

TREADWELL MINE HISTORIC SITE AND TRAIL PLAN

DOUGLAS, ALASKA



Alaska State Library - Historical Collections

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TABLE OF CONTENTS

ACKNOWLEDGMENTS

VICINITY MAP

PREVIOUS PLANNING EFFORTS

- 1— INTRODUCTION
VISION
- 2— HISTORIC STRUCTURES MAP
- 3— HISTORIC UTILITY SYSTEMS MAP
- 4— SIGNIFICANT SITES
- 5— EXISTING CONDITIONS & SITE ANALYSIS
- 6— TRAIL PLAN
- 7— SITE PLAN AND FEATURES
- 8— TREADWELL PLAZA
- 9— IMPLEMENTATION STRATEGIES
BIBLIOGRAPHY

ACKNOWLEDGMENTS

This work has been done by Deborah Mattson, a landscape architecture intern with Corvus Design, in an effort to assist the Treadwell Historic Preservation and Restoration Society (THP&RS). It is based partly on Margaret Tharp's 2007 Master Plan and Wayne Jensen's *Treadwell Mining Complex Historic Resources Survey*, as well as additional information provided by the Treadwell Historic Preservation and Restoration Society. The research and design work was financed by Corvus Design as a pro bono community contribution.

Thank you to all contributions, assistance, and feedback from Chris Mertl and Linda Pringle of Corvus Design, and Wayne Jensen, Paulette Simpson, and other members of (THP&RS).

Historic photos provided by the Alaska State Library Digital Archives, the Treadwell Historic Preservation and Restoration Society, and Deborah Mattson, as noted.

Maps and drawings provided by the Treadwell Historic Preservation and Restoration Society and Alaska State Historical Library.

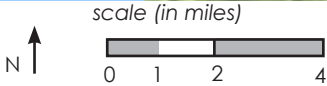
PREVIOUS PLANNING EFFORTS

The Treadwell Historic Preservation and Restoration Society has taken good care of the site in conjunction with the City and Borough of Juneau based on a 2009 agreement. In 2007, Margaret Tharp developed a master plan as a Master's thesis project, including both Savikko Park and the Treadwell Mining Complex. Margaret's master plan was adopted by the CBJ in June 2008 to inform upcoming site improvement decisions. Much of her work focused on Savikko Park/Sandy Beach rather than the Treadwell Mining Complex, however, there is some overlap and conceptual design suggestions for the complex. The master plan provides important analysis and memorialization of the miners and identifies an opportunity for deeper interpretation through the site itself.

Not long after the Historic Society had completed a Memorandum of Agreement with CBJ, a Site Survey and Resources Report was conducted by Wayne Jensen that detailed the history and conditions of existing and previous structures on site. These documents provide records for most standing and partial buildings, the communication of how the site works as a whole, and recommendations for maintenance.

These two documents provide us with the information that will further develop a new site plan, interpretive planning, and bringing the site and its history to life for all ages and capacities.

VICINITY MAP



INTRODUCTION

The Treadwell Mine is one of four gold mines that operated on Douglas Island, Alaska, in the early 1900s. After gold was discovered in 1881 by Pierre Joseph Erussard, he sold his claim to John Treadwell who—with John Fry and James Freeborn—began the Alaska Mill and Mining Company and had a 120 stamp mill running by 1884. During its peak from 1911 to 1917, the Treadwell Complex was the largest operating hard rock gold mine in the world. The first mine was the Glory Hole, which was an open-pit mine that is now filled with water. In 1906, operations shifted away from open pit mining and became deep underground excavation. On April 21, 1917, a sea level cave-in flooded three mines and closed all but the Ready Bullion Mine, which continued to operate for another five years.

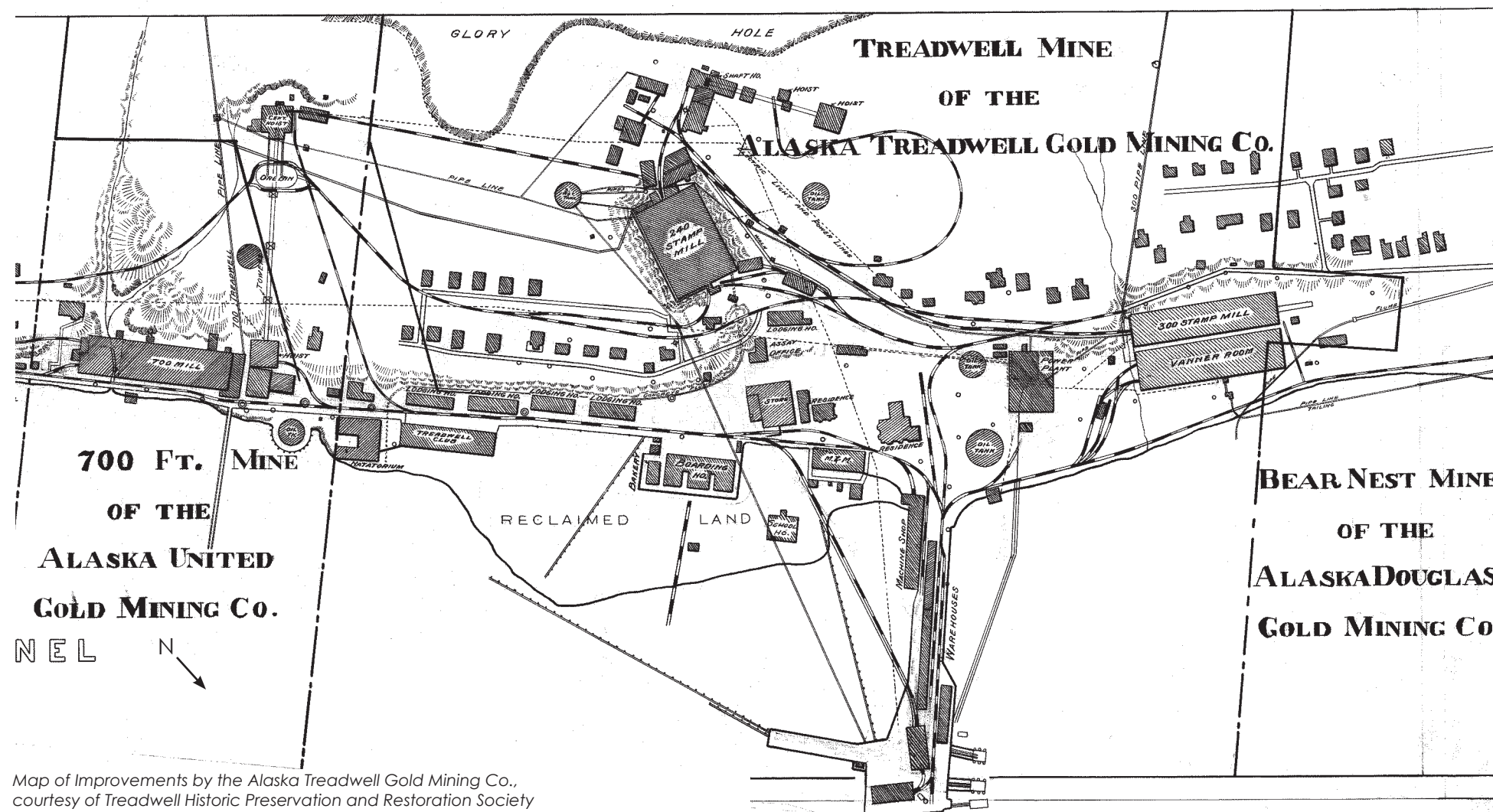
Not only was the complex home to four mines, it was also home to the miners and the miners' families. The complex provided miners with lodging, a store and butcher shop, school, and recreation. Between the four mines, over 2000 people were employed, and about \$67 million dollars of gold was extracted from 1883-1917. These mines and their employment helped to create the communities that grew into Douglas and Juneau, and are significant not only to southeast Alaska, but also to the context of Alaska as a whole.

Now part of the City and Borough of Juneau, the Treadwell Mining Complex has become a recreational area attached to Sandy Beach/Savikko Park. Many

remnants of structures exist, but they are overgrown with black cottonwood, Sitka alder, willow, mosses, and ferns. In 2007, Margaret Tharp completed a master plan on Savikko Park and Treadwell Mine area, which was adopted by CBJ Parks Department the following June. To date, few changes have been implemented to the area. The Treadwell Historic Preservation and Restoration Society (THP&RS), formed in 2008, is a non-profit corporation dedicated to managing the property alongside the City and Borough of Juneau. This Historic Site and Trail Plan will provide a strategy for enhancing the landscape aesthetically and historically expanding on its historical richness.

VISION

Taking a step beyond the master plan prepared in 2007, this site and trail plan aims to convey the history of the mining complex, developing a plan that complements the interpretive signage. Visitors can walk down railroad path, stand near the edge of the glory hole, and explore the foundations of the dozens of machinery and housing buildings. Every turn can provide a new opportunity to understand the history of Douglas and Treadwell, the comprehensiveness of the community, and the spaces in which miners spent their lives, all without obscuring the natural beauty of a successional forest or removing recreational activities.



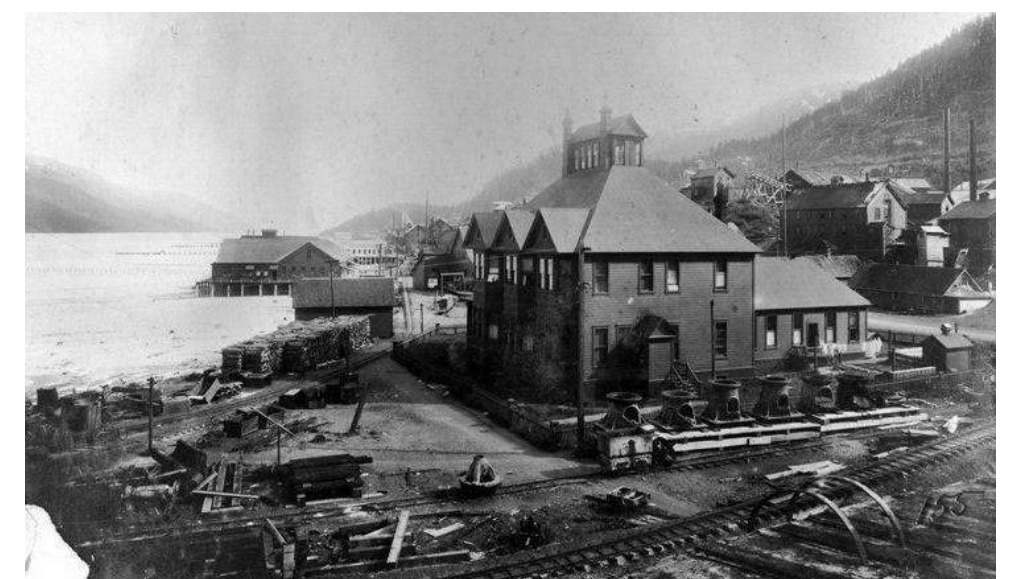
Map of Improvements by the Alaska Treadwell Gold Mining Co., courtesy of Treadwell Historic Preservation and Restoration Society



Wharf and Warehouses, Alaska State Library Historical Collections, P39-0860



Workers outside mine building, ca. 1918, Alaska State Library Historical Collections, P164-24



Treadwell Mine 1908, Alaska State Library Historical Collections, P40-15

HISTORIC STRUCTURES MAP

Built from historic maps and surveys including the Alaska Treadwell Mining Company's map, a 1914 Sanborn Map, and historic images, this map documents the locations of existing and previous structures, systems, and circulation routes at the height of operations. The shoreline has shifted and many of the buildings have burned, collapsed, or are only foundations.



KEY

- 1 5-Stamp Mill
- 2 Warehouse
- 3 300 Mill Vanner Rollers
- 4 300 Mill Batteries
- 5 Central Power Plant
- 6 Tennis Courts
- 7 Oil Tank
- 8 Treadwell Plaza
- 9 Wharf and Warehouses
- 10 Schoolhouse
- 11 Superintendent's House
- 12 Assistant Superintendent's House
- 13 Boarding House
- 14 Bunk House
- 15 Butcher Shop
- 16 Store
- 17 New Office Building
- 18 Bakery
- 19 Barn
- 20 Electrician's Shop
- 21 Assay Office
- 22 240 Mill
- 23 Treadwell Hoist
 - a Tower
 - b Treadwell Man Hoist
 - c Treadwell Shaft House, #2 Shaft
 - d Shift Bosses' Office
 - e Crusher House
 - f Foreman's Office
 - g Treadwell Shaft House, #1 Shaft
 - h Drying Room
 - i Old Compressor Room
- 24 Treadwell Blacksmith's Shop
- 25 Dormitories
- 26 Treadwell Club
- 27 Recreation Area (Baseball)
- 28 Natatorium
- 29 Old Foundry
- 30 Central Hoisting Plant, Hoist House
- 31 Central Hoisting Plant, Ore Bin
- 32 Central Shaft House
- 33 Treadwell Heights Residences
- 34 Campbell Hill Residences
- 35 Glory Hole
- 36 Cave-In
- 37 Pumphouse



Alaska State Library Photo Collection, Treadwell-Fire-01

Treadwell suffered from several fires which destroyed most wood structures. The store was once attached to the far side of the New Office Building burned in the 1926 fire.



Alaska State Library, Winter & Pond Collection, P87-0362

On April 21, 1917, high tide flooded the natatorium and all mines except the Ready Bullion. Only one miner was unaccounted for, and most mining operations were closed.



Alaska State Library Juneau Mining District Photo Collection, P587-03

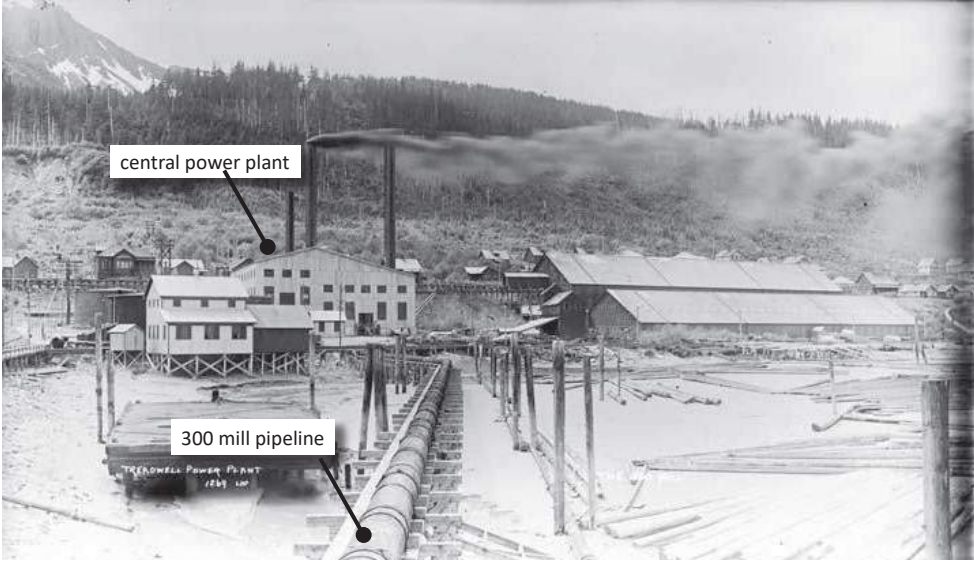
Recreation space was planned into the complex. In the above photo a baseball field was built on reclaimed land north of the Treadwell Club.

HISTORIC UTILITY SYSTEMS MAP

Water, power, and rail were the primary systems on site and crucial to the functionality and efficiency of not only the Treadwell Mine, but the other three mines as well. Often forgotten, these systems offer opportunities for circulation routes, focal points, and interpretive or educational features.

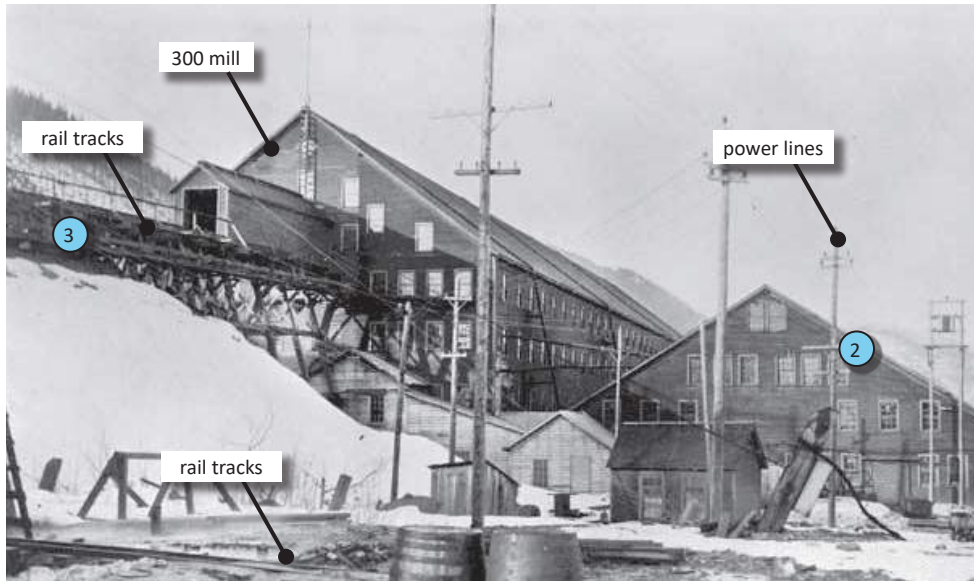


1. The **water system** powered the mills through hydro-mechanical means except off-season when coal and oil were used. It gathered water from all of Douglas Island (see Significant Site 5, page 9), the Treadwell Ditch directed water into pipelines and eventually through the mills.



Alaska State Library, Paul Sincic Photo Collection, P75-422

2. When water was out of season, the **power system** ran the mills and hoists, requiring a network of electric lines throughout the site (see Significant Site 6, page 9). It seasonally replaced the hydro-mechanical power in 1898, first fueled by steam-powered coal, then steam-powered oil, and finally, in 1910, electricity.



Alaska State Library, Louis L. Stein Photographs, P172-07

3. The **rail system** connected men to machinery and mine to mill. More rails existed than roads or boardwalks, and they were the primary transportation method (see Significant Site 7, page 9).

SIGNIFICANT SITES

While the complex is significant as a whole system, there are also parts that contribute more directly to the operation of the mine, the culture of the miners and families, and the use of resources. A few of these have been identified as focus areas in the site plan, with attention drawn to the interpretation of their roles. Each focus area had a unique contribution to the Treadwell Mine and provides a unique opportunity to celebrate the significance and integrate this history into these sites.



Alaska State Library, Paul Sincic Photo Collection, P75-417

1. The Wharf and Warehouses were important for production. Gold shipped out, equipment shipped in—this was the mines' connection with the economy and the world. Today only the pilings and the salt water pump remain, seen from trail spurs to the beach.



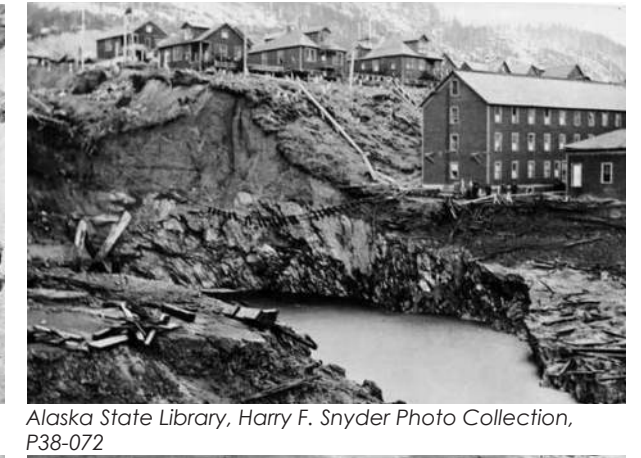
Alaska State Library, William Norton Photo Collection, P226-305

2. The Treadwell Plaza, or Parade Ground, was the central gathering ground in the complex, used for July 4th celebrations, recreation, and other events. Currently it is a clearing in the woods and the surrounding buildings are gone.



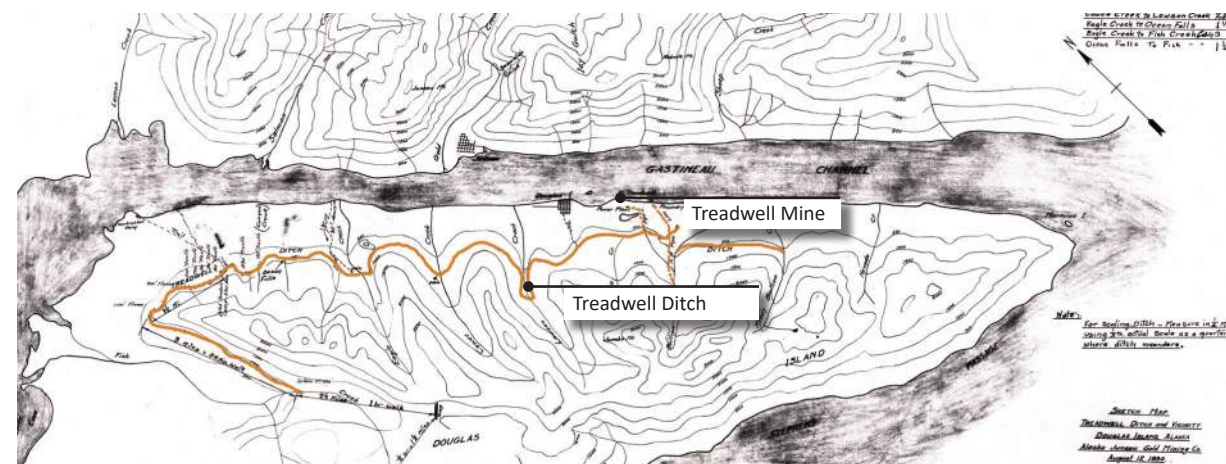
Alaska State Library, Charles Horton Metcalf Photo Collection, P32-094

3. The Glory Hole was an open-pit mine and the first mine used before tunneling began. Now filled with water, it can be viewed from an overlook. This view should be preserved and maintained to showcase the scale and dangers of the first operation.



Alaska State Library, Harry F. Snyder Photo Collection, P38-072

4. The Cave-In site, close to the border of the Treadwell Mine and the 700' Mine, allows a view over a cove that once held the natatorium, foundry, and an oil tank. This site is significant because it signifies the end of the operation of the Treadwell Complex.

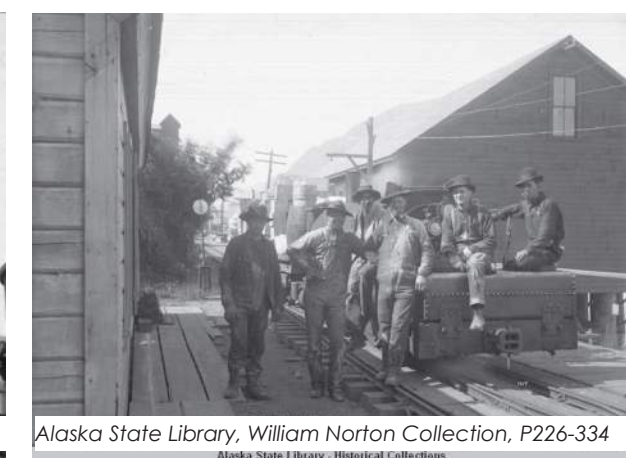


5. The Pipeline System included the 18-mile **Treadwell Ditch**, the 300 Mill Pipeline, the 700' Pipeline, small pipelines to disperse the water, and wastewater flumes for tailings. Some pipes were wood stave, others steel, and others concrete. The remains of this network include remnants of pipes and trestles throughout the site and are a crucial element to understanding the ingenuity of the Treadwell system. Drawing from all of Douglas Island, the system demonstrates the reliance on a watershed larger than the land of the mine itself.



Treadwell Historic Preservation and Restoration Society

6. The Tennis Courts are directly next to the **Central Power Plant**, have a broken concrete base, mostly upright steel poles, and wire fencing on the edges. The courts are one of the few remaining recreational activities that were not demolished on the reclaimed land. The courts could be refinished for use and to act as a focal point of the site.



Alaska State Library, William Norton Collection, P226-334

7. The Treadwell Express, built in 1888 moved miners, ore, supplies, and equipment between the four mines and was the first railroad in Alaska. It was 20lb. (narrow gauge), and ties and pieces remain throughout the complex. Because of the large quantity of tracks as well as the integral role it played in the operation of the mine, the rail is one of the most important elements in the site with a consistent presence.

EXISTING CONDITIONS & SITE ANALYSIS



OVERVIEW

Today, the mine complex is typically used for walking and running for locals and visitors to Juneau and Douglas. Unfortunately, there have been instances of vandalism and misuse of the site. Due to changing tides and construction of the beach from mine tailings, the shoreline has shifted causing the loss of many structures. Multiple fires have destroyed many of the wooden structures on the site and the majority of structures left are concrete foundations or walls.



Treadwell Pilings, courtesy of Deborah Mattson

Beyond existing and proposed signage, the interpretation of the landscape can be improved through:

1. Adjusting trail alignment, traveling along historic routes and highlighting travel types.
2. Removing vegetation that currently blocks historic viewsheds, allowing connections between structures and spaces.
3. Adding symbolic and literal site elements as visual aids to understand the scope of the complex and the equipment.
4. Celebrating railway, water, and power systems through artistic representations and interpretive signage.
5. Providing resting areas in significant locations near viewsheds, structures, and spaces.
6. Expanding and rehabilitating the plaza for active use and as a gathering place.

VEGETATION 2

In the days the Treadwell Mine operated, the site was clear of trees and vegetation. The only objects blocking sightlines were the buildings and power lines. There were views out to the wharf and across the beach, down through the parade ground, and along the railways and roads.

Today the vegetation is cow parsnip, bohemian knotweed, Sitka alder, willow, black cottonwood, and salmonberry. Maintaining historic sightlines is important, but there is also an opportunity to use the vegetation to create focal points and to draw a visitor through the site.



Trail near beginning, courtesy of Deborah Mattson

TRAIL PLAN

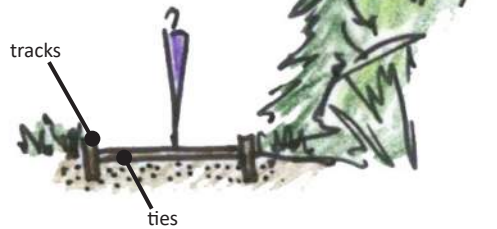
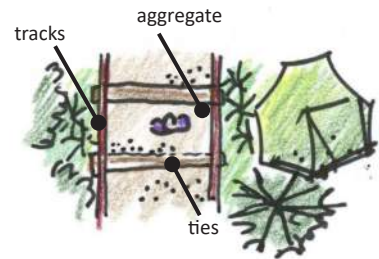


CONCEPT

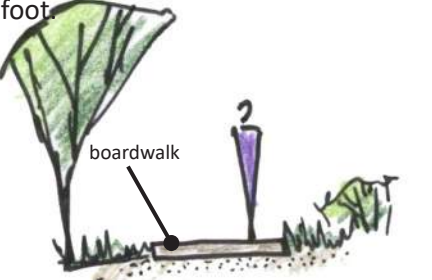
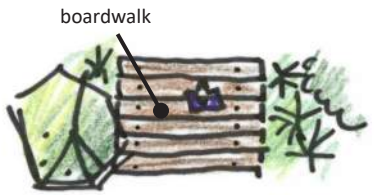
The site circulation will be layered with three levels of meaning: historic trail alignments, elements of tangible history inlaid in the paths, and interpretive signage.

By following the railroads, boardwalks, and roads that were historically there and seeing remnants of how they were used gives the journey a purpose, rather than the means to a destination. The no-longer arbitrary paths pull visitors along in the footsteps of miners and their families and will immerse them in physical and abstract elements of the old mining complex.

1. The railroad, integral to the operations, is the primary route through the site. By using rail materials, this history is embedded in the trail, helping to highlight this feature and its importance to the Treadwell mining complex.



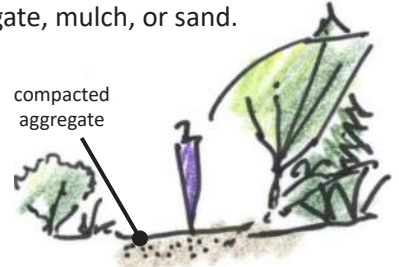
2. The boardwalk connected workers' housing with amenities such as the plaza, stores, and recreational activities. Wood boards distinguish the high-traffic path visually and audibly to experience the way people moved through the site on foot.



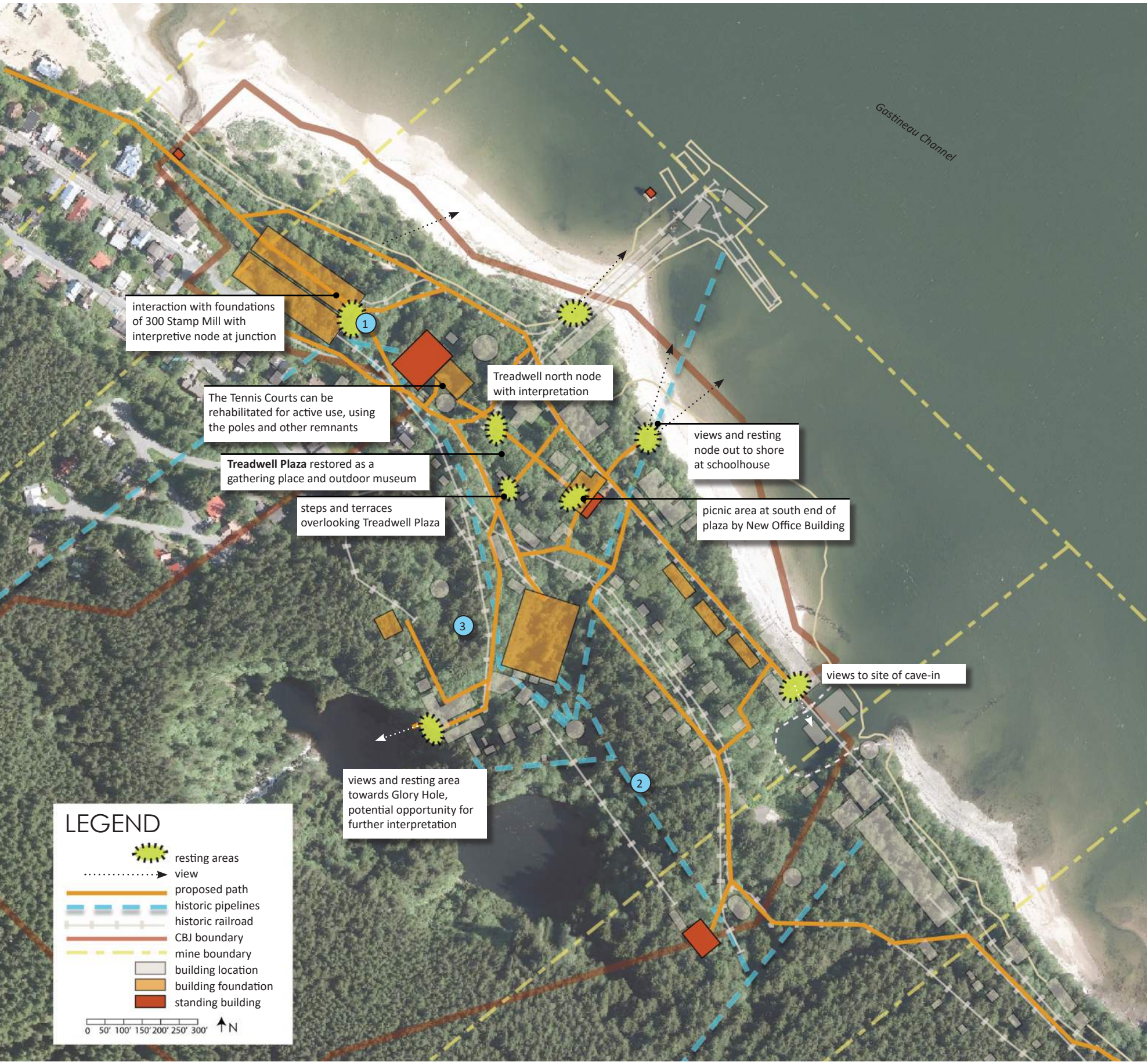
3. The road paths are based on the historic roads in Treadwell Heights and Campbell Hills. The few historic roads were routes in and out to the towns of Douglas and Juneau, connecting the complex to the community.



4. Connective paths, while not on a historic route, are important to provide circulation through the site and incorporate connections between historic elements and trails. These would mimic the existing paths and be compacted aggregate, mulch, or sand.

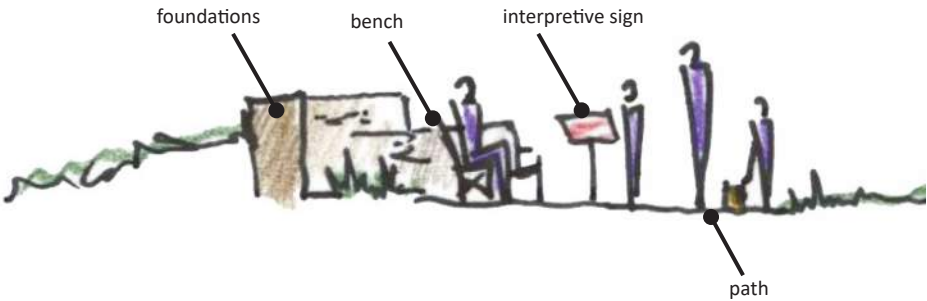


SITE PLAN AND FEATURES

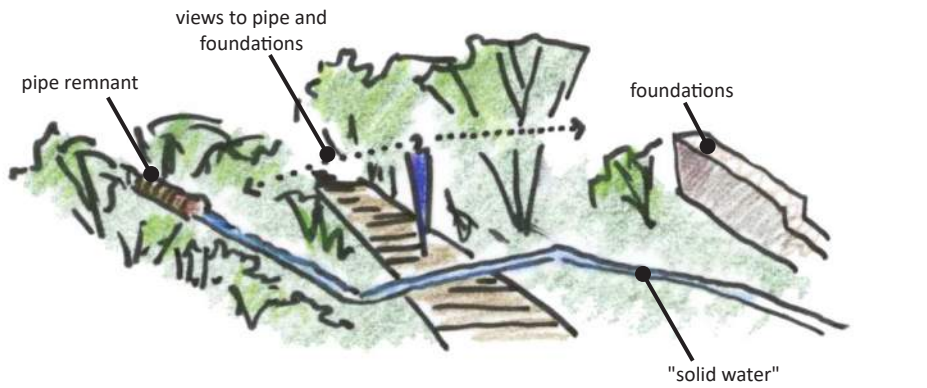


1. Resting areas will include interpretive signage and seating. These are placed at significant locations and set off the trail, or incorporated into junction points so they do not interfere with other activities and recreation.

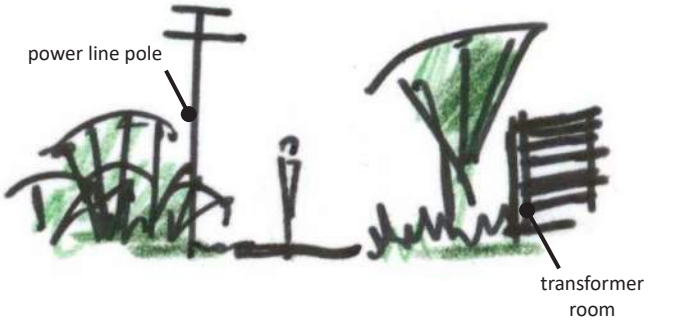
Elements within a node will include: interpretive signage (often existing currently), seating, and views toward significant features in the landscape, such as the pumphouse and wharf, cave-in, and plaza.



2. The remnants of the water system (Significant Site 5) will be enhanced and represented more fully to show the scale and frequency of the pipelines, linking the last pipes and trestles and creating a visual, tangible aspect to this hidden system. This "solid water" will daylight throughout the site as poured concrete.

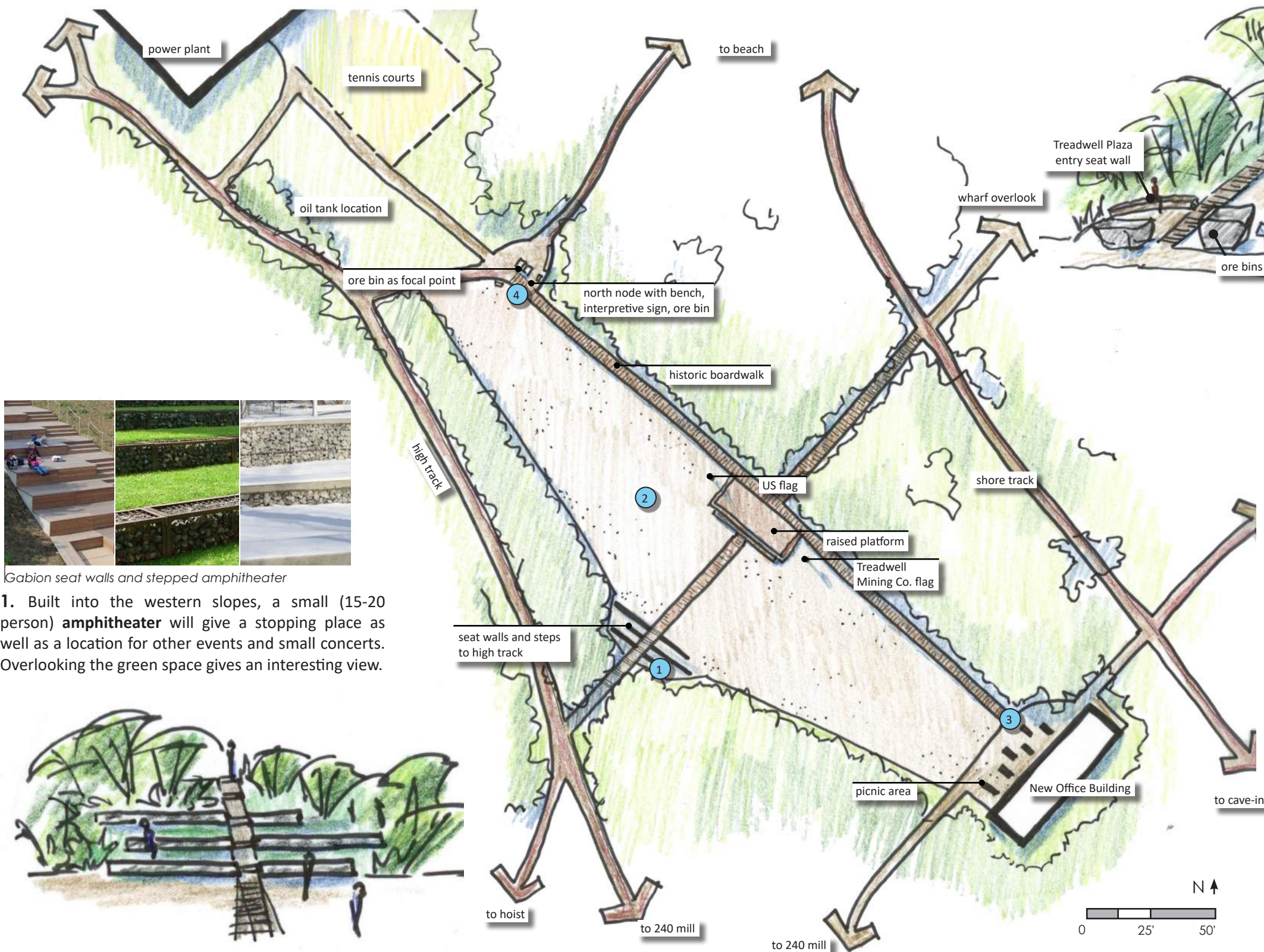


3. The hydro-electric power system, composed of scattered poles and wires leading to the transformer house, will be brought to light by reestablishing poles along the historic lines and adding interpretive signage to explain the succession of different power systems.



TREADWELL PLAZA

Treadwell Plaza provides a unique opportunity for both active and passive use as well as further interpretation. With large machinery and artifacts to mark locations, the newly renovated office building, and spaces programmed for activities, visitors will find this a destination in the center of the complex. Reminiscent of the original use, visitors will gather on the slopes and in the plaza for events as well as family get-togethers, quiet reading, conversations, games, and more.



Gabion seat walls and stepped amphitheater

1. Built into the western slopes, a small (15-20 person) **amphitheater** will give a stopping place as well as a location for other events and small concerts. Overlooking the green space gives an interesting view.



2. Active use would be in a large open **plaza space**, near the amphitheater, that can be used for activities such as soccer, frisbee, and races. Together with the amphitheater, it would provide an excellent opportunity for events throughout the year.



Sack racing in plaza

3. Passive use would be in **picnic areas** and **resting areas**. These are located at the southern end by the New Office Building and foundations of the store and also at the north end near the ore bins.

4. THP&RS has expressed interest in an **outdoor museum**, in which the plaza houses large artifacts and equipment. This would include replanting a US flag and a replica of the Treadwell Mining Co. flag, and placing an ore bin on the north rail spur.

IMPLEMENTATION STRATEGIES

In discussion with the Treadwell Historic Preservation and Restoration Society, these strategies provide a framework moving forward to implement this plan with the City and Borough of Juneau.

PHASE ONE: TRAILS

The trail alignment will require the removal of old trails, and construction of new trails, meaning vegetation removal, grading, acquiring materials, and building the four path types.

PHASE TWO: PLAZA

The Treadwell Plaza requires a high amount of construction in order to remove vegetation, reconstruct the historic boardwalk, and implement the addition of the stepped amphitheater and platform key areas.

PHASE THREE: INTERPRETATION

The installment of the "solid water" and resetting of power line poles should follow other rehabilitation. Additional interpretive signs can also be installed.

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This work has drawn from these sources:

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Tharp, Margaret. Savikko Park/Sandy Beach/Treadwell Mine Historic Trail Master Plan, 2007.

(TO BE DETERMINED WITH THP&RS)