



# **Coal Creek Camp**

## **YUKON-CHARLEY RIVERS NATIONAL PRESERVE, ALASKA**

### **HISTORIC STRUCTURE REPORT**



Front Cover:  
Coal Creek Camp looking north, photo by Hennebery Eddy Architects.

**NPS Task Order #140P2021F0185**  
**April 2022**

**Project Address:**  
Coal Creek Camp  
Coal Creek Camp Historic Mining District  
Yukon-Charley Rivers National Preserve  
AHRS Site #CHR-089  
Cultural Landscape Inventory #100086

**Prepared for:**  
**Department of the Interior**  
**Unified Region 11 - Alaska**  
Contact: Grant Crosby, Senior Historical Architect  
240 West 5th Avenue  
Anchorage, AK 99501

**Project Team:**  
**Architect: Hennebery Eddy Architects**  
Contacts:  
Carin Carlson, Principal/Historical Architect  
Josette Katcha, Preservation Specialist  
921 SW Washington Street, Suite 250  
Portland, OR 97205

**Structural Engineer: KPFF**  
Contact: Jeff Diephuis  
111 SW Fifth Avenue, Suite 2500  
Portland, OR 97204

*Information in this publication may be copied and used, with the condition that full credit is given to the authors, their companies, and the National Park Service. Appropriate citations and bibliographic credits should be made for each use.*



# Table of Contents

|                                                        |      |
|--------------------------------------------------------|------|
| List of Figures                                        | 0.01 |
| Executive Summary                                      | 0.02 |
| Administrative Data                                    | 0.03 |
| <b>Part 1 - Developmental History</b>                  |      |
| <i>Historical Background and Context</i>               | 1.01 |
| <i>Chronology of Development and Use</i>               | 1.02 |
| <i>Physical Description</i>                            | 1.03 |
| <b>Part 2 - Treatment and Use</b>                      |      |
| <i>Treatment and Use</i>                               | 2.01 |
| <i>Requirements for Treatment</i>                      | 2.02 |
| <i>Treatment Recommendations</i>                       | 2.03 |
| <i>Assessment of Effect for Recommended Treatments</i> | 2.04 |
| <b>Part 3 - Record of Treatment</b>                    |      |
| <b>Appendix</b>                                        |      |

(page intentionally left blank)



## List of Images 0.01

Image 1: Looking northeast towards Bunkhouses 3, 4, and 5, 2021.

Image 2: National Park Service Map of Yukon-Charley Rivers National Preserve, showing Coal Creek Historic Mining District area circled.

Image 3: Coal Creek Historic Mining District map identifying all areas within the district, including Coal Creek Camp outlined in red. 2004 Cultural Landscape Inventory.

Image 4: Cultural Landscape Inventory map (2004) of Coal Creek Camp, identifying buildings and their locations within the Coal Creek Historic Mining District. For ease of elevation identification, project north is oriented slightly northeast of true north.

Image 5: Historic image of the Coal Creek valley with “thawing points” injecting air-temperature water into the ground to melt permafrost in advance of dredge operation, ca. 1934-1938. “Of Gold and Gravel, A Pictorial History,” Chris Allan, 2021.

Image 6: Map of Coal Creek and Woodchopper Creek Mining Camps. “Of Gold and Gravel, A Pictorial History,” Chris Allan, 2021.

Image 7: Dredge components being unloaded from a barge on the Yukon River shore, 1938. “Of Gold and Gravel, A Pictorial History,” Chris Allan, 2021.

Image 8: The completed dredge, floating in its own excavated pond, 1938. “Of Gold and Gravel, A Pictorial History,” Chris Allan, 2021.

Image 9: Coal Creek Camp bunkhouse, 1935. NPS.

Image 10: Construction of Coal Creek Camp on skids, ca. 1936. “Of Gold and Gravel, A Pictorial History,” Chris Allan, 2021.

Image 11: Coal Creek Camp Mess Hall in its current location shortly after NPS procurement, ca 1990. Historic American Engineering Record.

Image 12: Coal Creek Camp at its first location with the recently constructed dredge, 1938. Courtesy of Rasmusson Library, University of Alaska Fairbanks.

Image 13: Original log skid with abandoned towing cable at the Mess Hall, 2021.

Image 14: Bunkhouse with original beaverboard deteriorating at exterior, 1986, Historic American Building Survey..

Image 15: Looking northwest towards Bunkhouse 6 (right), Manager’s Office (left), and the Assay Office (background).

Image 16: 2004 Cultural Landscape Inventory map of Coal Creek Camp.

Image 17: View from the Upper Road looking south toward Coal Creek Camp.

Image 18: Typical permafrost upheaval, located at Bunkhouse 2.

Image 19: Electrical posts and above-ground wire extend to the bunkhouses at the east end of the site.

Image 20: Photovoltaic array mounted at the top of the hill to the north of the site.

Image 21: Oil tank located at the north elevation of the Laundry Building.

Image 22: 2021 Electrical Site Plan detailing proposed photovoltaic upgrades. Electrified buildings are infilled in black. Site plan provided by Design Alaska.

Image 23: 2004 Cultural Landscape Inventory map of Coal Creek Camp, with Bunkhouse 1 identified in orange and current view looking southeast at Bunkhouse 1.

Image 24: Corrugated metal roof with chimney and access ladder.

Image 25: Exposed eaves reveal skip sheathing.

Image 26: View of roof ridge from attic.

Image 27: Mild corrosion at corrugated metal roofing.

Image 28: Shed style entrance awning at north entry.

Image 29: Chimney is not braced and is leaning.

Image 30: South elevation plywood exterior sheathing with surface wear and patched penetrations.

Image 31: Rust staining at the east elevation below chimney location.

Image 32: Cribbing supports the southeast corner of the building.

Image 33: Replacement skid is warped and unstable.

Image 34: Detail view of batt-fiberglass insulation and chicken wire at underside of floor framing.

Image 35: Typical 6-lite hopper window. Window W1 is missing a muntin.

Image 36: Interior view of typical hopper window, supported by wood blocking.

Image 37: North elevation entry stair with moderate rot at stair treads.

Image 38: Hollow core entry door and wood frame screen.

Image 39: Wood shed at west elevation is leaning away from building and unstable.

Image 40: Severe plywood deterioration at the propane shed, west elevation.

Image 41: Looking south into the one-room interior.

Image 42: Detail of water damage at plywood ceiling.

Image 43: Batt-fiberglass insulation above ceiling in the attic.

Image 44: Wood barrel stove with surface corrosion and inadequate heat shielding at adjacent wall.

Image 45: Typical porcelain socket, one of two at ceiling.

Image 46: Smoke alarm.

Image 47: 2004 Cultural Landscape Inventory map of Coal Creek Camp, with Bunkhouse 2 identified in orange and current view looking southwest at Bunkhouse 2.

Image 48: Moderate corrosion of corrugated metal roofing at east elevation.

Image 49: Rot and cracking at east fascia board.

Image 50: Painted beadboard sheathing visible within the attic.

Image 51: North entrance awning with eave trim rot.

Image 52: Chimney projecting from the ridge with chimney cap, storm collar, and severe corrosion.

Image 53: Paint weathering at exterior drop siding. Lowermost boards have been replaced with new siding.

Image 54: Various cribbing supports log skids.

Image 55: Biogrowth at projecting log skid.

Image 56: Typical warped and torn window screen.

Image 57: Detail of wood stops that hold windows in place.

Image 58: Entry door with missing handleset.

Image 59: Entry stair settling into grade.

Image 60: Looking south into the one room interior with central wood stove.

Image 61: Chimney thimble at beadboard ceiling.

Image 62: Exposed framing and chimney at attic.

Image 63: Porcelain socket missing light bulb.

Image 64: Fire extinguisher mounted at north wall.

Image 65: 2004 Cultural Landscape Inventory map of Coal Creek Camp, with Bunkhouse 3 identified in orange and current view looking southeast at Bunkhouse 3.

Image 66: Mild corrosion, access ladder, and chimney projecting through ridge.

Image 67: View of skip sheathing and king posts in attic.

Image 68: North entrance awning.

Image 69: Rotting rafter tail at east elevation.

Image 70: Detail of chimney.

Image 71: Typical plywood exterior walls with vertical battens.

Image 72: Surface damage at the south elevation gable.

Image 73: Cribbing supports log skids.

Image 74: Permafrost melting with upheaval.

Image 75: Hopper window with paint deterioration at exterior.

Image 76: Typical hopper hardware with transom latch and chain stay.

Image 77: Five-panel wood entry door.

Image 78: Stringer rests on deteriorated wood sill.

Image 79: Interior view of bunkhouse.

Image 80: Plywood ceiling with battens, porcelain light socket, and ceiling thimble at chimney.

Image 81: Batt-fiberglass insulation in attic.

Image 82: Mild corrosion at barrel stove.

Image 83: Fire extinguisher mounted at north wall.

Image 84: 2004 Cultural Landscape Inventory map of Coal Creek Camp, with Bunkhouse 4 identified in orange and current view looking southeast at Bunkhouse 4.

Image 85: Bent and uplifting corrugated metal roofing.

Image 86: Detail of bargeboard with tongue and groove sheathing visible.

Image 87: Active biogrowth at north entry awning and associated trim rot.

Image 88: Deteriorating roof access ladder.

Image 89: Surface wear at exterior plywood.

Image 90: Moose and caribou antlers above north entry.

Image 91: Abandoned fuel line at south elevation.

Image 92: Surface rot at projecting log skids.

Image 93: Various cribbing supports log skids.

Image 94: Interior view of typical hopper window.

Image 95: Detail of transom latch with strike.

Image 96: Natural light is visible through lowermost panel of exterior door.

Image 97: North elevation entry stair.

Image 98: Interior view of bunkhouse.

Image 99: Plywood floors, walls, and ceiling, with built-in shelving.

Image 100: Mild corrosion at barrel stove.

Image 101: Porcelain socket with incandescent bulb.

Image 102: Smoke detector mount.

Image 103: 2004 Cultural Landscape Inventory map of Coal Creek Camp, with Bunkhouse 5 identified in orange and current view looking southeast at Bunkhouse 5.

Image 104: Mild corrosion at east elevation corrugated metal roofing.

Image 105: Fire damage surrounding chimney in attic.

Image 106: Cracked bargeboard at north elevation.

Image 107: North entry awning with active biogrowth and rot.

Image 108: Projecting chimney with storm collar and cap.

Image 109: Surface wear at exterior plywood sheathing, south elevation.

Image 110: Frieze board patched at east elevation.

Image 111: Weathered projecting log skids.

Image 112: Melting permafrost with cribbing supporting log skids.

Image 113: Detail of hopper window frame, with hopper sash resting in opening.

Image 114: Paper shim used to hold window closed.

Image 115: Entry door knob handleset.

Image 116: North entry stair.

Image 117: Wood shed at west elevation.



Image 118: Detail of failing rolled asphalt roof covering at wood shed.

Image 119: Interior view of bunkhouse.

Image 120: Water damage at plywood attic access hatch.

Image 121: Fire damage at roof framing surrounding chimney.

Image 122: Wood stove with inadequate heat shield at floor.

Image 123: Fire extinguisher.

Image 124: 2004 Cultural Landscape Inventory map of Coal Creek Camp, with Bunkhouse 6 identified in orange and current view looking northwest at Bunkhouse 6.

Image 125: Moderate corrosion at corrugated metal roofing surrounding chimney.

Image 126: Exposed tongue and groove sheathing at underside of primary roof and awning roof.

Image 127: South entrance awning.

Image 128: Fractured rafter tail at east elevation.

Image 129: Projecting chimney with storm collar and cap.

Image 130: Surface weathering at exterior plywood, north elevation.

Image 131: Detail of typical paint weather at exterior plywood and trim.

Image 132: Underside of building with log skid and cribbing.

Image 133: Detail of chicken wire, wire mesh, and batt-fiberglass insulation below floor framing.

Image 134: Hopper window with exterior screen and paint weathering.

Image 135: Interior view of hopper window with transom latch and chain stay.

Image 136: Delamination of exterior door upper panel.

Image 137: Warped wood shed at east elevation.

Image 138: Interior view of bunkhouse.

Image 139: Painted plywood floor.

Image 140: Wood stove with inadequate heat shield at floor.

Image 141: One of two propane sconces.

Image 142: One of two propane sconces.

Image 143: Interior view of entry door and fire extinguisher.

Image 144: 2004 Cultural Landscape Inventory map of Coal Creek Camp, with the Public Use Cabin identified in orange and current view looking northeast at the Public Use Cabin.

Image 145: Corrugated metal roof with project shed roofs at east entry and wood shed.

Image 146: Tongue and groove sheathing exposed at gable ends, with support brackets.

Image 147: Active rot at east elevation entry awning.

Image 148: Attic view with skip sheathing, building paper, and batt-fiberglass insulation visible.

Image 149: Chimney projecting at north elevation.

Image 150: Typical exterior plywood sheathing with vertical battens and corner boards.

Image 151: Mildew discoloration at north elevation plywood sheathing.

Image 152: Cribbing supports log skids at foundation.

Image 153: Projecting log skids are weathered.

Image 154: Typical hopper window with exterior screen. Window W1 is missing a muntin.

Image 155: Windows are nailed closed using wood blocking.

Image 156: Typical entry door and screen.

Image 157: Severe rot at west entry handrail.

Image 158: East entrance door with exterior delamination at upper panel.

Image 159: Wood shed roof with biogrowth.

Image 160: Severe rot at east entry handrail.

Image 161: Interior view of bunkhouse, looking east.

Image 162: Delamination and water damage at plywood ceiling surrounding chimney.

Image 163: Wood stove with corrugated metal radiation shield.

Image 164: Porcelain socket and missing bulb.

Image 165: Smoke alarm.

Image 166: 2004 Cultural Landscape Inventory map of Coal Creek Camp, with the Mess Hall identified in orange and current view looking northwest at the Mess Hall.

Image 167: North elevation with pantry and bunkroom additions.

Image 168: Paint weathering at roof cupola.

Image 169: Paint weathering at north elevation bargeboards.

Image 170: Wood rot at intersecting roofs at the west elevation.

Image 171: Moderate corrosion surrounding Mess Hall chimney projection. Chimney is not braced.

Image 172: Detail of exterior drop siding and paint weathering.

Image 173: Crawlspace below building, with wood framing at exterior skirting visible on left.

Image 174: Chamfered log skids at splice, with abandoned tow cable and support cribbing.

Image 175: Active wood rot at projecting log skid at east elevation.

Image 176: Two window sash ganged together to create one hopper window.

Image 177: Pantry window N1 infilled with plywood for security.

Image 178: Door D2, main entrance.

Image 179: Surface wear at door D1.

Image 180: Surface wear at door D4

Image 181: Severe wood rot at west elevation handrail.

Image 182: East elevation main entry stair.

Image 183: South elevation wood shed.

Image 184: Detail of Blazo can exterior light.

Image 185: Mess Hall floor plan with interior rooms identified.

Image 186: Painted plywood flooring in bunkroom.

Image 187: Surface wear at wood floor near main entrance in mess hall.

Image 188: V-groove siding at interior wall, with corrugated metal heat shield behind cookstoves.

Image 189: Gabled roof with plywood ceiling and exposed joist.

Image 190: Mess hall barrel stove with corrugated metal wall shield and v-crimp galvanized steel panel floor shield.

Image 191: Bunkroom stove with corrugated metal wall and floor shield.

Image 192: Original kitchen hatch, still in use.

Image 193: Rheem on-demand hot water heater.

Image 194: Commercial kitchen sinks.

Image 195: 2004 Cultural Landscape Inventory map of Coal Creek Camp, with the Laundry building identified in orange and current view looking northeast at the Laundry.

Image 196: Corrugated metal roof with mild corrosion and projecting chimney.

Image 197: Exposed eaves reveal painted tongue and groove sheathing at exterior.

Image 198: Bent corrugated metal siding at southwest corner revealing wood framing.

Image 199: Severe erosion at the west end of the building, with various cribbing and barrels used to support the building.

Image 200: Underside of building with detail of floor framing. Building is not insulated.

Image 201: Six-light window sash, installed sideways.

Image 202: North elevation window with metal bar installed across face. Wood trim is weathered.

Image 203: South entry screen door, severely weathered.

Image 204: South entry landing is unstable with wood rot.

Image 205: Painted plywood interior flooring.

Image 206: Plywood walls with battens. Sinks are wall-mounted on an interior partition separating the laundry room from shower rooms.

Image 207: Gabled ceiling with exposed joists and porcelain light sockets.

Image 208: Wall mounted on-demand hot water heater, not in use.

Image 209: View into shower stall.

Image 210: 2004 Cultural Landscape Inventory map of Coal Creek Camp, with the Manager's Office identified in orange and current view looking northwest at the Manager's Office.

Image 211: Roof ridge flashing replaced with sheet metal at north end.

Image 212: 1x6 plank sheathing visible at exposed eaves.

Image 213: Mild to moderate corrosion of corrugated metal roofing.

Image 214: Chimney projects from gable, with storm collar and cap.

Image 215: Typical paint failure at exterior drop siding.

Image 216: Projecting log skids are weathered.

Image 217: Wood cribbing supports log skids.

Image 218: Typical two-over-two wood double hung window with exterior screen.

Image 219: Fixed window assembly at east elevation.

Image 220: Detail of missing double hung sash ropes.

Image 221: Exterior four-panel wood door.

Image 222: South entry stair.

Image 223: Interior view of office looking north towards bunk rooms.

Image 224: West bunkroom has natural finish plywood walls and ceiling.

Image 225: Painted beadboard ceiling.

Image 226: Wood stove with corrugated metal heat shield.

Image 227: Surface conduit and porcelain socket light, missing bulb.

Image 228: Interior view of entry door and fire extinguisher.

Image 229: 2004 Cultural Landscape Inventory map of Coal Creek Camp, with the Assay Office identified in orange and current view looking west at the Assay Office and addition.

Image 230: Corrugated metal shed addition projects at the north.

Image 231: Detail view of skip sheathing and project rafter tails at north addition.

Image 232: Chimney projects from ridge at main building and is braced using cables.

Image 233: Corrugated metal siding is dented throughout.

Image 234: Remnants of door hardware at exterior corner board trim, evidence that wood trim was salvaged from another building.

Image 235: Wood skids and cribbing at south elevation, below entry stair.

Image 236: Wood sills are flashed in corrugated metal at the north addition.

Image 237: Typical hopper window, no exterior screen.

Image 238: Typical fixed sash at north addition, no trim.

Image 239: Surface weathering at entry door.

Image 240: Severe wood rot at entry stair.

Image 241: 2004 Cultural Landscape Inventory map of Coal Creek Camp, with the Maintenance Shed identified in orange and current view looking east at the Maintenance Shed.

Image 242: Natural finish bargeboards with surface weathering.

Image 243: Mosaic of painted tongue and groove sheathing as viewed from the interior.

Image 244: Corrugated metal siding is dented throughout.

Image 245: Corners are treated with wood nailers and wrapped corrugated metal.

Image 246: Minimal exposed log skids are visible at east elevation.

Image 247: Screened window opening at east elevation.

Image 248: West entry with surface deterioration at exterior.

Image 249: Entry ramp.

Image 250: Interior view looking east into building.

Image 251: Wood floor has surface wear and staining.

Image 252: Interior wood framed partition with chainlink fencing.

Image 253: 2004 Cultural Landscape Inventory map of Coal Creek Camp, with the Generator Shed identified in orange and current view looking northwest at the Generator Shed.

Image 254: Moderate corrosion and abandoned chimney hole at roof.

Image 255: Typical exterior siding with severe wood rot and active biogrowth. Siding is missing throughout.

Image 256: One panel of the original double door is rotting on the ground.

Image 257: Typical slope south of the bunkhouses showing south sides on cribbing.

Image 258: Bunkhouse #2 cribbing composed of dimensional lumber and stacked shims.

Image 259: Slope dropping down to the creek behind the Mess Hall (foreground) and Laundry building (distance).

Image 260: Decayed perimeter skirting supported directly on soil.

Image 261: Perimeter skirting or cripple wall supported directly on soil.

Image 262: Narrow stack of cribbing.



Image 263: Settled timber skid cribbing at Bunkhouse 1.

Image 264: Settled sawn log skid cribbing on disturbed soil at Bunkhouse 3.

Image 265: Settled sawn log skid cribbing on gravel at Bunkhouse 5.

Image 266: Unstable cribbing at Laundry building.

Image 267: Fuel oil tank at Laundry building.

Image 268: From the south end of Coal Creek Camp, looking north.

Image 269: Looking down the camp's entry road towards Bunkhouses 3, 4, and 5.

Image 270: 2004 Cultural Landscape Inventory map of Coal Creek Camp, with recommended locations for new wood storage sheds identified by red "x"s.

Image 271: Approaching Coal Creek Camp from the Lower Road, looking east.

Image 272: Recommended roof covering diagram.

Image 273: Exterior stair diagram.

Image 274: Recommended roof covering diagram.

Image 275: Exterior stair diagram.

Image 276: Recommended roof covering diagram.

Image 277: Exterior stair diagram.

Image 278: Recommended roof covering diagram.

Image 279: Exterior stair diagram.

Image 280: Recommended roof covering diagram.

Image 281: Exterior stair diagram.

Image 282: Recommended roof covering diagram.

Image 283: Exterior stair diagram.

Image 284: Recommended roof covering diagram.

Image 285: Exterior stair diagram.

Image 286: Exterior stair diagram.

Image 287: Recommended roof covering diagram.

Image 288: Exterior stair diagram.

Image 289: Recommended roof covering diagram.

Image 290: Exterior stair diagram.

Image 291: Recommended roof covering diagram.

Image 292: Exterior stair diagram.

Image 293: Recommended roof covering diagram.

Image 294: SK-1 Foundation recommendation sketch, KPFF Consulting Engineers

Image 295: SK-2 Alternative foundation recommendation sketch, KPFF Consulting Engineers

Image 296: SK-3 Laundry building foundation sketch, KPFF Consulting Engineers

Image 297: View looking west from the Mess Hall, 2021.



Image 1: Looking northeast towards Bunkhouses 3, 4, and 5, 2021.

### INTRODUCTION

A remotely located resource in the Yukon-Charley Rivers National Preserve, Coal Creek Camp contributes to the Coal Creek Historic Mining District approximately 69 miles northwest of Eagle and 40 miles southeast of Circle, Alaska. The district encompasses the final 8 miles of the Coal Creek valley where it meets the Yukon River. Coal Creek Camp includes 16 buildings, 13 of which are contributing to the historic district listed in the National Register of Historic Places by the National Park Service in 1995.

Coal Creek Camp's contributing buildings were originally constructed 8 miles upriver at Cheese Creek by Gold Placers Inc. between 1934-1936. The buildings were constructed on skids with the intention for the camp to relocate as mining efforts moved down river toward the Yukon River. The camp was relocated twice, once in 1941 and again in 1952 to its current location at Beaton Pup Creek, a tributary to Coal Creek. Contributing resources addressed in this report include:

- Mess Hall, 1936
- Maintenance Building, 1934
- Laundry Building, 1937
- Bunkhouse 1, 1940
- Bunkhouse 2, 1936

- Bunkhouse 3, 1935
- Bunkhouse 4, 1936
- Bunkhouse 5, 1936
- Bunkhouse 6, 1936
- General Manager's Office, 1935
- Assay Office, 1935
- Generator Shed, between 1935-1950
- Public Use Cabin, 1936

*Note: Building names in this report refer to the most recent documented names per the 2004 Cultural Landscape Inventory.*

In anticipation of planned system upgrades and park identified deferred maintenance needs, the National Park Service (NPS) commissioned this Historic Structure Report (HSR). This HSR will serve as a planning and management document for the Yukon-Charley Rivers National Preserve to inform future rehabilitation and maintenance projects at the site and 13 contributing buildings. It summarizes historical information, documents current conditions, and provides long-term stewardship recommendations and analysis in accordance with The Secretary of the Interior's Standards for the Treatment of Historic Properties.

## MAJOR FINDINGS

### ***Foundations***

Current foundation configurations vary widely with one end of the buildings on grade and the other cantilevering out over sloping grade and supported at corners by cribbing. Cribbing is composed of a variety of materials, has a narrow width to height ratio, and has continued to settle. The Laundry building has the tallest cribbing installation and overhangs the slope to the creek. Foundation stability presents the greatest observed seismic and life safety risk and should be prioritized for preservation of the resources.

### ***Attics***

Roof/ceiling construction and attic conditions vary. Cold attics have a vapor retarder (visqueen) and batt-fiberglass insulation directly above the ceiling, but only one building provides the ventilation required to allow for air circulation and avoid condensation forming. Leaks at stove pipe penetrations, an aging metal roof with corrosion at attachment locations, and gaps in the vapor retarder have resulted in moisture trapped in the attic spaces, wet insulation, and water damage to plywood ceiling panels.

Holistic treatment of attic issues should combine roofing, barrel stove chimney repairs, and a universally applicable approach to replacement of vapor retarders, insulation, and the addition of attic ventilation.

### ***Exterior Stairs***

Exterior wood stairs, including landings and railings, require universal replacement. Wood component conditions range from surface paint loss to severe rot. Treads are broken and surfaces are slippery when wet. Landings are either inadequately sized or do not exist. Railings are unstable with failing attachments. At several buildings, artificial grass mats have been

placed at bottom landings and have subsequently been absorbed by the surrounding grade.

Universal replacement of stairs with code compliant treads and landings, with stabilized railings, and slip resistant tread surfaces is required to address life safety concerns.

### ***Windows***

Windows are not weather tight and difficult or impossible to secure. The wood sash windows sit loosely in wood frames and operate as in-swing hoppers without hinges. Hardware is inconsistent, and a variety of wood stops and wedges are used to hold windows in place. Window hardware should be replaced where missing, with transom sash locks and strikes aligned for proper engagement. Interlocking spring bronze weatherstripping should be added to create a weather tight seal.

### ***Barrel Stoves***

Barrel stoves used inside any kind of structure need to be properly vented and protected against fire. Chimneys are a mix of salvaged pipe from dredge operations. Extra large metal thimbles are used to provide a fire stop and insulation shield at the ceiling and through the attics and roofs. These thimbles are missing or do not extend properly through ceilings. Stoves rest on a variety of heat shields, and adjacent combustible walls are inadequately protected. Replacing chimneys with NFPA-certified units and ensuring protection of any adjacent floor or wall finishes with non-combustible materials will improve the fire safety of the barrel stoves.

### ***Smoke Detectors***

Battery powered smoke detectors were observed in all buildings, but in most cases units had been removed from walls and batteries had been removed for seasonal testing. Fire extinguishers should

be provided in all buildings. Regular observation and maintenance of smoke detectors and fire extinguishers should be included in the camp managers responsibilities. Consideration should be given to hard-wiring smoke/CO2 detectors at electrified buildings for life safety and protection of the resources.

#### **PRIORITIZED TREATMENT RECOMMENDATIONS**

Treatment recommendations for each building are summarized in the following matrices. Treatments are organized by priority with a brief description of the scope. For further details and products, see the narrative in Part 2.

Treatments are prioritized based on the severity of the condition and urgency of repair. Efficiencies may be gained during execution of the work by grouping systems and components regardless of their priority.

## PRIORITIZED TREATMENT RECOMMENDATIONS SUMMARY

### Bunkhouse 1, FMSS #73324

#### Priority 1 - Critical (Immediate - Year Two)

| System     | Component       | Recommended Treatment                                                                             | Alternate                     |
|------------|-----------------|---------------------------------------------------------------------------------------------------|-------------------------------|
| Roof       | Roof Covering   | Replace corrugated metal roof, underlayment, sheathing, and roof structure where required in-kind | Repair existing roof          |
| Roof       | Access Ladder   | Remove ladder                                                                                     |                               |
| Roof       | Entrance Awning | Replace mineral surface rolled roof and sheathing. Install ice and water shield.                  |                               |
| Chimney    | Chimney         | Replace chimney with NFPA-approved insulated chimney and components                               | Relocate and replace          |
| Foundation | Cribbing        | Replace cribbing                                                                                  |                               |
| Attic      | Insulation      | Replace insulation and vapor retarder, add ventilation                                            |                               |
| Wood Stove | Heat Shield     | Install heat shield on surfaces within 36" of stove                                               | Replace stove with drip stove |

#### Priority 2 - Necessary (Year Two - Year Five)

| System            | Component       | Recommended Treatment                                                       | Alternate                           |
|-------------------|-----------------|-----------------------------------------------------------------------------|-------------------------------------|
| Roof              | Entrance Awning | Replace trim                                                                |                                     |
| Roof              | Wood Components | Prep and paint all painted wood components and trim                         |                                     |
| Exterior Walls    | Plywood         | Replace south elevation panel                                               |                                     |
| Exterior Walls    | Plywood         | Prep and paint all plywood                                                  |                                     |
| Exterior Walls    | Trim            | Prep and paint all painted wood components and trim                         |                                     |
| Windows           | Windows         | Replace glazing compound, repair all wood surface deterioration and repaint | Install storm windows               |
| Windows           | Hardware        | Install hopper sash locks and chain stays                                   |                                     |
| Exterior Door     | Door            | Repair all wood surface deterioration and repaint                           | Install weatherstrip and door sweep |
| Exterior Door     | Screen          | Replace screen                                                              |                                     |
| Entry Stair       | Stair           | Construct new code-compliant stair, landing, and handrail                   |                                     |
| Wood Shed         | Wood Shed       | Reconstruct wood shed and brace                                             |                                     |
| Interior Finishes | Ceiling         | Replace plywood panels surrounding stove pipe                               |                                     |
| Wood Stove        | Stove           | Clean corrosion and refinish with rust-inhibiting high heat black paint     |                                     |

#### Priority 3 - Recommended (Year Five - Year Ten)

| System            | Component    | Recommended Treatment                                    | Alternate                       |
|-------------------|--------------|----------------------------------------------------------|---------------------------------|
| Roof              | Wood Trim    | Replace rotting trim when rot exceeds 25% of trim length |                                 |
| Windows           | Weatherstrip | Install interlocking spring bronze weatherstrip          |                                 |
| Windows           | Curtains     | Install curtain rods and curtains                        |                                 |
| Propane Shed      | Propane Shed | Remove propane shed and patch exterior wall              | Reconstruct propane shed        |
| Cooking Stove     | Stove        | Remove cooking stove                                     | Retain and provide ventilation  |
| Interior Lighting | Lamps        | Replace incandescent with LEDs                           |                                 |
| Furnishings       | Furniture    | Provide new mattresses, dresser, chairs, and coat tree   | Provide additional dining table |

#### Maintenance - Cyclical

| System               | Component           | Recommended Treatment                                 | Frequency     |
|----------------------|---------------------|-------------------------------------------------------|---------------|
| Foundation           | Log Skids           | Cut back projecting log ends flush with building wall | As needed     |
| Interior Finishes    | Flooring            | Clean, prep, and paint                                | Every 7 years |
| Interior Finishes    | Walls               | Clean, prep, and paint                                | Every 7 years |
| Interior Finishes    | Ceilings            | Clean, prep, and paint                                | Every 7 years |
| Wood Stove           | Stove               | Clean and inspect stove                               | Seasonally    |
| Fire and Life Safety | Fire Extinguishers  | Monitor expiration dates                              | Annually      |
| Fire and Life Safety | Smoke Detectors     | Test and replace batteries                            | Annually      |
| Fire and Life Safety | Extinguishing Pucks | Provide fire extinguishing pucks and restock          | Annually      |

## PRIORITIZED TREATMENT RECOMMENDATIONS SUMMARY

### Bunkhouse 2, FMSS #73316

#### Priority 1 - Critical (Immediate - Year Two)

| System     | Component       | Recommended Treatment                                                                             | Alternate            |
|------------|-----------------|---------------------------------------------------------------------------------------------------|----------------------|
| Roof       | Roof Covering   | Replace corrugated metal roof, underlayment, sheathing, and roof structure where required in-kind | Repair existing roof |
| Roof       | Entrance Awning | Replace mineral surface rolled roof and sheathing. Install ice and water shield.                  |                      |
| Chimney    | Chimney         | Replace chimney with NFPA-approved insulated chimney and components                               |                      |
| Foundation | Cribbing        | Replace cribbing                                                                                  |                      |
| Attic      | Insulation      | Replace insulation and vapor retarder, add ventilation                                            |                      |
| Wood Stove | Heat Shield     | Install heat shield on surfaces within 36" of stove                                               |                      |

#### Priority 2 - Necessary (Year Two - Year Five)

| System         | Component       | Recommended Treatment                                                       | Alternate |
|----------------|-----------------|-----------------------------------------------------------------------------|-----------|
| Roof           | Entrance Awning | Replace trim                                                                |           |
| Roof           | Wood Components | Prep and paint all painted wood components and trim                         |           |
| Exterior Walls | Wood Siding     | Replace damaged siding with new                                             |           |
| Exterior Walls | Trim            | Replace cracked frieze board with new                                       |           |
| Exterior Walls | Wood Siding     | Prep and paint all painted wood components and trim                         |           |
| Windows        | Windows         | Replace glazing compound, repair all wood surface deterioration and repaint |           |
| Windows        | Hardware        | Install hopper sash locks and chain stays                                   |           |
| Exterior Door  | Door            | Repair all wood surface deterioration and repaint                           |           |
| Exterior Door  | Hardware        | Install new round knob handleset                                            |           |
| Exterior Door  | Screen          | Replace screen mesh                                                         |           |
| Entry Stair    | Stair           | Construct new code-compliant stair, landing, and handrail                   |           |
| Wood Shed      | Wood Shed       | Construct new wood shed                                                     |           |
| Wood Stove     | Stove           | Clean corrosion and refinish with rust-inhibiting high heat black paint     |           |

#### Priority 3 - Recommended (Year Five - Year Ten)

| System      | Component    | Recommended Treatment                                    | Alternate |
|-------------|--------------|----------------------------------------------------------|-----------|
| Roof        | Wood Trim    | Replace rotting trim when rot exceeds 25% of trim length |           |
| Windows     | Weatherstrip | Install interlocking spring bronze weatherstrip          |           |
| Windows     | Curtains     | Install curtain rods and curtains                        |           |
| Furnishings | Furniture    | Provide new mattresses, dresser, chairs, and coat tree   |           |

#### Maintenance - Cyclical

| System               | Component           | Recommended Treatment                              | Frequency     |
|----------------------|---------------------|----------------------------------------------------|---------------|
| Foundation           | Log Skids           | Clean skids using D/2 Biological Solution          | Biannually    |
| Interior Finishes    | Flooring            | Clean, prep, and paint                             | Every 7 years |
| Interior Finishes    | Walls               | Clean, prep, and paint                             | Every 7 years |
| Interior Finishes    | Ceilings            | Clean, prep, and paint                             | Every 7 years |
| Wood Stove           | Stove               | Clean and inspect stove                            | Seasonally    |
| Interior Lighting    | Lamps               | Install incandescent salvaged from other buildings |               |
| Fire and Life Safety | Fire Extinguishers  | Monitor expiration dates                           | Annually      |
| Fire and Life Safety | Smoke Detectors     | Test and replace batteries                         | Annually      |
| Fire and Life Safety | Extinguishing Pucks | Provide fire extinguishing pucks and restock       | Annually      |



## PRIORITIZED TREATMENT RECOMMENDATIONS SUMMARY

### Bunkhouse 3, FMSS #73313

#### Priority 1 - Critical (Immediate - Year Two)

| System     | Component       | Recommended Treatment                                                                             | Alternate            |
|------------|-----------------|---------------------------------------------------------------------------------------------------|----------------------|
| Roof       | Roof Covering   | Replace corrugated metal roof, underlayment, sheathing, and roof structure where required in-kind | Repair existing roof |
| Roof       | Access Ladder   | Remove ladder                                                                                     |                      |
| Roof       | Entrance Awning | Replace mineral surface rolled roof and sheathing. Install ice and water shield.                  |                      |
| Chimney    | Chimney         | Replace chimney with NFPA-approved insulated chimney and components                               |                      |
| Foundation | Cribbing        | Replace cribbing                                                                                  |                      |
| Attic      | Insulation      | Replace insulation and vapor retarder, add ventilation                                            |                      |
| Wood Stove | Heat Shield     | Install heat shield on surfaces within 36" of stove                                               |                      |

#### Priority 2 - Necessary (Year Two - Year Five)

| System         | Component       | Recommended Treatment                                                       | Alternate |
|----------------|-----------------|-----------------------------------------------------------------------------|-----------|
| Roof           | Entrance Awning | Replace trim                                                                |           |
| Roof           | Wood Components | Prep and paint all painted wood components and trim                         |           |
| Exterior Walls | Plywood         | Replace south elevation panel                                               |           |
| Exterior Walls | Plywood         | Prep and paint all plywood                                                  |           |
| Exterior Walls | Trim            | Prep and paint all painted wood components and trim                         |           |
| Windows        | Windows         | Replace glazing compound, repair all wood surface deterioration and repaint |           |
| Windows        | Hardware        | Install hopper sash locks and chain stays                                   |           |
| Exterior Door  | Door            | Repair all wood surface deterioration and repaint                           |           |
| Exterior Door  | Hardware        | Install new round knob handleset                                            |           |
| Exterior Door  | Screen          | Replace screen mesh                                                         |           |
| Entry Stair    | Stair           | Construct new code-compliant stair, landing, and handrail                   |           |
| Wood Shed      | Wood Shed       | Construct new wood shed                                                     |           |
| Wood Stove     | Stove           | Clean corrosion and refinish with rust-inhibiting high heat black paint     |           |

#### Priority 3 - Recommended (Year Five - Year Ten)

| System      | Component    | Recommended Treatment                                  | Alternate |
|-------------|--------------|--------------------------------------------------------|-----------|
| Windows     | Weatherstrip | Install interlocking spring bronze weatherstrip        |           |
| Windows     | Curtains     | Install curtain rods and curtains                      |           |
| Furnishings | Furniture    | Provide new mattresses, dresser, chairs, and coat tree |           |

#### Maintenance - Cyclical

| System               | Component           | Recommended Treatment                              | Frequency     |
|----------------------|---------------------|----------------------------------------------------|---------------|
| Foundation           | Log Skids           | Clean skids using D/2 Biological Solution          | Biannually    |
| Interior Finishes    | Flooring            | Clean, prep, and paint                             | Every 7 years |
| Interior Finishes    | Walls               | Clean, prep, and paint                             | Every 7 years |
| Interior Finishes    | Ceilings            | Clean, prep, and paint                             | Every 7 years |
| Wood Stove           | Stove               | Clean and inspect stove                            | Seasonally    |
| Interior Lighting    | Lamps               | Install incandescent salvaged from other buildings |               |
| Fire and Life Safety | Fire Extinguishers  | Monitor expiration dates                           | Annually      |
| Fire and Life Safety | Smoke Detectors     | Test and replace batteries                         | Annually      |
| Fire and Life Safety | Extinguishing Pucks | Provide fire extinguishing pucks and restock       | Annually      |



## PRIORITIZED TREATMENT RECOMMENDATIONS SUMMARY

### Bunkhouse 4, FMSS #73312

#### Priority 1 - Critical (Immediate - Year Two)

| System     | Component       | Recommended Treatment                                                                             | Alternate            |
|------------|-----------------|---------------------------------------------------------------------------------------------------|----------------------|
| Roof       | Roof Covering   | Replace corrugated metal roof, underlayment, sheathing, and roof structure where required in-kind | Repair existing roof |
| Roof       | Access Ladder   | Remove ladder                                                                                     |                      |
| Roof       | Entrance Awning | Replace mineral surface rolled roof and sheathing. Install ice and water shield.                  |                      |
| Chimney    | Chimney         | Replace chimney with NFPA-approved insulated chimney and components                               |                      |
| Foundation | Cribbing        | Replace cribbing                                                                                  |                      |
| Attic      | Insulation      | Replace insulation and vapor retarder, add ventilation                                            |                      |
| Wood Stove | Heat Shield     | Install heat shield on surfaces within 36" of stove                                               |                      |

#### Priority 2 - Necessary (Year Two - Year Five)

| System         | Component       | Recommended Treatment                                                       | Alternate |
|----------------|-----------------|-----------------------------------------------------------------------------|-----------|
| Roof           | Entrance Awning | Replace trim                                                                |           |
| Roof           | Wood Components | Prep and paint all painted wood components and trim                         |           |
| Exterior Walls | Plywood         | Prep and paint all plywood                                                  |           |
| Exterior Walls | Trim            | Prep and paint all painted wood components and trim                         |           |
| Windows        | Windows         | Replace glazing compound, repair all wood surface deterioration and repaint |           |
| Windows        | Hardware        | Install hopper sash locks and chain stays                                   |           |
| Exterior Door  | Door            | Repair all wood surface deterioration and repaint                           |           |
| Exterior Door  | Hardware        | Install new round knob handleset                                            |           |
| Exterior Door  | Screen          | Replace screen mesh                                                         |           |
| Entry Stair    | Stair           | Construct new code-compliant stair, landing, and handrail                   |           |
| Wood Shed      | Wood Shed       | Construct new wood shed                                                     |           |
| Wood Stove     | Stove           | Clean corrosion and refinish with rust-inhibiting high heat black paint     |           |

#### Priority 3 - Recommended (Year Five - Year Ten)

| System      | Component    | Recommended Treatment                                  | Alternate |
|-------------|--------------|--------------------------------------------------------|-----------|
| Windows     | Weatherstrip | Install interlocking spring bronze weatherstrip        |           |
| Windows     | Curtains     | Install curtain rods and curtains                      |           |
| Furnishings | Furniture    | Provide new mattresses, dresser, chairs, and coat tree |           |

#### Maintenance - Cyclical

| System               | Component           | Recommended Treatment                                 | Frequency     |
|----------------------|---------------------|-------------------------------------------------------|---------------|
| Foundation           | Log Skids           | Cut back projecting log ends flush with building wall | As needed     |
| Interior Finishes    | Flooring            | Clean, prep, and paint                                | Every 7 years |
| Interior Finishes    | Walls               | Clean, prep, and paint                                | Every 7 years |
| Interior Finishes    | Ceilings            | Clean, prep, and paint                                | Every 7 years |
| Wood Stove           | Stove               | Clean and inspect stove                               | Seasonally    |
| Interior Lighting    | Lamps               | Install incandescents salvaged from other buildings   |               |
| Fire and Life Safety | Fire Extinguishers  | Monitor expiration dates                              | Annually      |
| Fire and Life Safety | Smoke Detectors     | Test and replace batteries                            | Annually      |
| Fire and Life Safety | Extinguishing Pucks | Provide fire extinguishing pucks and restock          | Annually      |

## PRIORITIZED TREATMENT RECOMMENDATIONS SUMMARY

### Bunkhouse 5, FMSS #73308

#### Priority 1 - Critical (Immediate - Year Two)

| System     | Component       | Recommended Treatment                                                                             | Alternate            |
|------------|-----------------|---------------------------------------------------------------------------------------------------|----------------------|
| Roof       | Roof Covering   | Replace corrugated metal roof, underlayment, sheathing, and roof structure where required in-kind | Repair existing roof |
| Roof       | Entrance Awning | Replace mineral surface rolled roof and sheathing. Install ice and water shield.                  |                      |
| Chimney    | Chimney         | Replace chimney with NFPA-approved insulated chimney and components                               |                      |
| Foundation | Cribbing        | Replace cribbing                                                                                  |                      |
| Windows    | Glazing         | Replace cracked pane                                                                              |                      |
| Attic      | Insulation      | Replace insulation and vapor retarder, add ventilation                                            |                      |
| Wood Stove | Heat Shield     | Install heat shield on surfaces within 36" of stove                                               |                      |

#### Priority 2 - Necessary (Year Two - Year Five)

| System            | Component       | Recommended Treatment                                                       | Alternate |
|-------------------|-----------------|-----------------------------------------------------------------------------|-----------|
| Roof              | Entrance Awning | Replace trim                                                                |           |
| Roof              | Wood Components | Prep and paint all painted wood components and trim                         |           |
| Exterior Walls    | Trim            | Replace frieze board                                                        |           |
| Exterior Walls    | Plywood         | Prep and paint all plywood                                                  |           |
| Exterior Walls    | Trim            | Prep and paint all painted wood components and trim                         |           |
| Windows           | Windows         | Replace glazing compound, repair all wood surface deterioration and repaint |           |
| Windows           | Hardware        | Install hopper sash locks and chain stays                                   |           |
| Exterior Door     | Door            | Repair all wood surface deterioration and repaint                           |           |
| Exterior Door     | Screen          | Replace screen mesh                                                         |           |
| Entry Stair       | Stair           | Construct new code-compliant stair, landing, and handrail                   |           |
| Wood Shed         | Wood Shed       | Construct new wood shed                                                     |           |
| Interior Finishes | Ceiling         | Replace plywood attic access hatch                                          |           |
| Wood Stove        | Stove           | Clean corrosion and refinish with rust-inhibiting high heat black paint     |           |

#### Priority 3 - Recommended (Year Five - Year Ten)

| System         | Component    | Recommended Treatment                                  | Alternate |
|----------------|--------------|--------------------------------------------------------|-----------|
| Roof           | Trim         | Replace bargeboards when rot exceeds 25%               |           |
| Exterior Walls | Trim         | Replace cornerboard when crack exceeds 25%             |           |
| Windows        | Weatherstrip | Install interlocking spring bronze weatherstrip        |           |
| Windows        | Curtains     | Install curtain rods and curtains                      |           |
| Furnishings    | Furniture    | Provide new mattresses, dresser, chairs, and coat tree |           |

#### Maintenance - Cyclical

| System               | Component           | Recommended Treatment                               | Frequency     |
|----------------------|---------------------|-----------------------------------------------------|---------------|
| Foundation           | Log Skids           | Clean with D/2 Biological Solution                  | As needed     |
| Interior Finishes    | Flooring            | Clean, prep, and paint                              | Every 7 years |
| Interior Finishes    | Walls               | Clean, prep, and paint                              | Every 7 years |
| Interior Finishes    | Ceiling             | Clean, prep, and paint                              | Every 7 years |
| Wood Stove           | Stove               | Clean and inspect stove                             | Seasonally    |
| Interior Lighting    | Lamps               | Install incandescents salvaged from other buildings |               |
| Fire and Life Safety | Fire Extinguishers  | Monitor expiration dates                            | Annually      |
| Fire and Life Safety | Smoke Detectors     | Test and replace batteries                          | Annually      |
| Fire and Life Safety | Extinguishing Pucks | Provide fire extinguishing pucks and restock        | Annually      |

## PRIORITIZED TREATMENT RECOMMENDATIONS SUMMARY

### Bunkhouse 6, FMSS #73320

#### Priority 1 - Critical (Immediate - Year Two)

| System      | Component       | Recommended Treatment                                                                             | Alternate            |
|-------------|-----------------|---------------------------------------------------------------------------------------------------|----------------------|
| Roof        | Roof Covering   | Replace corrugated metal roof, underlayment, sheathing, and roof structure where required in-kind | Repair existing roof |
| Roof        | Entrance Awning | Replace mineral surface rolled roof and sheathing. Install ice and water shield.                  |                      |
| Chimney     | Chimney         | Replace chimney with NFPA-approved insulated chimney and components                               |                      |
| Foundation  | Cribbing        | Replace cribbing                                                                                  |                      |
| Entry Stair | Stair           | Construct new code-compliant stair, landing, and handrail                                         |                      |
| Attic       | Insulation      | Replace insulation and vapor retarder, add ventilation                                            |                      |
| Wood Stove  | Stove           | Replace stove with barrel stove with flue damper and floor shield                                 |                      |
| Wood Stove  | Heat Shield     | Install heat shield on surfaces within 36" of stove                                               |                      |

#### Priority 2 - Necessary (Year Two - Year Five)

| System         | Component       | Recommended Treatment                                                       | Alternate |
|----------------|-----------------|-----------------------------------------------------------------------------|-----------|
| Roof           | Entrance Awning | Replace trim                                                                |           |
| Roof           | Wood Components | Prep and paint all painted wood components and trim                         |           |
| Exterior Walls | Plywood         | Replace panel at north elevation                                            |           |
| Exterior Walls | Plywood         | Prep and paint all plywood                                                  |           |
| Exterior Walls | Trim            | Prep and paint all painted wood components and trim                         |           |
| Windows        | Windows         | Replace glazing compound, repair all wood surface deterioration and repaint |           |
| Windows        | Hardware        | Install hopper sash locks and chain stays                                   |           |
| Exterior Door  | Door            | Replace door with new 2-panel solid wood door                               |           |
| Exterior Door  | Threshold       | Repair surface deterioration                                                |           |
| Exterior Door  | Screen          | Replace screen mesh                                                         |           |
| Wood Shed      | Wood Shed       | Construct new wood shed                                                     |           |

#### Priority 3 - Recommended (Year Five - Year Ten)

| System      | Component    | Recommended Treatment                                  | Alternate |
|-------------|--------------|--------------------------------------------------------|-----------|
| Windows     | Weatherstrip | Install interlocking spring bronze weatherstrip        |           |
| Windows     | Curtains     | Install curtain rods and curtains                      |           |
| Furnishings | Furniture    | Provide new mattresses, dresser, chairs, and coat tree |           |

#### Maintenance - Cyclical

| System               | Component           | Recommended Treatment                               | Frequency     |
|----------------------|---------------------|-----------------------------------------------------|---------------|
| Foundation           | Log Skids           | Clean with D/2 Biological Solution                  | As needed     |
| Interior Finishes    | Flooring            | Clean, prep, and paint                              | Every 7 years |
| Interior Finishes    | Walls               | Clean, prep, and paint                              | Every 7 years |
| Interior Finishes    | Ceiling             | Clean, prep, and paint                              | Every 7 years |
| Wood Stove           | Stove               | Clean and inspect stove                             | Seasonally    |
| Interior Lighting    | Lamps               | Install incandescents salvaged from other buildings |               |
| Fire and Life Safety | Fire Extinguishers  | Monitor expiration dates                            | Annually      |
| Fire and Life Safety | Smoke Detectors     | Test and replace batteries                          | Annually      |
| Fire and Life Safety | Extinguishing Pucks | Provide fire extinguishing pucks and restock        | Annually      |

## PRIORITIZED TREATMENT RECOMMENDATIONS SUMMARY

### Public Use Cabin, FMSS #73314

#### Priority 1 - Critical (Immediate - Year Two)

| System     | Component       | Recommended Treatment                                                                             | Alternate            |
|------------|-----------------|---------------------------------------------------------------------------------------------------|----------------------|
| Roof       | Roof Covering   | Replace corrugated metal roof, underlayment, sheathing, and roof structure where required in-kind | Repair existing roof |
| Roof       | Entrance Awning | Replace mineral surface rolled roof and sheathing. Install ice and water shield.                  |                      |
| Chimney    | Chimney         | Replace chimney with NFPA-approved insulated chimney and components                               |                      |
| Foundation | Cribbing        | Replace cribbing                                                                                  |                      |
| Attic      | Insulation      | Replace insulation and vapor retarder, add ventilation                                            |                      |
| Wood Stove | Heat Shield     | Install heat shield on surfaces within 36" of stove                                               |                      |

#### Priority 2 - Necessary (Year Two - Year Five)

| System            | Component       | Recommended Treatment                                                       | Alternate |
|-------------------|-----------------|-----------------------------------------------------------------------------|-----------|
| Roof              | Trim            | Replace cracked bracket at east elevation                                   |           |
| Roof              | Entrance Awning | Replace trim                                                                |           |
| Roof              | Wood Components | Prep and paint all painted wood components and trim                         |           |
| Exterior Walls    | Plywood         | Replace plywood panel at north elevation                                    |           |
| Exterior Walls    | Plywood         | Prep and paint all plywood                                                  |           |
| Exterior Walls    | Trim            | Prep and paint all painted wood components and trim                         |           |
| Windows           | Windows         | Replace glazing compound, repair all wood surface deterioration and repaint |           |
| Windows           | Hardware        | Install hopper sash locks and chain stays                                   |           |
| Exterior Door     | Doors           | Repair all wood surface deterioration at west door and repaint              |           |
| Exterior Door     | Doors           | Replace east door with 2-panel wood door                                    |           |
| Exterior Door     | Doors           | Replace screen mesh at both doors                                           |           |
| Entry Stair       | Stairs          | Construct two new code-compliant stairs, landings, and handrails            |           |
| Wood Shed         | Wood Shed       | Construct new wood shed                                                     |           |
| Interior Finishes | Ceiling         | Replace plywood surrounding stove pipe                                      |           |
| Wood Stove        | Stove           | Clean corrosion and refinish with rust-inhibiting high heat black paint     |           |

#### Priority 3 - Recommended (Year Five - Year Ten)

| System      | Component    | Recommended Treatment                                  | Alternate |
|-------------|--------------|--------------------------------------------------------|-----------|
| Windows     | Weatherstrip | Install interlocking spring bronze weatherstrip        |           |
| Windows     | Curtains     | Install curtain rods and curtains                      |           |
| Furnishings | Furniture    | Provide new mattresses, dresser, chairs, and coat tree |           |

#### Maintenance - Cyclical

| System               | Component           | Recommended Treatment                               | Frequency     |
|----------------------|---------------------|-----------------------------------------------------|---------------|
| Foundation           | Log Skids           | Clean with D/2 Biological Solution                  | As needed     |
| Interior Finishes    | Flooring            | Clean, prep, and paint                              | Every 7 years |
| Interior Finishes    | Walls               | Clean, prep, and paint                              | Every 7 years |
| Interior Finishes    | Ceiling             | Clean, prep, and paint                              | Every 7 years |
| Wood Stove           | Stove               | Clean and inspect stove                             | Seasonally    |
| Interior Lighting    | Lamps               | Install incandescents salvaged from other buildings |               |
| Fire and Life Safety | Fire Extinguishers  | Monitor expiration dates                            | Annually      |
| Fire and Life Safety | Smoke Detectors     | Test and replace batteries                          | Annually      |
| Fire and Life Safety | Extinguishing Pucks | Provide fire extinguishing pucks and restock        | Annually      |

## PRIORITIZED TREATMENT RECOMMENDATIONS SUMMARY

**Mess Hall, FMSS #73335**

### Priority 1 - Critical (Immediate - Year Two)

| System               | Component       | Recommended Treatment                                                    | Alternate |
|----------------------|-----------------|--------------------------------------------------------------------------|-----------|
| Chimneys             | Chimneys        | Replace (2) chimneys with NFPA-approved insulated chimney and components |           |
| Foundation           | Cribbing        | Replace cribbing                                                         |           |
| Foundation           | Log Skids       | Replace log skids with new skids                                         |           |
| Windows              | Glazing         | Replace broken glass pane                                                |           |
| Windows              | Windows         | Reinstall window sash S2 right side in                                   |           |
| Attic                | Insultaion      | Replace insulation and vapor retarder, add ventilation                   |           |
| Wood Stoves          | Heat Shields    | Install heat shield on surfaces within 36" of stove                      |           |
| Fire and Life Safety | Smoke Detectors | Install detectors in (3) new locations                                   |           |
| Fire and Life Safety | Cook stove      | Ventilate gas stove through cupola                                       |           |

### Priority 2 - Necessary (Year Two - Year Five)

| System            | Component       | Recommended Treatment                                                       | Alternate             |
|-------------------|-----------------|-----------------------------------------------------------------------------|-----------------------|
| Roof              | Wood Components | Prep and paint all painted wood components and trim                         |                       |
| Exterior Walls    | Wood Siding     | Prep and paint all painted wood components and trim                         |                       |
| Windows           | Windows         | Replace glazing compound, repair all wood surface deterioration and repaint | Install storm windows |
| Windows           | Hardware        | Install hopper sash locks and chain stays                                   |                       |
| Windows           | Screen          | Replace screen at window E3                                                 |                       |
| Exterior Door     | Doors           | Repair all wood surface deterioration and repaint at all doors              |                       |
| Exterior Door     | Doors           | Replace D2 east elevation door with new solid wood full-lite door           |                       |
| Entry Stair       | Stair           | Construct new code-compliant stair, landing, and handrail at main entry     |                       |
| Wood Shed         | Wood Shed       | Construct new wood shed                                                     |                       |
| Exterior Lighting | Blazo Cans      | Replace incandescents with LED bulbs                                        |                       |
| Interior Finishes | Flooring        | Replace mess hall room tongue and groove wood floor                         |                       |
| Wood Stoves       | Stoves          | Clean corrosion and refinish with rust-inhibiting high heat black paint     |                       |
| Interior Lighting | Lighting        | Replace incandescents with LED bulbs                                        |                       |

### Priority 3 - Recommended (Year Five - Year Ten)

| System      | Component     | Recommended Treatment                                          | Alternate |
|-------------|---------------|----------------------------------------------------------------|-----------|
| Roof        | Wood Trim     | Replace rotting bargeboard when rot exceeds 25% of trim length |           |
| Windows     | Weatherstrip  | Install interlocking spring bronze weatherstrip                |           |
| Windows     | Curtains      | Install curtain rods and curtains in bunkroom                  |           |
| Furnishings | Furniture     | Provide new desk, chairs, and coat tree                        |           |
| Furnishings | Kitchen hutch | Prep and paint all wood components                             |           |

### Maintenance - Cyclical

| System               | Component           | Recommended Treatment                                                  | Frequency     |
|----------------------|---------------------|------------------------------------------------------------------------|---------------|
| Roof                 | Covering            | Monitor for damage                                                     | Annually      |
| Foundation           | Log Skids           | Cut back deterioration at projecting log ends flush with building wall | As needed     |
| Exterior Lighting    | Blazo Cans          | Maintain blazo can lights and replace bulbs as needed                  |               |
| Interior Finishes    | Flooring            | Clean, prep, and paint                                                 | Every 7 years |
| Interior Finishes    | Walls               | Clean, prep, and paint                                                 | Every 7 years |
| Interior Finishes    | Ceilings            | Clean, prep, and paint                                                 | Every 7 years |
| Wood Stoves          | Stoves              | Clean and inspect stove                                                | Seasonally    |
| Fire and Life Safety | Fire Extinguishers  | Monitor expiration dates                                               | Annually      |
| Fire and Life Safety | Smoke Detectors     | Test and replace batteries                                             | Annually      |
| Fire and Life Safety | Extinguishing Pucks | Provide fire extinguishing pucks and restock                           | Annually      |

## PRIORITIZED TREATMENT RECOMMENDATIONS SUMMARY

### Laundry, FMSS #73336

#### Priority 1 - Critical (Immediate - Year Two)

| System               | Component       | Recommended Treatment                                                                             | Alternate            |
|----------------------|-----------------|---------------------------------------------------------------------------------------------------|----------------------|
| Roof                 | Roof Covering   | Replace corrugated metal roof, underlayment, sheathing, and roof structure where required in-kind | Repair existing roof |
| Foundation           | Cribbing        | Replace cribbing                                                                                  |                      |
| Foundation           | Log Skids       | Replace log skids with new skids                                                                  |                      |
| Entry Stair          | Stair           | Construct new code-compliant stair, landing, and handrail                                         |                      |
| Oil Tank             | Oil Tank        | Remove oil tank and dispose per hazardous waste standards                                         |                      |
| Fire and Life Safety | Smoke Detectors | Install new smoke detector                                                                        |                      |

#### Priority 2 - Necessary (Year Two - Year Five)

| System            | Component    | Recommended Treatment                                                                               | Alternate |
|-------------------|--------------|-----------------------------------------------------------------------------------------------------|-----------|
| Exterior Walls    | Metal Siding | Remove, repair, and reinstall corrugated metal siding. Replace building paper and siding as needed. |           |
| Windows           | Windows      | Replace glazing compound, repair all wood surface deterioration and repaint                         |           |
| Windows           | Hardware     | Install hopper sash locks and chain stays                                                           |           |
| Exterior Door     | Door         | Install new hollow core wood door                                                                   |           |
| Exterior Door     | Screen       | Replace screen door                                                                                 |           |
| Interior Lighting | Lamps        | Replace incandescents with LEDs                                                                     |           |

#### Priority 3 - Recommended (Year Five - Year Ten)

| System         | Component    | Recommended Treatment                               | Alternate |
|----------------|--------------|-----------------------------------------------------|-----------|
| Roof           | Trim         | Replace bargeboards and fascia when rot exceeds 25% |           |
| Exterior Walls | Trim         | Replace window and door trim                        |           |
| Windows        | Weatherstrip | Install interlocking spring bronze weatherstrip     |           |
| Oil Tank       | Drip Heater  | Decommission and retain for interpretation          |           |

#### Maintenance - Cyclical

| System               | Component          | Recommended Treatment                                  | Frequency     |
|----------------------|--------------------|--------------------------------------------------------|---------------|
| Foundation           | Log Skids          | Cut back projecting log skids flush with building wall | As needed     |
| Interior Finishes    | Flooring           | Clean, prep, and paint                                 | Every 7 years |
| Interior Finishes    | Walls              | Clean, prep, and paint                                 | Every 7 years |
| Interior Finishes    | Ceiling            | Clean, prep, and paint                                 | Every 7 years |
| Fire and Life Safety | Fire Extinguishers | Monitor expiration dates                               | Annually      |
| Fire and Life Safety | Smoke Detectors    | Test and replace batteries                             | Annually      |



## PRIORITIZED TREATMENT RECOMMENDATIONS SUMMARY

### Manager's Office, FMSS #73327

#### Priority 1 - Critical (Immediate - Year Two)

| System     | Component     | Recommended Treatment                                                                             | Alternate            |
|------------|---------------|---------------------------------------------------------------------------------------------------|----------------------|
| Roof       | Roof Covering | Replace corrugated metal roof, underlayment, sheathing, and roof structure where required in-kind | Repair existing roof |
| Chimney    | Chimney       | Replace chimney with NFPA-approved insulated chimney and components                               |                      |
| Foundation | Cribbing      | Replace cribbing                                                                                  |                      |
| Wood Stove | Heat Shield   | Install heat shield on surfaces within 36" of stove                                               |                      |

#### Priority 2 - Necessary (Year Two - Year Five)

| System            | Component       | Recommended Treatment                                                       | Alternate |
|-------------------|-----------------|-----------------------------------------------------------------------------|-----------|
| Roof              | Wood Components | Prep and paint all painted wood components and trim                         |           |
| Exterior Walls    | Wood Siding     | Prep and paint all painted wood components and trim                         |           |
| Windows           | Windows         | Replace glazing compound, repair all wood surface deterioration and repaint |           |
| Windows           | Hardware        | Install hopper sash locks and chain stays                                   |           |
| Exterior Door     | Door            | Repair all wood surface deterioration and repaint                           |           |
| Exterior Lighting | Lighting        | Replace incandescent bulbs with LEDs                                        |           |
| Entry Stair       | Stair           | Construct new code-compliant stair, landing, and handrail                   |           |
| Wood Stove        | Stove           | Clean corrosion and refinish with rust-inhibiting high heat black paint     |           |

#### Priority 3 - Recommended (Year Five - Year Ten)

| System      | Component    | Recommended Treatment                                    | Alternate |
|-------------|--------------|----------------------------------------------------------|-----------|
| Roof        | Wood Trim    | Replace rotting trim when rot exceeds 25% of trim length |           |
| Windows     | Weatherstrip | Install interlocking spring bronze weatherstrip          |           |
| Windows     | Curtains     | Install curtain rods and curtains                        |           |
| Furnishings | Furniture    | Provide new mattresses                                   |           |

#### Maintenance - Cyclical

| System               | Component           | Recommended Treatment                               | Frequency     |
|----------------------|---------------------|-----------------------------------------------------|---------------|
| Foundation           | Log Skids           | Clean skids using D/2 Biological Solution           | Biannually    |
| Interior Finishes    | Flooring            | Clean, prep, and paint                              | Every 7 years |
| Interior Finishes    | Walls               | Clean, prep, and paint                              | Every 7 years |
| Interior Finishes    | Ceilings            | Clean, prep, and paint                              | Every 7 years |
| Wood Stove           | Stove               | Clean and inspect stove                             | Seasonally    |
| Interior Lighting    | Lamps               | Install incandescents salvaged from other buildings |               |
| Fire and Life Safety | Fire Extinguishers  | Monitor expiration dates                            | Annually      |
| Fire and Life Safety | Smoke Detectors     | Test and replace batteries                          | Annually      |
| Fire and Life Safety | Extinguishing Pucks | Provide fire extinguishing pucks and restock        | Annually      |

## PRIORITIZED TREATMENT RECOMMENDATIONS SUMMARY

### Generator Shed, FMSS #73332

#### Priority 1 - Critical (Immediate - Year Two)

| System         | Component        | Recommended Treatment                                                                             | Alternate |
|----------------|------------------|---------------------------------------------------------------------------------------------------|-----------|
| Roof           | Roof Covering    | Replace corrugated metal roof, underlayment, sheathing, and roof structure where required in-kind |           |
| Exterior Walls | Walls and Siding | Reconstruct exterior walls and wood plank siding to match existing                                |           |
| Foundation     | Sills            | Replace wood wills with pressure treated lumber                                                   |           |
| Exterior Door  | Door             | Replace exterior double door                                                                      |           |

## PRIORITIZED TREATMENT RECOMMENDATIONS SUMMARY

### Assay Office, FMSS #73329

#### Priority 1 - Critical (Immediate - Year Two)

| System     | Component     | Recommended Treatment                                                                             | Alternate            |
|------------|---------------|---------------------------------------------------------------------------------------------------|----------------------|
| Roof       | Roof Covering | Replace corrugated metal roof, underlayment, sheathing, and roof structure where required in-kind | Repair existing roof |
| Foundation | Cribbing      | Replace cribbing                                                                                  |                      |
| Foundation | Log Skids     | Replace log skids with new skids                                                                  |                      |

#### Priority 2 - Necessary (Year Two - Year Five)

| System         | Component       | Recommended Treatment                                                                               | Alternate |
|----------------|-----------------|-----------------------------------------------------------------------------------------------------|-----------|
| Roof           | Wood Components | Prep and paint all painted wood components and trim                                                 |           |
| Chimney        | Chimney         | Install storm collar and chimney cap                                                                |           |
| Exterior Walls | Plywood         | Prep and paint all plywood                                                                          |           |
| Exterior Walls | Wood Trim       | Prep and paint all painted wood components and trim                                                 |           |
| Exterior Walls | Metal Siding    | Remove, repair, and reinstall corrugated metal siding. Replace building paper and siding as needed. |           |
| Windows        | Windows         | Replace glazing compound, repair all wood surface deterioration and repaint                         |           |
| Exterior Door  | Door            | Repair all wood surface deterioration and repaint                                                   |           |
| Entry Stair    | Stair           | Construct new code-compliant stair, landing, and handrail                                           |           |

#### Maintenance - Cyclical

| System     | Component | Recommended Treatment                                  | Frequency |
|------------|-----------|--------------------------------------------------------|-----------|
| Foundation | Log Skids | Cut back projecting log skids flush with building wall | As needed |

## PRIORITIZED TREATMENT RECOMMENDATIONS SUMMARY

### Maintenance Shed, FMSS #73325

#### Priority 1 - Critical (Immediate - Year Two)

| System     | Component | Recommended Treatment            | Alternate |
|------------|-----------|----------------------------------|-----------|
| Foundation | Cribbing  | Replace cribbing                 |           |
| Foundation | Log Skids | Replace log skids with new skids |           |

#### Priority 2 - Necessary (Year Two - Year Five)

| System            | Component | Recommended Treatment                     | Alternate |
|-------------------|-----------|-------------------------------------------|-----------|
| Exterior Door     | Door      | Repair surface deterioration and refinish |           |
| Entry Ramp        | Ramp      | Replace ramp to match existing            |           |
| Interior Lighting | Lamps     | Replace incandescents with LEDs           |           |

#### Priority 3 - Recommended (Year Five - Year Ten)

| System | Component | Recommended Treatment                               | Alternate |
|--------|-----------|-----------------------------------------------------|-----------|
| Roof   | Trim      | Replace bargeboards and fascia when rot exceeds 25% |           |

#### Maintenance - Cyclical

| System               | Component          | Recommended Treatment      | Frequency |
|----------------------|--------------------|----------------------------|-----------|
| Fire and Life Safety | Fire Extinguishers | Monitor expiration dates   | Annually  |
| Fire and Life Safety | Smoke Detectors    | Test and replace batteries | Annually  |

## Administrative Data 0.03



Image 2: National Park Service Map of Yukon-Charley Rivers National Preserve, showing Coal Creek Historic Mining District area circled.

### LOCATION & DISTRICT DATA

|                        |                                               |
|------------------------|-----------------------------------------------|
| Park Name:             | Yukon-Charley Rivers National Preserve (YUCH) |
| Area:                  | Coal Creek Historic Mining District           |
| Resource Name:         | Coal Creek Camp                               |
| Historic Name:         | Coal Creek Mining Camp, Gold Placers, Inc.    |
| Coordinates:           | Lat: 65.30462032, Long: -143.17239373         |
| AHRS* #                | CHR-00089                                     |
| Dates of Construction: | 1934-1950                                     |
| Historic Function:     | Gold Mine Camp                                |
| Current Function:      | NPS Staff Accommodations and Public Use Cabin |

\*Alaska Heritage Resource Survey





Image 3: Coal Creek Historic Mining District map identifying all areas within the district, including Coal Creek Camp outlined in red. 2004 Cultural Landscape Inventory.



## CONTRIBUTING BUILDINGS

The following buildings are contributing resources to the Coal Creek Historic Mining District and are included in this HSR. These buildings are referred to by different names in other historic research documents. The following table aligns building names between the Cultural Landscape Inventory (CLI), National Register nomination, and common names used on building signage on site. It also includes identification numbers for NPS's Facility Management System (FMSS), NPS's Cultural Resources Inventory System (CRIS-HS), and the Asset Priority Index (API) for each building. This HSR uses the names most recently used in the 2004 CLI.

| CLI Name         | National Register Name | FMSS # | CRIS-HS # | Common Name                 | API |
|------------------|------------------------|--------|-----------|-----------------------------|-----|
| Bunkhouse 1      | Recreation Hall        | 73324  | 35069     | Willie Juneby Cabin         | 46  |
| Bunkhouse 2      | Bunkhouse 6            | 73316  | 35070     | Elisha Lyman Cabin          | 54  |
| Bunkhouse 3      | Bunkhouse 3            | 73313  | 35071     | Jacob Malcom Cabin          | 54  |
| Bunkhouse 4      | Bunkhouse 2            | 73312  | 35072     | Harry David Cabin           | 54  |
| Bunkhouse 5      | Bunkhouse 1            | 73308  | 35073     | Arthur M. Shields Cabin     | 54  |
| Bunkhouse 6      | Bunkhouse 11           | 73320  | 35075     | Susie Paul Cabin            | 54  |
| Public Use Cabin | Bunkhouse 4            | 73314  | 35074     | Phil Berail Cabin           | 54  |
| Mess Hall        | Mess Hall              | 73335  | 35066     | Ernest Patty Cabin          | 54  |
| Laundry          | Laundry/Bathhouse      | 73336  | 35067     | Laundry and Shower Building | 54  |
| Manager's Office | Office                 | 73327  | 35076     | Manager's Office Cabin      | 58  |
| Assay Office     | Assay Office           | 73329  | 35077     | Assay Office Cabin          | 55  |
| Maintenance Shed | Storage Building       | 73325  | 35068     | Maintenance Shed            | 46  |
| Generator Shed   | Generator Shed         | 73332  | 35129     | Generator Shed              | 23  |

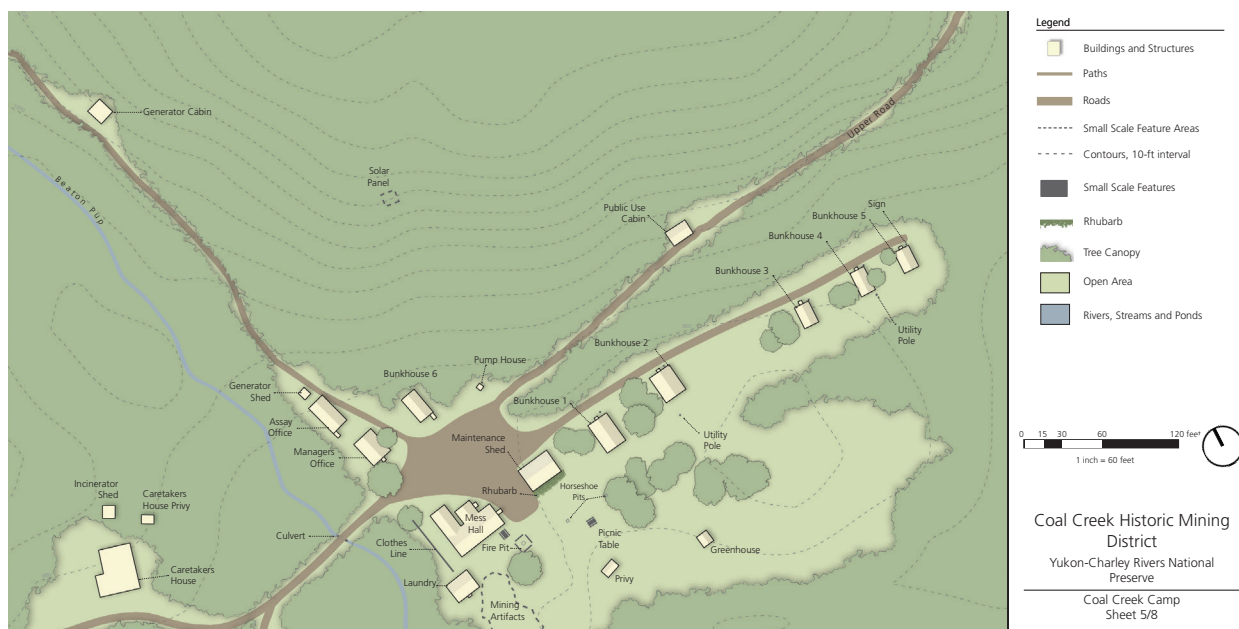


Image 4: Cultural Landscape Inventory map (2004) of Coal Creek Camp, identifying buildings and their locations within the Coal Creek Historic Mining District. For ease of elevation identification, project north is oriented slightly northeast of true north.

## ASSET PRIORITY INDEX (API)

The Department of the Interior (DOI) Asset Management Plan transitioned the Department and its Bureaus/offices from a project-centric to a portfolio-centric management approach. This transition was paired with performance measures within Facility Management such as the Facility Condition Index (FCI) and the Asset Priority Index (API), which provide park managers with metrics to make effective management decisions. Park managers use a matrix of FCI and API to determine which assets support mission critical roles and the condition of those assets.

The API is a balanced scorecard approach that allows park managers to compare the relative importance of facilities in relation to one another. This metric, in conjunction with other asset management considerations, can be used to create an overall asset management strategy. Including the API within a Historic Structure Report demonstrates the importance of these assets park-wide and helps prioritize future projects. It may also highlight where an API may need to be reevaluated if the historic significance of a structure or site has been reassessed while producing the HSR. In general, best practices in Facility Management will determine if a property with a Moderate (API of 12 -50) or Low (API <12) API score should be considered for excess or removal if the property's condition decreases.

## TREATMENT & USE

The 1987 Coal Creek Mining Camp Historic District Guide for Management recommended rehabilitation of the camp buildings for visitor and park use. In recent years, maintenance problems related to electricity, drinking water, road access, and communications have slowed operations at Coal Creek Camp. The purpose of this report is to plan for and guide appropriate treatments and repairs to continue operations.

Currently, the facility is used seasonally by park staff and consultants, with Bunkhouse 1/Juneby Cabin occupied year round. A public use cabin is available for public visitors. There are no current plans to change the use of any of the buildings or the site.

## CULTURAL RESOURCE DATA

### *Period and Level of Significance*

#### **Significance**

Coal Creek Camp was listed in the National Register of Historic Places in 1995 as the Coal Creek Historic Mining District within Yukon-Charley Rivers National Preserve. The district is significant at the state level under the umbrella of the Yukon Lifeways Thematic Group Nomination. It is significant under Criteria A and B in the areas of Industry and Engineering.

#### **Criterion A**

Coal Creek Camp is a significant 20th century mining complex representing mid-century gold dredge mining on the upper Yukon.

#### **Criterion B**

The Coal Creek Camp is significant under Criterion B for its association with Ernest N. Patty. Patty was the dean and president of the University of Alaska, Fairbanks, and made contributions to education and mining in Alaska, including his break from academia to manage Gold Placer's, Inc and its Coal Creek Camp from 1937 to 1954.

#### **Period of Significance**

The period of significance for the Coal Creek Historic Mining District is 1934-1964. It begins with the consolidation of claims by Gold Placers Inc. and spans through a series of independent operators until 1964. Given that the Coal Creek Camp was relocated to its present site in 1951, the buildings and their location are deemed contributing to the district.



## RELATED EXISTING STUDIES

Studies of the Coal Creek Camp include:

- Gold Placers Incorporated (Historic American Engineering Record (HAER) Inventory), 1986, prepared by the NPS Alaska Regional Office.
- Coal Creek Historic Mining District Register of Historic Places Nomination, 1995, prepared by the NPS Alaska Regional Office.
- Cultural Landscape Inventory, Coal Creek Historic Mining District, Yukon-Charley Rivers National Preserve, 2008, prepared by the NPS Alaska Regional Office.
- A History of National Park Service Clean-up Efforts at the Historic Coal Creek Mining District, Natural Resource Report, 2015, prepared by Chris Allen of the National Park Service.
- Coal Creek Historic Mining District Alaska Heritage Resources Survey, 1988
- Coal Creek Historic Mining District Alaska Heritage Resources Survey, 1988
- A Guide for Management: Coal Creek Mining Camp Historic District, 1987

## REPORT ORGANIZATION

This HSR is organized in general accordance with the following NPS documents as applicable: NPS-28 Chapter 8: Management of Historic and Prehistoric Structures, Preservation Brief 43: The Preparation and Use of Historic Structure Reports, and the Denver Service Center (DSC) Workflow for HSRs.

An HSR is broken down into three parts:

- Part 1 - Developmental History includes the history and significance of the property and its changes over time. It concludes with identification of character-defining features and a complete description of all building and immediate site components and their conditions.
- Part 2 - Treatment and Use discusses the best overall treatment approach and appropriated uses. It identifies regulatory requirements and lists treatment recommendations that correspond directly with the building component descriptions. Alternative treatment options are included where applicable. Part 2 also includes an assessment of effect for treatment recommendations and alternatives.
- Part 3 - Record of Treatment documents projects completed under the guidance of this HSR and includes a summary of the work and associated technical data.

This HSR includes Parts 1 and 2 only. Part 3 documentation should be completed, including all information outlined in the DSC Workflow for Part 3, as work on the building is completed. This documentation should be appended to this report to maintain a complete building record.



(page intentionally left blank)

# PART 1

## DEVELOPMENTAL HISTORY

(page intentionally left blank)

## Historical Background and Context 1.01



Image 5: Historic image of the Coal Creek valley with “thawing points” injecting air-temperature water into the ground to melt permafrost in advance of dredge operation, ca. 1934-1938. “Of Gold and Gravel, A Pictorial History,” Chris Allan, 2021.

### DEVELOPMENTAL HISTORY + CONTEXT

Located at the heart of Yukon-Charley Rivers National Preserve, in Alaska’s eastern interior, Coal Creek Mining Camp is significant as a nearly intact placer mining site from the 1930s-1960s and an important piece of Alaska’s economic and social history. The site, which has been restored and is regularly used by NPS staff and others, includes bunkhouses, sheds, offices, and a mess hall that were transported to this location on log skids using Caterpillar-style tractors. This camp complex was relocated multiple times to remain close to the Gold Placers, Inc. gold dredge as it excavated and processed millions of tons of gravel along roughly six miles of the Coal Creek drainage.

#### **Alexander McRae and Ernest Patty**

Born in 1874 on his family’s farm in Ontario, Canada, Alexander Duncan McRae rose from humble beginnings to become one of Canada’s most successful businessmen and politicians. His fortune came early when he made aggressive investments in the lumber, salmon canning, and whaling industries. During World War I, he advanced to the rank of Major General, and when the war ended he entered politics, becoming a Member of Parliament and later a lifetime member of the Canadian Senate. By the early 1930s, when the Great Depression was in full

swing, McRae had systematically studied industries and tax structures around the world and decided that because gold held its value during the economic crisis, he would invest in the precious metal. Still, he was no mining expert and he needed guidance from someone who knew about Alaska’s mineral wealth. For this he turned to Ernest Patty who taught geology and mining at the Alaska Agricultural College and School of Mining in Fairbanks (later called the University of Alaska)<sup>1</sup>.

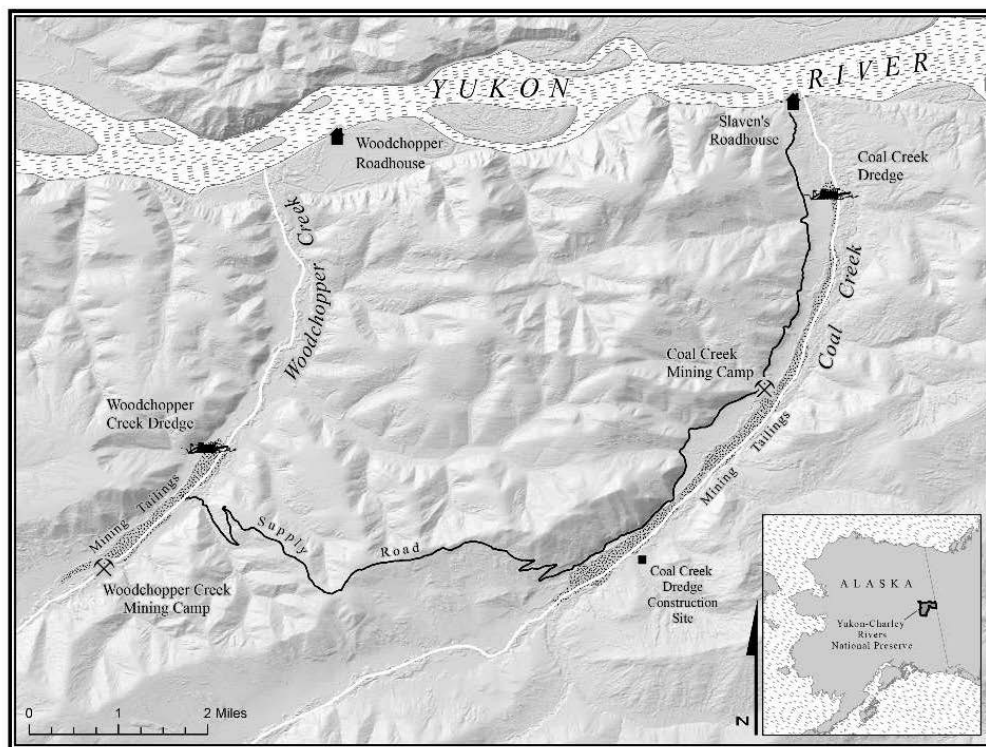
Initially McRae hired Patty for one month to look over possible mining properties, and after several disappointing visits to lode mining districts, the two men began considering placer mining<sup>2</sup> as an alternative. Coal Creek, along the Yukon River between the towns of Circle and Eagle, seemed to fit the bill and they began prospecting with churn drills to measure the amount of gold they might expect to unearth. McRae was impressed with the results and offered Patty the job managing the mine and acting as vice-president of a new mining company—Gold Placers, Inc. Eager to take on a new challenge, Patty resigned his position at the college and accepted the new job. He then began purchasing mining claims owned by Frank Slaven and others in the Coal Creek valley. Meanwhile, a well-known dredge designer named Charles Janin identified the requirements for

successful dredging at Coal Creek and searched for a manufacturer. The winning bid for the project came from the Walter W. Johnson Company in Oakland, California, for a medium-sized, four-cubic-foot bucket dredge with a steel pontoon hull that cost \$143,000, including delivery.<sup>3</sup>

In the coming years, McRae would leave Patty in charge of his mines, which in 1937 also included the neighboring Woodchopper Creek dredging operation. McRae did visit occasionally, but the Patty family, including Ernest's son Dale, ensured that the dredges remained in operation for the next twenty-five years.

### **Mine Operations and Coal Creek Camp**

In 1935, men and machinery began arriving at Coal Creek and preparations began for mining the following year. The workers built a six-mile-long road from the Yukon River to the site where the dredge would be assembled; they built camp buildings on skids that could move to follow the wandering dredge; and they built a two-mile-long ditch along the hillside above the camp to supply water for the process known as “stripping and thawing.” This preliminary work was essential for any dredging operation in the Far North because frozen ground would damage the dredges excavation buckets and cause serious delays.<sup>4</sup>



*Map by Martin Byrne, GIS Team, NPS Alaska Regional Office.*

Image 6: Map of Coal Creek and Woodchopper Creek Mining Camps. “Of Gold and Gravel, A Pictorial History,” Chris Allan, 2021.



Image 7: Dredge components being unloaded from a barge on the Yukon River shore, 1938. "Of Gold and Gravel, A Pictorial History," Chris Allan, 2021.

Meanwhile, the gold dredge was being assembled in California and then dismantled again for shipment northward. The parts weighed over 400 tons and had to be crated for shipment aboard a steamship to Skagway where they would be loaded onto the White Pass & Yukon Railroad for transport to Whitehorse in the Yukon Territory. From Whitehorse the parts were loaded on barges and pushed by paddle wheel steamboat down river to the mouth of Coal Creek near Frank Slaven's roadhouse. Once the parts were unloaded, they remained at a staging yard near the river until October when the ground was frozen enough to transport them with Caterpillar tractors, heavy sleds, and a track-equipped wagon. The construction of the dredge began on April 8, 1936 with a crew of twenty men using block and tackle and plenty of muscle power. It was completed three months later.



Image 8: The completed dredge, floating in its own excavated pond, 1938. "Of Gold and Gravel, A Pictorial History," Chris Allan, 2021.

After a trial run on July 1, 1936, the dredge began full operation on July 18. This was the culmination of more than a year of work and planning, and Patty was thrilled when the giant earth-eating machine was ready. He would later write about those first moments in his memoir:

*Finally, we were ready to go into production. The construction pond itself was flooded to float the dredge. Its two diesel engines began coughing; the winchman moved the dredge out of the construction pit and the bucket line started to revolve and bite into the gravel. It was a great moment to hear the thump of the first gravel falling into the hopper. As it cascaded from the hopper onto a big revolving screen, I could see the finer gravel, which would be sand and gold, dropping through slots in the screen and onto gold-saving sluices.<sup>5</sup>*

Before long the dredge was producing thousands of dollars in gold, which the crew melted down and formed into gold bricks. Patty thought this early success was reason enough to expand their operation and convinced McRae to send a prospecting crew to investigate some of the gold claims in the next creek valley just five miles to the west. Patty reasoned that if the gold deposits at nearby Woodchopper Creek matched those at Coal Creek, the two mining camps could share the costs of transportation, personnel and repairs. The drilling results were promising, and soon Patty began forming a sibling company—Alluvial Golds, Inc.—to operate a dredge at Woodchopper Creek and building a road to link them.

To operate the dredges, Patty recruited students from the college's mining program and also hired veteran miners and trappers from along the Yukon River. They worked hard for eight dollars a day, but Coal Creek and Woodchopper Creek were unlike many rough-and-tumble mining camps in Alaska because they were also home to entire families. For example, the



winchman Al Hendricks brought his wife Mildred and their son to live at Coal Creek; Ernest Patty's wife and children usually joined him for the mining season; and, beginning in the 1940s, three Athabascan families from Eagle Village decided to move to Coal Creek while the husbands held jobs on the dredge crew. During the summer months there might be as many as ninety dredge workers and fifteen additional family members in the camps, creating a pair of diminutive cities in the wilderness. Remembering Woodchopper camp in the later years, Patty wrote,

*We wanted our mining camp to look as though someone loved it. The frame buildings that lines our airstrip—mess hall, recreation room, watchman's log cabin, office and radio room, machines shop, repair shop, and warehouse—were all painted yellow trimmed with white. The mess hall sported window boxes full of flowers.<sup>6</sup>*



Image 9: Coal Creek Camp bunkhouse, 1935. NPS.



Image 10: Construction of Coal Creek Camp on skids, ca. 1936. "Of Gold and Gravel, A Pictorial History," Chris Allan, 2021.

In order that the night-shift employees could sleep during the day, the bunkhouses at both Coal Creek and Woodchopper Creek stood separate from the rest of the camp buildings, and at the mess hall there were always meals on the stove to feed hungry workers. The only day the crews had off was the Fourth of July when they gathered for sack races, formed improvised orchestras, and launched fierce tug-of-war contests when the men adopted noms de guerre like "Dynamite Red" and the "Cripple Creek Terror." For several summers Ernest Patty's wife Kay taught classes for the Athabascan children at the mines because they lacked a public school in Eagle Village. Dredge workers also went hunting, trapping, and prospecting in the surrounding hills. But always the primary mission remained—to keep the dredges working because any interruption meant lost revenue. Patty called the dredges "our cash register," and each season the feverish mining continued around the clock until late October. In 1937 a reporter from Fairbanks visited the twin camps and explained,

*Under the magic touch of modern machinery, two more of Alaska's gold-bearing stream valleys have come to life. Tractors equipped with bulldozers gouge out ditches and roads along the hillside; trucks move back and forth with supplies. Perhaps at night the transformation is more impressive for then the ugly gashes of mining operations are*

*blotted out and from the hilltops one sees the camp lights.*<sup>7</sup>

In 1953 Patty was asked to assume the presidency of the University of Alaska, and his son Dale took over as manager of the two mines. The younger Patty immediately faced two challenges. First, he had to find a new shipping company to supply the camps when the White Pass & Yukon Railroad halted its river transportation below Dawson City. Second, the cost of diesel oil, replacement parts, wages, and food for the workers were rising while the price of gold remained fixed at \$35 an ounce. In spite of extensive cost-cutting measures, the Coal Creek dredge was mothballed in 1957 and the Woodchopper dredge fell silent three years later. All across Alaska the dredges that bolstered Alaska's economy for a half-century were falling on hard times, confronted by the same reality that plagued the region's earliest miners—the amount of gold in the earth does not matter if the cost of recovering it exceeds the value.<sup>8</sup>

Soon after Gold Placers, Inc. and Alluvial Golds, Inc. ceased operations, the Fairbanks miner Ted C. Matthews leased the Coal Creek dredge and mining properties and operated the mine from 1962-1964. Although he recovered over 6,000 ounces of gold and nearly 600 ounces of silver, he could not turn a profit because of high fuel and transportation costs. After a seven-year lull, a partnership of three miners bought the Coal Creek claims and operated the dredge in 1973 and 1976. In 1977 an outfit calling itself AU Placer, Inc. purchased the property for open-cut mining with twenty-five employees and two bulldozers feeding large, steel sluices boxes mounted with high-power irrigation pumps. In 1985 a joint venture called Coal Creek Mining Properties acquired the mining claims and continued the practice of using bulldozers and sluice boxes, but, again, profits were rare. Throughout this period of activity in the Coal Creek drainage, mining crews used the camp buildings for lodging and other purposes.<sup>9</sup>

In 1986 the National Parks Conservation Association bought the claims and donated them to the National Park Service to become part of Yukon-Charley Rivers National Preserve.



*Image 11: Coal Creek Camp Mess Hall in its current location shortly after NPS procurement, ca 1990. Historic American Engineering Record.*

#### RECOMMENDED PERIOD OF SIGNIFICANCE

The historic district nomination to the National Register of Historic Places establishes the period of significance as 1934-1964. This time period remains appropriate and no change is recommended.

## Endnotes

1 Betty O’Keefe and Ian Macdonald, *Merchant Prince: The Story of Alexander Duncan McRae* (Surrey, BC: Heritage House, 2001), 1-20; National Register of Historic Places Registration Form, “Coal Creek Historic Mining District,” May 8, 1995, 15-16.

2 Placer mining is the mining of stream bed (alluvial) deposits of sand and gravel for minerals. This may be done by open-pit (also called open-cast mining) or by various surface excavating equipment or tunneling equipment. Placer mining is frequently used for precious metal deposits (particularly gold) and gemstones.

3 “M’Rae and Patty Plan Operations,” *Fairbanks Daily News-Miner*, September 12, 1933, 1; “Dean Patty Resigns to Become General Manager M’Rae Mining Interests,” *Fairbanks Daily News-Miner*, May 2, 1935, 5.

4 “General M’Rae Pleased with Coal Creek,” *Fairbanks Daily News-Miner*, July 24, 1935, 1; “Large Operations Are Launched on Yukon by Gen. McRae’s Interests,” *Fairbanks Daily News-Miner*, December 12, 1935, 1. See also, William R. Hunt, *Golden Places: A History of Alaska-Yukon Mining* (National Park Service, 1990), 310-313.

5 Ernest N. Patty, *North Country Challenge* (New York: David McKay Company, 1969), 98-99.

6 *Ibid*, 109.

7 “Coal Creek Is Worked, So Is Woodchopper,” *Fairbanks Daily News-Miner*, Goldfields Edition, November 29, 1937, 1.

8 Douglas Beckstead, *The World Turned Upside Down: A History of Coal Creek and Woodchopper Creek, Yukon-Charley Rivers National Preserve, Alaska* (National Park Service, 2003), 151-186.

9 William R. Hunt, *Golden Places: The History of Alaska-Yukon Mining with Particular Reference to Alaska’s National Parks* (Anchorage: National Park Service, 1990), 315.

## Chronology of Development & Use 1.02



Image 12: Coal Creek Camp at its first location with the recently constructed dredge, 1938. Courtesy of Rasmuson Library, University of Alaska Fairbanks.

### CAMP DEVELOPMENT AND USE

This section of the Historic Structure Report summarizes the physical construction, modification, and use of Coal Creek mining camp. Much of the history and understanding of Coal Creek Camp (and its repeated relocation to keep up with the dredge) comes from mining maps, photographs, and the surviving structures on the landscape. Managers and workers at Coal Creek mine did not write much about the camp's construction, life at the camp, or daily mining operations.

#### ***Site Development***

Interest in Coal Creek and the neighboring Woodchopper Creek drainage began during the frenzied Klondike-Alaska gold rush in the late 1890s when stampeders investigated all of the tributaries of the Yukon River and found that due to a geological quirk, all of the gold they discovered was on the river's southern side. Although one of the earliest claims was staked for coal (thus, Coal Creek), gold was what drew a handful of miners including Frank Slaven, William Beaton, Nels Nelson, Harold Malstrom, and James Pendergrast. In the early 1900s, their mining claims blanketed the length of Coal Creek though their mining operations remained

small-scale and their log cabin homes were thinly scattered. In 1934, when Ernest Patty began buying claims along Coal Creek on behalf of Alexander McRae, most of the old miners took their windfall and moved away.<sup>1</sup>

Based on gold values measured by drilling, Patty selected a location to build the dredge and began a campaign of stripping and thawing to ensure that the dredge would not encounter permafrost. The same drilling maps would allow the miners to guide the dredge through the richest patches of placer gold in a roughly twenty-foot layer of gravel. In order to feed and house the dredging crew and to assemble the dredge, Patty rushed to construct camp buildings, including a warehouse, blacksmith's shop, machine shops, laundry facilities, offices, a mess hall, and bunkhouses near a Coal Creek tributary called Cheese Creek. This would become the first location of a mobile camp that followed the dredge as it made its way down the valley of Coal Creek.<sup>2</sup>

Early in the camp's evolution, improvised, temporary structures were used to fill the needs of a wide-ranging and highly mobile operation. Many of the workers were housed in canvas tents equipped with



windows, doors, and plank floors. A cookhouse was built to be dismantled and hauled by tractor and wagon to distant sites for prospect drilling. Mobile sheds, called wanigans, were used to shelter men and equipment during drilling expeditions. And, some workers lived in log cabins built using local spruce trees.<sup>3</sup>

However, the majority of the structures that made up Coal Creek mining camp were simple, single-story wood frame buildings. As a rule, the workers of Gold Placers, Inc. constructed the Coal Creek mining camp buildings quickly and without much concern for longevity. These were all built with rough 2x4 lumber and the exterior walls are sheathed in either plywood or drop siding. The materials were partly imported from California and partly salvaged from Fort Egbert, a U.S. Army installation at Eagle that was decommissioned in 1911.

These buildings were mounted on log skids with steel cables attached to allow them to be towed behind a Caterpillar tractor. The buildings were relocated two times along the valley, once in 1942 and again in 1952 to their present location at Beaton Pup Creek. The buildings that were moved that remain today include six bunkhouses, an assaying shop, a mess hall, a manager's office, a machine shed, generator shed, and a laundry and shower building.



Image 13: Original log skid with abandoned towing cable at the Mess Hall, 2021.

### Site Chronology

The following summarizes major milestones in the development of the Coal Creek Camp and any alterations to the buildings. Information was taken from the 2004 Cultural Landscape Inventory unless otherwise noted.

| CHRONOLOGY |                                                                                                                                                                                                |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Year       | Action                                                                                                                                                                                         |
| 1934       | A.D. McRae, Ernest Patty, and several others established Gold Placers Inc. with the intention of dredge mining in the Coal Creek drainage.                                                     |
| 1935       | Frank Slaven and other small claim owners sold claims to Gold Placers Inc.                                                                                                                     |
| 1935-1940  | Gold Placers Inc. constructed buildings for mining camp, including mess hall, laundry, recreation, office, bunkhouses, machine shop, garage, and blacksmith shop at Cheese Creek (Camp No. 1). |
| 1936       | Dredge began operation July 1. First clean-up July 29.                                                                                                                                         |
| 1939       | Alaska Road Commission (ARC) and Gold Placers Inc. constructed the road from Slaven's Roadhouse to Woodchopper Creek.                                                                          |
| 1942       | Gold Placers Inc. moved the mining camp from Cheese Creek to a site opposite Coal Creek's confluence with Boulder Creek (Camp No. 2)                                                           |
| 1952       | Buildings dismantled at the end of 1951 season and moved to Camp No. 3 on Beaton Pup Creek the following season. (Current location)                                                            |
| 1954       | Buildings at Camp No. 3 improved and rehabilitated at cost of \$1,800.                                                                                                                         |

| CHRONOLOGY |                                                                                                                                             |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Year       | Action                                                                                                                                      |
| 1978       | Yukon-Charley Rivers National Monument established                                                                                          |
| 1980       | Yukon-Charley Rivers National Preserve established                                                                                          |
| 1986       | Coal Creek Mining Properties sold property to National Parks Conservation, donated to NPS                                                   |
| 1991       | NPS restores Bunkhouses 1-6, Public Use Cabin, Maintenance Shed, and Laundry. Extent unknown.                                               |
| 1995       | NPS restores Manager's Office and Assay Office. Extent unknown.                                                                             |
| 2001       | NPS rehabilitates buildings at Coal Creek Camp, including but not limited to installing running water, electrical, and garbage incinerator. |
| Post-1986  | Entrance awnings added to bunkhouses, Mess Hall pantry addition reconstructed, wood storage sheds added, and celotex siding replaced.       |

## HISTORY OF USE

The Coal Creek Camp was originally constructed to house the miners and their families and support dredging in the Coal Creek Valley. The buildings now provide seasonal and as-needed housing for park staff and consultants. One bunkhouse is allocated for public use.

## INTEGRITY

As defined by the National Register of Historic Places, seven aspects comprise the evaluation of a resources integrity. These include integrity of location, setting, design, material, workmanship, feeling, and associations. The Coal Creek Camp ranks as follows:

- Location - high - the buildings remain in their last location from within the period of significance.
- Design - high - the exteriors, building forms, and interiors rooms remain intact.
- Setting - high - few alterations have been made to the surrounding cultural landscape and the relationship between the camp buildings and roads.
- Materials - high exterior, moderate interior - While original beaverboard sheathing has been replaced with plywood, exterior materials have been maintained or replaced in kind at the end of their service life. Interior finishes have been altered including replacement of plank flooring with plywood.
- Workmanship - high - utilitarian and framed construction.
- Feeling - high - original contextual and time period associations remain intact.
- Association - high - the buildings maintains visual continuity with the surrounding site and mine tailings of the Coal Creek Valley and continues to provide housing for visitors and park staff.

Coal Creek Camp retains high integrity despite the ceasing of mining operations in the valley. The Coal Creek Camp Historic Mining District has well-preserved both the immediate site and Coal Creek Valley, maintaining the feel and association with former mining operations. The buildings have been largely maintained and repaired in-kind, with only minor alterations to interior finishes.



Image 14: Bunkhouse with original beaverboard deteriorating at exterior, 1986, Historic American Building Survey..



## Endnotes

1 Beckstead, *The World Turned Upside Down*, 3-4.

2 See set of two maps prepared by Gold Placers, Inc. showing the entire Coal Creek drainage with mining claims and drilling lines added and the dredge path and clean-up totals for 1936-1945, housed in the archives at National Park Service, Fairbanks Administrative Center.

3 Chris Allan, “Of Gold and Gravel: A Pictorial History of Mining Operations at Coal Creek and Woodchopper Creek, 1934-1938,” National Park Service, Yukon-Charley Rivers National Preserve, 2021.

## Physical Description 1.03



Image 15: Looking northwest towards Bunkhouse 6 (right), Manager's Office (left), and the Assay Office (background).

### OVERVIEW

The following section details the physical description and conditions of Coal Creek Camp, beginning with the overall complex and site and followed by dedicated sections for each building. Each building section includes a physical description, identifies character-defining features of the building's exterior and interior, and documents current conditions and assigns significance by assembly/component. This section is informed by the National Register nomination and CLI. Some descriptions have been modified for present conditions and accuracy.

Windows were given an identification code per elevation and numbered left to right. For example, window "W2" is at the west elevation, second from the left.

Structural observations are both integrated into each building section and provided in greater detail in the Structural Systems section prepared by KPFF Consulting Engineers.

Corresponding treatment recommendations and prioritization are identified in Part 2 - Treatment and Use.

### CONDITION ASSESSMENT METHODOLOGY

An on-site inspection of the existing conditions and context was carried out by Hennebery Eddy Architects (HEA) and the National Park Service on September 15-17, 2021. Conditions at the time of the survey were dry and clear, with scattered showers in the evenings. Access was provided to the site, exterior, and interior of the buildings, with the exception of the Assay Office interior which is inaccessible due to the presence of hazardous materials. Conditions were photo-documented and recorded on field assessment forms developed for this project. Moisture meters confirmed exterior lumber conditions.

The architectural team photo-documented and noted structural conditions on site. This information was provided to KPFF Consulting Engineers for review and high-level analysis. Mechanical, electrical, and plumbing (MEP) systems were not assessed or reviewed by an engineer. Observations have been provided by the architectural team and where instructed by NPS.

Unless noted otherwise, all photographs and drawings in this report have been provided by Hennebery Eddy Architects. Images by others are credited accordingly.

All condition observations were visible, no destructive investigation was performed. Moisture meters and probing awls were used to verify the extent of wood decay throughout. Wood Moisture Equivalent (WME) readings of 10% or less represent typical moisture levels for the area. A WME of greater than 17% provides an environment for rot. Readings greater than 20% indicate severe active rot.

Corresponding annotated elevation diagrams indicating the location and approximate area of deficiencies are included at the end of each building section. The diagrams serve to illustrate a majority of the deficiencies but are not all inclusive and do not include interior deficiencies, nor do they fully capture site conditions. Please refer to condition narratives for a complete record of all observed conditions.

# Coal Creek Camp Site



Image 16: 2004 Cultural Landscape Inventory map of Coal Creek Camp.

## GENERAL DESCRIPTION

The overall spatial organization of the Coal Creek Historic Mining District has altered little since the period of significance. The district is located in the Coal Creek drainage and dwarfed by the surrounding Biederman Hills. The major circulation patterns are orientated east to west and their placement on the landscape has not changed. The tailing piles remain in their original locations and create small mounds throughout the district.

The Coal Creek Camp consists of 16 buildings: the Mess Hall, Maintenance Shed, six bunkhouses, a Public Use Cabin, Laundry Building, Assay Office, General Manager's Office, Generator Shed, Well House, Privy and Greenhouse. The Upper Road runs through the north side of the camp. The Mess Hall is the nucleus of the camp and is located off the road. Directly off its southwest corner is the Laundry

Building. Located northeast of the Mess Hall is the Maintenance Shed. Between the three is a lawn with fire pit and various mining artifacts. Five bunkhouses are located northeast of the shed. Behind them, in an open area, is the Privy and Greenhouse. Directly north of the Mess Hall, located on the other side of the road, is the General Manager's Office. North of it is the Assay Office and the Generator Shed. To the east of the General Manager's Office is Bunkhouse 6 and a well house. Further along the upper road, which leads to Slaven's Roadhouse, is the Public Use Cabin.

A trail juts off the road between the General Manager's Office and Bunkhouse 6. The trail leads to the Generator Cabin. Another trail runs from the road next to the Maintenance Shed northeast towards the remaining five bunkhouses, terminating at Bunkhouse 1. The rest of the site has no defined circulation patterns.



## CHARACTER DEFINING FEATURES

Character-defining features (CDFs) are those architectural materials and elements that contribute to communicating the site and buildings' significance. The buildings at Coal Creek Camp are significant for their association with the development of the mine and the mobility offered by the dredge.

Character defining features of the site include:

- Cluster arrangement
- Gravel roads and trails
- Bunkhouses located with privacy in mind away from activity center/Mess Hall
- Bunkhouse 6 dedicated as women's bunk and located away from other bunkhouses
- Upper Road and Lower Road
- Open lawn clear of vegetation
- Bermed earth bunkhouse foundations

## CONDITIONS

### *General Site*

Site conditions are limited to the immediate surrounding site of the buildings included in this HSR.

Earth throughout the site consists of permafrost, which melts and upheaves with the seasons. The five bunkhouses located northeast of the shed all sit on bermed earth to act as foundations.

### **Conditions:**

Melting and upheaving permafrost is resulting in structural instability of all buildings, with elevated severity at the bunkhouses with bermed foundations. See Structural Systems section.



*Image 17: View from the Upper Road looking south toward Coal Creek Camp.*



*Image 18: Typical permafrost upheaval, located at Bunkhouse 2.*



*Image 19: Electrical posts and above-ground wire extend to the bunkhouses at the east end of the site.*

### **Electrical**

Above-ground electrical wires connect buildings to electricity. Originally powered by generators located in the historic generator shed, this shed no longer houses a generator. Solar panels have been installed on a hill to the north and out of sight and supply power to the Mess Hall, Laundry, and Mechanical Shed. A propane generator is located in a shed to the north of historic generator shed and is used to offset and maintain the photovoltaic system. No other buildings are presently electrified.

### **Conditions:**

Repairs are underway on the photovoltaic system to maintain power at the mess hall, laundry, maintenance shed, generator shed (non-historic), and bunkhouse 1/Juneby Cabin. See map, next page, for location of buildings with electricity.

### **Oil Tank**

A large enclosed oil tank sits adjacent to the laundry building at the north elevation. This serviced a drip stove located inside the laundry building that is no longer in use.

### **Conditions:**

The fuel tank is no longer in use, and the fuel in the tank is gellified. Combined with the age of the tank, there is risk for leaking.



Image 20: Photovoltaic array mounted at the top of the hill to the north of the site.



Image 21: Oil tank located at the north elevation of the Laundry Building.



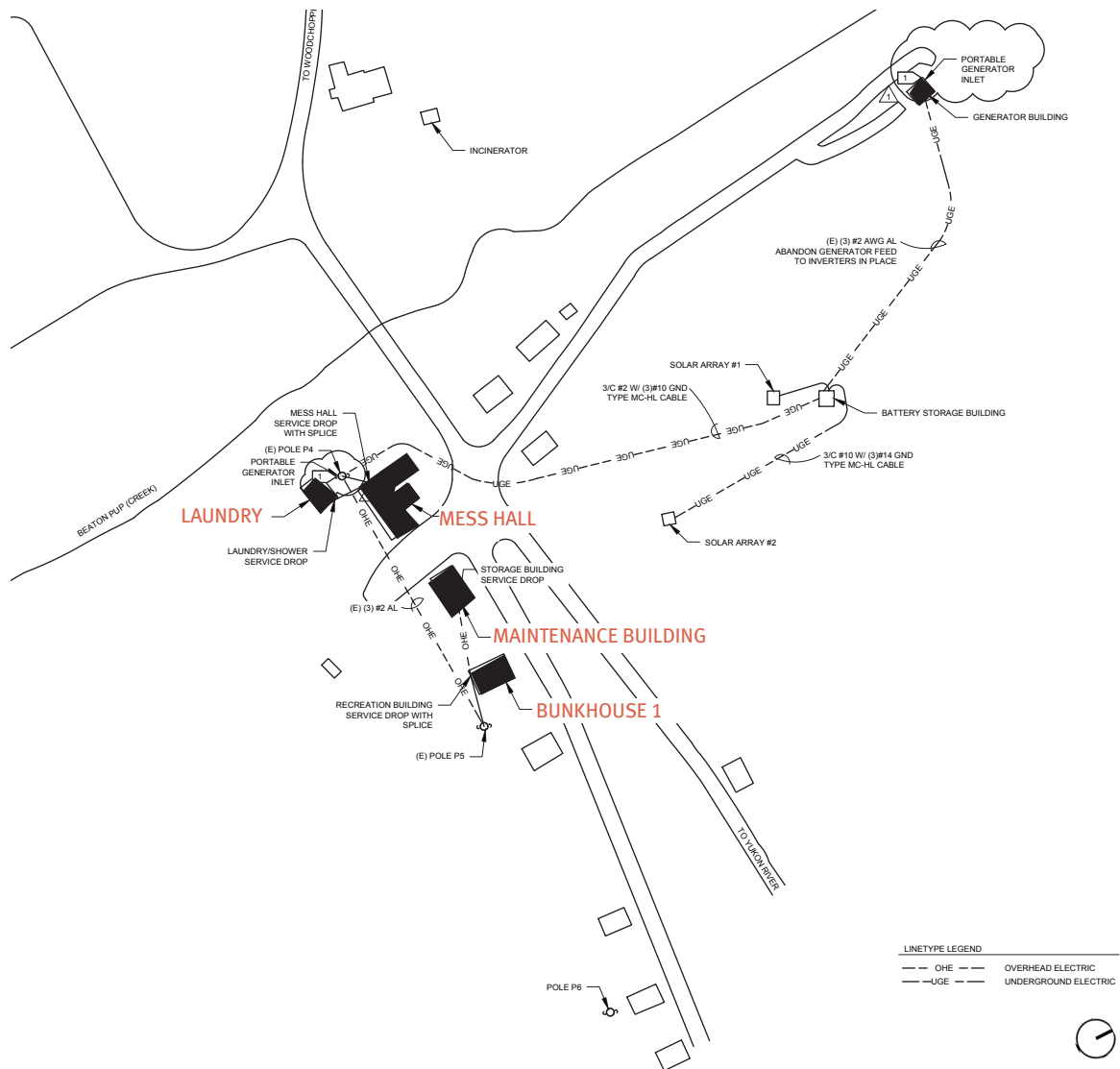


Image 22: 2021 Electrical Site Plan detailing proposed photovoltaic upgrades. Electrified buildings are infilled in black. Site plan provided by Design Alaska.

# Bunkhouse 1, FMSS #73324

## Willie Juneby Cabin



Image 23: 2004 Cultural Landscape Inventory map of Coal Creek Camp, with Bunkhouse 1 identified in orange and current view looking southeast at Bunkhouse 1.

### GENERAL DESCRIPTION

Gold Placers Inc. constructed Bunkhouse 1 in 1940. The structure moved with the Dredge in 1941 and 1952. The bunkhouse is a one story, 15'10"x 23'10" rectangular plan with gabled roof. It is constructed on bermed land with timber skids and an insulated floor. Exterior walls are 2x4 framing sheathed in plywood with battens, insulated and painted. The roof is clad in corrugated metal. A wood stovepipe penetrates the north side of the roof, and a wooden ladder hangs over the ridge. The main entrance is at the north elevation and protected by a small wood-framed, awning. Fenestration is provided by 6-lite hopper windows. The interior plan is a simple, one room interior with painted plywood ceilings, walls, and floor heated by a barrel stove. There is a wood storage shed located at the west elevation.

### CHARACTER DEFINING FEATURES

Character-defining features (CDFs) are those architectural materials and elements that contribute to communicating the site and buildings' significance. The buildings at Coal Creek Camp are significant for their association with the development of the mine and the mobility offered by the dredge.

Character defining features of Bunkhouse 1 include:

- Rectilinear plan, 1-story
- Gabled 8/12 roof with corrugated metal roofing
- 4x8 panels with battens as exterior wall cladding (originally beaverboard)
- Skids (originally log)
- Barrel stove with pipe chimney, cylindrical thimble, and wood access ladder at the roof
- Six-lite, hopper, wood sash windows
- Front-gable entry with awning
- Simple minimal interior finishes

# Building Exterior

## CONDITIONS

### **Roof**

The gabled roof is wood frame. Trim includes barge boards at the gable ends, with exposed rafter tails at the eaves. Penetrations are limited to one chimney near center on the east slope and electrical conduit at the south end of the west slope. Roof access is provided by a ridge-mounted ladder, not original. The following lists components included at the roof. See Structural Systems section for more detailed information. Dimensions are approximate and should be field verified before undertaking any project:

- 2" x 5-5/8" rafters
- No ridge beam
- 1" x 9-1/2" sheathing with 1/2" spacing
- Tar paper
- Corrugated metal roofing

Roof flashing is limited to bent corrugated panels at the ridge and pieces of sheathing surrounding the chimney penetration.

The north entrance is protected by a projecting wood framed awning with rolled mineral-surfaced covering, approximately 5' wide by 2-1/2' deep. The covering returns up the face of the exterior plywood and is nailed in place. The following lists components included at the awning:

- 1x4 angled brackets and supports with chamfered ends
- 3/4" thick tongue and groove sheathing
- One layer of plywood
- 1-3/4" x 3/4" edge trim
- Mineral-surfaced rolled roofing



Image 24: Corrugated metal roof with chimney and access ladder.



Image 25: Exposed eaves reveal skip sheathing.



Image 26: View of roof ridge from attic.



**Conditions:***Covering*

Corrugated metal roofing has mild surface corrosion throughout, with moderate surface corrosion at east slope. Access ladder is deteriorated and unsafe.

*Rafters*

Exposed rafter tails were in good condition.

*Trim*

Bargeboards exhibit paint and surface deterioration. There is a gap at the ridge of the north elevation bargeboards, and surface rot at the east end of the south bargeboard.

*Awning*

Wood framing has active wood rot with surface deterioration. Rolled roof covering has biogrowth. Roof covering curls up as flashing and is tacked into the exterior wall, covering battens.

***Chimney***

A stove chimney projects through the roof at the east elevation. The wood roof members are insulated from heat by a metal thimble that extends from the ceiling through the roof. The chimney is topped with a metal cap.

**Conditions:**

The chimney penetration is an access point for moisture and is leading to elevated moisture levels in nearby wood members and finish deterioration.

The chimney is not braced and does not meet code height requirements of 2' minimum projection above ridge.



Image 27: Mild corrosion at corrugated metal roofing.



Image 28: Shed style entrance awning at north entry.



Image 29: Chimney is not braced and is leaning.

### **Exterior Walls**

Exterior walls are wood-framed, sheathed in plywood with vertical and horizontal battens. Exterior trim also includes corner boards and frieze boards in between rafter tails. The following lists materials comprising the exterior walls. Dimensions are approximate and should be field verified before undertaking any project:

- 4-3/4" thick walls
- 3/4" thick plywood sheathing
- 1-1/2" x 1/2" battens
- Batt-fiberglass insulation

### **Conditions:**

#### *Plywood Sheathing*

Exterior plywood is weathered with paint deterioration throughout. The east elevation has rust staining below the wood stove chimney. Moisture readings at the east elevation rust staining and near the base of the building were elevated above 14% Wood Moisture Equivalent (WME) with surface rot.

There is surface damage at the south elevation, and a hole is patched with a piece of unpainted wood.

#### *Trim*

Battens are loose at the south elevation and all exhibit paint deterioration.

### **Foundation**

Foundations for the bunkhouses are comprised of wood framed floors resting on skids, with skids originally intended to rest on grade. Bunkhouse 1 has 9x9 timber skids supporting 2x6 floor joists with no fasteners or connections between the skids and joists. Joist spaces have batt-fiberglass insulation held in place with chicken wire stapled to the underside of the joists for rodent protection. The skids are supported by grade on the north side and stacks of cribbing on the south side. The space under the floor is open air with no skirting.



*Image 30: South elevation plywood exterior sheathing with surface wear and patched penetrations.*



*Image 31: Rust staining at the east elevation below chimney location.*



*Image 32: Cribbing supports the southeast corner of the building.*



### Conditions:

#### *Skids*

Exposed projecting ends of the timber skids have high moisture levels greater than 20% WME, with active rot and warping. Melting permafrost at the bermed earth below is resulting in severe settlement and ground upheaval. To level the bunkhouse, the timber skids are shimmed with various wood blocking and temporary cribbing at the south end of both elevations.

#### *Floor Assembly*

Joists, insulation, and rodent protection are in good condition.

#### *Cribbing*

See Structural System section.

### **Windows**

All windows are 2'x3' six-lite wood sash interior-swing hopper windows with exterior screens. There are a total of seven windows: two each at the north, east, and west elevations and one at the south elevation. Hardware is transom sash locks without strikes. Windows sit within the wood frames and are held in place using removable wood stops at the interior. Wood stops nailed in place act as stays when the hopper windows are opened. There is no weatherstripping.

### Conditions:

*\*See Window & Door Assessment forms in Appendix C for individual conditions at each window.*

Windows are in fair condition with moderate surface and paint deterioration at the exterior. Windows fit loosely in their frames and are not sealed. Putty glaze is dry and cracked throughout. Window S1 has a cracked pane. Window W1 is missing a muntin.



Image 33: Replacement skid is warped and unstable.



Image 34: Detail view of batt-fiberglass insulation and chicken wire at underside of floor framing.



Image 35: Typical 6-lite hopper window. Window W1 is missing a muntin.

### **Exterior Door**

The north entry door is a painted wood hollow core door with knob hardware and additional surface-mounted pulls and sliding bolt lock. A wood framed exterior screen has a spring closer and wood pull.

#### **Conditions:**

*\*See Window & Door Assessment forms in Appendix C for individual conditions at each door.*

#### **North Entrance Door**

There is light surface deterioration at the base of the exterior face of the door and paint is weathering. Hardware is in good operable condition.

#### **Screen Door**

There is surface deterioration at the exterior face. Spring closer is in good operable condition.

### **Entry Stair**

The entrance to the building is on the north elevation and is accessible by a wood stair with wood railings, both painted. The uppermost tread is two-treads deep to serve as a landing.

#### **Conditions:**

Entry stair and handrails do not meet code for landing requirements, tread or riser dimensions, and handrail heights and profiles. Paint is deteriorated throughout. The lower tread has settled into the grade. Moderate rot is evident at projecting handrails and treads.



*Image 36: Interior view of typical hopper window, supported by wood blocking.*



*Image 37: North elevation entry stair with moderate rot at stair treads.*



*Image 38: Hollow core entry door and wood frame screen.*



## ***Sheds***

A covered wood shed supported by 2x2 lumber sits adjacent to the west elevation at the north end. Its roof is treated with mineral-surface rolled roofing. Another small propane shed leans against the wall centered at the west elevation. This serves a modern gas cookstove installed inside the unit. It has a corrugated metal shed roof and four sides constructed of plywood.

Bunkhouse 1 currently serves as single family winter accommodations, and the cookstove is utilized during these months in lieu of opening up the Mess Hall.

## **Conditions:**

### ***Wood Shed***

The wood shed is leaning away from the building and lacks any crossbracing. The location of the wood shed violates the NPS Eastern Area Fire Management (EAFM) Prescription, which requires firewood to be stored a minimum of 30' from all structures.

### ***Propane Shed***

The gas cookstove installed at the interior is not properly ventilated and is a fire hazard. The plywood propane shed is severely rotted.



*Image 39: Wood shed at west elevation is leaning away from building and unstable.*



*Image 40: Severe plywood deterioration at the propane shed, west elevation.*

(page intentionally left blank)



# Bunkhouse 1

## Exterior Elevation Condition Diagram



North Elevation



East Elevation

LEGEND

|        |                           |
|--------|---------------------------|
| Red    | Wood Rot                  |
| Blue   | Cracked/Warped            |
| Green  | Biological Growth/Soiling |
| Yellow | Moderate Corrosion        |
| Orange | Incompatible Patch/Hole   |



South Elevation



West Elevation

- GENERAL NOTES
1. Paint deterioration is typical at all plywood and wood surfaces.
  2. Mild corrosion is typical at all corrugated metal roofing.
  3. Permafrost melt and foundation settlement are typical throughout. See Structural Systems section.



(page intentionally left blank)

# Building Interior

## CONDITIONS

### **Flooring**

Flooring is 4x8 sheets of 3/4" plywood face nailed to the joists and painted grey.

### **Conditions:**

Paint finish appears recent and is in good condition.

### **Wall Finishes**

Interior walls are sheathed in 1/2" plywood and painted yellow. Trim includes 1" x 3-1/2" base painted white.

### **Conditions:**

Paint finish appears recent and is in good condition. The east elevation wall recorded 11% WME whereas all other areas were dry, indicating water intrusion near the wood stove chimney and at adjacent finishes.

### **Ceiling**

The ceiling is 1/4" painted plywood nailed to 3-7/8" x 1-7/8" ceiling joists. The ceiling is insulated with batt-fiberglass insulation.

### **Conditions:**

The ceiling surrounding the wood stove chimney is warped and recorded high moisture levels. There is no vapor retarder.

### **Attic**

The attic is not ventilated. Batt-fiberglass insulation is damp to the touch.



Image 41: Looking south into the one-room interior.



Image 42: Detail of water damage at plywood ceiling.



Image 43: Batt-fiberglass insulation above ceiling in the attic.

### **Wood Stove**

A cast iron barrel stove located along the east wall provides heat to the bunkhouse. It includes a flue damper. The chimney is protected by a thimble at the ceiling. It sits on a metal floor radiation shield. A corrugated metal radiation shield rests behind the stove to insulate the plywood interior wall from heat.

#### **Conditions:**

The stove location does not meet clearance/heat shield requirements from adjacent interior walls. The stove has mild surface corrosion and is in working condition.

### **Interior Lighting**

Interior lighting is provided by two porcelain socket fixtures with exposed bulbs.

#### **Conditions:**

Light bulbs are extant but with inefficient incandescent bulbs.

### **Fire and Life Safety**

A battery powered smoke alarm is ceiling mounted at the south end of the interior. The fire extinguisher was removed for winter storage at the time of assessment.

#### **Conditions:**

Missing fire extinguisher. Smoke alarm battery was not tested.



*Image 44: Wood barrel stove with surface corrosion and inadequate heat shielding at adjacent wall.*



*Image 45: Typical porcelain socket, one of two at ceiling.*



*Image 46: Smoke alarm.*

## Bunkhouse 2, FMSS #73316

### *Elisha Lyman Cabin*



Image 47: 2004 Cultural Landscape Inventory map of Coal Creek Camp, with Bunkhouse 2 identified in orange and current view looking southwest at Bunkhouse 2.

#### GENERAL DESCRIPTION

Gold Placers Inc. constructed Bunkhouse 2 in 1936. The structure moved with the Dredge in 1941 and 1952. The building is a one story, 16'x20' rectangular plan with gabled roof. It is constructed on bermed land with hewn log skids and an insulated floor. Exterior walls are 2x4 framing sheathed in drop siding, insulated and painted. The roof is clad in corrugated metal. The main entrance is at the north elevation and protected by a small wood-framed, awning. Fenestration is provided by four-lite hopper windows. The interior plan is a simple, one room interior with painted beadboard ceilings, plywood walls, and floor, heated by a barrel stove. The interior walls have battens. Painted sheathing components visible in the attic indicate materials salvaged from another location.

#### CHARACTER DEFINING FEATURES

Character-defining features (CDFs) are those architectural materials and elements that contribute to communicating the site and buildings' significance. The buildings at Coal Creek Camp are significant for their association with the development of the mine and the mobility offered by the dredge.

Character defining features of Bunkhouse 2 include:

- Rectilinear plan, 1-story
- Gabled 8/12 roof corrugated metal roofing
- 7-1/4" drop siding
- Log skids
- Barrel stove with pipe chimney, cylindrical thimble, and wood access ladder at the roof
- Four-lite, hopper, wood sash windows
- Front-gable entry with awning
- Simple minimal interior finishes



## Building Exterior

### CONDITIONS

#### ***Roof***

The gabled roof is wood frame. Trim includes barge boards at the gable ends and fascia boards at the rafter ends. Penetrations are limited to one chimney centered at the ridge. The following lists components included at the roof. See Structural Systems section for more detailed information. Dimensions are approximate and should be field verified before undertaking any project:

- 2 1/8" x 4" rafters, 24" on center
- 3/4" thick beadboard ridge with collar ties
- Corrugated metal roofing

Roof flashing is limited to bent corrugated roofing at the ridge and metal panels surrounding the chimney penetration.

The north entrance is protected by a projecting wood framed awning with mineral-surface rolled roofing, approximately 5' wide by 2-1/2' deep. The roofing returns up the face of the exterior plywood and is nailed in place. The following lists components included at the awning:

- 1x4 angled brackets and supports with chamfered ends
- 3/4" thick tongue and groove sheathing
- One layer of plywood
- 1-3/4" x 3/4" edge trim
- Mineral-surfaced rolled roofing

#### **Conditions:**

##### *Covering*

Corrugated metal roofing has moderate surface corrosion throughout.

##### *Rafters*

Exposed rafter tails were in good condition.



Image 48: Moderate corrosion of corrugated metal roofing at east elevation.



Image 49: Rot and cracking at east fascia board.



Image 50: Painted beadboard sheathing visible within the attic.

### *Trim*

Bargeboards exhibit paint and surface deterioration. There is a gap at the ridge of the north elevation bargeboards as well as cracking at the west end. East fascia board exhibits surface rot and cracking.

### *Awning*

Wood framing has active wood rot with surface deterioration. Mineral-surfaced rolled roofing has biogrowth.

### **Chimney**

A stove chimney projects through the roof at the ridge. The wood roof members are insulated from heat by a metal thimble that extends from the ceiling through the roof. The chimney includes a storm collar and is topped with a metal cap.

### **Conditions:**

The chimney penetration is an access point for moisture and is leading to elevated moisture levels in nearby wood members and finish deterioration. The chimney is not braced.

### **Exterior Walls**

Exterior walls are wood-framed, sheathed 7-1/4" drop siding, painted. Exterior trim includes corner boards and frieze boards in between rafter tails. Extent of wall insulation was inaccessible and unknown.

### **Conditions:**

#### *Drop Siding*

Drop siding is weathered with paint deterioration throughout. The west elevation has rust staining below the wood stove chimney. Cracked boards are located at all elevations. Various holes are located at the south elevation, one patched with a piece of unpainted wood. The bottom three rows of drop siding have been replaced.

### *Trim*

Frieze board is cracked at the west elevation.



Image 51: North entrance awning with eave trim rot.



Image 52: Chimney projecting from the ridge with chimney cap, storm collar, and severe corrosion.



Image 53: Paint weathering at exterior drop siding. Lowermost boards have been replaced with new siding.



## **Foundation**

Foundations for the bunkhouses are comprised of wood framed floors resting on skids, with skids originally intended to rest on grade. Bunkhouse 2 has log skids supporting 2x6 floor joists with no fasteners or connections between the skids and joists. Joist spaces have batt-fiberglass insulation held in place with chicken wire stapled to the underside of the joists for rodent protection. The skids are supported by grade on the north side and stacks of cribbing on the south side. The space under the floor is open air with no skirting.



Image 54: Various cribbing supports log skids.

## **Conditions:**

### *Skids*

Exposed projecting ends of the log skids have biogrowth but moisture levels less than 10% WME. Melting permafrost at the bermed earth below is resulting in severe settlement and ground upheaval. To level the bunkhouse, the log skids are shimmed with various wood blocking and temporary cribbing at the south end of both elevations.



Image 55: Biogrowth at projecting log skid.

### *Floor Assembly*

Joists, insulation, and rodent protection are in good condition.

### *Cribbing*

See Structural System section.

## **Windows**

All windows are 2'x3' four-lite wood sash interior-swing hopper windows with exterior screens. There are a total of three windows: one each at the east, south, and west elevations. Windows E1 and S1 are created by two sash ganged together with metal strips.

Hardware is limited to interior chain stays. Windows sit within the wood frames and are held in place using removable wood stops at the interior. Wood stops nailed in place act as stays when the hopper windows are opened. There is no weatherstripping.



Image 56: Typical warped and torn window screen.

**Conditions:**

\*See Window & Door Assessment forms in Appendix C C for individual conditions at each window.

Windows are in fair condition with moderate surface and paint deterioration at the exterior sash and sills. Windows fit loosely in their frames and are not sealed. Putty glaze is dry and cracked throughout. Window S1 has a warped screen.

**Exterior Door**

The north entry door is a painted wood hollow core door with surface-mounted pull. A wood framed exterior screen has a spring closer and wood pull.

**Conditions:**

\*See Window & Door Assessment forms in Appendix C for individual conditions at each door.

**North Entrance Door**

There is moderate surface deterioration at the exterior face of the door. Paint weathering. Original door handle is missing.

**Screen Door**

Surface deterioration at the exterior face. Spring closer is in good operable condition.

**Entry Stair**

The entrance to the building is on the north elevation and is accessible by wood stairs with an upper landing deck wood railings, painted. The uppermost tread is two-treads deep to serve as a landing.

**Conditions:**

Entry stair does not meet code for landing requirements, tread or riser dimensions, and handrail heights and profiles. Paint is deteriorated throughout. The lower tread has settled into grade. Moderate rot is evident at projecting handrails and treads.



Image 57: Detail of wood stops that hold windows in place.



Image 58: Entry door with missing handleset.



Image 59: Entry stair settling into grade.



(page intentionally left blank)

# Bunkhouse 2

## Exterior Elevation Condition Diagram



North Elevation



East Elevation

LEGEND

- Wood Rot
- Cracked/Warped
- Biological Growth/Soiling
- Moderate Corrosion
- Incompatible Patch/Hole

Impact damage

Bottom three rows replaced



South Elevation



West Elevation

GENERAL NOTES

- Paint deterioration is typical at all plywood and wood surfaces.
- Mild corrosion is typical at all corrugated metal roofing.
- Permafrost melt and foundation settlement are typical throughout. See Structural Systems section.

Bottom three rows replaced

Water stains

(page intentionally left blank)



# Building Interior

## CONDITIONS

### **Flooring**

Flooring is 4x8 sheets of 3/4" plywood face nailed to the joists and painted grey.

### **Conditions:**

Paint finish appears recent and is in fair condition.

### **Wall Finishes**

Interior walls are sheathed in 1/2" plywood with battens and painted yellow. Trim includes a wood base painted white.

### **Conditions:**

Paint finish appears recent and is in good condition. All interior walls recorded moisture levels at or above 10% WME.

### **Ceiling**

The ceiling is 3/4" thick painted beadboard. Ceiling joists are 3" diameter round poles with wood nailers below. The ceiling is insulated with batt-fiberglass insulation.

### **Conditions:**

#### *Ceiling*

There is no vapor retarder.

#### *Attic*

The attic is not ventilated. Batt-fiberglass insulation is damp to the touch.

### **Wood Stove**

A cast iron barrel stove located at the center of the room provides heat to the bunkhouse. It includes a flue damper. The chimney is protected by a thimble at the ceiling. It sits on a metal floor radiation shield.

### **Conditions:**

The stove has mild surface corrosion and is in working condition.



Image 60: Looking south into the one room interior with central wood stove.



Image 61: Chimney thimble at beadboard ceiling.



Image 62: Exposed framing and chimney at attic.



### ***Interior Lighting***

Interior lighting is provided by two porcelain socket fixtures with exposed bulbs.

#### **Conditions:**

One light bulb is missing. Electricity no longer runs to the building.

### ***Fire and Life Safety***

A battery powered smoke alarm is wall mounted at the south elevation of the interior. A fire extinguisher is mounted at the north wall near the entrance.

#### **Conditions:**

No deficiencies noted.



*Image 63: Porcelain socket missing light bulb.*



*Image 64: Fire extinguisher mounted at north wall.*

## Bunkhouse 3, FMSS #73313

### *Jacob Malcom Cabin*



Image 65: 2004 Cultural Landscape Inventory map of Coal Creek Camp, with Bunkhouse 3 identified in orange and current view looking southeast at Bunkhouse 3.

#### GENERAL DESCRIPTION

Gold Placers Inc. constructed Bunkhouse 3 in 1935. The structure moved with the Dredge in 1941 and 1952. The building is a one story, 12'x18' rectangular plan with gabled roof. It is constructed on bermed land with hewn log skids and an insulated floor. Exterior walls are 2x4 framing sheathed in plywood with battens, insulated and painted. The roof is clad in corrugated metal. The main entrance is at the north elevation protected by a small wood-framed, awning. Fenestration is provided by six-lite hopper windows. The interior plan is a simple, one room interior with painted plywood ceilings, walls, and floor, heated by a barrel stove. Interior walls and ceiling have battens.

#### CHARACTER DEFINING FEATURES

Character-defining features (CDFs) are those architectural materials and elements that contribute to communicating the site and buildings' significance. The buildings at Coal Creek Camp are significant for their association with the development of the mine and the mobility offered by the dredge.

Character defining features of Bunkhouse 3 include:

- Rectilinear plan, 1-story
- Gabled 8/12 roof corrugated metal roofing
- 2x4 bracketed bargeboards
- 4x8 panels with battens as exterior wall cladding (originally beaverboard)
- Log skids
- Barrel stove with pipe chimney, cylindrical thimble, and wood access ladder at the roof
- Six-lite, hopper, wood sash windows
- Front-gable entry with awning
- Simple minimal interior finishes



# Building Exterior

## CONDITIONS

### **Roof**

The gabled roof is wood frame. Trim includes barge boards at the gable ends supported by 2x4 brackets, with exposed rafter tails at the eaves. Penetrations include one chimney centered on the ridge. Roof access is provided by a ridge-mounted ladder, not original. The following lists components included at the roof. See Structural Systems section for more detailed information. Dimensions are approximate and should be field verified before undertaking any project:

- 2" x 3-3/4" rafters
- No ridge beam
- 1" x 9-1/2" skip sheathing with 10" spacing
- Corrugated metal roofing

Roof flashing includes bent corrugated panels at the ridge and metal panels surrounding the chimney penetration. A piece of galvanized flashing has been added to the south elevation bargeboard.

The north entrance is protected by a projecting wood framed awning with mineral-surface rolled roofing, approximately 5' wide by 2-1/2' deep. The roofing returns up the face of the exterior plywood and is nailed in place. The following lists components included at the awning:

- 1x4 angled brackets and supports with chamfered ends
- 3/4" thick tongue and groove sheathing
- One layer of plywood
- 1-3/4" x 3/4" edge trim
- Mineral-surfaced rolled roofing

### **Conditions:**

#### *Covering*

Corrugated metal roofing has mild surface corrosion throughout. The metal is bent at the south elevation, with ridge flashing loose. The addition of galvanized flashing at the south elevation indicates the sheathing has failed beneath. Access ladder is deteriorated and unsafe.



Image 66: Mild corrosion, access ladder, and chimney projecting through ridge.



Image 67: View of skip sheathing and king posts in attic.



Image 68: North entrance awning.

### *Rafters*

One exposed rafter tail at the east elevation exhibits wood rot. All other exposed rafter tails were in good condition.

### *Trim*

No deficiencies noted.

### *Awning*

Wood framing has active wood rot with surface deterioration. Mineral-surfaced rolled roofing has biogrowth.

### ***Chimney***

A stove chimney projects through the roof at the center of the ridge. The wood roof members are insulated from heat by a metal thimble. A storm collar sits approximately 1' above the roof surface. The wood roof members are insulated from heat by a metal thimble that extends from the ceiling through the roof. The chimney is topped with a metal cap.

### **Conditions:**

The chimney penetration is an access point for moisture and is leading to elevated moisture levels in the attic space. The chimney is not braced.

### ***Exterior Walls***

Exterior walls are wood-framed, sheathed in plywood with vertical and horizontal battens. Exterior trim also includes corner boards and frieze boards in between rafter tails. The following lists materials comprising the exterior walls. Dimensions are approximate and should be field verified before undertaking any project:

- 4-3/4" thick walls
- 3/4" plywood sheathing
- 1-1/2" x 1/2" battens
- batt-fiberglass insulation



Image 69: Rotting rafter tail at east elevation.



Image 70: Detail of chimney.



Image 71: Typical plywood exterior walls with vertical battens.



**Conditions:***Plywood Sheathing*

Exterior plywood is weathered with paint deterioration throughout. Moisture readings throughout the plywood indicated elevated moisture levels at or above 14% WME. There is surface damage at the south elevation gable.

*Trim*

One vertical batten at the west elevation is unfinished.

**Foundation**

Foundations for the bunkhouses are comprised of wood framed floors resting on skids, with skids originally intended to rest on grade. Bunkhouse 3 has log skids supporting 2x6 floor joists with no fasteners or connections between the skids and joists. Joist spaces have batt-fiberglass insulation held in place with chicken wire stapled to the underside of the joists for rodent protection. The skids are supported by grade on the north side and stacks of cribbing on the south side. The space under the floor is open air with no skirting.

**Conditions:***Skids*

Exposed projecting ends of the log skids are weathered. Melting permafrost at the bermed earth below is resulting in severe settlement and ground upheaval. To level the bunkhouse, the log skids are shimmed with various wood blocking and temporary cribbing at all elevations.

*Floor Assembly*

Joists, insulation, and rodent protection are in good condition.

*Cribbing*

See Structural System section.



Image 72: Surface damage at the south elevation gable.



Image 73: Cribbing supports log skids.



Image 74: Permafrost melting with upheaval.

## **Windows**

All windows are 2'x3' six-lite wood sash interior-swing hopper windows with exterior screens. There are a total of three windows: one each at the east, south, and west elevations. It is likely these windows were salvaged from another location. Hardware is limited to chain stays and transom sash locks. There is no weatherstripping.

### **Conditions:**

\*See Window & Door Assessment forms in Appendix C for individual conditions at each window.

Windows are in fair condition with moderate surface and paint deterioration at the exterior. Windows fit loosely in their frames and are not sealed. Putty glaze is dry and cracked throughout. Window S1 is missing a sash lock and held in place using paper shims. Window E1 has moderate sill deterioration and a torn screen. Window W1 has moderate surface deterioration at the sill.

## **Exterior Door**

The north entry door is a painted 5-panel solid wood door with knob handleset. A wood framed exterior screen has a spring closer and wood pull.

### **Conditions:**

\*See Window & Door Assessment forms in Appendix C for individual conditions at each door.

#### *North Entrance Door*

Light surface deterioration at the base of the exterior face of the door. Paint weathering. Handleset does not latch.

#### *Screen Door*

Moderate rot at the bottom rail. Spring closer is in good operable condition.



Image 75: Hopper window with paint deterioration at exterior.



Image 76: Typical hopper hardware with transom latch and chain stay.



Image 77: Five-panel wood entry door.

### ***Entry Stair***

The entrance to the building is on the north elevation and is accessible by wood stairs, an upper landing deck, and wood handrails, all painted.

### **Conditions:**

Entry stair and handrails do not meet code for landing requirements, tread or riser dimensions, and handrail heights and profiles. Paint is deteriorated throughout. The stair treads rest on pressure treated lumber to combat building settlement, and stair is unstable. Moderate rot is evident at projecting handrails.



*Image 78: Stringer rests on deteriorated wood sill.*



# Bunkhouse 3

## Exterior Elevation Condition Diagram



North Elevation

Metal holes

Loose rail

Sign post



East Elevation

Loose flashing

Gap in chicken wire

LEGEND

Wood Rot

Cracked/Warped

Biological Growth/Soiling

Moderate Corrosion

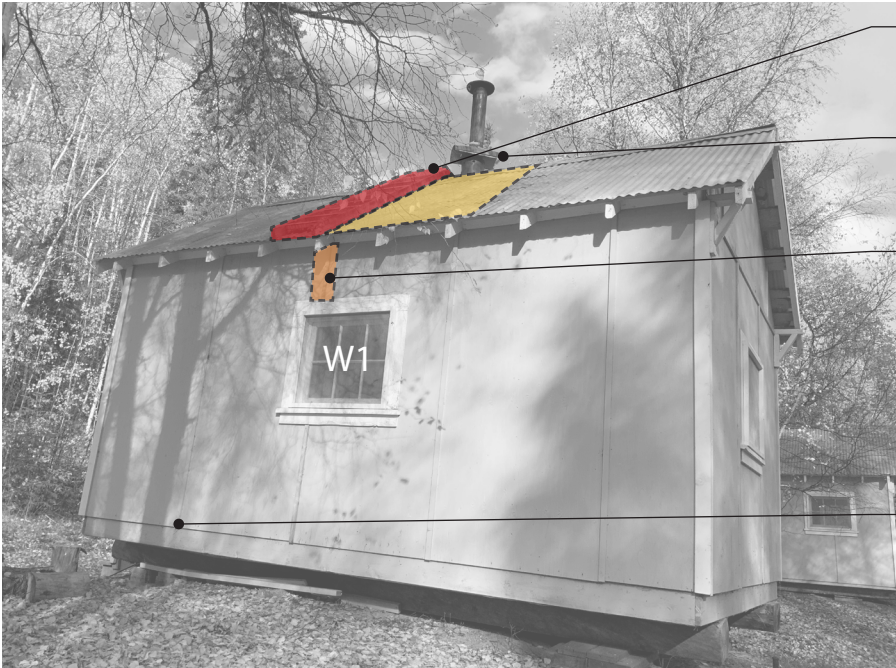
Incompatible Patch/Hole



South Elevation

Galvanized flashing not original

Animal damage



West Elevation

Access ladder

Failing flashing

Missing batten

No wood storage area

GENERAL NOTES

1. Paint deterioration is typical at all plywood and wood surfaces.

2. Mild corrosion is typical at all corrugated metal roofing.

3. Permafrost melt and foundation settlement are typical throughout. See Structural Systems section.



(page intentionally left blank)

# Building Interior

## CONDITIONS

### **Flooring**

Flooring is 4x8 sheets of 3/4" plywood face nailed to the joists and painted grey.

### **Conditions:**

Paint finish appears recent and is in good condition.

### **Wall Finishes**

Interior walls are sheathed in 1/2" plywood and painted yellow. Trim includes wood base and built-in shelving, all painted white.

### **Conditions:**

No deficiencies noted.

### **Ceiling**

The ceiling is 1/4" painted plywood nailed to ceiling joists. The ceiling is insulated with batt-fiberglass insulation and a moisture barrier was visible. The attic is ventilated through the gable ends by the gaps in the skip sheathing.

### **Conditions:**

#### *Ceiling*

No deficiencies noted.

#### *Attic*

Batt-fiberglass insulation is dislodged from several joist bays. The attic access is difficult due to the vapor retarder and insulation placed loosely over the top of the hatch.



Image 79: Interior view of bunkhouse.



Image 80: Plywood ceiling with battens, porcelain light socket, and ceiling thimble at chimney.



Image 81: Batt-fiberglass insulation in attic.

### ***Wood Stoves***

A cast iron barrel stove centrally located within the room provides heat to the bunkhouse. It includes a flue damper. The chimney is protected by a thimble at the ceiling. It sits on a metal floor radiation shield.

#### **Conditions:**

The stove has mild surface corrosion and is in working condition.

### ***Interior Lighting***

Interior lighting is provided by one porcelain socket fixture with exposed bulb.

#### **Conditions:**

Light bulb is missing. Electricity no longer runs to the building.

### ***Fire and Life Safety***

A battery powered smoke alarm is wall mounted at the east elevation. A fire extinguisher is wall mounted at the north elevation near the door.



*Image 82: Mild corrosion at barrel stove.*



*Image 83: Fire extinguisher mounted at north wall.*

## Bunkhouse 4, FMSS #73312

### Harry David Cabin



Image 84: 2004 Cultural Landscape Inventory map of Coal Creek Camp, with Bunkhouse 4 identified in orange and current view looking southeast at Bunkhouse 4.

#### GENERAL DESCRIPTION

Gold Placers Inc. constructed Bunkhouse 4 in 1936. The structure moved with the Dredge in 1941 and 1952. The building is a one story, 12'x20' rectangular plan with gabled roof. It is constructed on hewn log skids with an insulated floor. Exterior walls are 2x4 framing sheathed in plywood with battens, insulated and painted. The roof is clad in corrugated metal. The main entrance is at the north elevation protected by a small wood-framed, awning. Two sets of antlers are mounted above the entrance. Fenestration is provided by six-lite hopper windows. The interior plan is a simple, one room interior with painted plywood ceilings, walls, and floor, heated by a barrel stove. Interior walls and ceiling have battens.

#### CHARACTER DEFINING FEATURES

Character-defining features (CDFs) are those architectural materials and elements that contribute to communicating the site and buildings' significance. The buildings at Coal Creek Camp are significant for their association with the development of the mine and the mobility offered by the dredge.

Character defining features of Bunkhouse 4 include:

- Rectilinear plan, 1-story
- Gabled 8/12 roof corrugated metal roofing
- 2x4 bracketed bargeboards
- 4x8 panels with battens as exterior wall cladding (originally beaverboard)
- Log skids
- Barrel stove with pipe chimney, cylindrical thimble, and wood access ladder at the roof
- Six-lite, hopper, wood sash windows
- Front-gable entry with awning
- Simple minimal interior finishes
- Moose and caribou antlers above entrance



# Building Exterior

## CONDITIONS

### Roof

The gabled roof is wood frame. Trim includes barge boards at the gable ends supported by 2x4 brackets, with exposed rafter tails at the eaves. Penetrations include one chimney centered on the ridge. Roof access is provided by a ridge-mounted ladder, not original. The following lists components included at the roof. See Structural Systems section for more detailed information. Dimensions are approximate and should be field verified before undertaking any project:

- 2" x 3-3/4" rafters
- No ridge beam
- 3/4" thick tongue and groove sheathing
- Corrugated metal roofing

Roof flashing includes bent corrugated panels at the ridge and metal panels surrounding the chimney penetration.

The north entrance is protected by a projecting wood framed awning with mineral-surface rolled roofing, approximately 5' wide by 2-1/2' deep. The roofing returns up the face of the exterior plywood and is nailed in place. The following lists components included at the awning:

- 1x4 angled brackets and supports with chamfered ends
- 3/4" thick tongue and groove sheathing
- One layer of plywood
- 1-3/4" x 3/4" edge trim
- Mineral-surfaced rolled roofing

### Conditions:

#### Covering

Corrugated metal roofing has mild surface corrosion throughout. The metal is bent and nailed to the bargeboard of the south elevation. The covering is loose at the west elevation. Access ladder is deteriorated and unsafe.



Image 85: Bent and uplifting corrugated metal roofing.



Image 86: Detail of bargeboard with tongue and groove sheathing visible.



Image 87: Active biogrowth at north entry awning and associated trim rot.

### *Rafters*

No deficiencies noted.

### *Trim*

No deficiencies noted.

### *Awning*

Wood framing has active wood rot with surface deterioration. Mineral-surfaced rolled roofing has biogrowth.

### **Chimney**

A stove chimney projects through the roof at the center of the ridge. The wood roof members are insulated from heat by a metal thimble that extends from the ceiling through the roof. The chimney is topped with a metal cap and includes a storm collar.

### **Conditions:**

The chimney penetration is an access point for moisture and is leading to elevated moisture levels in the attic. The chimney is not braced

### **Exterior Walls**

Exterior walls are wood-framed, sheathed in plywood with vertical and horizontal battens. Exterior trim also includes corner boards and frieze boards in between rafter tails. The following lists materials comprising the exterior walls. Dimensions are approximate and should be field verified before undertaking any project:

- 4-3/4" thick walls
- 3/4" plywood sheathing
- 1-1/2" x 1/2" battens
- batt-fiberglass insulation

Moose and caribou antlers are mounted at the north gable.



Image 88: Deteriorating roof access ladder.



Image 89: Surface wear at exterior plywood.



Image 90: Moose and caribou antlers above north entry.



**Conditions:***Plywood Sheathing*

Exterior plywood is weathered with paint deterioration throughout. Moisture readings throughout the plywood indicated elevated moisture levels at or above 14% WME.

*Trim*

No deficiencies noted.

**Foundation**

Foundations for the bunkhouses are comprised of wood framed floors resting on skids, with skids originally intended to rest on grade. Bunkhouse 4 has log skids supporting 2x6 floor joists with no fasteners or connections between the skids and joists. Joist spaces have batt-fiberglass insulation held in place with chicken wire stapled to the underside of the joists for rodent protection. The skids are supported by grade on the north side and stacks of cribbing on the south side. The space under the floor is open air with no skirting.

**Conditions:***Skids*

Exposed projecting ends of the log skids have surface rot and moisture levels above 12% WME. Melting permafrost at the bermed earth below is resulting in severe settlement and ground upheaval. To level the bunkhouse, the log skids are shimmed with various wood blocking.

*Floor Assembly*

Joists, insulation, and rodent protection are in good condition.

*Cribbing*

See Structural System section.



Image 91: Abandoned fuel line at south elevation.



Image 92: Surface rot at projecting log skids.



Image 93: Various cribbing supports log skids.

## **Windows**

All windows are 2'x3' six-lite wood sash interior-swing hopper windows with exterior screens. There are a total of four windows: two at the north elevation and one each at the east and west elevations. Hardware includes chain stays and transom sash locks. There is no weatherstripping.

### **Conditions:**

\*See Window & Door Assessment forms in Appendix C for individual conditions at each window.

Windows are in fair condition with moderate surface and paint deterioration at the exterior. Windows fit loosely in their frames and are not sealed. Putty glaze is dry and cracked throughout. Window W1 has surface deterioration at the exterior sill and sash.

## **Exterior Door**

The north entry door is a painted 2-panel solid wood door with knob handleset. A wood framed exterior screen has a spring closer and wood pull.

### **Conditions:**

\*See Window & Door Assessment forms in Appendix C for individual conditions at each door.

### **North Entrance Door**

Light surface deterioration at the base of the exterior face of the door. The bottom panel is loose with visible gaps. Paint weathering. Handleset is in working condition.

### **Screen Door**

Moderate rot at the bottom rail. Spring closer is in good operable condition.



Image 94: Interior view of typical hopper window.



Image 95: Detail of transom latch with strike.



Image 96: Natural light is visible through lowermost panel of exterior door.



**Entry Stair**

The entrance to the building is on the north elevation and is accessible by wood stairs with wood handrails, painted. The uppermost tread is two-treads deep to serve as a landing.

**Conditions:**

Entry stair and handrails do not meet code for landing requirements, tread or riser dimensions, and handrail heights and profiles. The stair and handrail are in good condition with minor surface wear.



*Image 97: North elevation entry stair.*

# Bunkhouse 4

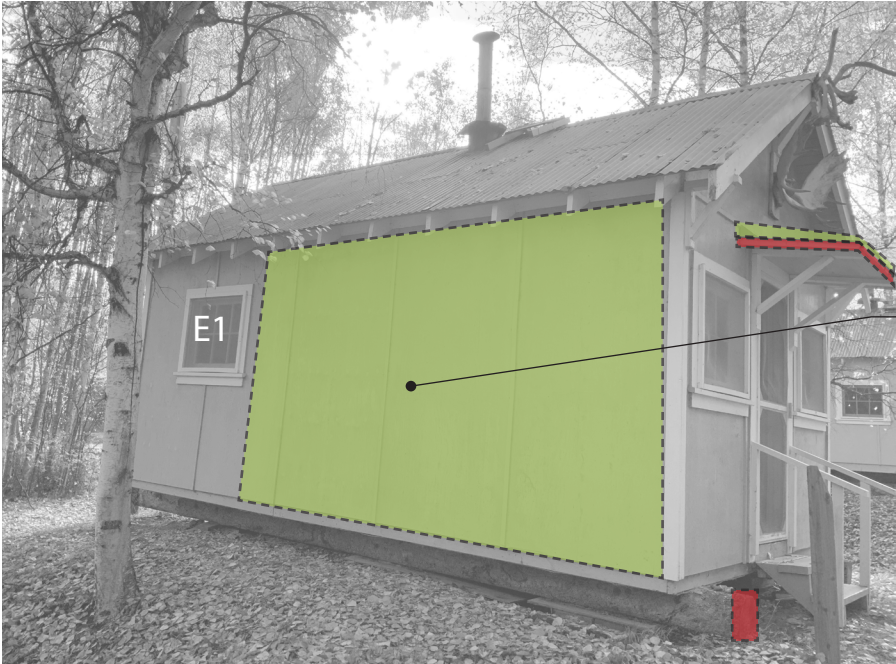
## Exterior Elevation Condition Diagram

### LEGEND

- Wood Rot
- Cracked/Warped
- Biological Growth/Soiling
- Moderate Corrosion
- Incompatible Patch/Hole



North Elevation



East Elevation



South Elevation



West Elevation

### GENERAL NOTES

1. Paint deterioration is typical at all plywood and wood surfaces.
2. Mild corrosion is typical at all corrugated metal roofing.
3. Permafrost melt and foundation settlement are typical throughout. See Structural Systems section.

(page intentionally left blank)



# Building Interior

## CONDITIONS

### **Flooring**

Flooring is 4x8 sheets of 3/4" plywood face nailed to the joists and painted grey.

### **Conditions:**

Paint finish appears recent and is in good condition.

### **Wall Finishes**

Interior walls are sheathed in 1/2" plywood and painted yellow. Trim includes battens, wood base, and built-in shelving, all painted white.

### **Conditions:**

Moisture levels were recorded at or above 12% WME indicating moisture infiltration.

### **Ceiling**

The ceiling is 1/4" painted plywood with battens. There was no access hatch to the attic. Conditions were not documented or observed.

### **Conditions:**

### **Ceiling**

No deficiencies noted.

### **Attic**

The attic is not ventilated. The attic was not accessible.

### **Wood Stoves**

A cast iron barrel stove centrally located within the room provides heat to the bunkhouse. It includes a flue damper. The chimney is protected by a thimble at the ceiling. It sits on a metal floor radiation shield.

### **Conditions:**

The stove location does not meet clearance requirements from adjacent interior walls. The stove has mild surface corrosion and is in working condition.



Image 98: Interior view of bunkhouse.

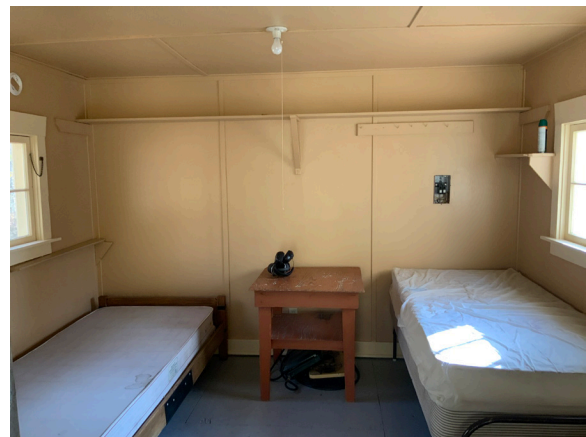


Image 99: Plywood floors, walls, and ceiling, with built-in shelving.



Image 100: Mild corrosion at barrel stove.



***Interior Lighting***

Interior lighting is provided by one porcelain socket fixture with exposed bulb.

***Conditions:***

Light bulb is extant but electricity no longer runs to the building.

***Fire and Life Safety***

No smoke alarm was visible. A fire extinguisher sits on the floor at the north elevation near the door.

***Conditions:***

Smoke alarms were removed for seasonal testing at the time of assessment and were not observed..



*Image 101: Porcelain socket with incandescent bulb.*



*Image 102: Smoke detector mount.*

## Bunkhouse 5, FMSS #73308

### Arthur M. Shields Cabin



Image 103: 2004 Cultural Landscape Inventory map of Coal Creek Camp, with Bunkhouse 5 identified in orange and current view looking southeast at Bunkhouse 5.

#### GENERAL DESCRIPTION

Gold Placers Inc. constructed Bunkhouse 5 in 1936. The structure moved with the Dredge in 1941 and 1952. The building is a one story, 12'x18' rectangular plan with gabled roof. It was constructed on hewn log skids and insulated floor. Exterior walls are 2x4 framing sheathed in plywood with battens, insulated and painted. The roof is clad in corrugated metal. The main entrance is at the north elevation protected by a small wood-framed, awning. Fenestration is provided by six-lite hopper windows. The interior plan is a simple, one room interior with painted plywood ceilings, walls, and floor, heated by a wood stove. Interior walls and ceiling have battens. There is a covered wood shed located at the west elevation.

#### CHARACTER DEFINING FEATURES

Character-defining features (CDFs) are those architectural materials and elements that contribute to communicating the site and buildings' significance. The buildings at Coal Creek Camp are significant for their association with the development of the mine and the mobility offered by the dredge.

Character defining features of Bunkhouse 5 include:

- Rectilinear plan, 1-story
- Gabled 8/12 roof corrugated metal roofing
- 2x4 bracketed bargeboards
- 4x8 panels with battens as exterior wall cladding (originally beaverboard)
- Log skids
- Wood stove with pipe chimney and cylindrical thimble
- Six-lite, hopper, wood sash windows
- Front-gable entry with awning
- Simple minimal interior finishes

# Building Exterior

## CONDITIONS

### **Roof**

The gabled roof is wood frame. Trim includes barge boards at the gable ends supported by 2x4 brackets, with exposed rafter tails at the eaves. Penetrations include one chimney centered on the ridge. The following lists components included at the roof. See Structural Systems section for more detailed information. Dimensions are approximate and should be field verified before undertaking any project:

- 2" x 3-3/4" rafters
- 1" x 5-3/4" ridge beam
- 7-1/2" x 3/4" shiplap sheathing
- Corrugated metal roofing

Roof flashing is limited to bent corrugated panels at the ridge and metal panels surrounding the chimney penetration.

The north entrance is protected by a projecting wood framed awning with mineral-surface rolled roofing, approximately 5' wide by 2-1/2' deep. The roofing returns up the face of the exterior plywood and is nailed in place. The following lists components included at the awning:

- 1x4 angled brackets and supports with chamfered ends
- 3/4" thick tongue and groove sheathing
- One layer of plywood
- 1-3/4" x 3/4" edge trim
- Mineral-surfaced rolled roofing

### **Conditions:**

#### *Covering*

Corrugated metal roofing has mild surface corrosion throughout. Ridge flashing is loose at the south elevation.

#### *Structure*

Fire damage was visible at the interior faces of the ridge and sheathing near the wood stove pipe.



Image 104: Mild corrosion at east elevation corrugated metal roofing.



Image 105: Fire damage surrounding chimney in attic.



Image 106: Cracked bargeboard at north elevation.



### *Rafters*

Fire damage was visible at rafters within the attic space.

### *Trim*

North elevation bargeboard is cracked. South elevation bargeboard end is cracked with moderate rot.

### *Awning*

Wood framing has active wood rot with surface deterioration. Mineral-surfaced rolled roofing has biogrowth.

### **Chimney**

A stove chimney projects through the roof at the center of the ridge. The wood roof members are insulated from heat by a metal thimble that extends from the ceiling through the roof. The chimney is topped with a metal cap.

### **Conditions:**

The thimble has become disconnected from the wood stove pipe at the interior. The chimney penetration is an access point for moisture and is leading to elevated moisture levels in nearby wood members and finish deterioration. The chimney is not braced.

### **Exterior Walls**

Exterior walls are wood-framed, sheathed in plywood with vertical and horizontal battens. Exterior trim also includes corner boards and frieze boards in between rafter tails. The following lists materials comprising the exterior walls. Dimensions are approximate and should be field verified before undertaking any project:

- 4-3/4" thick walls
- 3/4" plywood sheathing
- 1-1/2" x 1/2" battens
- batt-fiberglass insulation



Image 107: North entry awning with active biogrowth and rot.



Image 108: Projecting chimney with storm collar and cap.



Image 109: Surface wear at exterior plywood sheathing, south elevation.



**Conditions:***Plywood Sheathing*

Exterior plywood is weathered with paint deterioration throughout. Moisture readings at the west elevation indicated elevated moisture levels at or above 14% WME.

*Trim*

Frieze board is patched with metal sheet at east elevation. Cornerboard at southwest corner is cracked at the base with animal damage near the rafter.

**Foundation**

Foundations for the bunkhouses are comprised of wood framed floors resting on skids, with skids originally intended to rest on grade. Bunkhouse 5 has log skids supporting floor joists with no fasteners or connections between the skids and joists. Joist spaces have batt-fiberglass insulation held in place with chicken wire stapled to the underside of the joists for rodent protection. The skids are supported by grade on the north side and stacks of cribbing on the south side. The space under the floor is open air with no skirting. Floor framing members include:

- 1-1/2" x 7-1/4" rafters, 24" on center
- 12" diameter log skids

**Conditions:***Skids*

Exposed projecting ends of the log skids are weathered. Melting permafrost at the bermed earth below is resulting in severe settlement and ground upheaval. To level the bunkhouse, the log skids are shimmed with various wood blocking.

*Floor Assembly*

Joists, insulation, and rodent protection are in good condition.

*Cribbing*

See Structural System section.



Image 110: Frieze board patched at east elevation.



Image 111: Weathered projecting log skids.



Image 112: Melting permafrost with cribbing supporting log skids.

## **Windows**

All windows are 2'x3' six-lite wood sash interior-swing hopper windows with exterior screens. There are a total of three windows: one each at the north, south, and west elevations. Hardware includes chain stays, no latches. There is no weatherstripping.

### **Conditions:**

\*See Window & Door Assessment forms in Appendix C for individual conditions at each window.

Windows are in fair condition with moderate surface and paint deterioration at the exterior. Windows fit loosely in their frames and are not sealed. Putty glaze is dry and cracked throughout. Window E1 has a cracked pane. Window W1 has surface deterioration at the sill.

## **Exterior Door**

The north entry door is a painted 2-panel solid wood door with knob handleset. A wood framed exterior screen has a spring closer and wood pull.

### **Conditions:**

\*See *Window & Door Assessment forms in Appendix C* for individual conditions at each door.

### **North Entrance Door**

Light surface deterioration at the base of the exterior face of the door. Handleset is in working condition.

### **Screen Door**

Spring closer is in good operable condition.



Image 113: Detail of hopper window frame, with hopper sash resting in opening.



Image 114: Paper shim used to hold window closed.



Image 115: Entry door knob handleset.



### ***Entry Stair***

The entrance to the building is on the north elevation and is accessible by wood stairs with wood railings, painted.

#### **Conditions:**

Entry stair and handrails do not meet code for landing requirements, tread or riser dimensions, and handrail heights and profiles. The stair and handrail are in good condition with minor surface wear.

### ***Sheds***

A covered wood shed supported by 2x2 lumber sits adjacent to the west elevation at the north end. Its roof is comprised of plywood sheathing and is treated with mineral-surfaced rolled roofing.

#### **Conditions:**

##### ***Wood Shed***

The wood shed is tacked into the west elevation of the building with a nail at the south end. The rolled roofing is failing and falling off. Plywood sheathing exhibits wood rot. The location of the wood shed violates the NPS Eastern Area Fire Management (EAFM) Prescription, which requires firewood to be stored a minimum of 30' from all structures.



*Image 116: North entry stair.*



*Image 117: Wood shed at west elevation.*



*Image 118: Detail of failing rolled asphalt roof covering at wood shed.*



# Bunkhouse 5

## Exterior Elevation Condition Diagram



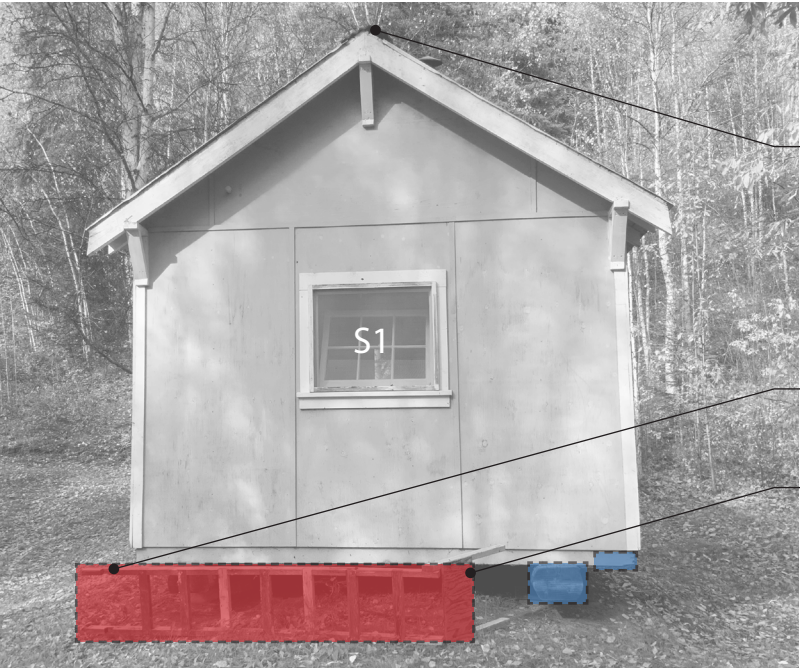
North Elevation



East Elevation

### LEGEND

- Wood Rot
- Cracked/Warped
- Biological Growth/Soiling
- Moderate Corrosion
- Incompatible Patch/Hole



South Elevation



West Elevation

### GENERAL NOTES

- Paint deterioration is typical at all plywood and wood surfaces.
- Mild corrosion is typical at all corrugated metal roofing.
- Permafrost melt and foundation settlement are typical throughout. See Structural Systems section.



(page intentionally left blank)

# Building Interior

## CONDITIONS

### **Flooring**

Flooring is 4x8 sheets of 3/4" plywood face nailed to the joists and painted grey.

### **Conditions:**

Paint finish appears recent and is in good condition.

### **Wall Finishes**

Interior walls are sheathed in 1/2" plywood and painted yellow. Trim includes battens, wood base, and built-in shelving, all painted.

### **Conditions:**

No deficiencies noted.

### **Ceiling**

The ceiling is 1/4" painted plywood with battens supported by 2x6 ceiling joists. The ceiling is insulated with batt-fiberglass insulation with a vapor retarder underneath.

### **Conditions:**

### **Ceiling**

High moisture levels were recorded near the attic hatch at 13.2% WME. Plywood hatch is warped.

### **Attic**

The attic is not ventilated. Batt-fiberglass insulation is damp to the touch. There is evidence of fire damage, see Roof section.



Image 119: Interior view of bunkhouse.

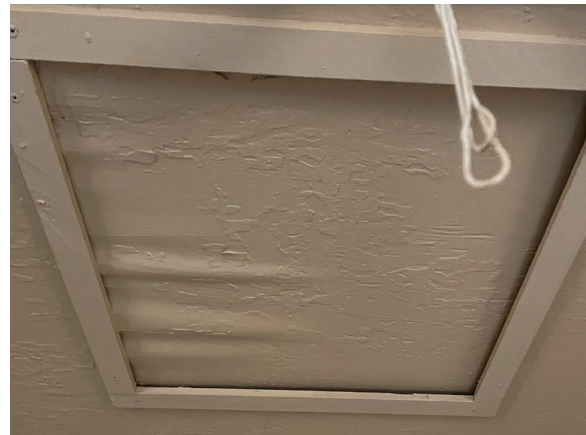


Image 120: Water damage at plywood attic access hatch.



Image 121: Fire damage at roof framing surrounding chimney.

### **Wood Stoves**

A centrally located small stove provides heat to the bunkhouse. It includes a flue damper. The chimney is protected by a thimble at the ceiling. It sits on a corrugated metal floor radiation shield.

#### **Conditions:**

The stove has visible water leaks and surface corrosion. It is in working condition. Corrugated metal radiation shield is inadequate in size and should extend a minimum of 18” beyond stove feet.



*Image 122: Wood stove with inadequate heat shield at floor.*

### **Interior Lighting**

Interior lighting is provided by one porcelain socket fixture with exposed bulb.

#### **Conditions:**

Light bulb is extant but electricity no longer runs to the building.

### **Fire and Life Safety**

A battery operated smoke alarm is wall mounted at the east elevation. A fire extinguisher sits on the floor at the north elevation near the door.



*Image 123: Fire extinguisher.*

#### **Conditions:**

Smoke alarm was inoperable/batteries are dead.



## Bunkhouse 6, FMSS #73320

### *Susie Paul Cabin*



Image 124: 2004 Cultural Landscape Inventory map of Coal Creek Camp, with Bunkhouse 6 identified in orange and current view looking northwest at Bunkhouse 6.

#### GENERAL DESCRIPTION

Gold Placers Inc. constructed Bunkhouse 6 in 1936. The structure moved with the Dredge in 1941 and 1952. The building is a one story, 12'x20' rectangular plan with gabled roof. It is constructed on hewn log skids and an insulated floor. Exterior walls are 2x4 framing sheathed in plywood with battens, insulated and painted. The roof is clad in corrugated metal. The main entrance is at the south elevation protected by a small wood-framed, awning. Fenestration is provided by six-lite hopper windows. The interior plan is a simple, one room interior with natural finish plywood ceilings, walls, and painted plywood floor, heated by a Blaze King wood stove. Interior walls and ceiling have battens. A wood storage shed is located at the east elevation.

#### CHARACTER DEFINING FEATURES

Character-defining features (CDFs) are those architectural materials and elements that contribute to communicating the site and buildings' significance. The buildings at Coal Creek Camp are significant for their association with the development of the mine and the mobility offered by the dredge.

Character defining features of Bunkhouse 6 include:

- Rectilinear plan, 1-story
- Gabled 8/12 roof corrugated metal roofing
- 2x4 bracketed bargeboards
- 4x8 panels with battens as exterior wall cladding (originally beaverboard)
- Log skids
- Wood stove with pipe chimney and cylindrical thimble
- Six-lite, hopper, wood sash windows
- Front-gable entry with awning
- Simple minimal interior finishes

# Building Exterior

## CONDITIONS

### **Roof**

The gabled roof is wood frame. Trim includes barge boards at the gable ends supported by 2x4 brackets, with exposed rafter tails at the eaves. Penetrations are limited to one chimney off-centered from the ridge at the west elevation. The following lists components included at the roof. See Structural Systems section for more detailed information. Dimensions are approximate and should be field verified before undertaking any project:

- 2" x 3-3/4" rafters
- 1" x 5-3/4" ridge beam
- Tongue and groove sheathing
- Corrugated metal roofing

Roof flashing includes bent corrugated panels at the ridge and metal panels surrounding the chimney penetration.

The south entrance is protected by a projecting wood framed awning with mineral-surface rolled roofing, approximately 5' wide by 2-1/2' deep. The roofing returns up the face of the exterior plywood and is nailed in place. The following lists components included at the awning:

- 1x4 angled brackets and supports with chamfered ends
- 3/4" thick tongue and groove sheathing
- One layer of plywood
- 1-3/4" x 3/4" edge trim
- Mineral-surfaced rolled roofing

### **Conditions:**

#### *Covering*

Corrugated metal roofing has mild surface corrosion throughout, with moderate corrosion concentrated around the chimney. A section is loose at the west elevation.



Image 125: Moderate corrosion at corrugated metal roofing surrounding chimney.



Image 126: Exposed tongue and groove sheathing at underside of primary roof and awning roof.



Image 127: South entrance awning.



### *Sheathing*

Tongue and groove sheathing exposed at the south elevation indicated end rot.

### *Rafters*

One cracked rafter at east elevation.

### *Trim*

No deficiencies noted.

### *Awning*

Wood framing has active wood rot with surface deterioration. Mineral-surfaced rolled roofing has biogrowth.

### **Chimney**

A stove chimney projects through the roof at the center of the ridge. The wood roof members are insulated from heat by a metal thimble that extends from the ceiling through the roof. The chimney is topped with a metal cap and includes a storm collar.

### **Conditions:**

The chimney is not braced.

### **Exterior Walls**

Exterior walls are wood-framed, sheathed in plywood with vertical and horizontal battens. Exterior trim also includes corner boards and frieze boards in between rafter tails. The following lists materials comprising the exterior walls. Dimensions are approximate and should be field verified before undertaking any project:

- 4-3/4" thick walls
- 3/4" plywood sheathing
- 1-1/2" x 1/2" battens
- batt-fiberglass insulation

Caribou antlers are mounted to the south elevation gable.



Image 128: Fractured rafter tail at east elevation.



Image 129: Projecting chimney with storm collar and cap.



Image 130: Surface weathering at exterior plywood, north elevation.



**Conditions:***Plywood Sheathing*

Exterior plywood is weathered with paint deterioration throughout. Moisture readings at all elevations included elevated moisture levels at or above 12% WME. Moderate rot was visible at the north gable.

*Trim*

No deficiencies noted.

**Foundation**

Foundations for the bunkhouses are comprised of wood framed floors resting on skids, with skids originally intended to rest on grade. Bunkhouse 6 has log skids supporting 2x6 floor joists with no fasteners or connections between the skids and joists. Joist spaces have batt-fiberglass insulation held in place with chicken wire stapled to the underside of the joists for rodent protection. The skids are supported by grade on the north side and stacks of cribbing on the south side. The space under the floor is open air with no skirting.

**Conditions:***Skids*

Exposed projecting ends of the log skids are weathered. Melting permafrost at the bermed earth below is resulting in severe settlement and ground upheaval. To level the bunkhouse, the log skids are shimmed with various wood blocking and cribbing at the south elevation.

*Floor Assembly*

Joists, insulation, and rodent protection are in good condition.

*Cribbing*

See Structural System section.



Image 131: Detail of typical paint weather at exterior plywood and trim.



Image 132: Underside of building with log skid and cribbing.



Image 133: Detail of chicken wire, wire mesh, and batt-fiberglass insulation below floor framing.

## **Windows**

All windows are 2'x3' six-lite wood sash interior-swing hopper windows with exterior screens. There are a total of four windows: one at each elevation. Hardware includes latches and chain stays. There is no weatherstripping.

### **Conditions:**

\*See Window & Door Assessment forms in Appendix C for individual conditions at each window.

Windows are in fair condition with moderate surface and paint deterioration at the exterior. Windows fit loosely in their frames and are not sealed. Putty glaze is dry and cracked throughout. Window N1 has a warped screen

## **Exterior Door**

The north entry door is a painted 2-panel wood door with knob handleset. A wood framed exterior screen has a spring closer and wood pull.

### **Conditions:**

\*See Window & Door Assessment forms in Appendix C for individual conditions at each door.

### **North Entrance Door**

Surface deterioration at both faces of door. Upper panel exterior face is delaminating. Handleset is in working condition.

### **Screen Door**

Spring closer is in good operable condition.



*Image 134: Hopper window with exterior screen and paint weathering.*



*Image 135: Interior view of hopper window with transom latch and chain stay.*



*Image 136: Delamination of exterior door upper panel.*

### ***Entry Stair***

The entrance to the building is on the south elevation and is accessible by wood stairs with an upper wood deck landing and wood railings, all painted.

### **Conditions:**

Entry stair and handrails do not meet code for landing requirements, tread or riser dimensions, and handrail heights and profiles. The stair and handrail are in poor condition with severe wood rot and unstable treads. The bottom tread is broken.



*Image 137: Warped wood shed at east elevation.*

### ***Sheds***

A covered wood shed supported by 2x2 lumber sits adjacent to the east elevation at the south end. Its roof is comprised of plywood sheathing and is treated with mineral-surfaced rolled roofing.

### **Conditions:**

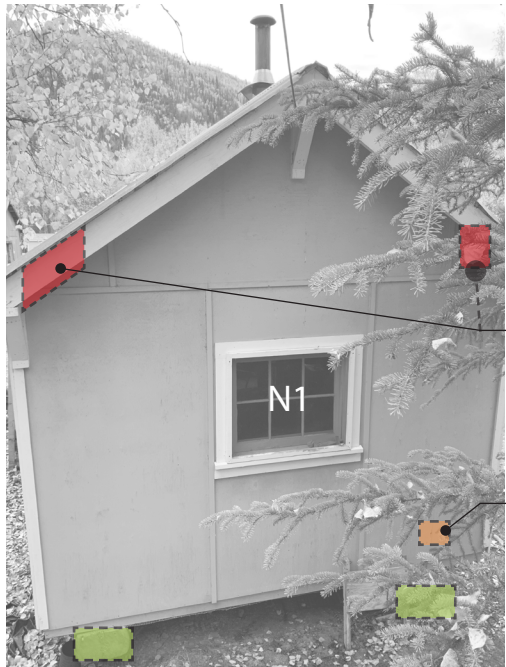
#### ***Wood Shed***

The wood shed lacks any crossbracing and is warped. The location of the wood shed violates the NPS Eastern Area Fire Management (EAFM) prescription, which requires firewood to be stored a minimum of 30' from all structures.



# Bunkhouse 6

## Exterior Elevation Condition Diagram



North Elevation



East Elevation

LEGEND

|        |                           |
|--------|---------------------------|
| Red    | Wood Rot                  |
| Blue   | Cracked/Warped            |
| Green  | Biological Growth/Soiling |
| Yellow | Moderate Corrosion        |
| Orange | Incompatible Patch/Hole   |



South Elevation



West Elevation

- GENERAL NOTES
1. Paint deterioration is typical at all plywood and wood surfaces.
  2. Mild corrosion is typical at all corrugated metal roofing.
  3. Permafrost melt and foundation settlement are typical throughout. See Structural Systems section.

(page intentionally left blank)



# Building Interior

## CONDITIONS

### **Flooring**

Flooring is 4x8 sheets of 3/4" plywood face nailed to the joists and painted grey.

### **Conditions:**

Paint finish appears recent and is in good condition.

### **Wall Finishes**

Interior walls are sheathed in 1/2" plywood with battens and are a natural finish.

### **Conditions:**

No deficiencies noted.

### **Ceiling**

The ceiling is 1/4" plywood with battens in a natural finish. There is no hatch, the attic was not accessible.

### **Conditions:**

#### *Ceiling*

No deficiencies noted.

#### *Attic*

The attic is not ventilated. The attic was not accessible for assessment.

### **Wood Stoves**

A centrally located circulating stove provides heat to the bunkhouse. It has the option to be plugged in for fan circulation. It includes a flue damper. The chimney is protected by a thimble at the ceiling. It sits on a metal floor radiation shield.

### **Conditions:**

Without electricity for fan circulation, the wood stove produces a lot of smoke. Radiation shield at floor is inadequate and should project a minimum of 18" from stove feet.



Image 138: Interior view of bunkhouse.



Image 139: Painted plywood floor.



Image 140: Wood stove with inadequate heat shield at floor.



### ***Interior Lighting***

Interior lighting is provided by one porcelain socket fixture with exposed bulb and two propane sconces.

#### **Conditions:**

Light bulb is missing. Electricity no longer runs to the building.

### ***Fire and Life Safety***

A battery powered smoke alarm is wall mounted at the west elevation. A fire extinguisher is wall mounted at the south elevation near the door.

#### **Conditions:**

The smoke alarm is removed from the wall with batteries removed.



*Image 141: One of two propane sconces.*



*Image 142: One of two propane sconces.*



*Image 143: Interior view of entry door and fire extinguisher.*

## Public Use Cabin, FMSS #73314

### Phil Berail Cabin



Image 144: 2004 Cultural Landscape Inventory map of Coal Creek Camp, with the Public Use Cabin identified in orange and current view looking northeast at the Public Use Cabin.

#### GENERAL DESCRIPTION

Gold Placers Inc. constructed the Public Use Cabin in 1936. The structure moved with the Dredge in 1941 and 1952. The building is a one story, 12'x18' rectangular plan with gabled roof. It is constructed on hewn log skids and insulated floor. Exterior walls are 2x4 framing sheathed in plywood with battens, insulated and painted. The roof is clad in corrugated metal. There are two entrances, one at the east and one at the west elevation, both protected by small wood-framed, awnings. Fenestration is provided by six-lite hopper windows. The interior plan is a simple, one room interior with painted plywood ceilings, walls, and floor, heated by a wood stove. A small coat closet is located at the northwest corner. Interior walls and ceiling have battens. There is a wood shed located at the east elevation.

#### CHARACTER DEFINING FEATURES

Character-defining features (CDFs) are those architectural materials and elements that contribute to communicating the site and buildings' significance. The buildings at Coal Creek Camp are significant for their association with the development of the mine and the mobility offered by the dredge.

Character defining features of the Public Use Cabin include:

- Rectilinear plan, 1-story
- Gabled 8/12 roof corrugated metal roofing
- 2x4 bracketed bargeboards
- 4x8 panels with battens as exterior wall cladding (originally beaverboard)
- Log skids
- Wood stove with pipe chimney and cylindrical thimble
- Six-lite, hopper, wood sash windows
- Front-gable entries with awning
- Simple minimal interior finishes



# Building Exterior

## CONDITIONS

### Roof

The gabled roof is wood frame. Trim includes barge boards at the gable ends supported by 2x4 brackets, with exposed rafter tails at the eaves. Penetrations are limited to one chimney off-centered from the ridge at the east end of the north elevation. The following lists components included at the roof. See Structural Systems section for more detailed information. Dimensions are approximate and should be field verified before undertaking any project:

- 2" x 3-3/4" rafters
- 1"x 5-3/4" ridge beam
- 1x6 sheathing
- Corrugated metal roofing

Roof flashing includes bent corrugated metal at the ridge and pieces of metal covering surrounding the chimney penetration.

The east and west entrances are protected by a projecting wood framed awning with mineral-surface rolled roofing, approximately 5' wide by 2-1/2' deep. The roofing returns up the face of the exterior plywood and is nailed in place. The following lists components included at the awnings:

- 1x4 angled brackets and supports with chamfered ends
- 3/4" thick tongue and groove sheathing
- One layer of plywood
- 1-3/4" x 3/4" edge trim
- Mineral-surfaced rolled roofing

### Conditions:

#### Covering

Corrugated metal roofing has mild surface corrosion throughout, with moderate corrosion concentrated around the chimney. A section has been patched at the west gable.



Image 145: Corrugated metal roof with project shed roofs at east entry and wood shed.



Image 146: Tongue and groove sheathing exposed at gable ends, with support brackets.



Image 147: Active rot at east elevation entry awning.



### *Sheathing*

No deficiencies noted.

### *Rafters*

One cracked rafter at south elevation.

### *Trim*

One cracked bracket at east elevation ridge.

### *Awning*

Wood framing has active wood rot with surface deterioration. Mineral-surfaced rolled roofing has biogrowth.

### ***Chimney***

A stove chimney projects through the roof. The wood roof members are insulated from heat by a metal thimble that extends from the ceiling through the roof. The chimney is topped with a metal cap.

### **Conditions:**

The chimney is not braced. Water leaking is evident.

### ***Exterior Walls***

Exterior walls are wood-framed, sheathed in plywood with vertical and horizontal battens. Exterior trim also includes corner boards and frieze boards in between rafter tails. The following lists materials comprising the exterior walls. Dimensions are approximate and should be field verified before undertaking any project:

- 4-3/4" thick walls
- 3/4" plywood sheathing
- 1-1/2" x 1/2" battens
- Batt-fiberglass insulation



Image 148: Attic view with skip sheathing, building paper, and batt-fiberglass insulation visible.



Image 149: Chimney projecting at north elevation.



Image 150: Typical exterior plywood sheathing with vertical battens and corner boards.

**Conditions:***Plywood Sheathing*

Exterior plywood is weathered with paint deterioration throughout. Moisture readings at all elevations included elevated moisture levels at or above 12% WME. Active rot and potential mold visible at north elevation..

*Trim*

No deficiencies noted.

**Foundation**

Foundations for the bunkhouses are comprised of wood framed floors resting on skids, with skids originally intended to rest on grade. The Public Use Cabin was constructed in the same manner and has log skids supporting 2x6 floor joists with no fasteners or connections between the skids and joists. Joist spaces have batt-fiberglass insulation held in place with chicken wire stapled to the underside of the joists for rodent protection. The skids are supported by grade on the north side and stacks of cribbing on the south side. The space under the floor is open air with no skirting.

**Conditions:***Skids*

Exposed projecting ends of the log skids are weathered. Melting permafrost at the bermed earth below is resulting in settlement and ground upheaval at the south elevation. To level the bunkhouse, the south skid is shimmed with various wood blocking and cribbing.

*Floor Assembly*

Joists, insulation, and rodent protection are in good condition.

*Cribbing*

See Structural System section.



Image 151: Mildew discoloration at north elevation plywood sheathing.



Image 152: Cribbing supports log skids at foundation.



Image 153: Projecting log skids are weathered.



## **Windows**

All windows are 2'x3' three-over-three wood sash interior-swing hopper windows with exterior screens. There are a total of three windows: one each at the north, south, and west elevations. Hardware includes latches and chain stays. There is no weatherstripping.

### **Conditions:**

\*See Window & Door Assessment forms in Appendix C for individual conditions at each window.

Windows are in fair condition with moderate surface and paint deterioration at the exterior. Windows fit loosely in their frames and are not sealed. Putty glaze is dry and cracked throughout. Window S1 has surface deterioration at the sill and is missing the chain stay. Window W1 is missing a muntin, latch and chain and is nailed closed.

## **Exterior Doors**

The east and west entry doors are painted 2-panel wood doors with knob handlesets. Wood framed exterior screens have spring closers and wood pulls.

### **Conditions:**

\*See Window & Door Assessment forms in Appendix C for individual conditions at each door.

#### *West Entrance Door and Screen*

Surface deterioration at both faces of door. Handleset is in working condition. Spring closer is in good operable condition.

#### *East Entrance Door and Screen*

Surface deterioration at both faces of door. Upper panel exterior face is delaminating. Handleset is in working condition. Spring closer is in good operable condition.



Image 154: Typical hopper window with exterior screen. Window W1 is missing a muntin.



Image 155: Windows are nailed closed using wood blocking.



Image 156: Typical entry door and screen.



### **Entry Stairs**

The entrances to the building are on the east and west elevations and are accessible by wood stairs with wood railings, painted. The west entrance includes an upper wood deck landing.

#### **Conditions:**

Entry stair and handrails do not meet code for landing requirements, tread or riser dimensions, and handrail heights and profiles. Both stairs are in fair condition with surface wear. Both handrails are in poor condition with severe wood rot.

### **Sheds**

A covered wood shed supported by 2x2 lumber sits adjacent to the east entrance. Its roof is comprised of plywood sheathing and is treated with mineral-surfaced rolled roofing.

#### **Conditions:**

##### *Wood Shed*

Shed and wood pile is stacked directly against the building. Rolled roofing has biogrowth. The location of the wood shed violates the NPS Eastern Area Fire Management (EAFM) prescription, which requires firewood to be stored a minimum of 30' from all structures.



*Image 158: East entrance door with exterior delamination at upper panel.*



*Image 159: Wood shed roof with biogrowth.*



*Image 157: Severe rot at west entry handrail.*



*Image 160: Severe rot at east entry handrail.*



# Public Use Cabin

## Exterior Elevation Condition Diagram



North Elevation



East Elevation

LEGEND

|             |                           |
|-------------|---------------------------|
| <div></div> | Wood Rot                  |
| <div></div> | Cracked/Warped            |
| <div></div> | Biological Growth/Soiling |
| <div></div> | Moderate Corrosion        |
| <div></div> | Incompatible Patch/Hole   |



South Elevation



West Elevation

- GENERAL NOTES
1. Paint deterioration is typical at all plywood and wood surfaces.
  2. Mild corrosion is typical at all corrugated metal roofing.
  3. Permafrost melt and foundation settlement are typical throughout. See Structural Systems section.

(page intentionally left blank)



# Building Interior

## CONDITIONS

### **Flooring**

Flooring is 4x8 sheets of 3/4" plywood face nailed to the joists and painted grey.

### **Conditions:**

Paint finish appears recent and is in good condition.

### **Wall Finishes**

Interior walls are sheathed in beaverboard with battens, all painted. Trim includes wood baseboard painted white.

### **Conditions:**

No deficiencies noted.

### **Ceiling**

The ceiling is 1/4" plywood with battens and painted. The ceiling is insulated with batt-fiberglass insulation. There is no vapor retarder.

### **Conditions:**

#### *Ceiling*

The ceiling surrounding the chimney penetration has severe water damage with 21% WME recordings.

#### *Attic*

The attic is not ventilated. Batt-fiberglass insulation is damp to the touch.

### **Wood Stove**

A small stove located at the northeast corner provides heat to the Public Use Cabin. It includes a flue damper. The chimney is protected by a thimble at the ceiling. It sits on a metal floor radiation shield. A corrugated metal radiation shield rests behind the stove to insulate the plywood interior wall from heat.

### **Conditions:**

The stove location does not meet clearance requirements from adjacent interior walls. Wood stove pipe is leaking. Stove appears in operating condition.



Image 161: Interior view of bunkhouse, looking east.



Image 162: Delamination and water damage at plywood ceiling surrounding chimney.



Image 163: Wood stove with corrugated metal radiation shield.

**Interior Lighting**

Interior lighting is provided by two porcelain socket fixtures with exposed bulbs

**Conditions:**

Light bulbs are missing. Electricity no longer runs to the building.

**Fire and Life Safety**

A battery operated smoke alarm is wall mounted at the south elevation.

**Conditions:**

The fire extinguisher was removed for winter storage at the time of assessment.



Image 164: Porcelain socket and missing bulb.



Image 165: Smoke alarm.

## Mess Hall, FMSS #73335

### Harry David Cabin



Image 166: 2004 Cultural Landscape Inventory map of Coal Creek Camp, with the Mess Hall identified in orange and current view looking northwest at the Mess Hall.

#### GENERAL DESCRIPTION

Gold Placers Inc. constructed the Mess Hall in 1936. The structure moved with the Dredge in 1941 and 1952. The building is one story, 38'5" x 42'7" overall. The main building portion is rectilinear in plan. Two additions at the north elevation include a pantry (east end) and bunkroom (west end). The roof is gabled, treated with corrugated metal, and topped with a with a rectangular cupola. Exterior walls are 2x4 framing sheathed in drop siding, painted. There are four entrances. The main entrance is at the east elevation, a secondary entrance is at the east elevation of the pantry. The bunkroom has its own entrance at the north elevation. A fourth entry is located at the west elevation. Fenestration is provided by six-lite and 2-over-2 hopper windows.

The interior has six rooms: the mess hall, kitchen, pantry, bunkroom, bunkroom entry, and hall. Most interior walls and ceilings are painted plywood with battens, with the exception of the east mess hall wall (drop siding) and east kitchen wall (corrugated metal for fire-prevention behind stove). Most floors are painted plywood with the exception of the mess hall (painted tongue and groove, 3/4" x 3-1/4"). Wood stoves are included in the mess hall (southeast corner) and bunkroom (southwest corner).

#### CHARACTER DEFINING FEATURES

Character-defining features (CDFs) are those architectural materials and elements that contribute to communicating the site and buildings' significance. The buildings at Coal Creek Camp are significant for their association with the development of the mine and the mobility offered by the dredge.

Character defining features of the Mess Hall include:

- "F" plan, 1-story
- Intersecting gabled roofs with corrugated metal roofing
- Bargeboards and fascia
- Cupola
- Exterior Blazo can lights
- Exterior drop siding
- Log skids
- Two wood stoves with pipe chimneys and cylindrical thimbles
- Six-lite, hopper, wood sash windows
- Simple minimal interior finishes
- Caribou antlers



# Building Exterior

## CONDITIONS

### **Roof**

The intersecting gabled roof is wood frame. Trim includes bargeboards at the gable ends supported by 2x4 brackets, with exposed rafter tails at the eaves. A cupola tops the ridge of the main building above the kitchen, likely a former cooking vent but presently closed off. Penetrations are limited to two chimneys, one at the south slope of the mess hall and one at the west slope of the bunkroom. The following lists components included at the roof. See Structural Systems section for more detailed information. Dimensions are approximate and should be field verified before undertaking any project:

- 2" x 3-3/4" rafters
- 1" x 5-3/4" ridge beams
- 1x6 sheathing
- 1x9 bargeboards
- 1x8 fascia
- Corrugated metal roofing

Roof flashing includes bent corrugated paneling at the ridge and metal panels surrounding the chimney penetrations.

### **Conditions:**

#### *Covering*

Corrugated metal roofing is in good condition and appears to have been replaced recently. There is mild surface corrosion concentrated around the mess hall chimney.

#### *Sheathing and Rafters*

No deficiencies noted.

#### *Trim*

There is surface rot at the west elevation bargeboard return where the bunkroom meets the hall. Paint is weathering at the north elevation bargeboards.



Image 167: North elevation with pantry and bunkroom additions.



Image 168: Paint weathering at roof cupola.



Image 169: Paint weathering at north elevation bargeboards.

### ***Chimneys***

One stove chimney penetrates the southeast corner of the mess hall room at the south slope of the gable roof. Another chimney penetrates the west elevation slope of the bunkroom. The wood roof members are insulated from heat by a metal thimble that extends from the ceiling through the roof. Both chimneys are topped with a metal cap. The bunkroom chimney includes a storm collar.

### **Conditions:**

Chimneys are not braced.

### ***Exterior Walls***

Exterior walls are wood-framed, sheathed in wood drop siding. Exterior trim includes corner boards and frieze boards in between rafter tails. The following lists materials comprising the exterior walls. Dimensions are approximate and should be field verified before undertaking any project:

- 6" thick walls
- Wood drop siding with 7" exposure
- Batt-fiberglass insulation

Caribou antlers are mounted to the east elevation gable.

### **Conditions:**

#### ***Drop Siding***

Exterior drop siding is weathered with paint deterioration throughout. Paint is weathered at the west, south, and east elevations. There is insect and bear scratch damage at the north elevation near windows. The pantry wing is settling away from the main building, leaving a gap in the siding. Drop siding at the cupola is weathered at the south elevation.

#### ***Trim***

Cornerboards at the southwest corner have surface deterioration.



*Image 170: Wood rot at intersecting roofs at the west elevation.*



*Image 171: Moderate corrosion surrounding Mess Hall chimney projection. Chimney is not braced.*



*Image 172: Detail of exterior drop siding and paint weathering.*



## ***Foundation***

Foundations for the Mess Hall are comprised of wood framed floors resting on skids, with skids originally intended to rest on grade. Log skids vary in size between building sections, from 11" to 16" diameter, and are spliced together at their joints. 2x floor joists spaced 24" on center rest on the skids with no fasteners or connections. Joist spaces have batt-fiberglass insulation held in place with chicken wire stapled to the underside of the joists for rodent protection. The skids are supported by stacks of cribbing throughout. The Mess Hall is unique with water table trim and wood skirting. The skirting is 1x8 painted rough sawn mounted to 2x6 pressure treated framing behind.

## ***Conditions:***

### ***Skids***

Exposed projecting ends of the log skids are weathered. The log skid projecting at the west elevation hall shows active rot and moisture levels above 12% WME. Melting permafrost at the bermed earth below is resulting in severe settlement and ground upheaval. To level the Mess Hall, the log skids are shimmed with various wood blocking and cribbing.

### ***Skirting***

Wood skirting throughout is severely weathered with surface rot. Boards are loose at the west elevation. Biogrowth is prevalent at the north elevation.

### ***Floor Assembly***

Joists, insulation, and rodent protection are in good condition.

### ***Cribbing***

See Structural System section.



*Image 173: Crawlspace below building, with wood framing at exterior skirting visible on left.*



*Image 174: Chamfered log skids at splice, with abandoned tow cable and support cribbing.*



*Image 175: Active wood rot at projecting log skid at east elevation.*



## Windows

Most windows are 2'x3' six-lite wood sash interior-swing hopper windows with exterior screens. There are two four-lite hopper sash that were created by combining two sash together, held with metal strips. There are a total of ten windows: two at the west elevation, two at the south elevation, three at the north elevation, and three at the east elevation. Hardware includes latches and chain stays. There is no weatherstripping.

### Conditions:

\*See Window & Door Assessment forms in Appendix C for individual conditions at each window.

Windows are in fair condition with moderate surface and paint deterioration at the exterior. Windows fit loosely in their frames and are not sealed. Putty glaze is dry and cracked throughout. Window N1 glazing has been replaced with plywood painted black for security and fixed in place. Window E1 has a broken glass pane. Window E2 is missing its chain stay. Window E3 has a torn screen. Window N3 is missing hardware and screen is warped. Windows S1 and S2 are missing hardware. S2 is installed backwards in its frame.

## Exterior Doors

There are four entry doors to the Mess Hall building:

- D1 east elevation pantry door, wood batten style with strap hinges and pull. Natural finish. Interior wood frame screen with spring closer.
- D2 east elevation mess hall door (main entrance), Solid wood painted full lite door infilled with plywood, knob handleset and sliding bolt lock. Includes half-lite screen door with spring closer and wood pull.
- D3 west elevation hall door, wood batten style with strap hinges and pull. Natural finish.
- D4 north elevation bunkhouse door, solid wood 5-panel with knob handleset. Painted at exterior, natural finish at interior.



Image 176: Two window sash ganged together to create one hopper window.



Image 177: Pantry window N1 infilled with plywood for security.



Image 178: Door D2, main entrance.

**Conditions:**

*\*See Window & Door Assessment forms in Appendix C for individual conditions at each door.*

***D1 East elevation pantry door***

Surface deterioration and weathering at exterior face of door. Hardware in operable condition.

***D2 East elevation mess hall door (main entrance)***

Wood door has severe surface deterioration. Plywood infill is deteriorating. Exterior screen is weathered, screen is torn and patched. Handleset is loose, sliding bolt used to latch door. Spring closer is in good operable condition.

***D3 West elevation hall door***

Surface deterioration and weathering at exterior face of door.

***D4 North elevation bunkhouse door***

Surface deteriorate and weathering at exterior face of door. Handleset in operable condition. Door is shimmed to stay closed.

***Entry Stairs***

All four entries include wood stairs and handrails for access. Entries D2 and D3 include wood deck upper landings.

**Conditions:**

Entry stair and handrails do not meet code for landing requirements, tread or riser dimensions, and handrail heights and profiles.

Entries D1 and D4 have surface wear at the treads. Entries D2 and D3 are severely rotted and unstable.



*Image 179: Surface wear at door D1.*



*Image 180: Surface wear at door D4*



*Image 181: Severe wood rot at west elevation handrail.*



### ***Sheds***

A covered wood shed supported by 2x2 lumber sits adjacent to the south elevation at the east end. Its roof is comprised of plywood sheathing and is treated with mineral-surfaced rolled roofing.

### **Conditions:**

#### ***Wood Shed***

Wood posts are weathered. The location of the wood shed violates the NPS Eastern Area Fire Management (EAFM) Prescription, which requires firewood to be stored a minimum of 30' from all structures.

### ***Exterior Lighting***

Exterior lighting is limited to two Blazo can sconces above doors D2 and D3.

### **Conditions:**

Light bulbs are extant. Electricity on site had been turned off at the time of the site visit assessment and operation of lighting could not be confirmed.



*Image 182: East elevation main entry stair.*



*Image 183: South elevation wood shed.*



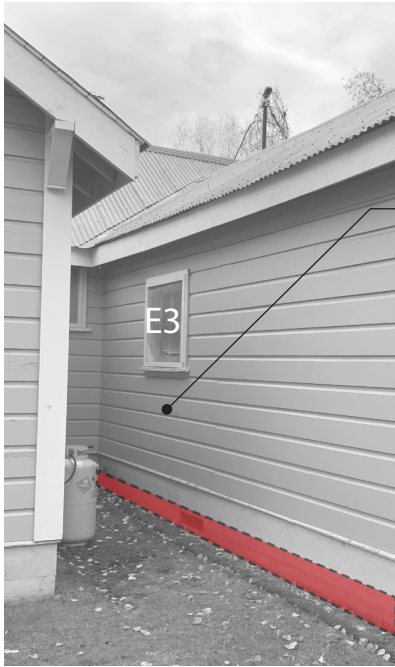
*Image 184: Detail of Blazo can exterior light.*



(page intentionally left blank)

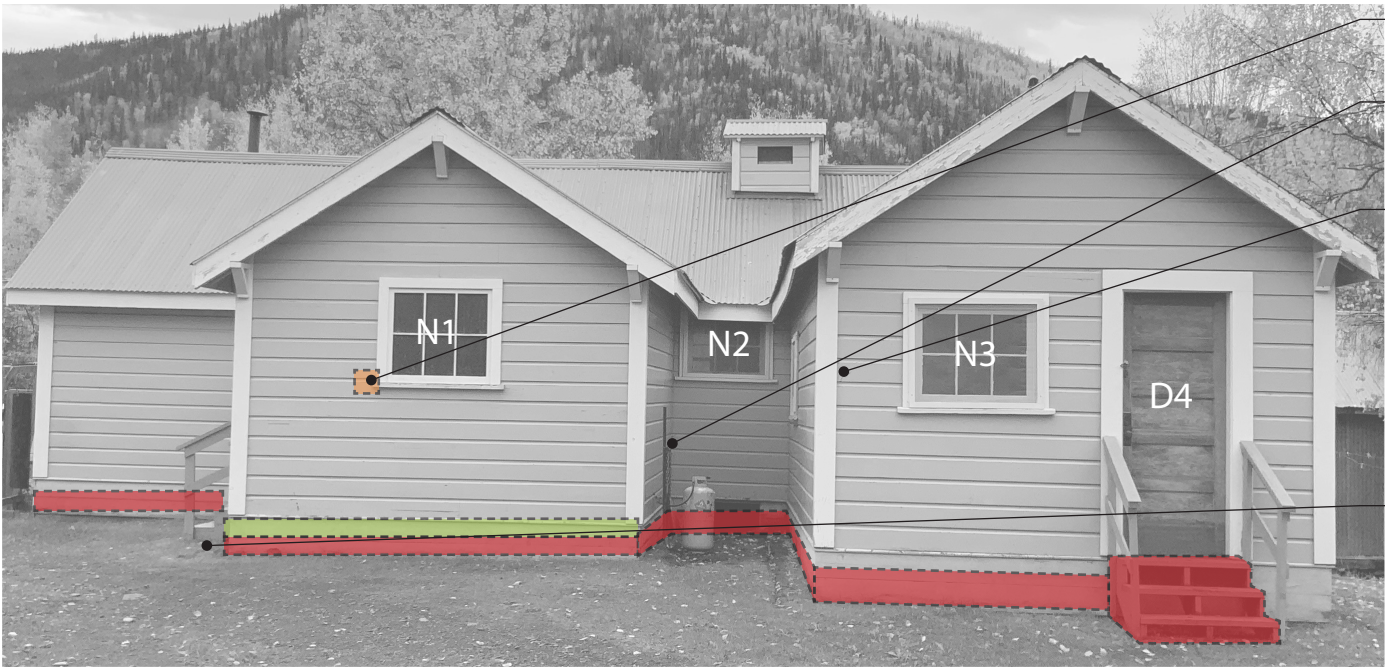
Exterior Elevation Condition Diagram

(Continued on following page)



Bear damage

Bunkhouse East Elevation



Animal damage

Gap

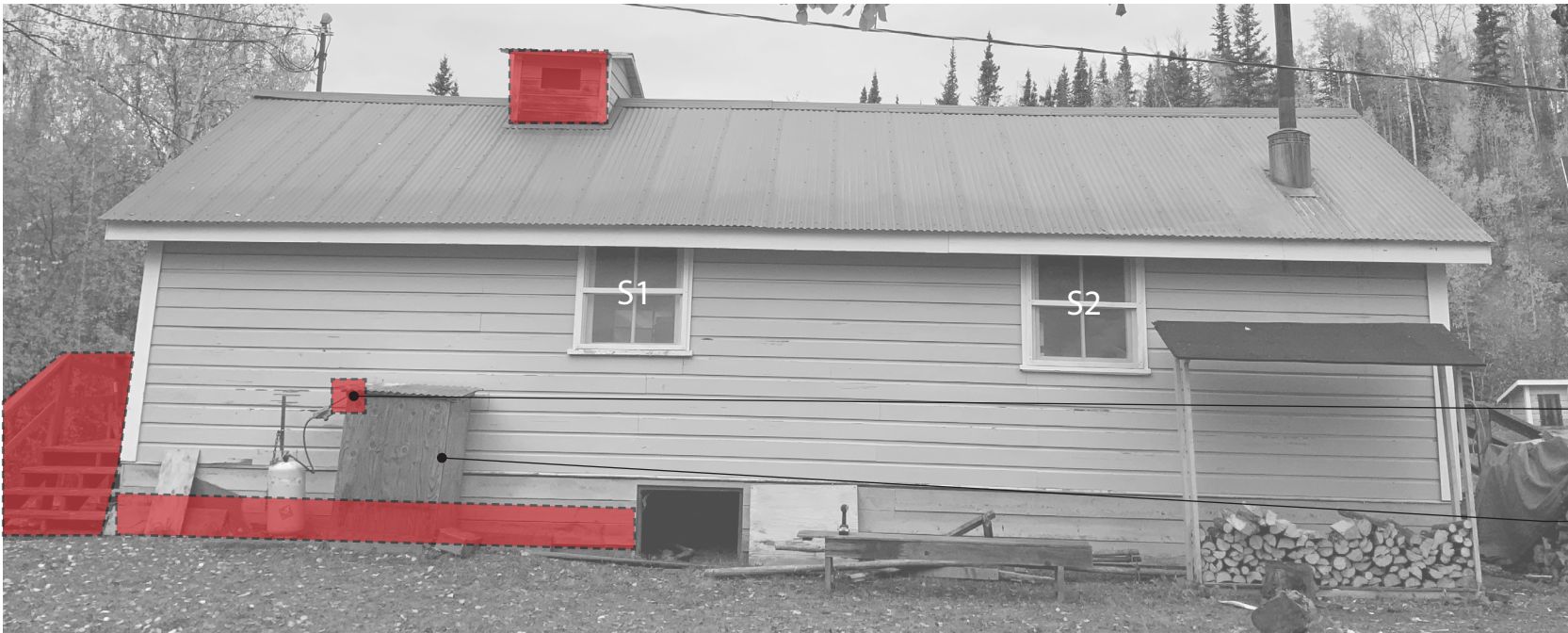
Bear damage

Built up grade burying wood skirting

North Elevation

LEGEND

- Wood Rot
- Cracked/Warped
- Biological Growth/Soiling
- Moderate Corrosion
- Incompatible Patch/Hole



Surface rot at propane entry

Old propane shed, not used

South Elevation

GENERAL NOTES

1. Paint deterioration is typical at all plywood and wood surfaces.
2. Mild corrosion is typical at all corrugated metal roofing.
3. Permafrost melt and foundation settlement are typical throughout. See Structural Systems section.



Exterior Elevation Condition Diagram

(Continued from previous page)



East Elevation

LEGEND

- Wood Rot
- Cracked/Warped
- Biological Growth/Soiling
- Moderate Corrosion
- Incompatible Patch/Hole



Bunkhouse West Elevation



West Elevation

GENERAL NOTES

1. Paint deterioration is typical at all plywood and wood surfaces.
2. Mild corrosion is typical at all corrugated metal roofing.
3. Permafrost melt and foundation settlement are typical throughout. See Structural Systems section.



## Building Interior

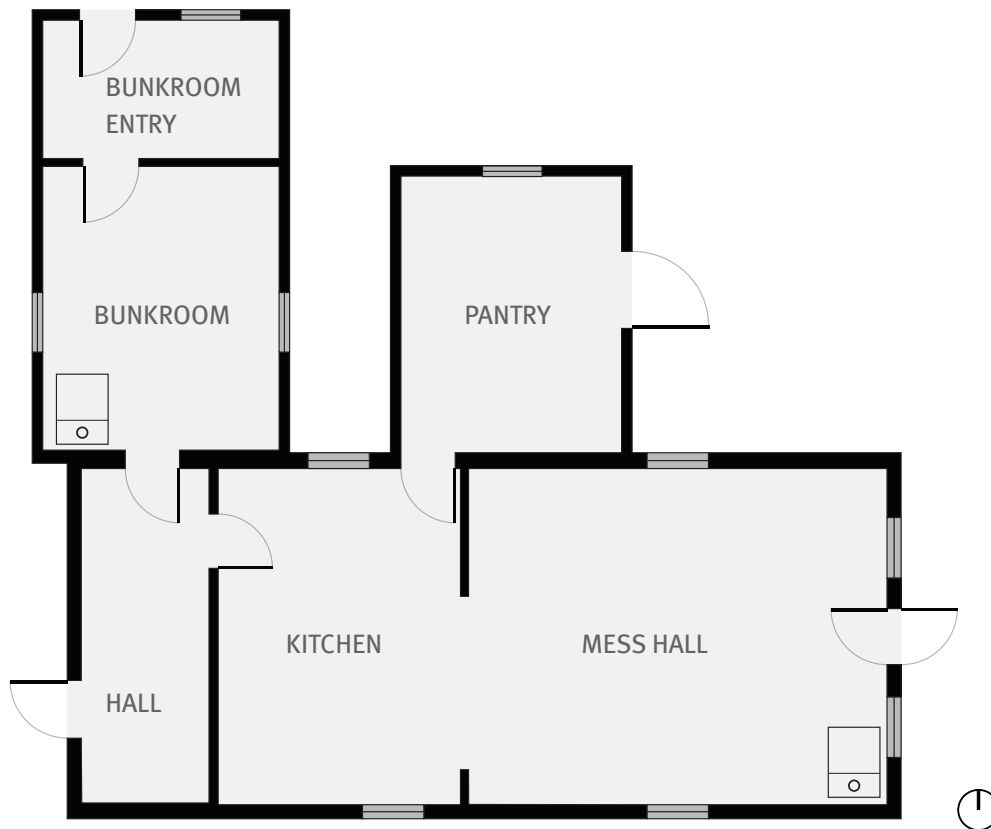


Image 185: Mess Hall floor plan with interior rooms identified.

### CONDITIONS

#### ***Flooring***

Flooring is 4x8 sheets of 3/4" plywood face nailed to the joists and painted red at all rooms except the mess hall, which has the original 3/4" x 3-1/4" tongue and groove floor painted red.

#### **Conditions:**

##### *Plywood*

Plywood floors are fair throughout with paint and surface deterioration.

##### *Tongue and Groove*

The wood tongue and groove floor is in poor condition with gaps between boards, splintering, and surface wear.



Image 186: Painted plywood flooring in bunkroom.

### **Wall Finishes**

Interior walls are primarily sheathed in 1/2" plywood with battens and are painted. Exterior V-groove siding now enclosed at additions within the kitchen and mess hall west elevations remain and are painted. The kitchen west elevation wall is treated with corrugated paneling to insulate the wall from cookstove heat. The kitchen north elevation is treated with hardboard behind the kitchen sink.

#### **Conditions:**

##### *Plywood*

Plywood walls and battens are fair throughout minor paint deterioration.

##### *V-groove Siding*

Walls are fair throughout with minor paint deterioration.

##### *Corrugated Metal*

No deficiencies noted.

##### *Hardboard*

No deficiencies noted.

### **Ceiling**

The ceiling is 1/4" plywood with battens, painted. The ceiling in the mess hall and kitchen is vaulted with an exposed joist, also painted.

#### **Conditions:**

No deficiencies noted

### **Wood Stoves**

A cast iron barrel stove provides heat to the mess hall. It includes a flue damper. The chimney is protected by a thimble at the ceiling. It sits on a metal floor radiation shield. A corrugated metal radiation shield rests behind the stove to insulate the plywood interior wall from heat.



Image 187: Surface wear at wood floor near main entrance in mess hall.



Image 188: V-groove siding at interior wall, with corrugated metal heat shield behind cookstoves.



Image 189: Gabled roof with plywood ceiling and exposed joist.

A small wood stove provides heat to the bunkroom. It includes a flue damper. The chimney is protected by a thimble at the ceiling. It sits on a corrugated metal floor radiation shield. A corrugated metal radiation shield rests behind the stove to insulate the plywood interior wall from heat.

**Conditions:**

Both stove locations do not meet clearance requirements from adjacent interior walls. Mess hall stove has surface corrosion. No deficiencies noted at bunkroom stove.

**Interior Lighting**

Interior lighting is provided by porcelain socket fixtures with exposed bulbs at the following locations:

- (2) in hall
- (1) in bunkroom
- (1) in bunkroom entry
- (1) in pantry
- (2) in kitchen
- (2) in mess hall

**Conditions:**

Light bulbs are extent. Electricity on site had been turned off by the time of the site visit assessment and operation of lighting could not be confirmed.

**Kitchen Hutch**

A wood kitchen hutch separating the kitchen from the mess hall is believed to be from the period of significance and served as a serving counter. The hutch is painted.

**Conditions:**

The hutch has surface wear but is in stable condition.



Image 190: Mess hall barrel stove with corrugated metal wall shield and v-crimp galvanized steel panel floor shield.



Image 191: Bunkroom stove with corrugated metal wall and floor shield.



Image 192: Original kitchen hutch, still in use.



### **Plumbing**

The domestic hot water system includes an on-demand water heater in the Mess Hall. Associated plumbing includes a three-basin commercial sink in the kitchen. Domestic water piping was not visible for assessment.

#### **Conditions:**

##### *Plumbing Fixtures*

Sinks were not operable at the time of assessment.

### **Fire and Life Safety**

A smoke alarm should be mounted at all sleeping rooms, the main space, and cooking areas. A fire extinguisher should be available in rooms with wood stoves or cooking stoves.

#### **Conditions:**

Smoke alarms were removed for seasonal testing at the time of the assessment and were not observed. The following rooms should include a smoke alarm:

- Mess hall, missing smoke alarm
- Kitchen, missing smoke alarm
- Bunkroom, missing smoke alarm



Image 193: Rheem on-demand hot water heater.



Image 194: Commercial kitchen sinks.

## Laundry, FMSS #73336



Image 195: 2004 Cultural Landscape Inventory map of Coal Creek Camp, with the Laundry building identified in orange and current view looking northeast at the Laundry.

### GENERAL DESCRIPTION

Gold Placers Inc. constructed the Laundry in 1937. The structure moved with the Dredge in 1941 and 1952. The building is a one story, 14'x20' rectangular plan with gabled roof. It is constructed on timber skids and cribbing. Exterior walls are 2x4 framing sheathed in corrugated metal. The roof is also covered in corrugated metal. The entrance is located at the south elevation. Fenestration is provided by six-lite and four-lite 2 hopper windows. The interior plan has three rooms, one large laundry room with two small shower rooms at the east end. Interior finishes are painted plywood ceilings, walls, and floor. Interior walls and ceiling have battens.

### CHARACTER DEFINING FEATURES

Character-defining features (CDFs) are those architectural materials and elements that contribute to communicating the site and buildings' significance. The buildings at Coal Creek Camp are significant for their association with the development of the mine and the mobility offered by the dredge.

Character defining features of the Laundry include:

- Rectilinear plan, 1-story
- Gabled roof with corrugated metal roofing
- Unfinished bargeboards and fascia
- Corrugated metal exterior sheathing
- Six-lite, hopper, wood sash windows
- Simple minimal interior finishes
- Timber skids

# Building Exterior

## CONDITIONS

### **Roof**

The gabled roof is wood frame with tongue and groove sheathing. Trim includes bargeboards at the gable ends and fascia boards at the eaves. Penetrations are limited to one hot water heater vent off-centered from the ridge at the north elevation and a conduit post next to this vent. See Structural Systems section for more detailed information.

Roof flashing is limited to bent corrugated panels at the ridge and metal flashing surrounding the roof penetrations.

### **Conditions:**

#### *Covering*

Corrugated metal roofing has mild surface corrosion throughout. A section is loose at the north elevation.

#### *Sheathing*

No deficiencies noted.

#### *Rafters*

No deficiencies noted.

#### *Trim*

All bargeboards and fascia boards have surface rot.

### **Exterior Walls**

Exterior walls are wood-framed, sheathed in corrugated metal.

### **Conditions:**

#### *Corrugated Metal*

There are holes and penetrations throughout the exterior, which have been patched or double-layered with additional sheathing. The southwest corner is delaminating near the foundation.



Image 196: Corrugated metal roof with mild corrosion and projecting chimney.



Image 197: Exposed eaves reveal painted tongue and groove sheathing at exterior.



Image 198: Bent corrugated metal siding at southwest corner revealing wood framing.



### **Foundation**

The foundation is comprised of a wood framed floor resting on skids, with skids originally intended to rest on grade. The Laundry building has three 6x6 wood skids with no fasteners or connections between the skids and joists. The skids are supported by grade on the east side and stacks of cribbing and barrels on the west side. The space under the floor is open air with no skirting.

### **Conditions:**

#### *Skids*

The wood sills and skids are severely rotted with high moisture levels above 12% WME. Melting permafrost and erosion towards the nearby Beaton Pup Creek at the earth below is resulting in severe settlement and instability toward the west. To level the laundry building, the skids are supported by wood cribbing and a metal barrel and are extremely unstable.

#### *Floor Assembly*

The wood sills are severely rotted with high moisture levels above 12% WME.

#### *Cribbing*

See Structural System section.

### **Windows**

Two windows are four-lite wood sash interior-swing hopper windows with exterior screens. The sash are created by combining two sash, held together with metal straps. These are located at the south and north elevations. A third window at the east elevation is a six-lite sash turned on its side. There is no hardware or weatherstripping. Exterior trim is unfinished. Interior trim is painted.

### **Conditions:**

\*See Window & Door Assessment forms in Appendix C for individual conditions at each window.



*Image 199: Severe erosion at the west end of the building, with various cribbing and barrels used to support the building.*



*Image 200: Underside of building with detail of floor framing. Building is not insulated.*



*Image 201: Six-lite window sash, installed sideways.*

Windows are in fair condition with moderate surface and paint deterioration at the exterior. Windows fit loosely in their frames and are not sealed. Putty glaze is dry and cracked throughout. All windows are toenailed in place. Exterior trim is weathered throughout. Interior trim is in good condition. Window N1 trim was constructed around an abandoned metal strip, likely used to support a clothesline.

### **Exterior Door**

The south entry door is a limited to a half-lite plywood screen door that is shuttered in the winter. The screen door operates with spring closer and metal pull.

### **Conditions:**

*\*See Window & Door Assessment forms in Appendix C for individual conditions at each door.*

### **South Entrance Screen Door**

The screen door is severely weathered and warped. Spring closer is in operable condition. Exterior trim is weathered at the base. Interior trim is in good condition.

### **Entry Landing**

The entrance to the building is on the south elevation and is accessible by one step and a wood frame landing with astroturf surface treatment.

### **Conditions:**

The entry stair and landing does not meet code for landing requirements, tread or riser dimensions. The landing has severe rot and is propped on wood blocking due to erosion below.



Image 202: North elevation window with metal bar installed across face. Wood trim is weathered.



Image 203: South entry screen door, severely weathered.



Image 204: South entry landing is unstable with wood rot.

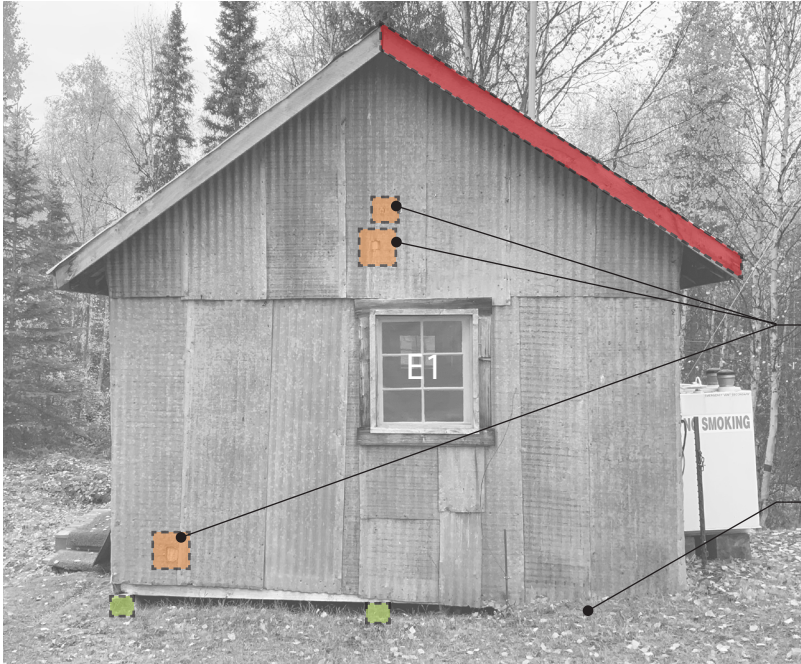


# Laundry

## Exterior Elevation Condition Diagram



North Elevation



East Elevation

LEGEND

|        |                           |
|--------|---------------------------|
| Red    | Wood Rot                  |
| Blue   | Cracked/Warped            |
| Green  | Biological Growth/Soiling |
| Yellow | Moderate Corrosion        |
| Orange | Incompatible Patch/Hole   |



South Elevation



West Elevation

- GENERAL NOTES
1. Paint deterioration is typical at all plywood and wood surfaces.
  2. Mild corrosion is typical at all corrugated metal roofing.
  3. Permafrost melt and foundation settlement are typical throughout. See Structural Systems section.



(page intentionally left blank)

# Building Interior

## CONDITIONS

### **Flooring**

Flooring is 4x8 sheets of 3/4" plywood face nailed to the joists and painted red.

#### **Conditions:**

##### *Plywood*

Plywood floors are fair throughout with paint and surface deterioration.

### **Wall Finishes**

Interior walls are sheathed in plywood with battens and are painted.

#### **Conditions:**

##### *Plywood*

Plywood walls and battens are fair throughout with paint and surface deterioration.

### **Ceiling**

The ceiling is 1/4" plywood with battens, painted. The ceiling is vaulted with two exposed joist, also painted.

#### **Conditions:**

No deficiencies noted

### **Interior Lighting**

Interior lighting is provided by three porcelain socket fixtures with exposed bulb and two propane sconces.

#### **Conditions:**

Light bulbs are extant but electricity on site had been turned off at the time of the assessment site visit and operation of lighting could not be confirmed.



Image 205: Painted plywood interior flooring.



Image 206: Plywood walls with battens. Sinks are wall-mounted on an interior partition separating the laundry room from shower rooms.



Image 207: Gabled ceiling with exposed joists and porcelain light sockets.

### **Plumbing**

The domestic hot water system includes an on-demand water heater located in the Laundry building. Associated plumbing includes two shower stalls, sinks, and washing machine hookups in the Laundry building. Domestic water piping was not visible for assessment. Sink faucet and shower sets are chrome or stainless steel finish.

#### **Conditions:**

##### *Plumbing Fixtures (Laundry)*

Sinks and showers were not operable at the time of assessment.

##### *On-Demand Water Heater*

According to NPS, the water heater has not been connected to domestic water supply due to improper connections and equipment.

### **Fire and Life Safety**

A fire extinguisher rests at the south elevation near the door.

#### **Conditions:**

Smoke alarms were removed for seasonal testing at the time of assessment and were not observed..



Image 208: Wall mounted on-demand hot water heater, not in use.



Image 209: View into shower stall.



## Manager's Office, FMSS #73327



Image 210: 2004 Cultural Landscape Inventory map of Coal Creek Camp, with the Manager's Office identified in orange and current view looking northwest at the Manager's Office.

### GENERAL DESCRIPTION

Gold Placers Inc. constructed the Manager's Office in 1935. The structure moved with the Dredge in 1941 and 1952. The building is a one story, 14'x20' rectangular plan with gabled roof. It is constructed on timber skids. Exterior walls are 2x4 framing sheathed in drop siding, painted. The roof is clad in corrugated metal. The main entrance is at the south elevation. Fenestration is provided by 2-over-2 double hung windows and four-lite fixed windows. The interior plan is divided into three rooms: the office at the south end and two bedrooms at the north. The office includes a built-in desk along the east elevation and a wood stove. Interior finishes include painted tongue-and-groove floor with painted wood beadboard walls and ceilings. The west bedroom has natural finish plywood walls and ceiling.

### CHARACTER DEFINING FEATURES

Character-defining features (CDFs) are those architectural materials and elements that contribute to communicating the site and buildings' significance.

The buildings at Coal Creek Camp are significant for their association with the development of the mine and the mobility offered by the dredge.

Character defining features of the Manager's Office include:

- Rectilinear plan, 1-story
- Gabled 8/12 roof corrugated metal roofing
- Bargeboards and fascia
- Drop siding
- Skids (originally log)
- Wood stove with pipe chimney and cylindrical thimble
- Simple minimal interior finishes
- Two-over-two double hung wood sash windows
- Front-gable entry
- Blazo can exterior light

# Building Exterior

## CONDITIONS

### ***Roof***

The gabled roof is wood frame. Trim includes bargeboards at the gable ends and fascia at the eaves. Penetrations are limited to one chimney centered on the ridge. The following lists components included at the roof. See Structural Systems section for more detailed information. Dimensions are approximate and should be field verified before undertaking any project:

- 2" x 3-3/4" rafters
- 1" x 5-3/4" ridge beam
- 1x6 sheathing
- Corrugated metal roofing

Roof flashing includes bent corrugated panels at the ridge and flashing at the chimney penetration.

### **Conditions:**

#### *Covering*

Corrugated metal roofing has mild surface corrosion throughout, with moderate corrosion concentrated around the chimney. A section is loose at the east elevation. The ridge flashing is patched with smooth metal panel at the north gable.

#### *Sheathing*

Moderate rot at exposed sheathing at north gable.

#### *Rafters*

No deficiencies noted.

#### *Trim*

Surface deterioration at south gable bargeboards, and moderate rot at west fascia.



Image 211: Roof ridge flashing replaced with sheet metal at north end.



Image 212: 1x6 plank sheathing visible at exposed eaves.



Image 213: Mild to moderate corrosion of corrugated metal roofing.



### ***Chimney***

A stove chimney projects through the roof at the center of the building. The wood roof members are insulated from heat by a metal thimble that extends through the roof. The chimney is topped with a metal cap and includes a storm collar

#### **Conditions:**

The chimney is not braced. The metal thimble does not extend down the interior ceiling finishes, leaving the ceiling unprotected.



*Image 214: Chimney projects from gable, with storm collar and cap.*

### ***Exterior Walls***

Exterior walls are wood-framed, sheathed in drop siding. Exterior trim includes corner boards and frieze boards in between rafter tails. The following lists materials comprising the exterior walls. Dimensions are approximate and should be field verified before undertaking any project:

- 4-3/4" thick walls
- Drop siding with 7" exposure
- Batt-fiberglass insulation

#### **Conditions:**

##### *Drop Siding*

Exterior siding is weathered with paint deterioration throughout.

##### *Trim*

No deficiencies noted.



*Image 215: Typical paint failure at exterior drop siding.*

### ***Foundation***

Foundations for the bunkhouses are comprised of wood framed floors resting on skids, with skids originally intended to rest on grade. The Manager's Office is constructed in the same manner and has timber skids supporting 2x6 floor joists with no fasteners or connections between the skids and joists. The skids are supported by grade on the north side and stacks of cribbing on the south side. The space under the floor is open air with no skirting.



*Image 216: Projecting log skids are weathered.*



**Conditions:***Skids*

Exposed projecting ends of the timber skids are weathered with biogrowth. Melting permafrost at the bermed earth below is resulting in severe settlement to the south elevation. To level the building, the timber skids are shimmed with various wood blocking and cribbing at the south elevation.

*Floor Assembly*

Joists are in good condition.

*Cribbing*

See Structural System section.

**Windows**

Most windows are two-over-two wood sash double hung units with exterior screens. Two windows at the east elevation are fixed units ganged together in one assembly. The sash of each fixed unit are comprised of two sash connected with metal strips. The remaining four double hung windows are located at the south, west, and north elevations and have screens. All windows have interior and interior trim. Windows, trim, and screens are painted at the interior and exterior. Double hung frames are mortised for pulleys, but no hardware is extant. There is no weatherstripping.

**Conditions:**

\*See Window & Door Assessment forms in Appendix C for individual conditions at each window.

Windows are in fair condition with moderate surface and paint deterioration at the exterior. Windows fit loosely in their frames and are not sealed. Putty glaze is dry and cracked throughout. Window W1 has a warped screen.



Image 217: Wood cribbing supports log skids.



Image 218: Typical two-over-two wood double hung window with exterior screen.



Image 219: Fixed window assembly at east elevation.

### **Exterior Door**

The south entry door is a painted 4-panel wood door with knob handleset and no screen. Additional locks are mounted to the exterior for security. Door includes interior and exterior trim, all painted.

#### **Conditions:**

*\*See Window & Door Assessment forms in Appendix C for individual conditions at each door.*

#### **South Entrance Door**

Surface deterioration at both faces of door. Handleset is in working condition.

### **Entry Stair**

The entrance to the building is on the south elevation and is accessible by wood stairs with wood railings, painted. There is no landing.

#### **Conditions:**

Entry stair and handrails do not meet code for landing requirements, tread or riser dimensions, and handrail heights and profiles. The stair and handrail are in fair condition with surface wear. The handrail recorded 15% WME but no rot was evident.

### **Exterior Lighting**

Exterior lighting is limited to one Blazo can sconce above the south entry

#### **Conditions:**

Light bulb is extant but electricity on site had been turned off at the time of the assessment site visit and operation of lighting could not be confirmed.



Image 220: Detail of missing double hung sash ropes.



Image 221: Exterior four-panel wood door.



Image 222: South entry stair.

(page intentionally left blank)



Manager’s Office  
Exterior Elevation Condition Diagram



North Elevation



East Elevation

LEGEND

- Wood Rot
- Cracked/Warped
- Biological Growth/Soiling
- Moderate Corrosion
- Incompatible Patch/Hole



South Elevation



West Elevation

GENERAL NOTES

1. Paint deterioration is typical at all plywood and wood surfaces.
2. Mild corrosion is typical at all corrugated metal roofing.
3. Permafrost melt and foundation settlement are typical throughout. See Structural Systems section.

(page intentionally left blank)



# Building Interior

## CONDITIONS

### **Flooring**

Flooring throughout is tongue and groove wood flooring painted grey.

### **Conditions:**

Paint finish appears recent and is in good condition. Wood floor members are worn and deteriorated with gaps.

### **Wall Finishes**

Interior walls in the west bunkroom are sheathed in 1/2" plywood with battens and wood base and are a natural finish. The remaining interior walls are wood beadboard, painted.

### **Conditions:**

Beadboard is in fair condition with gaps. Plywood is in good condition.

### **Ceiling**

The ceiling is 1/4" plywood with battens in a natural finish in the west bunkroom. The ceiling at the remaining interior rooms are wood beadboard, painted. The attic was not accessible.

### **Conditions:**

No deficiencies noted at plywood. Beadboard is in fair condition with gaps.

### **Wood Stove**

A trailblazer wood burning stove centrally located provides heat to the office. It includes a flue damper. It sits on a metal floor radiation shield. A corrugated metal radiation shield rests behind the stove to insulate the interior wall from heat.



Image 223: Interior view of office looking north towards bunk rooms.



Image 224: West bunkroom has natural finish plywood walls and ceiling.



Image 225: Painted beadboard ceiling.



**Conditions:**

The stove location does not meet clearance requirements from adjacent interior walls. The chimney is not protected by a thimble at the ceiling.

**Interior Lighting**

Interior lighting is provided by four porcelain socket fixtures with exposed bulbs.

**Conditions:**

Light bulbs are missing from all locations. Electricity no longer runs to the building.

**Fire and Life Safety**

There are no smoke alarms. A fire extinguisher is wall mounted at the south elevation near the door.

**Conditions:**

Smoke alarms were removed for seasonal testing at the time of assessment and were not observed..



Image 226: Wood stove with corrugated metal heat shield.



Image 227: Surface conduit and porcelain socket light, missing bulb.



Image 228: Interior view of entry door and fire extinguisher.

## Assay Office, FMSS #73329



Image 229: 2004 Cultural Landscape Inventory map of Coal Creek Camp, with the Assay Office identified in orange and current view looking west at the Assay Office and addition.

### GENERAL DESCRIPTION

Gold Placers Inc. constructed the Assay Office in 1935. The structure moved with the Dredge in 1941 and 1952. The main building is a one-story, 12'x12" rectangular plan with gabled roof, constructed on timber skids. Exterior walls are 2x4 framing sheathed in plywood with battens, painted. The roof is clad in corrugated metal. Weights suspended from the roof hang at the east and west elevations. The main entrance is at the south elevation. Fenestration is provided by six-lite hopper windows. The rear north addition is a 12'x12' rectangular plan with shed roof. It is constructed on wood framing. Exterior walls are 2x4 framing sheathed in corrugated metal. The roof is clad in corrugated metal. Fenestration is provided by fixed six-lite window units. Both interiors were inaccessible for assessment due to health safety concerns related to mercury.

### CHARACTER DEFINING FEATURES

Character-defining features (CDFs) are those architectural materials and elements that contribute to communicating the site and buildings' significance. The buildings at Coal Creek Camp are significant for their association with the development of the mine and the mobility offered by the dredge.

Character defining features of the Assay Office include:

- Rectilinear plan, 1-story
- Gabled 8/12 roof corrugated metal roofing
- 2x4 bracketed bargeboards
- 4x8 panels with battens as exterior wall cladding (originally beaverboard)
- Skids (originally log)
- Wood stove (details inaccessible)
- Six-lite, hopper, wood sash windows
- Front-gable entry
- Corrugated shed addition

## Building Exterior

### CONDITIONS

#### **Roof**

The gabled roof at the main building is wood frame. Trim includes bargeboards at the gable ends supported by 2x4 brackets, with exposed rafter tails at the eaves. Penetrations are limited to one chimney off-centered from the ridge at the east elevation. Sheathing is plywood. Roof covering is corrugated metal at both the gable roof and shed addition. Roof flashing is bent corrugated covering at the ridge and sheet metal surrounding the chimney penetration.

The shed addition has plywood sheathing and exposed rafters at the north elevation.

#### **Conditions:**

##### *Covering*

Corrugated metal roofing has mild surface corrosion throughout, with a square patch at the east elevation. A section is loose at the west elevation.

##### *Sheathing*

No deficiencies noted at main building. Active rot at north addition.

##### *Rafters*

Minor paint deterioration at main building. Surface rot at north addition.

##### *Trim*

No deficiencies noted.

#### **Chimney**

A stove pipe projects through the roof at the center of the ridge and extends high above the ridgeline due to the nature of the chemicals being burned off in this office. The chimney is braced with wire guylines.

#### **Conditions:**

The wood roof members do not appear to be insulated from heat by a metal thimble.



Image 230: Corrugated metal shed addition projects at the north.



Image 231: Detail view of skip sheathing and project rafter tails at north addition.



Image 232: Chimney projects from ridge at main building and is braced using cables.



### **Exterior Walls**

Exterior walls at the main building are wood-framed, sheathed in plywood with vertical and horizontal battens. Exterior trim also includes corner boards and frieze boards in between rafter tails. One corner board at the southeast corner has an embedded door handle strike and was likely salvaged from a door frame.

Exterior walls at the north shed addition are corrugated metal.

### **Conditions:**

#### *Plywood Sheathing*

Exterior plywood is weathered with paint deterioration throughout.

#### *Corrugated Metal*

Metal is in fair condition with denting and hole punctures throughout. Holes appear to be patched or repair with added layers of corrugated paneling.

#### *Trim*

No deficiencies noted.

### **Foundation**

Foundations for the bunkhouses are comprised of wood framed floors resting on skids, with skids originally intended to rest on grade. The Assay Office was constructed in the same manner with timber skids supporting 2x6 floor joists with no fasteners or connections between the skids and joists. The skids are supported by grade on the north side and stacks of cribbing on the south side. The space under the floor is open air with no skirting.

The corrugated shed addition floor framing appears to be resting directly on the earth and is flashed with corrugated metal.



Image 233: Corrugated metal siding is dented throughout.



Image 234: Remnants of door hardware at exterior corner board trim, evidence that wood trim was salvaged from another building.



Image 235: Wood skids and cribbing at south elevation, below entry stair.

**Conditions:*****Skids***

Exposed projecting ends of the timber skids are weathered and checked with moderate rot. Melting permafrost at the grade below is resulting in severe settlement to the south. To level the office, the skids are shimmed with various wood blocking and cribbing at the south elevation.

The corrugated shed addition foundation was not accessible for assessment buried by earth at the east and north elevations.



*Image 236: Wood sills are flashed in corrugated metal at the north addition.*

***Windows***

All windows at the main office building are 2'x3' six-lite wood sash interior-swing hopper windows without exterior screens. There are a total of three windows: one at each exposed elevation. Interiors were not accessible for assessment.

The corrugated shed addition has two six-lite wood sash windows that appear to be fixed.



*Image 237: Typical hopper window, no exterior screen.*

**Conditions:**

\*See Window & Door Assessment forms in Appendix C for individual conditions at each window.

Windows are in fair condition with moderate surface and paint deterioration at the exterior. Windows fit loosely in their frames and are not sealed. Putty glaze is dry and cracked throughout.



*Image 238: Typical fixed sash at north addition, no trim.*



### **Exterior Door**

The south entry door is a painted 2-panel wood door with knob handleset and added surface bolt for security.

#### **Conditions:**

*\*See Window & Door Assessment forms in Appendix C for individual conditions at each door.*

#### **South Entrance Door**

Surface deterioration at exterior face of door. Handleset appears in good condition but door could not be opened.

### **Entry Stair**

The entrance to the building is on the south elevation and is accessible by wood stairs with a wood deck landing and wood railings, all painted.

#### **Conditions:**

Entry stair and handrails do not meet code for landing requirements, tread or riser dimensions, and handrail heights and profiles. The stair and handrail are in poor condition with severe wood rot and unstable treads.



Image 239: Surface weathering at entry door.



Image 240: Severe wood rot at entry stair.



(page intentionally left blank)

Assay Office  
Exterior Elevation Condition Diagram

LEGEND

|                           |
|---------------------------|
| Wood Rot                  |
| Cracked/Warped            |
| Biological Growth/Soiling |
| Moderate Corrosion        |
| Incompatible Patch/Hole   |



North Elevation



East Elevation



South Elevation



West Elevation

- GENERAL NOTES
1. Paint deterioration is typical at all plywood and wood surfaces.
  2. Mild corrosion is typical at all corrugated metal roofing.
  3. Permafrost melt and foundation settlement are typical throughout. See Structural Systems section.

(page intentionally left blank)



## Maintenance Shed, FMSS #73325



Image 241: 2004 Cultural Landscape Inventory map of Coal Creek Camp, with the Maintenance Shed identified in orange and current view looking east at the Maintenance Shed.

### GENERAL DESCRIPTION

Gold Placers Inc. constructed the Maintenance Shed in 1934. The structure moved with the Dredge in 1941 and 1952. The building is a one-story, 16'3" x 24', rectangular plan with gabled roof. Exterior walls are 2x4 framing with corrugated metal siding and roof covering. The main entrance is located at the west elevation. The interior is open plan with a framed but unsheathed interior partition dividing it in half. Interior floors are wood plank, unfinished.

### CHARACTER DEFINING FEATURES

Character-defining features (CDFs) are those architectural materials and elements that contribute to communicating the site and buildings' significance. The buildings at Coal Creek Camp are significant for their association with the development of the mine and the mobility offered by the dredge.

Character defining features of the Maintenance Shed include:

- Rectilinear plan, 1-story
- Gabled roof with corrugated metal roofing
- Corrugated metal siding
- Exposed structure at interior
- Screen window
- Wood plank door

# Building Exterior

## CONDITIONS

### **Roof**

The gabled roof is wood frame. Trim includes bargeboards at the gable ends and fascia at the eaves. There are no roof penetrations. Roof covering is corrugated metal. Roof flashing is limited to bent sheet metal at the ridge. Sheathing is wood tongue and groove. Sheathing members are painted miscellaneous colors at the interior, indicative that they were salvaged from other buildings. Roof components include:

- 8:12 roof pitch
- 7" wide bargeboards
- 3/4" x 3-1/4" tongue and groove sheathing
- 1-7/8" x 3-3/4" rafters, 24" on center

### **Conditions:**

#### *Covering*

No deficiencies noted.

#### *Sheathing*

No deficiencies noted.

#### *Rafters*

No deficiencies noted.

#### *Trim*

Surface weathering throughout.

### **Exterior Walls**

Exterior walls are wood-framed sheathed in corrugated metal. Corners are flashed with bent pieces of corrugated metal fastened to wood nailers. A basketball hoop is mounted above the door at the west gable.

### **Conditions:**

#### *Corrugated Metal*

Metal panels are dented throughout, typically near the base of the building. Hole punctures are typical at the north and west elevations.



Image 242: Natural finish bargeboards with surface weathering.

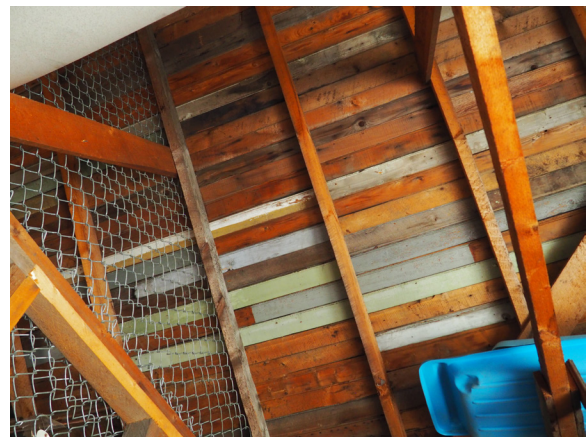


Image 243: Mosaic of painted tongue and groove sheathing as viewed from the interior.



Image 244: Corrugated metal siding is dented throughout.



### *Nailers*

Exposed surfaces of wood nailers at building corners exhibit rot and high moisture levels.

### **Foundation**

The foundation is comprised of wood frame floor resting on 10" diameter log skids, with no fasteners or connections between the skids and joists. Wood joists are 1-7/8" x 5-1/2", spaced 24" on center. Log skids project from the east elevation. The foundation at all other elevations was buried and not visible.

### **Conditions:**

#### *Skids*

Projecting log skid ends have elevated moisture levels and moderate rot.

#### *Floor Assembly*

Not visible for assessment.

### **Window**

One exterior window at the east elevation is a fixed chicken wire screened opening with wood interior and exterior trim, unfinished.

### **Conditions:**

\*See Window & Door Assessment forms in Appendix C for individual conditions at each window.

Screen is in good condition with surface deterioration at exterior trim.



*Image 245: Corners are treated with wood nailers and wrapped corrugated metal.*



*Image 246: Minimal exposed log skids are visible at east elevation.*



*Image 247: Screened window opening at east elevation.*



### **Exterior Door**

The west entry door is a solid wood plank door with diagonal wood members. Hardware includes a sliding bolt and chain.

#### **Conditions:**

*\*See Window & Door Assessment forms in Appendix C for individual conditions at each door.*

#### **West Entrance Door**

Surface deterioration at both faces of door.

### **Entry Ramp**

The west entrance is accessible by shallow pressure-treated wood ramp.

#### **Conditions:**

Ramp has settled into the earth but is in good condition.



Image 248: West entry with surface deterioration at exterior.



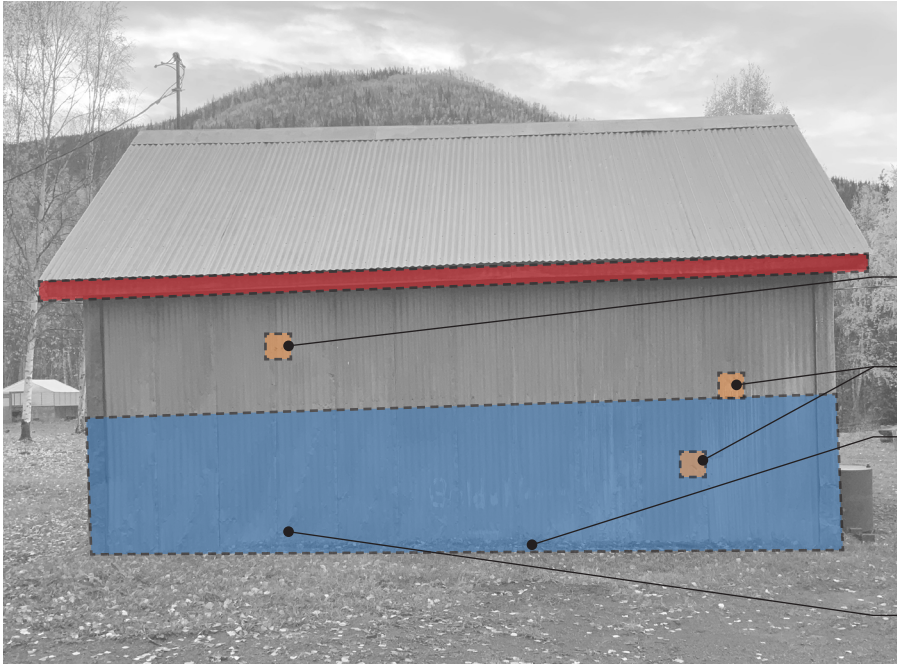
Image 249: Entry ramp.



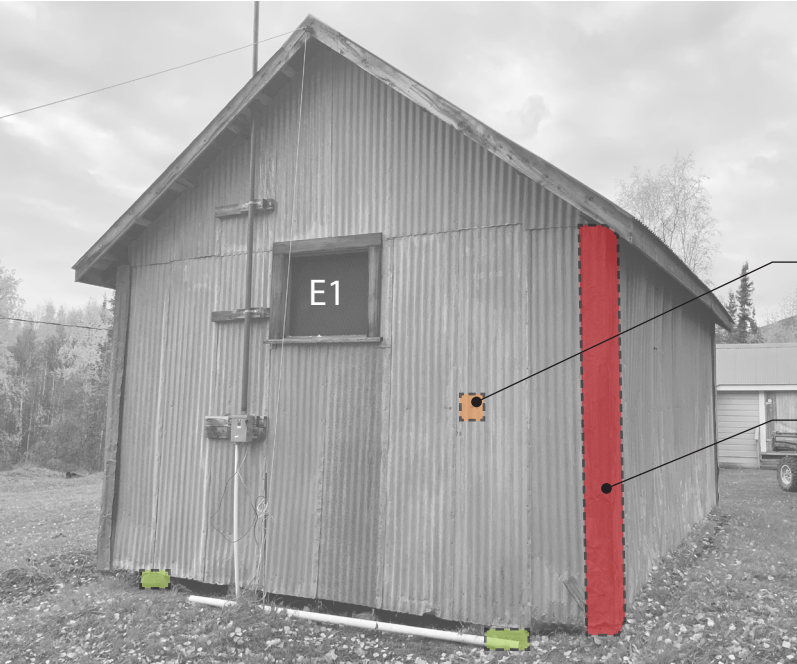
# Maintenance Shed Exterior Elevation Condition Diagram

## LEGEND

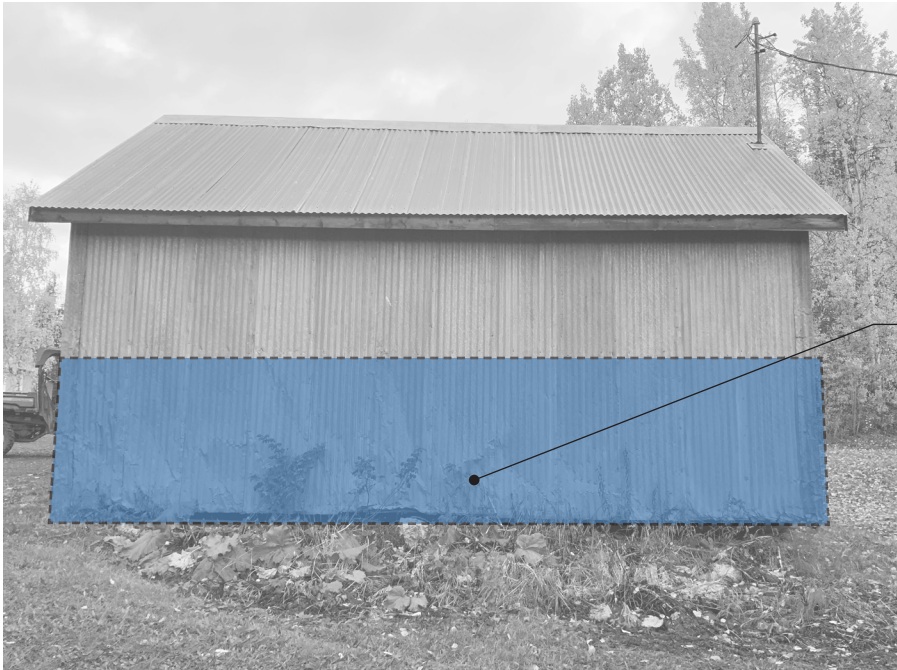
- Wood Rot
- Cracked/Warped
- Biological Growth/Soiling
- Moderate Corrosion
- Incompatible Patch/Hole



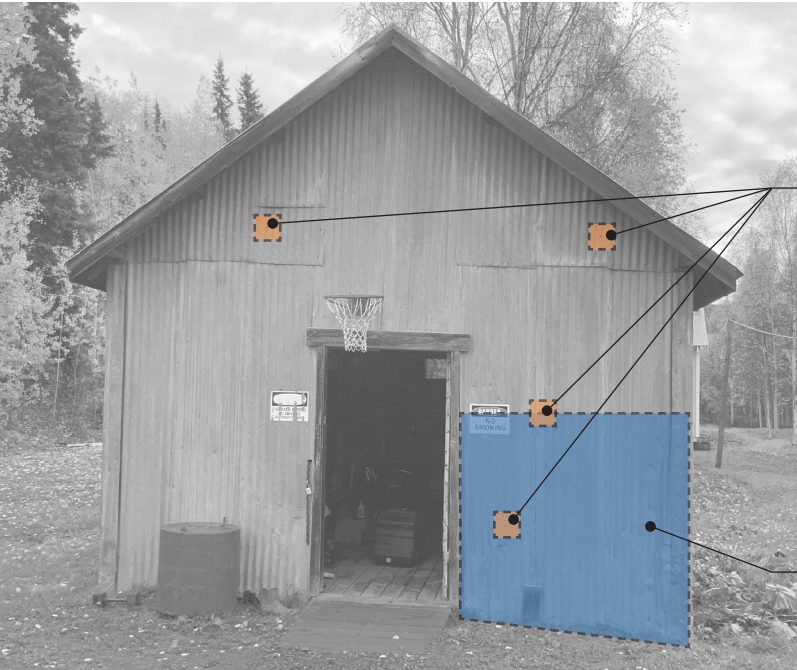
North Elevation



East Elevation



South Elevation



West Elevation

## GENERAL NOTES

- Paint deterioration is typical at all plywood and wood surfaces.
- Mild corrosion is typical at all corrugated metal roofing.
- Permafrost melt and foundation settlement are typical throughout. See Structural Systems section.

(page intentionally left blank)



# Building Interior

## CONDITIONS

### **Flooring**

Flooring is 3/4" x 5-1/2" wood plank, unfinished.

#### **Conditions:**

Wood is in fair condition with surface wear and staining.

### **Wall Finishes**

Interior walls are exposed structure. A wood framed partition divides the interior into two spaces. The structure is exposed, with chainlink fencing at the east elevation.

#### **Conditions:**

No deficiencies noted.

### **Ceiling**

The ceiling is exposed structure. Wood sheathing members are painted a variety of colors, suggesting salvage and reuse from a separate building..

#### **Conditions:**

No deficiencies noted

### **Interior Lighting**

Interior lighting is provided by two porcelain socket fixture with exposed bulbs.

#### **Conditions:**

Light bulbs are extant but electricity on site had been turned off at the time of the assessment site visit and operation of lighting could not be confirmed.

### **Fire and Life Safety**

A fire extinguisher rests on the floor.

#### **Conditions:**

Smoke alarms were removed for seasonal testing at the time of assessment and were not observed.



Image 250: Interior view looking east into building.



Image 251: Wood floor has surface wear and staining.



Image 252: Interior wood framed partition with chainlink fencing.

(page intentionally left blank)

## Generator Shed, FMSS #73332



Image 253: 2004 Cultural Landscape Inventory map of Coal Creek Camp, with the Generator Shed identified in orange and current view looking northwest at the Generator Shed.

### GENERAL DESCRIPTION

Gold Placers Inc. constructed the Generator Shed between 1935 and 1950. The building is a one-story, 6' x 7' rectilinear plan with shed roof. Exterior walls are 2x4 framing with unpainted horizontal wood plank sheathing. The double entrance door at the east elevation is missing a door leaf, with one deteriorating on the ground. The roof is clad in corrugated metal. There are no interior finishes, with exposed ground at the floor.

### CHARACTER DEFINING FEATURES

Character-defining features (CDFs) are those architectural materials and elements that contribute to communicating the site and buildings' significance. The buildings at Coal Creek Camp are significant for their association with the development of the mine and the mobility offered by the dredge.

Character defining features of Generator Shed include:

- Rectilinear plan, 1-story
- Shed roof with corrugated metal roofing
- Wood plank siding, unfinished



# Building Exterior

## CONDITIONS

### **Roof**

The shed roof is wood frame with exposed rafters, skip sheathing, and corrugated metal roof. The slope is 4:12.

#### **Conditions:**

##### *Covering*

Corrugated metal roofing has moderate corrosion and large hole at the southwest corner, likely from vent pipe no longer extant.

##### *Sheathing*

Skip sheathing is severely rotted.

##### *Rafters*

Rafters are severely rotted.

### **Exterior Walls**

Exterior walls are wood frame with horizontal wood plank siding, all unfinished.

#### **Conditions:**

##### *Plank Siding*

Siding is in poor condition with severe rot and missing members at the north, west, and south elevations.

### **Foundation**

Foundation is non-extant and the building rests on the ground.

### **Exterior Door**

The shed door was a double door at the east elevation. The door is wood frame with the same wood plank siding as the exterior walls.

#### **Conditions:**

One door slab remains, deteriorated and rotting on the ground.



Image 254: Moderate corrosion and abandoned chimney hole at roof.



Image 255: Typical exterior siding with severe wood rot and active biogrowth. Siding is missing throughout.



Image 256: One panel of the original double door is rotting on the ground.



# Generator Shed Exterior Elevation Condition Diagram



Two missing boards

Moderate rot at sill plate

North Elevation



Missing door

Deteriorated door

East Elevation

## LEGEND

- Wood Rot
- Cracked/Warped
- Biological Growth/Soiling
- Moderate Corrosion
- Incompatible Patch/Hole



Six missing boards

South Elevation



Hole

Abandoned stove insulation panel

West Elevation

## GENERAL NOTES

- Paint deterioration is typical at all plywood and wood surfaces.
- Mild corrosion is typical at all corrugated metal roofing.
- Permafrost melt and foundation settlement are typical throughout. See Structural Systems section.
- Biological growth is typical at all wood components.

(page intentionally left blank)



# Structural Systems

## GENERAL DESCRIPTION

On September 15, 2021, a team from Hennebery Eddy Architects traveled to the Coal Creek Historic Mining District in Alaska's Yukon-Charley Rivers National Preserve. The purpose of the site visit was to gather information to complete an Historic Structure Report for the site as well as to assess the condition of the buildings on the site. KPFF has reviewed the photographs from the site visit. Our observations relative to the building condition, as well as the nature of the construction, are based on these photographs and experience with similar type structures. Based on this limited photographic investigation, we have developed the following description of the buildings and made recommendations as appropriate.

We understand that the buildings currently on site date from the period of 1934-1952. The structures were originally built on log skids and were intended to be mobile as the camp moved within the district based on the mining operations. The buildings at the site were likely relocated twice, with the buildings moving to the current location in 1952. The buildings are described in the 1995 National Register of Historic Places registration form as primarily light wood framed with plank flooring and board siding or beaverboard/Celotex sheathing. The maintenance shed, laundry, and an addition on the Assay Office feature corrugated metal siding. The buildings appear to have various forms of timber sheathing for the roof with corrugated metal on top. Based on our review of the photos this description appears accurate.

All buildings are skid mounted, other than portions of the Mess Hall and Assay Office which were added after the last time the camp moved. The skids vary between buildings, most are flat-sawn logs while the assay office, Bunkhouse 1, and Laundry building skids are sawn timber. The Manager's Office and the original portion of the Mess Hall appear to have

peeled round log skids. All skids are either bearing directly on the ground and/or are supported by cribbing for leveling to accommodate variation in site grade and/or ground subsidence over time.

We were not able to assess the nature of the site soils or prevalence of permafrost from the photos. It appears that surface soils consist of topsoil and potentially mixed fine and gravel materials. Based on the history of Placer Mining on the site we would expect sands and gravels to predominate the subsurface. Depending on mining operations these could be native or could be uncontrolled and normally consolidated fills. A map of permafrost characteristics of Alaska, published in 2008 by the Institute of Northern Engineering at the University of Alaska Fairbanks by Jorgenson et al, indicates discontinuous permafrost occurring over 50% to 90% of the land area in this region. Given the proximity to continuous areas of permafrost, it is likely to be a foundation consideration on this site.

## CONDITIONS

The physical condition of the structures appears to be fair to good throughout, considering the remote location and basic functional/utilitarian camp design. Overall, the buildings show ongoing attention to basic maintenance resulting in what appears to be generally adequate preservation of most of the exterior wood elements despite their age and the harsh environment.

None of the buildings appear to have gutters or other measures to collect and direct water away from the structure. Exterior walls, log skids and cribbing below eaves are exposed to moisture.

## **Foundations**

Adverse structural conditions identified in our review of the buildings primarily relate to foundation support. All the buildings appear to be supported directly on the ground surface, either by direct bearing of the skids on the ground or by cribbing stacks placed on the ground. In some locations it appears that support surfaces may have been improved with gravel.

Cribbing used to support building skids varies widely but generally consists of various dimension lumber pieces stacked to the required height. Cribbing appears to be a mixture of pressure treated and untreated wood with occasional wood or plywood shims of small dimension or other materials. It is evident that all structures have settled somewhat over time and have been shimmed and re-supported with cribbing. In some locations the cribbing has noticeably settled into the surface soils, often in an uneven manner. Additionally, some of the cribbing stacks are relatively tall compared to their width. The un-level or narrow cribbing stacks are more likely to become unstable over time or when subjected to wind or seismic loads.

While the foundation systems employed represent a somewhat common and traditional method of foundation support in the region, frequent settlement and the requirement to re-level and crib are also common. Modern buildings eliminating these issues would be expected to have foundations extending below grade to depths sufficient to prevent frost heave. The prevalence and thickness of permafrost and other geotechnical conditions would inform the selection of a foundation system and could include a traditional frost wall, excavation and removal of heave-susceptible soils, use of piles or other deep foundations, or other more specialized systems.

Building-specific foundation observations are as follows:



*Image 257: Typical slope south of the bunkhouses showing south sides on cribbing.*



*Image 258: Bunkhouse #2 cribbing composed of dimensional lumber and stacked shims.*



*Image 259: Slope dropping down to the creek behind the Mess Hall (foreground) and Laundry building (distance).*



### Mess Hall

This building features peeled log skids under a portion of the building. Based on the information in the National Register of Historic Places registration form we understand that part of the building was constructed after the final relocation of the original structure and that this portion may not be supported on skids. Based on the available photos we could not definitively determine how the newer portion of the structure was supported.

The Mess Hall is unique as the only building with skirting around the perimeter. With significant amounts of wood framing and skirting extending to the ground this building is more susceptible to moisture-related decay, even of pressure treated materials. Photos suggest that the newer portions may be supported on cripple walls at the perimeter. Like all skid-supported buildings on the site this structure appears to have been leveled over time. This building appears to have a more ad-hoc cribbing arrangement than others on the site, possibly due to the skirting limiting access under the building. Some of the cribbing is tall and narrow, leading to potential instability.

### Bunkhouse #1

This building features sawn lumber skids which appear to have warped considerably. In addition, some of the cribbing used to support the skids has also settled unevenly into the surface soils. The resulting cribbing supports are potentially unstable.

### Bunkhouse #3

The cribbing on this building has settled and appears to be on disturbed soil. The nature of the soil disturbance is unknown but may be related to frost-heave or other seasonal actions. The cribbing configuration itself otherwise appears good, providing broad, stable support for the sawn log skids.



Image 260: Decayed perimeter skirting supported directly on soil.



Image 261: Perimeter skirting or cripple wall supported directly on soil.



Image 262: Narrow stack of cribbing.



### Bunkhouse #5

The cribbing on this building has settled unevenly. This settlement has occurred despite the appearance of potential gravel improvement of the immediate area. The cribbing configuration itself otherwise appears good, providing low, broad support for the sawn log skids.

### Laundry Building

The cribbing on this building is by far the most extreme condition evident on the site. One end of the building is approximately even with the ground surface while the other end has been cribbed at least four feet off the ground. The tall cribbing is narrowly stacked and potentially unstable.

### Seismic Assessment

No formal or detailed assessment of the lateral force resisting systems of the buildings has been performed by KPFF, however we offer the following discussion to provide context for our overall recommendations. This discussion follows the concepts outlined in ASCE 41-17 Seismic Evaluation and Retrofit of Existing Buildings. Based on mapped seismic ground motion values, the area of the site would be classified as exhibiting a high level of seismicity, according to ASCE41.

The lateral force resisting system of the buildings can be described in general as Wood Light Frames. This type of construction features wood-framed, floor and roof diaphragms supported by wood-framed, shear walls. In these buildings the roof diaphragms feature straight-lumber sheathing of various types, and the floor diaphragms are straight-lumber or plywood sheathed. Light frame walls are board-sided or sheathed with Celotex or plywood panels. All of the buildings are single-story and most are small in size.

Buildings of this type generally perform well when subjected to moderate ground shaking. Buildings that



Image 263: Settled timber skid cribbing at Bunkhouse 1.

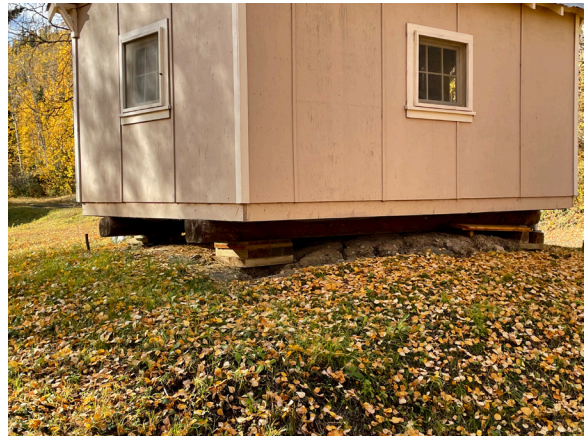


Image 264: Settled sawn log skid cribbing on disturbed soil at Bunkhouse 3.



Image 265: Settled sawn log skid cribbing on gravel at Bunkhouse 5.

perform poorly tend to have one or more irregularities which make them particularly susceptible to damage. Such irregularities include open-front plan configurations, unbraced cripple wall foundations, weak or soft lower stories or horizontal wall offsets between levels. The buildings on this site are very regular in shape, have a small spacing of walls and are free of vertical and horizontal irregularities. All of the chimneys are stove pipe and there are no heavy finishes or masonry associated with the buildings.

While the buildings themselves are free of the most significant irregularities of major concern, the buildings would still be considered seismically deficient due to their construction type, owing mainly to the building practices of the time and place in which they were built. Deficient items likely include:

- Lack of ties between diaphragms and walls
- General lack of foundations providing support for overturning uplift or sliding
- Unstable cribbing which could result in toppling and large displacements of the structures

Most of these deficiencies are minor, however the overall foundation configuration of the buildings represents the greatest source of life-safety and resource loss hazard. The skid buildings supported directly on the ground or on low, stable cribbing would be expected to perform better than buildings on un-even sites and/or tall cribbing.

An additional seismic deficiency observed relates to the fuel oil tank adjacent to the Laundry Building. The tank appears to be free-standing on wood timbers. This tank may be prone to overturning in a seismic event and the laundry building is also particularly prone to shifting during a seismic event.



Image 266: Unstable cribbing at Laundry building.



Image 267: Fuel oil tank at Laundry building.

(page intentionally left blank)



# PART 2

## TREATMENT & USE

(page intentionally left blank)



Image 268: From the south end of Coal Creek Camp, looking north.

### OVERVIEW

All recommendations in this HSR follow *The Secretary of the Interior's Standards for the Treatment of Historic Properties*. Taken from the National Park Service's Technical Preservation Services, the four treatment approaches are defined as:

**“Preservation** is defined as the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses on the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction. New exterior additions are not within the scope of this treatment; however, the limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a preservation project.

**Rehabilitation** is defined as the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values.

**Restoration** is defined as the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing

features from the restoration period. The limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a restoration project.

**Reconstruction** is defined as the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape, building, structure, or object for the purpose of replicating its appearance at a specific period of time and in its historic location.”

The following recommendations for overall treatment approach, appropriate uses, and alternative treatments are based on these four approaches.

### CURRENT USE

Since the National Park Service acquired Coal Creek Camp in 1986, the camp has been used for a combination of administrative and visitor purposes. Administrative uses include: lodging, training, and staging area for YUCH fire program; lodging and transportation hub for cultural and natural resource missions; training and orientation for NPS staff; and as a duty station for camp managers and maintenance employees.



For visitors, a public-use cabin is available and history talks or tours are based at the camp. The option of landing aircraft and of arriving via the Yukon River to reach Coal Creek Camp—and the convenient lodging, communications, and electrical power options—make the camp an operational hub for all of Yukon-Charley Rivers National Preserve.

## FUTURE GOALS

In recent years, maintenance problems related to electricity, drinking water, road access, and communications have slowed operations at Coal Creek Camp. The purpose of this report is to plan for and guide appropriate treatments and repairs to continue operations. There is intent to upgrade electrical and water and determine where the next privy site should be (the current one is filling up). There is also the goal of addressing the known backlog of deferred maintenance as soon as feasible. There are no current plans to change the use of any of the buildings or the site.

## PREFERRED TREATMENT & USE

The most appropriate treatment, based on continued use of the camp as seasonal/short-term employee housing and public accommodations, is rehabilitation. A rehabilitation approach to future repairs and alterations will prioritize retention and restoration of historic character-defining features while allowing changes necessary to address fire and life safety concerns.

Key aspects of the approach include:

- Repair and restoration of extant historic features.
- Restoration of missing character-defining features and finishes to the extent possible and where documentation exists

- Continue use as a hub of NPS activity in the Preserve.
- Improvements to building and occupant safety
- Upgrade mechanical, electrical, and plumbing systems to improve occupant comfort and energy efficiency
- Future alterations that support and improve conditions for current and future uses without damaging integrity and character-defining features

The individual component recommendations in this report will focus on strategies aimed at maintaining and repairing existing historic fabric, restoring character-defining features that have been lost where practical, adapting features where feasible without negative impact to historic character, and improving safety and resource protection.

## POTENTIAL ALTERNATIVE TREATMENTS & USES

Rehabilitation allows for flexibility to adapt for continued use within the parameters of the building's historic character. Alternatively, a preservation approach would include maintenance and repair of existing conditions, such as replacement of the deteriorated wood components in kind and maintenance of protective coating, but would not allow for restoration of missing features or improvements for contemporary use. A restoration approach would involve returning the site to its historical state during the period of significance and restoring the finishes of all spaces to an identified period in time.

## Requirements for Treatment 2.02



Image 269: Looking down the camp's entry road towards Bunkhouses 3, 4, and 5.

### REGULATIONS AND GUIDANCE

Requirements for treatment currently include laws, regulations, and standards as outlined by NPS in NPS-28: Cultural Resource Management (Chapter 8). The following are laws and regulations applicable to this site. Specific attention should be given to issues of human safety, fire protection, energy conservation, abatement of hazardous materials, and physical and programmatic accessibility for people with disabilities.

#### Legal Mandates & Policy Directives

- Section 106 of the National Historic Preservation Act (NHPA)
- NPS Cultural Resources Management Guidelines (Director's Order 28)
- Review of all proposed work by NPS Park and Regional cultural resources staff
- NPS Night Sky Initiative
- *A Guide for Management: Coal Creek Mining Camp Historic District, 1987*

#### The Secretary of the Interior's Standards for the Treatment of Historic Properties

- Standards and Guidelines for Rehabilitation

### Applicable Building Codes

*(Code versions should be verified at time of project design)*

- International Building Code (IBC)
- International Existing Building Code (IEBC)
- International Energy Conservation Code (IECC)
- International Fuel Gas Code (IFGC)
- International Mechanical Code (IMC)
- National Electrical Code (NEC)
- Uniform Mechanical Code (UMC)
- Uniform Plumbing Code (UPC)

### Accessibility

- Architectural Barriers Act (ABA)

### Hazardous Materials

- Environmental Protection Agency (EPA)
- Clean Air Act (CAA)
- Occupational Safety and Health Administration (OSHA)

### Applicable NPS Preservation Briefs

**03:** Improving Energy Efficiency in Historic Buildings

**04:** Roofing for Historic Buildings

**09:** The Repair of Historic Wood Windows

**10:** Exterior Paint Problems on Historic Woodwork

**14:** New Exterior Additions to Historic Buildings: Preservation Concerns

**16:** The Use of Substitute Materials on Historic Building Exteriors

**24:** Heating, Ventilating, and Cooling Historic Buildings: Problems and Recommended Approaches

**32:** Making Historic Properties Accessible

**36:** Protecting Cultural Landscapes: Planning, Treatment and Management of Historic Landscapes

**39:** Holding the Line: Controlling Unwanted Moisture in Historic Buildings

**41:** The Seismic Rehabilitation of Historic Buildings

**47:** Maintaining the Exterior of Small and Medium Size Historic Buildings

### BUILDING CODE ANALYSIS

The State of Alaska and NPS follow the International Building Codes, including the International Existing Building Code (IEBC). It is recommended that the most current IEBC be applied when consideration is given to making alterations. As existing buildings, without a substantial change in occupancy, not all clauses of the International Building Code apply. However, buildings should be made as safe as possible, within the parameters of historic character, use, and specific location.

The IEBC defines increasing levels of alterations that in turn trigger increasing levels of code compliance for existing buildings. These levels are defined as follows:

Alteration - Level 1: alterations include the removal and replacement or the covering of existing materials, elements, equipment, or fixtures using new materials, elements, equipment, or fixtures that serve the same purpose.

Alteration - Level 2: alterations include the reconfiguration of space, the addition or elimination of any door or window, or the installation of any additional equipment.

Alteration - Level 3: where the work area exceeds 50% of the building area.

When planning to undertake future projects the level of alteration should be identified in order to meet the required level of compliance with the IBC.

| Code Analysis Factors |                                 |
|-----------------------|---------------------------------|
| Date of Construction  | 1935-1952 (when last relocated) |
| Construction Type     | Type V                          |
| Occupancy Type        | R - Residential                 |
| Sprinklered           | No                              |

### ACCESSIBILITY

Federal properties, including those in national parks, must seek compliance with the Architectural Barriers Act (ABA) Standards. These standards apply to facilities designed, built, altered, or leased with federal funds. *NPS Director's Order 42: Accessibility* provides a clause for historic resources, recommending that they be made as accessible as possible provided that efforts do not negatively impact the integrity of the resource.

In general, the location, site, and buildings at Coal Creek Camp are not accessible to physically disabled



people. Improvements to accessibility should consider the point of arrival (air strip) to the camp and include alterations to roads and pathways. Full compliance with ABA Standards would significantly impact character defining site, exterior, and interior features. However, there are some interventions that will improve accessibility with low to moderate impact. See Assessment of Effect #14 for further analysis. A summary and analysis of requirements to meet ABA Standards at any building is provided in the chart below.

To provide equivalent experience/opportunity, considerations should be given to improving

accessibility at the Mess Hall, Laundry (shower) Building, privy, and at least one bunkhouse. Bunkhouse #1 is preferable due to its siting and proximity compared to the other bunkhouses. Additionally, when the current privy/outhouse is replaced, consideration should be given to more accessible siting and provision of one accessible stall.

In addition to overarching requirements, each building's construction and existing conditions present specific deficiencies and barriers to accessibility. The following outlines details for each building, in order of priority.

| BUILDING REQUIREMENTS FOR ACCESSIBILITY                                                   |                                                                         |                                                                                                                                                                    |
|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement                                                                               | Impact                                                                  | Analysis                                                                                                                                                           |
| Provide one route from arrival point (air strip) to building that does not require stairs | High - Ground disturbance and visible exterior modifications            | Requires regrading for maximum 1:20 slope along route, providing a non-slip/paved surface, and construction of ramp or installation of lift at entry..             |
| Provide clearances at all entrances and doorways                                          | High -- Alteration of exterior and interior doors and surrounding walls | Requires modifying door openings to meet 32" clear opening, 60" minimum approach, 18" minimum clearance at handle side of door, and bevelled thresholds <3/4" high |
| Provide accessible door hardware                                                          | Low - New handlesets may replace existing                               | Requires replacement of knob handlesets with levers or pulls                                                                                                       |
| Provide 36" clear circulation paths                                                       | Moderate - Relocation of interior built-ins                             | May require reconfiguration of interiors or built-ins, such as relocating kitchen sinks in Mess Hall                                                               |
| Provide accessible work surfaces                                                          | Low - Most furniture and built-ins are not character defining           | Requires all tables, counters, and cooking areas to have a maximum height of 36" with 27" of knee clearance underneath                                             |
| Provide accessible toilet room                                                            | Low - Outhouse is not historic                                          | Requires 60" clear turning radius, modification of toilet configuration and size, and installation of grab bars                                                    |
| Provide visual and audible fire alarms                                                    | Low - in-kind smoke alarm replacement                                   | Requires hardwiring new smoke alarms                                                                                                                               |

## **Mess Hall**

As the central building that provides communal gathering space, cooking, and sleeping quarters, the Mess Hall is the most public of all buildings and should be prioritized for accessibility. Providing an accessible interior requires, at minimum, installing a ramp at the east main entry and modifying door clearances to provide 32" clear openings.

The sleeping quarters in the bunkroom wing step down from the main building approximately 6". This requires either raising the bunkroom wing level with the rest of the building, or providing an additional exterior ramp to the bunkroom's north entry. These two options, plus a third (to provide accessible sleeping quarters in another building) are presented in the diagram.

### **OPTION 1: FULLY ACCESSIBLE, 1 ENTRY**

This option limits exterior entrance modifications to the main east entrance, providing access to the bunkroom wing from the interior. To achieve this, the bunkroom wing must be raised approximately 6" to become level with rest of the building. This would involve modification to the intersecting gable roofs and exterior siding. This would also require relocation of the commercial kitchen sink to provide clearance to the rear hall and adjacent bunkroom.

### **OPTION 2: PARTIALLY ACCESSIBLE, 2 ENTRIES**

This option provides access to the bunkroom from the exterior north entrance by providing an additional exterior ramp. This option eliminates the need to raise the bunkroom wing, and reduces the number of interior doorways that require clearance modifications. It also allows for the kitchen sink to remain in its current location. In this option, the rear hall would remain inaccessible.

### **OPTION 3: LIMITED ACCESS**

Option 3 limits accessibility improvements to the main entrance and interior mess hall and kitchen. This option reduces interventions at the Mess Hall but requires improvements to Bunkhouse 1 to provide accessible sleeping quarters.

See Mess Hall Accessibility Diagram for more details.

## **Privy**

NPS has stated that the outhouse is reaching capacity and requires relocation to a new pit. The privy is not a contributing building to the historic district. The new location of the privy should maintain distance from the creek and well. Consideration should be given to a location with route access that avoids steep site grades, with close proximity to the Mess Hall. The privy should be renovated to include one stall with fixtures and clearances that are compliant with ABA standards.

## **Laundry Building**

Providing equal access at Coal Creek Camp would include shower facilities. Shower facilities are currently provided in the Laundry Building. Modification of the Laundry Building to provide equal access would include providing an accessible route from the Mess Hall, installation of a ramp, and replacement of one shower stall with an ABA compliant stall and fixtures.

## **Bunkhouse 1**

If accessible sleeping quarters are not provided in the Mess Hall, Bunkhouse 1/Juneby Cabin should be prioritized for its proximity to the Mess Hall and year-round use. This would require an exterior ramp.

## **Public Use Cabin**

Additionally, the Public Use Cabin should be considered as it is the only designated publicly accessible sleeping quarters.

Mess Hall Accessibility Diagram

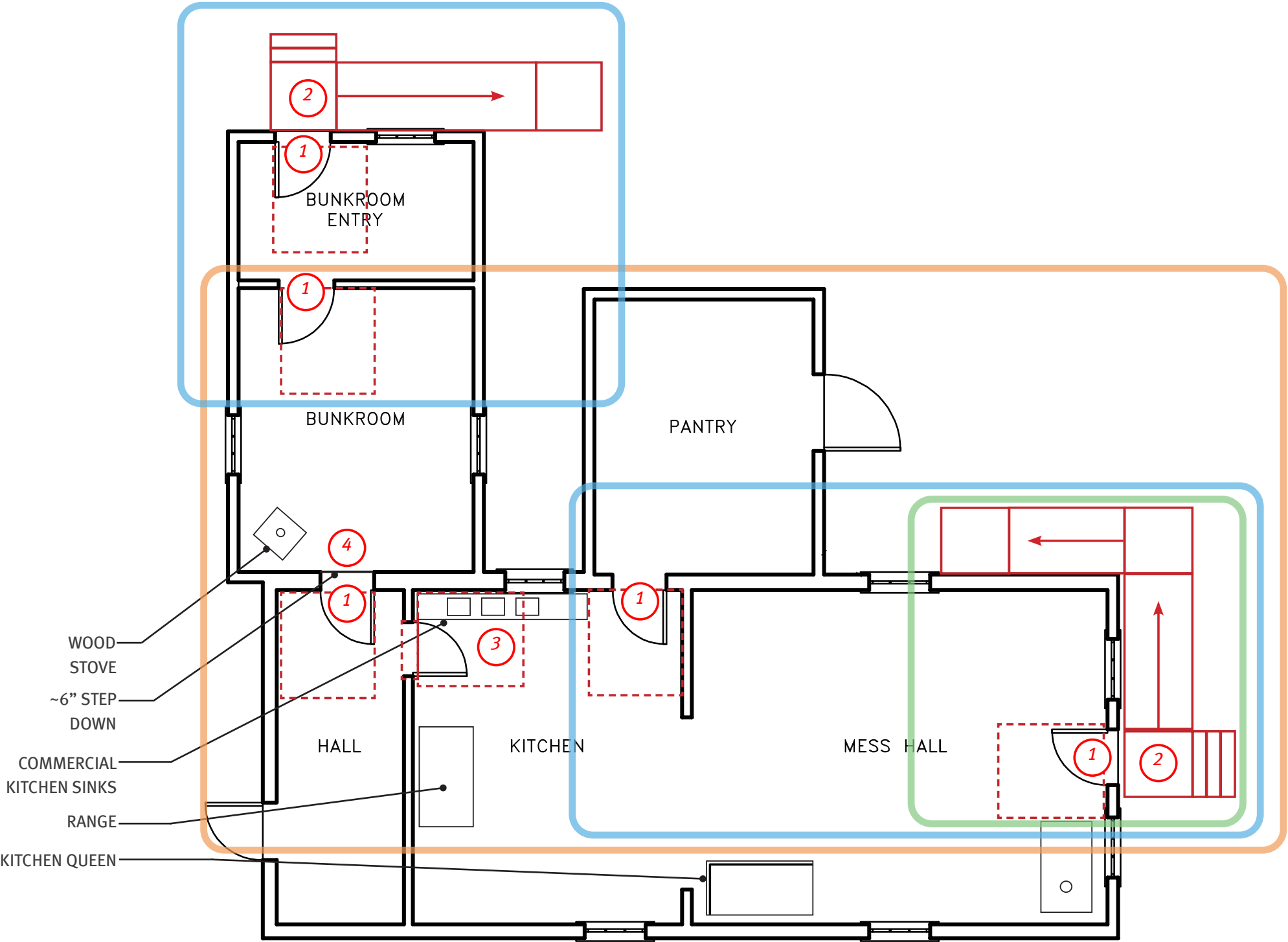
LEGEND

- OPTION 1 SCOPE: Fully accessible, 1 entry
- OPTION 2 SCOPE: Partially accessible, 2 entries
- OPTION 3 SCOPE: Limited access, separate sleeping quarters in Bunkhouse 1
- CLEARANCES REQUIRED
- PROPOSED NEW ENTRY RAMP/STAIR

KEY NOTES:

- 1 Modify door clearances to minimum 32"
- 2 Install new ramp with maximum 1:12 slope and minimum 36" landings
- 3 Relocate sink to provide clearance
- 4 Raise Bunkroom wing level with Hall

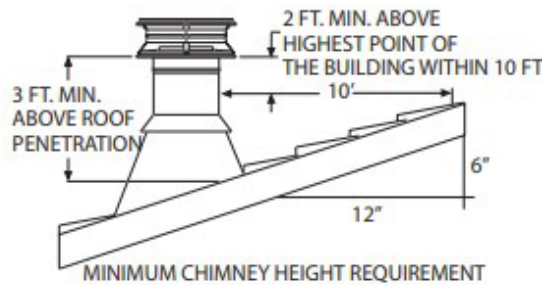
NOTE:  
Diagram not to scale. Proposed ramp locations are approximate. Diagrams not intended for construction.



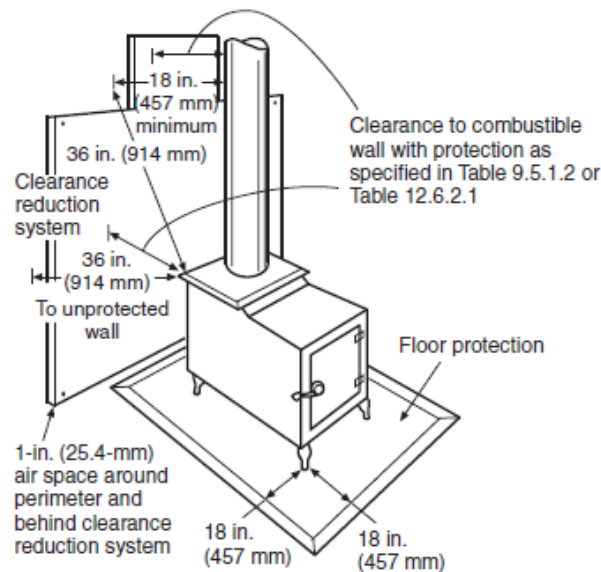
MESS HALL FLOOR PLAN 1



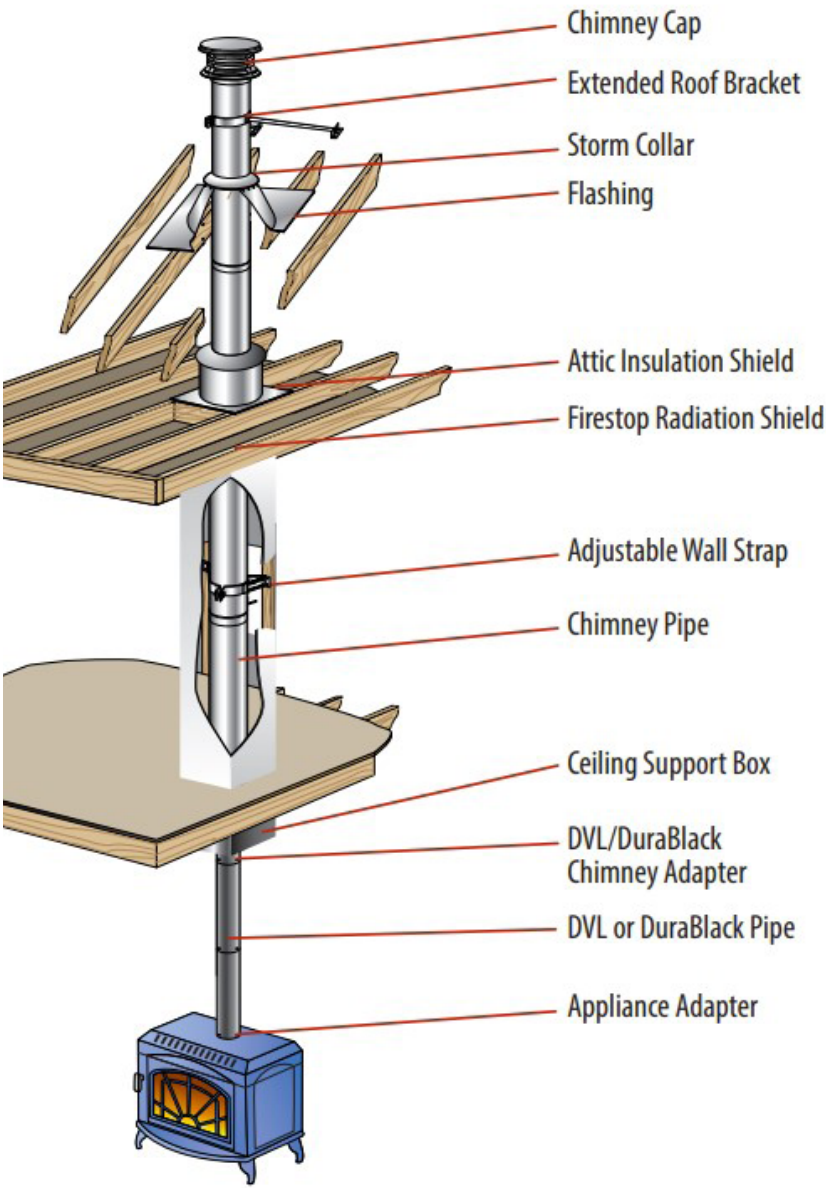
Wood Stove and Chimney Components



DURAVENT CHIMNEY HEIGHT DIAGRAM



NFPA CLEARANCE REQUIREMENTS



DURAVENT CHIMNEY COMPONENTS

## LIFE SAFETY CONCERNS

### Barrel Stoves & Chimneys

Barrel stoves used inside any kind of structure need to be properly vented and protected against fire. Existing chimneys are predominately scrap piping from dredge operations and are not insulated. The original condition of an extra-large cylindrical thimble that starts just below the ceiling and extends into the attic is likely the only current protection mechanism, providing both a fire stop and insulation shield.

NFPA Standard #211 requires chimney pipes to extend a minimum of 3 feet above the highest point through which the chimney penetrates the roof and a minimum of 2 feet above the highest roof point within 10 feet of the chimney. Adequate protection of the floor and adjacent wall surfaces must be provided with non-combustible materials within 36" of the stove. The chimney collar must have a functional damper where connected to the barrel stove. Where loose or batt-fiberglass insulation exists, an insulation shield is recommended. See Wood Stove and Chimney Components diagrams for illustrations of required chimney components, chimney heights, and stove clearances.

Replacement of chimneys with NFPA-approved insulated chimneys is recommended, such as Duravent DuraTech chimney in black or similar. Include all manufacturer required components, see illustration. In addition, regular inspection and maintenance of barrel stoves should include:

- Clean stoves annually to prevent buildup of combustion products like creosote, which can cause fires.
- Barrel stoves get very hot and have a relatively large footprint. Ensure a minimum of three feet of clearance from furniture and anything else combustible in every direction.

- Provide fireplace gloves and fireplace tools, including pokers, in all buildings with barrel stoves.

### Wood Storage Sheds

Per NPS EAFM Remote Cabin Firewise Prescription, all firewood must be stored at a minimum distance of 30' from all structures. Five new wood storage shed locations are recommended in discreet locations across the site to provide firewood within walking distance of all buildings with wood stoves. See recommended locations for new sheds in the diagram below. Actual locations should be confirmed via site measurements.

New wood storage sheds should be simple wood frame structures with shed roofs. The shed roofs should incorporate rolled asphalt roof covering and plywood sheathing to match existing wood sheds. New sheds to use dimensional lumber with exposed structure and cross-bracing for improved stability.

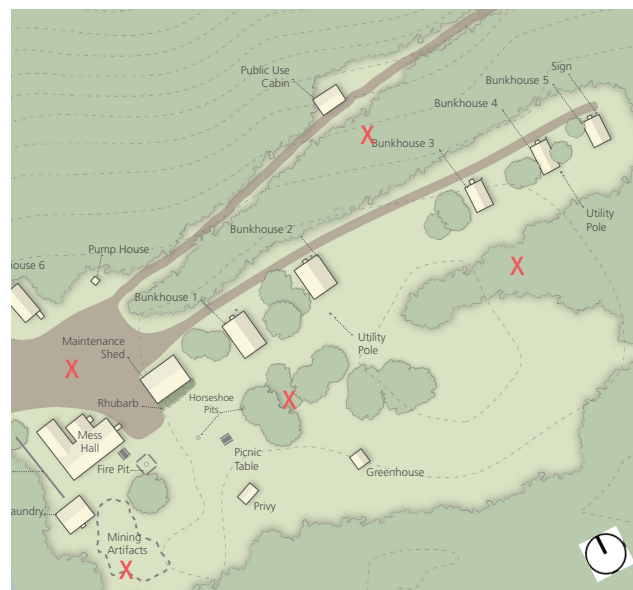


Image 270: 2004 Cultural Landscape Inventory map of Coal Creek Camp, with recommended locations for new wood storage sheds identified by red "x"s.

### **Fire Extinguishers & Smoke Detectors**

Battery powered smoke detectors were observed in all buildings, but in most cases units had been removed from walls and batteries had been removed. Fire extinguishers should be provided in all buildings. During winter months, fire extinguishers at unoccupied buildings are stored within the Mess Hall. Fire extinguishers should be retained within occupied buildings. Regular observation and maintenance of smoke detectors and fire extinguishers should be included in the camp managers responsibilities. Consideration should be given to hard-wiring smoke/CO2 detectors, and to including fire extinguishing pucks at all cook areas (StoveTop FireStop pucks or similar).

## **ENVIRONMENTAL CONCERNS**

### **Asbestos Containing Materials (ACM)**

Any future scope of work that disturbs an asbestos-containing substance must be executed by a professional trained in asbestos mitigation per the U.S. Environmental Protection Agency (EPA) and the Alaska Department of Environmental Conservation Solid Waste Program. Asbestos is also addressed in NPS Reference Manual 36: Housing Management section 5.4.3.2.

Areas commonly containing asbestos may include but are not limited to:

- Vinyl or composition tile flooring (including adhesives)
- Building insulation
- Mechanical, Electrical, Plumbing (MEP) pipe and duct insulation
- Chimney sealant or thimble insulation
- Glazing compound at windows
- Celotex (or similar) wall and ceiling board

Early building descriptions include the use of beaverboard or Celotex siding, which has been known to contain asbestos. This wall board appears to have been replaced throughout by plywood sheathing, but the material may remain at select areas. In addition, the age of the glazing compound at windows is unknown and may also contain asbestos.

### **Lead-Based Paint (LBP)**

At all areas where prepping and refinishing of a painted surface is required, paint should be tested for lead prior to disturbance. Any future scope of work that disturbs lead-containing paint must be executed by Certified Abatement Firm per the U.S. Environmental Protection Agency and the Alaska Department of Environmental Conservation Solid Waste Program. Lead and lead-based paint is also addressed in NPS Reference Manual 36: Housing Management section 5.4.3.1.

## **SUSTAINABILITY / ENERGY CONSERVATION**

Areas where energy performance and efficiency can be improved include:

- Windows and doors (sealing, weatherstripping)
- Insulation
- Lighting (efficient bulbs)
- Electricity (solar)



## Treatment Recommendations 2.03



Image 271: Approaching Coal Creek Camp from the Lower Road, looking east.

### OVERVIEW

The following treatment recommendations are guided by *The Secretary of the Interior's Standards for Rehabilitation* and general preservation best practices. Recommendations are provided for each assembly/component. The *Recommended Treatment* represents the best practices for the preservation of the building and its historic integrity. Alternatives to the recommended treatment are identified where they exist, including a no action alternative. Recommended and Alternative Treatments are further analyzed in the Assessment of Effect Section 2.04.

### TREATMENT PRIORITY

KEY

1

Each treatment recommendation is accompanied by a key to identify its priority.

Treatments are prioritized based on the severity of the condition and urgency of repair. The priorities are defined as:

- **Priority 1 - Critical:** (Immediate - Year Two) Items in this category require immediate action within two years.
- **Priority 2 - Necessary:** (Year Two - Year Five) Items in this category are not yet critical but require prompt attention.
- **Priority 3 - Recommended:** (Year Five - Year Ten) Items in this category represent a necessary but longer-term improvement to restore original conditions.
- **"M" - Maintenance:** (Cyclical) Items in this category are cyclical maintenance tasks.

# Bunkhouse 1, FMSS #73324

## Building Exterior

### Roof

#### Recommended Treatment:

- 1
  - Replace corrugated metal roof in-kind. See roof covering diagram. Match material, corrugated pattern and dimensions, eave details, and ridge conditions. Replacement roof system to include the following components, from top to bottom:
    - o Corrugated metal sheets. See Appendix D for cutsheet.
    - o Corrugated metal ridge cap
    - o Sheet metal chimney flashing
    - o Neoprene gasketed fasteners. Metal fastener type to be compatible with corrugated sheets.
    - o 1/2" exterior grade plywood sheathing with ice and water shield
    - o Replace wood sheathing and roof structure components in-kind where damaged.
- 3
  - Replace rotting bargeboard when rot exceeds 25% of the trim length. Match existing trim dimensions, profiles, and paint finish.
- 1
  - Remove access ladder. Future maintenance should be conducted from extension ladder.
- 1
  - Replace entrance awning mineral surface rolled roofing. Remove existing rolled roofing. Replace plywood substrate where damaged. Install self-adhesive ice and water shield to plywood. Install new mineral surface rolled roofing to match existing. Rolled roofing to return up exterior wall face a minimum of 3".
- 2
  - Replace entrance awning 3/4" x 1-3/4" eave trim. Match wood profiles, dimensions, and finish.
- 2
  - Prep and paint all wood components, including exposed rafters, sheathing, and trim. Match existing paint color per 1994 Paint Color Analysis report.
  - See Assessment of Effect action #1 for analysis.

#### Alternative Treatment:

##### Alternative 1 - Repair Existing Roof:

- Remove existing corrugated panels, fasteners, bargeboards, and tar paper (where it exists) down to sheathing or rafters. Salvage panels and bargeboards for reuse.
- Repair sheathing and rafters in-kind where damaged.
- Install 1/2" exterior grade plywood sheathing on top of existing sheathing
- Install ice and water shield on top of plywood sheathing
- Replace moderate or severely corroded panels in-kind, reinstall all other existing panels. Replace all fasteners with neoprene gasketed fasteners.
- Replace chimney flashing.
- Reinstall bargeboards.
- See Assessment of Effect action #1.1 for analysis.

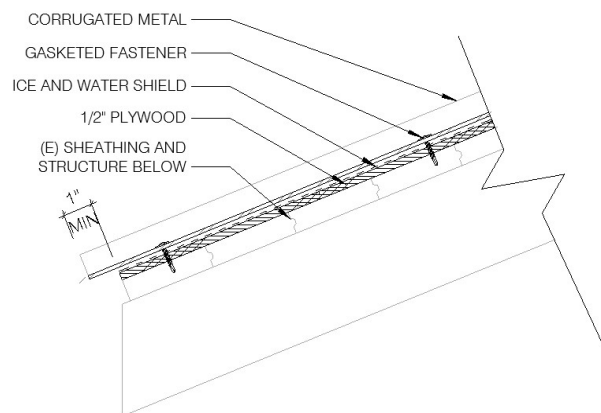


Image 272: Recommended roof covering diagram.

## Chimney

### Recommended Treatment:

- Coordinate with Roof and Interior Wood Stove section.
- 1 • Replace chimney with NFPA-approved and insulated chimney, Duravent DuraTech in black, or similar. Include thimbles at ceiling and roof as character defining features. Install storm collar above roof level, and brace chimney to roof. See diagrams in Requirements for Treatment section 2.02 for details and Appendix D for cutsheets.
- See Assessment of Effect action #2 for analysis.

### Alternative Treatment:

Alternative 1 - Relocate stove/chimney: Consider relocating stove and chimney to center of building for proper clearances. Install chimney elbow within attic space per manufacturer's requirements to retain existing chimney penetration. Bends in chimney can be no greater than 45 degrees. Coordinate with roof replacement. See Assessment of Effect action #2.1 for analysis.

## Exterior Walls

### Recommended Treatment:

- 2 • Replace plywood panel at south gable with 3/4" exterior grade plywood. Paint to match existing paint color using mildew-resistant exterior paint.
- 2 • Prep, clean, and paint all other plywood and battens. Treat plywood with biocide prior to refinishing. Repaint using mildew-resistant paint to match existing paint color per 1994 Paint Color Analysis report.
- 2 • Prep and paint all wood trim, include frieze boards, corner boards, window and door trim. Paint to match existing paint color per 1994 Paint Color Analysis report.
- See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

Alternative 1 - Winterize Cabin: Insulate building envelope to support year-round use. Install batt-fiber insulation at exterior walls. Access wall cavity from exterior. Remove existing plywood, any existing insulation, and building paper. Install moisture barrier - 30# felt building paper or similar - at interior side of wall. Install new batt-fiberglass insulation. Replace exterior plywood with 3/4" exterior grade plywood to match existing. Reinstall or replace battens in-kind. Paint to match existing. See Assessment of Effect action #1.2 for analysis.



## Foundation

### Recommended Treatment:

- See Structural System section for foundation recommendations and alternatives including treatment of grade, cribbing, and connections.

1

- When implementing structural upgrades, replace timber skids with log skids 9-12" in diameter. Hewn top and bottom of log skids flat, leaving bark on round faces. Limit log projection to a maximum of 3" beyond exterior building face.

M

- Deterioration at projecting log ends can be cut back until flush with the building wall before requiring replacement.
- See Assessment of Effect action #3 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Windows

### Recommended Treatment:

2

- Repair surface deterioration at window sash, frames, sills, and screens by sanding and painting. Paint to match existing paint color per 1994 Paint Color Analysis report.

2

- Replace damaged glazing compound with traditional glazing compound (oil-based glazing putty, manufacturers include Abatron, UGL, and Sarco). Allow to adequately dry before painting.

3

- Install interlocking spring bronze weatherstrip appropriate for hopper operation. See Appendix D for cutsheets.

2

- Install hopper hardware including engaging transom lock and strike, and chain stay, House of Antique Hardware Solid Brass Transom Window Latch or similar. See Appendix D for cutsheets.

3

- Consider installing curtains at all windows to mitigate long daylight hours and provide privacy. Curtains to be mounted on simple rods, with rods mounted above windows to minimize fastening to wood. Rods should extend beyond sides of windows to push curtains aside for window operation.
- See Assessment of Effect action #4 for analysis.

### Alternative Treatment:

Alternative 1 - Winterize Windows: Install exterior storm windows. New storms to be wood frame with 1/8" clear glazing, single pane. Storm sash to hang within existing window opening, suspended by storm hangers with turnbolts holding storms in place. See Assessment of Effect action #4.1 for analysis.

## Exterior Door

### Recommended Treatment:

- 2 • Repair surface deterioration at door leaf, threshold, and screens by sanding and painting. Paint to match existing paint color per 1994 Paint Color Analysis report.
- 2 • Replace exterior screen mesh to match existing.
- See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

Alternative 1 - Winterize Door: Install spring bronze weatherstrip and door sweep. See Assessment of Effect action #1.4 for analysis.

## Entry Stair

### Recommended Treatment:

- Implement stair replacement after structural foundation work is completed and building is leveled. If this work will not be completed during the next construction season, temporary repairs to existing treads and securing railings should be completed to improve safety in the short-term.
- 2 • Construct new code-compliant wood stair, 36" x 36" landing, and handrail. Match existing profiles and design of railing. Stair treads and structure to be pressure treated lumber. Consider incorporating steel grating to allow debris and snow to pass through. For improved slip resistance on the stair consider applying a medium textured, paintable, slip-resistant coating. Paint stairs and handrail to match existing paint colors. See diagram below.
- See Assessment of Effect action #5 for analysis.

### Alternative Treatment:

No alternatives recommended.

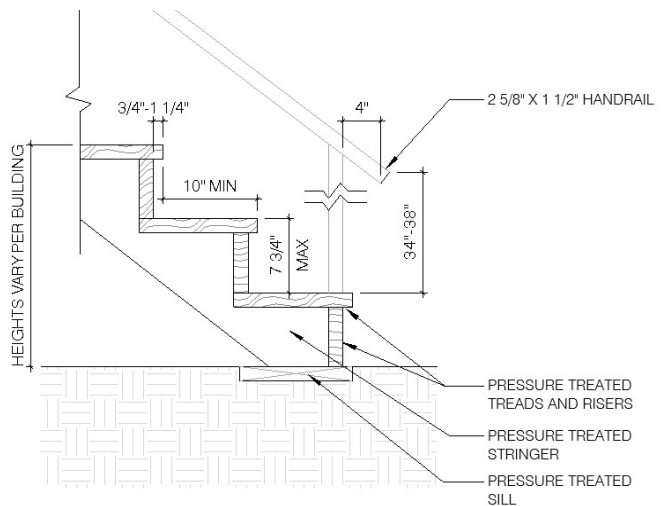


Image 273: Exterior stair diagram.

### **Wood Shed**

#### **Recommended Treatment:**

- 2 • Demolish existing wood shed. Construct new shed 30' away from adjacent structures on site per Life Safety recommendations at the beginning of this section.
- See Assessment of Effect action #6 for analysis.

#### **Alternative Treatment:**

No alternatives recommended.

### **Propane Shed**

#### **Recommended Treatment:**

- 3 • Remove propane shed and associated gas cooking stove at interior. Patch interior and exterior plywood until plywood meets end of service life. Then replace plywood with 3/4" exterior grade plywood. Paint to match existing paint color using mildew-resistant exterior paint.
- See Assessment of Effect action #7 for analysis.

#### **Alternative Treatment:**

Alternative 1 - Reconstruct Propane Shed for Winter Cooking Use: Replace exterior plywood walls with new 3/4" exterior grade plywood. Paint to match existing. Reconstruct access door to match existing. Reuse door hinge hardware. See Assessment of Effect action #7.1 for analysis.



# Building Interior

## Flooring

### Recommended Treatment:

- M

• Repaint when surface deterioration begins to expose plywood substrate. Paint to match existing paint color per 1994 Paint Color Analysis report.
- See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

#### Alternative 1 - Restore to Wood Strip Flooring:

Remove plywood and replace flooring with wood tongue and groove. Treat with durable polyurethane finish. See Assessment of Effect action #1.3 for analysis.

## Wall Finishes

### Recommended Treatment:

- M

• Maintain existing walls. Paint cyclically, a minimum of every 7 years, to match existing paint color per 1994 Paint Color Analysis report.
- See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Ceiling

### Recommended Treatment:

- 2

• Replace plywood panels surrounding stove pipe with 1/4" plywood. Paint to match existing paint color per 1994 Paint Color Analysis report. Utilize an intumescent paint for added fire protection. Implement in coordination with stove pipe work.
- M

• Maintain existing ceilings. Paint cyclically, a minimum of every 7 years, to match existing paint color per 1994 Paint Color Analysis report.
- See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Attic

### Recommended Treatment:

- Implement attic recommendations in conjunction with roof and chimney repairs to resolve material deterioration and water infiltration.
- 1 • Remove and replace existing insulation and vapor retarder.
- Install new vapor retarder, limit openings and seal seams.
- Install new 12" (R-38) batt-fiberglass insulation.
- Ventilate attic space either through open space at soffits or vents at gable end(s).
- See Assessment of Effect action #8 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Wood Stove

### Recommended Treatment:

- 2 • Clean corrosion, finish with rust-inhibiting high heat black paint.
- M • Clean barrel stove and stove pipe seasonally. Inspect damper operation to ensure proper ventilation.
- 1 • Install corrugated metal heat shield at vertical wall surfaces within 36" of stove. Maintain a 1" air gap between corrugated metal and plywood surface. See diagram in Requirements for Treatment section 2.02 for details.
- Coordinate with Exterior Chimney section.
- See Assessment of Effect action #9 for analysis.

### Alternative Treatment:

Alternative 1 - Add Drip Stove: If winter use at Bunkhouse 1 is to continue, consider installing a drip stove for improved heating efficiency. Drip stove may be salvaged from Laundry Building. Install associated lube cube at east elevation exterior to limit visibility. See Assessment of Effect action #9.1 for analysis.

## Cooking Stove

### Recommended Treatment:

- 3 • Disconnect and remove cooking stove to return bunkhouse to sleeping quarters only.
- Remove associated exterior propane shed.
- Replace plywood panels with resulting holes. Match existing plywood and painted finishes.
- See Assessment of Effect action #10 for analysis.

### Alternative Treatment:

Alternative 1 - Retain Cooking Stove for Winter Use: If Mess Hall cannot be utilized in the winter, retain cookstove at Bunkhouse 1 for cooking purposes when occupied in winter months. Include fire extinguishing pucks and store near stove (StoveTop FireStop pucks or similar). Propane gas range should be ventilated with a range hood, particularly because this is also a sleeping unit. See Assessment of Effect action #10.1 for analysis.

## Interior Lighting

### Recommended Treatment:

- 3 • Replace incandescent bulbs with LED, white A19, 60-watt, 2700k. See Appendix D for cutsheets.
- See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

Alternative 1 - Replace Light Fixtures: Replace porcelain socket fixtures in-kind with compatible lamp cages for bulb protection, Epco 16512 fixture or similar. See Appendix D for cutsheet.

## Fire and Life Safety

### Recommended Treatment:

- M • Store fire extinguisher in Mess Hall during unoccupied winter months. Monitor expiration dates and replace as needed.
- M • Provide fire extinguishing pucks, StoveTop FireStop pucks or similar, as back-up fire protection. Monitor and restock as needed.
- M • Maintain smoke detector. Monitor and replace batteries annually. Consider replacing with hard-wired units.
- See Assessment of Effect action #11 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Furnishings

For consistency and occupant comfort, consider furnishing all bunkhouses with the following:

### Recommended Treatment:

- 3 • Replace twin mattresses. Protect with waterproof, insect resistant cover such as SureGuard Mattress Encasement or similar.
- 3 • Provide a minimum of (1) tall dresser per (2) bunks.
- 3 • Provide a minimum of (2) upholstered side chairs per bunkhouse
- 3 • Install a freestanding coat tree to minimize reliance on wall-mounted coat hooks and to prevent future wall penetrations
- See Assessment of Effect action #12 for analysis.

### Alternative Treatment:

Alternative 1 - Provide Dining Table for Winter Use: Providing a two-person wood dining table. Upholstered side chairs may be used as dining chairs.



## Bunkhouse 2, FMSS #73316

### Building Exterior

#### Roof

##### Recommended Treatment:

- 1
  - Replace corrugated metal roof in-kind. See roof covering diagram. Match material, corrugated pattern and dimensions, eave details, and ridge conditions. Replacement roof system to include the following components, from top to bottom:
    - o Corrugated metal sheets. See Appendix D for cutsheet.
    - o Corrugated metal ridge cap
    - o Sheet metal chimney flashing
    - o Neoprene gasketed fasteners. Metal fastener type to be compatible with corrugated sheets.
    - o 1/2" exterior grade plywood sheathing with ice and water shield
    - o Replace wood sheathing and roof structure components in-kind where damaged.
- 3
  - Replace deteriorated bargeboards and fascia when rot or cracking exceeds 25% of the trim length. Match existing trim dimensions, profiles, and paint finish.
- 1
  - Replace entrance awning mineral surface rolled roofing. Remove existing rolled roofing. Replace plywood substrate where damaged. Install self-adhesive ice and water shield to plywood. Install new mineral surface rolled roofing to match existing. Rolled roofing to return up exterior wall face a minimum of 3".
- 2
  - Replace entrance awning 3/4" x 1-3/4" eave trim. Match wood profiles, dimensions, and finish.
- 2
  - Prep and paint all wood components, including exposed rafters, sheathing, and trim. Match existing paint color per 1994 Paint Color Analysis report.
  - See Assessment of Effect action #1 for analysis.

##### Alternative Treatment:

##### Alternative 1 - Repair Existing Roof:

- Remove existing corrugated panels, fasteners, bargeboards, and tar paper (where it exists) down to sheathing or rafters. Salvage panels and bargeboards for reuse.
- Repair sheathing and rafters in-kind where damaged.
- Install 1/2" exterior grade plywood sheathing on top of existing sheathing
- Install ice and water shield on top of plywood sheathing
- Replace moderate or severely corroded panels in-kind, reinstall all other existing panels. Replace all fasteners with neoprene gasketed fasteners.
- Replace chimney flashing.
- Reinstall bargeboards.
- See Assessment of Effect action #1.1 for analysis.

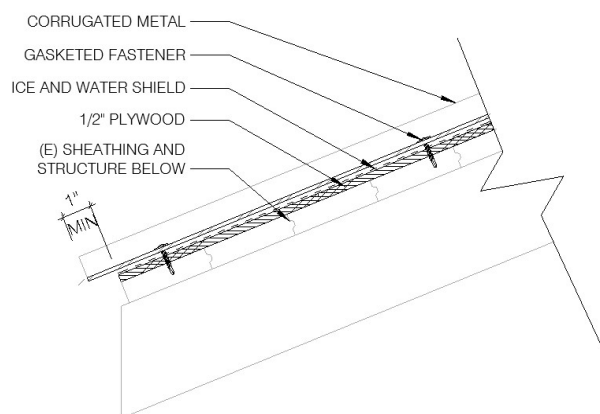


Image 274: Recommended roof covering diagram.

## **Chimney**

### **Recommended Treatment:**

- 1 • Replace chimney with NFPA-approved and insulated chimney, Duravent DuraTech in black, or similar. Include thimbles at ceiling and roof as character defining features. Install storm collar above roof level, and brace chimney to roof. See diagrams in Requirements for Treatment section 2.02 for details and Appendix D for cutsheets.
- Coordinate with Interior Wood Stove section.
- See Assessment of Effect action #2 for analysis.

### **Alternative Treatment:**

No alternatives recommended.

## **Exterior Walls**

### **Recommended Treatment:**

- 2 • Replace all cracked or damaged drop siding with new wood siding to match existing profile, dimensions, and exposure. Paint to match existing paint color per 1994 Paint Color Analysis report.
- 2 • Replace cracked frieze board with new wood trim to match existing profile and dimensions. Paint to match existing paint color per 1994 Paint Color Analysis report.
- 2 • Prep, clean, and paint all other drop siding and trim to match existing paint color per 1994 Paint Color Analysis report.
- See Assessment of Effect action #1 for analysis.

### **Alternative Treatment:**

No alternatives recommended.

## Foundation

### Recommended Treatment:

- See Structural System section for foundation recommendations and alternatives including treatment of grade, cribbing, and connections.

M

- When implementing structural upgrades, clean log skids using D/2 Biological Solution or equivalent. Trim log projection back until flush with building wall.
- See Assessment of Effect action #3 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Windows

### Recommended Treatment:

2

- Repair surface deterioration at window sash, frames, sills, and screens by sanding and painting. Paint to match existing paint color per 1994 Paint Color Analysis report.

2

- Replace damaged glazing compound with traditional glazing compound (oil-based glazing putty, manufacturers include Abatron, UGL, and Sarco). Allow to adequately dry before painting.

3

- Install interlocking spring bronze weatherstrip appropriate for hopper operation. See Appendix D for cutsheets.

2

- Install hopper hardware including engaging transom lock and strike, and chain stay, House of Antique Hardware Solid Brass Transom Window Latch or similar. See Appendix D for cutsheets.

3

- Consider installing curtains at all windows to mitigate long daylight hours and provide privacy. Curtains to be mounted on simple rods, with rods mounted above windows to minimize fastening to wood. Rods should extend beyond sides of windows to push curtains aside for window operation.
- See Assessment of Effect action #4 for analysis.

### Alternative Treatment:

No alternatives recommended.



## Exterior Door

### Recommended Treatment:

- 2 • Repair surface deterioration at door leaf, threshold, and screens by sanding and painting. Paint to match existing paint color per 1994 Paint Color Analysis report.
- 2 • Replace exterior screen mesh to match existing.
- 2 • Install new round knob handleset.
- See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Entry Stair

### Recommended Treatment:

- Implement stair replacement after structural foundation work is completed and building is leveled. If this work will not be completed during the next construction season, temporary repairs to existing treads and securing railings should be completed to improve safety in the short-term.
- 2 • Construct new code-compliant wood stair, 36" x 36" landing, and handrail. Match existing profiles and design of railing. Stair treads and structure to be pressure treated lumber. Consider incorporating steel grating to allow debris and snow to pass through. For improved slip resistance on the stair consider applying a medium textured, paintable, slip-resistant coating. Paint stairs and handrail to match existing paint colors. See diagram below.
- See Assessment of Effect action #5 for analysis.

### Alternative Treatment:

No alternatives recommended.

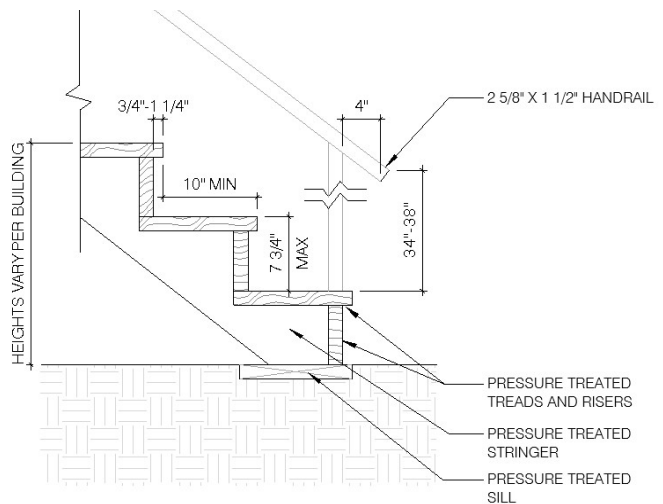


Image 275: Exterior stair diagram.

# Building Interior

## Flooring

### Recommended Treatment:

M

- Repaint when surface deterioration begins to expose plywood substrate. Paint to match existing paint color per 1994 Paint Color Analysis report. See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

#### Alternative 1 - Restore to Wood Strip Flooring:

Remove plywood and replace flooring with wood tongue and groove. Treat with durable polyurethane finish. See Assessment of Effect action #1.3 for analysis.

## Wall Finishes

### Recommended Treatment:

M

- Maintain existing walls. Paint cyclically, a minimum of every 7 years, to match existing paint color per 1994 Paint Color Analysis report. See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Ceiling

### Recommended Treatment:

M

- Maintain existing ceilings. Paint cyclically, a minimum of every 7 years, to match existing paint color per 1994 Paint Color Analysis report. Utilize an intumescent paint for added fire protection. See Assessment of Effect action # for analysis.

### Alternative Treatment:

No alternatives recommended.

## Attic

### Recommended Treatment:

1

- Implement attic recommendations in conjunction with roof and chimney repairs to resolve material deterioration and water infiltration.
- Remove and replace existing insulation and vapor retarder.
- Install new vapor retarder, limit openings and seal seams.
- Install new 12" (R-38) batt-fiberglass insulation.
- Ventilate attic space either through open space at soffits or vents at gable end(s).
- See Assessment of Effect action #8 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Wood Stoves

### Recommended Treatment:

- 2

 • Clean corrosion, finish with rust-inhibiting high heat black paint.
- M

 • Clean barrel stove and stove pipe seasonally.
- 1

 • Install corrugated metal heat shield at vertical wall surfaces within 36" of stove. Maintain a 1" air gap between corrugated metal and plywood surface. See diagram in Requirements for Treatment section 2.02 for details.
- Coordinate with Exterior Chimney section.
- See Assessment of Effect action #9 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Interior Lighting

### Recommended Treatment:

- M

 • Remove all bulbs. Retain light fixtures for future interpretation.
- See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Fire and Life Safety

### Recommended Treatment:

- M

 • Store fire extinguisher in Mess Hall during unoccupied winter months. Monitor expiration dates and replace as needed.
- M

 • Provide fire extinguishing pucks, StoveTop FireStop pucks or similar, as back-up fire protection. Monitor and restock as needed.
- M

 • Maintain smoke detector. Monitor and replace batteries annually. Consider replacing with hard-wired units.
- See Assessment of Effect action #11 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Furnishings

For consistency and occupant comfort, consider furnishing all bunkhouses with the following:

### Recommended Treatment:

- 3

 • Replace twin mattresses. Protect with waterproof, insect resistant cover such as SureGuard Mattress Encasement or similar.
- 3

 • Provide a minimum of (1) tall dresser per (2) bunks.
- 3

 • Provide a minimum of (2) upholstered side chairs per bunkhouse
- 3

 • Install a freestanding coat tree to minimize reliance on wall-mounted coat hooks and to prevent future wall penetrations
- See Assessment of Effect action #12 for analysis.

### Alternative Treatment:

No alternatives recommended.



## Bunkhouse 3, FMSS #73313

### Building Exterior

#### Roof

##### Recommended Treatment:

- 1
  - Replace corrugated metal roof in-kind. See roof covering diagram. Match material, corrugated pattern and dimensions, eave details, and ridge conditions. Replacement roof system to include the following components, from top to bottom:
    - o Corrugated metal sheets. See Appendix D for cutsheet.
    - o Corrugated metal ridge cap
    - o Sheet metal chimney flashing
    - o Neoprene gasketed fasteners. Metal fastener type to be compatible with corrugated sheets.
    - o 1/2" exterior grade plywood sheathing with ice and water shield
    - o Replace wood sheathing and roof structure components in-kind where damaged.
- 1
  - Remove access ladder. Future maintenance should be conducted from extension ladder.
- 1
  - Replace entrance awning mineral surface rolled roofing. Remove existing rolled roofing. Replace plywood substrate where damaged. Install self-adhesive ice and water shield to plywood. Install new mineral surface rolled roofing to match existing. Rolled roofing to return up exterior wall face a minimum of 3".
- 2
  - Replace entrance awning 3/4" x 1-3/4" eave trim. Match wood profiles, dimensions, and finish.
- 2
  - Prep and paint all wood components, including exposed rafters, sheathing, and trim. Match existing paint color per 1994 Paint Color Analysis report.
  - See Assessment of Effect action #1 for analysis.

##### Alternative Treatment:

##### Alternative 1 - Repair Existing Roof:

- Remove existing corrugated panels, fasteners, bargeboards, and tar paper (where it exists) down to sheathing or rafters. Salvage panels and bargeboards for reuse.
- Repair sheathing and rafters in-kind where damaged.
- Install 1/2" exterior grade plywood sheathing on top of existing sheathing
- Install ice and water shield on top of plywood sheathing
- Replace moderate or severely corroded panels in-kind, reinstall all other existing panels. Replace all fasteners with neoprene gasketed fasteners.
- Replace chimney flashing.
- Reinstall bargeboards.
- See Assessment of Effect action #1.3 for analysis.

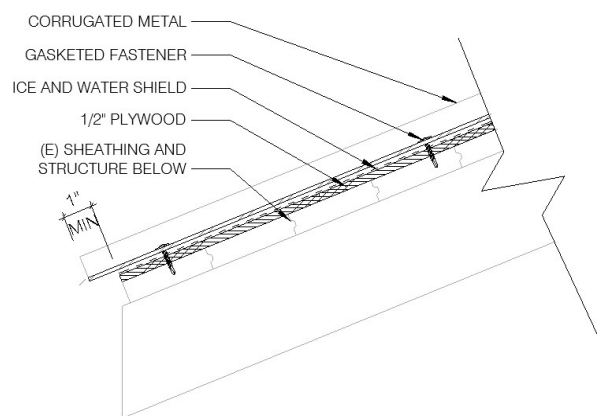


Image 276: Recommended roof covering diagram.

## ***Chimney***

### **Recommended Treatment:**

- 1 • Replace chimney with NFPA-approved and insulated chimney, Duravent DuraTech in black, or similar. Include thimbles at ceiling and roof as character defining features. Install storm collar above roof level, and brace chimney to roof. See diagrams in Requirements for Treatment section 2.02 for details and Appendix D for cutsheets.
- Coordinate with Interior Wood Stove section.
- See Assessment of Effect action #2 for analysis.

### **Alternative Treatment:**

No alternatives recommended.

## ***Exterior Walls***

### **Recommended Treatment:**

- 2 • Replace plywood panel at south gable with 3/4" exterior grade plywood. Paint to match existing paint color using mildew-resistant exterior paint.
- 2 • Prep, clean, and paint all other plywood and battens. Treat plywood with biocide prior to refinishing. Repaint using mildew-resistant paint to match existing paint color per 1994 Paint Color Analysis report.
- 2 • Prep and paint all wood trim, include frieze boards, corner boards, window and door trim. Paint to match existing paint color per 1994 Paint Color Analysis report.
- See Assessment of Effect action #1 for analysis.

### **Alternative Treatment:**

No alternatives recommended.

## ***Foundation***

### **Recommended Treatment:**

- See Structural System section for foundation recommendations and alternatives including treatment of grade, cribbing, and connections.
- M • When implementing structural upgrades, clean log skids using D/2 Biological Solution or equivalent. Trim log projection back until flush with building wall.
- See Assessment of Effect action #3 for analysis.

### **Alternative Treatment:**

No alternatives recommended.

## **Windows**

### **Recommended Treatment:**

- 2

 • Repair surface deterioration at window sash, frames, sills, and screens by sanding and painting. Paint to match existing paint color per 1994 Paint Color Analysis report.
- 2

 • Replace damaged glazing compound with traditional glazing compound (oil-based glazing putty, manufacturers include Abatron, UGL, and Sarco). Allow to adequately dry before painting.
- 3

 • Install interlocking spring bronze weatherstrip appropriate for hopper operation. See Appendix D for cutsheets.
- 2

 • Install hopper hardware including engaging transom lock and strike, and chain stay, House of Antique Hardware Solid Brass Transom Window Latch or similar. See Appendix D for cutsheets.
- 3

 • Consider installing curtains at all windows to mitigate long daylight hours and provide privacy. Curtains to be mounted on simple rods, with rods mounted above windows to minimize fastening to wood. Rods should extend beyond sides of windows to push curtains aside for window operation.
- See Assessment of Effect action #4 for analysis.

### **Alternative Treatment:**

No alternatives recommended.

## **Exterior Door**

### **Recommended Treatment:**

- 2

 • Repair surface deterioration at door leaf, threshold, and screens by sanding and painting. Paint to match existing paint color per 1994 Paint Color Analysis report.
- 2

 • Install new round knob handleset.
- 2

 • Replace exterior screen mesh to match existing.
- See Assessment of Effect action #1 for analysis.

### **Alternative Treatment:**

No alternatives recommended.



## Entry Stair

### Recommended Treatment:

- Implement stair replacement after structural foundation work is completed and building is leveled. If this work will not be completed during the next construction season, temporary repairs to existing treads and securing railings should be completed to improve safety in the short-term.
- 2 • Construct new code-compliant wood stair, 36" x 36" landing, and handrail. Match existing profiles and design of railing. Stair treads and structure to be pressure treated lumber. Consider incorporating steel grating to allow debris and snow to pass through. For improved slip resistance on the stair consider applying a medium textured, paintable, slip-resistant coating. Paint stairs and handrail to match existing paint colors. See diagram below.
- See Assessment of Effect action #5 for analysis.

### Alternative Treatment:

No alternatives recommended.

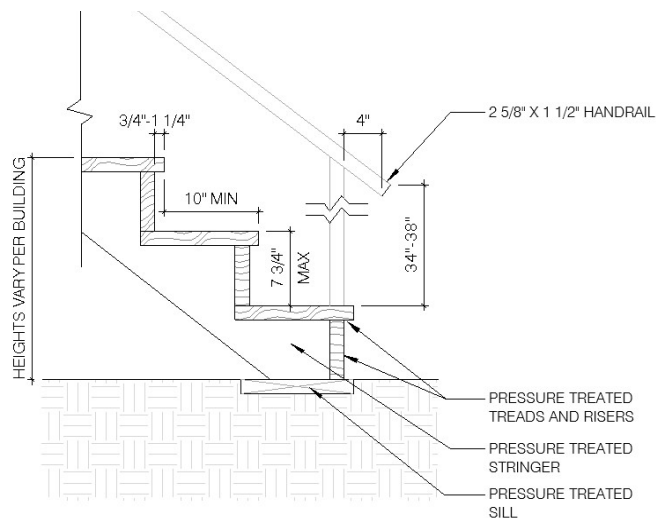


Image 277: Exterior stair diagram.

# Building Interior

## Flooring

### Recommended Treatment:

- M
- Repaint when surface deterioration begins to expose plywood substrate. Paint to match existing paint color per 1994 Paint Color Analysis report. See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

#### Alternative 1 - Restore to Wood Strip Flooring:

Remove plywood and replace flooring with wood tongue and groove. Treat with durable polyurethane finish. See Assessment of Effect action #1.3 for analysis.

## Wall Finishes

### Recommended Treatment:

- M
- Maintain existing walls. Paint cyclically, a minimum of every 7 years, to match existing paint color per 1994 Paint Color Analysis report. See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Ceiling

### Recommended Treatment:

- M
- Maintain existing ceilings. Paint cyclically, a minimum of every 7 years, to match existing paint color per 1994 Paint Color Analysis report. Utilize an intumescent paint for added fire protection. See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Attic

### Recommended Treatment:

- 1
- Implement attic recommendations in conjunction with roof and chimney repairs to resolve material deterioration and water infiltration.
  - Remove and replace existing insulation and vapor retarder.
  - Install new vapor retarder, limit openings and seal seams.
  - Install new 12" (R-38) batt-fiberglass insulation.
  - Ventilate attic space either through open space at soffits or vents at gable end(s).
  - See Assessment of Effect action #8 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Wood Stoves

### Recommended Treatment:

- 2

• Clean corrosion, finish with rust-inhibiting high heat black paint.
- M

• Clean barrel stove and stove pipe seasonally. Inspect damper operation to ensure proper ventilation.
- 1

• Install corrugated metal heat shield at vertical wall surfaces within 36" of stove. Maintain a 1" air gap between corrugated metal and plywood surface. See diagram in Requirements for Treatment section 2.02 for details.
- Coordinate with Exterior Chimney section.
- See Assessment of Effect action #9 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Interior Lighting

### Recommended Treatment:

- M

• Remove all bulbs. Retain light fixtures for future interpretation.
- See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Fire and Life Safety

### Recommended Treatment:

- M

• Store fire extinguisher in Mess Hall during unoccupied winter months. Monitor expiration dates and replace as needed.
- M

• Provide fire extinguishing pucks, StoveTop FireStop pucks or similar, as back-up fire protection. Monitor and restock as needed.
- M

• Maintain smoke detector. Monitor and replace batteries annually. Consider replacing with hard-wired units.
- See Assessment of Effect action #11 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Furnishings

For consistency and occupant comfort, consider furnishing all bunkhouses with the following:

### Recommended Treatment:

- 3

• Replace twin mattresses. Protect with waterproof, insect resistant cover such as SureGuard Mattress Encasement or similar.
- 3

• Provide a minimum of (1) tall dresser per (2) bunks.
- 3

• Provide a minimum of (2) upholstered side chairs per bunkhouse
- 3

• Install a freestanding coat tree to minimize reliance on wall-mounted coat hooks and to prevent future wall penetrations
- See Assessment of Effect action #12 for analysis.

### Alternative Treatment:

No alternatives recommended.



## Bunkhouse 4, FMSS #73312

### Building Exterior

#### Roof

##### Recommended Treatment:

- 1
  - Replace corrugated metal roof in-kind. See roof covering diagram. Match material, corrugated pattern and dimensions, eave details, and ridge conditions. Replacement roof system to include the following components, from top to bottom:
    - o Corrugated metal sheets. See Appendix D for cutsheet.
    - o Corrugated metal ridge cap
    - o Sheet metal chimney flashing
    - o Neoprene gasketed fasteners. Metal fastener type to be compatible with corrugated sheets.
    - o 1/2" exterior grade plywood sheathing with ice and water shield
    - o Replace wood sheathing and roof structure components in-kind where damaged.
- 1
  - Remove access ladder. Future maintenance should be conducted from extension ladder.
- 1
  - Replace entrance awning mineral surface rolled roofing. Remove existing rolled roofing. Replace plywood substrate where damaged. Install self-adhesive ice and water shield to plywood. Install new mineral surface rolled roofing to match existing. Rolled roofing to return up exterior wall face a minimum of 3".
- 2
  - Replace entrance awning 3/4" x 1-3/4" eave trim. Match wood profiles, dimensions, and finish.
- 2
  - Prep and paint all wood components, including exposed rafters, sheathing, and trim. Match existing paint color per 1994 Paint Color Analysis report.
  - See Assessment of Effect action #1 for analysis.

##### Alternative Treatment:

##### Alternative 1 - Repair Existing Roof:

- Remove existing corrugated panels, fasteners, bargeboards, and tar paper (where it exists) down to sheathing or rafters. Salvage panels and bargeboards for reuse.
- Repair sheathing and rafters in-kind where damaged.
- Install 1/2" exterior grade plywood sheathing on top of existing sheathing
- Install ice and water shield on top of plywood sheathing
- Replace moderate or severely corroded panels in-kind, reinstall all other existing panels. Replace all fasteners with neoprene gasketed fasteners.
- Replace chimney flashing.
- Reinstall bargeboards.
- See Assessment of Effect action #1.1 for analysis.

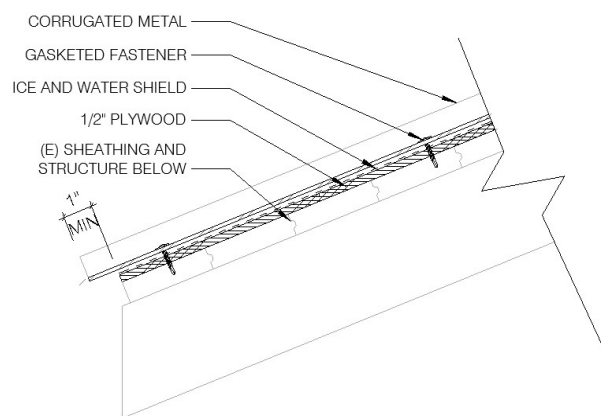


Image 278: Recommended roof covering diagram.

## **Chimney**

### **Recommended Treatment:**

- 1 • Replace chimney with NFPA-approved and insulated chimney, Duravent DuraTech in black, or similar. Include thimbles at ceiling and roof as character defining features. Install storm collar above roof level, and brace chimney to roof. See diagrams in Requirements for Treatment section 2.02 for details and Appendix D for cutsheets.
- Coordinate with Interior Wood Stove section.
- See Assessment of Effect action #2 for analysis.

### **Alternative Treatment:**

No alternatives recommended.

## **Exterior Walls**

### **Recommended Treatment:**

- 2 • Prep, clean, and paint all plywood and battens. Treat plywood with biocide prior to refinishing. Repaint using mildew-resistant paint to match existing paint color per 1994 Paint Color Analysis report.
- 2 • Prep and paint all wood trim, include frieze boards, corner boards, window and door trim. Paint to match existing paint color per 1994 Paint Color Analysis report.
- See Assessment of Effect action #1 for analysis.

### **Alternative Treatment:**

No alternatives recommended.

## **Foundation**

### **Recommended Treatment:**

- See Structural System section for foundation recommendations and alternatives including treatment of grade, cribbing, and connections.
- M • When implementing structural upgrades, replace log skids with new log skids 9-12" in diameter. Hewn top and bottom of log skids flat, leaving bark on round faces. Limit log projection to a maximum of 3" beyond exterior building face.
- M • Deterioration at projecting log ends can be cut back until flush with the building wall before requiring replacement.
- See Assessment of Effect action #3 for analysis.

### **Alternative Treatment:**

No alternatives recommended.

## Windows

### Recommended Treatment:

- 2

 • Repair surface deterioration at window sash, frames, sills, and screens by sanding and painting. Paint to match existing paint color per 1994 Paint Color Analysis report.
- 2

 • Replace damaged glazing compound with traditional glazing compound (oil-based glazing putty, manufacturers include Abatron, UGL, and Sarco). Allow to adequately dry before painting.
- 3

 • Install interlocking spring bronze weatherstrip appropriate for hopper operation. See Appendix D for cutsheets.
- 2

 • Install hopper hardware including engaging transom lock and strike, and chain stay, House of Antique Hardware Solid Brass Transom Window Latch or similar. See Appendix D for cutsheets.
- 3

 • Consider installing curtains at all windows to mitigate long daylight hours and provide privacy. Curtains to be mounted on simple rods, with rods mounted above windows to minimize fastening to wood. Rods should extend beyond sides of windows to push curtains aside for window operation.
- See Assessment of Effect action #4 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Exterior Door

### Recommended Treatment:

- 2

 • Replace exterior door with new wood 2-panel door to match existing.
- 2

 • Repair surface deterioration at screen by sanding and painting. Paint to match existing paint color per 1994 Paint Color Analysis report.
- 2

 • Replace exterior screen mesh to match existing.
- See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.



## Entry Stair

### Recommended Treatment:

- Implement stair replacement after structural foundation work is completed and building is leveled. If this work will not be completed during the next construction season, temporary repairs to existing treads and securing railings should be completed to improve safety in the short-term.
- 2 • Construct new code-compliant wood stair, 36" x 36" landing, and handrail. Match existing profiles and design of railing. Stair treads and structure to be pressure treated lumber. Consider incorporating steel grating to allow debris and snow to pass through. For improved slip resistance on the stair consider applying a medium textured, paintable, slip-resistant coating. Paint stairs and handrail to match existing paint colors. See diagram below.
- See Assessment of Effect action #5 for analysis.

### Alternative Treatment:

No alternatives recommended.

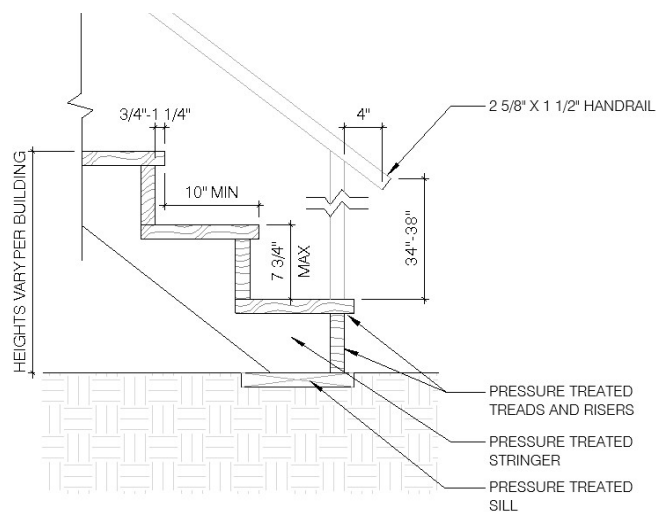


Image 279: Exterior stair diagram.

# Building Interior

## Flooring

### Recommended Treatment:

- M
- Repaint when surface deterioration begins to expose plywood substrate. Paint to match existing paint color per 1994 Paint Color Analysis report. See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

#### Alternative 1 - Restore to Wood Strip Flooring:

Remove plywood and replace flooring with wood tongue and groove. Treat with durable polyurethane finish. See Assessment of Effect action #1.3 for analysis.

## Wall Finishes

### Recommended Treatment:

- M
- Maintain existing walls. Paint cyclically, a minimum of every 7 years, to match existing paint color per 1994 Paint Color Analysis report. See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Ceiling

### Recommended Treatment:

- M
- Maintain existing ceilings. Paint cyclically, a minimum of every 7 years, to match existing paint color per 1994 Paint Color Analysis report. Utilize an intumescent paint for added fire protection. See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Attic

### Recommended Treatment:

- 1
- Implement attic recommendations in conjunction with roof and chimney repairs to resolve material deterioration and water infiltration.
  - Remove and replace existing insulation and vapor retarder.
  - Install new vapor retarder, limit openings and seal seams.
  - Install new 12" (R-38) batt-fiberglass insulation.
  - Ventilate attic space either through open space at soffits or vents at gable end(s).
  - See Assessment of Effect action #8 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Wood Stoves

### Recommended Treatment:

- 2

• Clean corrosion, finish with rust-inhibiting high heat black paint.
- M

• Clean barrel stove and stove pipe seasonally. Inspect damper operation to ensure proper ventilation.
- 1

• Install corrugated metal heat shield at vertical wall surfaces within 36" of stove. Maintain a 1" air gap between corrugated metal and plywood surface. See diagram in Requirements for Treatment section 2.02 for details.
- Coordinate with Exterior Chimney section.
- See Assessment of Effect action #9 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Interior Lighting

### Recommended Treatment:

- M

• Remove all bulbs. Retain light fixtures for future interpretation.
- See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Fire and Life Safety

### Recommended Treatment:

- M

• Store fire extinguisher in Mess Hall during unoccupied winter months. Monitor expiration dates and replace as needed.
- M

• Provide fire extinguishing pucks, StoveTop FireStop pucks or similar, as back-up fire protection. Monitor and restock as needed.
- M

• Install smoke detector. Monitor and replace batteries annually. Consider replacing with hard-wired units.
- See Assessment of Effect action #11 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Furnishings

For consistency and occupant comfort, consider furnishing all bunkhouses with the following:

### Recommended Treatment:

- 3

• Replace twin mattresses. Protect with waterproof, insect resistant cover such as SureGuard Mattress Encasement or similar.
- 3

• Provide a minimum of (1) tall dresser per (2) bunks.
- 3

• Provide a minimum of (2) upholstered side chairs per bunkhouse
- 3

• Install a freestanding coat tree to minimize reliance on wall-mounted coat hooks and to prevent future wall penetrations
- See Assessment of Effect action #12 for analysis.

### Alternative Treatment:

No alternatives recommended.



## Bunkhouse 5, FMSS #73308

### Building Exterior

#### Roof

##### Recommended Treatment:

- 1
  - Replace corrugated metal roof in-kind. See roof covering diagram. Match material, corrugated pattern and dimensions, eave details, and ridge conditions. Replacement roof system to include the following components, from top to bottom:
    - o Corrugated metal sheets. See Appendix D for cutsheet.
    - o Corrugated metal ridge cap
    - o Sheet metal chimney flashing
    - o Neoprene gasketed fasteners. Metal fastener type to be compatible with corrugated sheets.
    - o 1/2" exterior grade plywood sheathing with ice and water shield
    - o Replace wood sheathing and roof structure components in-kind where damaged due to fire.
- 3
  - Replace deteriorated bargeboards when rot or cracking exceeds 25% of the trim length. Match existing trim dimensions, profiles, and paint finish.
- 1
  - Replace entrance awning mineral surface rolled roofing. Remove existing rolled roofing. Replace plywood substrate where damaged. Install self-adhesive ice and water shield to plywood. Install new mineral surface rolled roofing to match existing. Rolled roofing to return up exterior wall face a minimum of 3".
- 2
  - Replace entrance awning 3/4" x 1-3/4" eave trim. Match wood profiles, dimensions, and finish.
- 2
  - Prep and paint all wood components, including exposed rafters, sheathing, and trim. Match existing paint color per 1994 Paint Color Analysis report.
  - See Assessment of Effect action #1 for analysis.

##### Alternative Treatment:

###### Alternative 1 - Repair Existing Roof:

- Remove existing corrugated panels, fasteners, bargeboards, and tar paper (where it exists) down to sheathing or rafters. Salvage panels and bargeboards for reuse.
- Repair sheathing and rafters in-kind where damaged.
- Install 1/2" exterior grade plywood sheathing on top of existing sheathing
- Install ice and water shield on top of plywood sheathing
- Replace moderate or severely corroded panels in-kind, reinstall all other existing panels. Replace all fasteners with neoprene gasketed fasteners.
- Replace chimney flashing.
- Reinstall bargeboards.
- See Assessment of Effect action #1.1 for analysis.

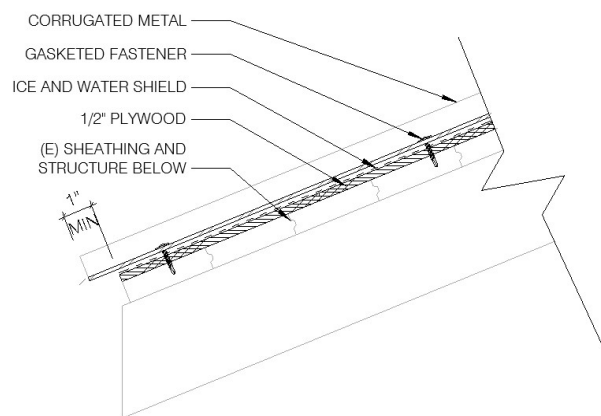


Image 280: Recommended roof covering diagram.

## **Chimney**

### **Recommended Treatment:**

- 1 • Replace chimney with NFPA-approved and insulated chimney, Duravent DuraTech in black, or similar. Include thimbles at ceiling and roof as character defining features. Install storm collar above roof level, and brace chimney to roof. See diagrams in Requirements for Treatment section 2.02 for details and Appendix D for cutsheets.
- Coordinate with Interior Wood Stove section.
- See Assessment of Effect action #2 for analysis.

### **Alternative Treatment:**

No alternatives recommended..

## **Exterior Walls**

### **Recommended Treatment:**

- 2 • Replace frieze board at east elevation.
- 3 • Replace cornerboard at southwest corner when cracking extends greater than 25% member length. Match existing profiles and dimensions.
- 2 • Prep, clean, and paint all plywood and battens. Treat plywood with biocide prior to refinishing. Repaint using mildew-resistant paint to match existing paint color per 1994 Paint Color Analysis report.
- 2 • Prep and paint all wood trim, include frieze boards, corner boards, window and door trim. Paint to match existing paint color per 1994 Paint Color Analysis report.
- See Assessment of Effect action #2 for analysis.

### **Alternative Treatment:**

No alternatives recommended..

## Foundation

### Recommended Treatment:

- See Structural System section for foundation recommendations and alternatives including treatment of grade, cribbing, and connections.
- M

 • When implementing structural upgrades, clean log skids using D/2 Biological Solution or equivalent. Trim log projection back until flush with building wall.
- See Assessment of Effect action #3 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Exterior Door

### Recommended Treatment:

- 2

 • Repair surface deterioration at door leaf, threshold, and screens by sanding and painting. Paint to match existing paint color per 1994 Paint Color Analysis report.
- 2

 • Replace exterior screen mesh to match existing.
- See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Windows

### Recommended Treatment:

- 2

 • Repair surface deterioration at window sash, frames, sills, and screens by sanding and painting. Paint to match existing paint color per 1994 Paint Color Analysis report.
- 1

 • Replace cracked pane at window E1 with 1/8" clear tempered glass.
- 2

 • Replace damaged glazing compound with traditional glazing compound (oil-based glazing putty, manufacturers include Abatron, UGL, and Sarco). Allow to adequately dry before painting.
- 3

 • Install interlocking spring bronze weatherstrip appropriate for hopper operation. See Appendix D for cutsheets.
- 2

 • Install hopper hardware including engaging transom lock and strike, and chain stay, House of Antique Hardware Solid Brass Transom Window Latch or similar. See Appendix D for cutsheets.
- 3

 • Consider installing curtains at all windows to mitigate long daylight hours and provide privacy. Curtains to be mounted on simple rods, with rods mounted above windows to minimize fastening to wood. Rods should extend beyond sides of windows to push curtains aside for window operation.
- See Assessment of Effect action #4 for analysis.

### Alternative Treatment:

No alternatives recommended.



## Entry Stair

### Recommended Treatment:

- Implement stair replacement after structural foundation work is completed and building is leveled. If this work will not be completed during the next construction season, temporary repairs to existing treads and securing railings should be completed to improve safety in the short-term.
- 2 • Construct new code-compliant wood stair, 36" x 36" landing, and handrail. Match existing profiles and design of railing. Stair treads and structure to be pressure treated lumber. Consider incorporating steel grating to allow debris and snow to pass through. For improved slip resistance on the stair consider applying a medium textured, paintable, slip-resistant coating. Paint stairs and handrail to match existing paint colors. See diagram below.
- See Assessment of Effect action #5 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Wood Shed

### Recommended Treatment:

- 2 • Demolish existing wood shed. Construct new shed 30' away from adjacent structures on site per Life Safety recommendations at the beginning of this section.
- See Assessment of Effect action #6 for analysis.

### Alternative Treatment:

No alternatives recommended.

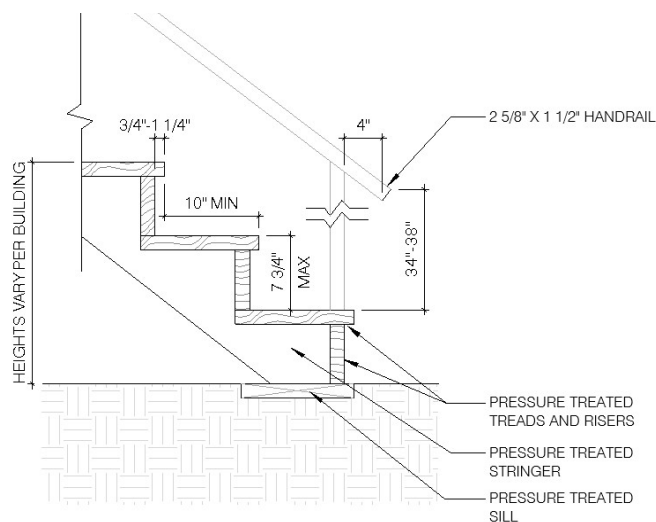


Image 281: Exterior stair diagram.

# Building Interior

## Flooring

### Recommended Treatment:

- M

 • Repaint when surface deterioration begins to expose plywood substrate. Paint to match existing paint color per 1994 Paint Color Analysis report. See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

#### Alternative 1 - Restore to Wood Strip Flooring:

Remove plywood and replace flooring with wood tongue and groove. Treat with durable polyurethane finish. See Assessment of Effect action #1.3 for analysis.

## Wall Finishes

### Recommended Treatment:

- M

 • Maintain existing walls. Paint cyclically, a minimum of every 7 years, to match existing paint color per 1994 Paint Color Analysis report. See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Ceiling

### Recommended Treatment:

- 2

 • Replace plywood hatch with 1/4" plywood. Paint to match existing paint color per 1994 Paint Color Analysis report.
- M

 • Maintain existing ceilings. Paint cyclically, a minimum of every 7 years, to match existing paint color. Utilize an intumescent paint for added fire protection.
- See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Attic

### Recommended Treatment:

- Implement attic recommendations in conjunction with roof and chimney repairs to resolve material deterioration and water infiltration.
- 1

 • Remove and replace existing insulation and vapor retarder.
- Install new vapor retarder, limit openings and seal seams.
- Install new 12" (R-38) batt-fiberglass insulation.
- Ventilate attic space either through open space at soffits or vents at gable end(s).
- See Assessment of Effect action #8 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Wood Stoves

### Recommended Treatment:

- 2

• Clean corrosion, finish with rust-inhibiting high heat black paint.
- M

• Clean stove and stove pipe seasonally. Inspect damper operation to ensure proper ventilation.
- 1

• Install corrugated metal heat shield at vertical wall surfaces within 36" of stove. Maintain a 1" air gap between corrugated metal and plywood surface. See diagram in Requirements for Treatment section 2.02 for details.
- Coordinate with Exterior Chimney section.
- See Assessment of Effect action #9 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Interior Lighting

### Recommended Treatment:

- M

• Remove all bulbs. Retain light fixtures for future interpretation.
- See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Fire and Life Safety

### Recommended Treatment:

- M

• Store fire extinguisher in Mess Hall during unoccupied winter months. Monitor expiration dates and replace as needed.
- M

• Provide fire extinguishing pucks, StoveTop FireStop pucks or similar, as back-up fire protection. Monitor and restock as needed.
- M

• Maintain smoke detector. Monitor and replace batteries annually. Consider replacing with hard-wired units.
- See Assessment of Effect action #11 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Furnishings

For consistency and occupant comfort, consider furnishing all bunkhouses with the following:

### Recommended Treatment:

- 3

• Replace twin mattresses. Protect with waterproof, insect resistant cover such as SureGuard Mattress Encasement or similar.
- 3

• Provide a minimum of (1) tall dresser per (2) bunks.
- 3

• Provide a minimum of (2) upholstered side chairs per bunkhouse
- 3

• Install a freestanding coat tree to minimize reliance on wall-mounted coat hooks and to prevent future wall penetrations
- See Assessment of Effect action #12 for analysis.

### Alternative Treatment:

No alternatives recommended.



## Bunkhouse 6, FMSS #73320

### Building Exterior

#### Roof

##### Recommended Treatment:

- 1
  - Replace corrugated metal roof in-kind. See roof covering diagram. Match material, corrugated pattern and dimensions, eave details, and ridge conditions. Replacement roof system to include the following components, from top to bottom:
    - o Corrugated metal sheets. See Appendix D for cutsheet.
    - o Corrugated metal ridge cap
    - o Sheet metal chimney flashing
    - o Neoprene gasketed fasteners. Metal fastener type to be compatible with corrugated sheets.
    - o 1/2" exterior grade plywood sheathing with ice and water shield
    - o Replace wood sheathing and roof structure components in-kind where damaged.
- 1
  - Replace entrance awning mineral surface rolled roofing. Remove existing rolled roofing. Replace plywood substrate where damaged. Install self-adhesive ice and water shield to plywood. Install new mineral surface rolled roofing to match existing. Rolled roofing to return up exterior wall face a minimum of 3".
- 2
  - Replace entrance awning 3/4" x 1-3/4" eave trim. Match wood profiles, dimensions, and finish.
- 2
  - Prep and paint all wood components, including exposed rafters, sheathing, and trim. Match existing paint color per 1994 Paint Color Analysis report.
  - See Assessment of Effect action #1 for analysis.

##### Alternative Treatment:

##### Alternative 1 - Repair Existing Roof:

- Remove existing corrugated panels, fasteners, bargeboards, and tar paper (where it exists) down to sheathing or rafters. Salvage panels and bargeboards for reuse.
- Repair sheathing and rafters in-kind where damaged.
- Install 1/2" exterior grade plywood sheathing on top of existing sheathing
- Install ice and water shield on top of plywood sheathing
- Replace moderate or severely corroded panels in-kind, reinstall all other existing panels. Replace all fasteners with neoprene gasketed fasteners.
- Replace chimney flashing.
- Reinstall bargeboards.
- See Assessment of Effect action #1.1 for analysis.

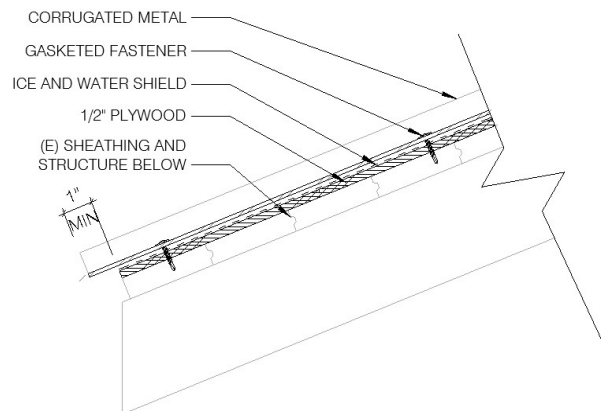


Image 282: Recommended roof covering diagram.

## **Chimney**

### **Recommended Treatment:**

- 1 • Replace chimney with NFPA-approved and insulated chimney, Duravent DuraTech in black, or similar. Include thimbles at ceiling and roof as character defining features. Install storm collar above roof level, and brace chimney to roof. See diagrams in Requirements for Treatment section 2.02 for details and Appendix D for cutsheets.
- Coordinate with Interior Wood Stove section.
- See Assessment of Effect action #2 for analysis.

### **Alternative Treatment:**

No alternatives recommended.

## **Exterior Walls**

### **Recommended Treatment:**

- 2 • Replace plywood panel at north gable with 3/4" exterior grade plywood. Remove and reinstall antlers. Paint to match existing paint color using mildew-resistant exterior paint.
- 2 • Prep, clean, and paint all other plywood and battens. Treat plywood with biocide prior to refinishing. Repaint using mildew-resistant paint to match existing paint color per 1994 Paint Color Analysis report.
- 2 • Prep and paint all wood trim, include frieze boards, corner boards, window and door trim. Paint to match existing paint color per 1994 Paint Color Analysis report.
- See Assessment of Effect action #1 for analysis.

### **Alternative Treatment:**

No alternatives recommended.

## **Foundation**

### **Recommended Treatment:**

- See Structural System section for foundation recommendations and alternatives including treatment of grade, cribbing, and connections.
- M • When implementing structural upgrades, clean log skids using D/2 Biological Solution or equivalent. Trim log projection back until flush with building wall.
- See Assessment of Effect action #3 for analysis.

### **Alternative Treatment:**

No alternatives recommended.

## Windows

### Recommended Treatment:

- 2

 • Repair surface deterioration at window sash, frames, sills, and screens by sanding and painting. Paint to match existing paint color per 1994 Paint Color Analysis report.
- 2

 • Replace damaged glazing compound with traditional glazing compound (oil-based glazing putty, manufacturers include Abatron, UGL, and Sarco). Allow to adequately dry before painting.
- 3

 • Install interlocking spring bronze weatherstrip appropriate for hopper operation. See Appendix D for cutsheets.
- 2

 • Install hopper hardware including engaging transom lock and strike, and chain stay, House of Antique Hardware Solid Brass Transom Window Latch or similar. See Appendix D for cutsheets.
- 3

 • Consider installing curtains at all windows to mitigate long daylight hours and provide privacy. Curtains to be mounted on simple rods, with rods mounted above windows to minimize fastening to wood. Rods should extend beyond sides of windows to push curtains aside for window operation.
- See Assessment of Effect action #4 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Exterior Door

### Recommended Treatment:

- 2

 • Replace exterior door with new 2-panel solid wood door to match existing.
- 2

 • Repair surface deterioration threshold and screen by sanding and painting. Paint to match existing paint color per 1994 Paint Color Analysis report.
- 2

 • Replace exterior screen mesh to match existing.
- See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.



## Entry Stair

### Recommended Treatment:

- Implement stair replacement after structural foundation work is completed and building is leveled. If this work will not be completed during the next construction season, temporary repairs to existing treads and securing railings should be completed to improve safety in the short-term.
- 1 • Construct new code-compliant wood stair, 36" x 36" landing, and handrail. Match existing profiles and design of railing. Stair treads and structure to be pressure treated lumber. Consider incorporating steel grating to allow debris and snow to pass through. For improved slip resistance on the stair consider applying a medium textured, paintable, slip-resistant coating. Paint stairs and handrail to match existing paint colors. See diagram below.
- See Assessment of Effect action #5 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Wood Shed

### Recommended Treatment:

- 2 • Demolish existing wood shed. Construct new shed 30' away from adjacent structures on site per Life Safety recommendations at the beginning of this section.
- See Assessment of Effect action #6 for analysis.

### Alternative Treatment:

No alternatives recommended.

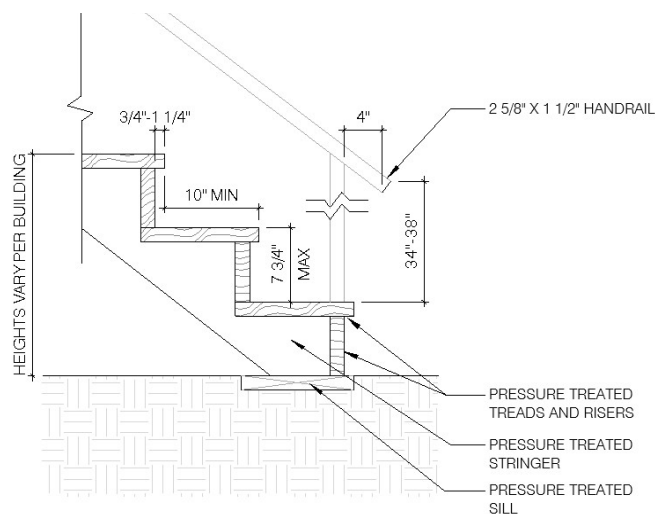


Image 283: Exterior stair diagram.

# Building Interior

## Flooring

### Recommended Treatment:

M

- Repaint when surface deterioration begins to expose plywood substrate. Paint to match existing paint color per 1994 Paint Color Analysis report. See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

#### Alternative 1 - Restore to Wood Strip Flooring:

Remove plywood and replace flooring with wood tongue and groove. Treat with durable polyurethane finish. See Assessment of Effect action #1.3 for analysis.

## Wall Finishes

### Recommended Treatment:

M

- Maintain existing walls. Paint cyclically, a minimum of every 7 years, to match existing paint color per 1994 Paint Color Analysis report. See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Ceiling

### Recommended Treatment:

M

- Maintain existing ceilings. Paint cyclically, a minimum of every 7 years, to match existing paint color. Utilize an intumescent paint for added fire protection. See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Attic

### Recommended Treatment:

1

- Implement attic recommendations in conjunction with roof and chimney repairs to resolve material deterioration and water infiltration.
- Remove existing insulation and vapor retarder.
- Install new vapor retarder, limit openings and seal seams.
- Install new 12" (R-38) batt-fiberglass insulation.
- Ventilate attic space either through open space at soffits or vents at gable end(s).
- See Assessment of Effect action #8 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Wood Stoves

### Recommended Treatment:

- 1

 • Replace existing stove with barrel stove with flue damper and metal radiation shield at floor.
- 1

 • Install corrugated metal heat shield at vertical wall surfaces within 36" of stove. Maintain a 1" air gap between corrugated metal and plywood surface. See diagram in Requirements for Treatment section 2.02 for details.
- M

 • Clean stove and stove pipe seasonally. Inspect damper operation to ensure proper ventilation.
- Coordinate with Exterior Chimney section.
- See Assessment of Effect action #9 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Interior Lighting

### Recommended Treatment:

- M

 • Remove all bulbs. Retain light fixtures for future interpretation.
- See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Fire and Life Safety

### Recommended Treatment:

- M

 • Store fire extinguisher in Mess Hall during unoccupied winter months. Monitor expiration dates and replace as needed.
- M

 • Provide fire extinguishing pucks, StoveTop FireStop pucks or similar, as back-up fire protection. Monitor and restock as needed.
- M

 • Maintain smoke detector. Monitor and replace batteries annually. Consider replacing with hard-wired units.
- See Assessment of Effect action #11 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Furnishings

For consistency and occupant comfort, consider furnishing all bunkhouses with the following:

### Recommended Treatment:

- 3

 • Replace twin mattresses. Protect with waterproof, insect resistant cover such as SureGuard Mattress Encasement or similar.
- 3

 • Provide a minimum of (1) tall dresser per (2) bunks.
- 3

 • Provide a minimum of (2) upholstered side chairs per bunkhouse
- 3

 • Install a freestanding coat tree to minimize reliance on wall-mounted coat hooks and to prevent future wall penetrations
- See Assessment of Effect action #12 for analysis.

### Alternative Treatment:

No alternatives recommended.



## Building Exterior

### Roof

#### Recommended Treatment:

- 1
  - Replace corrugated metal roof in-kind. See roof covering diagram. Match material, corrugated pattern and dimensions, eave details, and ridge conditions. Replacement roof system to include the following components, from top to bottom:
    - o Corrugated metal sheets. See Appendix D for cutsheet.
    - o Corrugated metal ridge cap
    - o Sheet metal chimney flashing
    - o Neoprene gasketed fasteners. Metal fastener type to be compatible with corrugated sheets.
    - o 1/2" exterior grade plywood sheathing with ice and water shield
    - o Replace wood sheathing and roof structure components in-kind where damaged.
- 2
  - Replace cracked bracket at east elevation profiles, and paint finish.
- 1
  - Replace entrance awning mineral surface rolled roofing. Remove existing rolled roofing. Replace plywood substrate where damaged. Install self-adhesive ice and water shield to plywood. Install new mineral surface rolled roofing to match existing. Rolled roofing to return up exterior wall face a minimum of 3".
- 2
  - Replace entrance awning 3/4" x 1-3/4" eave trim. Match wood profiles, dimensions, and finish.
- 2
  - Prep and paint all wood components, including exposed rafters, sheathing, and trim. Match existing paint color per 1994 Paint Color Analysis report.
  - See Assessment of Effect action #1 for analysis.

#### Alternative Treatment:

##### Alternative 1 - Repair Existing Roof:

- Remove existing corrugated panels, fasteners, bargeboards, and tar paper (where it exists) down to sheathing or rafters. Salvage panels and bargeboards for reuse.
- Repair sheathing and rafters in-kind where damaged.
- Install 1/2" exterior grade plywood sheathing on top of existing sheathing
- Install ice and water shield on top of plywood sheathing
- Replace moderate or severely corroded panels in-kind, reinstall all other existing panels. Replace all fasteners with neoprene gasketed fasteners.
- Replace chimney flashing.
- Reinstall bargeboards.
- See Assessment of Effect action #211 for analysis.

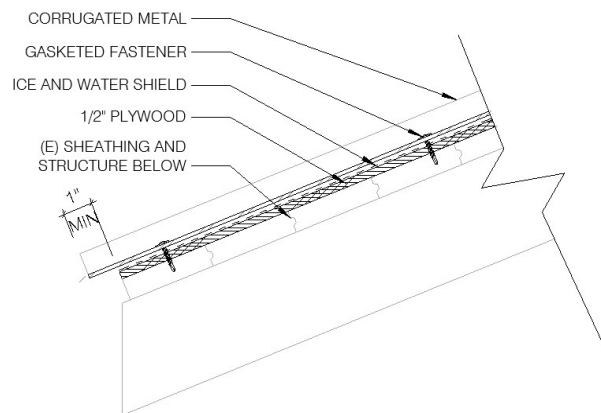


Image 284: Recommended roof covering diagram.

## Chimney

### Recommended Treatment:

- 1 • Replace chimney with NFPA-approved and insulated chimney, Duravent DuraTech in black, or similar. Include thimbles at ceiling and roof as character defining features. Install storm collar above roof level, and brace chimney to roof. See diagrams in Requirements for Treatment section 2.02 for details and Appendix D for cutsheets.
- Coordinate with Interior Wood Stove section.
- See Assessment of Effect action #2 for analysis.

### Alternative Treatment:

Alternative 1 - Relocate stove/chimney: Consider relocating stove and chimney to center of building for proper clearances. Coordinate with roof replacement. Will require extended length thimble for ceiling to ridge height. See Assessment of Effect action #2.1 for analysis.

## Exterior Walls

### Recommended Treatment:

- 2 • Replace plywood panels at north elevation with 3/4" exterior grade plywood. Paint to match existing paint color using mildew-resistant exterior paint.
- 2 • Prep, clean, and paint all other plywood and battens. Treat plywood with biocide prior to refinishing. Repaint using mildew-resistant paint to match existing paint color per 1994 Paint Color Analysis report.
- 2 • Prep and paint all wood trim, include frieze boards, corner boards, window and door trim. Paint to match existing paint color per 1994 Paint Color Analysis report.
- See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Foundation

### Recommended Treatment:

- See Structural System section for foundation recommendations and alternatives including treatment of grade, cribbing, and connections.
- M • When implementing structural upgrades, clean log skids using D/2 Biological Solution or equivalent. Trim log projection back until flush with building wall
- See Assessment of Effect action #3 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Windows

### Recommended Treatment:

- 2

 • Repair surface deterioration at window sash, frames, sills, and screens by sanding and painting. Paint to match existing paint color per 1994 Paint Color Analysis report.
- 2

 • Replace damaged glazing compound with traditional glazing compound (oil-based glazing putty, manufacturers include Abatron, UGL, and Sarco). Allow to adequately dry before painting.
- 3

 • Install interlocking spring bronze weatherstrip appropriate for hopper operation. See Appendix D for cutsheets.
- 2

 • Install hopper hardware including engaging transom lock and strike, and chain stay, House of Antique Hardware Solid Brass Transom Window Latch or similar. See Appendix D for cutsheets.
- 3

 • Consider installing curtains at all windows to mitigate long daylight hours and provide privacy. Curtains to be mounted on simple rods, with rods mounted above windows to minimize fastening to wood. Rods should extend beyond sides of windows to push curtains aside for window operation.
- See Assessment of Effect action #4 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Exterior Doors

### Recommended Treatment:

- 2

 • Repair west entrance door surface deterioration at door leaf, threshold, and screens by sanding and painting. Paint to match existing paint color per 1994 Paint Color Analysis report.
- 2

 • Replace east entrance 2-panel wood door to match existing. Repair deterioration at threshold and screens by sanding and painting. Paint to match existing paint color per 1994 Paint Color Analysis report.
- 2

 • Replace exterior screen mesh to match existing at both doors.
- See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.



## Entry Stairs

### Recommended Treatment:

- Implement stair replacement after structural foundation work is completed and building is leveled. If this work will not be completed during the next construction season, temporary repairs to existing treads and securing railings should be completed to improve safety in the short-term.
- 2 • Construct new code-compliant wood stair, 36" x 36" landing, and handrail. Match existing profiles and design of railing. Stair treads and structure to be pressure treated lumber. Consider incorporating steel grating to allow debris and snow to pass through. For improved slip resistance on the stair consider applying a medium textured, paintable, slip-resistant coating. Paint stairs and handrail to match existing paint colors. See diagram below.
- See Assessment of Effect action #5 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Wood Shed

### Recommended Treatment:

- 2 • Demolish existing wood shed. Construct new shed 30' away from adjacent structures on site per Life Safety recommendations at the beginning of this section.
- See Assessment of Effect action #6 for analysis.

### Alternative Treatment:

No alternatives recommended.

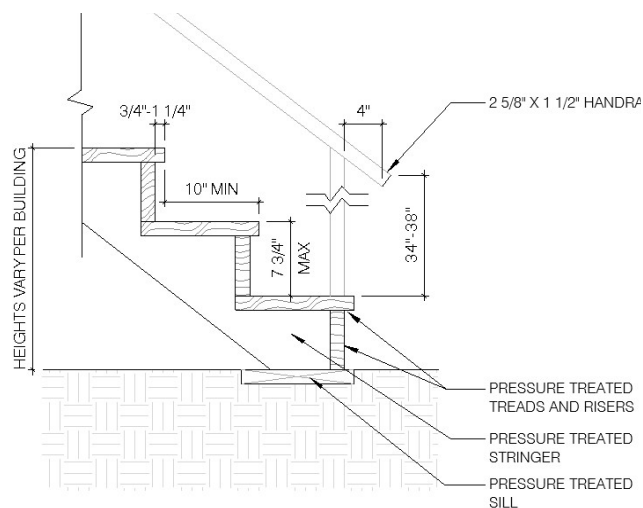


Image 285: Exterior stair diagram.

# Building Interior

## Flooring

### Recommended Treatment:

- M

 • Repaint when surface deterioration begins to expose plywood substrate. Paint to match existing paint color per 1994 Paint Color Analysis report. See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

#### Alternative 1 - Restore to Wood Strip Flooring:

Remove plywood and replace flooring with wood tongue and groove. Treat with durable polyurethane finish. See Assessment of Effect action #1.3 for analysis.

## Wall Finishes

### Recommended Treatment:

- M

 • Maintain existing walls. Paint cyclically, a minimum of every 7 years, to match existing paint color per 1994 Paint Color Analysis report. See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Ceiling

### Recommended Treatment:

- 2

 • Replace plywood panels surrounding stove pipe with 1/4" plywood. Paint to match existing paint color per 1994 Paint Color Analysis report. Implement in coordination with stove pipe work.
- M

 • Maintain existing ceilings. Paint cyclically, a minimum of every 7 years, to match existing paint color. Utilize an intumescent paint for added fire protection.
- See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Attic

### Recommended Treatment:

- Implement attic recommendations in conjunction with roof and chimney repairs to resolve material deterioration and water infiltration.
- 1

 • Remove existing insulation and vapor retarder.
- Install new vapor retarder, limit openings and seal seams.
- Install new 12" (R-38) batt-fiberglass insulation.
- Ventilate attic space either through open space at soffits or vents at gable end(s).
- See Assessment of Effect action #8 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Wood Stoves

### Recommended Treatment:

- 2

 • Clean corrosion, finish with rust-inhibiting high heat black paint.
- M

 • Clean stove and stove pipe seasonally. Inspect damper operation to ensure proper ventilation.
- 1

 • Install corrugated metal heat shield at vertical wall surfaces within 36" of stove. Maintain a 1" air gap between corrugated metal and plywood surface. See diagram in Requirements for Treatment section 2.02 for details.
- Coordinate with Exterior Chimney section.
- See Assessment of Effect action #9 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Interior Lighting

### Recommended Treatment:

- M

 • Remove all bulbs. Retain light fixtures for future interpretation.
- See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Fire and Life Safety

### Recommended Treatment:

- M

 • Store fire extinguisher in Mess Hall during unoccupied winter months. Monitor expiration dates and replace as needed.
- M

 • Provide fire extinguishing pucks, StoveTop FireStop pucks or similar, as back-up fire protection. Monitor and restock as needed.
- M

 • Maintain smoke detector. Monitor and replace batteries annually. Consider replacing with hard-wired units.
- See Assessment of Effect action #11 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Furnishings

For consistency and occupant comfort, consider furnishing all bunkhouses with the following:

### Recommended Treatment:

- 3

 • Replace twin mattresses. Protect with waterproof, insect resistant cover such as SureGuard Mattress Encasement or similar.
- 3

 • Provide a minimum of (1) tall dresser per (2) bunks.
- 3

 • Provide a minimum of (2) upholstered side chairs per bunkhouse
- 3

 • Install a freestanding coat tree to minimize reliance on wall-mounted coat hooks and to prevent future wall penetrations
- See Assessment of Effect action #12 for analysis.

### Alternative Treatment:

No alternatives recommended.



### Building Exterior

#### Roof

##### Recommended Treatment:

- M

• Maintain existing roof covering. Monitor for damage annually.
- 3

• Replace rotting bargeboard when rot exceeds 25% of the trim length. Match existing trim dimensions, profiles, and paint finish.
- 2

• Prep and paint all wood components, including exposed rafters, sheathing, and trim. Match existing paint color per 1994 Paint Color Analysis report.
- See Assessment of Effect action #1 for analysis.

##### Alternative Treatment:

No alternatives recommended.

#### Chimneys

##### Recommended Treatment:

- 1

• Replace chimneys with NFPA-approved and insulated chimney, Duravent DuraTech in black, or similar. Include thimbles at ceiling and roof as character defining features. Install storm collar above roof level, and brace chimney to roof. See diagrams in Requirements for Treatment section 2.02 for details and Appendix D for cutsheets.
- Coordinate with Interior Wood Stove section.
- See Assessment of Effect action #2 for analysis.

##### Alternative Treatment:

No alternatives recommended.

## Exterior Walls

### Recommended Treatment:

- 2 • Prep, clean, and paint all drop siding and trim to match existing paint color per 1994 Paint Color Analysis report.
- See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Foundation

### Recommended Treatment:

- See Structural System section for foundation recommendations and alternatives including treatment of grade, cribbing, and connections.
- 1 • When implementing structural upgrades, replace skids with log skids 9-12" in diameter. Hewn top and bottom of log skids flat, leaving bark on round faces. Limit log projection to a maximum of 3" beyond exterior building face.
- M • Deterioration at projecting log ends can be cut back until flush with the building wall before requiring replacement.
- See Assessment of Effect action #3 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Windows

### Recommended Treatment:

- 2 • Repair surface deterioration at window sash, frames, sills, and screens by sanding and painting. Paint to match existing paint color per 1994 Paint Color Analysis report.
- 1 • Replace broken glass pane with 1/8" clear glass.
- 2 • Replace damaged glazing compound with traditional glazing compound (oil-based glazing putty, manufacturers include Abatron, UGL, and Sarco). Allow to adequately dry before painting.
- 3 • Install interlocking spring bronze weatherstrip appropriate for hopper operation. See Appendix D for cutsheets.
- 2 • Install hopper hardware including engaging transom lock and strike, and chain stay, House of Antique Hardware Solid Brass Transom Window Latch or similar. See Appendix D for cutsheets.
- 3 • Consider installing curtains at all windows in bunkrooms to mitigate long daylight hours and provide privacy. Curtains to be mounted on simple rods, with rods mounted above windows to minimize fastening to wood. Rods should extend beyond sides of windows to push curtains aside for window operation.
- 2 • Replace window screen at window E3.
- 1 • Reinstall window S2 with proper exterior face facing the outside.
- See Assessment of Effect action #4 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Exterior Door

### Recommended Treatment:

- 2 • Replace D2 East elevation mess hall door with new solid wood full-lite door to match existing with round knob handleset. Replace exterior screen door to match existing.
- 2 • Repair surface deterioration at remaining door leafs, thresholds, and screens by sanding and refinishing. Paint exterior face of door D4 to match existing paint color per 1994 Paint Color Analysis report. Refinish D1 and D3 with polyurethane.
- See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Entry Stairs

### Recommended Treatment:

- Implement stair replacement after structural foundation work is completed and building is leveled. If this work will not be completed during the next construction season, temporary repairs to existing treads and securing railings should be completed to improve safety in the short-term.
- 2 • Construct new code-compliant wood stair, 36" x 36" landing, and handrail. Match existing profiles and design of railing. Stair treads and structure to be pressure treated lumber. Consider incorporating steel grating to allow debris and snow to pass through. For improved slip resistance on the stair consider applying a medium textured, paintable, slip-resistant coating. Paint stairs and handrail to match existing paint colors. See diagram below.
- See Assessment of Effect action #5 for analysis.

### Alternative Treatment:

No alternatives recommended.

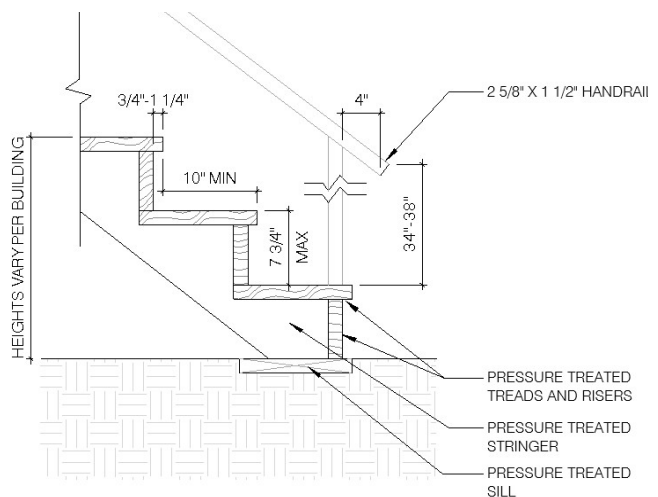


Image 286: Exterior stair diagram.

## **Wood Shed**

### **Recommended Treatment:**

2

- Demolish existing wood shed. Construct new shed 30' away from adjacent structures on site per Life Safety recommendations at the beginning of this section.
- See Assessment of Effect action #6 for analysis.

### **Alternative Treatment:**

No alternatives recommended.

## **Exterior Lighting**

### **Recommended Treatment:**

M

2

- Retain and maintain Blazo can lights.
- Replace incandescent bulbs with LED, white A19, 60-watt, 2700k. See Appendix D for cutsheets.
- See Assessment of Effect action #1 for analysis.

### **Alternative Treatment:**

No alternatives recommended.



# Building Interior

## Flooring

### Recommended Treatment:

- 2 • Replace mess hall room tongue and groove flooring with new wood tongue and groove to match existing profiles and dimensions. Finish with durable polyurethane finish.
- M • Repaint plywood flooring when surface deterioration begins to expose plywood substrate. Paint to match existing paint color per 1994 Paint Color Analysis report.
- See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

Alternative 1 - Restore plywood to Wood Strip Flooring: Remove plywood and replace flooring with wood tongue and groove. Treat with durable polyurethane finish. See Assessment of Effect action #1.3 for analysis.

## Wall Finishes

### Recommended Treatment:

- M • Maintain existing walls. Paint cyclically, a minimum of every 7 years, to match existing paint color per 1994 Paint Color Analysis report. See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Ceiling

### Recommended Treatment:

- M • Maintain existing ceilings. Paint cyclically, a minimum of every 7 years, to match existing paint color. Utilize an intumescent paint for added fire protection.
- See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Attic

### Recommended Treatment:

- Implement attic recommendations in conjunction with roof and chimney repairs to resolve material deterioration and water infiltration.
- 1 • Remove existing insulation and vapor retarder.
- Install new vapor retarder, limit openings and seal seams.
- Install new 12" (R-38) batt-fiberglass insulation.
- Ventilate attic space either through open space at soffits or vents at gable end(s).
- See Assessment of Effect action #8 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Wood Stoves

### Recommended Treatment:

- 2

• Clean corrosion, finish with rust-inhibiting high heat black paint.
- M

• Clean stoves and stove pipes seasonally. Inspect damper operation to ensure proper ventilation.
- 1

• Install corrugated metal heat shield at vertical wall surfaces within 36" of stoves. Maintain a 1" air gap between corrugated metal and plywood surface. See diagram in Requirements for Treatment section 2.02 for details.
- Coordinate with Exterior Chimney section.
- See Assessment of Effect action #9 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Interior Lighting

### Recommended Treatment:

- 2

• Replace incandescent bulbs with LED, white A19, 60-watt, 2700k. See Appendix D for cutsheets. Salvage incandescents for installation at non-electrified buildings.
- See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

Alternative 1 - Replace Light Fixtures: Replace porcelain socket fixtures in-kind with compatible lamp cages for bulb protection, Epc0 16512 fixture or similar. See Appendix D for cutsheet.

## Fire and Life Safety

### Recommended Treatment:

- 1

• Ventilate gas stove. Potential to use the cupola located roughly above the stove to install and run a hood.
- M

• Monitor fire extinguisher expiration dates and replace as needed.
- M

• Provide fire extinguishing pucks, StoveTop FireStop pucks or similar, as back-up fire protection. Monitor and restock as needed.
- 1

• Install smoke detectors at (3) locations. Monitor and replace batteries annually. Consider replacing with hard-wired units.
- See Assessment of Effect action #11 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Furnishings

For consistency and occupant comfort, consider providing the following at the Mess Hall:

### Recommended Treatment:

- 3

• Remove unused desk to provide more seating in mess hall.
- 3

• Provide a minimum of (4) upholstered side chairs
- 3

• Install a freestanding coat tree to minimize reliance on wall-mounted coat hooks and to prevent future wall penetrations
- 3

• Maintain kitchen hutch. Sand, prep, and repaint to match existing.
- See Assessment of Effect action #12 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Building Exterior

### Roof

#### Recommended Treatment:

- 1
  - Replace corrugated metal roof in-kind. See roof covering diagram. Match material, corrugated pattern and dimensions, eave details, and ridge conditions. Replacement roof system to include the following components, from top to bottom:
    - o Corrugated metal sheets. See Appendix D for cutsheet.
    - o Corrugated metal ridge cap
    - o Sheet metal chimney flashing
    - o Neoprene gasketed fasteners. Metal fastener type to be compatible with corrugated sheets.
    - o 1/2" exterior grade plywood sheathing with ice and water shield
    - o Replace wood sheathing and roof structure components in-kind where damaged.
- 3
  - Replace rotting bargeboards and fascia when rot exceeds 25% of the trim length. Match existing trim dimensions, profiles, and natural finish.
  - See Assessment of Effect action #1 for analysis.

#### Alternative Treatment:

##### Alternative 1 - Repair Existing Roof:

- Remove existing corrugated panels, fasteners, bargeboards, and tar paper (where it exists) down to sheathing or rafters. Salvage panels and bargeboards for reuse.
- Repair sheathing and rafters in-kind where damaged.
- Install 1/2" exterior grade plywood sheathing on top of existing sheathing
- Install ice and water shield on top of plywood sheathing
- Replace moderate or severely corroded panels in-kind, reinstall all other existing panels. Replace all fasteners with neoprene gasketed fasteners.
- Reinstall bargeboards.
- See Assessment of Effect action #1.1 for analysis.

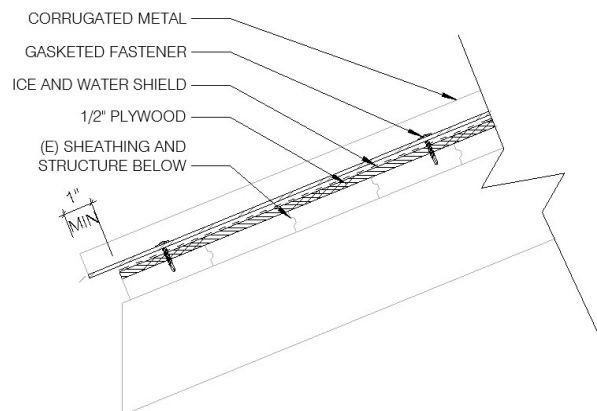


Image 287: Recommended roof covering diagram.

## Exterior Walls

### Recommended Treatment:

- 2

 • Remove existing corrugated panels, fasteners, and tar paper (where it exists) down to studs.
- 2

 • Repair studs in-kind where damaged.
- 2

 • Install new #30 asphalt-saturated felt .
- 2

 • Replace moderate or severely corroded panels in-kind, reinstall all other existing panels. Replace all fasteners with neoprene gasketed fasteners.
- 3

 • Replace window and door trim. Finish with polyurethane.
- See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Foundation

### Recommended Treatment:

- See Structural System section for foundation recommendations and alternatives including treatment of grade, cribbing, and connections.
- 1

 • When implementing structural upgrades, replace skids with log skids 9-12" in diameter. Hewn top and bottom of log skids flat, leaving bark on round faces. Limit log projection to a maximum of 3" beyond exterior building face.
- M

 • Deterioration at projecting log ends can be cut back until flush with the building wall before requiring replacement.
- See Assessment of Effect action #3 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Windows

### Recommended Treatment:

- 2

 • Repair surface deterioration at window sash, frames, sills, and screens by sanding and refinishing. Finish with polyurethane.
- 2

 • Replace damaged glazing compound with traditional glazing compound (oil-based glazing putty, manufacturers include Abatron, UGL, and Sarco). Allow to adequately dry before painting.
- 3

 • Install interlocking spring bronze weatherstrip appropriate for hopper operation. See Appendix D for cutsheets.
- 2

 • Install hopper hardware including engaging transom lock and strike, and chain stay, House of Antique Hardware Solid Brass Transom Window Latch or similar. See Appendix D for cutsheets.
- See Assessment of Effect action #4 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Exterior Door

### Recommended Treatment:

- 2

 • Install hollow core solid wood exterior door with new round knob handleset.
- 2

 • Replace exterior screen to match existing.
- See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.



## Entry Stair

### Recommended Treatment:

- Implement stair replacement after structural foundation work is completed and building is leveled. If this work will not be completed during the next construction season, temporary repairs to existing treads and securing railings should be completed to improve safety in the short-term.

1

- Construct new code-compliant wood stair, 36" x 36" landing, and handrail. Match existing profiles and design of railing. Stair treads and structure to be pressure treated lumber. Consider incorporating steel grating to allow debris and snow to pass through. For improved slip resistance on the stair consider applying a medium textured, paintable, slip-resistant coating. Paint stairs and handrail to match existing paint colors. See diagram below.
- See Assessment of Effect action #5 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Oil Tank

### Recommended Treatment:

1

- Remove oil tank at north elevation. Dispose per appropriate hazardous waste standards. Patch resulting holes in siding.

3

- Retain drip-style heater at interior or salvage for relocation.
- See Assessment of Effect action #13 for analysis.

### Alternative Treatment:

No alternatives recommended.

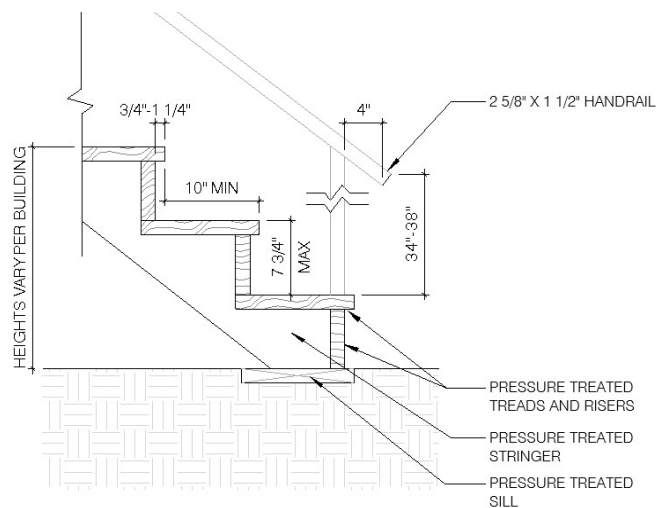


Image 288: Exterior stair diagram.

# Building Interior

## Flooring

### Recommended Treatment:

- M

 • Repaint when surface deterioration begins to expose plywood substrate. Paint to match existing paint color per 1994 Paint Color Analysis report. See Assessment of Effect action #3 for analysis.

### Alternative Treatment:

Alternative 1 - Restore to Wood Strip Flooring:  
Remove plywood and replace flooring with wood tongue and groove. Treat with durable polyurethane finish. See Assessment of Effect action #1.3 for analysis.

## Wall Finishes

### Recommended Treatment:

- M

 • Maintain existing walls. Paint cyclically, a minimum of every 7 years, with mold and mildew resistant paint to match existing paint color per 1994 Paint Color Analysis report. See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Ceiling

### Recommended Treatment:

- M

 • Maintain existing ceilings. Paint cyclically, a minimum of every 7 years, to match existing paint color. Utilize an intumescent paint for added fire protection. See Assessment of Effect action # for analysis.

### Alternative Treatment:

No alternatives recommended.

## Interior Lighting

### Recommended Treatment:

- 2

 • Replace incandescent bulbs with LED, white A19, 60-watt, 2700k. See Appendix D for cutsheets. Salvage incandescents for installation at non-electrified buildings.
- See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

Alternative 1 - Replace Light Fixtures: Replace porcelain socket fixtures in-kind with compatible lamp cages for bulb protection, Epco 16512 fixture or similar. See Appendix D for cutsheet.

## Fire and Life Safety

### Recommended Treatment:

- M

 • Store fire extinguisher in Mess Hall during unoccupied winter months. Monitor expiration dates and replace as needed.
- 1

 • Install smoke detector. Monitor and replace batteries annually. Consider replacing with hard-wired units.
- See Assessment of Effect action #11 for analysis.

### Alternative Treatment:

No alternatives recommended.

### Building Exterior

#### Roof

##### Recommended Treatment:

- 1
  - Replace corrugated metal roof in-kind. See roof covering diagram. Match material, corrugated pattern and dimensions, eave details, and ridge conditions. Replacement roof system to include the following components, from top to bottom:
    - o Corrugated metal sheets. See Appendix D for cutsheet.
    - o Corrugated metal ridge cap
    - o Sheet metal chimney flashing
    - o Neoprene gasketed fasteners. Metal fastener type to be compatible with corrugated sheets.
    - o 1/2" exterior grade plywood sheathing with ice and water shield
    - o Replace wood sheathing and roof structure components in-kind where damaged.
- 3
  - Replace rotting bargeboards and fascia when rot exceeds 25% of the trim length. Match existing trim dimensions, profiles, and paint finish.
- 2
  - Prep and paint all wood components, including exposed rafters, sheathing, and trim. Match existing paint color per 1994 Paint Color Analysis report.
  - See Assessment of Effect action #1 for analysis.

##### Alternative Treatment:

###### Alternative 1 - Repair Existing Roof:

- Remove existing corrugated panels, fasteners, bargeboards, and tar paper (where it exists) down to sheathing or rafters. Salvage panels and bargeboards for reuse.
- Repair sheathing and rafters in-kind where damaged.
- Install 1/2" exterior grade plywood sheathing on top of existing sheathing
- Install ice and water shield on top of plywood sheathing
- Replace moderate or severely corroded panels in-kind, reinstall all other existing panels. Replace all fasteners with neoprene gasketed fasteners.
- Replace chimney flashing.
- Reinstall bargeboards.
- See Assessment of Effect action #1.3 for analysis.

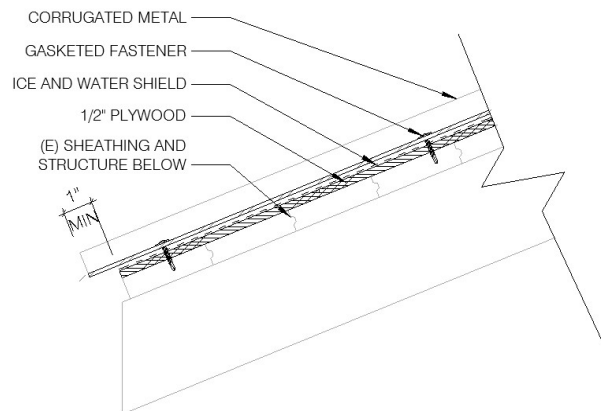


Image 289: Recommended roof covering diagram.

## ***Chimney***

### **Recommended Treatment:**

- 1 • Replace chimney with NFPA-approved and insulated chimney, Duravent DuraTech in black, or similar. Include thimbles at ceiling and roof as character defining features. Install storm collar above roof level, and brace chimney to roof. See diagrams in Requirements for Treatment section 2.02 for details and Appendix D for cutsheets.
- Coordinate with Interior Wood Stove section.
- See Assessment of Effect action #2 for analysis.

### **Alternative Treatment:**

No alternatives recommended.

## ***Exterior Walls***

### **Recommended Treatment:**

- 2 • Prep, clean, and paint all drop siding and trim. Paint to match existing paint colors.
- See Assessment of Effect action #1 for analysis.

### **Alternative Treatment:**

No alternatives recommended.

## ***Foundation***

### **Recommended Treatment:**

- See Structural System section for foundation recommendations and alternatives including treatment of grade, cribbing, and connections.
- M • When implementing structural upgrades, clean log skids using D/2 Biological Solution or equivalent. Trim log projection back until flush with building wall
- See Assessment of Effect action #3 for analysis.

### **Alternative Treatment:**

No alternatives recommended.

## ***Exterior Door***

### **Recommended Treatment:**

- 2 • Repair surface deterioration at door leaf and threshold by sanding and painting. Paint to match existing paint color per 1994 Paint Color Analysis report.
- See Assessment of Effect action #1 for analysis.

### **Alternative Treatment:**

No alternatives recommended.



## Windows

### Recommended Treatment:

- 2 • Repair surface deterioration at window sash, frames, sills, and screens by sanding and painting. Paint to match existing paint color per 1994 Paint Color Analysis report.
- 2 • Replace damaged glazing compound with traditional glazing compound (oil-based glazing putty, manufacturers include Abatron, UGL, and Sarco). Allow to adequately dry before painting.
- 3 • Install interlocking spring bronze weatherstrip appropriate for double hung operation. See Appendix D for cutsheets.
- 2 • Install hopper hardware including engaging transom lock and strike, and chain stay, House of Antique Hardware Solid Brass Transom Window Latch or similar. See Appendix D for cutsheets.
- 3 • Consider installing curtains at all bunkroom windows to mitigate long daylight hours and provide privacy. Curtains to be mounted on simple rods, with rods mounted above windows to minimize fastening to wood. Rods should extend beyond sides of windows to push curtains aside for window operation.
- See Assessment of Effect action #4 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Exterior Lighting

### Recommended Treatment:

- 2 • Replace incandescent bulb with LED, white A19, 60-watt, 2700k.
- See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Entry Stair

### Recommended Treatment:

- Implement stair replacement after structural foundation work is completed and building is leveled. If this work will not be completed during the next construction season, temporary repairs to existing treads and securing railings should be completed to improve safety in the short-term.
- 2 • Construct new code-compliant wood stair, 36" x 36" landing, and handrail. Match existing profiles and design of railing. Stair treads and structure to be pressure treated lumber. Consider incorporating steel grating to allow debris and snow to pass through. For improved slip resistance on the stair consider applying a medium textured, paintable, slip-resistant coating. Paint stairs and handrail to match existing paint colors. See diagram below.
- See Assessment of Effect action #5 for analysis.

### Alternative Treatment:

No alternatives recommended.

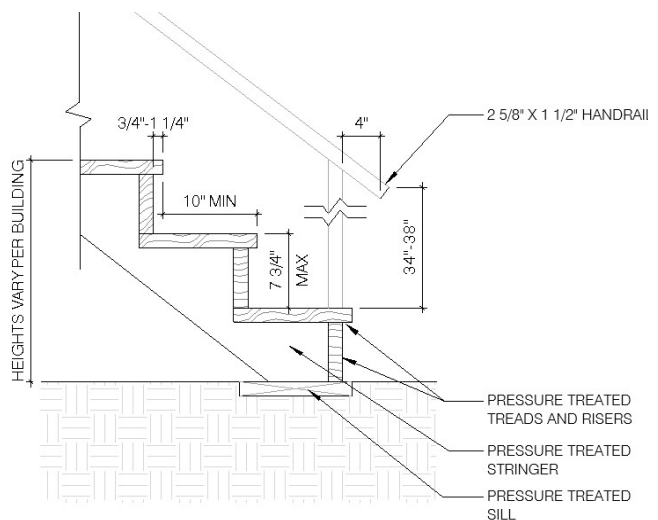


Image 290: Exterior stair diagram.

# Building Interior

## Flooring

### Recommended Treatment:

- M

 • Repaint when surface deterioration begins to expose wood substrate. Paint to match existing paint color per 1994 Paint Color Analysis report. See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

#### Alternative 1 - Replace Wood Strip Flooring:

Remove and replace flooring with new wood tongue and groove. Treat with durable polyurethane finish. See Assessment of Effect action #1 for analysis.

## Wall Finishes

### Recommended Treatment:

- M

 • Maintain existing walls. Paint beadboard cyclically. Refinish natural plywood finish when necessary. See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Ceiling

### Recommended Treatment:

- M

 • Maintain existing ceilings. Paint cyclically, a minimum of every 7 years, to match existing paint color. Utilize an intumescent paint for added fire protection. See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Wood Stove

### Recommended Treatment:

- 2

 • Clean corrosion, finish with rust-inhibiting high heat black paint.
- M

 • Clean stove and stove pipe seasonally. Inspect damper operation to ensure proper ventilation.
- 1

 • Install corrugated metal heat shield at vertical wall surfaces within 36" of stove. Maintain a 1" air gap between corrugated metal and plywood surface. See diagram in Requirements for Treatment section 2.02 for details.
- Coordinate with Exterior Chimney section.
- See Assessment of Effect action #9 for analysis.

### Alternative Treatment:

No alternatives recommended.

### ***Interior Lighting***

#### **Recommended Treatment:**

- M

 • Remove all bulbs. Retain light fixtures for future interpretation.
- See Assessment of Effect action #1 for analysis.

#### **Alternative Treatment:**

No alternatives recommended.

### ***Fire and Life Safety***

#### **Recommended Treatment:**

- M

 • Store fire extinguisher in Mess Hall during unoccupied winter months. Monitor expiration dates and replace as needed.
- M

 • Provide fire extinguishing pucks, StoveTop FireStop pucks or similar, as back-up fire protection. Monitor and restock as needed.
- M

 • Install smoke detector. Monitor and replace batteries annually. Consider replacing with hard-wired units.
- See Assessment of Effect action #11 for analysis.

#### **Alternative Treatment:**

No alternatives recommended.

### ***Furnishings***

For consistency and occupant comfort, consider the following:

#### **Recommended Treatment:**

- 3

 • Replace twin mattresses. Protect with waterproof, insect resistant cover such as SureGuard Mattress Encasement or similar.
- 3

 • Maintain all other furnishings and artifacts for interpretation.
- See Assessment of Effect action #12 for analysis.

#### **Alternative Treatment:**

No alternatives recommended.

## Building Exterior

### Roof

#### Recommended Treatment:

- 1 • Replace corrugated metal roof in-kind. See roof covering diagram. Match material, corrugated pattern and dimensions, eave details, and ridge conditions. Replacement roof system to include the following components, from top to bottom:
  - o Corrugated metal sheets. See Appendix D for cutsheet.
  - o Corrugated metal ridge cap
  - o Sheet metal chimney flashing
  - o Neoprene gasketed fasteners. Metal fastener type to be compatible with corrugated sheets.
  - o 1/2" exterior grade plywood sheathing with ice and water shield
  - o Replace wood sheathing and roof structure components in-kind where damaged.
- 2 • Prep and paint all wood components, including exposed rafters, sheathing, and trim. Match existing paint color per 1994 Paint Color Analysis report.
- See Assessment of Effect action #1 for analysis.

#### Alternative Treatment:

##### Alternative 1 - Repair Existing Roof:

- Remove existing corrugated panels, fasteners, bargeboards, and tar paper (where it exists) down to sheathing or rafters. Salvage panels and bargeboards for reuse.
- Repair sheathing and rafters in-kind where damaged.
- Install 1/2" exterior grade plywood sheathing on top of existing sheathing
- Install ice and water shield on top of plywood sheathing
- Replace moderate or severely corroded panels in-kind, reinstall all other existing panels. Replace all fasteners with neoprene gasketed fasteners.
- Replace chimney flashing.
- Reinstall bargeboards.
- See Assessment of Effect action #1.1 for analysis.

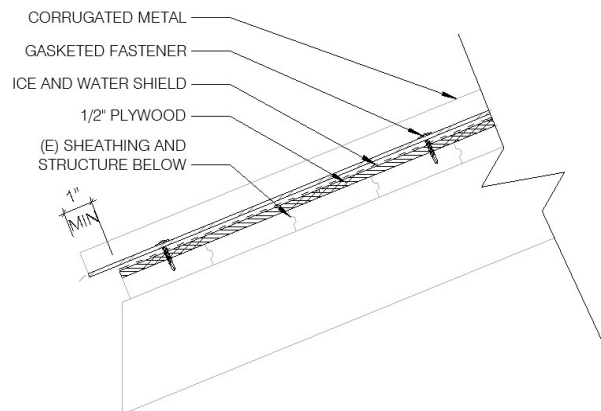


Image 291: Recommended roof covering diagram.



### **Chimney**

The following recommendations assume the Assay Office will remain closed to park staff and public use due to hazardous material.

#### **Recommended Treatment:**

- 2 • Decommission wood stove. Install a storm collar above the sheet metal roof flashing and a chimney cap.
- See Assessment of Effect action #1 for analysis.

#### **Alternative Treatment:**

No alternatives recommended.

### **Exterior Walls**

#### **Recommended Treatment:**

- 2 • Prep, clean, and paint all plywood and battens. Treat plywood with biocide prior to refinishing. Repaint using mildew-resistant paint to match existing paint color per 1994 Paint Color Analysis report.
- 2 • Prep and paint all wood trim, include frieze boards, corner boards, window and door trim. Paint to match existing paint color per 1994 Paint Color Analysis report.
- 2 • Remove existing corrugated panels, fasteners, down to studs.
- 2 • Install new #30 asphalt-saturated felt vapor barrier at interior side of wall.
- 2 • Replace moderate or severely corroded panels in-kind, reinstall all other existing panels. Replace all fasteners with neoprene gasketed fasteners.
- See Assessment of Effect action #1 for analysis.

#### **Alternative Treatment:**

No alternatives recommended.

## Foundation

### Recommended Treatment:

- See Structural System section for foundation recommendations and alternatives including treatment of grade, cribbing, and connections.
- Inspect north addition foundation when structural upgrades are implemented.

1

- When implementing structural upgrades, replace skids at main building with log skids 9-12" in diameter. Hewn top and bottom of log skids flat, leaving bark on round faces. Limit log projection to a maximum of 3" beyond exterior building face.

M

- Deterioration at projecting log ends can be cut back until flush with the building wall before requiring replacement.
- See Assessment of Effect action #3 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Windows

### Recommended Treatment:

2

- Repair surface deterioration at window sash, frames, sills, and screens by sanding and painting. Paint to match existing paint color per 1994 Paint Color Analysis report.

2

- Replace damaged glazing compound with traditional glazing compound (oil-based glazing putty, manufacturers include Abatron, UGL, and Sarco). Allow to adequately dry before painting.
- See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Exterior Door

### Recommended Treatment:

2

- Repair surface deterioration at door leaf and threshold by sanding and painting. Paint to match existing paint color per 1994 Paint Color Analysis report.
- See Assessment of Effect action #1 for analysis.

### Alternative Treatment:

No alternatives recommended.

## Entry Stair

### Recommended Treatment:

2

- Implement stair replacement after structural foundation work is completed and building is leveled. If this work will not be completed during the next construction season, temporary repairs to existing treads and securing railings should be completed to improve safety in the short-term.

2

- Remove existing stair and handrail.
- Construct new code-compliant wood stair, 36" x 36" landing, and handrail. Match existing profiles and design of railing. Stair treads and structure to be pressure treated lumber. Consider incorporating steel grating to allow debris and snow to pass through. For improved slip resistance on the stair consider applying a medium textured, paintable, slip-resistant coating. Paint stairs and handrail to match existing paint colors. See diagram below.
- See Assessment of Effect action #5 for analysis.

### Alternative Treatment:

No alternatives recommended.

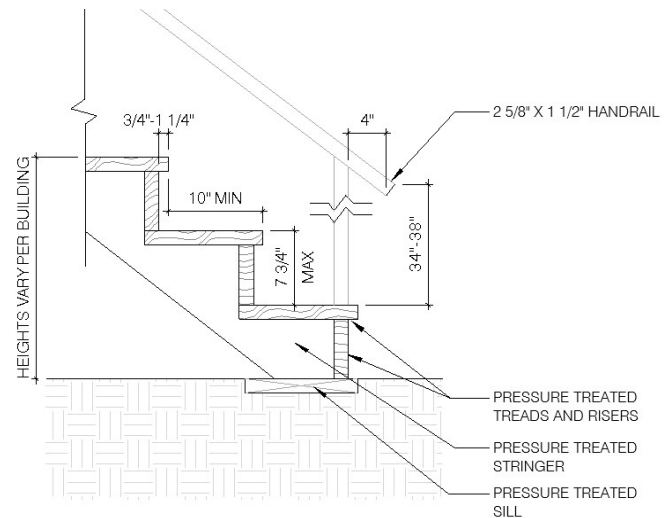


Image 292: Exterior stair diagram.

# Maintenance Shed, FMSS #73325

## Building Exterior

### Roof

#### Recommended Treatment:

- 3 • Replace rotting bargeboards and fascia when rot exceeds 25% of the trim length. Match existing trim dimensions, profiles, and polyurethane finish. See Assessment of Effect action #1 for analysis.

#### Alternative Treatment:

No alternatives recommended.

### Exterior Walls

#### Recommended Treatment:

- 2 • Patch holes using corrugated metal scraps from other buildings post-reroofing.
- Reinstall basketball hoop.
- See Assessment of Effect action #1 for analysis.

#### Alternative Treatment:

No alternatives recommended.

### Foundation

#### Recommended Treatment:

- See Structural System section for foundation recommendations and alternatives including treatment of grade, cribbing, and connections.

- 1 • When implementing structural upgrades, replace timber skids with log skids 9-12" in diameter. Hewn top and bottom of log skids flat, leaving bark on round faces. Limit log projection to a maximum of 3" beyond exterior building face.

- M • Deterioration at projecting log ends can be cut back until flush with the building wall before requiring replacement.
- See Assessment of Effect action #3 for analysis.

#### Alternative Treatment:

No alternatives recommended.

### Windows

#### Recommended Treatment:

- No recommendations.

### Exterior Door

#### Recommended Treatment:

- 2 • Repair surface deterioration at door leaf by sanding and refinishing with polyurethane.
- See Assessment of Effect action #1 for analysis.

#### Alternative Treatment:

No alternatives recommended.



## Building Interior

### Entry Ramp

#### Recommended Treatment:

- 2 • Implement ramp replacement after structural foundation work is completed and building is leveled. Remove existing ramp. Construct new ramp to match existing profiles and design. Ramp tread to be pressure treated lumber. Consider incorporating steel grating to allow debris and snow to pass through.
- See Assessment of Effect action #1 for analysis.

#### Alternative Treatment:

No alternatives recommended.

### Interior Lighting

#### Recommended Treatment:

- 2 • Replace incandescent bulbs with LED, white A19, 60-watt, 2700k. See Appendix D for cutsheets. Salvage incandescents for installation at non-electrified buildings.
- See Assessment of Effect action #1 for analysis.

#### Alternative Treatment:

Alternative 1 - Replace Light Fixtures: Replace porcelain socket fixtures in-kind with compatible lamp cages for bulb protection, Epco 16512 fixture or similar. See Appendix D for cutsheet.

### Fire and Life Safety

#### Recommended Treatment:

- M • Store fire extinguisher in Mess Hall during unoccupied winter months. Monitor expiration dates and replace as needed.
- M • Install smoke detector. Monitor and replace batteries annually. Consider replacing with hard-wired units.
- See Assessment of Effect action #11 for analysis.

#### Alternative Treatment:

No alternatives recommended.

## Building Exterior

### Roof

#### Recommended Treatment:

- 1
  - Replace corrugated metal roof in-kind. See roof covering diagram. Match material, corrugated pattern and dimensions. Replacement roof system to include the following components:
    - o Corrugated metal sheets. See Appendix D for cutsheet.
    - o Neoprene gasketed fasteners. Metal fastener type to be compatible with corrugated sheets.
    - o #30 asphalt-saturated felt underlayment
    - o Replace wood sheathing and roof structure components in-kind.
  - See Assessment of Effect action #1 for analysis.

#### Alternative Treatment:

No alternatives recommended.

### Exterior Walls

#### Recommended Treatment:

- 1
  - Rebuild exterior walls and replace plank siding. Studs to match existing dimensions and spacing. Plank siding to match existing profiles and dimensions. Treat with polyurethane.
  - See Assessment of Effect action #1 for analysis.

#### Alternative Treatment:

No alternatives recommended.

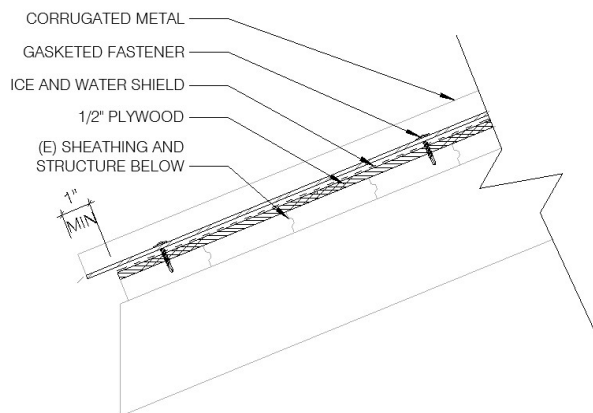


Image 293: Recommended roof covering diagram.

### ***Foundation***

#### **Recommended Treatment:**

- |   |                                                                                                                                                                   |
|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | <ul style="list-style-type: none"><li>• Replace wood sills with 2x4 pressure treated lumber.</li><li>• See Assessment of Effect action #1 for analysis.</li></ul> |
|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### **Alternative Treatment:**

No alternatives recommended.

### ***Exterior Door***

#### **Recommended Treatment:**

- |   |                                                                                                                                                                                                                                                       |
|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | <ul style="list-style-type: none"><li>• Replace exterior double doors to match existing. Use deteriorated door on ground as template. Install using new hinges and surface bolt.</li><li>• See Assessment of Effect action #1 for analysis.</li></ul> |
|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### **Alternative Treatment:**

No alternatives recommended.

# Structural Systems

Observations, analyses, conclusions and recommendations contained in this report reflect KPFF's best engineering judgment. Concealed problems with the construction of the building may exist that were not revealed through our review. KPFF, therefore, can in no way warrant or guarantee the condition of the existing buildings, the building site, and future building performance.

Based on current understanding of local building code requirements, proposed treatment recommendations and maintenance would not trigger any mandatory seismic rehabilitation.

## Foundations

1

Treatment recommendation primarily relate to the foundation support conditions. Depending on the level of repair or improvement desired there are several options which can be considered to improve the support of the buildings and increase the level of safety.

### Recommended Treatment:

- At a minimum any building cribbing should be level and broad relative to its height. In locations where cribbing has settled unevenly or deeply into the soil, the supporting earth should be re-leveled and improved with gravel.
- In general cribbing towers should be 1.5x as wide as they are tall and should be constructed with treated wood. We recommend positive attachments be used when constructing the towers to increase their stability in seismic events. Sketch SK-1 illustrates some of these recommendations.
- Sketch SK-1 includes an option for a permanently placed screw shore for seasonal adjustability. This installation is inherently less stable than broad-based cribbing towers. Cross-bracing should be included in this scenario to ensure the posts cannot topple. Alternately, cribbing towers in close proximity could be placed to back up the posts.

### Alternative Treatment:

A more permanent foundation improvement could be made using a deep foundation system which would be less susceptible to heave and subsidence and which could also potentially include provision for adjustability to aid in leveling. Deep foundations could consist of steel pipe piles or drilled helical anchors. Foundation systems should be selected based on the characteristics of the soil and permafrost profile on the site and with the aid of a geotechnical report. Local knowledge of proven systems in use in the area can also guide the selection. A schematic representation of what such an improvement might look like for a typical skid building is shown in SK-2. Structural details need to be developed following further investigation prior to construction.

## Laundry Building

The height of the Laundry building above the ground and its current arrangement of cribbing merit special recommendations and high priority. We recommend a braced timber frame be provided to support the elevated end of the structure and provide improved stability. This frame could be supported by gravel pads on grade, similar to the current cribbing, or on a suitable deep foundation system as previously discussed. This recommendation is illustrated in SK-3.



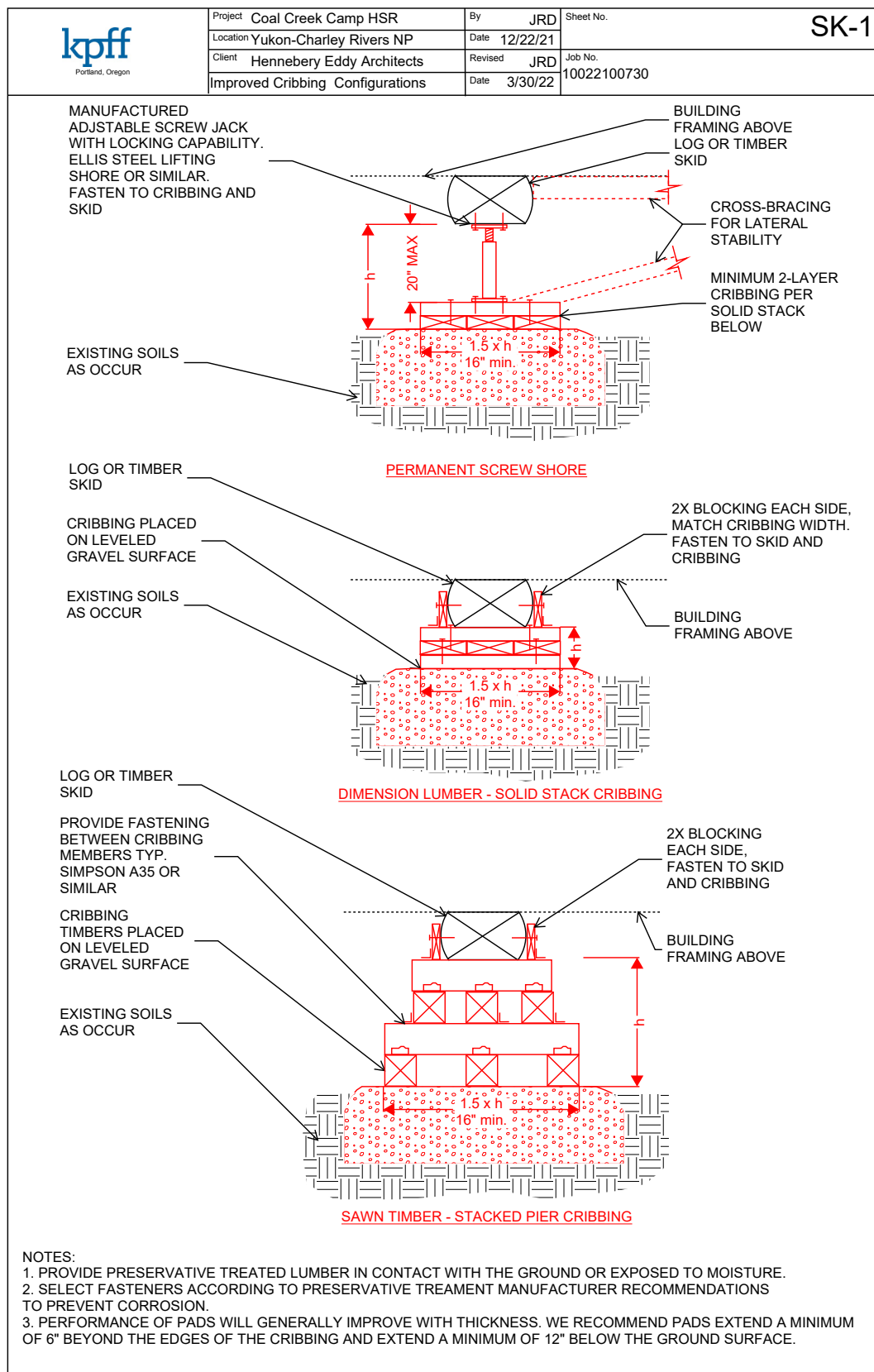


Image 294: SK-1 Foundation recommendation sketch, KPFF Consulting Engineers

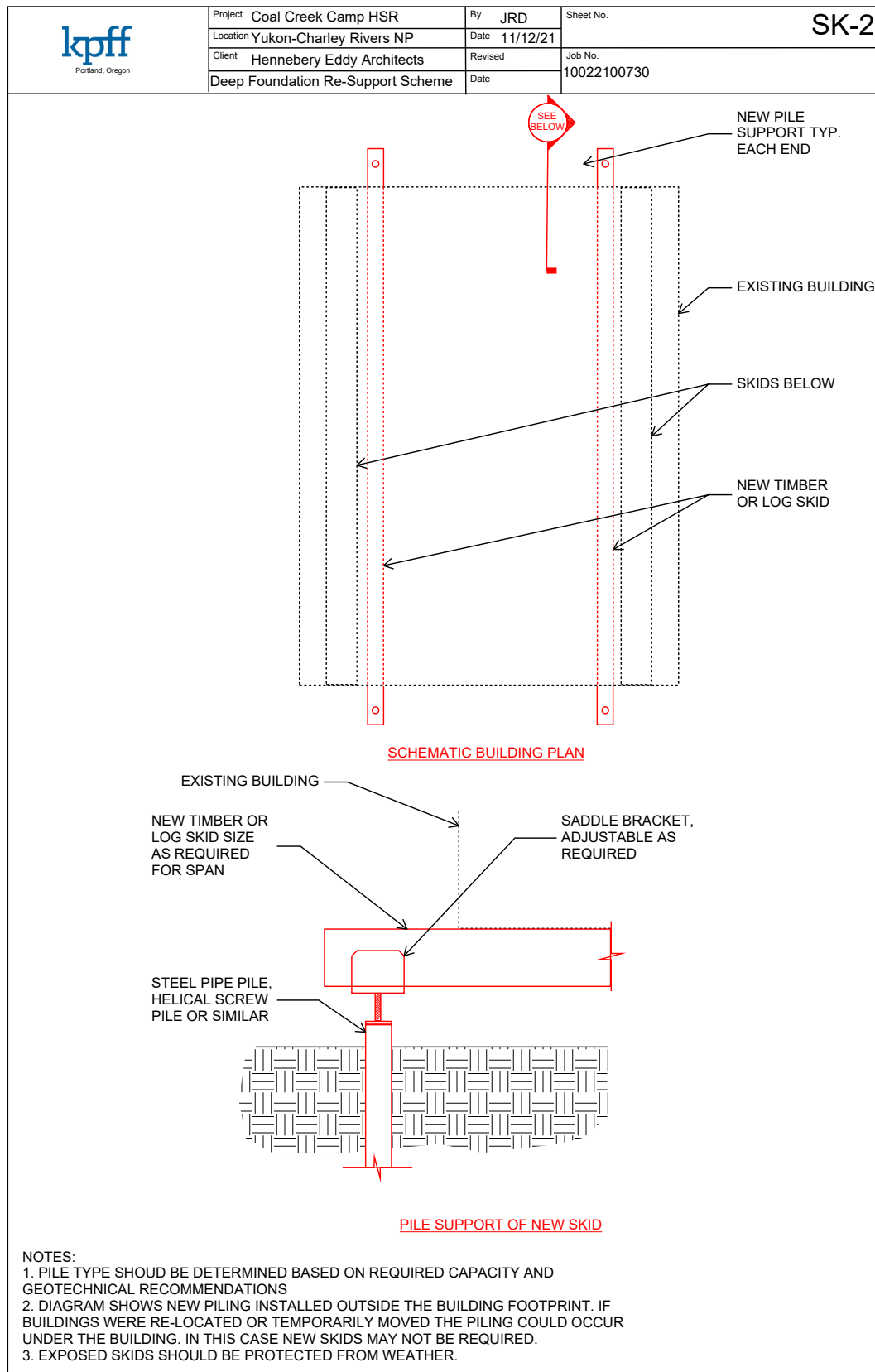


Image 295: SK-2 Alternative foundation recommendation sketch, KPFF Consulting Engineers

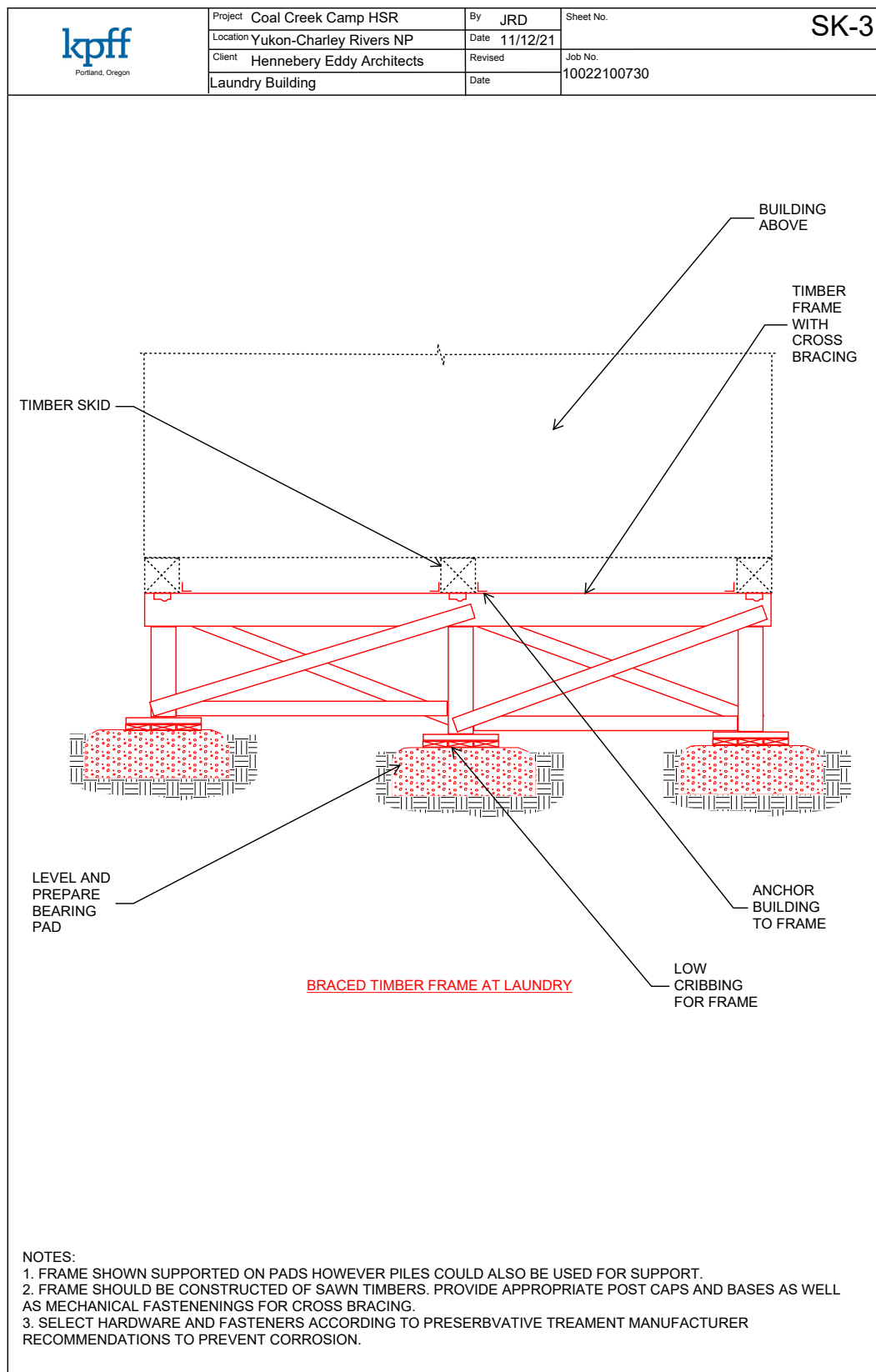


Image 296: SK-3 Laundry building foundation sketch, KPFF Consulting Engineers

## Assessment of Effect for Recommended Treatments 2.04



Image 297: View looking west from the Mess Hall, 2021.

### COMPLIANCE

Section 106 of the National Historic Preservation Act (NHPA) of 1966 mandates that every federal undertaking or federally funded undertaking must determine what effects, if any, it will have on historic resources, and take appropriate measures to mitigate any adverse effects.

#### ***Degree of Effect***

The effect of a recommended treatment or action on an historic resource is defined by the degree of impact to the resource's character-defining features. The Advisory Council on Historic Preservation's (ACHP) assessment criteria ask "Does the undertaking have the potential to alter characteristics of historic properties such as location, design, setting, workmanship, materials, feeling, and association? Will it cause visual, audible, or atmospheric intrusions not in keeping with a property or its setting, or change the use of the property?"

As defined by NPS-28: Cultural Resources Management Guidelines, the degree of effect is measured as one of the following three findings:

- ***No Effect:*** An action will not impact any historic resources.

- ***No Adverse Effect:*** An action will have an impact on the historic resource but not an adverse impact.
- ***Adverse Effect:*** An action that alters the characteristics that qualify a property for inclusion in the National Register in a manner that would diminish the integrity of the property. Adverse effects can be direct or indirect. They include reasonably foreseeable impacts that may occur later in time, be farther removed in distance, or be cumulative.

#### ***The Secretary of the Interior's Standards***

An established pathway to assuring treatments will not result in an adverse effect is to adhere to *The Secretary of the Interior's Standards* for the treatment approach determined applicable to the project.

*Rehabilitation* has been determined the appropriate approach for the Coal Creek Camp in order to maintain use.

#### **The Secretary of the Interior's Standards for Rehabilitation**

*The Standards* pertain to historic buildings of all materials, construction types, sizes, and occupancy and encompass the exterior and the interior of historic buildings. *The Standards*



also encompass related landscape features and the building's site and environment, as well as attached, adjacent, or related new construction. *The Standards* for rehabilitation are as follows:

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a historic property shall be preserved.
6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.
7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
8. Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

#### ***Parameters for Compliance***

Any project conducted within the boundaries of Yukon Charley Rivers National Preserve, whether it is related to the site, site features, or structures (both new construction and alterations to an existing building), is to undergo Section 106 compliance per NHPA. Proposed changes to the landscape or buildings associated with Coal Creek Camp will require consultation well in advance of project activities, beginning with the park's Section 106 Coordinator and Cultural Resources Management team.

There is potential to have adverse effect if the Secretary of the Interior's Standards are not followed. The treatments recommended in this report are in accordance with the Standards.

Assessment of Effect

| AREA OF POTENTIAL EFFECT: BUILDINGS & SITE, COAL CREEK CAMP |                                                                                   |                                             |                          |                                                                                                                                           |                                                                                                                                    |                     |                                                                                                                     |
|-------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|---------------------|---------------------------------------------------------------------------------------------------------------------|
| #                                                           | RECOMMENDED TREATMENT / ACTION                                                    | Meets Secretary of the Interior's Standards | Determination of Effect  | Analysis                                                                                                                                  | Parameters for Compliance                                                                                                          | Action Alternatives | No Action Alternative                                                                                               |
| 1                                                           | Maintain, repair, and replace historic materials and features in kind.            | Yes                                         | No adverse effect        | Standard preservation practice                                                                                                            |                                                                                                                                    | 1.1, 1.2, 1.3       | Features and materials continue to deteriorate and ultimately fail.                                                 |
| 2                                                           | Replace chimneys with NFPA-approved insulated chimneys and associated components  | Yes                                         | No adverse effect        | Retains chimney locations and sizes, includes character-defining insulation thimbles, and vastly improves safety                          |                                                                                                                                    | 2.1                 | Existing chimneys pose a serious fire and life safety threat                                                        |
| 3                                                           | Replace structural cribbing and repair/replace log skids                          | Yes                                         | No adverse effect        | Improves structural stability while retaining original log skids                                                                          | Use of log skids is a character defining feature, interventions should be within the perimeter of the building                     |                     | Continued structural instability and life safety risk                                                               |
| 4                                                           | Repair existing windows, restore hardware, and install weatherstrip               | Yes                                         | No adverse effect        | Retains historic windows, restores operability, and improves weather tightness                                                            |                                                                                                                                    | 2.1                 | Features and materials continue to deteriorate and ultimately fail.                                                 |
| 5                                                           | Replace exterior entry stairs                                                     | Yes                                         | No adverse effect        | Repairs rot and improves life safety with adequate clearances                                                                             | Maintain compatible wood handrail and stair tread design                                                                           |                     | Continued structural instability and life safety risk                                                               |
| 6                                                           | Construct new wood sheds                                                          | Yes                                         | No adverse effect        | Improves fire and life safety by relocating firewood storage away from structures.                                                        | Keep new wood storage sheds as close to existing structures as possible while maintaining EAFM prescription to preserve open site. |                     | Fire and life safety risk, features and materials continue to deteriorate and ultimately fail.                      |
| 7                                                           | Remove Bunkhouse 1/Juneby Cabin propane shed                                      | Yes                                         | No adverse effect        | Removes non-original propane shed and restores exterior appearance                                                                        |                                                                                                                                    | 7.1                 | Features and materials continue to deteriorate and ultimately fail. Continued use of cookstove increases fire risk. |
| 8                                                           | Replace attic insulation and vapor barrier                                        | Yes                                         | No adverse effect        | Improves building efficiency and reduces moisture infiltration                                                                            |                                                                                                                                    |                     | Features and materials continue to deteriorate and ultimately fail.                                                 |
| 9                                                           | Maintain existing barrel stove and install metal heat shield at adjacent surfaces | Yes                                         | No adverse effect        | Maintains historic stove and protects adjacent interior finishes                                                                          |                                                                                                                                    | 9.1, 9.2            | Fire and life safety risk                                                                                           |
| 10                                                          | Remove cookstove at Bunkhouse 1/ Juneby Cabin                                     | Yes                                         | No adverse effect        | Restores cabin to sleeping quarters and reduces fire risk                                                                                 |                                                                                                                                    | 10.1                | Fire and life safety risk                                                                                           |
| 11                                                          | Maintain fire extinguishers and smoke alarms                                      | Yes                                         | No adverse effect        | Reduces fire and life safety risk                                                                                                         |                                                                                                                                    |                     | Fire and life safety risk                                                                                           |
| 12                                                          | Install new furnishings                                                           | Yes                                         | No adverse effect        | Maintains existing beds, new seating improves occupant comfort, and improved storage reduces wear and tear on interior finishes           |                                                                                                                                    |                     | Fire and life safety risk                                                                                           |
| 13                                                          | Remove oil tank                                                                   | Yes                                         | No adverse effect        | Removes non-original oil tank that is no longer in use                                                                                    |                                                                                                                                    | N/A                 | Fire and life safety risk                                                                                           |
| 14                                                          | Improve accessibility                                                             | Yes                                         | Potential adverse effect | Provides accessibility to a wider range of physical abilities but may alter character-defining features such as exterior doors and stairs |                                                                                                                                    | N/A                 | Site remains inaccessible                                                                                           |

Assessment of Effect - Alternatives

| AREA OF POTENTIAL EFFECT: BUILDINGS & SITE, COAL CREEK CAMP |                                                                   |                                             |                          |                                                                                                                                                                   |                                                                                                |                     |                                                                     |
|-------------------------------------------------------------|-------------------------------------------------------------------|---------------------------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|---------------------|---------------------------------------------------------------------|
| #                                                           | ALTERNATIVE ACTIONS                                               | Meets Secretary of the Interior's Standards | Determination of Effect  | Analysis                                                                                                                                                          | Parameters for Compliance                                                                      | Action Alternatives | No Action Alternative                                               |
| 1.1                                                         | Repair existing roofs, reinstall existing corrugated metal panels | Yes                                         | No adverse effect        | Reusing existing corrugated panels will maintain corrugated metal patina but risks continual corrosion and potential leaks                                        |                                                                                                | N/A                 | Features and materials continue to deteriorate and ultimately fail. |
| 1.2                                                         | Winterize Bunkhouse 1/Juneby Cabin exterior walls                 | Yes                                         | No adverse effect        | Improves energy efficiency by installing insulation and vapor barrier within existing exterior walls                                                              | Retain existing exterior wall width                                                            | N/A                 | Inefficient heating in winter                                       |
| 1.3                                                         | Restore wood floor                                                | Yes                                         | No adverse effect        | Replaces plywood floor and restores historic finish                                                                                                               |                                                                                                | N/A                 | Features and materials continue to deteriorate and ultimately fail. |
| 1.4                                                         | Winterize Bunkhouse 1/Juneby Cabin door                           | Yes                                         | No adverse effect        | Weatherstrip and door sweep will not be visible                                                                                                                   |                                                                                                | N/A                 | Inefficient heating in winter                                       |
| 2.1                                                         | Relocate Bunkhouse 1/Juneby Cabin stove to center of room         | Yes                                         | No adverse effect        | Relocates stove for improved heating and clearance requirements, reuses existing chimney penetration at roof                                                      | Must reuse existing chimney penetration at roof                                                | N/A                 | Stove remains in current location                                   |
| 4.1                                                         | Winterize exterior storm windows at Bunkhouse 1/Juneby Cabin      | Yes                                         | No adverse effect        | Exterior storms to fit within existing window opening and retain glazed opening dimensions. Improves occupant comfort and energy performance during winter months |                                                                                                | N/A                 | Inefficient heating in winter.                                      |
| 7.1                                                         | Repair Bunkhouse 1/Juneby Cabin propane shed                      | Yes                                         | No adverse effect        | While not original, maintains current propane shed configuration for continued cookstove use at interior                                                          | Paint to match exterior of building                                                            | N/A                 | Features and materials continue to deteriorate and ultimately fail. |
| 9.1                                                         | Install drip stove at Bunkhouse 1/ Juneby Cabin                   | Yes                                         | Potential adverse effect | Improves heating efficiency, but requires installation of large lube cube at exterior.                                                                            | Install lube cube at east elevation/away from view. Provide screening to reduce visual impacct | N/A                 | Continue use of wood stove                                          |
| 10.1                                                        | Retain cookstove at Bunkhouse 1/ Juneby Cabin                     | Yes                                         | No adverse effect        | Provides cookstove and range hood for winter use                                                                                                                  |                                                                                                | N/A                 | Fire safety risk                                                    |

## Appendix

|                                         |          |
|-----------------------------------------|----------|
| <i>References</i>                       | <i>A</i> |
| <i>Relevant Drawings</i>                | <i>B</i> |
| <i>Field Forms - Windows and Doors</i>  | <i>C</i> |
| <i>Recommended Products / Cutsheets</i> | <i>D</i> |



(page intentionally left blank)

## **Appendix A - References**

## REFERENCES

Adney, Tappan. *The Klondike Stampede*. New York, New York: Harper & Brothers, 1900.

Allan, Chris. *Gold, Steel & Ice: A History of Mining Machines in Yukon-Charley Rivers National Preserve*. National Park Service, Fairbanks, Alaska, 2015.

—. “A History of National Park Service Clean-up Efforts at the Historic Coal Creek Mining District, Yukon-Charley Rivers National Preserve.” National Park Service, Fairbanks, Alaska, 2014.

—. “Of Gold and Gravel: A Pictorial History of Mining Operations at Coal Creek and Woodchopper Creek, 1934-1938.” National Park Service, Fairbanks, Alaska, 2021.

Beckstead, Doug. *The World Turned Upside Down: A History of Mining on Coal Creek and Woodchopper Creek, Yukon-Charley River National Preserve, Alaska*. National Park Service, Fairbanks, Alaska, 2003.

Hoagland, Alison K. *Buildings of Alaska*. Society of Architectural Historians—Buildings of the United States Series. New York, New York: Oxford University Press, 1993.

Hunt, William R. *Golden Places: A History of Alaska-Yukon Mining with Particular Reference to Alaska's National Parks*. Anchorage, Alaska: National Park Service, 1990.

—. *North of 53: The Wild Days of the Alaska-Yukon Mining Frontier, 1870-1914*. New York, New York: MacMillan, 1974.

Joraleman, Ira B. *Adventure Beacons*. New York, New York: Society of Mining Engineers of AIME, 1976.

Mishler, Craig and William E. Simeone. *Han—People of the River: An Ethnography and Ethnohistory*. Fairbanks, Alaska: University of Alaska Press, 2004.

National Register of Historic Places, nomination, “Coal Creek Mining District.” Roderick Johnson and Ann Kain, National Park Service, Fairbanks, Alaska, September 23, 1994.

Patty, Ernest. *North Country Challenge*. New York, New York: David McKay Company, 1969.

Spence, Clark C. *The Northern Gold Fleet: Twentieth-Century Gold Dredging in Alaska*. Chicago, Illinois: University of Illinois Press, 1996.

Webb, Melody. *The Last Frontier: A History of the Yukon Basin of Canada and Alaska*. Albuquerque, New Mexico: University of New Mexico Press, 1985.

## **Appendix B - Relevant Drawings**



(page intentionally left blank)

NATIONAL PARK SERVICE

MICROGRID UPGRADES IN ALASKA PARKS

COAL CREEK (YUCH)

COAL CREEK, ALASKA

CONTRACT NO.: 140P2020D0001

ORDER NO.: 140P9720F0034

PLAN SET NO.: YUCH 190 #173742

|            |                                    |
|------------|------------------------------------|
| GENERAL    |                                    |
| G001       | GENERAL INFORMATION                |
| ELECTRICAL |                                    |
| E100       | ELECTRICAL SITE PLAN - EXISTING    |
| E101       | ELECTRICAL SITE PLAN               |
| E300       | POWER RISER AND DETAILS - EXISTING |
| E301       | POWER RISER AND DETAILS            |

GENERAL SYMBOLS

SEE DISCIPLINES FOR SPECIFIC SYMBOLS

NAME

NUMBER

SHEET LOCATION

SCALE

TRUE NORTH

PLAN NORTH

GRID LINE

REVISION

ROOM NAME

ROOM NUMBER

VIEW NAME

1/8"=1'-0"

1

G001

1

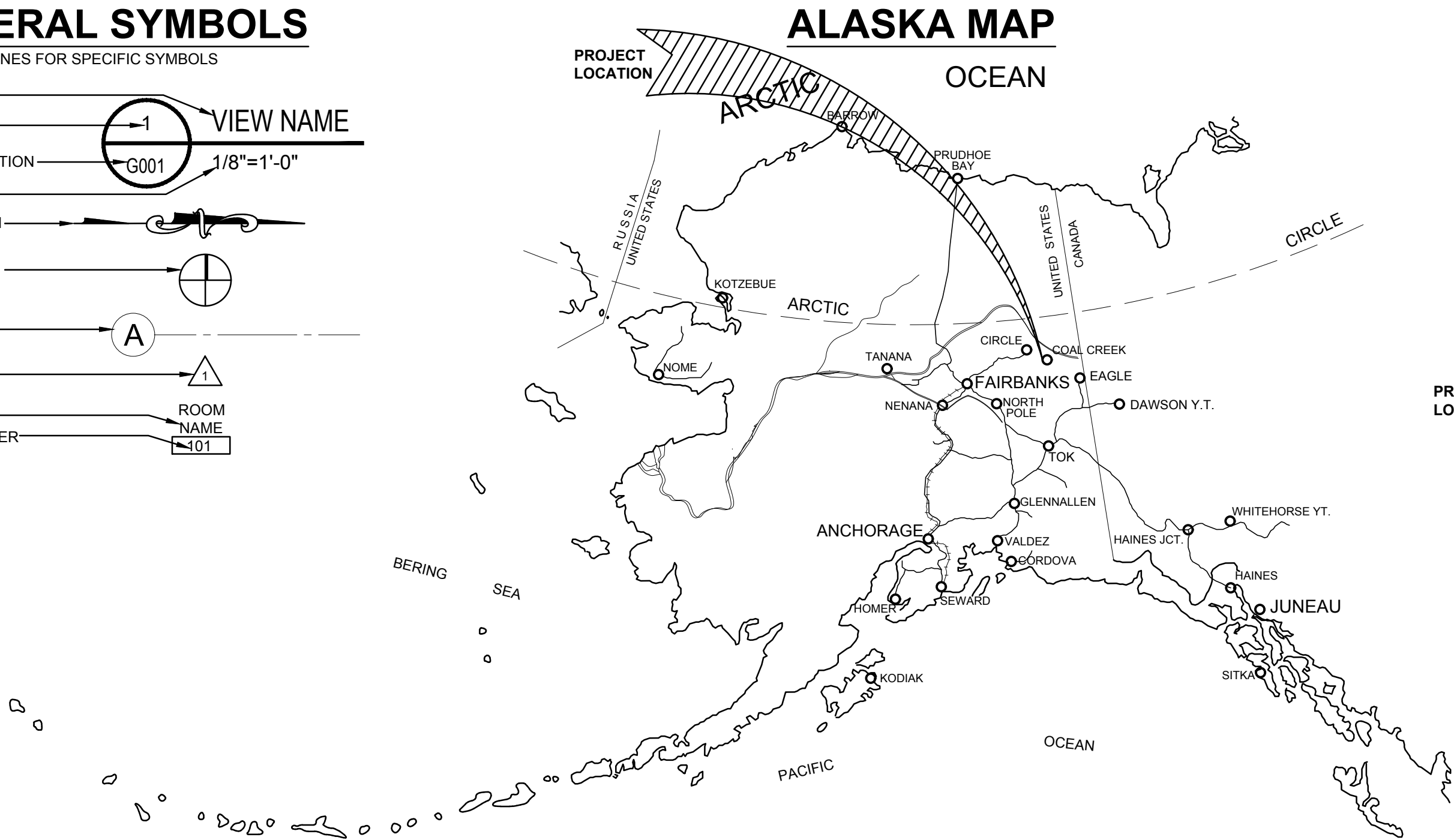
A

1

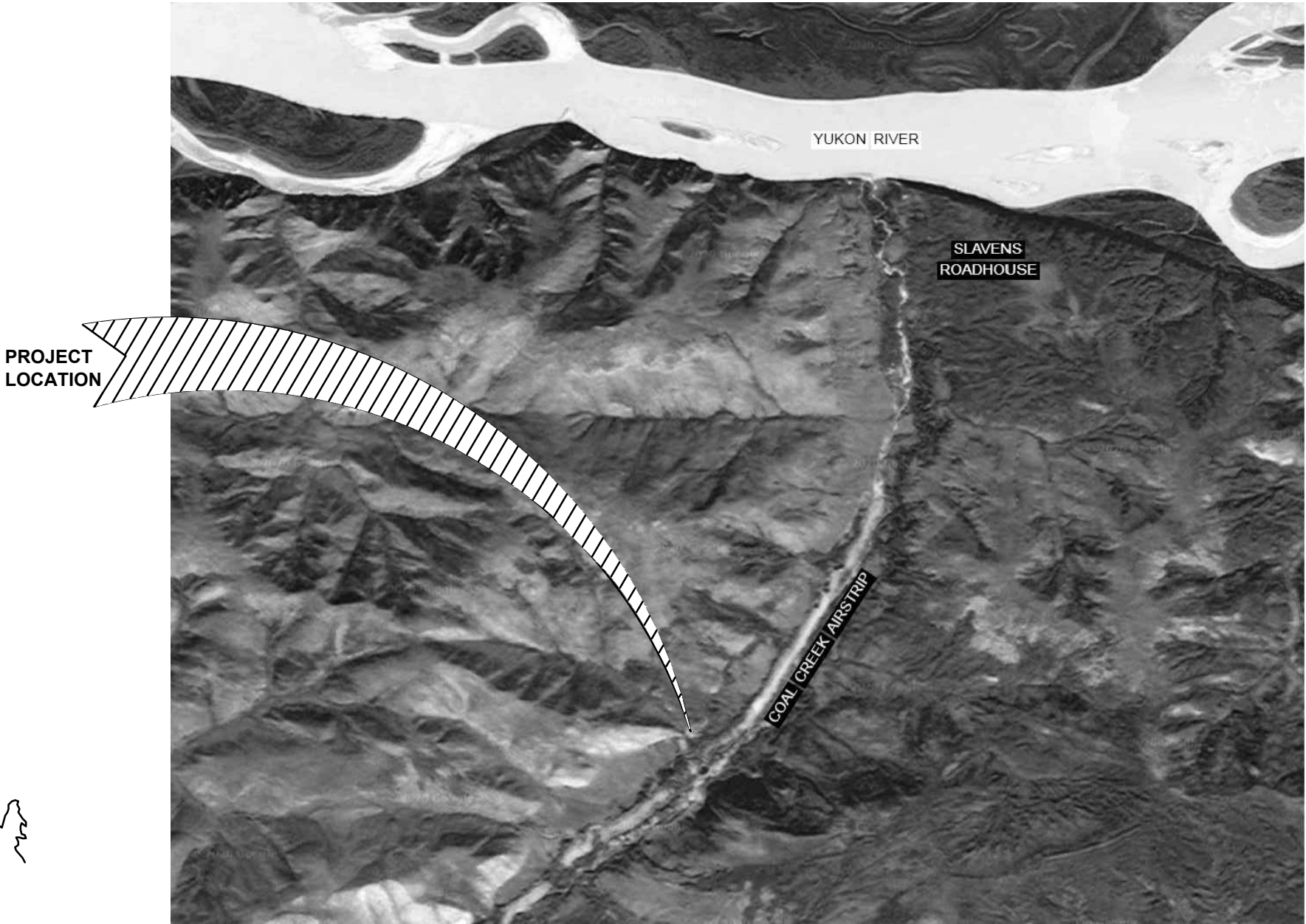
ROOM NAME

ROOM NUMBER

101



VICINITY MAP



PROJECT TEAM

**OWNERS REPRESENTATIVE**  
NATIONAL PARK SERVICE  
AMANDA JORDAN  
240 WEST 5TH AVENUE, ANCHORAGE, AK 99501  
907 644-3311  
amanda\_jordan@nps.gov

**LEAD DESIGNER**  
DESIGN ALASKA  
ROBERT GRAS  
601 COLLEGE ROAD, FAIRBANKS, AK 99701  
907 452-1241  
bob@designalaska.com

CODE SUMMARY

**GOVERNING CODES**  
NFPA 70 2017

**AUTHORITY HAVING JURISDICTION**  
NATIONAL PARK SERVICE

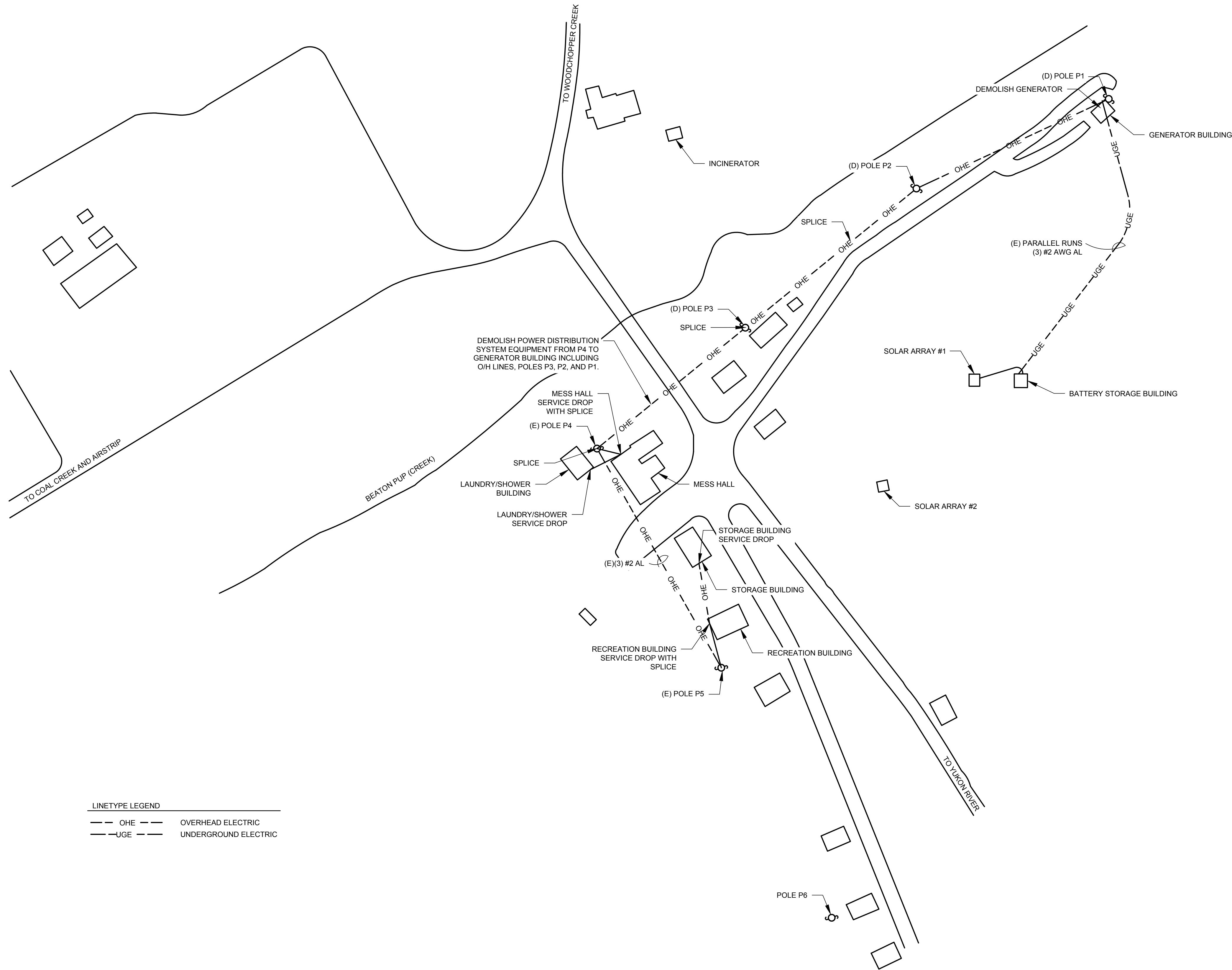
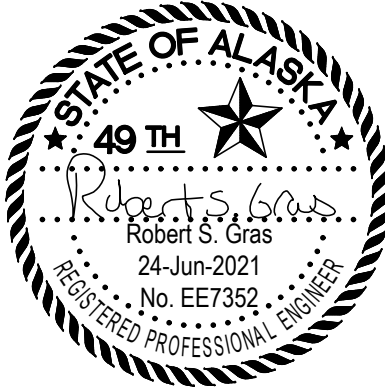
MICROGRID  
UPGRADES IN  
ALASKA PARKS  
COAL CREEK  
(YUCH)

ISSUE DATE 1 OCT 2020  
COMM. NUMBER 402001  
DESIGNED BY JCC  
DRAWN BY JCC  
SCALE 0" = 1"

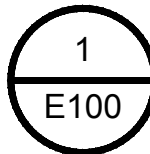
GENERAL  
INFORMATION

G001





| LINETYPE LEGEND |     |     |                      |
|-----------------|-----|-----|----------------------|
| ---             | OHE | --- | OVERHEAD ELECTRIC    |
| ---             | UGE | --- | UNDERGROUND ELECTRIC |



EXISTING ELECTRICAL SITE PLAN

1" = 80'

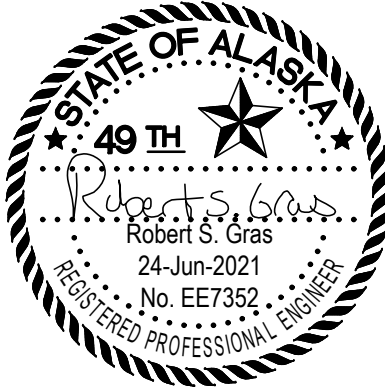
MICROGRID  
UPGRADES IN  
ALASKA PARKS  
COAL CREEK  
(YUCH)

|              |            |
|--------------|------------|
| ISSUE DATE   | 1 OCT 2020 |
| COMM. NUMBER | 402001     |
| DESIGNED BY  | RSG        |
| DRAWN BY     | JCC        |
| SCALE        | 0" = 1"    |

ELECTRICAL SITE  
PLAN - EXISTING

E100





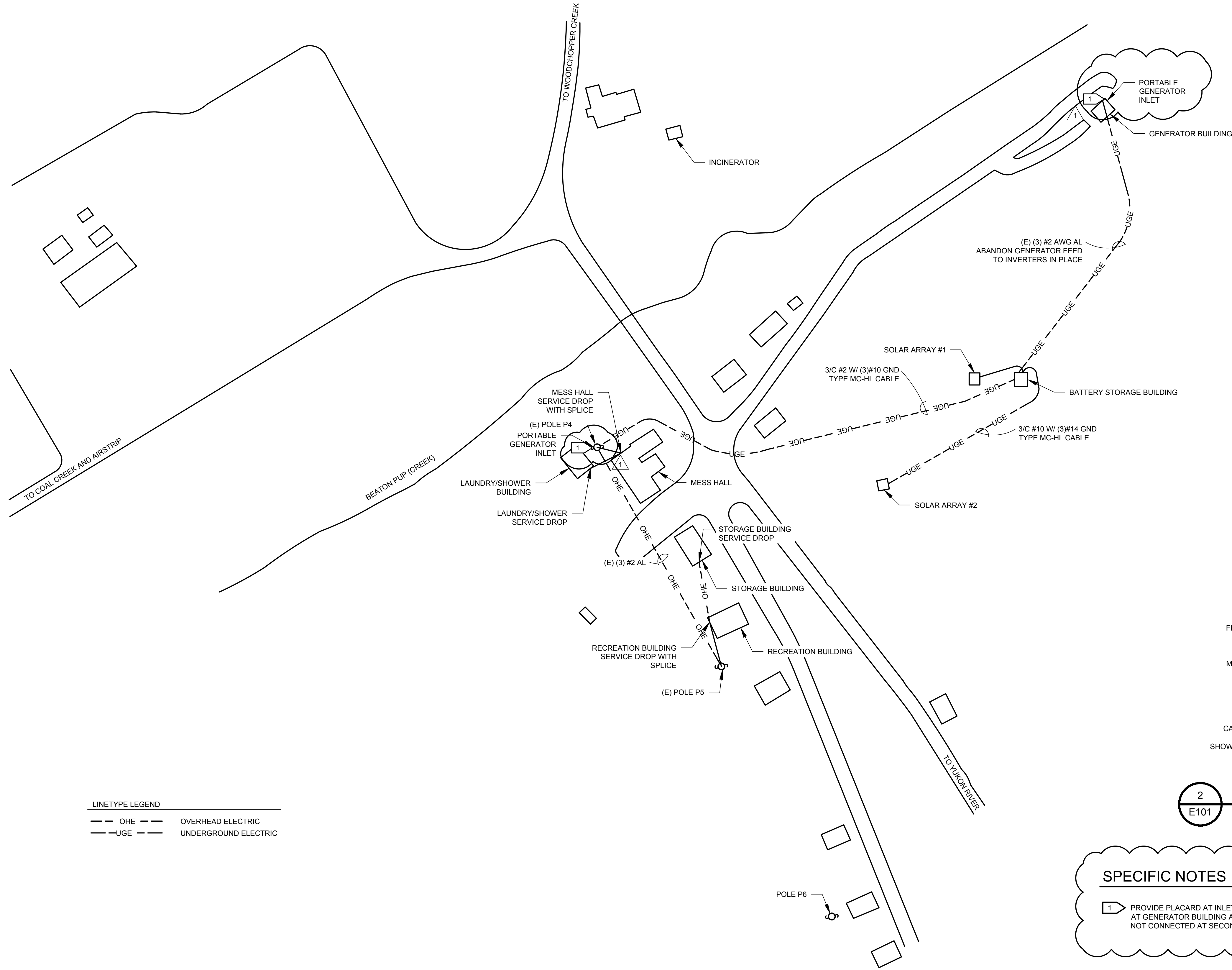
REVISION 1 23 JUN 2021  
REVISED FINAL

MICROGRID  
UPGRADES IN  
ALASKA PARKS  
COAL CREEK  
(YUCH)

ISSUE DATE 1 OCT 2020  
COMM. NUMBER 402001  
DESIGNED BY RSG  
DRAWN BY JCC  
SCALE 0" = 1"

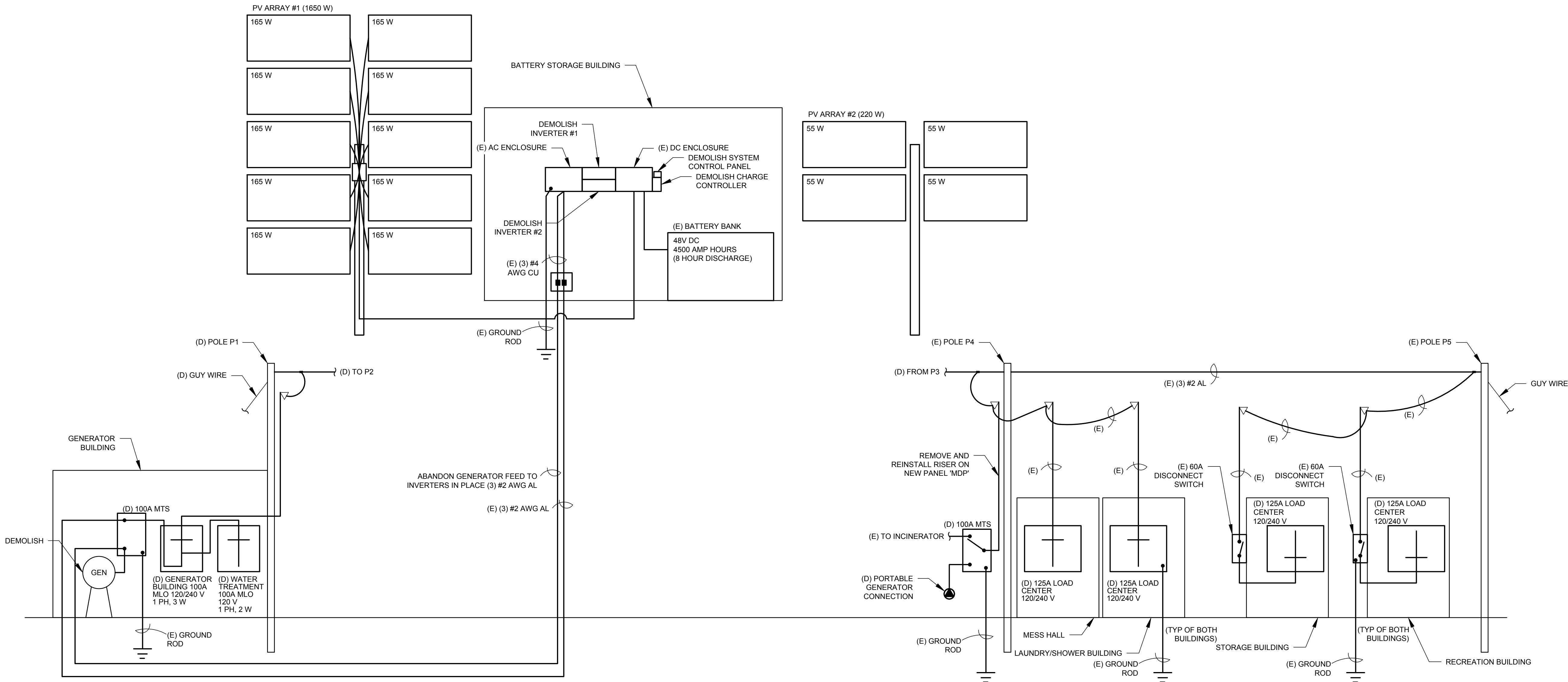
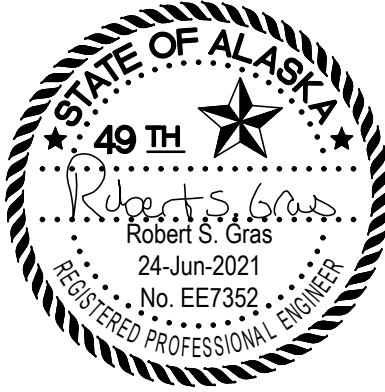
ELECTRICAL SITE  
PLAN

E101

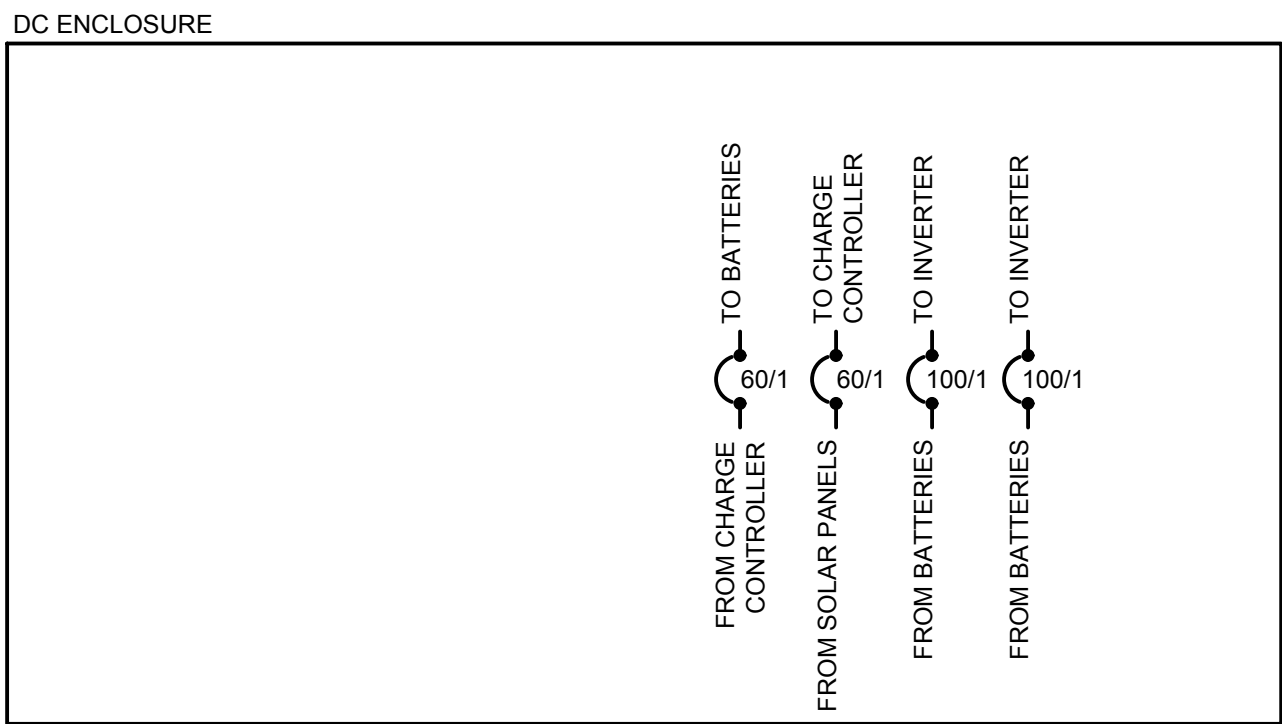
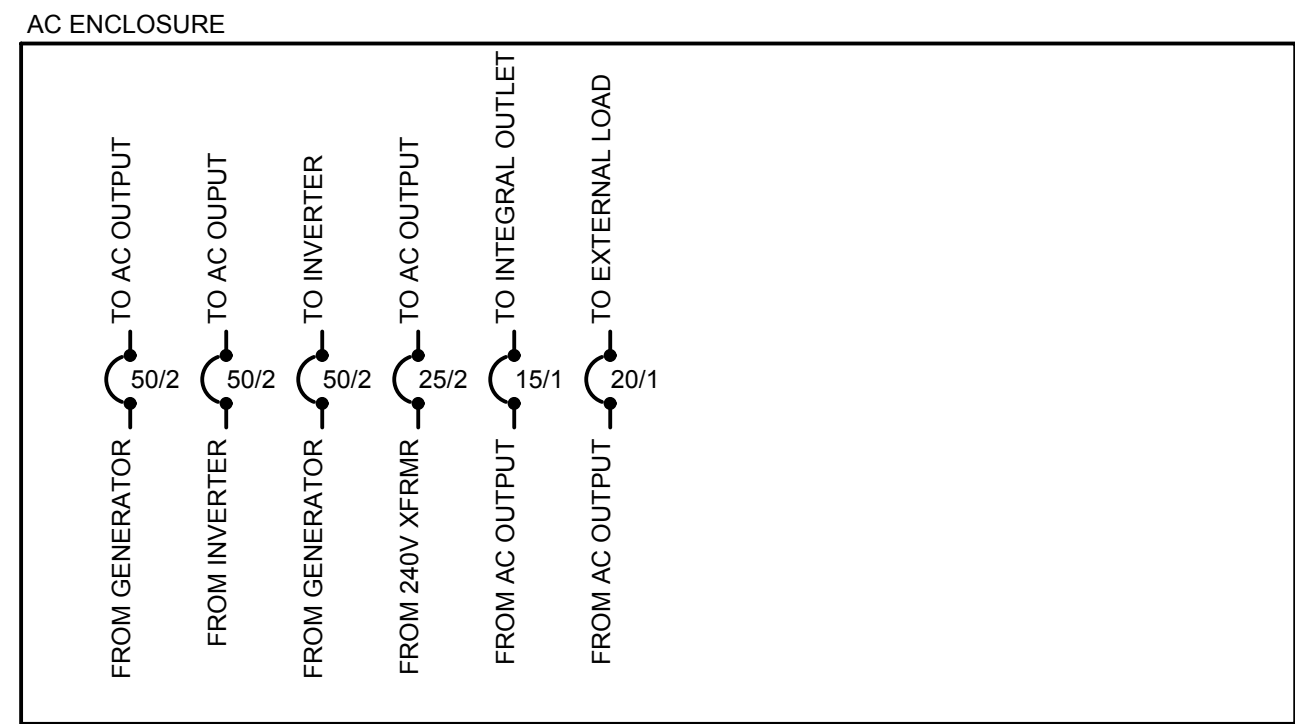


1 ELECTRICAL SITE PLAN  
E101 1" = 80'





1 EXISTING POWER ONE-LINE  
E300 NOT TO SCALE



### GENERAL NOTES

- (D) DENOTES "DEMOLISH"
- (E) DENOTES "EXISTING TO REMAIN"

2 SOLAR CONTROLLER DETAILS  
E300 NO SCALE

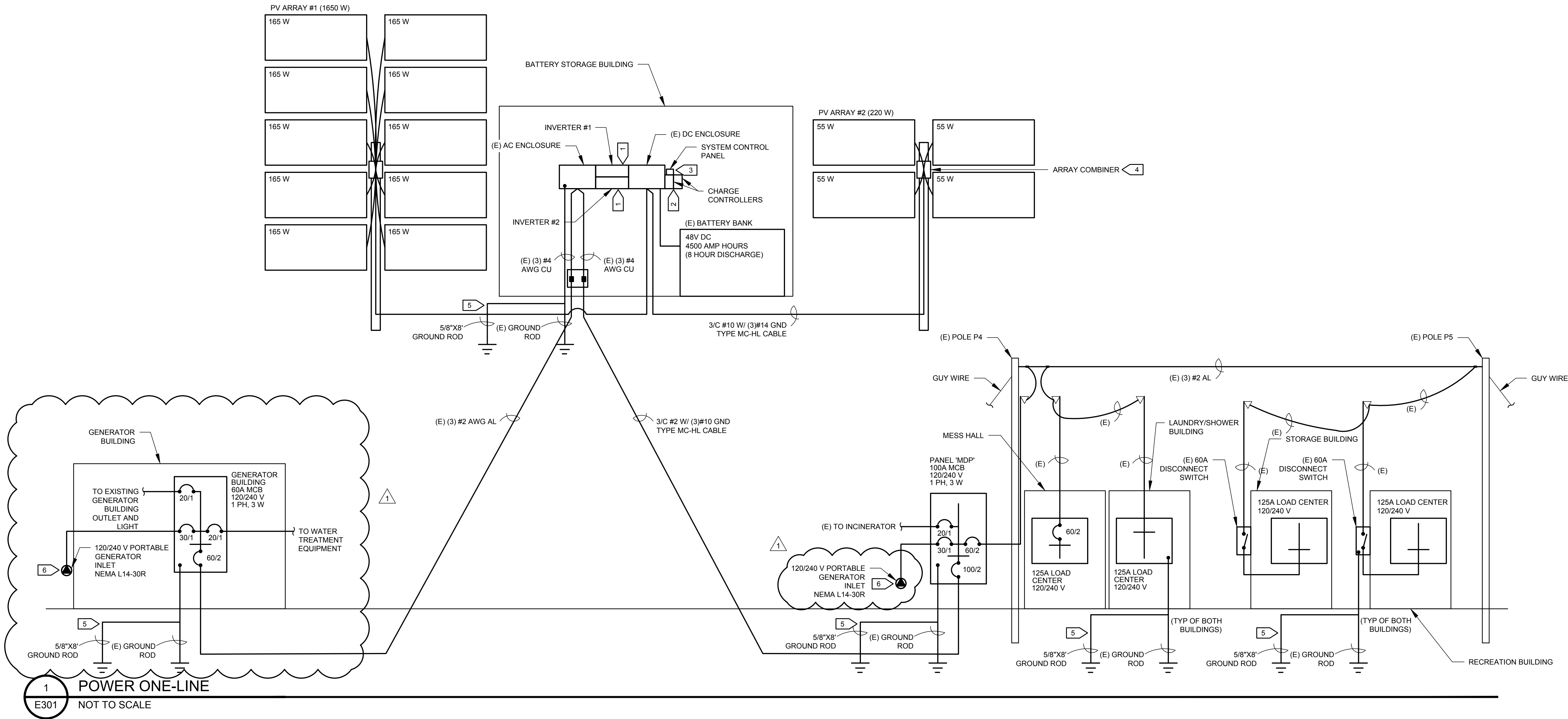
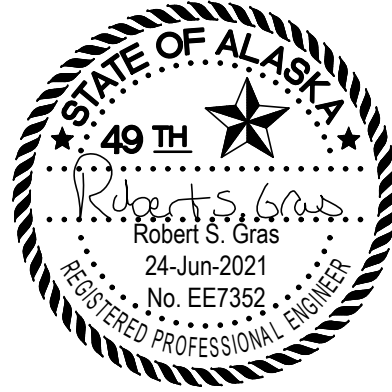
## MICROGRID UPGRADES IN ALASKA PARKS COAL CREEK (YUCH)

ISSUE DATE 1 OCT 2020  
COMM. NUMBER 402001  
DESIGNED BY RSG  
DRAWN BY JCC  
SCALE 0" = 1"

## POWER RISER AND DETAILS - EXISTING

E300





REVISION 23 JUN 2021  
REVISED FINAL

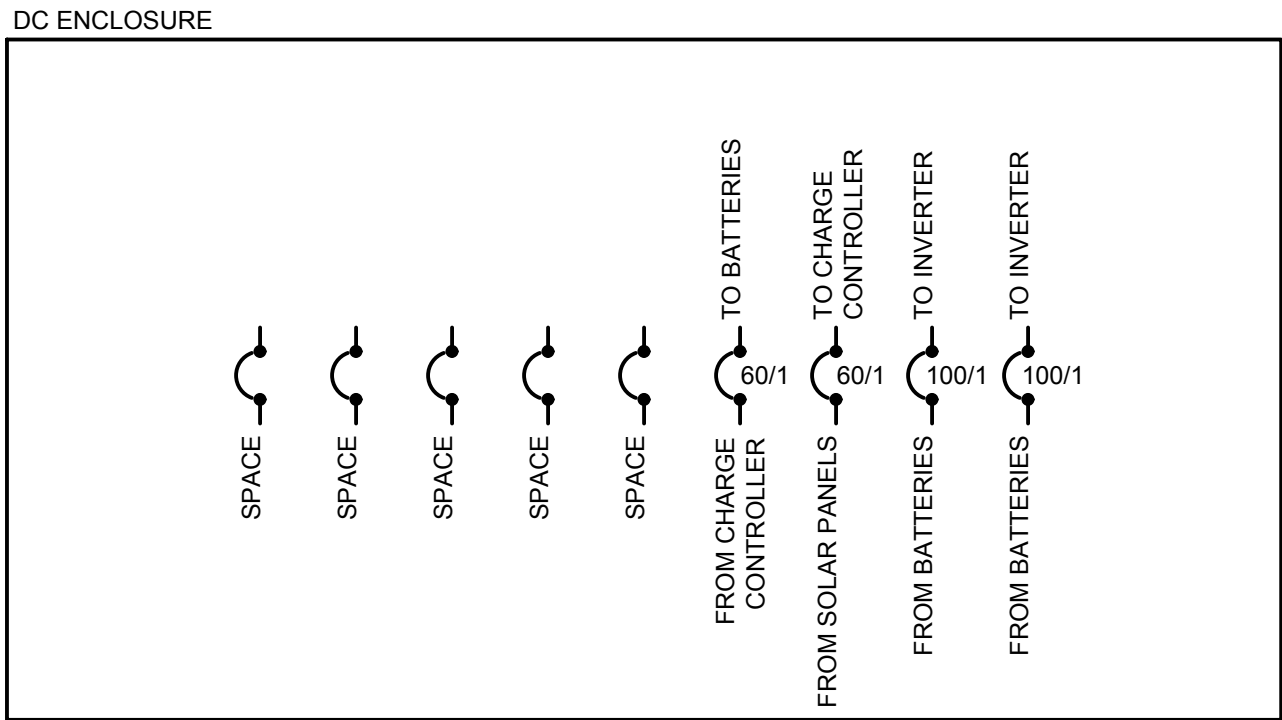
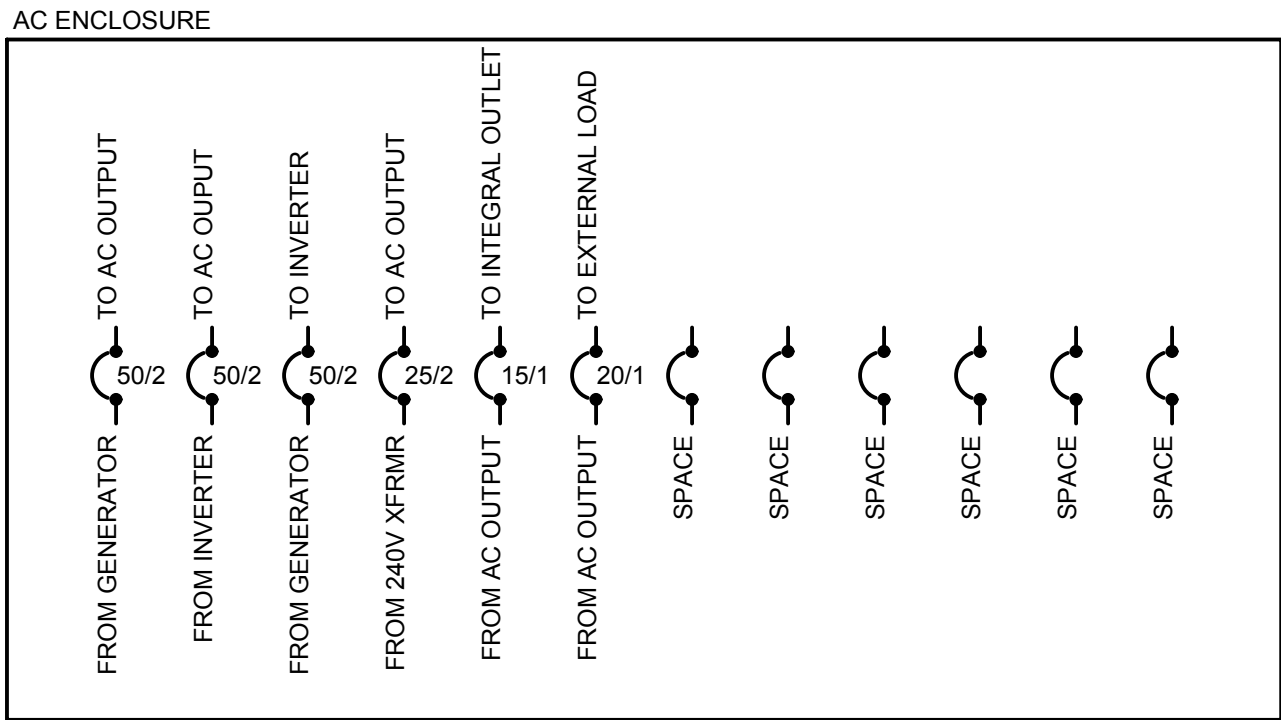
## MICROGRID UPGRADES IN ALASKA PARKS COAL CREEK (YUCH)

### GENERAL NOTES

1. (E) DENOTES "EXISTING TO REMAIN"

### SPECIFIC NOTES

- PROVIDE NEW INVERTERS COMPATIBLE WITH EXISTING OUTBACK POWER SYSTEMS PS2 AC AND DC ENCLOSURES AND NEW SYSTEM CONTROL PANEL AND CHARGE CONTROLLERS. INVERTERS TO HAVE A CONTINUOUS POWER RATING OF 3,000 VAC @ 25°C AND CAPABLE OF PRODUCING A 120/240 VAC SINGLE PHASE SYSTEM. BASIS OF DESIGN: OUTBACK POWER SYSTEMS FXR3048A
- PROVIDE NEW CHARGE CONTROLLERS COMPATIBLE WITH EXISTING OUTBACK POWER SYSTEMS PS2 AC AND DC ENCLOSURES AND NEW INVERTERS AND SYSTEM CONTROL PANEL. CHARGE CONTROLLER TO FEATURE MAXIMUM POWER POINT TRACKING. BASIS OF DESIGN: OUTBACK POWER SYSTEMS FLEXMAX 60.
- PROVIDE NEW SYSTEM CONTROL PANEL COMPATIBLE WITH EXISTING OUTBACK POWER SYSTEMS PS2 AC AND DC ENCLOSURES AND NEW INVERTERS AND CHARGE CONTROLLERS. SYSTEM CONTROLLER TO HAVE ABILITY TO BE MONITORED REMOTELY. BASIS OF DESIGN: OUTBACK POWER SYSTEMS MATE3 WITH OPTICS RE MONITORING.
- PROVIDE NEW PV ARRAY COMBINER BOX AND CONNECT EXISTING 4 PANEL ARRAY IN COMBINER BOX. PV COMBINER BOX TO BE RATED TO HANDLE EXISTING SOLAR PANELS. BASIS OF DESIGN: OUTBACK POWER SYSTEMS FLEXWARE FWPV-8.
- CONNECT NEW 5/8"X8' GROUND ROD TO EXISTING GROUND ROD WITH #8 BARE CU WIRE. LOCATE NEW GROUND ROD A MINIMUM OF 24 FEET FROM EXISTING GROUND ROD.
- PROVIDE PLACARD AT INLET THAT READS: "GENERATOR INLET RECEPTACLES LOCATED AT GENERATOR BUILDING AND UTILITY POLE NEAR MESS HALL. ENSURE GENERATOR IS NOT CONNECTED AT SECOND LOCATION PRIOR TO CONNECTING AT THIS LOCATION."

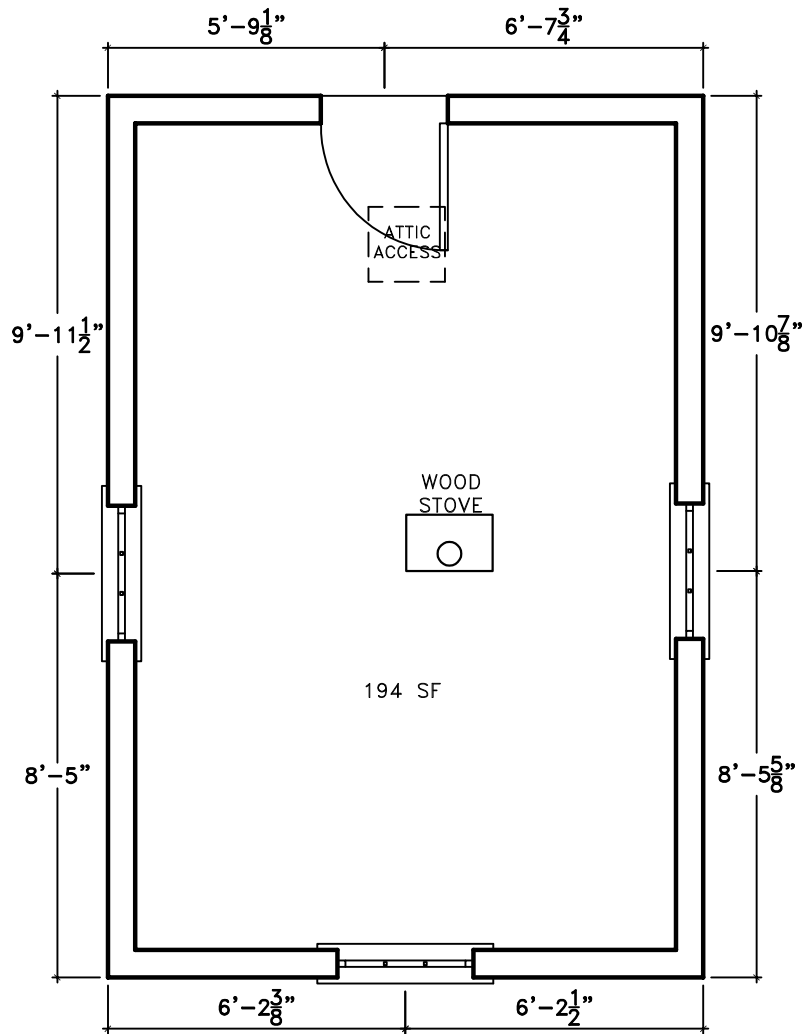


### SOLAR CONTROLLER DETAILS

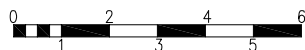
ISSUE DATE 1 OCT 2020  
COMM. NUMBER 402001  
DESIGNED BY RSG  
DRAWN BY JCC  
SCALE 0" = 1"

### POWER RISER AND DETAILS

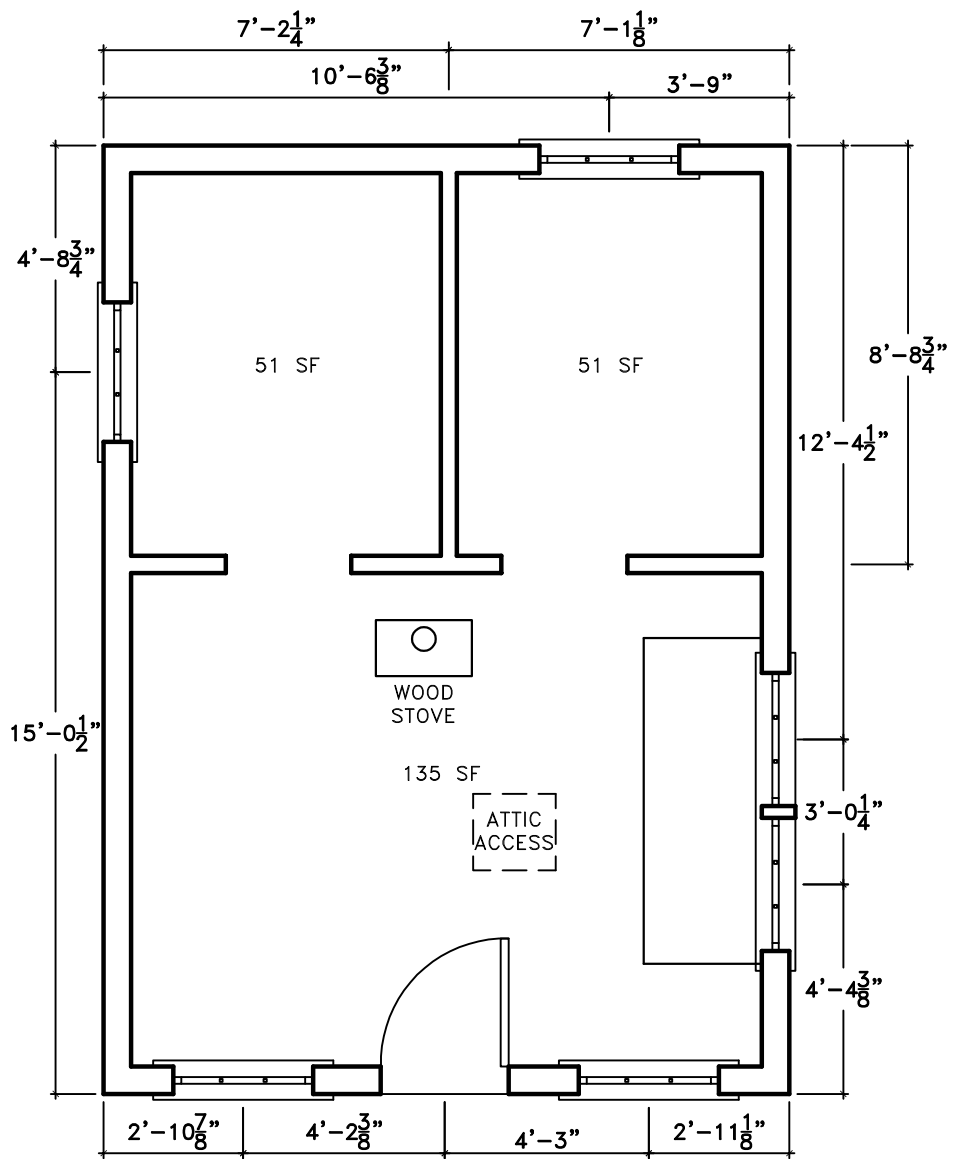
E301



1 FLOOR PLAN  
1/4"=1'-0"



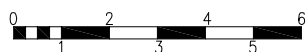
|                       |                              |                                                              |                           |
|-----------------------|------------------------------|--------------------------------------------------------------|---------------------------|
| DESIGNED:<br>--       | SUB SHEET NO.<br><b>A1.1</b> | TITLE OF SHEET<br><b>ARTHUR SHIELDS CABIN</b>                | DRAWING NO.<br><b>191</b> |
| DRAWN BY:<br>G.CROSBY |                              | COAL CREEK CAMP HISTORIC MINING DISTRICT                     | 80,131                    |
| TECH. REVIEW:<br>--   |                              |                                                              | PKG. NO. SHEET            |
| DATE:<br>2.15.22      |                              | YUKON-CHARLEY RIVERS NATIONAL PRESERVE<br>COAL CREEK, ALASKA | <b>1</b><br>OF 1          |



1

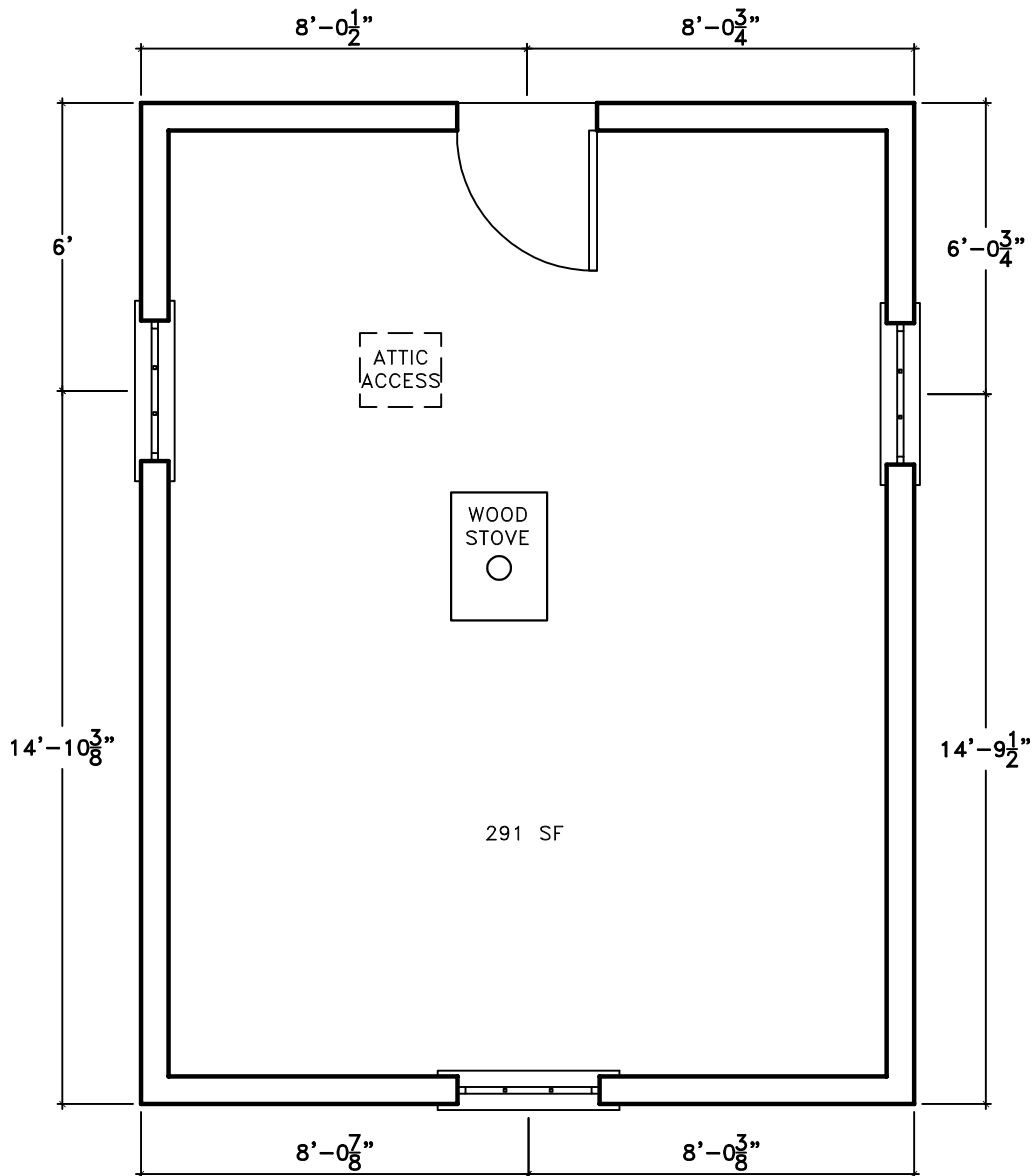
# FLOOR PLAN

1/4"=1'-0"

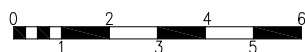


|                       |                              |                                                              |                           |
|-----------------------|------------------------------|--------------------------------------------------------------|---------------------------|
| DESIGNED:<br>--       | SUB SHEET NO.<br><b>A1.1</b> | TITLE OF SHEET<br><b>ASSAY OFFICE CABIN</b>                  | DRAWING NO.<br><b>191</b> |
| DRAWN BY:<br>G.CROSBY |                              | COAL CREEK CAMP HISTORIC MINING DISTRICT                     | 80,140                    |
| TECH. REVIEW:<br>--   |                              |                                                              | PKG. NO. <b>1</b>         |
| DATE:<br>2.15.22      |                              | YUKON-CHARLEY RIVERS NATIONAL PRESERVE<br>COAL CREEK, ALASKA | SHEET<br>OF <b>1</b>      |

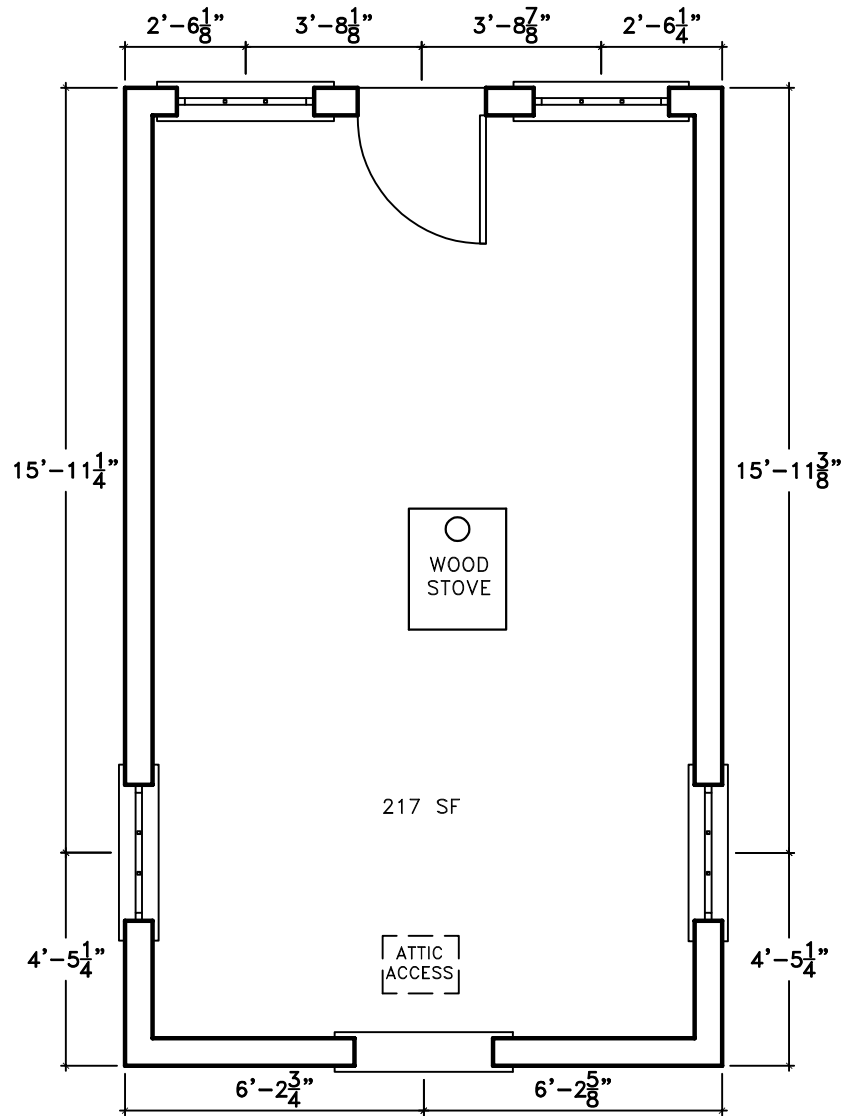




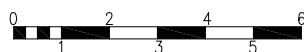
1 FLOOR PLAN  
1/4"=1'-0"



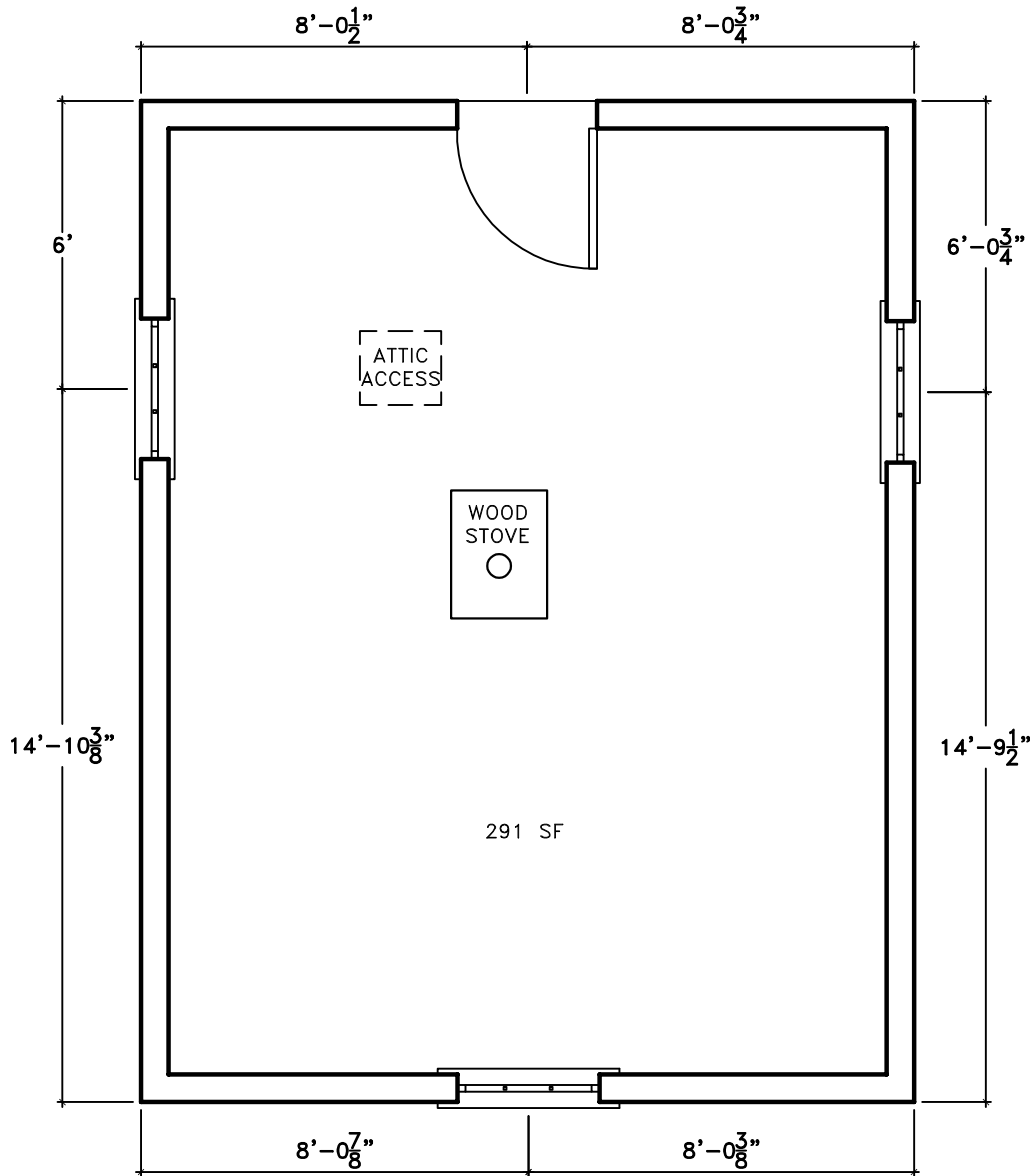
|                       |                                  |                                                                                                                                                                 |                                            |       |
|-----------------------|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-------|
| DESIGNED:<br>--       | SUB SHEET NO.<br><br><b>A1.1</b> | TITLE OF SHEET<br><br><b>ELISHA LYMAN CABIN</b><br>COAL CREEK CAMP HISTORIC MINING DISTRICT<br><br>YUKON-CHARLEY RIVERS NATIONAL PRESERVE<br>COAL CREEK, ALASKA | DRAWING NO.<br><b>191</b><br><b>80,135</b> |       |
| DRAWN BY:<br>G.CROSBY |                                  |                                                                                                                                                                 | PKG. NO.                                   | SHEET |
| TECH. REVIEW:<br>--   |                                  |                                                                                                                                                                 | 1                                          | 1     |
| DATE:<br>2.15.22      |                                  |                                                                                                                                                                 | OF                                         | 1     |



1 FLOOR PLAN  
1/4"=1'-0"



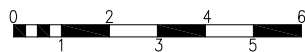
|                       |                                  |                                                                                                                                                                |                                            |                                  |
|-----------------------|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------|
| DESIGNED:<br>--       | SUB SHEET NO.<br><br><b>A1.1</b> | TITLE OF SHEET<br><br><b>HARRY DAVID CABIN</b><br>COAL CREEK CAMP HISTORIC MINING DISTRICT<br><br>YUKON-CHARLEY RIVERS NATIONAL PRESERVE<br>COAL CREEK, ALASKA | DRAWING NO.<br><b>191</b><br><b>80,132</b> |                                  |
| DRAWN BY:<br>G.CROSBY |                                  |                                                                                                                                                                | PKG.<br>NO.                                | SHEET<br><b>1</b><br>OF <b>1</b> |
| TECH. REVIEW:<br>--   |                                  |                                                                                                                                                                |                                            |                                  |
| DATE:<br>2.15.22      |                                  |                                                                                                                                                                |                                            |                                  |



1

## FLOOR PLAN

$1/4" = 1'-0"$



DESIGNED:

--

DRAWN BY:

G. CROSBY

TECH. REVIEW:

--

DATE:

2.15.22

SUB SHEET NO.

**A1.1**

TITLE OF SHEET

### JACOB MALCOM CABIN

COAL CREEK CAMP HISTORIC MINING DISTRICT

YUKON-CHARLEY RIVERS NATIONAL PRESERVE  
COAL CREEK, ALASKA

DRAWING NO.

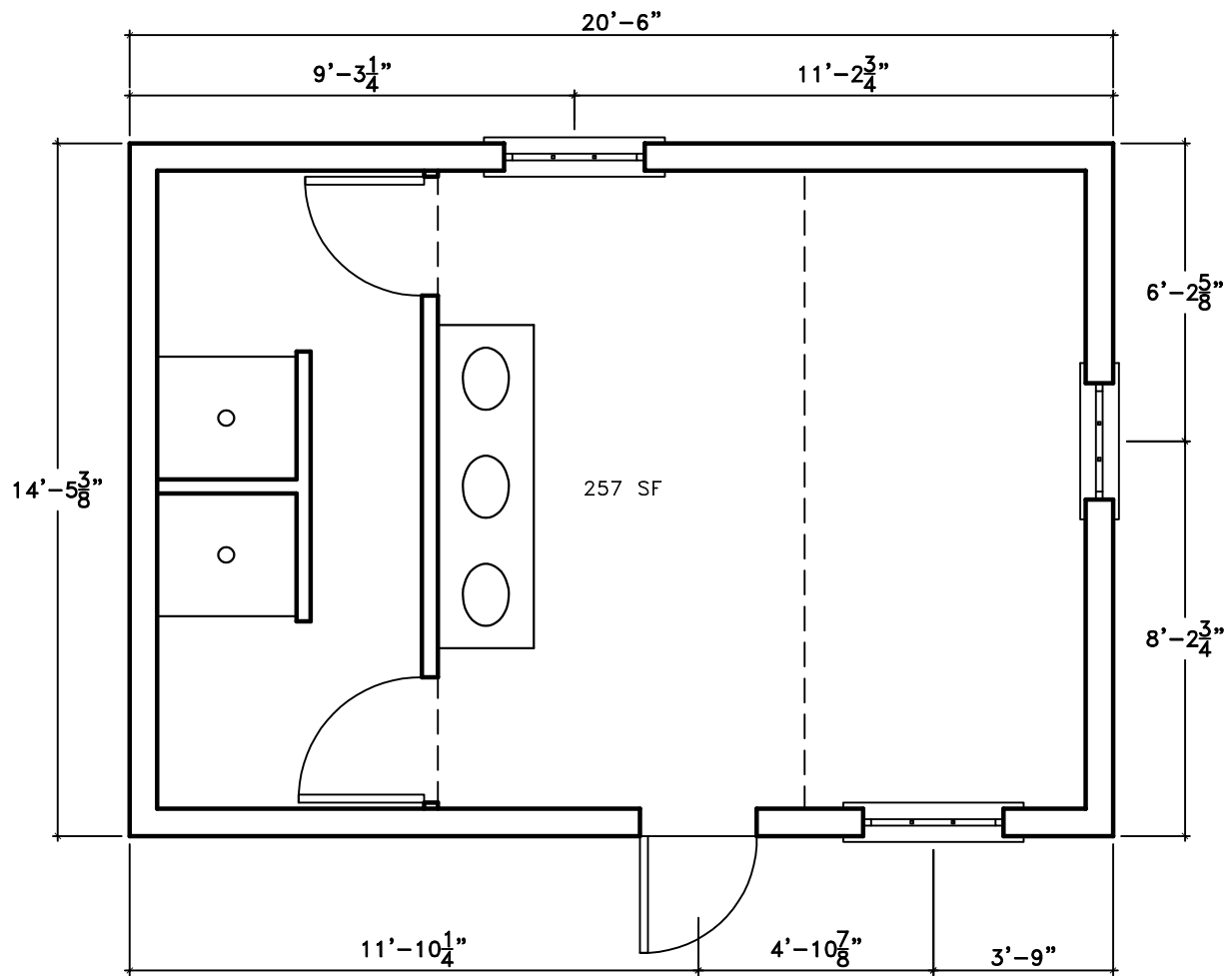
191  
80,133

PKG.  
NO.

SHEET

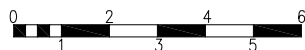
1

OF 1



1 FLOOR PLAN

1/4"=1'-0"



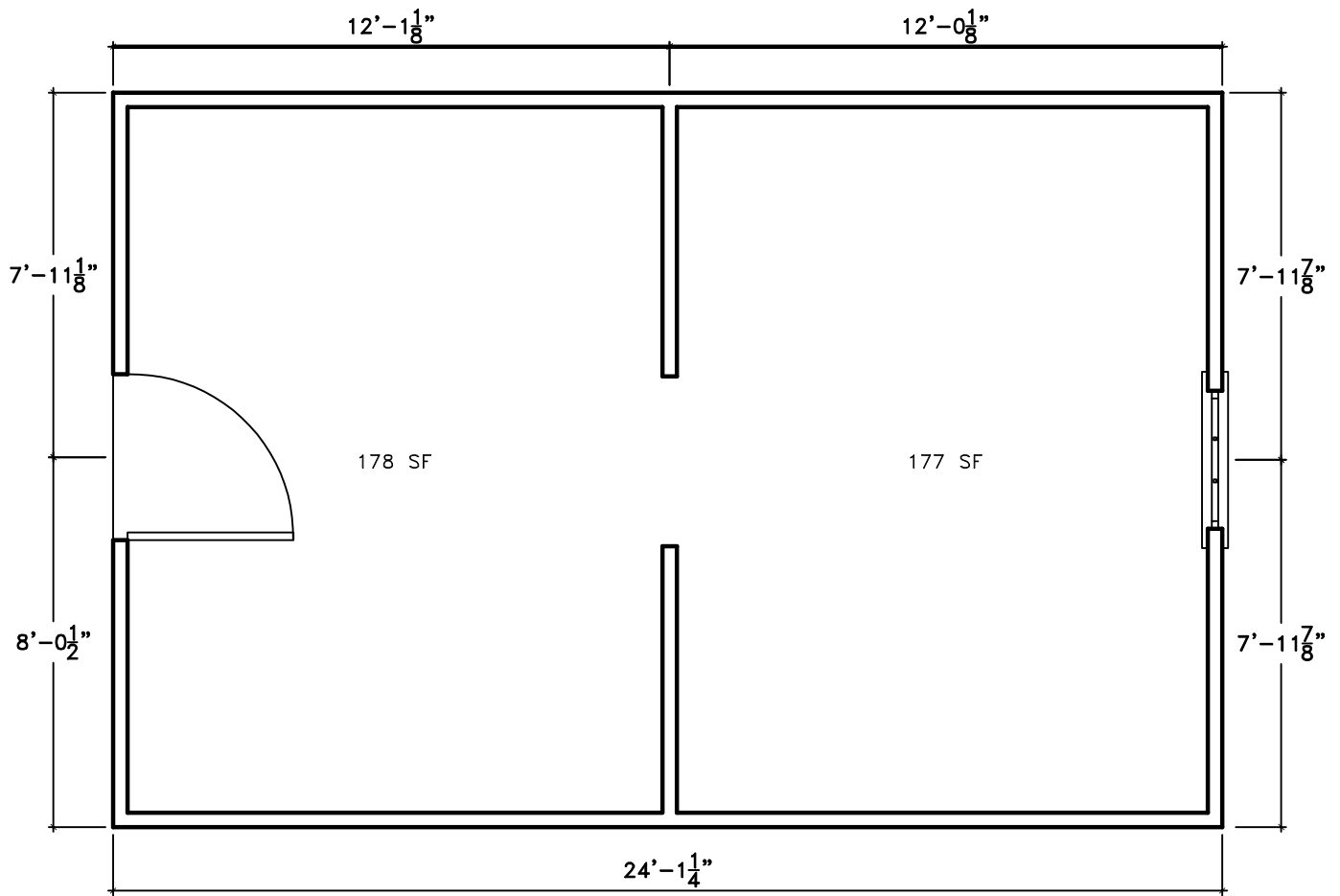
DESIGNED:  
--  
DRAWN BY:  
G.CROSBY  
TECH. REVIEW:  
--  
DATE:  
2.15.22

SUB SHEET NO.  
**A1.1**

TITLE OF SHEET  
**LAUNDRY BUILDING**  
COAL CREEK CAMP HISTORIC MINING DISTRICT  
YUKON-CHARLEY RIVERS NATIONAL PRESERVE  
COAL CREEK, ALASKA

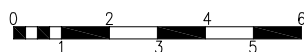
DRAWING NO.  
**191**  
**80,143**  
PKG. NO. SHEET  
**1**  
OF **1**



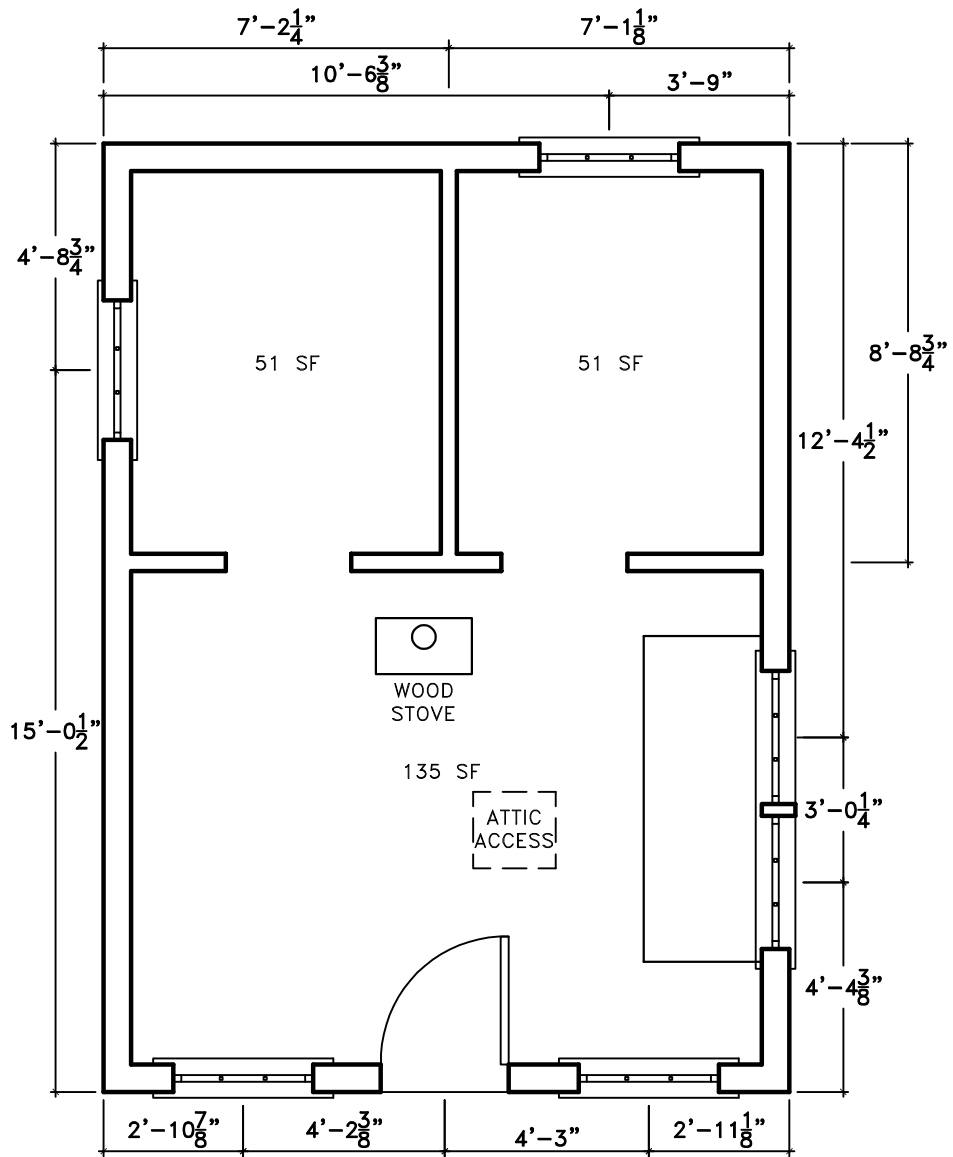


1 FLOOR PLAN

1/4"=1'-0"



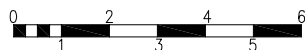
|                       |                                  |                                                              |  |                           |       |
|-----------------------|----------------------------------|--------------------------------------------------------------|--|---------------------------|-------|
| DESIGNED:<br>--       | SUB SHEET NO.<br><br><b>A1.1</b> | TITLE OF SHEET<br><br><b>MAINTENANCE SHED</b>                |  | DRAWING NO.<br><b>191</b> |       |
| DRAWN BY:<br>G.CROSBY |                                  | COAL CREEK CAMP HISTORIC MINING DISTRICT                     |  | 80,138                    |       |
| TECH. REVIEW:<br>--   |                                  | YUKON-CHARLEY RIVERS NATIONAL PRESERVE<br>COAL CREEK, ALASKA |  | PKG. NO.                  | SHEET |
| DATE:<br>2.16.22      |                                  |                                                              |  | 1                         | OF 1  |



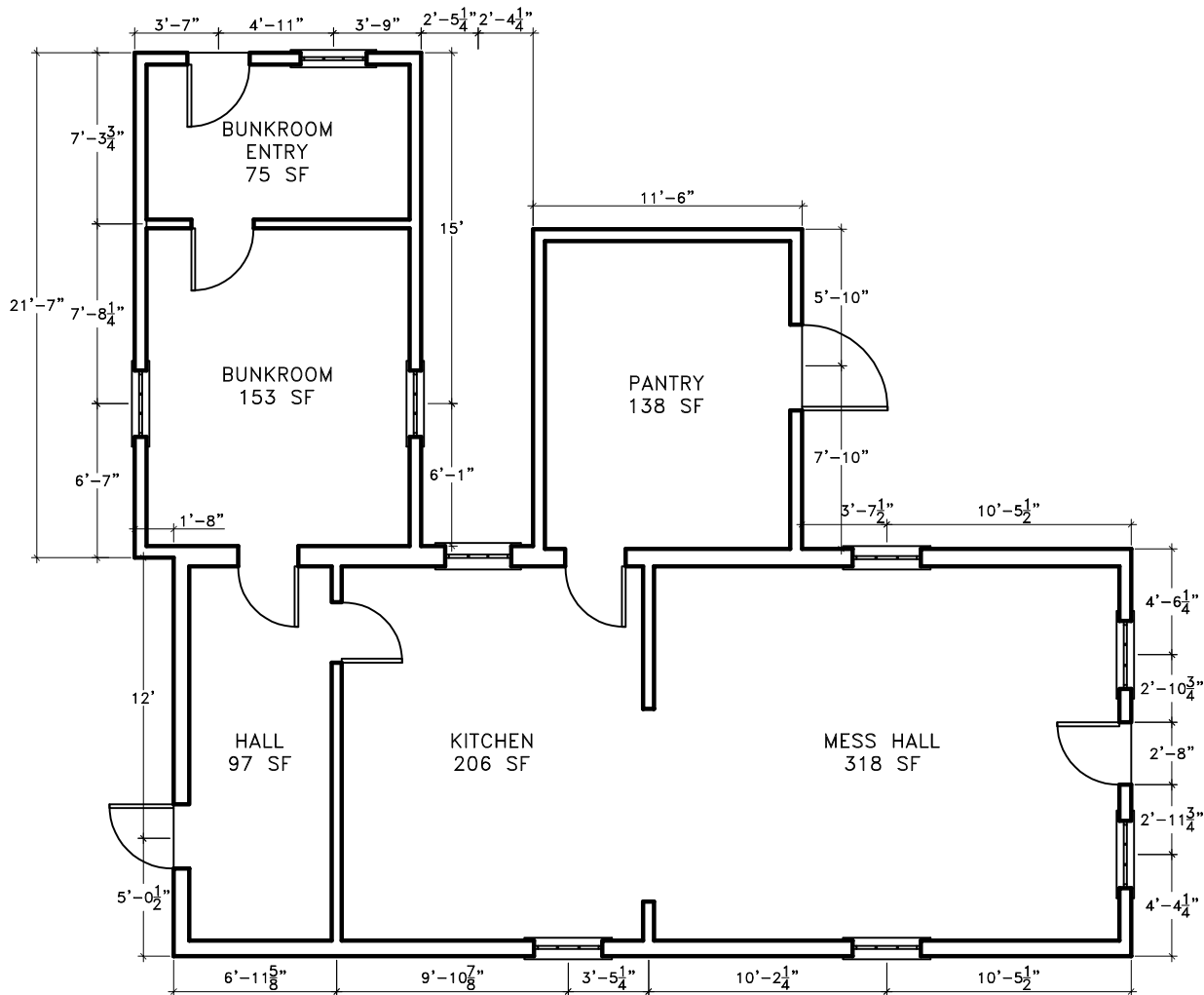
1

# FLOOR PLAN

1/4"=1'-0"

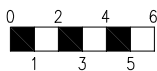


|                       |               |                                                              |                          |
|-----------------------|---------------|--------------------------------------------------------------|--------------------------|
| DESIGNED:<br>--       | SUB SHEET NO. | TITLE OF SHEET                                               | DRAWING NO.              |
| DRAWN BY:<br>G.CROSBY | <b>A1.1</b>   | <b>MANAGER'S OFFICE CABIN</b>                                | 191                      |
| TECH. REVIEW:<br>--   |               | COAL CREEK CAMP HISTORIC MINING DISTRICT                     | 80,139                   |
| DATE:<br>2.15.22      |               | YUKON-CHARLEY RIVERS NATIONAL PRESERVE<br>COAL CREEK, ALASKA | PKG. NO. SHEET<br>1 OF 1 |

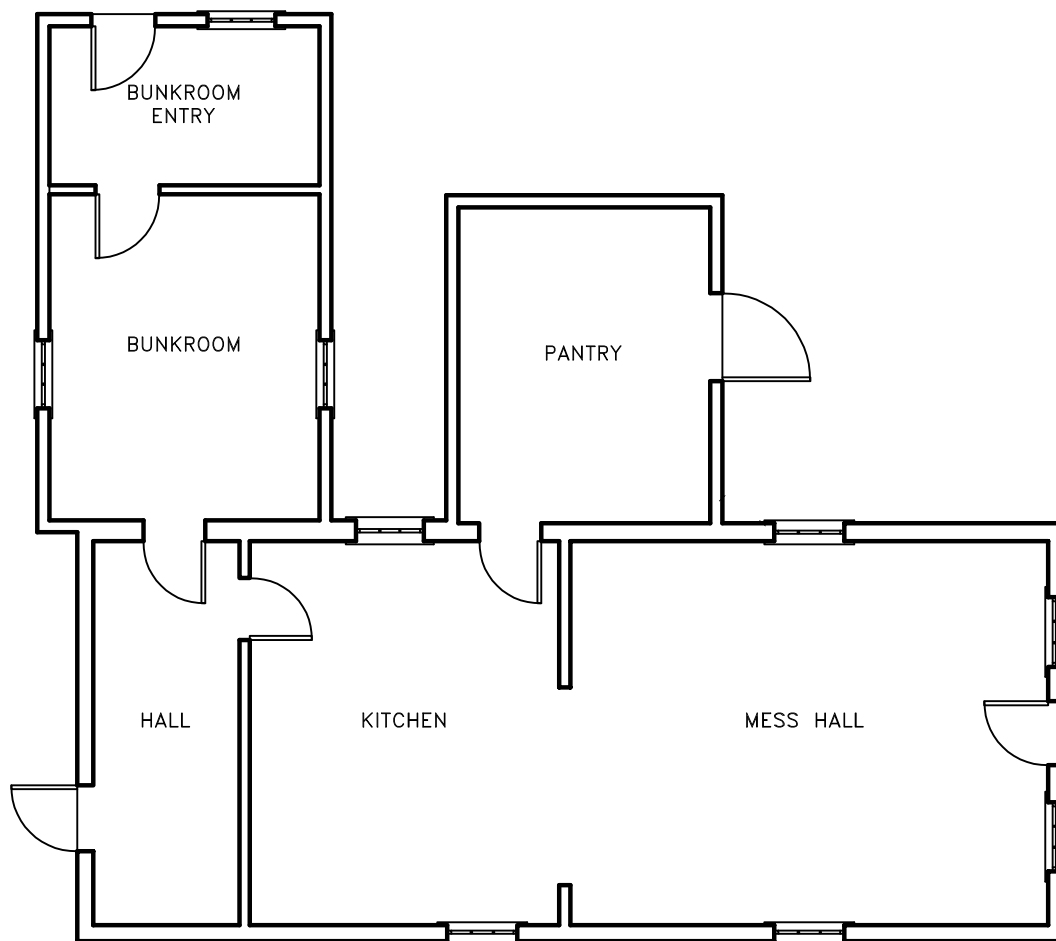


# 1 FLOOR PLAN

1/8"=1'-0"



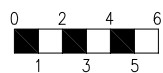
|                       |                              |                                                              |                           |
|-----------------------|------------------------------|--------------------------------------------------------------|---------------------------|
| DESIGNED:<br>--       | SUB SHEET NO.<br><b>A1.1</b> | TITLE OF SHEET<br><b>MESS HALL</b>                           | DRAWING NO.<br><b>191</b> |
| DRAWN BY:<br>G.CROSBY |                              | COAL CREEK CAMP HISTORIC MINING DISTRICT                     | 80,142                    |
| TECH. REVIEW:<br>--   |                              | YUKON-CHARLEY RIVERS NATIONAL PRESERVE<br>COAL CREEK, ALASKA | PKG. NO. <b>1</b>         |
| DATE:<br>2.15.22      |                              |                                                              | OF <b>1</b>               |



1

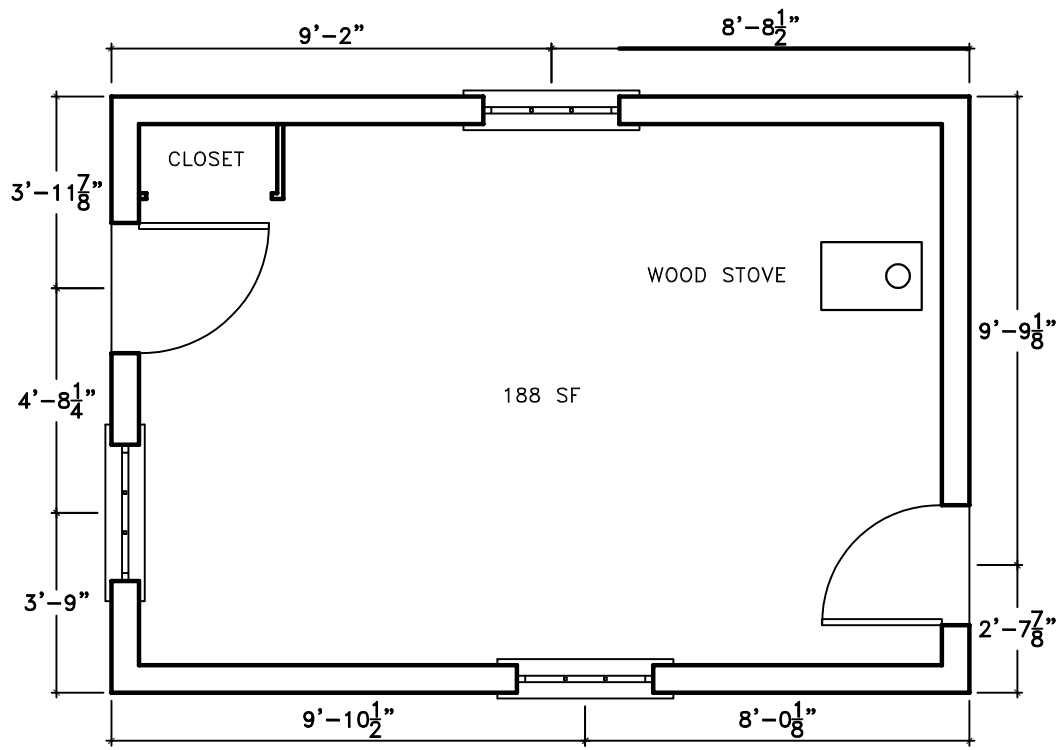
# FLOOR PLAN

1/8"=1'-0"



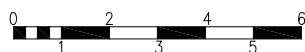
|                       |                                  |                                                              |                           |
|-----------------------|----------------------------------|--------------------------------------------------------------|---------------------------|
| DESIGNED:<br>--       | SUB SHEET NO.<br><br><b>A1.1</b> | TITLE OF SHEET<br><br><b>MESS HALL</b>                       | DRAWING NO.<br><b>191</b> |
| DRAWN BY:<br>G.CROSBY |                                  | COAL CREEK CAMP HISTORIC MINING DISTRICT                     | <b>80,142</b>             |
| TECH. REVIEW:<br>--   |                                  | YUKON-CHARLEY RIVERS NATIONAL PRESERVE<br>COAL CREEK, ALASKA | PKG. NO. SHEET            |
| DATE:<br>2.15.22      |                                  |                                                              | <b>1</b><br>OF <b>1</b>   |



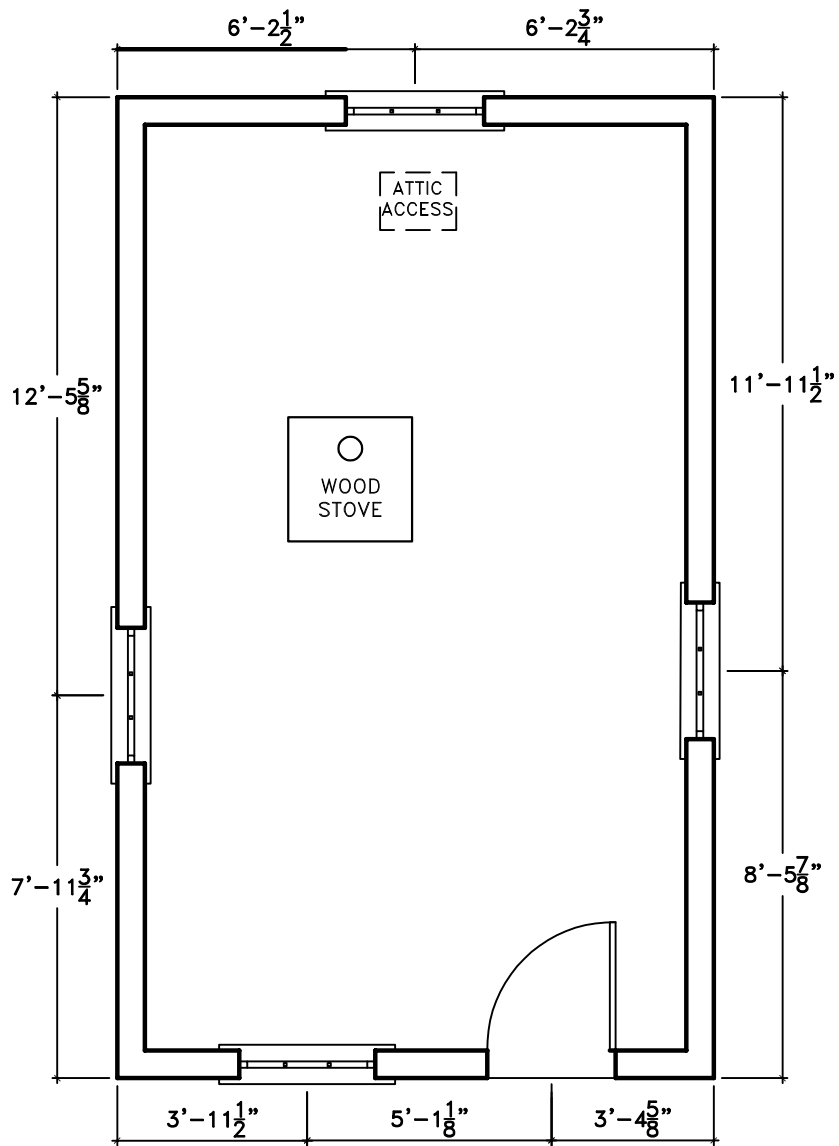


1 FLOOR PLAN

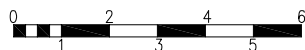
1/4"=1'-0"



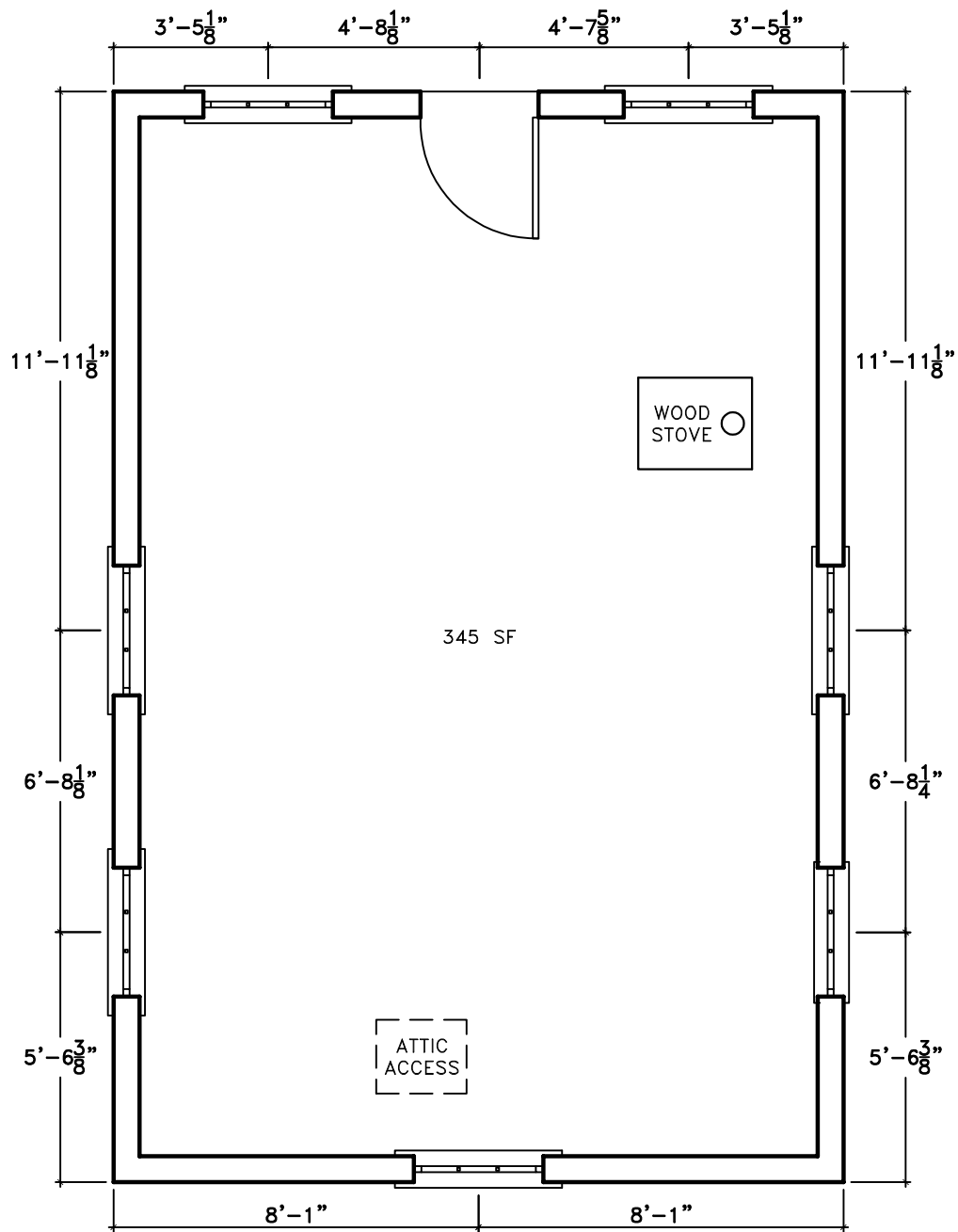
|                       |                                  |                                                              |                           |
|-----------------------|----------------------------------|--------------------------------------------------------------|---------------------------|
| DESIGNED:<br>--       | SUB SHEET NO.<br><br><b>A1.1</b> | TITLE OF SHEET                                               | DRAWING NO.<br><b>191</b> |
| DRAWN BY:<br>G.CROSBY |                                  | <b>PUBLIC USE CABIN</b>                                      | <b>80,134</b>             |
| TECH. REVIEW:<br>--   |                                  | COAL CREEK CAMP HISTORIC MINING DISTRICT                     | PKG. NO. SHEET            |
| DATE:<br>2.15.22      |                                  | YUKON-CHARLEY RIVERS NATIONAL PRESERVE<br>COAL CREEK, ALASKA | <b>1</b><br>OF <b>1</b>   |



1 FLOOR PLAN  
 $1/4" = 1'-0"$



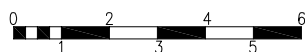
|                       |                              |                                                                                       |                                            |
|-----------------------|------------------------------|---------------------------------------------------------------------------------------|--------------------------------------------|
| DESIGNED:<br>--       | SUB SHEET NO.<br><b>A1.1</b> | TITLE OF SHEET<br><b>SUSIE PAUL CABIN</b><br>COAL CREEK CAMP HISTORIC MINING DISTRICT | DRAWING NO.<br><b>191</b><br><b>80,136</b> |
| DRAWN BY:<br>G.CROSBY |                              |                                                                                       | PKG. NO.<br>1                              |
| TECH. REVIEW:<br>--   |                              |                                                                                       | SHEET<br>OF 1                              |
| DATE:<br>2.15.22      |                              | YUKON-CHARLEY RIVERS NATIONAL PRESERVE<br>COAL CREEK, ALASKA                          |                                            |



1

# FLOOR PLAN

1/4"=1'-0"



|                       |                              |                                                              |                            |
|-----------------------|------------------------------|--------------------------------------------------------------|----------------------------|
| DESIGNED:<br>--       | SUB SHEET NO.<br><b>A1.1</b> | TITLE OF SHEET<br><b>WILLIE JUNEBY CABIN</b>                 | DRAWING NO.<br><b>191</b>  |
| DRAWN BY:<br>G.CROSBY |                              | COAL CREEK CAMP HISTORIC MINING DISTRICT                     | 80,137                     |
| TECH. REVIEW:<br>--   |                              | YUKON-CHARLEY RIVERS NATIONAL PRESERVE<br>COAL CREEK, ALASKA | PKG. NO. SHEET<br><b>1</b> |
| DATE:<br>2.15.22      |                              |                                                              | OF 1                       |

## **Appendix C - Field Forms**



(page intentionally left blank)

**Coal Creek Camp Door Assessment**

September 2021

Exterior Photo:



Interior Photo:

Building: Assay Office

Tag: AO.D1

Slab Type: Two Panel

Operability: —

Slab Condition: Surface deterioration

Jamb: —

Sill: Moderate deterioration

Threshold: —

Exterior Trim: Good

Interior Trim: —

Hardware Type: Knob

Hardware Condition: —

Hardware Original: —

Lock: —

Strike Plate: —

Hinges: Good

Hinge #: 2

Closer: —

Notes:

**Coal Creek Camp Door Assessment**

September 2021

Exterior Photo:



Interior Photo:



Building: Bunkhouse 1

Tag: B1.D1

Slab Type: Hollow Core

Operability: Good

Slab Condition: Surface deterioration

Jamb: —

Sill: N/A

Threshold: N/A

Exterior Trim: Good

Interior Trim: Good

Hardware Type: Knob

Hardware Condition: Good

Hardware Original: —

Lock: —

Strike Plate: Good

Hinges: Good

Hinge #: —

Closer: —

Notes:

**Coal Creek Camp Door Assessment**

September 2021

Exterior Photo:



Interior Photo:



Building: Bunkhouse 2

Tag: B2.D1

Slab Type: Hollow Core

Operability: Good

Slab Condition: Surface deterioration

Jamb: Surface deterioration

Sill: Surface deterioration

Threshold: N/A

Exterior Trim: Surface deterioration

Interior Trim: Good

Hardware Type: Knob

Hardware Condition: Missing

Hardware Original: —

Lock: —

Strike Plate: Good

Hinges: Good

Hinge #: —

Closer: —

Notes:



**Coal Creek Camp Door Assessment**

September 2021

Exterior Photo:



Interior Photo:



Building: Bunkhouse 3

Tag: B3.D1

Slab Type: Five Panel

Operability: Good

Slab Condition: Surface deterioration

Jamb: Good

Sill: Surface deterioration

Threshold: N/A

Exterior Trim: —

Interior Trim: Surface deterioration

Hardware Type: Knob

Hardware Condition: Broken/Inoperable

Hardware Original: —

Lock: —

Strike Plate: Missing

Hinges: Good

Hinge #: —

Closer: —

Notes:

**Coal Creek Camp Door Assessment**

September 2021

Exterior Photo:



Interior Photo:



Building: Bunkhouse 4

Tag: B4.D1

Slab Type: Two Panel

Operability: Good

Slab Condition: Moderate deterioration

Jamb: —

Sill: Surface deterioration

Threshold: N/A

Exterior Trim: Good

Interior Trim: Good

Hardware Type: Knob

Hardware Condition: Good

Hardware Original: —

Lock: —

Strike Plate: Good

Hinges: Good

Hinge #: —

Closer: —

Notes:

**Coal Creek Camp Door Assessment**

September 2021

Exterior Photo:



Interior Photo:



Building: Bunkhouse 5

Tag: B5.D1

Slab Type: Two Panel

Operability: Good

Slab Condition: Good

Jamb: Good

Sill: —

Threshold: N/A

Exterior Trim: Good

Interior Trim: Good

Hardware Type: Knob

Hardware Condition: Good

Hardware Original: —

Lock: —

Strike Plate: Good

Hinges: Good

Hinge #: —

Closer: —

Notes:

**Coal Creek Camp Door Assessment**

September 2021

Exterior Photo:



Building: Bunkhouse 6

Tag: B6.D1

Slab Type: Two Panel

Operability: Good

Slab Condition: Moderate deterioration

Jamb: Surface deterioration

Sill: —

Threshold: Surface deterioration

Exterior Trim: Good

Interior Trim: Surface deterioration

Interior Photo:



Hardware Type: Knob

Hardware Condition: Good

Hardware Original: —

Lock: —

Strike Plate: Good

Hinges: —

Hinge #: —

Closer: —

Notes:



**Coal Creek Camp Door Assessment**

September 2021

Exterior Photo:



Interior Photo:



Building: Laundry

Tag: LA.D1

Slab Type: —

Operability: Good

Slab Condition: Severe deterioration

Jamb: Surface deterioration

Sill: Good

Threshold: —

Exterior Trim: Surface deterioration

Interior Trim: Good

Hardware Type: —

Hardware Condition: —

Hardware Original: —

Lock: —

Strike Plate: —

Hinges: Good

Hinge #: —

Closer: —

Notes: Screen only, shuttered/screwed closed

**Coal Creek Camp Door Assessment**

September 2021

Exterior Photo:



Interior Photo:



Building: Mess Hall

Tag: MH.D1

Slab Type: Batten

Operability: —

Slab Condition: Surface deterioration

Jamb: Good

Sill: —

Threshold: Surface deterioration

Exterior Trim: Good

Interior Trim: Good

Hardware Type: Push plate + pull

Hardware Condition: Good

Hardware Original: —

Lock: Good

Strike Plate: —

Hinges: Good

Hinge #: 2

Closer: —

Notes:

**Coal Creek Camp Door Assessment**

September 2021

Exterior Photo:



Interior Photo:



Building: Mess Hall

Tag: MH.D2

Slab Type: Single Panel

Operability: Good

Slab Condition: Severe deterioration

Jamb: Surface deterioration

Sill: Severe deterioration

Threshold: Severe deterioration

Exterior Trim: Surface deterioration

Interior Trim: Surface deterioration

Hardware Type: Knob

Hardware Condition: Good

Hardware Original: —

Lock: —

Strike Plate: —

Hinges: Good

Hinge #: 2

Closer: —

Notes: Full lite door with ply infill



**Coal Creek Camp Door Assessment**

September 2021

Exterior Photo:



Interior Photo:



Building: Mess Hall

Tag: MH.D3

Slab Type: Batten

Operability: —

Slab Condition: Moderate bottom rail

Jamb: —

Sill: Moderate deterioration

Threshold: —

Exterior Trim: Surface deterioration

Interior Trim: Good

Hardware Type: Push plate + pull

Hardware Condition: —

Hardware Original: —

Lock: —

Strike Plate: Good

Hinges: Good

Hinge #: 3

Closer: —

Notes:



**Coal Creek Camp Door Assessment**

September 2021

Exterior Photo:



Interior Photo:



Building: Mess Hall

Tag: MH.D4

Slab Type: Five Panel

Operability: —

Slab Condition: Surface deterioration

Jamb: —

Sill: Moderate deterioration

Threshold: —

Exterior Trim: Good

Interior Trim: Good

Hardware Type: Knob

Hardware Condition: Good

Hardware Original: —

Lock: —

Strike Plate: —

Hinges: Good

Hinge #: 2

Closer: —

Notes: Shimmed close at interior

**Coal Creek Camp Door Assessment**

September 2021

Exterior Photo:



Building: Manager's Office

Tag: MO.D1

Slab Type: Four Panel

Operability: Good

Slab Condition: Moderate deterioration

Jamb: Moderate deterioration

Sill: Moderate deterioration

Threshold: —

Exterior Trim: Surface deterioration

Interior Trim: —

Interior Photo:



Hardware Type: Knob

Hardware Condition: Good

Hardware Original: —

Lock: —

Strike Plate: —

Hinges: Good

Hinge #: 2

Closer: —

Notes:

## Coal Creek Camp Door Assessment

September 2021

Exterior Photo:



Interior Photo:



Building: Maintenance Shed

Tag: MS.D1

Slab Type: Batten

Operability: Good

Slab Condition: Surface deterioration

Jamb: Moderate deterioration

Sill: —

Threshold: Moderate deterioration

Exterior Trim: Moderate deterioration

Interior Trim: —

Hardware Type: Bolt Slider

Hardware Condition: Good

Hardware Original: —

Lock: —

Strike Plate: —

Hinges: Good

Hinge #: —

Closer: —

Notes:



**Coal Creek Camp Door Assessment**

September 2021

Exterior Photo:



Interior Photo:



Building: Public Use Cabin

Tag: PC.D1

Slab Type: Two Panel

Operability: Good

Slab Condition: Moderate deterioration

Jamb: Surface deterioration

Sill: Surface deterioration

Threshold: —

Exterior Trim: Surface deterioration

Interior Trim: Good

Hardware Type: Knob

Hardware Condition: Good

Hardware Original: —

Lock: —

Strike Plate: Good

Hinges: Good

Hinge #: —

Closer: —

Notes:



**Coal Creek Camp Door Assessment**

September 2021

Exterior Photo:



Building: Public Use Cabin

Tag: PC.D2

Slab Type: Two Panel

Operability: Good

Slab Condition: Surface deterioration

Jamb: Good

Sill: Moderate deterioration

Threshold: —

Exterior Trim: Good

Interior Trim: Good

Interior Photo:



Hardware Type: Knob

Hardware Condition: Good

Hardware Original: —

Lock: —

Strike Plate: Good

Hinges: Good

Hinge #: —

Closer: —

Notes:

**Coal Creek Camp Interiors**

September 2021

North:



Building: Bunkhouse 1

Room name:

Flooring: Plywood

Flooring Condition: Good

Base: Wood

Base Condition: Good

Walls: Painted plywood

Wall Condition : Good

Ceiling: Painted plywood

Ceiling Condition: Poor

East:



Lighting: Socket

Lighting Condition: Good

Stove: Large

Stove condition: Water Leaking

☒ Chimney Safety☒ Smoke alarm☐ Fire extinguisher

South:



West:



Notes: Severe water damage at stove pipe/ceiling.  
Ceiling 9.1%, walls 11.3%

## Coal Creek Camp Interiors

September 2021

---

Floor:



Ceiling Photo:



Miscellaneous Photo:



**Coal Creek Camp Interiors**

September 2021

North:



Building: Bunkhouse 2

Room name:

Flooring: Plywood

Flooring Condition: Fair

Base: Wood

Base Condition: Good

Walls: Painted plywood

Wall Condition : Good

Ceiling: Painted wood

Ceiling Condition: Fair

East:



South:



Lighting: Socket

Lighting Condition: Missing bulb(s)

Stove: Large

Stove condition: Corrosion

☒ Chimney Safety☐ Smoke alarm☒ Fire extinguisher

West:

Notes: T&G ceiling warped  
10.2% WME at walls



## Coal Creek Camp Interiors

September 2021

---

Floor:



Ceiling Photo:



Miscellaneous Photo:



**Coal Creek Camp Interiors**

September 2021

North:



Building: Bunkhouse 3

Room name:

Flooring: Plywood

Flooring Condition: Good

Base: Wood

Base Condition: Good

Walls: Painted plywood

Wall Condition : Good

Ceiling: Painted plywood

Ceiling Condition: Good

East:



Lighting: Socket

Lighting Condition: Missing bulb(s)

Stove: Large

Stove condition: Corrosion

☒ Chimney Safety☒ Smoke alarm☒ Fire extinguisher

South:



West:



Notes: 8% WME at walls, good.  
Attic access hatch, moisture  
barrier blocking access

## Coal Creek Camp Interiors

September 2021

---

Floor:



Ceiling Photo:



Miscellaneous Photo:

**Coal Creek Camp Interiors**

September 2021

North:



Building: Bunkhouse 4

Room name:

Flooring: Plywood

Flooring Condition: Good

Base: Wood

Base Condition: Good

Walls: Painted plywood

Wall Condition : Good

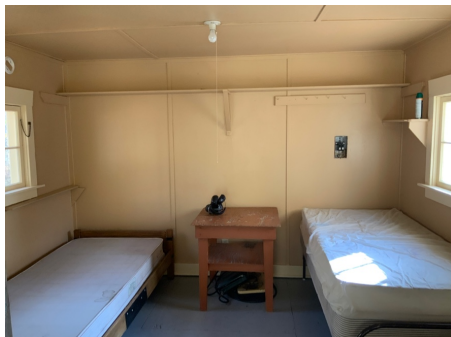
Ceiling: Painted plywood

Ceiling Condition: Fair

East:



South:



Lighting: Socket

Lighting Condition: Good

Stove: Large

Stove condition: Corrosion

☒ Chimney Safety☐ Smoke alarm☒ Fire extinguisher

West:

Notes: No attic access hatch. WME  
12%+ at ceiling and walls.



## Coal Creek Camp Interiors

September 2021

---

Floor:



Ceiling Photo:



Miscellaneous Photo:

**Coal Creek Camp Interiors**

September 2021

North:



Building: Bunkhouse 5

Room name:

Flooring: Plywood

Flooring Condition: Good

Base: Wood

Base Condition: Good

Walls: Painted plywood

Wall Condition : Good

Ceiling: Painted plywood

Ceiling Condition: Fair

East:



Lighting: Socket

Lighting Condition: Good

Stove: Small

Stove condition: Water Leaking

☒ Chimney Safety☒ Smoke alarm☒ Fire extinguisher

South:



West:



Notes: Attic hatch water damage, warped, active moisture.

## Coal Creek Camp Interiors

September 2021

---

Floor:



Ceiling Photo:



Miscellaneous Photo:



**Coal Creek Camp Interiors**

September 2021

North:



Building: Bunkhouse 6

Room name:

Flooring: Plywood

Flooring Condition: Fair

Base: N/A

Base Condition: —

Walls: Plywood unfinished

Wall Condition : Good

Ceiling: Plywood unfinished

Ceiling Condition: Good

East:



Lighting: Socket

Lighting Condition: Poor

Stove: Large

Stove condition: Good

☒ Chimney Safety☒ Smoke alarm☒ Fire extinguisher

South:



West:



Notes: Missing (1) socket light,  
(2) additional propane sconces,  
Plywood dry



## Coal Creek Camp Interiors

September 2021

---

Floor:



Ceiling Photo:



Miscellaneous Photo:



**Coal Creek Camp Interiors**

September 2021

North:



Building: Laundry

Room name:

Flooring: Plywood

Flooring Condition: Fair

Base: Wood

Base Condition: Good

Walls: Painted plywood

Wall Condition : Poor

Ceiling: Painted plywood

Ceiling Condition: Good

East:



Lighting: Socket

Lighting Condition: Good

Stove: —

Stove condition: —

☐ Chimney Safety☐ Smoke alarm☒ Fire extinguisher

South:



West:



Notes: 16.3% WME at north wall near water heater

## Coal Creek Camp Interiors

September 2021

---

Floor:



Ceiling Photo:



Miscellaneous Photo:



**Coal Creek Camp Interiors**September 2021

---

North:



Building: Maintenance Shed

Room name:

Flooring: Wood

Flooring Condition: Fair

Base: —

Base Condition: —

Walls: Exposed structure

Wall Condition : —

Ceiling: Exposed structure

Ceiling Condition: Good

East:



Lighting: Socket

Lighting Condition: Good

Stove: —

Stove condition: —

☐ Chimney Safety☐ Smoke alarm☒ Fire extinguisher

South:



West:



Notes:



## Coal Creek Camp Interiors

September 2021

---

Floor:



Ceiling Photo:



Miscellaneous Photo:



**Coal Creek Camp Interiors**September 2021

---

North:



Building: Manager's Office

Room name: East bunk

Flooring: Wood

Flooring Condition: Fair

Base: —

Base Condition: —

Walls: Wood Painted

Wall Condition : Fair

Ceiling: Painted wood

Ceiling Condition: Fair

East:



South:



Lighting: Socket

Lighting Condition: Missing bulb(s)

Stove: —

Stove condition: —

☐ Chimney Safety☐ Smoke alarm☐ Fire extinguisher

West:



Notes:

## Coal Creek Camp Interiors

September 2021

---

Floor:



Ceiling Photo:



Miscellaneous Photo:

**Coal Creek Camp Interiors**

September 2021

North:



Building: Manager's Office

Room name: Office

Flooring: Wood

Flooring Condition: Fair

Base: —

Base Condition: —

Walls: Wood Painted

Wall Condition : Fair

Ceiling: Painted wood

Ceiling Condition: Fair

East:



Lighting: Socket

Lighting Condition: Missing bulb(s)

Stove: Small

Stove condition: Good

☐ Chimney Safety☐ Smoke alarm☒ Fire extinguisher

South:



West:



Notes:



## Coal Creek Camp Interiors

September 2021

---

Floor:



Ceiling Photo:



Miscellaneous Photo:



**Coal Creek Camp Interiors**September 2021

---

North:



Building: Manager's Office

Room name: West bunk

Flooring: Wood

Flooring Condition: Fair

Base: Wood

Base Condition: Good

Walls: Plywood unfinished

Wall Condition : Good

Ceiling: Plywood unfinished

Ceiling Condition: Good

East:



South:



Lighting: Socket

Lighting Condition: Missing bulb(s)

Stove: —

Stove condition: —

☐ Chimney Safety☐ Smoke alarm☐ Fire extinguisher

West:



Notes:

## Coal Creek Camp Interiors

September 2021

---

Floor:



Ceiling Photo:



Miscellaneous Photo:

**Coal Creek Camp Interiors**September 2021

---

North:



Building: Mess Hall

Room name: Breezeway

Flooring: Plywood

Flooring Condition: Fair

Base: Wood

Base Condition: Fair

Walls: Painted plywood

Wall Condition : Good

Ceiling: Painted plywood

Ceiling Condition: Good

East:



Lighting: Socket

Lighting Condition: Good

Stove: —

Stove condition: —

South:

☐ Chimney Safety☐ Smoke alarm☐ Fire extinguisher

West:



Notes: 7.4% WME at all walls



## Coal Creek Camp Interiors

September 2021

---

Floor:



Ceiling Photo:



Miscellaneous Photo:

**Coal Creek Camp Interiors**September 2021

---

North:



Building: Mess Hall

Room name: Bunkroom

Flooring: Plywood

Flooring Condition: Fair

Base: Wood

Base Condition: Fair

Walls: Painted plywood

Wall Condition : Good

Ceiling: Painted plywood

Ceiling Condition: Good

East:



Lighting: Socket

Lighting Condition: Good

Stove: Small

Stove condition: Good

☒ Chimney Safety☐ Smoke alarm☒ Fire extinguisher

South:



West:



Notes: 7.7% WME at walls

## Coal Creek Camp Interiors

September 2021

---

Floor:



Ceiling Photo:



Miscellaneous Photo:



**Coal Creek Camp Interiors**September 2021

---

North:



Building: Mess Hall

Room name: Bunkroom entry

Flooring: Plywood

Flooring Condition: Fair

Base: Wood

Base Condition: Good

Walls: Painted plywood

Wall Condition : Good

Ceiling: Painted plywood

Ceiling Condition: Good

East:



South:



Lighting: Socket

Lighting Condition: Good

Stove: —

Stove condition: —

☐ Chimney Safety☐ Smoke alarm☐ Fire extinguisher

West:



Notes: 8.6% at west wall



## Coal Creek Camp Interiors

---

September 2021

Floor:



Ceiling Photo:



Miscellaneous Photo:

**Coal Creek Camp Interiors**September 2021

---

North:



Building: Mess Hall

Room name: Cold Storage

Flooring: Plywood

Flooring Condition: Fair

Base: Wood

Base Condition: Fair

Walls: Painted plywood

Wall Condition : Good

Ceiling: Painted plywood

Ceiling Condition: Fair

East:



South:



Lighting: Socket

Lighting Condition: Good

Stove: —

Stove condition: —

☐ Chimney Safety☐ Smoke alarm☒ Fire extinguisher

West:



Notes:

## Coal Creek Camp Interiors

---

September 2021

Floor:



Ceiling Photo:



Miscellaneous Photo:

**Coal Creek Camp Interiors**

September 2021

North:



Building: Mess Hall

Room name: Kitchen

Flooring: Plywood

Flooring Condition: Fair

Base: Wood

Base Condition: Fair

Walls: Other

Wall Condition : Good

Ceiling: Painted plywood

Ceiling Condition: Good

East:



Lighting: Socket

Lighting Condition: Good

Stove: —

Stove condition: —

☐ Chimney Safety☐ Smoke alarm☒ Fire extinguisher

South:



West:



Notes: Painted ply, hardboard, and  
corrugated wall  
South wall 8% WME



## Coal Creek Camp Interiors

September 2021

---

Floor:



Ceiling Photo:



Miscellaneous Photo:



**Coal Creek Camp Interiors**

September 2021

North:



Building: Mess Hall

Room name: Mess Hall

Flooring: Wood

Flooring Condition: Poor

Base: Wood

Base Condition: Fair

Walls: Painted plywood

Wall Condition : Fair

Ceiling: Painted plywood

Ceiling Condition: Good

East:



Lighting: Socket

Lighting Condition: Good

Stove: Large

Stove condition: Corrosion

☒ Chimney Safety☐ Smoke alarm☒ Fire extinguisher

South:



West:



Notes:

## Coal Creek Camp Interiors

September 2021

---

Floor:



Ceiling Photo:



Miscellaneous Photo:



**Coal Creek Camp Interiors**

September 2021

North:



Building: Public Use Cabin

Room name:

Flooring: Plywood

Flooring Condition: Good

Base: Wood

Base Condition: Good

Walls: Painted beaverboard

Wall Condition : Good

Ceiling: Painted plywood

Ceiling Condition: Poor

East:



Lighting: Socket

Lighting Condition: Missing bulb(s)

Stove: Small

Stove condition: Water Leaking

☒ Chimney Safety☒ Smoke alarm☐ Fire extinguisher

South:



West:



Notes: Severe water damage at top pipe ceiling, 21.5% moisture



## Coal Creek Camp Interiors

September 2021

---

Floor:



Ceiling Photo:



Miscellaneous Photo:



**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:

Building: Assay Office

Window: AO.E1

Type: Hopper

Material: Wood

Operable: —

Upper/Fixed Sash: Surface deterioration

Lower Sash: —

Muntins: Surface deterioration

Jamb: Good

Exterior Sill: Surface deterioration

Exterior Trim: Good

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Dry/Cracked

Storm Type: —

Frame: —

Muntins : —

Infill: —

☐ Wood stops☐ Latch ☐ Strike☐ Chain stay

Notes:

**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:

Building: Assay Office

Window: AO.E2

Type: Fixed

Material: Wood

Operable: —

Upper/Fixed Sash: Surface deterioration

Lower Sash: —

Muntins: Surface deterioration

Jamb: —

Exterior Sill: —

Exterior Trim: —

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Dry/Cracked

Storm Type: —

Frame: —

Muntins : —

Infill: —

☐ Wood stops☐ Latch ☐ Strike☐ Chain stay

Notes:

**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:

Building: Assay Office

Window: AO.S1

Type: Hopper

Material: Wood

Operable: —

Upper/Fixed Sash: Surface deterioration

Lower Sash: —

Muntins: Surface deterioration

Jamb: Surface deterioration

Exterior Sill: Surface deterioration

Exterior Trim: Surface deterioration

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Dry/Cracked

Storm Type: —

Frame: —

Muntins : —

Infill: —

☐ Wood stops☐ Latch ☐ Strike☐ Chain stay

Notes:



**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:

Building: Assay Office

Window: AO.W1

Type: Fixed

Material: Wood

Operable: —

Upper/Fixed Sash: Surface deterioration

Lower Sash: —

Muntins: Surface deterioration

Jamb: —

Exterior Sill: —

Exterior Trim: —

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Dry/Cracked

Storm Type: —

Frame: —

Muntins : —

Infill: —

☐ Wood stops☐ Latch ☐ Strike☐ Chain stay

Notes:

**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:

Building: Assay Office

Window: AO.W2

Type: Hopper

Material: Wood

Operable: —

Upper/Fixed Sash: Surface deterioration

Lower Sash: —

Muntins: Good

Jamb: Good

Exterior Sill: Surface deterioration

Exterior Trim: Surface deterioration

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Dry/Cracked

Storm Type: —

Frame: —

Muntins : —

Infill: —

☐ Wood stops☐ Latch ☐ Strike☐ Chain stay

Notes:

**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Bunkhouse 1

Window: B1.E1

Type: Hopper

Material: Wood

Operable: —

Upper/Fixed Sash: Good

Lower Sash: —

Muntins: Good

Jamb: Good

Exterior Sill: Good

Exterior Trim: Good

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Good

Storm Type: Screen

Frame: Good

Muntins : —

Infill: Good

☒ Wood stops☒ Latch ☒ Strike☒ Chain stay

Notes: Won't latch

**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Bunkhouse 1

Window: B1.E2

Type: Hopper

Material: Wood

Operable: —

Upper/Fixed Sash: Surface deterioration

Lower Sash: —

Muntins: Good

Jamb: Good

Exterior Sill: Good

Exterior Trim: Good

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Good

Storm Type: Screen

Frame: Surface deterioration

Muntins : —

Infill: Good

☒ Wood stops☒ Latch ☐ Strike☒ Chain stay

Notes:



**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Bunkhouse 1

Window: B1.N1

Type: Hopper

Material: Wood

Operable: —

Upper/Fixed Sash: Surface deterioration

Lower Sash: —

Muntins: Good

Jamb: Surface deterioration

Exterior Sill: Good

Exterior Trim: Good

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Good

Storm Type: Screen

Frame: Good

Muntins : —

Infill: Warped screen

☒ Wood stops☒ Latch ☒ Strike☐ Chain stay

Notes: Won't latch

**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Bunkhouse 1

Window: B1.N2

Type: Hopper

Material: Wood

Operable: —

Upper/Fixed Sash: Surface deterioration

Lower Sash: —

Muntins: Good

Jamb: Good

Exterior Sill: Good

Exterior Trim: Good

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Failed/Missing

Storm Type: Screen

Frame: Surface deterioration

Muntins : —

Infill: Torn screen

☒ Wood stops☒ Latch ☒ Strike☐ Chain stay

Notes: Won't latch

**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Bunkhouse 1

Window: B1.S1

Type: Hopper

Material: Wood

Operable: —

Upper/Fixed Sash: Good

Lower Sash: —

Muntins: Good

Jamb: Good

Exterior Sill: Good

Exterior Trim: Good

Glazing Type: Clear-single pane

Glazing Condition: Cracked

Putty: Good

Storm Type: Screen

Frame: Surface deterioration

Muntins : —

Infill: Good

☒ Wood stops☐ Latch ☐ Strike☐ Chain stay

Notes:

**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Bunkhouse 1

Window: B1.W1

Type: Hopper

Material: Wood

Operable: —

Upper/Fixed Sash: Surface deterioration

Lower Sash: —

Muntins: Missing

Jamb: Good

Exterior Sill: Good

Exterior Trim: Good

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Dry/Cracked

Storm Type: Screen

Frame: Good

Muntins : —

Infill: Good

☒ Wood stops☒ Latch ☒ Strike☐ Chain stay

Notes:



**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Bunkhouse 1

Window: B1.W2

Type: Hopper

Material: Wood

Operable: —

Upper/Fixed Sash: Severe deterioration

Lower Sash: —

Muntins: Surface deterioration

Jamb: Good

Exterior Sill: Good

Exterior Trim: Good

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Dry/Cracked

Storm Type: Screen

Frame: Good

Muntins : —

Infill: Good

☒ Wood stops☒ Latch ☒ Strike☐ Chain stay

Notes:

**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Bunkhouse 2

Window: B2.E1

Type: Hopper

Material: Wood

Operable: —

Upper/Fixed Sash: Surface deterioration

Lower Sash: —

Muntins: Surface deterioration

Jamb: Surface deterioration

Exterior Sill: Surface deterioration

Exterior Trim: Good

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Good

Storm Type: Screen

Frame: Good

Muntins : —

Infill: Good

☐ Wood stops☐ Latch ☐ Strike☐ Chain stay

Notes: Double hung sash ganged together with metal strips.  
Chain stay, wood blocking

**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Bunkhouse 2

Window: B2.S1

Type: Hopper

Material: Wood

Operable: —

Upper/Fixed Sash: Surface deterioration

Lower Sash: —

Muntins: Surface deterioration

Jamb: Good

Exterior Sill: Surface deterioration

Exterior Trim: Good

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Dry/Cracked

Storm Type: Screen

Frame: Good

Muntins : —

Infill: Warped screen

☐ Wood stops☐ Latch ☐ Strike☐ Chain stay

Notes: Double hung sash ganged together with metal strips. Chain stay, wood blocking



**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Bunkhouse 2

Window: B2.W1

Type: Hopper

Material: Wood

Operable: —

Upper/Fixed Sash: Good

Lower Sash: —

Muntins: Good

Jamb: Good

Exterior Sill: Moderate deterioration

Exterior Trim: Good

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Good

Storm Type: Screen

Frame: Good

Muntins : —

Infill: Torn screen

☐ Wood stops☐ Latch ☐ Strike☐ Chain stay

Notes: Chain stay, wood blocking



**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Building: Bunkhouse 3

Window: B3.E1

Type: Hopper

Material: Wood

Operable: —

Upper/Fixed Sash: Surface deterioration

Lower Sash: —

Muntins: Good

Jamb: Good

Exterior Sill: Moderate deterioration

Exterior Trim: Good

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Good

Detail Photo:



Storm Type: Screen

Frame: Good

Muntins : —

Infill: Torn screen

☐ Wood stops☐ Latch ☐ Strike☐ Chain stay

Notes: Chain stay and latch

**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Bunkhouse 3

Window: B3.S1

Type: Hopper

Material: Wood

Operable: —

Upper/Fixed Sash: Surface deterioration

Lower Sash: —

Muntins: Good

Jamb: Good

Exterior Sill: Good

Exterior Trim: Good

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Good

Storm Type: Screen

Frame: Good

Muntins : —

Infill: Good

☐ Wood stops☐ Latch ☐ Strike☐ Chain stay

Notes: Channel stay no latch

**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Bunkhouse 3

Window: B3.W1

Type: Hopper

Material: Wood

Operable: —

Upper/Fixed Sash: Surface deterioration

Lower Sash: —

Muntins: Good

Jamb: Good

Exterior Sill: Surface deterioration

Exterior Trim: Moderate deterioration

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Failed/Missing

Storm Type: Screen

Frame: Good

Muntins : —

Infill: Good

☐ Wood stops☐ Latch ☐ Strike☐ Chain stay

Notes: Chain stay and latch

**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Bunkhouse 4

Window: B4.E1

Type: Hopper

Material: Wood

Operable: —

Upper/Fixed Sash: Good

Lower Sash: —

Muntins: Good

Jamb: Good

Exterior Sill: Good

Exterior Trim: Good

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Dry/Cracked

Storm Type: Screen

Frame: Good

Muntins : —

Infill: Good

☐ Wood stops☐ Latch ☐ Strike☐ Chain stay

Notes: Chain stay and latch



**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Bunkhouse 4

Window: B4.N1

Type: Hopper

Material: Wood

Operable: —

Upper/Fixed Sash: Good

Lower Sash: —

Muntins: Good

Jamb: Good

Exterior Sill: Good

Exterior Trim: Good

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Failed/Missing

Storm Type: Screen

Frame: Good

Muntins : —

Infill: Good

☐ Wood stops☐ Latch ☐ Strike☐ Chain stay

Notes: Chain stay and latch

**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Bunkhouse 4

Window: B4.N2

Type: Hopper

Material: Wood

Operable: —

Upper/Fixed Sash: Good

Lower Sash: —

Muntins: Good

Jamb: Good

Exterior Sill: Good

Exterior Trim: Good

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Failed/Missing

Storm Type: Screen

Frame: Good

Muntins : —

Infill: Good

☐ Wood stops☐ Latch ☐ Strike☐ Chain stay

Notes: Chain stay and latch

**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Bunkhouse 4

Window: B4.W1

Type: Hopper

Material: Wood

Operable: —

Upper/Fixed Sash: Surface deterioration

Lower Sash: —

Muntins: Good

Jamb: Good

Exterior Sill: Good

Exterior Trim: Good

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Dry/Cracked

Storm Type: Screen

Frame: Moderate deterioration

Muntins : —

Infill: Good

☐ Wood stops☐ Latch ☐ Strike☐ Chain stay

Notes: Chain stay and latch

**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Bunkhouse 5

Window: B5.E1

Type: Hopper

Material: Wood

Operable: —

Upper/Fixed Sash: Surface deterioration

Lower Sash: —

Muntins: Good

Jamb: Good

Exterior Sill: Good

Exterior Trim: Good

Glazing Type: Clear-single pane

Glazing Condition: Cracked

Putty: Failed/Missing

Storm Type: Screen

Frame: Surface deterioration

Muntins : —

Infill: Good

☐ Wood stops☐ Latch ☐ Strike☐ Chain stayNotes: 1 pane cracked  
Chain stay, no latch



**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Bunkhouse 5

Window: B5.S1

Type: Hopper

Material: Wood

Operable: —

Upper/Fixed Sash: Good

Lower Sash: —

Muntins: Good

Jamb: Good

Exterior Sill: Good

Exterior Trim: Good

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Dry/Cracked

Storm Type: Screen

Frame: Surface deterioration

Muntins : —

Infill: Good

☐ Wood stops☐ Latch ☐ Strike☐ Chain stay

Notes: Chain stay no latch

**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Bunkhouse 5

Window: B5.W1

Type: Hopper

Material: Wood

Operable: —

Upper/Fixed Sash: Surface deterioration

Lower Sash: —

Muntins: Good

Jamb: Good

Exterior Sill: Good

Exterior Trim: Surface deterioration

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Dry/Cracked

Storm Type: Screen

Frame: Good

Muntins : —

Infill: Torn screen

☐ Wood stops☐ Latch ☐ Strike☐ Chain stayNotes: Sill fractured but good condition  
Chain stay no latch

**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Bunkhouse 6

Window: B6.E1

Type: Hopper

Material: Wood

Operable: —

Upper/Fixed Sash: Moderate bottom rail

Lower Sash: —

Muntins: Surface deterioration

Jamb: Good

Exterior Sill: Surface deterioration

Exterior Trim: Good

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Failed/Missing

Storm Type: Screen

Frame: Good

Muntins : —

Infill: Good

☐ Wood stops☒ Latch ☒ Strike☒ Chain stay

Notes:

**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Bunkhouse 6

Window: B6.N1

Type: Hopper

Material: Wood

Operable: —

Upper/Fixed Sash: Surface deterioration

Lower Sash: —

Muntins: Surface deterioration

Jamb: Good

Exterior Sill: Good

Exterior Trim: Good

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Dry/Cracked

Storm Type: Screen

Frame: Surface deterioration

Muntins : —

Infill: Warped screen

☐ Wood stops☒ Latch ☒ Strike☒ Chain stay

Notes:



**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Bunkhouse 6

Window: B6.S1

Type: Hopper

Material: Wood

Operable: —

Upper/Fixed Sash: Surface deterioration

Lower Sash: —

Muntins: Surface deterioration

Jamb: Good

Exterior Sill: Surface deterioration

Exterior Trim: Moderate deterioration

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Dry/Cracked

Storm Type: Screen

Frame: Good

Muntins : —

Infill: Good

☐ Wood stops☒ Latch ☒ Strike☒ Chain stay

Notes:

**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Bunkhouse 6

Window: B6.W1

Type: Hopper

Material: Wood

Operable: —

Upper/Fixed Sash: Surface deterioration

Lower Sash: —

Muntins: Surface deterioration

Jamb: Good

Exterior Sill: Surface deterioration

Exterior Trim: Moderate deterioration

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Dry/Cracked

Storm Type: Screen

Frame: Surface deterioration

Muntins : —

Infill: Good

☐ Wood stops☒ Latch ☒ Strike☒ Chain stay

Notes:

**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Laundry

Window: LA.E1

Type: Hopper

Material: Wood

Operable: No

Upper/Fixed Sash: Surface deterioration

Lower Sash: —

Muntins: Good

Jamb: —

Exterior Sill: Not visible

Exterior Trim: Surface deterioration

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Dry/Cracked

Storm Type: Screen

Frame: Surface deterioration

Muntins : —

Infill: Good

☐ Wood stops☐ Latch ☐ Strike☐ Chain stay

Notes: Toenailed in place



**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Laundry

Window: LA.N1

Type: Hopper

Material: Wood

Operable: No

Upper/Fixed Sash: Surface deterioration

Lower Sash: —

Muntins: Surface deterioration

Jamb: Good

Exterior Sill: Not visible

Exterior Trim: Moderate deterioration

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Failed/Missing

Storm Type: Screen

Frame: Surface deterioration

Muntins : —

Infill: Good

☐ Wood stops☐ Latch ☐ Strike☐ Chain stayNotes: 2 sash ganged together  
Wood block nailed in place



**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Laundry

Window: LA.S1

Type: Hopper

Material: Wood

Operable: No

Upper/Fixed Sash: Surface deterioration

Lower Sash: —

Muntins: Good

Jamb: Surface deterioration

Exterior Sill: Moderate deterioration

Exterior Trim: Good

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Dry/Cracked

Storm Type: Screen

Frame: Good

Muntins : —

Infill: Good

☐ Wood stops☐ Latch ☐ Strike☐ Chain stay

Notes: 2 sash ganged together  
Sitting in frame, toenailed in place

**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Mess Hall

Window: MH.E1

Type: Hopper

Material: Wood

Operable: Yes

Upper/Fixed Sash: Surface deterioration

Lower Sash: —

Muntins: Good

Jamb: Good

Exterior Sill: Surface deterioration

Exterior Trim: Good

Glazing Type: Clear-single pane

Glazing Condition: Cracked

Putty: Dry/Cracked

Storm Type: Screen

Frame: Good

Muntins : —

Infill: Good

☐ Wood stops☒ Latch ☒ Strike☒ Chain stay

Notes:

**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Mess Hall

Window: MH.E2

Type: Hopper

Material: Wood

Operable: Yes

Upper/Fixed Sash: Surface deterioration

Lower Sash: —

Muntins: Surface deterioration

Jamb: Good

Exterior Sill: Surface deterioration

Exterior Trim: Good

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Dry/Cracked

Storm Type: Screen

Frame: Good

Muntins : —

Infill: Good

☐ Wood stops☒ Latch ☒ Strike☐ Chain stay

Notes:



**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Mess Hall

Window: MH.E3

Type: Hopper

Material: Wood

Operable: Yes

Upper/Fixed Sash: Surface deterioration

Lower Sash: —

Muntins: Surface deterioration

Jamb: Surface deterioration

Exterior Sill: Moderate deterioration

Exterior Trim: Good

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Failed/Missing

Storm Type: Screen

Frame: Good

Muntins : —

Infill: Torn screen

☐ Wood stops☒ Latch ☒ Strike☒ Chain stay

Notes:



**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:

Building: Mess Hall

Window: MH.N1

Type: —

Material: Wood

Operable: —

Upper/Fixed Sash: Good

Lower Sash: —

Muntins: —

Jamb: —

Exterior Sill: Surface deterioration

Exterior Trim: Good

Glazing Type: —

Glazing Condition: —

Putty: —

Storm Type: —

Frame: —

Muntins : —

Infill: —

☐ Wood stops☐ Latch ☐ Strike☐ Chain stayNotes: Ply infill with faux muntins  
Interior not accessible

**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Mess Hall

Window: MH.N2

Type: Hopper

Material: Wood

Operable: Yes

Upper/Fixed Sash: Moderate deterioration

Lower Sash: —

Muntins: Surface deterioration

Jamb: Good

Exterior Sill: Good

Exterior Trim: Good

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Failed/Missing

Storm Type: Screen

Frame: Good

Muntins : —

Infill: Good

☐ Wood stops☒ Latch ☒ Strike☒ Chain stay

Notes:

**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Mess Hall

Window: MH.N3

Type: Fixed

Material: Wood

Operable: —

Upper/Fixed Sash: Surface deterioration

Lower Sash: —

Muntins: Surface deterioration

Jamb: Good

Exterior Sill: Surface deterioration

Exterior Trim: Good

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Failed/Missing

Storm Type: Screen

Frame: Good

Muntins : —

Infill: Warped screen

☐ Wood stops☐ Latch ☐ Strike☐ Chain stay

Notes:

**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Mess Hall

Window: MH.S1

Type: Fixed

Material: Wood

Operable: —

Upper/Fixed Sash: Good

Lower Sash: —

Muntins: Good

Jamb: Good

Exterior Sill: Surface deterioration

Exterior Trim: Good

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Dry/Cracked

Storm Type: Screen

Frame: Good

Muntins : Aligned

Infill: Good

☐ Wood stops☐ Latch ☐ Strike☐ Chain stay

Notes: Two sash ganged together



**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Mess Hall

Window: MH.S2

Type: Hopper

Material: Wood

Operable: Yes

Upper/Fixed Sash: Surface deterioration

Lower Sash: —

Muntins: Surface deterioration

Jamb: Good

Exterior Sill: Good

Exterior Trim: Good

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Failed/Missing

Storm Type: Screen

Frame: Good

Muntins : Aligned

Infill: Good

☒ Wood stops☐ Latch ☐ Strike☐ Chain stayNotes: Sash installed backwards  
Left stop missing

**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Mess Hall

Window: MH.W1

Type: Fixed

Material: Wood

Operable: —

Upper/Fixed Sash: Surface deterioration

Lower Sash: —

Muntins: Good

Jamb: Good

Exterior Sill: Surface deterioration

Exterior Trim: Good

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Dry/Cracked

Storm Type: Screen

Frame: Good

Muntins : —

Infill: Warped screen

☐ Wood stops☐ Latch ☐ Strike☐ Chain stay

Notes:

**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Mess Hall

Window: MH.W2

Type: Hopper

Material: Wood

Operable: No

Upper/Fixed Sash: Surface deterioration

Lower Sash: —

Muntins: Good

Jamb: Good

Exterior Sill: Surface deterioration

Exterior Trim: Good

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Good

Storm Type: Screen

Frame: Good

Muntins : —

Infill: Warped screen

☐ Wood stops☒ Latch ☐ Strike☐ Chain stay

Notes: Screwed at top



**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Manager's Office

Window: MO.E1

Type: Fixed

Material: Wood

Operable: —

Upper/Fixed Sash: Surface deterioration

Lower Sash: —

Muntins: —

Jamb: Surface deterioration

Exterior Sill: Surface deterioration

Exterior Trim: Surface deterioration

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Failed/Missing

Storm Type: —

Frame: —

Muntins : —

Infill: —

☐ Wood stops☐ Latch ☐ Strike☐ Chain stay

Notes: 2 sash ganged together



**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Manager's Office

Window: MO.E2

Type: Fixed

Material: Wood

Operable: —

Upper/Fixed Sash: Surface deterioration

Lower Sash: —

Muntins: Surface deterioration

Jamb: Surface deterioration

Exterior Sill: Surface deterioration

Exterior Trim: Surface deterioration

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Dry/Cracked

Storm Type: —

Frame: —

Muntins : —

Infill: —

☐ Wood stops☐ Latch ☐ Strike☐ Chain stay

Notes:

**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Manager's Office

Window: MO.N1

Type: Double hung

Material: Wood

Operable: Ropes and pulleys missing

Upper/Fixed Sash: Surface deterioration

Lower Sash: Surface deterioration

Muntins: Surface deterioration

Jamb: Good

Exterior Sill: Surface deterioration

Exterior Trim: Surface deterioration

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Dry/Cracked

Storm Type: Screen

Frame: Good

Muntins : —

Infill: Good

☐ Wood stops☐ Latch ☐ Strike☐ Chain stay

Notes:

**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Manager's Office

Window: MO.S1

Type: Double hung

Material: Wood

Operable: Ropes and pulleys missing

Upper/Fixed Sash: Good

Lower Sash: Surface deterioration

Muntins: Good

Jamb: Good

Exterior Sill: Surface deterioration

Exterior Trim: Surface deterioration

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Dry/Cracked

Storm Type: Screen

Frame: Good

Muntins : —

Infill: Good

☐ Wood stops☐ Latch ☐ Strike☐ Chain stay

Notes:



**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Manager's Office

Window: MO.S2

Type: Double hung

Material: Wood

Operable: Ropes and pulleys missing

Upper/Fixed Sash: Surface deterioration

Lower Sash: Surface deterioration

Muntins: Good

Jamb: Good

Exterior Sill: Surface deterioration

Exterior Trim: Surface deterioration

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Dry/Cracked

Storm Type: Screen

Frame: Good

Muntins : —

Infill: Good

☐ Wood stops☐ Latch ☐ Strike☐ Chain stay

Notes:



**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Manager's Office

Window: MO.W1

Type: Double hung

Material: Wood

Operable: Ropes and pulleys missing

Upper/Fixed Sash: Surface deterioration

Lower Sash: Surface deterioration

Muntins: Good

Jamb: Good

Exterior Sill: Surface deterioration

Exterior Trim: Surface deterioration

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Dry/Cracked

Storm Type: Screen

Frame: Good

Muntins : —

Infill: Warped screen

☐ Wood stops☐ Latch ☐ Strike☐ Chain stay

Notes:

**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Maintenance Shed

Window: MS.E1

Type: Fixed

Material: —

Operable: —

Upper/Fixed Sash: —

Lower Sash: —

Muntins: —

Jamb: Good

Exterior Sill: Surface deterioration

Exterior Trim: Good

Glazing Type: —

Glazing Condition: —

Putty: —

Storm Type: -

Frame: —

Muntins : —

Infill: —

☐ Wood stops☐ Latch ☐ Strike☐ Chain stay

Notes:

**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Public Use

Window: PB.N1

Type: Hopper

Material: Wood

Operable: —

Upper/Fixed Sash: Good

Lower Sash: —

Muntins: Good

Jamb: Good

Exterior Sill: Good

Exterior Trim: Good

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Dry/Cracked

Storm Type: Screen

Frame: Good

Muntins : —

Infill: Good

☐ Wood stops☒ Latch ☒ Strike☒ Chain stay

Notes:



**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Public Use

Window: PB.S1

Type: Hopper

Material: Wood

Operable: —

Upper/Fixed Sash: Good

Lower Sash: —

Muntins: Good

Jamb: Good

Exterior Sill: Surface deterioration

Exterior Trim: Good

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Dry/Cracked

Storm Type: Screen

Frame: Good

Muntins : —

Infill: Good

☐ Wood stops☒ Latch ☒ Strike☐ Chain stay

Notes:



**Coal Creek Camp Window Assessment**

September 2021

Exterior Photo:



Detail Photo:



Building: Public Use

Window: PB.W1

Type: Hopper

Material: Wood

Operable: No

Upper/Fixed Sash: Surface deterioration

Lower Sash: —

Muntins: Missing

Jamb: Good

Exterior Sill: Surface deterioration

Exterior Trim: Surface deterioration

Glazing Type: Clear-single pane

Glazing Condition: Intact

Putty: Failed/Missing

Storm Type: Screen

Frame: Good

Muntins : —

Infill: Good

☐ Wood stops☐ Latch ☒ Strike☐ Chain stay

Notes: Wood blocks nailed closed

## **Appendix D - Recommended Products / Cutsheets**

(page intentionally left blank)

# Architectural Door Accessories

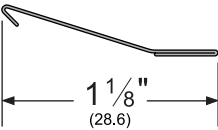
ASSA ABLOY

Pemko Weatherization Products:  
Spring Bronze Weatherstrip

The global leader in  
door opening solutions

## P51B17

AVAILABLE FINISHES: B  
AVAILABLE LENGTHS: 17'  
WIDTH: 1-1/8" (28.6 mm)



TITLE:

PREPARED FOR:

PREPARED BY:

DATE:

COMMENTS:

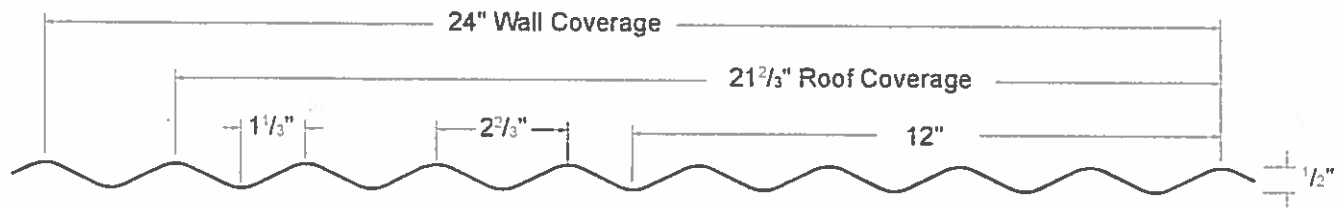
B (Bronze/Brass)

Copyright © 2017, Pemko Manufacturing Co., an ASSA ABLOY Group company. All rights reserved.  
Reproduction in whole or in part without the express written permission of Pemko Manufacturing Co. is prohibited.



# 2.5" CORRUGATED

**CONDENSED  
TECHNICAL  
REFERENCE**



**COMMERCIAL  
RESIDENTIAL  
PANEL**

**DIRECT  
FASTEN**

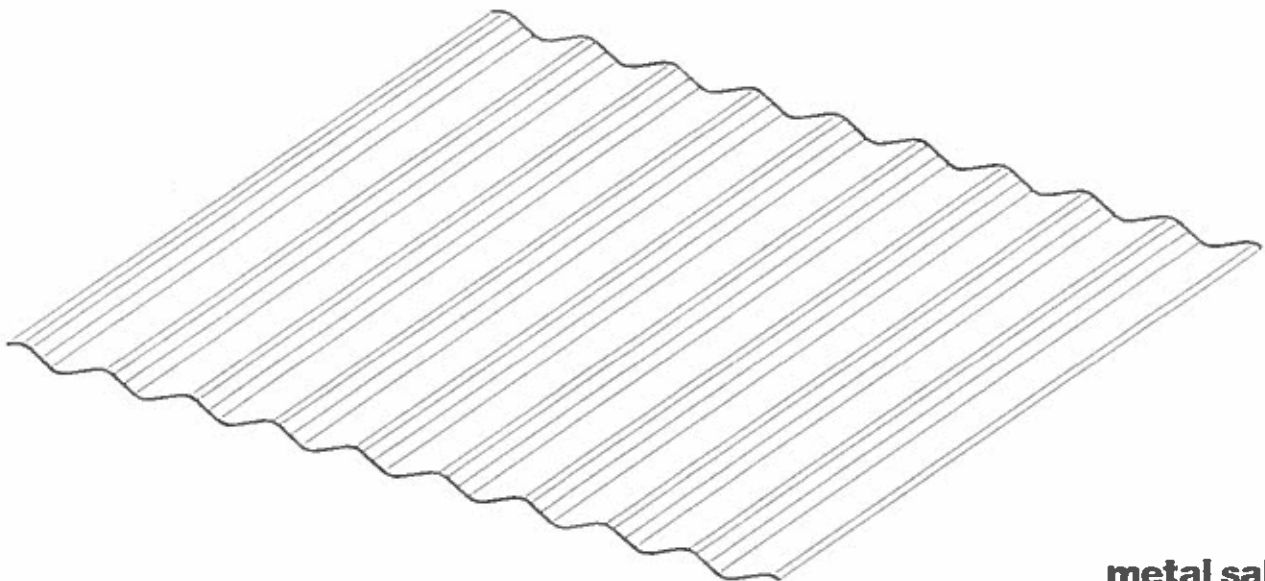
**24" WALL  
COVERAGE**

**MINIMUM  
3:12 SLOPE**

**OPEN FRAMING OR  
SOLID SUBSTRATE**

## PANEL OVERVIEW

- ▶ Finishes: Bare Galvanized, MS Colorfast45<sup>®</sup>, and Acrylic Coated Galvalume<sup>®</sup>
- ▶ Gauges: 26ga, 24ga, 22ga, 18ga
- ▶ 24" wall panel coverage, 1/2" rib height
- ▶ 21<sup>2</sup>/<sub>3</sub>" roof panel coverage, 1/2" rib height
- ▶ Applies over open framing or solid substrate
- ▶ 3:12 slope minimum



**metal sales**  
manufacturing corporation

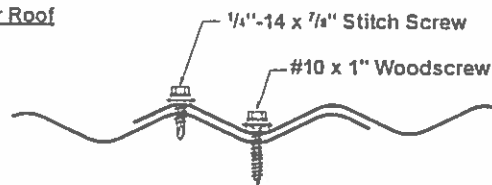
**ms**

# 2.5" CORRUGATED

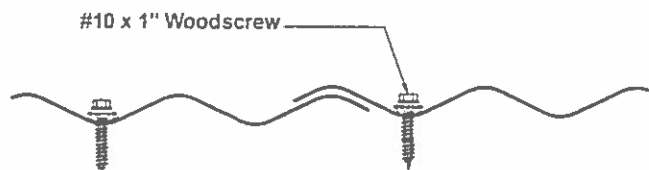
## CONDENSED TECHNICAL REFERENCE

### ATTACHMENT DETAILS

#### For Roof



#### For Wall

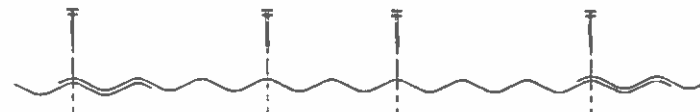


### FASTENING PATTERN

#### Typical Screw Fastening Pattern



#### Typical Nail Fastening Pattern



### GENERAL INFORMATION

#### ► Slope

The minimum recommended slope for 2.5" Corrugated roofing panel is 3:12.

#### ► Substructure

2.5" Corrugated panel is designed to be utilized over open structural framing but can easily be used with a solid sub-structure. To avoid panel distortion use a properly aligned and uniform substructure.

#### ► Coverage

2.5" Corrugated panels are available in a 1/2" rib height with a coverage width of 24".

#### ► Length

Minimum factory cut length is 3'-0". Maximum recommended panel length is 30'-0". Longer panels require additional consideration in packaging, shipping, and erection. Please consult Metal Sales for recommendations.

#### ► Fasteners

The fastener selection guide should be consulted for choosing the proper fastener for specific applications. Quantity and type of fastener must meet necessary loading and code requirements (for applications involving the use of nails instead of screws, Metal Sales recommends nailing through the high part of the corrugation).

**NOTE:** All panels are subject to surface distortion due to improperly applied fasteners. Overdriven fasteners will cause stress and induce oil canning across the face of the panel at or near the point of attachment.

#### ► Availability

**Finishes:** MS Colorfast45<sup>®</sup>, Acrylic Coated Galvalume<sup>®</sup>, Bare Galvanized, and Kynar 500 (PVDF) colors.  
**Gauges:** 26ga standard (See Metal Sales Product Color Charts for selection.)

### SECTION PROPERTIES

### ALLOWABLE UNIFORM LIVE LOADS PSF (3 or More Equal Spans)

| Ga. | Width<br>(in.) | Yield<br>KSI | Weight<br>PSF | Top in Compression         |                            | Bottom in Compression      |                            | Inward (Gravity / Deflection)<br>Load |      |     |      |    |    | Outward Uplift (Stress)<br>Load |      |     |      |    |    |
|-----|----------------|--------------|---------------|----------------------------|----------------------------|----------------------------|----------------------------|---------------------------------------|------|-----|------|----|----|---------------------------------|------|-----|------|----|----|
|     |                |              |               | Ixx<br>in <sup>4</sup> /ft | Sxx<br>in <sup>3</sup> /ft | Ixx<br>in <sup>4</sup> /ft | Sxx<br>in <sup>3</sup> /ft | 2'                                    | 2.5' | 3'  | 3.5' | 4' | 5' | 2'                              | 2.5' | 3'  | 3.5' | 4' | 5' |
|     |                |              |               |                            |                            |                            |                            |                                       |      |     |      |    |    |                                 |      |     |      |    |    |
| 26  | 24"            | 60           | 0.78          | 0.0060                     | 0.0237                     | 0.0060                     | 0.0237                     | 124                                   | 63   | 37  | 23   | 15 | 8  | 124                             | 63   | 37  | 23   | 15 | 8  |
| 24  | 24"            | 50           | 1.03          | 0.0080                     | 0.0308                     | 0.0080                     | 0.0308                     | 165                                   | 84   | 49  | 31   | 21 | 11 | 165                             | 84   | 49  | 31   | 21 | 11 |
| 22  | 24"            | 50           | 1.34          | 0.0105                     | 0.0397                     | 0.0105                     | 0.0397                     | 216                                   | 111  | 64  | 40   | 27 | 14 | 216                             | 111  | 64  | 40   | 27 | 14 |
| 18  | 24"            | 33           | 2.12          | 0.0165                     | 0.0605                     | 0.0165                     | 0.0605                     | 215                                   | 142  | 100 | 63   | 43 | 22 | 215                             | 142  | 100 | 63   | 43 | 22 |

- Theoretical section properties have been calculated per AISI 2001 "Specification for the Design of Cold-formed Steel Structural Members." Ixx and Sxx are effective section properties for deflection and bending.
- Allowable load is calculated in accordance with AISI 2001 specifications considering bending, shear, combined bending and shear, deflection, and applicable testing when available. Allowable load considers the worst case of 3 and 4 equal span conditions. Allowable load does not address web crippling or fasteners/support connection and panel weight is not considered.
- Deflection consideration is limited by a maximum deflection ratio of L/180 of span.
- Allowable loads do not include a 1/3 stress increase in uplift.

**metal sales**  
manufacturing corporation

**ms**

Kent, WA (800) 431-3470  
Temple, TX (800) 543-4415  
Longmont, CO (800) 289-7663  
Antioch, TN (800) 251-8508  
Woodland, CA (800) 759-6019  
Rogers, MN (800) 328-9316  
Spokane, WA (800) 572-6565

Jefferson, OH (800) 321-5833  
Rock Island, IL (800) 747-1206  
Sellersburg, IN (800) 999-7777  
Jacksonville, FL (800) 394-4419  
Orwigsburg, PA (800) 544-2577  
Independence, MO (800) 747-0012  
Fontana, CA (800) 782-7953

Anchorage, AK (866) 640-7663  
Bay City, MI (888) 777-7640  
Detroit Lakes, MN (888) 594-1394  
Mocksville, NC (800) 228-6119

©MS1280-2C/07-2008

Need help finding the right chimney pipe? Try our Chimney Wizard today!



Home > [Chimney Products](#) > [Stove & Chimney Pipe](#) > [Class A Chimney Pipe](#) > [6" Chimney Pipe](#) > [6" DuraTech Chimney](#)  
> 6" and 8" DuraTech Extended Roof Bracket - 6DT-XRS

6" and 8" DuraTech Extended Roof Bracket - 6DT-XRS



SKU: NLE5SP\_6DT\_XRS  
MPN: 810007990

\$123.98

Quantity Discounts

- Buy 2 or more and save 3%
- Buy 6 or more and save 6%
- Buy 12 or more and save 10%



# DuraTech<sup>®</sup>

All-fuel, double-wall  
chimney system.

UL 103 HT, UL 103, and ULC S604.





## Specifications

### Applications

5"-8" DuraTech is a double-wall, all-fuel chimney system for use with wood stoves, fireplaces, furnaces, boilers, ranges, water heaters, or other appliances fueled by wood, oil, coal, or gas, and zero-clearance fireplaces that are factory-built.

### Materials and Construction

5"-8" diameter pipe features inner wall of .020" 430 stainless steel. Outer wall options of .016" 430 stainless steel or .021" galvalume steel. A Refractory insulation is encased between walls. Stainless steel end rings seal the pipe.

DuraTech features light weight insulation, twist-lock fittings, support boxes with factory installed starter sections, elbows with 360° swivel base, select black finish pipe lengths, five foot length pipe sections, and adjustable pipe lengths.

### Clearances

2" clearance to combustibles.

### Shrouds

UL Listed with DuraVent shroud specifications. Information available online at [www.duravent.com](http://www.duravent.com) or call and request L157.

### Diameters

5"-8"

### Listings

c-UL-us Listed to UL 103 HT and ULC S604 (MH7399)  
(Stainless steel outer wall required for oil-burning installations in Canada).



## UL 103 HT and ULC S604 System

### DuraTech 5"-8"

With a Refractory insulation encased between dual walls, DuraTech offers the optimum in safety and performance. It keeps the outer wall of the chimney cool while ensuring high flue gas temperatures for optimum draft performance.

The inner wall is 25% thicker than competitive chimneys for an extra margin of safety. No locking bands or mechanical fasteners required.

DuraTech's sleek 1" wall design provides for easy installations through 16" on-center framing. For tight installations, a Reduced Clearance Square Ceiling Support Box is available (6" diameter DuraTech only).

Designed for normal, continuous operation at 1000°F flue gas temperatures, DuraTech is subjected to rigorous and stringent high temperature requirements of the UL standard, including one hour at 1400°F, plus three ten-minute chimney fire test at 2100°F.



## UL 103 System

### DuraTech 10"-24"

DuraVent now offers DuraTech in large diameters to vent large-scale residential fireplaces and building heating appliances.

10"-24" DuraTech chimney is tested and listed for continuous operation at 1000° F flue gas temperatures, one hour at 1400° F and ten-minutes at 1700° F, in accordance with the UL 103 test standard.



## Specifications

### Applications

10"-24" large diameter DuraTech is a 1" wall, all-fuel chimney system for use with wood stoves, fireplaces, furnaces, boilers, ranges, water heaters, or other appliances fueled by wood, oil, coal, or gas.

### Materials and Construction

10"-24" diameter pipes feature an .027" 430 stainless steel inner wall and an outer wall of .029" galvalume or .027" 430 stainless steel. A Refractory insulation is encased between walls. Only stainless pipes use the stainless end rings. Regular galvalume pipe uses galvalume end rings.

### Clearances

2" clearance to combustibles.

### Shrouds

UL Listed with DuraVent shroud specifications. Information available online at [www.duravent.com](http://www.duravent.com) or call and request L157.

### Diameters

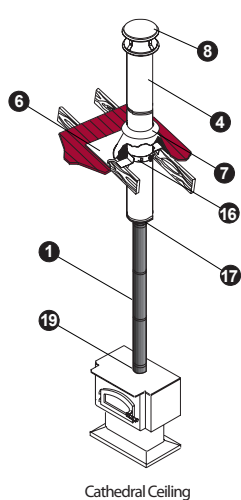
10", 12", 14", 16", 18", 20", 22", and 24".

### Listings

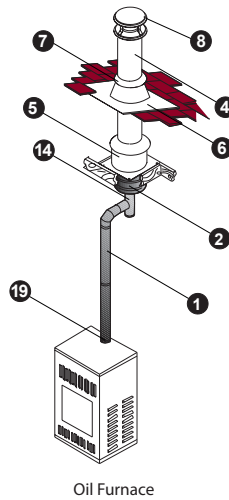
c-UL-us Listed to UL 103 and ULC S604 (MH7399)  
(Stainless steel outer wall required for installation in Canada.)



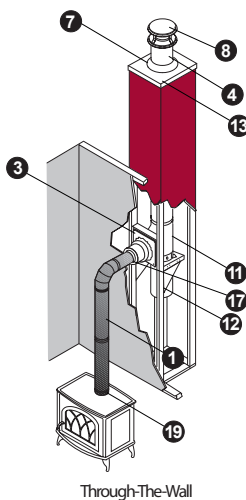
## Typical Installations For 5"- 24" DuraTech



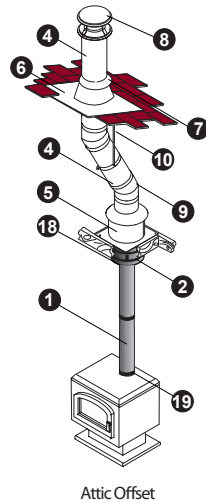
Cathedral Ceiling



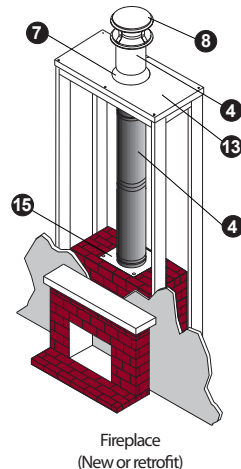
Oil Furnace



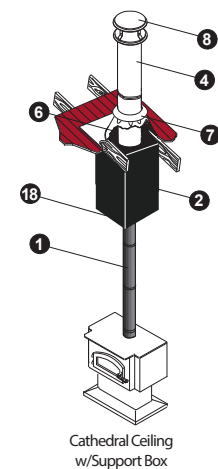
Through-The-Wall



Attic Offset



Fireplace  
(New or retrofit)



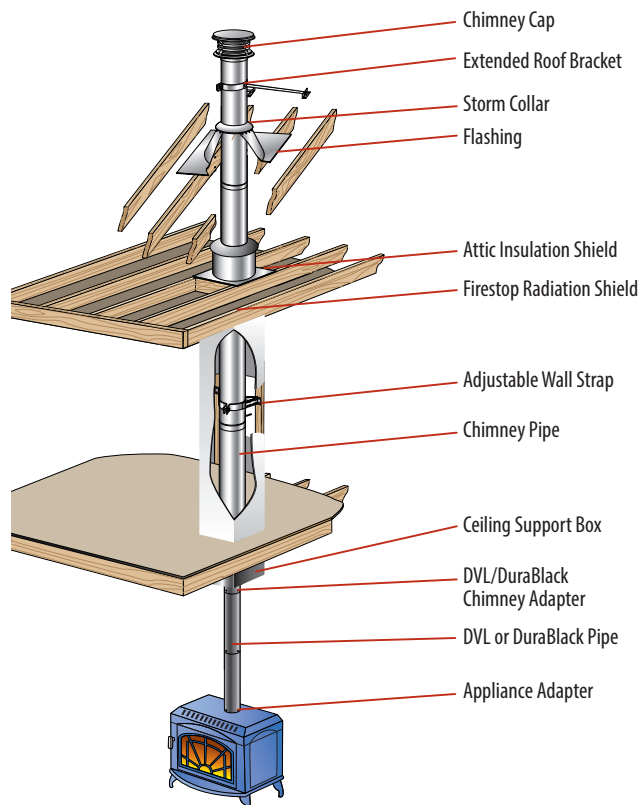
Cathedral Ceiling  
w/Support Box

### Installation Key

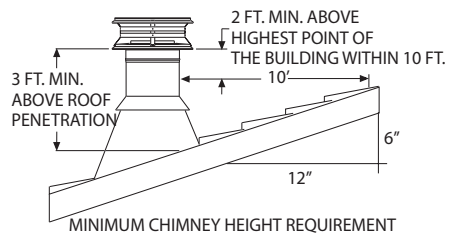
|    |                         |    |                                                             |
|----|-------------------------|----|-------------------------------------------------------------|
| 1  | DVL or DuraBlack        | 11 | Tee with Tee Cap                                            |
| 2  | Ceiling Support         | 12 | Tee Support                                                 |
| 3  | Wall Thimble            | 13 | Chase Top Flashing                                          |
| 4  | Chimney Pipe            | 14 | Base Tee/Double Tee                                         |
| 5  | Attic Insulation Shield | 15 | Anchor Plate or Anchor Plate with Damper                    |
| 6  | Flashing                | 16 | Roof Support                                                |
| 7  | Storm Collar            | 17 | Finishing Collar                                            |
| 8  | Chimney Cap             | 18 | DVL Adapter, DuraBlack Slip Connector, or Snap-Lock Adapter |
| 9  | Elbow                   | 19 | DVL Adapter (w/ or w/o damper)                              |
| 10 | Elbow Strap             |    |                                                             |

Refer to our Typical Installation drawings to select the appropriate component parts for your installation.

- DVL/DuraBlack Chimney Adapter must be used when connecting DVL pipe to a Ceiling Support Box or Finishing Collar. When connecting DuraBlack pipe, a DVL/DuraBlack Chimney Adapter, DuraBlack Slip Connector, or Snap-Lock Adapter must be used.
- Wall Thimble must be installed with an appropriate length of chimney pipe for all horizontal through-the-wall installations. To accommodate thicker walls, the telescoping pieces of the Wall Thimble can be separated, and a field-fabricated extension may be installed.
- Attic Insulation Shield must be used in all installations that pass through an attic, regardless of whether the attic is insulated or not.
- Firestop Radiation Shield must be used when a chimney passes through a floor or ceiling without a support box.



## Planning Your Installation



**Figure 1**

The following recommendations are general guidelines to assist in the layout and selection of the chimney components needed for your installation. Always follow DuraVent Installation instructions before installing your chimney system, found with the cap or support box. Installation instructions can be viewed online at [www.duravent.com](http://www.duravent.com).

- The diameter of the chimney should match the outlet size of the appliance. An improperly sized chimney results in poor draft and excessive creosote formation.
- Measure the diameter of the appliance flue outlet. Select the chimney and either DVL or DuraBlack connector stovepipe with the same size diameter as the appliance flue outlet. For fireplace installations, refer to the sizing chart in the back of this catalog section.
- Determine if the installation is a through-the-roof installation or a through-the-wall installation. A through-the-wall installation will require additional components (Wall Thimble, Tee/ Cap, Tee Support, and Wall Straps).
- Install the chimney in the interior of the structure whenever possible. A cold exterior chimney will produce less draft and will generate more creosote.
- If possible avoid offsets that serve to restrict the natural draft. A straight vertical installation is more efficient and less likely to develop creosote. If an offset is required to avoid rafters or other obstructions, measure the horizontal distance required and the vertical height available. Both 15° and 30° elbows are available. Elbows have a 360° swivel base to allow orientation of elbow direction only. Elbows are fixed at 15° or 30°. Elbows greater than 30° are not allowed in the United States. A maximum of two offsets (four elbows) in a single installation are permitted. Refer to the offset table in the back section of this catalog. At least one Elbow Strap is required for each offset. Elbow Straps ensure adequate support.
- Determine the minimum chimney height above the roof line. Building codes require a minimum of 3' above the roof penetration and at least 2' higher than any portion of a building within 10'. See figure 1. The termination cap is installed above that point. If the chimney extends 5' or more above the roof penetration an extended roof bracket is required. An additional roof bracket is needed every 5'.
- Measure the roof pitch. For example a 6/12 pitch has a vertical rise of 6" over a horizontal distance of 12". Select the appropriate flashing.
- Determine the total length of chimney and stovepipe required for the installation. To calculate the installed length of 5"-8" DuraTech pipe, subtract 1 1/4" per joint. For 10"-24" diameter, subtract 1" per joint. Subtract 1 1/4" per joint of DuraBlack stovepipe. Subtract 1 1/2" per joint of DVL stovepipe. Minimum chimney height, at sea level, of straight vertical chimney is 10' to 15' above the appliance outlet. Higher elevations, or the use of elbows or a tee, will require approximately 30% to 60% more height to provide an adequate draft.
- For a UL approved shroud, see the DuraTech Shrouds Installation Instructions (L157). View online at [www.duravent.com](http://www.duravent.com), under support > literature.
- Be fire safe. Maintain at least 2" clearance to combustibles. Follow local building codes and have your chimney inspected by a certified professional.



# What makes us different from the rest?

DuraTech: The optimum in safety and performance for an all-fuel chimney.



| DuraTech Feature                                     | Benefit                                                                                                                                                                                                                   | DuraTech Feature                                                                                                           | Benefit                                                                                                                                                                                                                             | DuraTech Feature                                          | Benefit                                                                                                                                                               |
|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5" through 24" diameter selection                    | Gives the installer the largest variety of diameters to fit and size the fireplace or stove properly.                                                                                                                     | 1" Refractory Insulation Blanket                                                                                           | Ensures complete insulation coverage between inner and outer walls, preventing any hot spots from appearing due to expansion of the metal walls during operation. Hot spots could cause a fire.                                     | 15 and 30 Degree Elbows come with swivel base             | The swivel base allows an installer to line up the elbow without unlocking and repositioning the elbow, saving time and money.                                        |
| 6", 9", 12", 18", 24", 36", 48" and 60" pipe lengths | Gives the installer the greatest variety of lengths to reach the desired height with ease and least amount of pipe sections.                                                                                              |                                                                                                                            |                                                                                                                                                                                                                                     | 15 and 30 Degree Elbows come in kits                      | This ensures that the installer gets both the offset and return elbow along with an elbow support bracket to make a properly code approved offset.                    |
| Twist Lock End Rings for 5" - 8"                     | Allows the installer to safely and easily connect and disconnect chimney sections without mechanical fasteners. Encases insulation to prevent exposure to outside elements. No locking bands required.                    | Factory Installed Starter Section in the Support Box                                                                       | Allows the installer a safe, quick and easy connection of chimney to the support box.                                                                                                                                               | Limited Lifetime Warranty                                 | The best Warranty in the industry. 15 years 100%, 15 years and up 50%. Gives the installer and home owner the greatest peace of mind in a quality installation.       |
| 430 Stainless Steel Inner Wall                       | Corrosion resistant stainless steel with the smallest amount of expansion when exposed to heat. Prevents hot spots from appearing which could cause a fire.                                                               | DuraTech offers 3 support box heights. 12", 24", 36" along with flat and round supports                                    | Gives the installer the most options when dealing with ceiling slopes. Creating the most aesthetically pleasing installation possible.                                                                                              | Adjustable Tee and Wall Support Brackets                  | Guarantees proper clearance to combustibles, allowing the installer to work around changing exterior wall surfaces, avoiding any field fabrication or code violation. |
| .020" thick Stainless Steel Inner Wall for 5"-8"     | Thickest inner wall construction in the industry providing the best protection from creosote fires.                                                                                                                       | Reduced 10" wide Support Box for 6" diameter DuraTech                                                                      | Allows for the smallest area of framing while still maintaining safe and approved clearances to combustibles. Could prevent having to reframe around chimney.                                                                       | Shroud Specifications                                     | Shroud specs allow the installer to create a UL listed shroud to hide the termination at the top of the chase for safest installation.                                |
| Light Weight Construction                            | Light weight Thermo Tech insulation makes pipe sections lighter (5lbs per ft for 6" diameter) to allow the manufacture of 5' lengths, thus the installer has fewer trips up the ladder for a quick and easy installation. |                                                                                                                            |                                                                                                                                                                                                                                     | Adjustable Height Attic Insulation Shield                 | Allows the installer to accommodate deep attic insulation without having to field fabricate an extension. Saves time and money.                                       |
| 1" Double Wall Insulated Pipe                        | Has the smallest outside diameter available to allow easy placement between studs. i.e. 8" O.D. on 6" diameter pipe. Saves from having to reframe around the chimney.                                                     | DuraVent offers 3 easy options to attach Connector Pipe to Chimney System with the DVL/DB adapter or the DB slip connector | Allows installer to connect DVL, DuraBlack or stovepipe to the support box or finishing collar for an easy and quick installation. Adapter screws into support box and ensures a firm connection between stovepipe and support box. | Removable Top Plate and Spark Arrestor on termination cap | Easy cleaning of chimney without having to disconnect and remove the cap. Saves time and money in cleaning.                                                           |

### PORCELAIN AND PLASTIC LAMP HOLDERS

- UL Listed. File Number: E236781.
- Nickel-plated brass screw shell will not corrode.
- Fits 3.25 inch or 4.0 inch outlet box.
- UV resistant Lamp Holders will not fade or discolor.
- Optional Plastic and Metal Safety Cages fit all Lamp Holders.
- Includes corrosion resistant mounting screws.
- Meets the requirements of the 2017 National Electrical Code:
  - Part Numbers: 16500, 16502, 16510, 16512 and 16514 — Articles 410.74(A)(B) and 410.122
  - Part Numbers: 16520, 16522, 16524 and 16526 — Articles 410.52, 410.74(A)(B) and 410.122



| Catalog Number | UPC Number | Description                                                                   | Order Unit | Unit Qty | Unit Pkg | Units/ Case | TL Case Qty | Min Order Qty | MM Req | Ship Wt (Lbs) |
|----------------|------------|-------------------------------------------------------------------------------|------------|----------|----------|-------------|-------------|---------------|--------|---------------|
| 16500          | 16500      | Porcelain Lamp Holder: Keyless, 4-Terminal                                    | EA         | 1        | BX       | 48          | 48          | 48            | Yes    | 33            |
| 16502          | 16502      | Porcelain Lamp Holder: Pull Chain                                             | EA         | 1        | BX       | 48          | 48          | 48            | Yes    | 35            |
| 16510          | 16510      | Plastic Lamp Holder: Keyless, 4-Terminal                                      | EA         | 1        | BX       | 48          | 48          | 48            | Yes    | 11            |
| 16512          | 16512      | Plastic Lamp Holder: Pull Chain                                               | EA         | 1        | BX       | 48          | 48          | 48            | Yes    | 13            |
| 16514          | 16514      | Porcelain Lamp Holder: Pull Chain and 15 AMP Receptacle                       | EA         | 1        | BX       | 48          | 48          | 48            | Yes    | 40            |
| 16520          | 16520      | Porcelain Lamp Holder: Keyless, 4-Terminal with 7" Black and White Conductors | EA         | 1        | BX       | 48          | 48          | 48            | Yes    | 33            |
| 16522          | 16522      | Porcelain Lamp Holder: Pull Chain with 7" Black and White Conductors          | EA         | 1        | BX       | 48          | 48          | 48            | Yes    | 35            |
| 16524          | 16524      | Plastic Lamp Holder: Keyless, 4-Terminal with 7" Black and White Conductors   | EA         | 1        | BX       | 48          | 48          | 48            | Yes    | 11            |
| 16526          | 16526      | Plastic Lamp Holder: Pull Chain with 7" Black and White Conductors            | EA         | 1        | BX       | 48          | 48          | 48            | Yes    | 13            |

#### Accessories

|       |       |                                                                                                                     |    |   |    |    |    |    |     |   |
|-------|-------|---------------------------------------------------------------------------------------------------------------------|----|---|----|----|----|----|-----|---|
| 15680 | 15680 | Compact Fluorescent Lamp: 23-Watt, Self-Ballasted Lamp (5000K); Lumen output is equal to 100-Watt Incandescent Lamp | EA | 1 | BX | 50 | 50 | 1  | No  | 8 |
| 15681 | 15681 | LED A21 Lamp: 15.5-Watt, 5000K, dimmable, Energy Star rated Lumen output is equal to 100-Watt Incandescent Lamp     | EA | 1 | BX | 12 | 12 | 50 | No  | 8 |
| 16100 | 16100 | Safety Cage: Yellow                                                                                                 | EA | 1 | BX | 10 | 10 | 10 | Yes | 1 |
| 16501 | 16501 | Safety Cage: Metal                                                                                                  | EA | 1 | BX | 12 | 12 | 12 | Yes | 6 |

**UNITS OF MEASURE KEY** Order Unit: The Unit to be ordered; Unit Qty: Number of pieces in each Unit; Unit Pkg: Unit Packages contained in the case - Packaging types - BG (Bag), BRL (Barrel), BX (Box), BN (Bulk), PKG (Package), EA (Each), RL (Roll), LB (Pound), C (Hundred), M (Thousand); Units/Case: Unit packages contained in the Case; TL Case Qty: The total number of items in each Master Case; Min Order Qty: The smallest Unit that can be ordered; MM Req: Must order multiples of the Unit in the stated quantities; Ship Wt (Lbs): Total weight of the units per Carton

 HOUSE OF ANTIQUE HARDWARE

☐ 0

< Latches

# Solid Brass Transom Window Latch With Choice of Finish



Selected  
Option

Select Your Finish:  
Finish: