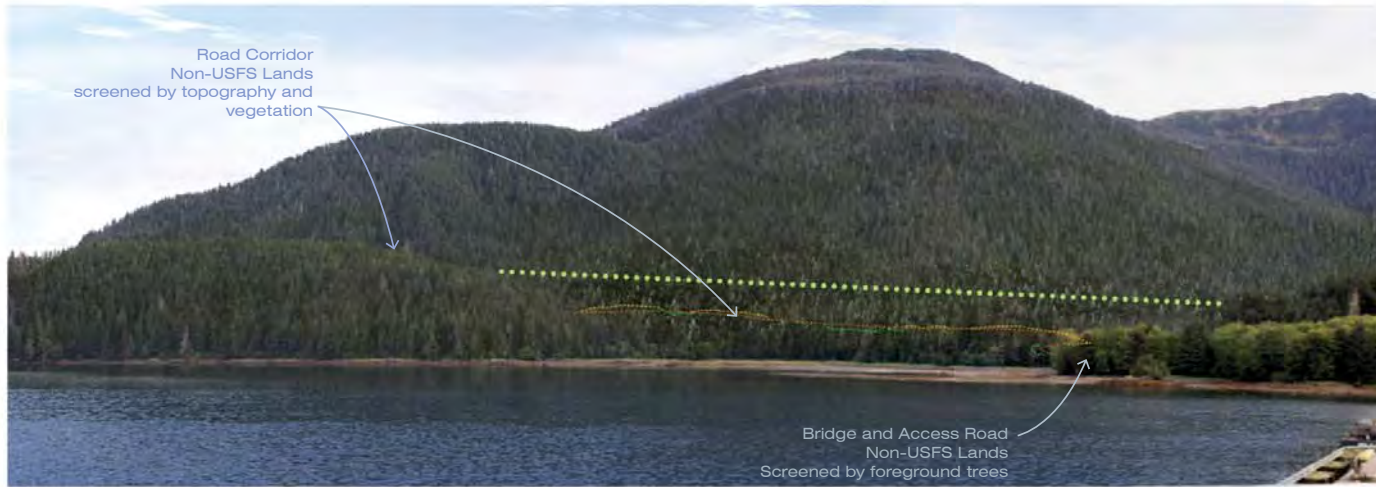


- General Base Data**
- Proposed Road
 - Existing Road
 - Value Comparison Unit *
 - Tongass National Forest *
- Visual Priority Areas**
- View Points
 - Small Boat Anchorage *
 - Recreational Facility *

* Data obtained directly from Tongass National Forest (TNF)

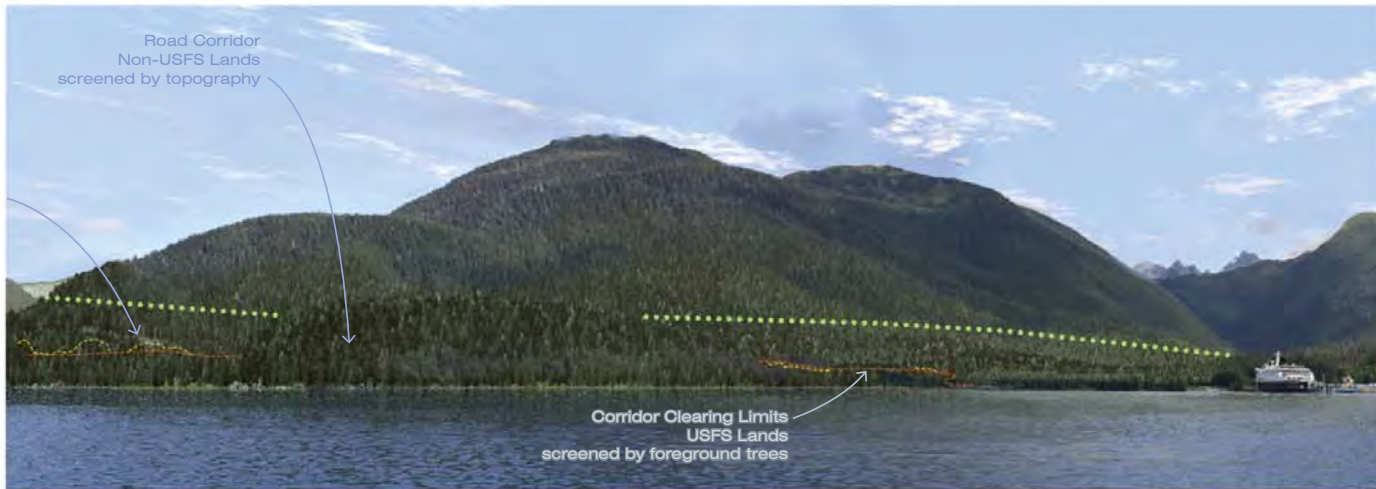


PLANS PREPARED BY:		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES SOUTHEAST REGION			
		KATLIAN BAY ROAD: SCENERY RESOURCES View Point Map			
DESIGNED BY: C. MERTL / N. FERREIRA DRAWN BY: N. FERREIRA					
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NO.	DATE	DESCRIPTION	DOT&PF 67672	2015	1
			TOTAL SHEETS	9	



- Tongass National Forest Boundary
- Upslope Extent of Road
- Center line of Road
- Downslope extent of Road

DESIGNED BY: C. MERTLJN FERREIRA		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES SOUTHEAST REGION		
DRAWN BY: N. FERREIRA		KATLIAN BAY ROAD: SCENERY RESOURCES		
		View Point #1		
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		DOT&PF 67672		9



Road Corridor - Cut walls
Non-USFS Lands
20 foot vegetation clearing
beyond extent of cut shown

Road Corridor
Non-USFS Lands
screened by topography

Corridor Clearing Limits
USFS Lands
screened by foreground trees



- Tongass National Forest Boundary
- Upslope Extent of Road
- Center line of Road
- Downslope extent of Road

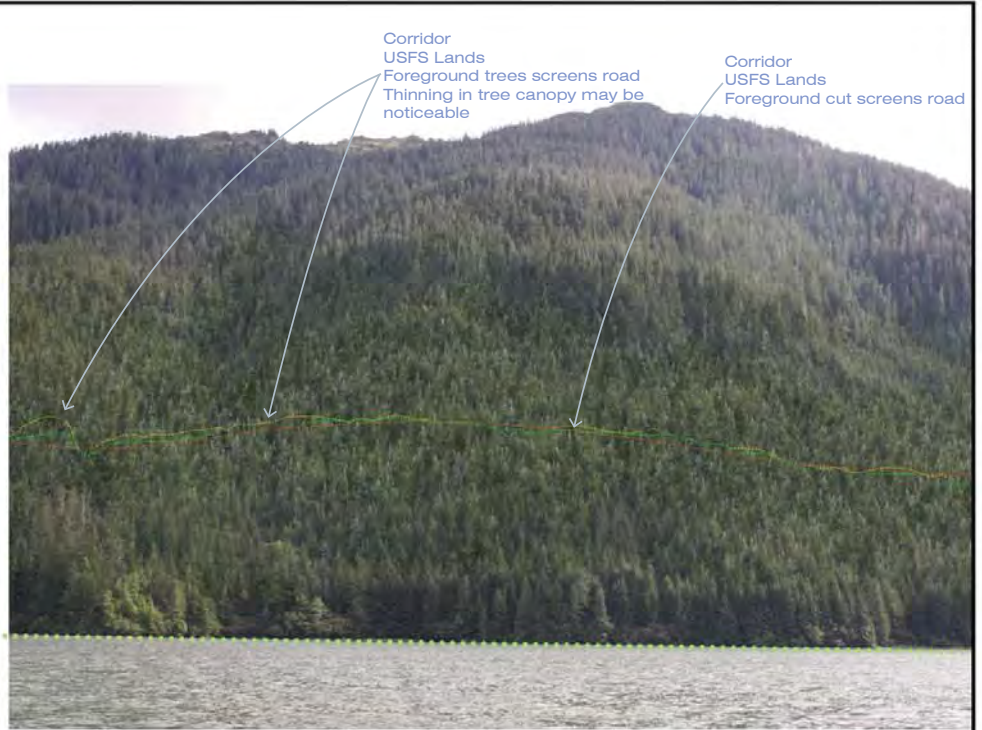
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Viewpoint

- Tongass National Forest Boundary
- Upslope Extent of Road
- Center line of Road
- Downslope extent of Road

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Corridor
USFS Lands
Foreground trees screens road
Thinning in tree canopy may be noticeable

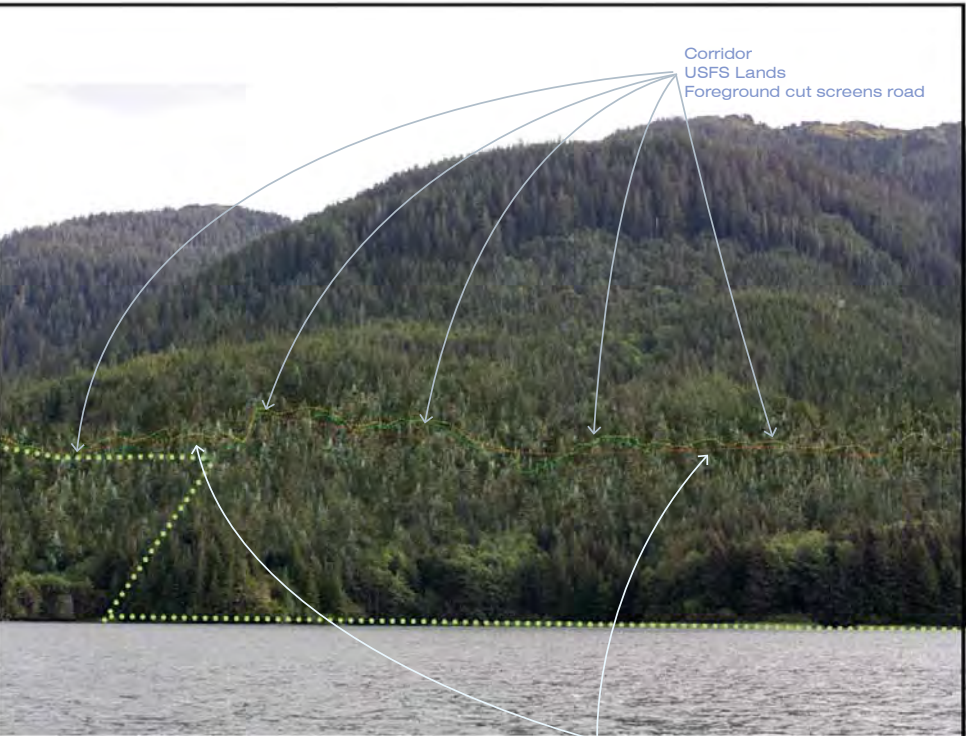
Corridor
USFS Lands
Foreground cut screens road



Viewpoint

- Tongass National Forest Boundary
- Upslope Extent of Road
- Center line of Road
- Downslope extent of Road

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		KATLIAN BAY ROAD: SCENERY RESOURCES			
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Corridor
USFS Lands
Foreground cut screens road

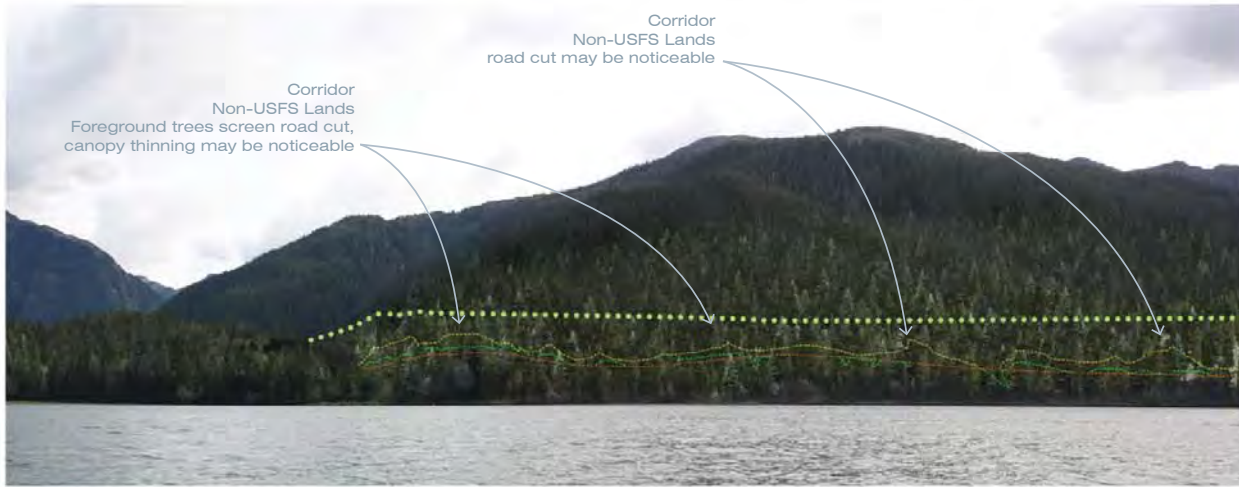
Corridor
USFS Lands
Foreground trees screen road cut,
canopy thinning may be noticeable



- - - - - Tongass National Forest Boundary
- - - - - Upslope Extent of Road
- - - - - Center line of Road
- - - - - Downslope extent of Road

Viewpoint

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- ⋯ Tongass National Forest Boundary
- Upslope Extent of Road
- Center line of Road
- - - Downslope extent of Road

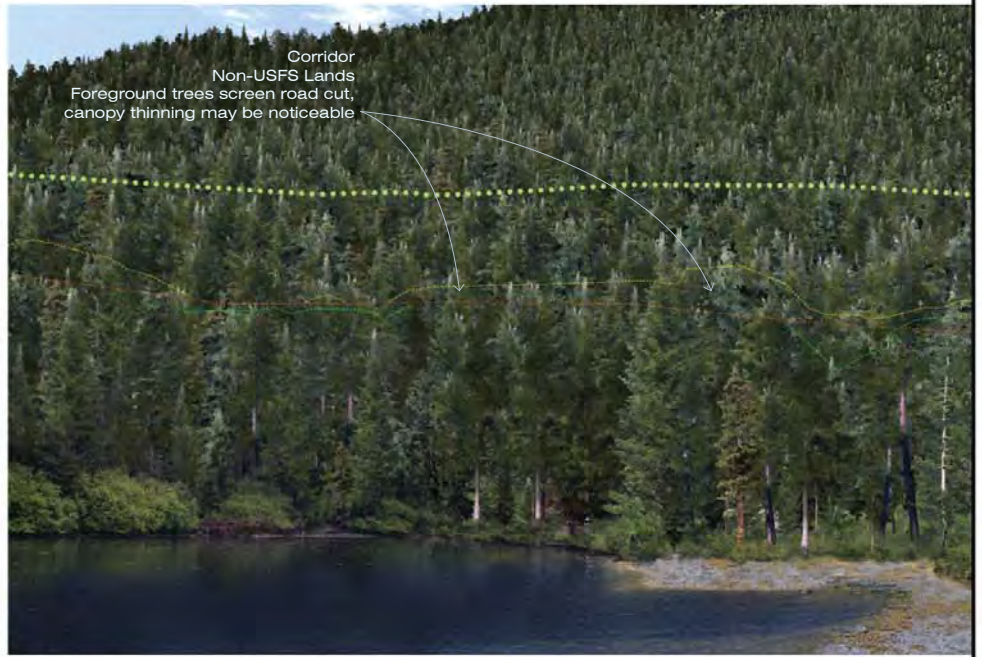
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Corridor Clearing Limits
USFS Lands



PLANS PREPARED BY:		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES SOUTHEAST REGION				
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- ⋯ Tongass National Forest Boundary
- Upslope Extent of Road
- Center line of Road
- Downslope extent of Road

Viewpoint

PLANS PREPARED BY:		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES SOUTHEAST REGION				
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