BAR BC DUDE RANCH

CONDITION ASSESSMENT AND REPORT

2011

University of Pennsylvania
Architectural Conservation Laboratory

Mary Catherine Colins • Maria Diadato • Christine Leggio • Nels Youngborg

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INTRODUCTION

Established in 1912 by Struthers Burt and Horace Carncross, the Bar BC Dude Ranch is one of the oldest extant dude ranches in the United States. It is nestled between the Snake River and Teton Park Road to take full advantage of the vistas of the Teton Range. The site itself is a carefully constructed cultural landscape created by ranch owners to include cabins, recreational buildings, a pool, corral, and fencing. At its peak, the site had thirty-six major structures, plus additional out-buildings. These structures were made from local materials in a rustic style and simple floor plan. Most had a cobblestone chimney at one end.

The complex has seen a decline caused by closure and deferred maintenance since its peak period of operation (1912-1941). To assess the condition of the remaining structures at the Bar BC Dude Ranch, Grand Teton National Park commissioned a study by the Architectural Conservation Laboratory of the University of Pennsylvania. The resulting assessment was based on a two-week survey of the Bar BC Dude Ranch. The field survey was conducted from July 19 - 29, 2011, with additional analysis completed over the following months. This report is a description of the method employed and the data generated for this survey. The information, combined with an assessment of the integrity and significance of the structures, can inform future decisions regarding the preservation and maintenance of the Bar BC Dude Ranch.

PURPOSE AND OBJECTIVES

The purpose of this report is to provide resource managers with a quantitative condition assessment of the standing log buildings of the Bar BC Dude Ranch in Grand Teton National Park. This assessment is critical to complement other assessment criteria (see below) to assist the park in preservation planning. It is based on the visual inspection of each structure focusing on key features that were identified as critical to building stability and performance. Structural condition and material deterioration to the roof and foundation of each building were considered essential information.

The majority of the assessment focuses on the exterior of the structures. Interior condition is often visibly evident through deformation and deterioration of the exterior. The interiors contain few elements of structural support, with the exception of added roof and wall braces, which have been noted where present.

The resulting condition assessment provides additional information to existing assessments of each structure based on historical significance and integrity as documented by the National Park Service. By assessing each extant structure in terms of its historical significance, condition, and integrity, a comprehensive preservation plan for Bar BC Ranch can be developed based on the realities of the extant structures and their potential for reuse and interpretation.

METHODOLOGY

DATA COLLECTION

To complete a full assessment of the Bar BC Ranch, three components were considered: historical significance, integrity, and condition. The method outlined in this report focuses primarily on condition, and examines integrity to a lesser extent. A more in depth assessment of integrity and a complete evaluation of historical significance was simultaneously completed by Katherine Longfield, cultural resource specialist for Grand Teton National Park.

Condition refers to the physical state of a building and its individual elements. *Integrity*, according to the Secretary of the Interior's Standards on Historic Preservation, is "the authenticity of a property's historic identity, evidenced by the survival of physical characteristics that existed during the property's historic or prehistoric period". In the case of Bar B C, integrity is a function of condition because the structures have not been subjected to repair or significant restorations. In this case, it was decided that condition, combined with the authenticity of interior architectural features such as doors, windows, and fittings (e.g. shelving), would inform the integrity of the building. For this reason, interior elements are documented. Some architectural elements, like roofs, have gone through sporadic maintenance but minimal full replacements have not occurred. That is why the loss of material contributes to both reduced integrity and a low condition rating. Historical significance is related to the date, use, and prominence of the building within the context of the Ranch's development.

Documents considered included: Historic American Buildings Survey (HABS) of 1980-82, Historic Structure Report (HSR) of 1993, Cultural Landscape Inventory of 1999-2007, and Stabilization Plan of 1997.

To identify detailed conditions of each structure, a field survey form was developed. The form was designed to be sufficiently complex, yet consistent and reproducible, with each architectural element considered separately. One two-page form was completed per building. To ensure greater consistency, it was decided that specific

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conditions would be recorded by each team member for every structure. E.g., the roof condition for all of the structures on the Bar B C Dude Ranch.

The first section of the form identifies the specific building. It includes the LCS (List of Classified Structures) number, the orientation of the building, specific features of the area surrounding the structure, and general information such as the weather, date, and the names of surveyors.

The central part of the form is structured according to the main architectural elements: foundations, walls, roof, porch and chimney. It is important to note that some of these elements have been subdivided first according to their orientation and secondly according to their construction features. For example the north, east, south and west walls have been considered separately and likewise the gable roof has been divided into two slopes, each identified by their cardinal direction. In the case of double cabins and more complex buildings, some elevations have been partitioned in two or more sections depending on their construction. The purpose of this division is to assess each separately and relate its condition to its orientation or relation to other building components and site situations.

For each of these elements, a number of features have been considered and rated so that a variety of significant factors could be evaluated.

In the case of foundations, type and number of footings were considered. For each wall section several characteristics were recorded: the condition of the logs (the upper half and lower half were considered separately), the condition of the sill log (the sill log was not considered in the evaluation of the lower half of logs), the percentage of chinking still extant, openings within the wall, and the condition of the corners. Structural problems recorded included tilting, racking, displacement and deformation. Finally associated aspects that can accelerate the decay process, such as vegetation, grade, and drainage were noted and documented as well.

For each slope of a roof, fundamental attributes were surveyed. These included the skin or covering and condition, wood sheathing condition, the presence of

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deformation, and the number of purlins in sound condition.

The porch analysis identifies the number of posts intact versus the number or posts intended. The survey also documents the number of posts that exhibit no signs of basal rot and which have a closed joint with the upper beam. Additionally, the floor slope and floorboard condition were considered.

Finally the chimney masonry was assessed. Loss of the lower and/or upper portions was noted as well as the presence of significant cracks and evidence of separation from the building.

A table was added to the form and dedicated to interiors. Its purpose was to document the presence of added stabilization poles and bracing, the floor condition and its deformation, the difference between the number of doors openings and the number of original doors still installed, as well as the difference between the number of window openings and the number of original frames and sashes still installed. For a few of the structures, there is a discrepancy between the number of original windows intact because the definition of an intact window changed during the survey process. For some structures, "intact windows" are only recorded if they are installed in the window frame. Later the definition of "intact windows" was expanded to include windows that contained over 50% of their original muntins and glass as well as windows that were not installed in their opening. This means windows that had been removed and were stored within a building. Due to time limitations, this discrepancy was not resolved. The information on original sashes, frames, and doors was more detailed than other elements. Not only was the quantity and condition of the elements recorded, but a sketch of the elements was included as well as a brief descriptor of their "style". It is hoped that this additional information will aid in assessing the integrity of the structures in the future.

For each of these sections within the central form, three fields were added. These fields recorded the presence of temporary stabilization, repairs and notable details not otherwise covered.

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To obtain an overall condition assessment, a rating system was developed for all the described features. This rating system, depending on the attributes, was a scaled description, a choice between yes and no, or a fraction. These ratings have been converted into numerical values, which summarize the concept and allow further elaboration and evaluation through their sum and multiplication.

This rating system allows different scales of interpretation. Either a single element or the entire building can be comparatively assessed and analyzed. A detailed description of each term and condition rating is included in an extended glossary. The glossary includes images to further aid in understanding the evaluation of the conditions.

The information generated in the survey has been entered into a Microsoft Access database. This database provides the ability to analyze the data quantitatively. The data from the survey can be queried to reveal relationships between the condition of the building and the site characteristics as well as comparisons between architectural elements within a single building or across multiple buildings. It is intended that this database will help prioritize stabilization and preservation work on the structures at the Bar B C Dude Ranch in the immediate future.

As visual analyses often prove to be a persuasive and useful tool, the data in Microsoft Access database is linked to a Geographic Information System (GIS) so that it is possible to read conditions across the entire site in a map format. This report includes historic and contemporary maps that were provided by the park. However, for the purpose of examining each structure at the Bar BC Dude Ranch individually in terms of condition, a more accurate geo-located map was necessary. Therefore a map was produced in AutoCAD and used for the shape files in GIS.

Additionally, quantitative comparison between historical and contemporary photographs was completed to aid in the understanding of the processes of deterioration over time. The compilation of a number of photos from different reports facilitated better understanding of the current condition of the buildings.

METHODOLOGY

DATA ANALYSIS

After completion of the field documentation of the structural and material conditions at Bar BC, the data was entered into an Access database. The database was then used to evaluate and compare the information obtained from the field survey. The first analysis was designed to compare the condition of three major structural elements of each structure: the roofs, walls, and foundations. The design of the field survey did not give one overall score for an element, but instead divided the element into various components. For example walls were given a score for the material condition of the logs as well as another score for structural condition, such as racking or tilting of the wall. Therefore it was necessary to combine and compare scores of each component of a major structural element. Averages and descriptive statistics were calculated to represent the overall condition of the structural component. Since each condition was assessed using the same Likert scale, the results were comparable. The following table illustrates the results from the assessment.

Bar BC Condition Assessment
Analysis of Average Structural Component Scores
Poor = 1- 2.49 ; Fair = 2.5 - 3.9 ; Good = 4 - 5

	Foundation	Walls	Roof
Mean ($\bar{x}$)	3.6	4.15	3.02
Median ($\tilde{x}$)	3.64	4.26	3.47
Standard Deviation (σ)	0.67	0.57	1.27
Interquartile Range (Q_1-Q_3)	3.07-4.24	3.78-4.58	1.73-3.92
Population (n)	33	31	30

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The populations for each of the structural components listed above are different due to the extant conditions of the buildings at Bar BC. Two of the structures, 1367 and 1386, have had all roof and wall structural components removed except for the concrete foundations. All other buildings possess walls and roofs, except one structure, 1390, which had no roof due to a fire in 1941. In order to calculate an unbiased average score for each structural component, only observable conditions were added to the average calculation. This meant that structures without roofs or walls were given a null score for missing components.

The mean scores in the table above indicate that the structures are in fair to good condition, with roofs being the most significantly damaged component. Although the average score for roofs indicate a fair condition ($\bar{x}$ = 3.02), the standard deviation (σ = 1.27) indicates that there is a significant amount of structures that have roofs in poor condition (Roof score < 2.5). Also, foundations have a standard deviation that indicates a poor trend (σ = .67); however, not as poor as the trend shown in the roofs.

The condition assessment performed at Bar BC provided information that could be interpolated to determine specific hazards to the structural integrity of the buildings on site. Three different aspects of the site were directly observed: environmental factors, architectural features, and structural components. Each aspect is important to understanding how the buildings will perform over time. Using regression analysis, each aspect was compared against another to determine if there was a correlation between them. A correlation between the two aspects could indicate a cause and effect relationship. If the process of decay can be explained by cause and effect of observable conditions, then measures can be taken to mitigate hazards and prolong the remaining useful life of the structures.
The following demonstrates the different relationships that were studied as part of this analysis:

METHODOLOGY

	Observed Relationship
1. External causes and structural effects	
a. Trees within 20 feet of structure and Average Roof Score	X
b. Vegetation and Sill Log Condition	
c. Orientation and Average Roof Score	X
d. Orientation and Average Wall Score	X
e. Soil Grade and Sill Log Condition	X
f. Soil Slope and Sill Log Condition	
2. Feature causes and structural effects	
a. Corner Condition and Mechanical Condition of Walls	X
b. Corner Condition and Material Condition of Walls	
c. Sill Log Condition and Mechanical Condition of Walls	X
d. Sill Log Condition and Material Condition of Walls	
e. Purlin Condition and Material Condition of Walls	
f. Material Condition of Walls and Mechanical Condition of Walls	
g. Mechanical Condition of Walls and Purlin Condition	
h. Purlin Condition and Mechanical Condition of Walls	
i. Roof Condition and Purlin-end Condition	X
3. Structural causes and structural effects	
a. Average Roof Score and Average Foundation Score	
b. Average Roof Score and Average Wall Score	X
c. Average Wall Score and Average Roof Score	X
d. Average Wall Score and Average Foundation Score	
e. Average Foundation Score and Average Roof Score	
f. Average Foundation Score and Average Wall Score	

FINDINGS

To begin the comparison analysis, the structural causes and structural effects were studied first. This analysis showed that wall conditions and roof conditions were related. A regression analysis was performed on the average scores for each of the major structural components: foundations, walls and roofs. The results demonstrated that the condition of the walls is significantly related to the condition of the roofs, i.e. a building with a low score for roof condition often has walls that also score low for condition. Regression analysis did not show any significant relationships between walls and foundations or foundations and roofs. Since roof and wall condition are closely related, these variables were further analyzed in an attempt to isolate conditions that have the greatest effect on each of the structural components. Roofs protect the walls and interiors from exposure to the environmental hazards and are equipped with sacrificial materials such as asphalt or metal roofing that will decompose under the heavy onslaught of UV radiation and precipitation. Underneath the roofing material is a layer of sheathing made of plywood or wood planks. This layer is supported by a series of wooden purlins that are exposed on the interior of the buildings. No insulation material has been installed into the roofing system. Of all the construction materials within each structure, the roofing has the lowest average useful life due mainly to the sacrificial skin of asphalt rolled roofing and minimal maintenance of the structures. Therefore, it is not surprising to find that the roofs have the most apparent damage as compared to the walls and foundations. However, the roofs are first defenders of the other structural components of the buildings, so the maintenance of roofing components is of the upmost importance.

The data gathered suggested that structures with roofs in good condition had walls in good condition. Therefore, it is important to identify what environmental circumstances were of greatest significance to the condition of the roofs. Two of the environmental variables that had the highest correlation were roof orientation and the presence of trees within twenty feet. Trees add twig and leaf litter to roofs which could retain moisture and create adverse conditions that speed deterioration of the asphalt roofs, and suffocate the vegetation on sod roofs. Metal roofs were not as affected by tree litter accumulation, however there was only one structure at Bar BC that had this type of roofing and it was installed within

FINDINGS

the past few years, so it is possible that the good condition of the metal roof is not a function of its location to trees, but instead, a function of its relatively recent installation. Both sod and asphalt were historically used as roofing materials; however these types of roofs have shorter average useful life.

Results of the analysis show that roofs with a north-south orientation had more severe conditions than roofs with east-west orientation. They exhibited worse overall condition of the roofing material and plywood sheathing. However, the rate of deformation in the roofs was consistently high between both gable orientation types. This relationship could be caused by environmental hazards such as prevailing winds and sun patterns. These hazards could damage the roof both directly and indirectly. Since our results show a relationship between the condition of the roof and the condition of the walls, a north-south orientation could indirectly affect the roof by damaging the walls, therefore leading to potential roof damage. Analysis of wall orientation and condition show that a north-south orientation correlated with worse condition, just as analysis for roof orientation and condition had shown.

Another relationship that was analyzed was purlin condition and average roof condition. The results of this analysis showed a very strong relationship. Poor purlin conditions were associated with poor roof scores, and good purlin scores were associated with good roof scores. Since this was a strong relationship, a failure in one component most likely would lead to the failure in the other. Roof material had the shortest useful life, so this component would deteriorate the fastest. Failure in the roofing material leads to deterioration of the sheathing and then will lead to deterioration of the purlins.

FINDINGS

Although many of the walls exhibited signs of wear and damage, the overall material condition was good. Most structures of log construction exhibited little damage to the actual members within the wall. However, the structural conditions of the walls did not perform as well. The structural and mechanical conditions observed during the field survey affected the integrity of the wall as a load bearing component. These adverse structural conditions were identified as tilting, racking, displacement and deformation. In order to understand what environmental conditions were contributing to these types of damage, wall corners, purlins and sill logs were identified as potential contributors.

Analysis of sill logs and structural conditions (an average of tilting, racking, displacement, and deformation scores) within the walls showed a unilateral relationship. Instead of a mutually damaging relationship, the presence of mechanical deterioration was often indicated by a damaged sill log, but damaged sill logs were not good indicators of mechanical deterioration. Also, not all four of the mechanical deterioration types were associated with sill condition. The presence of deformation and tilting often involved a sill log in poor condition, whereas racking and displacement showed a weak relationship to the condition of the sill log. The relationship between purlin condition and the structural condition of the walls did not provide a good indicator of condition. Further analysis of the relationship between purlin condition and structural condition within each wall corner type may demonstrate higher correlations. For example, box and post log cabins may have worse structural wall damage and deteriorated purlins, as opposed to more secure corner types like square notch and saddle joined structures. The analysis between corner type and structural wall condition showed a strong relationship between tilting, racking and deformation. However, displacement was not a good indicator of corner condition. Once again, this analysis may be enriched by further analysis of each category of corner type due to the structural rigidity of square notch and saddle log joints compared to box and post structures that lack rigidity in the corners.

FINDINGS

The sill logs of the cabins exhibited more damage than other components within each wall. This is due to the hazards that constantly surround the material and pose perpetual risk. Three of these hazards identified within the condition assessment were presence of dense vegetation, grade level and slope of drainage. Analysis of these relationships demonstrated that soil grade had the strongest relationship with the condition of the sill log. A positive soil grade was related to a lower sill log condition score, while a negative grade was related to a higher sill log condition score. A zero grade level had a less significant relationship to sill log condition, however, it was slightly negative. Each of the relationships studied showed a trend in environmental hazards and sill condition, yet no single hazard could be identified as the strongest indicator of condition.

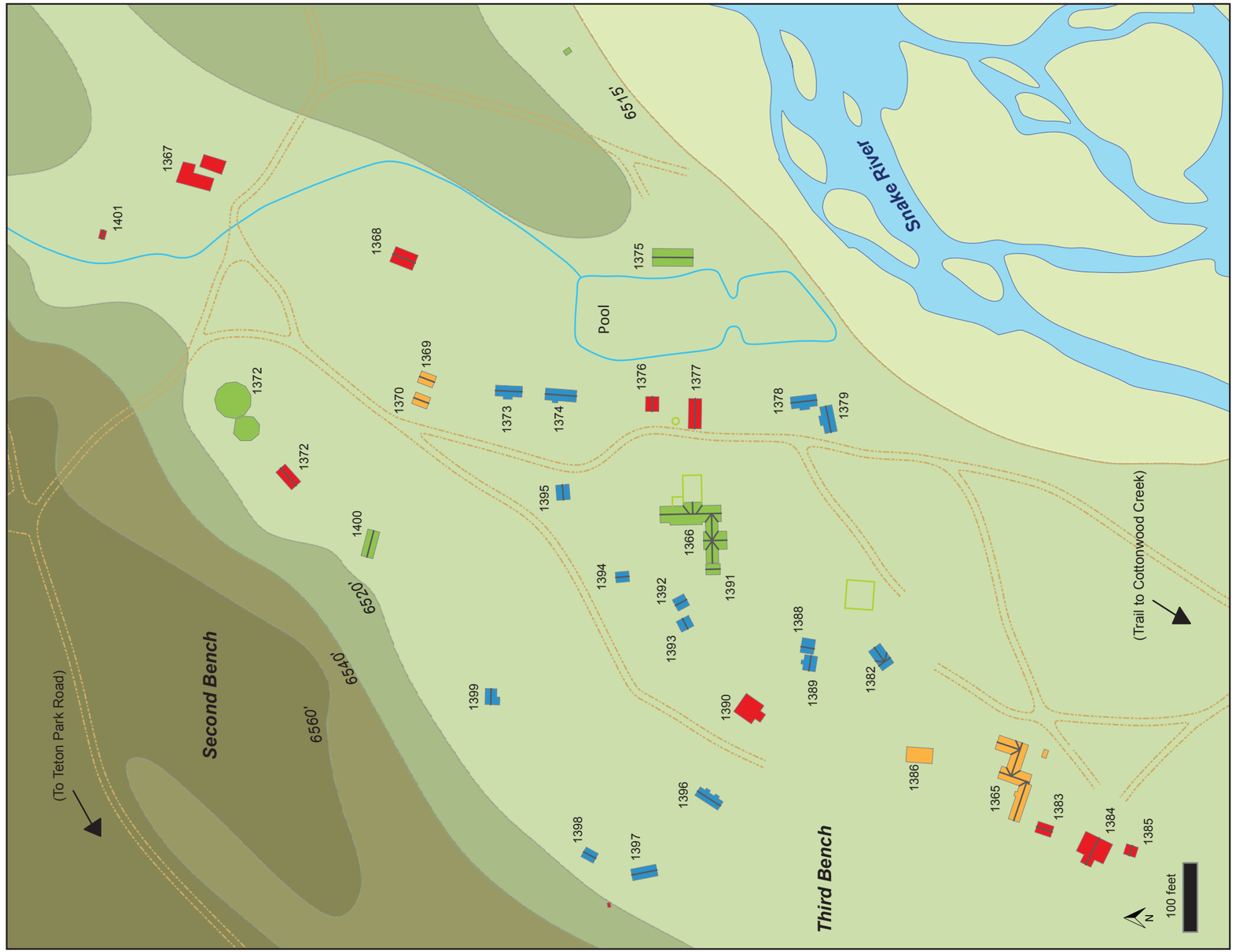
The Access database and ArcGIS files that were produced as part of this survey can be used to further investigate relationships between the condition of cabin components and between cabins themselves. It is hoped that this information can aid the National Park Service in understanding the deterioration of the structures at the Bar BC Dude Ranch and assist in prioritizing maintenance and repair for each structure.

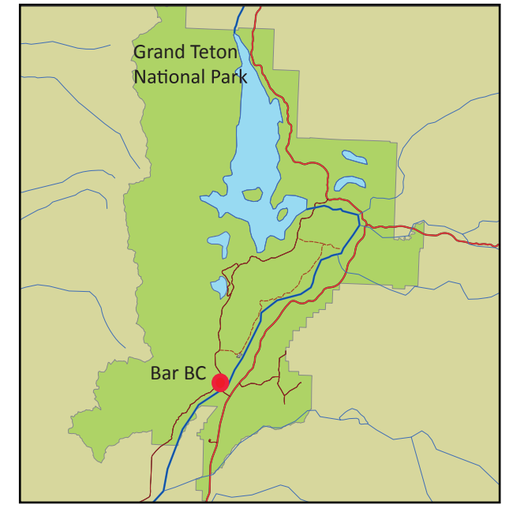
BUILDING USE

BAR BC DUDE RANCH

Grand Teton National Park, WY

Graduate Program in Historic Preservation
University of Pennsylvania, 2012
Documentation Team: Mary Catherine Collins, Maria Diadato, Christine Leggio, Nels Yougborg



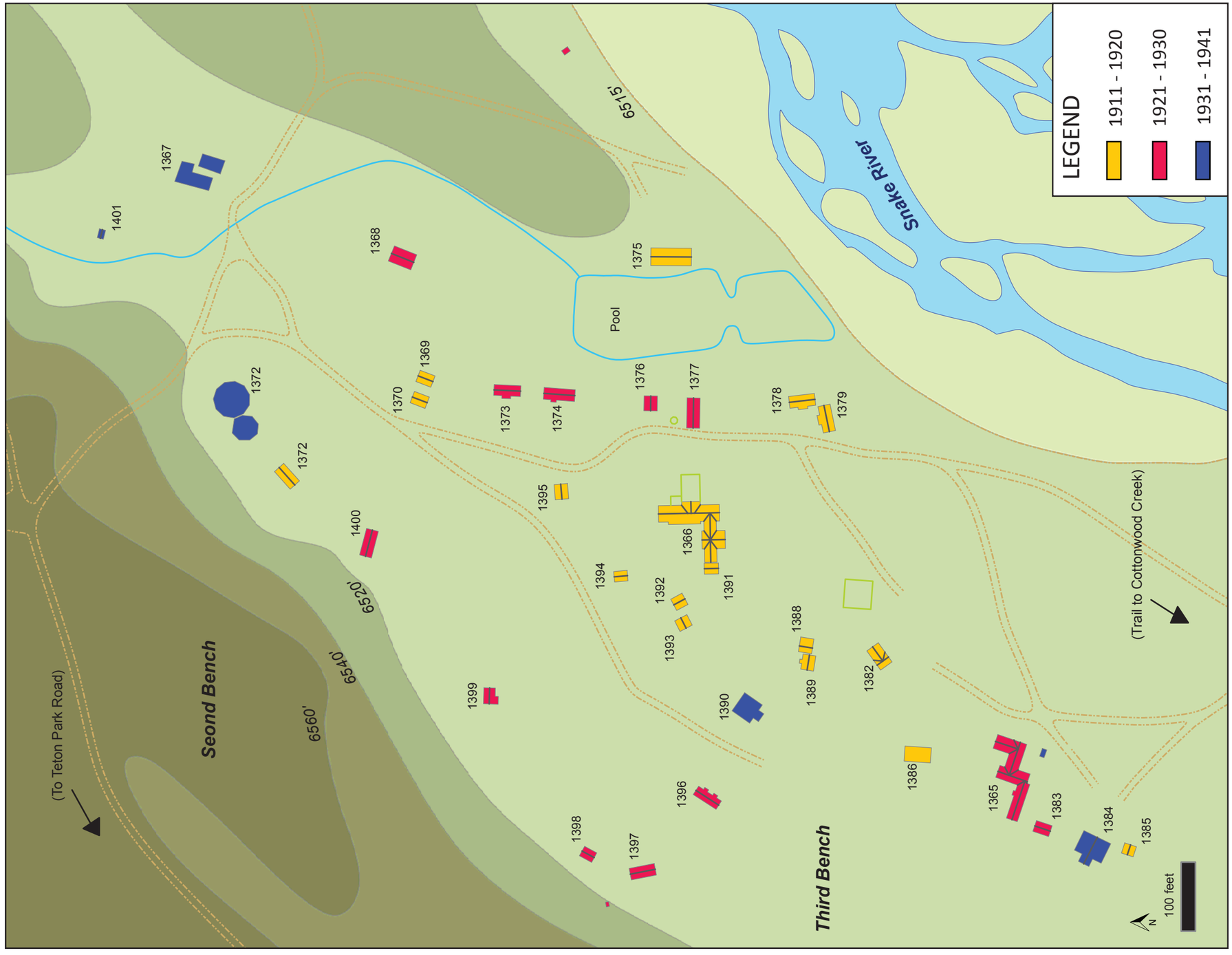


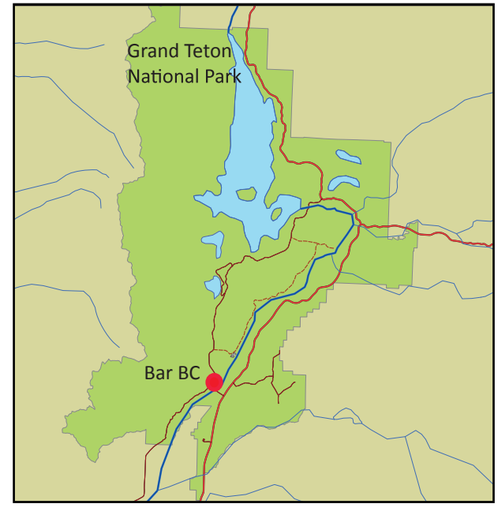
Sources: Graham, Roy Eugene. Bar B-C Dude Ranch Historic Structures Report. National Park Service, U.S. Department of the Interior. Washington, D.C. 1993; Burt, Maxwell Struthers. Diary of a Dude-Wrangler, Charles Scribner's Sons, 1925; Burt, Nathaniel. Jackson Hole Journal, University of Oklahoma Press. 1983

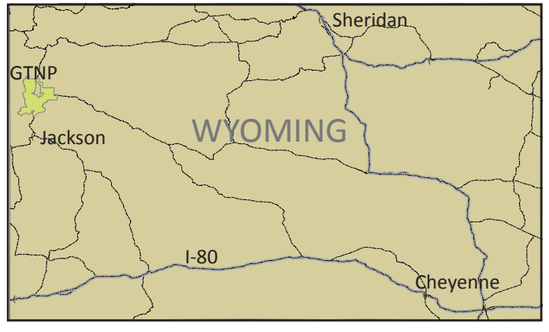
CONSTRUCTION CHRONOLOGY

BAR BC DUDE RANCH
Grand Teton National Park, WY

Graduate Program in Historic Preservation
University of Pennsylvania, 2012
Documentation Team: Mary Catherine Collins,
Maria Diadato, Christine Leggio, Nels Yougborg





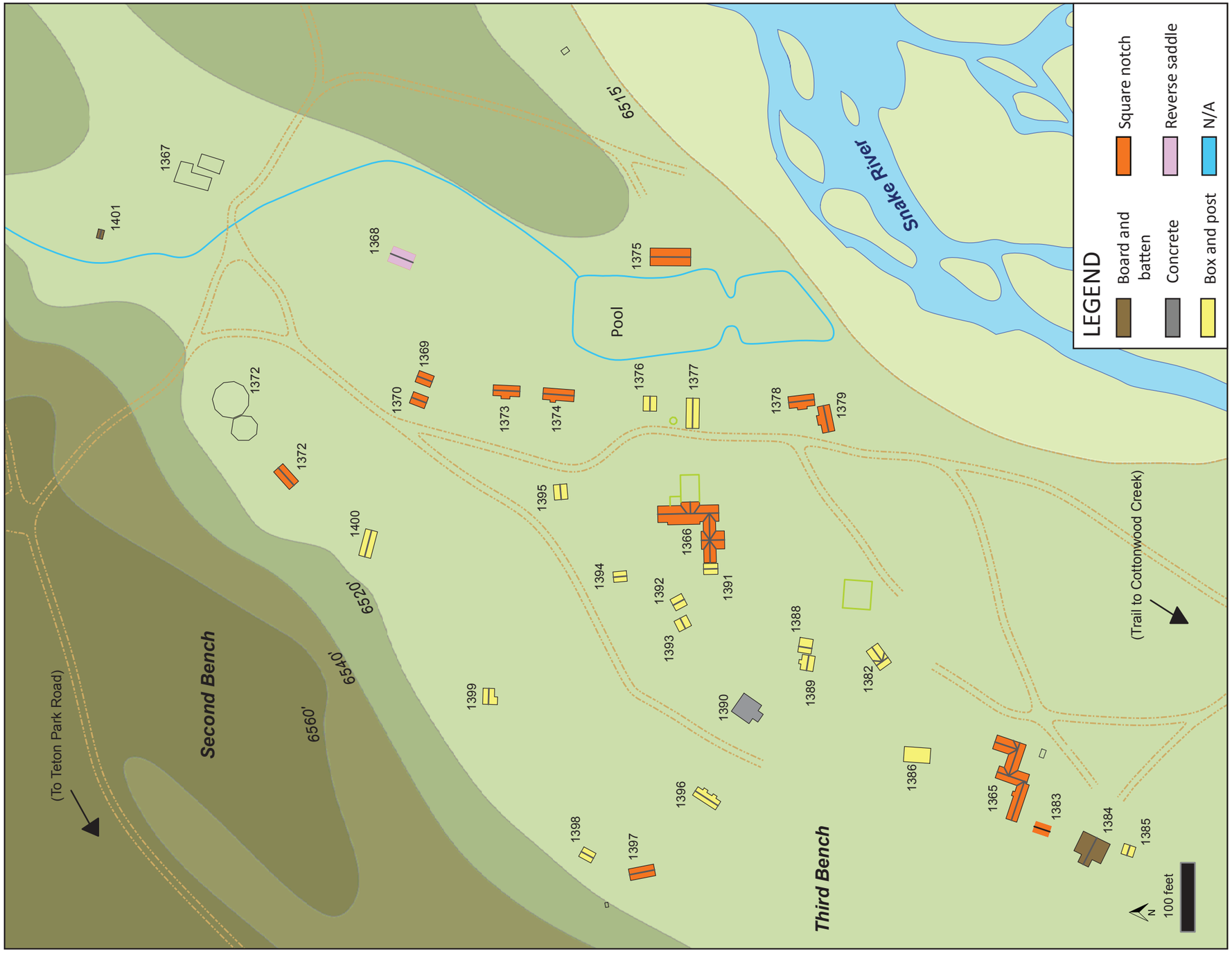


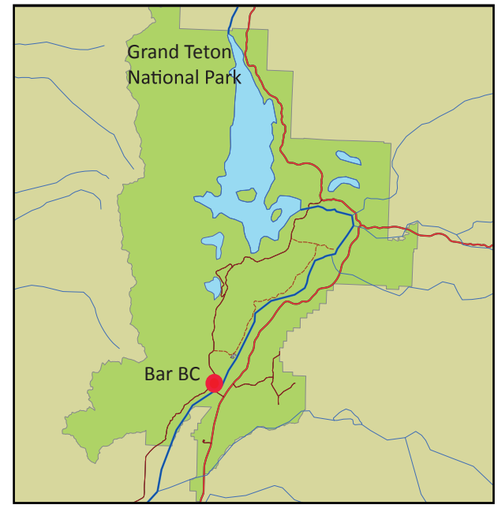
Sources: Graham, Roy Eugene. Bar B-C Dude Ranch Historic Structures Report. National Park Service, U.S. Department of the Interior. Washington, D.C. 1993; Burt, Maxwell Struthers. Diary of a Dude-Wrangler, Charles Scribner's Sons, 1925; Burt, Nathaniel. Jackson Hole Journal, University of Oklahoma Press. 1983

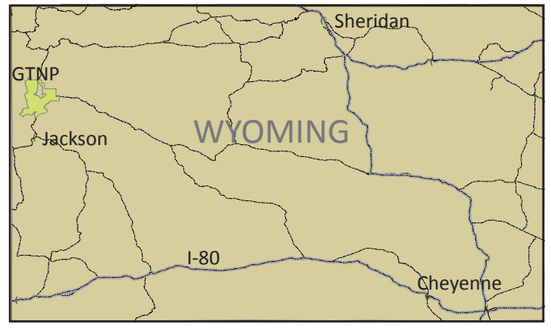
WALL CONSTRUCTION

BAR BC DUDE RANCH
Grand Teton National Park, WY

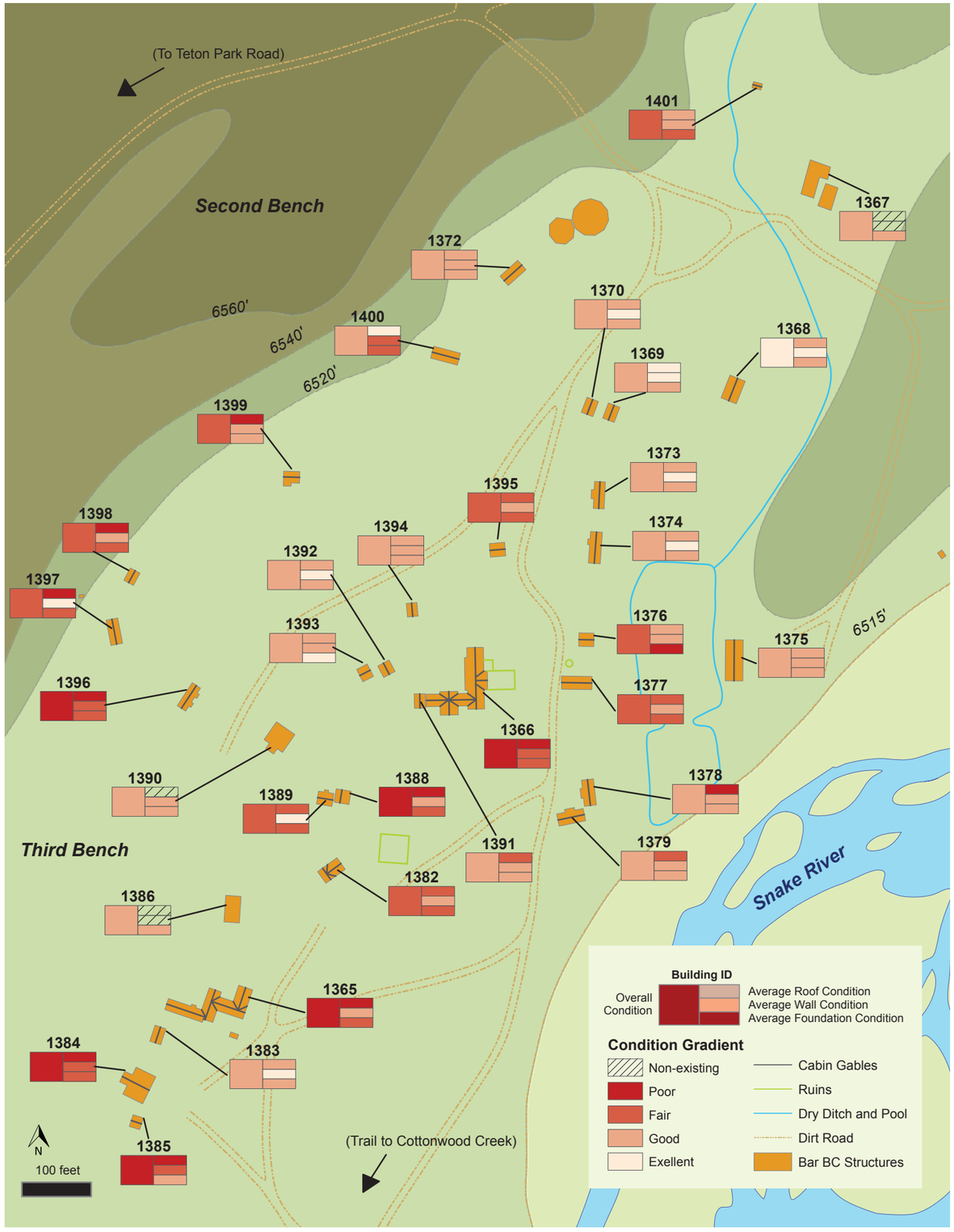
Graduate Program in Historic Preservation
University of Pennsylvania, 2012
Documentation Team: Mary Catherine Collins, Maria Diadato, Christine Leggio, Nels Yougborg







Sources: Graham, Roy Eugene. Bar B-C Dude Ranch Historic Structures Report. National Park Service, U.S. Department of the Interior. Washington, D.C. 1993.



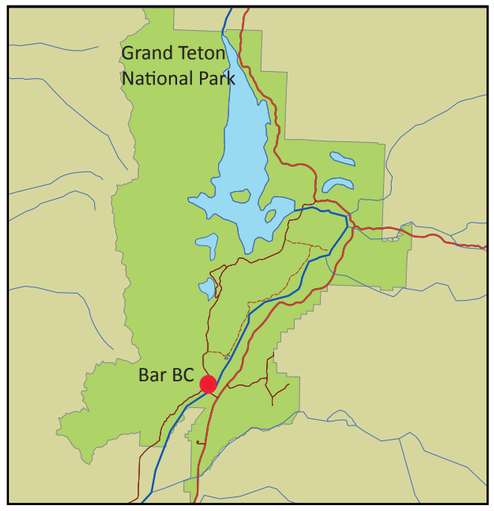
NPSNum	Overall Average	Average Found	Average Wall	Average Roof
1384	2.39	3.15	2.90	1.13
1385	2.41	3.48	2.76	1.00
1396	2.52	3.13	3.43	1.00
1388	2.77	2.80	3.72	1.78
1365	2.78	2.89	4.22	1.21
1366	2.85	3.19	3.47	1.89
1398	2.88	3.25	4.39	1.00
1397	3.07	2.97	4.69	1.56
1399	3.13	3.90	4.28	1.22
1377	3.24	3.00	3.85	2.88
1376	3.28	1.90	4.28	3.67
1382	3.36	2.83	3.90	3.35
1401	3.38	2.80	3.58	3.75
1395	3.45	3.25	4.00	3.11
1389	3.47	3.15	4.58	2.67
1378	3.58	3.97	4.26	2.50
1379	3.65	4.17	4.13	2.67
1400	3.69	2.63	3.44	5.00
1391	3.86	4.35	3.78	3.44
1375	3.96	3.93	4.44	3.50
1394	3.98	4.30	3.97	3.67
1372	4.02	3.64	4.42	4.00
1392	4.16	3.85	4.86	3.78
1393	4.17	4.50	4.11	3.89
1383	4.19	4.10	4.92	3.56
1374	4.20	3.98	4.51	4.11
1373	4.28	4.07	4.87	3.89
1369	4.38	3.60	4.97	4.56
1367	4.40	4.40		
1386	4.40	4.40		
1390	4.42	4.40	4.45	
1370	4.45	4.40	4.83	4.11
1368	4.45	4.40	4.63	4.33

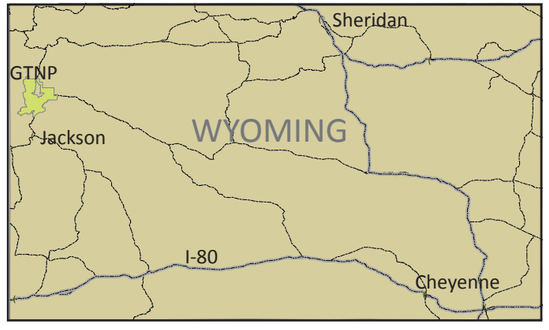
OVERALL CONDITIONS

BAR BC DUDE RANCH

Grand Teton National Park, WY

Graduate Program in Historic Preservation
University of Pennsylvania, 2012
Documentation Team: Mary Catherine Collins, Maria Diadato, Christine Leggio, Nels Yougborg





Sources: Graham, Roy Eugene. Bar B-C Dude Ranch Historic Structures Report. National Park Service, U.S. Department of the Interior. Washington, D.C. 1993; Burt, Maxwell Struthers. Diary of a Dude-Wrangler, Charles Scribner's Sons, 1925; Burt, Nathaniel. Jackson Hole Journal, University of Oklahoma Press. 1983

BAR BC Condition Assessment

SURVEY DATA: OVERALL

NPS ID Number	Dude Cabin Number	Date Surveyed	Date Entered	Weather while Surveying	Number of Trees w/in 20 Feet	Presence of Overhanging Branches	Gable Direction	Foundation Type	Foundation Footings (# in Good Condition/ # intended)	Foundation Stabilization?	Foundation Repairs?	Foundation Notes	Average Foundation Condition Score	Average Wall Condition Score	Average Roof Condition Score	Purlin Condition (# in good condition/ # intended)	Purlin Condition Score	Roof Notes
1365		07/26/11	8/25/2011	SUNNY	20	YES	ALL	SLAB	0	FALSE	FALSE		2.89	4.22	1.21	15/20	3	COULDN'T GET INTO 1365-B, THE STORE ROOM, BECAUSE OF THE TYPE OF NAILS IN THE PLYWOOD BLOCKING THE ENTRANCE;
1366		07/26/11	8/31/2011	SUNNY	20	NO	ALL	SLAB	0	FALSE	FALSE		3.19	3.47	1.89	31/47	3	
1367		07/25/11	7/28/2011	FAIR	0	NO	NA	SLAB	0	FALSE	FALSE		4.40			NA		
1368		07/25/11	7/25/2011	SUNNY	0	NO	N-S	RAISED	6/6	FALSE	FALSE		4.40	4.63	4.33	6/7	3	
1369	1	07/25/11	7/25/2011	FAIR	10	YES	N-S	RAISED	2/4	FALSE	FALSE		3.60	4.97	4.56	5/5	5	
1370	2	07/25/11	7/25/2011	FAIR	10	YES	N-S	RAISED	7/7	FALSE	FALSE	FOOTINGS IN FRONT OF CABIN MAY INDICATE THAT IT WAS MOVED	4.40	4.83	4.11	5/5	5	NAILS POPPING OUT ALONG FLASHING
1372		07/25/11	7/25/2011	FAIR	4	NO	N-S	RAISED	11/11	FALSE	FALSE	RAISED FOOTINGS: CABIN STONE 6/6, PORCH CONCRETE 5/5	3.64	4.42	4.00	5/5	5	
1373	3	07/25/11	7/25/2011	SUNNY	5	NO	N-S	RAISED	6/6	FALSE	FALSE		4.07	4.87	3.89	5/5	5	
1374	4	07/25/11	7/25/2011	SUNNY	0	NO	N-S	RAISED	6/6	FALSE	FALSE		3.98	4.51	4.11	5/5	5	FLASHING INSTALLED ALONG ROOF EDGE
1375		07/25/11	7/26/2011	SUNNY	0	NO	N-S	RAISED	8/8	FALSE	FALSE	CONCRETE PAD - SE PAD MAY EXISIT BELOW GRADE BUT NO LONGER SUPPORT STRUCTURE	3.93	4.44	3.50	NA		DEFORMATION OCCURS WHERE PORCH WAS; BOLTS IN TRUSS POSTS AND BEAMS; LOOKS LIKE SHEATHING REPLACED
1376		07/25/11	7/26/2011	FAIR	0	NO	E-W	RAISED	3/4	FALSE	FALSE		1.90	4.28	3.67	5/5	5	
1377	5	07/25/11	7/26/2011	FAIR	0	NO	E-W	RAISED	6/6	FALSE	FALSE	CONCRETE PADS	3.00	3.85	2.88	NA		NEW SHEATHING
1378	6	07/20/11	7/26/2011	SUNNY	0	NO	N-S	RAISED	6/6	FALSE	FALSE		3.97	4.26	5.00	5/5	5	
1379	7	07/20/11	7/26/2011	SUNNY	0	NO	E-W	RAISED	6/6	FALSE	FALSE		4.17	4.13	2.67	4/5	3	
1382		07/22/11	7/26/2011	FAIR	3	NO	N-S	RAISED		FALSE	FALSE		2.83	3.90	3.35	6/6	5	
1383		07/22/11	7/26/2011	FAIR	8	NO	N-S	RAISED	4/4	FALSE	FALSE		4.10	4.92	3.56	4/5	3	
1384		07/22/11	7/26/2011	FAIR	7	NO	E-W	RAISED	8/8	FALSE	FALSE		3.15	2.90	1.13	NA		
1385		07/22/11	7/26/2011	FAIR	10	YES	E-W	RAISED	4/4	FALSE	TRUE	RAISED ON WOODEN SLED FOUNDATION	3.48	2.76	1.00	2/5	1	
1386		07/22/11	7/26/2011	FAIR	5	NO	NA	RAISED	8/8	FALSE	FALSE	BUILDING HAS BEEN DISASSEMBLED, NEW FOOTINGS HAVE BEEN POURED	4.40			NA		
1388	7	07/20/11	7/26/2011	SUNNY	0	NO	N-S	GRADE	0	FALSE	FALSE		2.80	3.72	1.78	5/7	3	
1389		07/22/11	7/28/2011	FAIR	9	YES	E-W	RAISED	4/4	FALSE	FALSE		3.15	4.58	2.67	7/7	5	UNDERNEATH WHERE ASPHALT INTACT, GOOD SHEATHING; WHERE ASPHALT DETERIORATED, SHEATHING DETERIORATED
1390		07/22/11	7/28/2011	FAIR	1	YES	NA	SLAB	0	FALSE	FALSE	CONCRETE POURED FOUNDATION WITH RANDOM RUBBLE WALL FRAGMENTS	4.40	4.45		NA		NO ROOF DUE TO CATASTROPHIC FIRE
1391	8	07/25/11	7/28/2011	SUNNY	4	NO	N-S	RAISED	4/4	FALSE	FALSE		4.35	3.78	3.44	5/5	5	
1392	10	07/25/11	7/28/2011	SUNNY	8	YES	E-W	RAISED	4/4	FALSE	FALSE	STONE FOOTINGS	3.85	4.86	3.78	5/5	5	
1393	9	07/25/11	7/28/2011	SUNNY	10	YES	E-W	RAISED	4/4	FALSE	FALSE		4.50	4.11	3.89	5/5	5	
1394		07/25/11	7/28/2011	FAIR	8	NO	N-S	RAISED	4/4	FALSE	FALSE		4.30	3.97	3.67	3/5	3	
1395	13	07/25/11	7/28/2011	SUNNY	2	YES	E-W	RAISED	4/4	FALSE	FALSE		3.25	4.00	3.11	4/5	3	
1396	14	07/25/11	7/28/2011	FAIR	20	NO	N-S	RAISED	5/6	FALSE	FALSE		3.13	3.43	1.00	1/5	1	
1397	15	07/25/11	7/28/2011	FAIR	3	NO	N-S	RAISED	6/6	FALSE	FALSE		2.97	4.69	1.56	3/5	3	
1398	16	07/25/11	7/28/2011	FAIR	12	NO	N-S	RAISED	4/4	FALSE	FALSE		3.25	4.39	1.00	1/5	1	
1399	17	07/25/11	7/28/2011	SUNNY	15	NO	E-W	RAISED	4/4	FALSE	FALSE		3.90	4.28	1.22	3/5	3	
1400	18	07/25/11	7/28/2011	FAIR	8	YES	E-W	RAISED	5/6	FALSE	FALSE	2 OF THE RAISED FOUNDATIONS ARE CONCRETE	2.63	3.44	5.00	5/5	5	
1401		07/25/11	7/28/2011	FAIR	10	YES	E-W	SLAB	0	FALSE	FALSE		2.80	3.58	3.75	NA		

BAR BC Condition Assessment

SURVEY DATA: PORCHES AND CHIMNEYS

NPS ID Number	Porch Type	# of Porch Posts Originally Intended	# of Porch Posts Present	# of Porch Posts in Good Condition	# of Porch Posts Securely Joined with Roof	Slope of Porch Floorboards	Porch Condition Score	Porch Stabilization?	Porch Repairs?	Porch Notes	Chimney Presence	Chimney Type	Upper Section Condition	Lower Section Condition	Cracking of Chimney	Separation of Chimney from Wall	Chimney Stabilization?	Chimney Repairs?	Chimney Notes
1365	GABLE	2	2	1	1	ZERO	2	TRUE	FALSE		TRUE	RUBBLE	5	5	FALSE	TRUE	FALSE	FALSE	
1366	GABLE	3	3	1	3	NA	1	FALSE	FALSE		TRUE	ASHLAR	5	5	FALSE	TRUE	FALSE	FALSE	EVIDENCE OF TWO OTHER CHIMNEYS, HOWEVER THEY ARE DILAPIDATED AND DISINTEGRATED. MADE OF RUBBLE STONE.
1367	NA							FALSE	FALSE		FALSE								
1368	NA							FALSE	FALSE		FALSE								
1369	GABLE	3	3	3	3	ZERO	5	FALSE	FALSE		FALSE								
1370	GABLE	3	3	3	3	ZERO	5	FALSE	FALSE		FALSE								
1372	NA							FALSE	FALSE		FALSE								
1373	EAVE	3	3	3	3	ZERO	5	FALSE	FALSE		FALSE								
1374	EAVE	2	2	2	2	ZERO	5	FALSE	FALSE		FALSE								
1375	EAVE							FALSE	FALSE	PORCHES REMOVED FROM WEST & EAST SIDES	TRUE	ASHLAR	5	4	FALSE	TRUE	FALSE	FALSE	SOME BRICKS NEED REPLACEMENT; NEEDS MORTAR
1376	NA							FALSE	FALSE		FALSE								
1377	GABLE	2	2	1	1	ZERO	4	FALSE	FALSE		FALSE								
1378	EAVE	2	2	2	2	ZERO	3	FALSE	FALSE	VEGETATION ACCUMULATION IS DAMAGING	TRUE	RUBBLE	4	3	FALSE	TRUE	FALSE	FALSE	
1379	EAVE	3	3	3	2	NEGATIVE	5	FALSE	FALSE		FALSE								
1382	EAVE	2	2	2	2	ZERO	3	FALSE	FALSE	VEGETATION ACCUMULATION IS DAMAGING	FALSE								
1383	NA							FALSE	FALSE		FALSE								
1384	NA							FALSE	FALSE		FALSE								
1385	NA							FALSE	FALSE		FALSE								
1386	NA							FALSE	FALSE		TRUE	RUBBLE	1	1	FALSE	TRUE	FALSE	FALSE	CHIMNEY DESTROYED AND PILED NEAR NEW CABIN FOUNDATION
1388	EAVE	3	3	3	3	NEGATIVE	2	FALSE	FALSE		TRUE	RUBBLE	1	1	FALSE	FALSE	FALSE	TRUE	REMOVED WHILE THE BUILDING WAS IN USE
1389	EAVE	2	2	1	2	ZERO	3	FALSE	FALSE		TRUE	RUBBLE	5	5	FALSE	TRUE	FALSE	FALSE	
1390	NA							FALSE	FALSE		FALSE								
1391	GABLE	2	2	2	2	ZERO	4	FALSE	FALSE		TRUE	RUBBLE	1	3	TRUE	FALSE	FALSE	FALSE	
1392	NA							FALSE	FALSE		FALSE								
1393	EAVE					ZERO	1	FALSE	FALSE		TRUE	RUBBLE	2	3	FALSE	TRUE	FALSE	FALSE	
1394	NA							FALSE	FALSE		TRUE	RUBBLE	1	3	FALSE	TRUE	FALSE	FALSE	
1395	EAVE					NEGATIVE	1	FALSE	FALSE		TRUE	RUBBLE	1	3	FALSE	FALSE	FALSE	FALSE	
1396	EAVE	4	2	0	2	ZERO	1	FALSE	FALSE		TRUE	RUBBLE	3	2	TRUE	TRUE	FALSE	FALSE	
1397	EAVE	4	0	0	0	ZERO	1	FALSE	FALSE		FALSE								
1398	EAVE	2	0	0		ZERO	1	FALSE	FALSE		FALSE								
1399	EAVE	2	2	0		POSITIVE	1	FALSE	FALSE		FALSE								
1400	EAVE	2	2	2	2	NA		FALSE	TRUE		FALSE								
1401	NA							FALSE	FALSE		FALSE								

SURVEY DATA: INTERIORS

NPS ID Number	Interior Stabilization?	# of Doors Installed	# of Doors Installed that are Original	Percent of Doors that are Original	# of Windows Installed	# of Window Frames Installed that are Original	Percent of Frames that are Original	# of Windows Installed that are Original	Percent of Windows that are Original	Floor Condition Score	Deformation in the Floor	Floor Condition Score	Storage of Windows and Doors Inside	Interior Notes
1365	FALSE	16	13	81	22	22	100	20	91	5	TRUE	1		
1366	FALSE	22	6	27	25	20	80	8	32	2	TRUE	1		
1367	FALSE	0	0		0	0		0		0	FALSE	5		
1368	TRUE	3	2	67	5	5	100	2	40	3	TRUE	1		OTHER 3 WINDOWS HAVE PARTS OF ORIGINAL WINDOWS; NEED NEW LOCKS FOR BOTH DOORS
1369	FALSE	1	1	100	2	2	100	2	100	5	TRUE	1		
1370	TRUE	2	2	100	2	0	0	0	0	3	TRUE	1	YES	ONE ORIGINAL WINDOW REMOVED AND STORED; FLOOR BOARDS IN GOOD CONDITION, JOIST BAD CONDITION; ONE LOCK NEED FOR S DOOR
1372	FALSE	1	1	100	1	1	100	0	0	2	TRUE	1		HALF OF WINDOW LEFT INTACT
1373	FALSE	4	3	75	4	4	100	4	100	3	TRUE	1		HAS INTERIOR FURNISHINGS; FLOOR BOARDS GOOD, JOISTS ROTTED
1374	FALSE	3	2	67	4	4	100	4	100	2	TRUE	1		
1375	TRUE	2	1	50	7	6	86	0	0	4	TRUE	1	YES	DOORS ARE FRENCH DOORS, ONE IS CURRENTLY INSTALLED AND THE OTHER IS DETACHED BUT STORED INSIDE; WINDOWS ARE DETACHED AND STORED INSIDE; CONTAINS FURNITURE: LONG BENCH, SHORT
1376	FALSE	1	1	100	1	1	100	0	0	4	FALSE	5		CAGE INSIDE OCCUPIES MOST OF THE INTERIOR; 4/5 OF THE FLOOR COVERED SO MOST FLOOR BOARDS WERE UNABLE TO BE OBSERVED
1377	TRUE	2	0	0	4	3	75	0	0	5	FALSE	5	YES	ORIGINAL WINDOWS DETACHED AND STORED INSIDE; DOOR DETACHED AND STORED INSIDE; CONTAINS SHELVES AND CLOSETS
1378	FALSE	3	1	33	4	4	100	0	0	4	TRUE	1	YES	ORIGINAL DOORS AND WINDOWS DETACHED AND STORED INSIDE
1379	FALSE	3	1	33	4	4	100	0	0	4	TRUE	1	YES	ORIGINAL WINDOWS AND DOOR INSIDE
1382	FALSE	2	2	100	4	3	75	3	75	4	FALSE	5		ONE WINDOW MAY HAVE ORIGINAL WINDOW INSTALLED, BUT COVERED BY TARP AND PLYWOOD
1383	FALSE	0	0		0	0		0		0	FALSE	5		COULDN'T ENTER STRUCTURE DUE TO MASTER LOCK
1384	FALSE	0	0		0	0		0		1	FALSE	5		
1385	FALSE	1	0	0	1	0	0	0	0	1	FALSE	5	YES	MANY WINDOWS AND DOORS STORED INSIDE THE STRUCTURE, HOWEVER WALLS HAVE COLLAPSED AND BLOCKED IN MOST FRAMES
1386	FALSE		0		0	0		0		0	FALSE	5		BUILDING DISASSEMBLED
1388	FALSE	1	1	100	2	1	50	0	0	2	TRUE	1		
1389	FALSE	1	0	0	2	2	100	0	0	4	FALSE	5	YES	ORIGINAL DOOR AND WINDOWS REMOVED AND STORED INSIDE
1390	FALSE	3	0	0	0	0		0	0	2	TRUE	1		
1391	FALSE	1	0	0	1	1	100	0	0	3	TRUE	1	YES	ORIGINAL WINDOW DETACHED AND STORED INSIDE
1392	FALSE	2	1	50	2	2	100	2	100	5	FALSE	5	YES	ORIGINAL WINDOWS DETACHED AND STORED INSIDE
1393	FALSE	1	0	0	2	2	100	0	0	4	TRUE	1	YES	ORIGINAL WINDOWS DETACHED AND STORED INSIDE
1394	FALSE	1	0	0	3	2	67	0	0	2	TRUE	1		
1395	FALSE	1	0	0	2	2	100	0	0	4	TRUE	1	YES	ORIGINAL DOOR AND WINDOWS DETACHED AND STORED INSIDE
1396	TRUE	3	1	33	4	2	50	0	0	3	TRUE	1		
1397	FALSE	3	2	67	4	4	100	3	75	5	TRUE	1		
1398	FALSE	1	1	100	2	2	100	2	100	5	TRUE	1		
1399	FALSE	1	1	100	2	2	100	2	100	4	TRUE	1		
1400	TRUE	2	1	50	5	1	20	1	20	2	TRUE	1		PARTIAL WALL MISSING, UNABLE TO DETERMINE NUMBER OF HISTORIC OPENINGS
1401	FALSE	1	0	0	1	1	100	0	0	1	TRUE	1		

BAR BC Condition Assessment

SURVEY DATA: ROOFS

NPS ID Number	Roof Orientation	Roof ID	Roofing Material	Roofing Material Coverage	Roofing Marerial Condition	Sheathing Condition	Presence of Roof Deformation?	Purlin Condition Score	Roof Stabilization?	Roof Repairs?
1365	W	1365_W1	ASPHALT	1	1	2	Yes		FALSE	FALSE
1365	E	1365_E1	ASPHALT	1	1	2	Yes		FALSE	FALSE
1365	N	1365_N1	ASPHALT	1	1	1	Yes		FALSE	FALSE
1365	S	1365_S1	ASPHALT	1	1	2	Yes		FALSE	FALSE
1365	E	1365_E2	ASPHALT	1	1	2	Yes		FALSE	FALSE
1365	W	1365_W2	ASPHALT	2	1	1	Yes		FALSE	FALSE
1365	N	1365_N2	ASPHALT	1	1	1	Yes		FALSE	FALSE
1365	S	1365_S2	ASPHALT	1	1	1	Yes	3	FALSE	FALSE
1366	N	1366_N1	TARP	1	1	3	Yes		FALSE	FALSE
1366	S	1366_S1	ASPHALT	1	1	3	Yes		FALSE	FALSE
1366	W	1366_W1	TARP	2	4	2	Yes		TRUE	TRUE
1366	E	1366_E1	TARP	2	4	3	Yes		FALSE	FALSE
1366	N	1366_N2	TARP ASPHALT	2	1	3	Yes		TRUE	FALSE
1366	S	1366_S2	TARP ASPHALT	1	1	2	Yes		TRUE	FALSE
1366	W	1366_W2	TARP	5	3	3	Yes		TRUE	FALSE
1366	E	1366_E2	TARP	4	4	3	Yes		TRUE	FALSE
1366	W	1366_W3	TARP	1	1	2	Yes		TRUE	TRUE
1366	S	1366_S3	TARP	1	1	2	Yes		TRUE	TRUE
1366	N	1366_N3	TARP	3	2	3	Yes		FALSE	FALSE
1366	W	1366_W4	TARP	1	1	2	Yes		FALSE	FALSE
1366	E	1366_E3	TARP ASPHALT	1	1	3	Yes	3	TRUE	FALSE
1368	W	1368_W	ASPHALT	5	5	5	No		FALSE	FALSE
1368	E	1368_E	ASPHALT	5	5	5	Yes	3	FALSE	FALSE
1369	W	1369_W	ASPHALT	5	5	5	Yes		TRUE	FALSE
1369	E	1369_E	ASPHALT	5	5	5	No	5	TRUE	FALSE
1370	E	1370_E	ASPHALT	5	4	5	No		FALSE	FALSE
1370	W	1370_W	ASPHALT	3	4	5	Yes	5	FALSE	FALSE
1372	E	1372_E	ASPHALT	5	5	5	Yes		TRUE	FALSE
1372	W	1372_W	ASPHALT	5	4	5	Yes	5	TRUE	FALSE
1373	W	1373_W	ASPHALT	5	4	5	Yes		TRUE	FALSE
1373	E	1373_E	ASPHALT	5	4	5	Yes	5	TRUE	FALSE
1374	W	1374_W	ASPHALT	5	5	5	Yes		FALSE	FALSE
1374	E	1374_E	ASPHALT	5	5	5	Yes	5	FALSE	FALSE
1375	W	1375_W	ASPHALT	5	4	5	Yes		TRUE	FALSE
1375	E	1375_E	ASPHALT	4	3	5	Yes	0	TRUE	FALSE
1376	N	1376_N	ASPHALT	5	4	4	Yes		FALSE	FALSE
1376	S	1376_S	ASPHALT	5	4	4	Yes	5	FALSE	FALSE
1377	N	1377_N	ASPHALT	4	3	5	Yes		TRUE	FALSE
1377	S	1377_S	ASPHALT	3	2	4	Yes	0	TRUE	FALSE
1378	E	1378_E	ASPHALT	3	3	3	Yes		FALSE	FALSE
1378	W	1378_W	ASPHALT	4	2	3	Yes	0	FALSE	FALSE

NPS ID Number	Roof Orientation	Roof ID	Roofing Material	Roofing Material Coverage	Roofing Marerial Condition	Sheathing Condition	Presence of Roof Deformation?	Purlin Condition Score	Roof Stabilization?	Roof Repairs?
1379	N	1379_N	ASPHALT	3	2	3	Yes		FALSE	TRUE
1379	S	1379_S	ASPHALT	5	3	3	Yes	3	FALSE	TRUE
1382	E	1382_E	TARP	5	5	2	Yes		TRUE	FALSE
1382	W	1382_W	TARP	5	5	2	Yes		TRUE	FALSE
1382	N	1382_N	TARP	5	5	2	Yes		TRUE	FALSE
1382	S	1382_S	TARP	5	5	2	Yes	5	TRUE	FALSE
1383	E	1383_EE	ASPHALT	5	4	4	Yes		FALSE	FALSE
1383	W	1383_W	ASPHALT	5	5	4	Yes	3	FALSE	FALSE
1384	E	1384_E	ASPHALT	1	1	1	Yes		FALSE	FALSE
1384	W	1384_W	ASPHALT	1	1	1	Yes		FALSE	FALSE
1384	N	1384_N	ASPHALT	1	1	2	Yes		FALSE	FALSE
1384	S	1384_S	ASPHALT	1	1	2	Yes	0	FALSE	FALSE
1385	N	1385_N	TAR AND SOD	1	1	1	Yes		FALSE	FALSE
1385	S	1385_S	TAR AND SOD	1	1	1	Yes	1	FALSE	FALSE
1388	E	1388_E	TAR AND SOD	1	1	1	Yes		FALSE	FALSE
1388	W	1388_W	TAR AND SOD	2	1	1	No	3	FALSE	FALSE
1389	S	1389_S	ASPHALT	2	1	3	Yes		TRUE	FALSE
1389	N	1389_N	ASPHALT	3	1	3	No	5	TRUE	FALSE
1391	W	1391_W	ASPHALT	5	3	4	Yes		TRUE	FALSE
1391	E	1391_E	ASPHALT	5	3	4	Yes	5	TRUE	FALSE
1392	W	1392_W	ASPHALT	5	4	4	Yes		TRUE	FALSE
1392	E	1392_E	ASPHALT	5	5	4	Yes	5	TRUE	FALSE
1393	N	1393_N	ASPHALT	3	5	5	Yes		TRUE	FALSE
1393	S	1393_S	ASPHALT	5	5	5	Yes	5	TRUE	FALSE
1394	W	1394_W	ASPHALT	5	4	5	Yes		TRUE	FALSE
1394	E	1394_E	ASPHALT	5	4	5	Yes	3	TRUE	FALSE
1395	S	1395_S	METAL	4	3	4	Yes		TRUE	FALSE
1395	N	1395_N	METAL	4	4	4	Yes	3	TRUE	FALSE
1396	W	1396_W	ASPHALT	1	1	1	Yes		TRUE	FALSE
1396	E	1396_E	ASPHALT	1	1	1	Yes	1	TRUE	FALSE
1397	N	1397_N	ASPHALT	2	1	2	Yes		TRUE	FALSE
1397	S	1397_S	ASPHALT	2	1	1	Yes	3	TRUE	FALSE
1398	W	1398_W	ASPHALT	1	1	1	Yes		TRUE	FALSE
1398	E	1398_E	ASPHALT	1	1	1	Yes	1	TRUE	FALSE
1399	S	1399_S	ASPHALT	1	1	1	Yes		TRUE	FALSE
1399	N	1399_N	ASPHALT	1	1	1	Yes	3	TRUE	FALSE
1400	N	1400_N	NA	0	0	5	No		TRUE	TRUE
1400	S	1400_S	NA	0	0	5	No	5	TRUE	TRUE
1401	N	1401_N	WOOD	5	3	2	No		FALSE	FALSE
1401	S	1401_S	WOOD	5	3	2	No	NA	FALSE	FALSE

BAR BC Condition Assessment

SURVEY DATA: WALLS

NPS ID Number	Wall Face Orientation	Wall Number	Wall ID	Upper Wall Condition	Lower Wall Condition	Sill Log Condition	Wall Chinking Condition	Wall Chinking Type	Wall Corner Condition	Presence of Tilting?	Presence of Racking?	Presence of Displacement?	Presence of Deformation?	Wall Openings	Presence of Vegetation Overgrowth?	Grade of Soil Against Sill	Drainage Adjacent to Wall	Wall Stabilization?	Wall Repairs?
1365	N	1	1365_N1	5	5	4	5	Quarter Round	4	No	Yes	No	No	5	Yes	Positive	Negative	FALSE	FALSE
1365	N	2	1365_N2	5	5	3	2	Mortar and Lath	5	No	No	Yes	No	5	Yes	Positive	Negative	FALSE	FALSE
1365	N	3	1365_N3	5	5	4	5	Mortar and Lath	5	No	Yes	Yes	No	5	Yes	Positive	Negative	FALSE	FALSE
1365	N	4	1365_N4	3	5	3	1	NA	3	No	Yes	No	No	5	Yes	Positive	Negative	FALSE	FALSE
1365	N	5	1365_N5	3	3	2	1	Mortar and Lath	4	No	No	No	No	5	Yes	Zero	Zero	FALSE	FALSE
1365	N	6	1365_N6	5	5	4	5	Mortar and Willow	5	No	No	Yes	No	5	Yes	Positive	Zero	FALSE	FALSE
1365	N	7	1365_N7	4	4	3	3	Mortar and Lath	5	No	No	No	Yes	1	Yes	Positive	Negative	FALSE	FALSE
1365	N	8	1365_N8	5	5	2	5	Mortar and Lath	5	No	No	No	No	1	Yes	Positive	Negative	FALSE	FALSE
1365	N	9	1365_N9	4	4	2	5	Mortar and Lath	4	No	No	Yes	No	5	No	Positive	Negative	FALSE	FALSE
1365	E	1	1365_E1	0	0	0	0	Mortar and Lath	4	No	No	No	No	1	Yes	Zero	Zero	FALSE	FALSE
1365	E	2	1365_E2	2	4	1	5	Mortar and Lath	5	No	No	No	No	5	Yes	Positive	Negative	FALSE	FALSE
1365	E	3	1365_E3	4	3	3	5	Mortar and Lath	4	No	No	No	No	1	Yes	Positive	Negative	FALSE	FALSE
1365	E	4	1365_E4	5	5	4	5	Mortar and Lath	5	No	No	Yes	No	5	No	Zero	Zero	FALSE	FALSE
1365	E	5	1365_E5	5	5	4	5	Mortar and Lath	5	No	No	Yes	No	5	No	Zero	Zero	FALSE	FALSE
1365	E	6	1365_E6	4	4	3	3	Mortar and Lath	5	No	No	No	No	5	Yes	Positive	Negative	FALSE	FALSE
1365	E	7	1365_E7	3	4	4	4	Mortar and Lath	3	No	No	Yes	No	5	No	Negative	Negative	FALSE	FALSE
1365	S	1	1365_S1	3	3			NA	5	No	No	No	No	5	No	Zero	Zero	FALSE	FALSE
1365	S	2	1365_S2	4	3	4	3	Mortar and Lath	5	No	No	No	No	5	No	Positive	Negative	FALSE	FALSE
1365	S	3	1365_S3	3	3	3	2	Mortar and Lath	5	No	No	No	No	5	No	Negative	Zero	FALSE	FALSE
1365	S	4	1365_S4	4	3	3	3	Mortar and Lath	5	No	No	No	Yes	5	No	Positive	Zero	FALSE	FALSE
1365	S	5	1365_S5	5	5	4	4	Mortar and Lath	5	No	No	No	No	5	No	Positive	Zero	FALSE	FALSE
1365	S	6	1365_S6	3	4	4	4	Mortar and Lath	4	No	No	No	No	5	Yes	Positive	Zero	FALSE	FALSE
1365	S	7	1365_S7	4	3	3	4	Mortar and Lath	5	No	No	No	No	1	Yes	Positive	Zero	FALSE	FALSE
1365	S	8	1365_S8	3	3	3	2	Mortar and Lath	5	No	No	No	No	5	Yes	Positive	Zero	FALSE	FALSE
1365	S	9	1365_S9	4	4	5	5	Quarter Round	5	No	No	No	No	5	Yes	Positive	Zero	FALSE	FALSE
1365	W	1	1365_W1	5	5	5	1	Mortar and Lath	1	No	Yes	Yes	No	5	Yes	Zero	Zero	FALSE	FALSE
1365	W	2	1365_W2	4	4	3	3	Mortar and Lath	3	No	No	No	No	5	Yes	Positive	Negative	FALSE	FALSE
1365	W	3	1365_W3	2	3	1	1	Mortar and Willow	4	No	No	Yes	No	5	Yes	Positive	Negative	FALSE	FALSE
1365	W	4	1365_W4	4	4	3	5	Mortar and Willow	5	No	No	Yes	No	5	No	Positive	Negative	FALSE	FALSE
1365	W	5	1365_W5	4	4	3	5	NA	5	No	No	Yes	Yes	1	No	Positive	Negative	FALSE	FALSE
1365	W	6	1365_W6	5	5	5	5	Quarter Round	5	No	No	No	No	1	Yes	Positive	Zero	FALSE	FALSE
1366	N	1	1366_N1	4	5	2	5	Mortar and Lath	5	Yes	Yes	Yes	No	1	No	Zero	Zero	TRUE	FALSE
1366	N	2	1366_N2	3	3	2	2	Mortar and Lath	1	No	No	Yes	Yes	1	Yes	Positive	Negative	TRUE	FALSE
1366	N	3	1366_N3	2	4	1	3	Mortar and Lath	4	No	Yes	Yes	Yes	1	Yes	Zero	Zero	TRUE	FALSE
1366	N	4	1366_N4	5	5	4	5	Mortar and Lath	4	No	No	No	No	5	No	Zero	Zero	FALSE	FALSE
1366	N	5	1366_N5	5	5	1	5	Mortar and Lath	5	No	No	No	No	5	No	Positive	Zero	FALSE	FALSE
1366	N	6	1366_N6	4	5	1	5	Mortar and Lath	5	No	No	No	No	1	Yes	Negative	Negative	FALSE	FALSE
1366	N	7	1366_N7	4	3	2	2	Mortar and Lath	3	No	No	No	No	1	No	Zero	Zero	TRUE	FALSE
1366	N	8	1366_N8					Mortar and Lath		No	No	No	No	1	No	Negative	Positive	FALSE	FALSE
1366	E	1	1366_E1	4	5	2	5	Mortar and Lath	5	No	No	No	No	5	No	Positive	Zero	FALSE	FALSE
1366	E	2	1366_E2	1	3	3	3	Mortar and Lath	5	No	Yes	Yes	Yes	1	No	Zero	Negative	FALSE	FALSE
1366	E	3	1366_E3	5	4	3	4	Mortar and Lath	5	No	No	Yes	Yes	1	No	Zero	Negative	FALSE	FALSE
1366	E	4	1366_E4	2	3	1	2	Mortar and Lath	3	No	Yes	Yes	Yes	1	Yes	Positive	Negative	FALSE	FALSE
1366	E	5	1366_E5	4	4	3	4	Mortar and Lath	4	No	Yes	Yes	No	1	Yes	Positive	Negative	FALSE	FALSE
1366	S	1	1366_S1	5	5	5	5	Mortar and Lath	4	No	No	Yes	No	5	No	Zero	Zero	FALSE	FALSE

BAR BC Condition Assessment

SURVEY DATA: WALLS

NPS ID Number	Wall Face Orientation	Wall Number	Wall ID	Upper Wall Condition	Lower Wall Condition	Sill Log Condition	Wall Chinking Condition	Wall Chinking Type	Wall Corner Condition	Presence of Tilting?	Presence of Racking?	Presence of Displacement?	Presence of Deformation?	Wall Openings	Presence of Vegetation Overgrowth?	Grade of Soil Against Sill	Drainage Adjacent to Wall	Wall Stabilization?	Wall Repairs?
1366	S	2	1366_S2	1	1	1	1	Mortar and Lath	1	No	No	No	No	5	No	Zero	Zero	TRUE	FALSE
1366	S	3	1366_S3	3	4	4	3	Mortar and Lath	0	No	No	No	Yes	1	No	Negative	Zero	FALSE	FALSE
1366	S	4	1366_S4	4	3	3	3	Mortar and Lath	3	No	No	Yes	No	1	No	Zero	Zero	FALSE	FALSE
1366	S	5	1366_S5	3	4	3	4	Mortar and Lath	3	No	No	Yes	Yes	1	No	Zero	Zero	TRUE	FALSE
1366	S	6	1366_S6	4	4	1	5	Quarter Round	5	Yes	Yes	Yes	Yes	1	No	Zero	Zero	FALSE	FALSE
1366	S	7	1366_S7	4	4	3	4	Mortar and Lath	4	No	No	Yes	Yes	1	No	Positive	Negative	TRUE	FALSE
1366	W	1	1366_W1	1	2	1	1	Mortar and Lath	2	No	Yes	Yes	No	5	No	Positive	Negative	TRUE	FALSE
1366	W	2	1366_W2	1	2	1	1	Mortar and Lath	2	Yes	No	Yes	Yes	1	No	Positive	Negative	FALSE	TRUE
1366	W	3	1366_W3	3	4	2	4	Mortar and Lath	2	Yes	Yes	Yes	Yes	1	Yes	Positive	Negative	TRUE	FALSE
1366	W	4	1366_W4	5	5	4	5	Mortar and Lath	5	No	No	No	No	1	No	Zero	Zero	TRUE	FALSE
1366	W	5	1366_W5	4	4	3	5	Mortar and Lath	5	Yes	Yes	Yes	Yes	1	Yes	Positive	Zero	FALSE	FALSE
1366	W	6	1366_W6	4	4	3	5	Mortar and Lath	5	No	No	Yes	Yes	1	Yes	Positive	Zero	FALSE	FALSE
1366	W	7	1366_W7	5	4	1	5	Mortar and Lath	4	No	No	No	No	5	No	Positive	Zero	FALSE	FALSE
1366	W	8	1366_W8	2	3	1	3	Mortar and Lath	3	Yes	No	Yes	Yes	5	Yes	Positive	Negative	TRUE	FALSE
1366	W	9	1366_W9	3	4	1	4	NA	4	No	No	No	Yes	5	No	Positive	Negative	FALSE	FALSE
1368	N		1368_N	5	5	5	5	Mortar and Lath	5	No	No	No	No	5	No	Zero	Zero	FALSE	FALSE
1368	E	1	1368_E1	5	4	4	3	Mortar and Lath	4	No	No	No	No	5	No	Zero	Zero	FALSE	FALSE
1368	E	2	1368_E2	5	4	4	3	Mortar and Lath	4	No	No	No	No	5	No	Zero	Zero	FALSE	FALSE
1368	S		1368_S	4	3	3	2	Mortar and Lath	4	No	No	No	No	5	No	Zero	Zero	FALSE	FALSE
1368	W	1	1368_W1	5	5	4	5	Mortar and Lath	4	No	No	No	No	5	No	Zero	Zero	FALSE	FALSE
1368	W	2	1368_W2	5	5	4	5	Mortar and Lath	5	No	No	No	No	1	No	Zero	Zero	FALSE	FALSE
1369	N		1369_N	5	5	5	5	Quarter Round	5	No	No	No	No	5	No	Zero	Zero	FALSE	FALSE
1369	E		1369_E	5	5	5	5	Quarter Round	5	No	No	No	No	5	No	Zero	Zero	FALSE	FALSE
1369	S		1369_S	5	4	5	5	Quarter Round	5	No	No	No	No	5	No	Negative	Negative	FALSE	FALSE
1369	W		1369_W	5	5	5	5	Quarter Round	5	No	No	No	No	5	No	Zero	Zero	FALSE	FALSE
1370	N		1370_N	5	5	5	5	Mortar and willow	5	No	No	No	No	5	No	Zero	Negative	FALSE	FALSE
1370	E		1370_E	5	4	5	5	Mortar and willow	5	No	No	No	No	5	No	Zero	Negative	FALSE	FALSE
1370	S		1370_S	5	5	5	5	Mortar and willow	5	No	No	No	No	5	No	Zero	Zero	FALSE	FALSE
1370	W		1370_W	5	4	5	5	Mortar and willow	5	No	No	No	Yes	5	No	Zero	Zero	FALSE	FALSE
1372	N		1372_N	5	4	5	1	Full Round	4	No	No	No	No	5	Yes	Zero	Zero	FALSE	FALSE
1372	E		1372_E	5	4	5	1	NA	5	No	No	No	No	5	Yes	Zero	Zero	FALSE	FALSE
1372	S		1372_S	4	3	5	1	Mortar and Willow	5	No	No	No	No	5	Yes	Zero	Negative	FALSE	FALSE
1372	W	1	1372_W1	5	5	5	1	Mortar and Willow	5	No	No	No	No	5	Yes	Zero	Negative	FALSE	FALSE
1372	W	2	1372_W2	5	5	5	1	Mortar and Willow	5	No	No	No	No	5	Yes	Zero	Zero	FALSE	FALSE
1373	N		1373_N	5	5	5	5	Mortar and Lath	5	No	No	No	No	5	No	Zero	Zero	FALSE	TRUE
1373	E	1	1373_E1	5	4	5	5	Mortar and Lath	5	No	No	No	No	5	Yes	Zero	Zero	FALSE	TRUE
1373	E	2	1373_E2	4	4	5	5	Mortar and Lath	5	No	No	No	No	5	Yes	Zero	Zero	FALSE	TRUE
1373	S		1373_S	4	4	5	5	Mortar and Lath	5	No	No	No	No	5	Yes	Zero	Zero	FALSE	TRUE
1373	W	1	1373_W1	5	4	5	5	Mortar and Lath	5	No	No	No	No	5	No	Positive	Zero	FALSE	TRUE
1373	W	2	1373_W2	5	4	5	5	Mortar and Lath	5	No	No	No	No	5	No	Zero	Zero	FALSE	FALSE
1374	N		1374_N	5	5	5	5	Mortar and Lath	5	No	No	No	No	5	No	Negative	Negative	FALSE	FALSE
1374	E	1	1374_E1	4	4	5	5	Mortar and Lath	5	No	No	No	No	5	Yes	Zero	Zero	FALSE	FALSE
1374	E	2	1374_E2	4	4	5	5	Mortar and Lath	5	No	No	No	No	5	Yes	Zero	Zero	FALSE	FALSE
1374	E	3	1374_E3	5	5	5	0	NA	5	No	No	No	No	1	Yes	Zero	Zero	FALSE	FALSE
1374	S	1	1374_S1	5	4	5	4	Mortar and Lath	5	No	No	No	No	5	No	Zero	Zero	FALSE	FALSE

BAR BC Condition Assessment

SURVEY DATA: WALLS

NPS ID Number	Wall Face Orientation	Wall Number	Wall ID	Upper Wall Condition	Lower Wall Condition	Sill Log Condition	Wall Chinking Condition	Wall Chinking Type	Wall Corner Condition	Presence of Tilting?	Presence of Racking?	Presence of Displacement?	Presence of Deformation?	Wall Openings	Presence of Vegetation Overgrowth?	Grade of Soil Against Sill	Drainage Adjacent to Wall	Wall Stabilization?	Wall Repairs?
1374	S	2	1374_S2	4	4	5	0	NA	5	No	No	No	No	1	Yes	Zero	Zero	FALSE	FALSE
1374	W	1	1374_W1	4	4	5	0	NA	5	No	No	No	No	1	No	Zero	Zero	FALSE	FALSE
1374	W	2	1374_W2	4	4	5	5	Mortar and Lath	5	No	No	No	No	5	Yes	Zero	Zero	FALSE	FALSE
1374	W	3	1374_W3	5	4	5	5	Mortar and Lath	5	No	No	No	No	5	Yes	Zero	Zero	FALSE	FALSE
1375	N		1375_N	5	5	5	4	Mortar	5	No	No	No	No	5	No	Zero	Negative	FALSE	FALSE
1375	E	1	1375_E1	5	5	5	3	Full Round	5	No	No	No	Yes	5	No	Zero	Negative	FALSE	FALSE
1375	E	2	1375_E2	5	5	5	3	Full Round	4	No	No	No	No	5	No	Negative	Negative	FALSE	FALSE
1375	E	3	1375_E3	5	5	5	5	Full Round	5	No	Yes	No	No	5	No	Zero	Negative	FALSE	FALSE
1375	S		1375_S	4	3	4	4	Full Round	4	No	No	No	No	5	Yes	Zero	Negative	FALSE	FALSE
1375	W	1	1375_W1	5	5	5	3	Full Round	3	No	Yes	No	Yes	5	No	Negative	Negative	FALSE	FALSE
1375	W	2	1375_W2	5	4	5	3	Full Round	4	No	No	No	No	5	No	Zero	Negative	FALSE	FALSE
1375	W	3	1375_W3	4	4	5	5	Full Round	4	No	No	No	Yes	5	No	Negative	Negative	FALSE	FALSE
1376	N		1376_N	5	5	1	5	Quarter Round	4	No	No	Yes	No	5	No	Positive	Negative	FALSE	FALSE
1376	E		1376_E	5	4	1	5	Mortar and Lath	4	Yes	No	Yes	No	5	Yes	Negative	Negative	FALSE	FALSE
1376	S		1376_S	4	2	1	5	Quarter Round	3	No	Yes	Yes	No	5	Yes	Zero	Negative	FALSE	FALSE
1376	W		1376_W	5	4	1	5	Quarter Round	4	No	No	No	No	5	Yes	Zero	Negative	FALSE	FALSE
1377	N	1	1377_N1	5	5	2	5	Mortar and Lath	5	No	No	No	Yes	5	Yes	Zero	Negative	FALSE	FALSE
1377	N	2	1377_N2	3	5	4	4	Mortar and Lath	5	No	No	No	Yes	5	Yes	Negative	Negative	FALSE	FALSE
1377	E		1377_E	5	4	4	5	Mortar and Lath	5	Yes	Yes	Yes	No	5	Yes	Negative	Negative	FALSE	FALSE
1377	S	1	1377_S1	3	4	4	1	Mortar	4	No	Yes	No	No	5	Yes	Zero	Negative	FALSE	FALSE
1377	S	2	1377_S2	3	2	2	1	Mortar	2	Yes	Yes	No	Yes	5	Yes	Zero	Negative	FALSE	FALSE
1377	W		1377_W	5	5	4	5	Mortar and Lath	3	No	Yes	Yes	No	5	Yes	Zero	Zero	TRUE	FALSE
1378	N		1378_N	5	5	4	5	Mortar and Lath	3	Yes	No	No	No	5	Yes	Zero	Positive	FALSE	FALSE
1378	E	1	1378_E1	5	5	1	5	Mortar and Lath	2	No	Yes	Yes	No	5	No	Zero	Positive	FALSE	FALSE
1378	E	2	1378_E2	5	5	1	5	Mortar and Lath	4	No	Yes	Yes	No	5	No	Zero	Positive	FALSE	FALSE
1378	S		1378_S	5	5	1	2	Mortar and Lath	4	Yes	No	No	No	5	No	Zero	Positive	FALSE	FALSE
1378	W	1	1378_W1	5	5	2	4	Mortar and Lath	4	No	No	Yes	No	5	Yes	Zero	Positive	FALSE	FALSE
1378	W	2	1378_W2	5	5	2	5	Mortar and Lath	4	No	Yes	Yes	No	5	Yes	Zero	Positive	FALSE	FALSE
1379	N	1	1379_N1	5	5	3	5	Mortar and Lath	5	Yes	No	No	No	5	Yes	Zero	Positive	FALSE	FALSE
1379	N	2	1379_N2	5	5	2	4	Mortar and Lath	4	Yes	No	No	Yes	5	No	Zero	Positive	FALSE	FALSE
1379	E		1379_E	5	5	5	5	Mortar and Lath	5	No	No	No	No	5	No	Negative	Positive	FALSE	FALSE
1379	S	1	1379_S1	4	3	1	4	Mortar and Lath	5	Yes	No	Yes	Yes	5	No	Zero	Zero	FALSE	FALSE
1379	S	2	1379_S2	5	3	1	3	Mortar and Lath	3	Yes	No	Yes	Yes	5	No	Zero	Positive	FALSE	FALSE
1379	W		1379_W	5	4	1	4	Mortar and Lath	5	No	No	Yes	No	5	No	Zero	Positive	FALSE	FALSE
1382	N	1	1382_N1	5	4	2	5	Mortar and Willow	4	No	Yes	No	No	5	No	Zero	Negative	FALSE	FALSE
1382	E	1	1382_E1	5	4	4	5	Mortar and Willow	4	Yes	Yes	No	No	5	Yes	Zero	Zero	FALSE	FALSE
1382	N	2	1382_N2	0	0	0	0	NA	4	No	Yes	No	No	5	Yes	Zero	Zero	FALSE	FALSE
1382	E	2	1382_E2	4	3	2	2	Mortar and Willow	4	Yes	Yes	No	No	5	Yes	Positive	Negative	FALSE	FALSE
1382	S		1382_S	4	3	1	1	NA	2	No	Yes	No	No	5	Yes	Zero	Negative	FALSE	FALSE
1382	W	1	1382_W1	5	5	1	4	Mortar and Willow	3	Yes	No	No	No	5	Yes	Zero	Negative	FALSE	FALSE
1382	W	2	1382_W2	5	4	1	4	Mortar and Willow	5	Yes	No	No	No	5	Yes	Zero	Negative	FALSE	FALSE
1383	N		1383_N	5	5	5	5	Quarter Round	5	No	No	No	No	5	No	Zero	Negative	FALSE	FALSE
1383	E		1383_E	4	4	5	5	Quarter Round	5	No	No	No	No	5	No	Zero	Negative	FALSE	FALSE
1383	S		1383_S	5	5	4	5	Quarter Round	5	No	No	No	No	5	No	Zero	Zero	FALSE	FALSE
1383	W		1383_W	5	4	4	5	Quarter Round	5	No	No	No	No	5	Yes	Zero	Zero	FALSE	TRUE

BAR BC Condition Assessment

SURVEY DATA: WALLS

NPS ID Number	Wall Face Orientation	Wall Number	Wall ID	Upper Wall Condition	Lower Wall Condition	Sill Log Condition	Wall Chinking Condition	Wall Chinking Type	Wall Corner Condition	Presence of Tilting?	Presence of Racking?	Presence of Displacement?	Presence of Deformation?	Wall Openings	Presence of Vegetation Overgrowth?	Grade of Soil Against Sill	Drainage Adjacent to Wall	Wall Stabilization?	Wall Repairs?
1384	N	1	1384_N1	4	4	1	1	NA	3	No	Yes	Yes	No	5	Yes	Zero	Positive	FALSE	FALSE
1384	W	1	1384_W1	2	2	1	1	NA	1	Yes	Yes	No	No	5	Yes	Zero	Zero	FALSE	TRUE
1384	N	2	1384_N2	2	2	1	1	NA	2	Yes	Yes	No	No	5	Yes	Zero	Zero	FALSE	FALSE
1384	E		1384_E	1	1	1	1	NA	1	Yes	Yes	No	No	1	Yes	Zero	Zero	FALSE	FALSE
1384	S	1	1384_S1	1	1	1	1	NA	1	Yes	Yes	No	No	5	Yes	Zero	Zero	FALSE	FALSE
1384	W	2	1384_W2	2	2	1	1	NA	2	Yes	Yes	No	Yes	5	Yes	Zero	Positive	FALSE	FALSE
1384	S	2	1384_S2	4	4	1	1	NA	3	No	Yes	No	No	5	Yes	Zero	Positive	FALSE	FALSE
1384	W	3	1384_W3	3	3	1	1	NA	4	Yes	No	No	No	1	Yes	Zero	Zero	FALSE	FALSE
1385	N		1385_N	1	1	2	1	Mortar and Lath	1	Yes	Yes	No	Yes	1	Yes	Positive	Positive	FALSE	FALSE
1385	E		1385_E	4	4	2	3	Mortar	3	Yes	Yes	No	No	5	Yes	Zero	Zero	TRUE	FALSE
1385	S		1385_S	3	4	4	1	Mortar	3	Yes	Yes	No	Yes	1	Yes	Zero	Zero	TRUE	FALSE
1385	W		1385_W	2	2	4	1	Mortar	1	Yes	Yes	No	No	1	No	Zero	Zero	TRUE	FALSE
1388	N		1388_N	4	3	1	4	Mortar and Willow	4	Yes	No	No	Yes	5	No	Zero	Negative	FALSE	TRUE
1388	E		1388_E	5	5	3	5	Mortar and Willow	5	Yes	Yes	No	Yes	1	Yes	Zero	Zero	FALSE	FALSE
1388	S		1388_S	5	5	2	2	Mortar and Willow	4	No	No	Yes	Yes	1	No	Zero	Negative	FALSE	FALSE
1388	W		1388_W	5	5	4	5	Mortar and Willow	4	No	No	No	Yes	5	No	Positive	Negative	FALSE	FALSE
1389	N		1389_N	5	5	3	5	Mortar and Willow	4	No	No	No	No	5	No	Positive	Zero	FALSE	FALSE
1389	E		1389_E	4	4	2	5	Mortar and Willow	4	No	No	No	No	5	No	Positive	Negative	FALSE	FALSE
1389	S		1389_S	5	5	3	4	Mortar and Willow	3	No	Yes	No	No	5	Yes	Zero	Zero	FALSE	FALSE
1389	W		1389_W	5	5	3	5	Mortar and Willow	3	Yes	No	No	No	5	No	Positive	Negative	FALSE	FALSE
1390	N		1390_N	0	5	0	0	NA	5	No	No	No	No	5	Yes	Positive	Zero	FALSE	FALSE
1390	E	1	1390_E1	0	5	0	0	NA	5	No	No	No	No	5	Yes	Positive	Zero	FALSE	FALSE
1390	S	1	1390_S1	0	4	0	0	NA	4	No	No	No	No	1	No	Positive	Zero	FALSE	FALSE
1390	E	2	1390_E2	0	4	0	0	NA	5	No	No	No	No	5	Yes	Positive	Zero	FALSE	FALSE
1390	S	2	1390_S2	0	3	0	0	NA	4	No	No	No	No	1	Yes	Positive	Zero	FALSE	FALSE
1390	W	1	1390_W1	0	3	0	0	NA	3	No	No	No	No	5	Yes	Positive	Zero	FALSE	FALSE
1390	S	3	1390_S3	0	2	0	0	NA	5	No	No	No	No	5	No	Positive	Zero	FALSE	FALSE
1390	W	2	1390_W2	0	3	0	0	NA	1	No	No	No	No	1	Yes	Positive	Zero	FALSE	FALSE
1391	N		1391_N	3	4	5	3	Mortar	5	Yes	No	Yes	No	5	No	Zero	Zero	FALSE	FALSE
1391	E		1391_E	5	5	5	2	Mortar	4	Yes	Yes	Yes	No	5	Yes	Zero	Zero	FALSE	FALSE
1391	S		1391_S	5	4	4	3	Quarter Round	4	Yes	Yes	Yes	No	5	No	Zero	Zero	FALSE	FALSE
1391	W		1391_W	5	4	5	3	Quarter Round	4	No	Yes	No	No	5	No	Zero	Zero	FALSE	FALSE
1392	N		1392_N	5	5	5	5	Mortar and Willow	5	No	No	No	No	5	Yes	Zero	Zero	FALSE	FALSE
1392	E		1392_E	5	5	3	5	Mortar and Willow	5	No	No	No	No	1	No	Zero	Zero	FALSE	FALSE
1392	S		1392_S	5	5	4	5	Mortar and Willow	5	No	No	No	No	5	No	Zero	Zero	FALSE	FALSE
1392	W		1392_W	5	5	3	5	Mortar and Willow	4	No	No	No	No	5	Yes	Positive	Positive	FALSE	FALSE
1393	N		1393_N	5	5	5	5	Mortar and Willow	5	Yes	No	No	No	5	No	Zero	Zero	FALSE	FALSE
1393	E		1393_E	5	5	3	5	Mortar and Willow	4	Yes	Yes	Yes	No	5	No	Zero	Zero	FALSE	FALSE
1393	S		1393_S	4	3	5	4	Mortar and Willow	4	No	Yes	Yes	No	5	No	Zero	Zero	FALSE	FALSE
1393	W		1393_W	5	5	5	5	Mortar and Willow	3	Yes	Yes	No	No	5	No	Zero	Zero	FALSE	FALSE
1394	N		1394_N	4	4	5	5	Mortar and Willow	4	No	No	No	No	5	Yes	Zero	Zero	FALSE	FALSE
1394	E		1394_E	5	4	5	5	Mortar and Willow	4	No	Yes	Yes	No	5	Yes	Zero	Zero	FALSE	FALSE
1394	S		1394_S	5	4	5	5	Mortar and Willow	4	No	Yes	Yes	No	5	No	Zero	Zero	FALSE	FALSE
1394	W		1394_W	4	4	5	4	Mortar and Willow	4	No	Yes	Yes	Yes	1	No	Zero	Positive	FALSE	FALSE
1395	N		1395_N	5	5	3	5	Mortar and Willow	4	Yes	Yes	Yes	No	5	Yes	Zero	Zero	FALSE	FALSE

BAR BC Condition Assessment

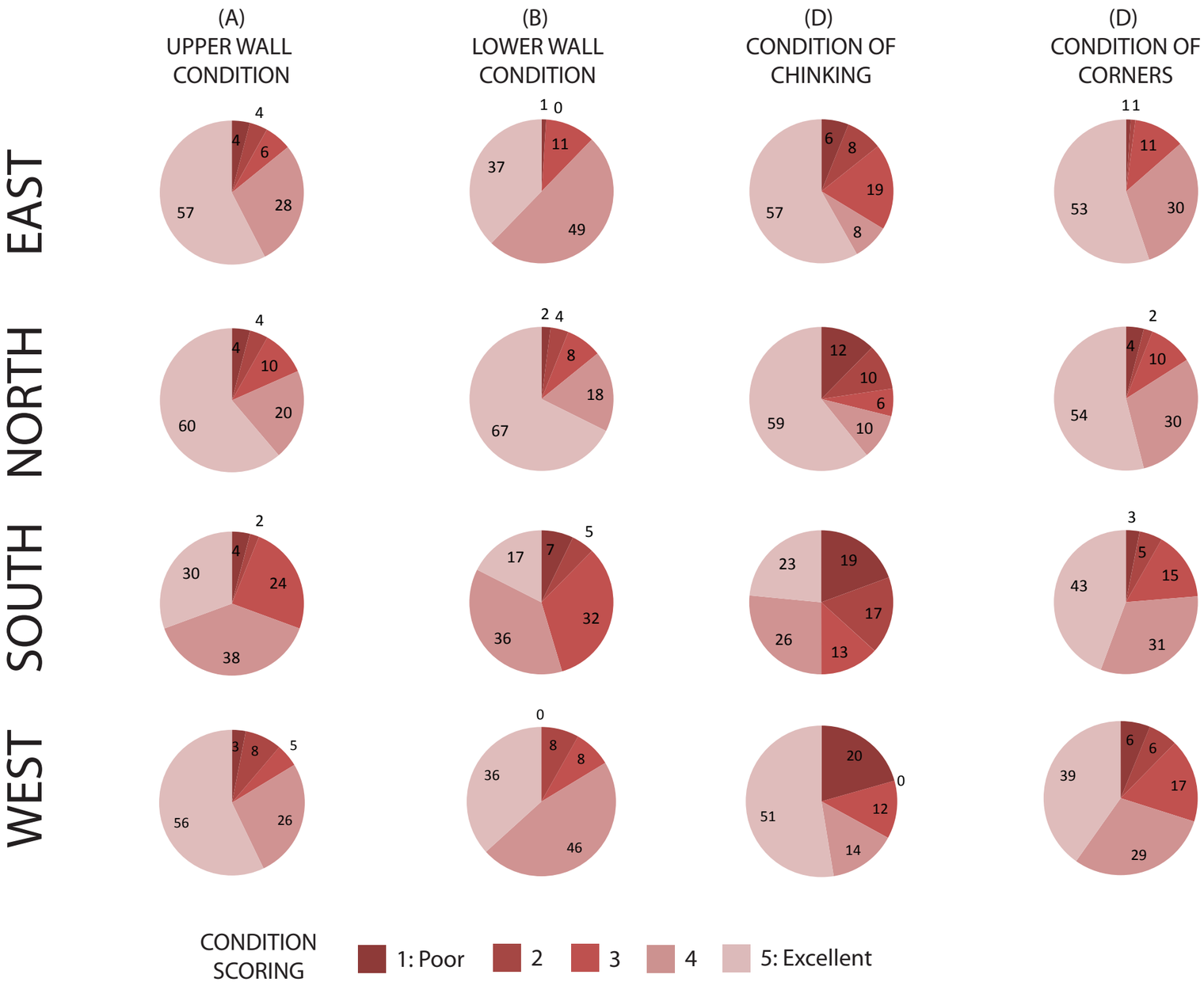
SURVEY DATA: WALLS

NPS ID Number	Wall Face Orientation	Wall Number	Wall ID	Upper Wall Condition	Lower Wall Condition	Sill Log Condition	Wall Chinking Condition	Wall Chinking Type	Wall Corner Condition	Presence of Tilting?	Presence of Racking?	Presence of Displacement?	Presence of Deformation?	Wall Openings	Presence of Vegetation Overgrowth?	Grade of Soil Against Sill	Drainage Adjacent to Wall	Wall Stabilization?	Wall Repairs?
1395	E		1395_E	3	5	1	4	Mortar and Willow	5	Yes	No	No	No	5	Yes	Negative	Negative	FALSE	FALSE
1395	S		1395_S	5	5	3	4	Mortar and Willow	4	No	Yes	Yes	Yes	5	Yes	Zero	Zero	FALSE	FALSE
1395	W		1395_W	5	4	4	5	Mortar and Willow	4	Yes	Yes	No	No	5	No	Zero	Negative	FALSE	FALSE
1396	N		1396_N	5	5	5	4	Mortar	4	Yes	Yes	No	No	5	Yes	Zero	Zero	FALSE	FALSE
1396	E	1	1396_E1	4	4	2	2	Mortar	3	No	Yes	Yes	Yes	1	Yes	Zero	Zero	FALSE	FALSE
1396	E	2	1396_E2	5	5	4	1	Mortar	3	No	Yes	Yes	Yes	1	Yes	Zero	Zero	FALSE	FALSE
1396	S		1396_S	5	4	4	1	Mortar	4	No	Yes	Yes	No	5	Yes	Zero	Zero	FALSE	FALSE
1396	W	1	1396_W1	4	5	3	1	Mortar	4	No	Yes	No	Yes	5	Yes	Zero	Zero	FALSE	FALSE
1396	W	2	1396_W2	5	5	4	3	Mortar	3	No	Yes	No	Yes	5	Yes	Zero	Zero	FALSE	FALSE
1397	N		1397_N	5	5	5	5	Mortar and Lath	5	No	No	No	No	5	Yes	Positive	Negative	FALSE	FALSE
1397	E	1	1397_E1	5	4	4	5	Mortar and Lath	5	No	Yes	No	No	5	Yes	Positive	Negative	FALSE	FALSE
1397	E	2	1397_E2	5	4	3	5	Mortar and Lath	4	No	Yes	No	No	5	Yes	Positive	Negative	FALSE	FALSE
1397	S		1397_S	4	4	5	5	Mortar and Lath	5	No	No	No	No	5	No	Zero	Negative	FALSE	FALSE
1397	W	1	1397_W1	4	4	4	5	Mortar and Lath	5	No	No	No	No	5	No	Positive	Negative	FALSE	FALSE
1397	W	2	1397_W2	4	4	4	4	Mortar and Lath	4	No	No	No	No	5	Yes	Zero	Negative	FALSE	FALSE
1398	N		1398_N	5	5	5	5	Mortar and Lath	5	No	No	No	No	5	Yes	Zero	Zero	FALSE	FALSE
1398	E		1398_E	4	4	4	3	Mortar and Lath	5	No	No	No	No	5	Yes	Zero	Negative	FALSE	FALSE
1398	S		1398_S	3	3	4	2	Mortar and Lath	5	No	No	Yes	No	5	Yes	Negative	Negative	FALSE	FALSE
1398	W		1398_W	4	4	4	5	Mortar and Lath	5	Yes	No	Yes	No	5	Yes	Zero	Negative	FALSE	FALSE
1399	N		1399_N	5	5	4	2	Mortar	3	No	Yes	No	No	5	No	Zero	Zero	FALSE	FALSE
1399	E		1399_E	5	5	5	5	Mortar	4	Yes	No	No	No	5	No	Zero	Negative	FALSE	FALSE
1399	S		1399_S	4	4	4	4	Mortar	4	No	No	No	Yes	5	Yes	Zero	Negative	FALSE	FALSE
1399	W		1399_W	5	5	5	5	Mortar	5	Yes	Yes	No	No	5	Yes	Zero	Zero	FALSE	FALSE
1400	N	1	1400_N1	4	5	2	5	Full Round	5	No	No	No	No	1	No	Negative	Negative	TRUE	TRUE
1400	N	2	1400_N2	1	2	2	2	Full Round	5	No	No	No	Yes	5	No	Positive	Negative	TRUE	TRUE
1400	E		1400_E	4	3	1	3	Full Round	3	No	No	No	No	1	No	Positive	Negative	TRUE	TRUE
1400	S	1	1400_S1	2	1	1	2	Full Round	2	No	Yes	No	Yes	1	No	Positive	Negative	TRUE	TRUE
1400	S	2	1400_S2	3	1	1	2	Full Round	3	No	No	No	Yes	1	No	Positive	Positive	TRUE	TRUE
1400	W		1400_W	5	5	4	3	Full Round	3	No	Yes	No	Yes	5	No	Positive	Zero	TRUE	TRUE
1401	N		1401_N	4	4	3	0	NA	5	No	No	No	No	1	Yes	Positive	Zero	FALSE	FALSE
1401	E		1401_E	3	3	3	0	NA	5	No	No	No	No	1	Yes	Positive	Positive	FALSE	FALSE
1401	S		1401_S	3	3	3	0	NA	5	Yes	No	No	No	1	Yes	Positive	Negative	FALSE	FALSE
1401	W		1401_W	4	4	3	0	NA	5	No	No	No	No	1	Yes	Zero	Zero	FALSE	FALSE

DATA ANALYSIS: CARDINAL ORIENTATION VS. WALL MATERIAL CONDITONS

Bar BC Dude Ranch, Grand Teton National Park, WY

The charts reflect percentages of the amount of scores for damage on the walls of each structure. The legend below the graphs represents the possible scores that a wall could receive. Notice how walls exposed to the south orientations have more prevalent damage than walls exposed to the east and west orientations.



MATRIX OF WALL SCORES AND ORIENTATION

SCORE	A	B	C	D
1	2 (4%)	1 (1%)	3 (6%)	1 (1%)
2	2 (4%)	0 (0%)	4 (8%)	1 (1%)
3	3 (6%)	6 (11%)	9 (19%)	6 (11%)
4	14 (28%)	25 (49%)	4 (8%)	16 (30%)
5	28 (57%)	19 (37%)	27 (57%)	28 (53%)
Totals	49 (100%)	51 (100%)	47 (100%)	52 (100%)

SCORE	A	B	C	D
1	2 (4%)	1 (2%)	6 (12%)	2 (4%)
2	2 (4%)	2 (4%)	5 (10%)	1 (2%)
3	5 (10%)	4 (8%)	3 (6%)	5 (10%)
4	10 (20%)	9 (18%)	5 (10%)	15 (30%)
5	29 (60%)	33 (67%)	28 (59%)	27 (54%)
Totals	48 (100%)	49 (100%)	47 (100%)	50 (100%)

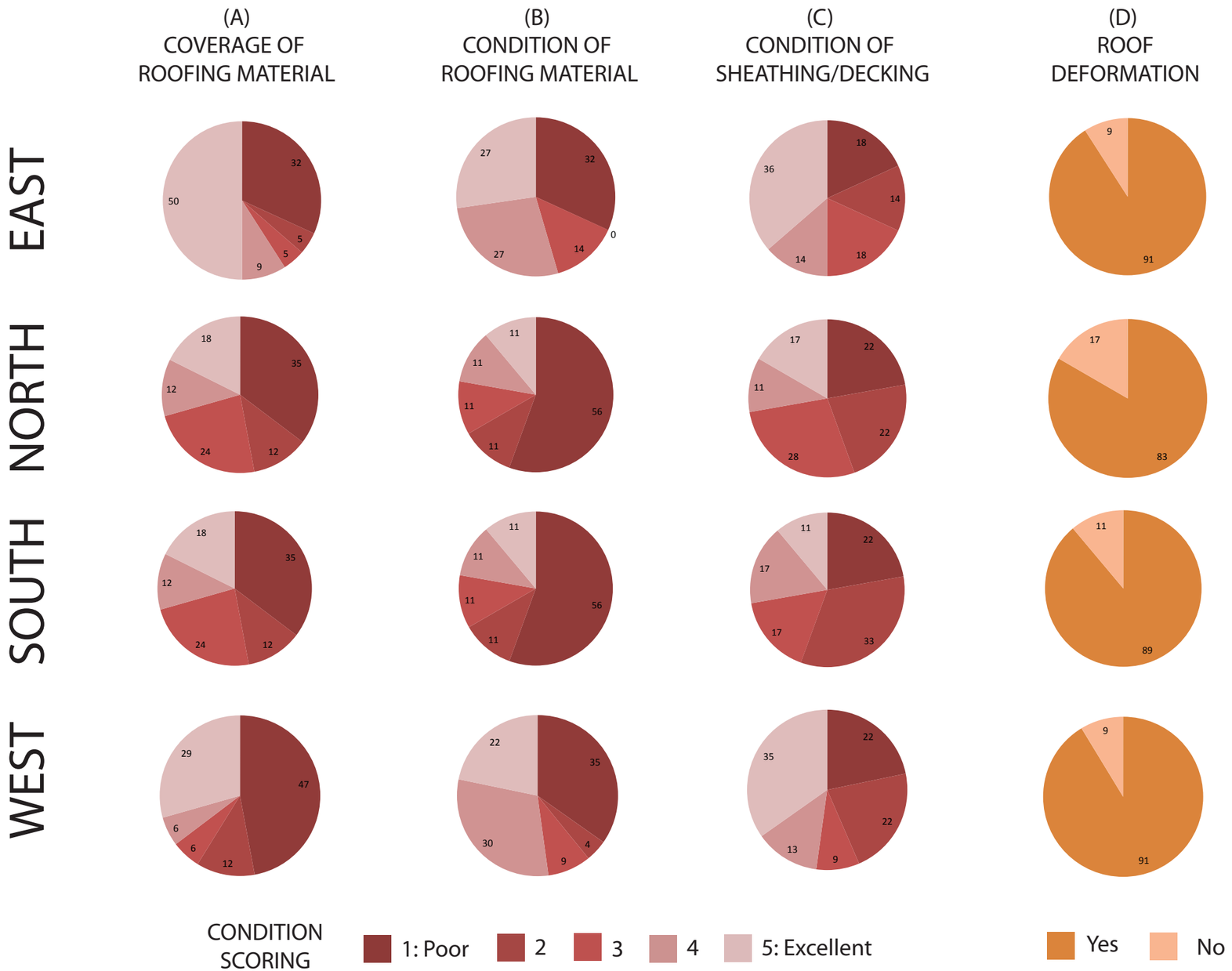
SCORE	A	B	C	D
1	2 (4%)	4 (7%)	9 (19%)	2 (3%)
2	1 (2%)	3 (5%)	8 (17%)	3 (5%)
3	12 (24%)	17 (32%)	6 (13%)	8 (15%)
4	19 (38%)	19 (36%)	12 (26%)	16 (31%)
5	15 (30%)	9 (17%)	11 (23%)	22 (43%)
Totals	49 (100%)	52 (100%)	46 (100%)	51 (100%)

SCORE	A	B	C	D
1	2 (3%)	0 (0%)	11 (20%)	4 (6%)
2	5 (8%)	5 (8%)	0 (0%)	4 (6%)
3	3 (5%)	5 (8%)	7 (12%)	10 (17%)
4	15 (26%)	27 (46%)	8 (14%)	17 (29%)
5	32 (56%)	21 (36%)	28 (51%)	23 (39%)
Totals	57 (100%)	58 (100%)	54 (100%)	58 (100%)

Bar BC Dude Ranch, Grand Teton National Park, WY

The charts reflect percentages of the amount of scores for damage on the roofs of each structure. The legend below the graphs represents the possible scores that a roof could receive. Notice how roofs exposed to the south orientations have more prevalent damage than walls exposed to the east and west orientations.

DATA ANALYSIS: CARDINAL ORIENTATION VS. ROOF CONDITONS



MATRIX OF ROOF SCORES AND ORIENTATION

SCORE	A	B	C	D
1	7 (32%)	7 (32%)	4 (18%)	20 (91%)
2	1 (5%)	0 (0%)	3 (14%)	0
3	1 (5%)	3 (14%)	4 (18%)	0
4	2 (9%)	6 (27%)	3 (14%)	0
5	11 (50%)	6 (27%)	8 (36%)	2 (9%)
TOTALS	22 (100%)	22 (100%)	22 (100%)	22 (100%)

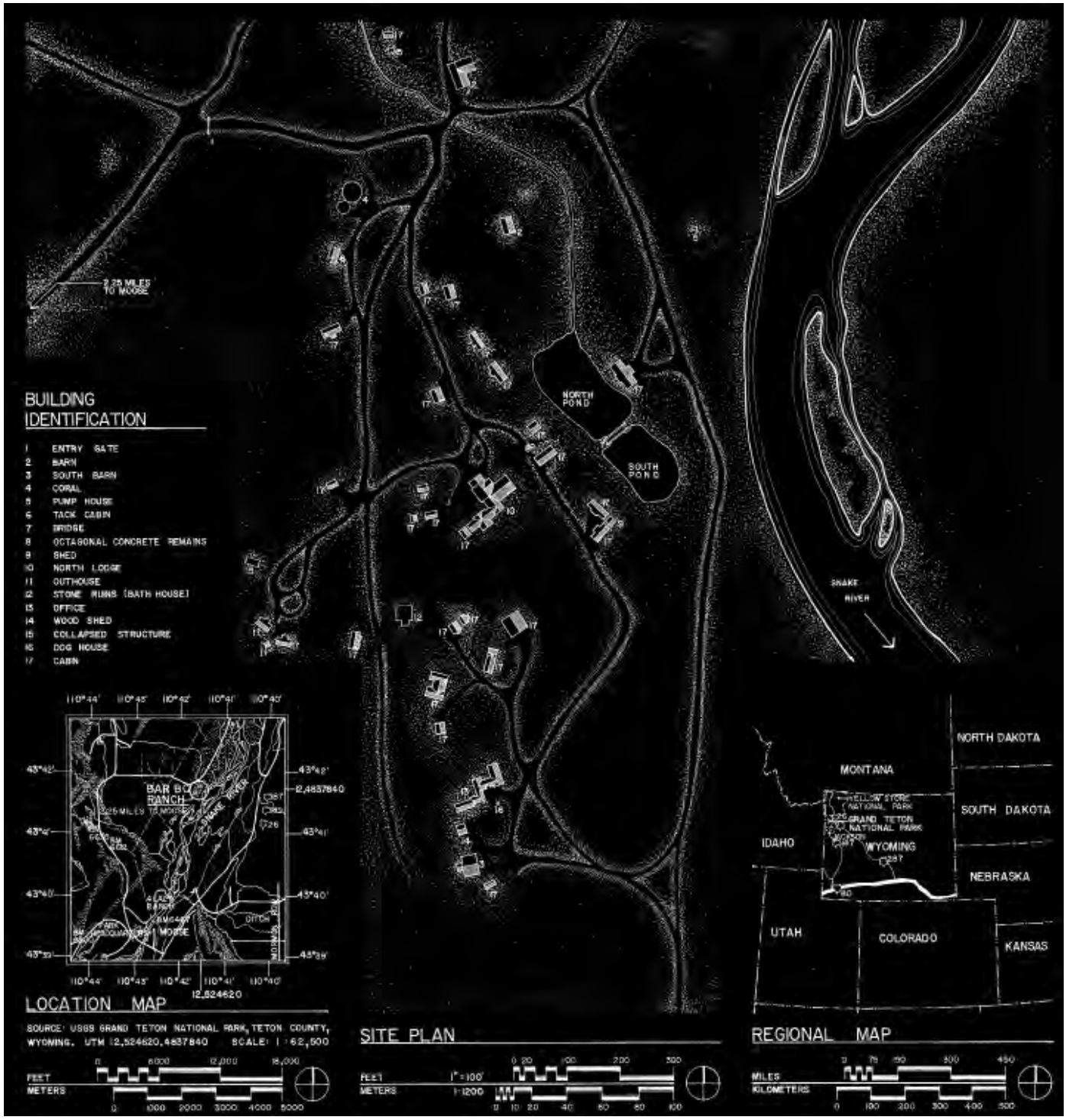
SCORE	A	B	C	D
1	6 (35%)	10 (56%)	4 (22%)	15 (83%)
2	2 (12%)	2(11%)	4 (22%)	0
3	4 (24%)	2(11%)	5 (28%)	0
4	2 (12%)	2(11%)	2 (11%)	0
5	3 (18%)	2(11%)	3 (17%)	3 (17%)
TOTALS	17 (100%)	18 (100%)	18 (100%)	18 (100%)

SCORE	A	B	C	D
1	8 (47%)	10 (56%)	4 (22%)	16 (89%)
2	2 (12%)	1 (6%)	6 (33%)	0
3	1 (6%)	3 (18%)	3 (17%)	0
4	1 (6%)	1 (6%)	3 (17%)	0
5	5 (29%)	2 (12%)	2 (11%)	2 (11%)
TOTALS	17 (100%)	17 (100%)	18 (100%)	18 (100%)

SCORE	A	B	C	D
1	6 (26%)	8 (35%)	5 (22%)	21 (91%)
2	3 (13%)	1 (4%)	5 (22%)	0
3	1 (4%)	2 (9%)	2 (9%)	0
4	1 (4%)	7 (30%)	3 (13%)	0
5	12 (52%)	5 (22%)	8 (35%)	2 (9%)
TOTALS	23 (100%)	23 (100%)	23 (100%)	23 (100%)

SITE PLAN

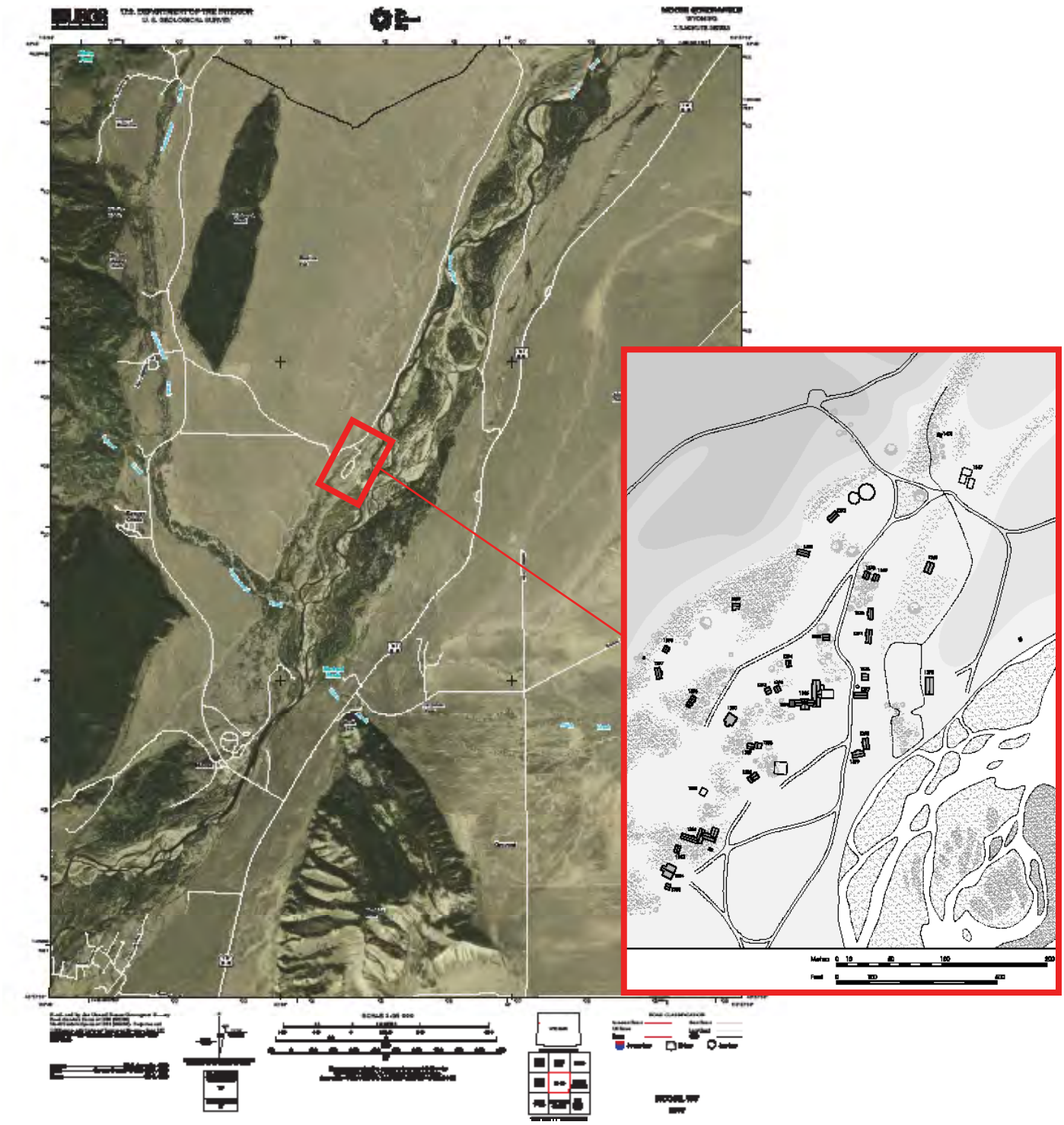
1933 HABS Site Plan



SITE PLAN

Site Location
2009 USGS

2011 Base map drawn by UPenn team.
Sources: USGS 2009 map, 1933 Site plan, field observations



BAR BC DUDE RANCH CONDITION ASSESSMENT

Building information

NPS Building #	
Historic Door #	
Trees within 30ft	
Overhanging Branches	
Gable Direction	

Survey information

Date of Survey	
Weather	

I. Foundation

On Grade	Raised	If Raised: Footings	Temp. Stabilization	Repairs
Notes:				

II. Walls

Wall ID	Upper Log	Lower Log	Sill Log Condition	Chinking %	Chinking Type	Corners	Tilting	Racking

Wall ID	Displacement	Deformation	Openings	Vegetation	Grade	Drainage	Temp. Stabil	Repairs
Notes:								

NPS Building #	

III. Roof

Slope ID	Skin Material	Skin Integrity	Skin Condition	Sheathing Condition	Deformation	Purlin Condition	Temp. Stabilization	Repairs
Notes:								

IV. Porch

Gable End	Eave End	Number of Posts	Post condition	Joints Closed	Floor Slope	Board Condition	Temp. Stabilization	Repairs
Notes:								

V. Chimney

Chimney Presence	Type	Upper Condition	Lower Condition	Cracking	Separation	Temp. Stabilization	Repairs
Notes:							

VI. Interior

Interior Stabilization	Number of doors	Number of original doors	Number of windows	Number of original Frames	Number of original Windows	Interior Floor Condition score
Notes:						

GLOSSARY OF TERMS

HABS NUMBER

The HABS number is a numerical identifier used on the HABS 1982 Bar BC Ranch site plan. This number is used to identify type of building and is not necessarily unique to each structure.

HISTORIC BUILDING NUMBER

The historic building number is a unit number designated and used during the period of significance. This number is found painted on the door frame of the building and is not present on all buildings.

LIST OF CLASSIFIED STRUCTURES ID

The LCS Number is a unique number assigned to each structure by the National Park Service (NPS). These numbers are used to identify structures in the 1993 Historic Structures Report (HSR).

BUILDING NAME

The building name refers to the traditional or historic name designated by use and referenced in the HSR.

BUILDING TYPE

The building type is a building use classification assigned to the structures of the Bar B C in the HSR.

CONSTRUCTION TYPE

Construction type refers to the method of joinery used in construction. Construction types include Box and Post, Tennant, and Saddle Join.

TREES WITHIN 20 FEET

Trees within 20 feet is scored as a measure of the quantity of standing trees, dead or living which are located within twenty feet of the structure. It is important to record this number because trees within 20 feet are deemed a fire hazard by NPS and may also affect the stability of a structure as growing roots cause displacement of foundations or falling limbs may damage roofs.

OVERHANGING BRANCHES

Overhanging branches are counted when the tree branches hang directly over buildings. The presence of overhanging branches can negatively affect condition by shedding debris which can accumulate on roof tops and hold moisture, thus contributing to rot and the deterioration of the roof members. They also pose an immediate risk if they were to fall on the building.

GABLE DIRECTION

Gable direction refers to the orientation of the roof ridge: running North-South (N-S) or East-West (E-W). All cardinal directions referred to in this document are defined based on "job north" rather that "true north," as the job site is oriented several degrees off true north.

ON GRADE

A building on grade is a building whose sill sits directly on the ground with no foundation material.

RAISED

A raised building is one whose sill sits above grade, often through the use of concrete or stone footings. Types of raised buildings also include those with a continuous poured concrete foundation pad, or in some cases, a full poured concrete cellar.

FOOTINGS PRESENT/ORIGINAL

The conditions assessment survey form and database list the number of footings present or functioning in relation to the number of footings which originally supported the building.

TEMPORARY STABILIZATION

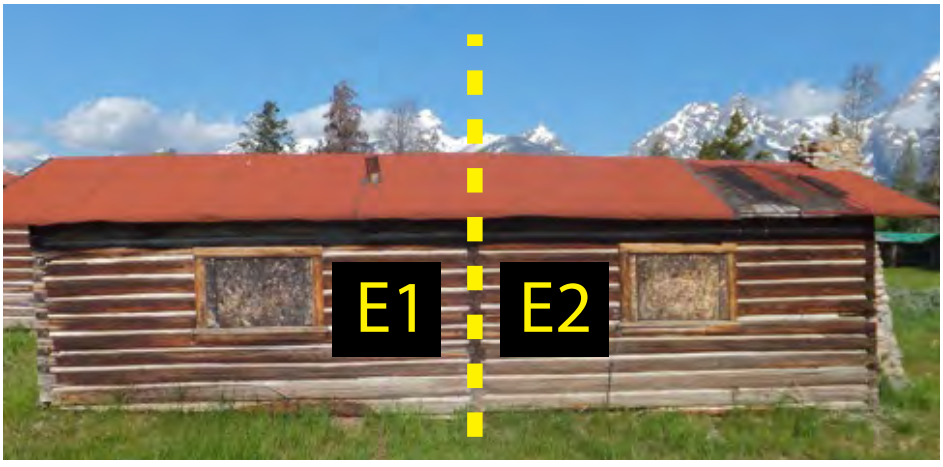
Temporary stabilization refers to structural interventions installed in the years following abandonment of the structures. This can include various types of structural bracing for walls and roofs, as well as well as temporary roofing skins such as tarps.

REPAIRS

A repair is defined as a permanent replacement or intervention installed in the years following abandonment of the structures. This can include replacement-in-kind of structural members such as sill logs and purlins, as well as permanent or semi-permanent roofing skins such as asphalt roll roofing.

WALL ID

Wall ID is an identifier used to distinguish exterior walls within a structure. The identifier consists of the first initial of the cardinal direction which the wall faces, followed by a number designating wall sections within that span. Numbering begins on the far right end of such a wall and moves clockwise around each structure. A wall is broken into segments in situations where the log structure is broken by a join, usually corresponding to an interior partition.



UPPER AND LOWER WALL CONDITION

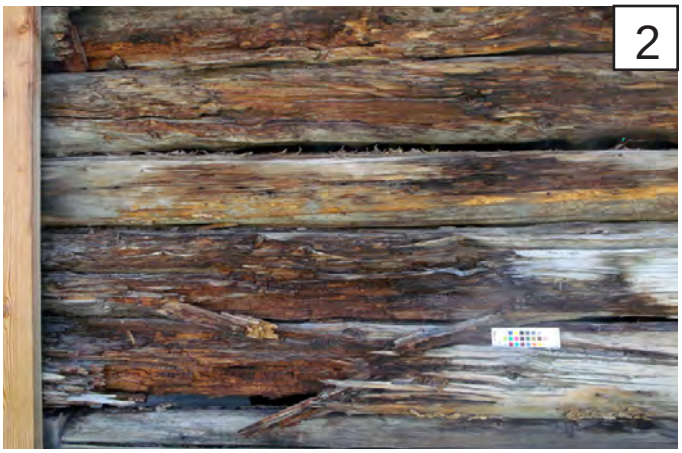
Upper and lower wall log condition is determined by a 1-5 scale in which 1 poor and 5 is excellent.

Each wall is divided into upper and lower sections at mid-point (sill logs are recorded separately). Condition of each portion is ranked based on the overall material condition of the logs in each section.

5 logs are tight and sound with minimal checking and no signs of rot.

4 logs may have more checking and some minimal signs of deterioration.

3 logs have more advanced checking, splitting and signs of loss.



2 logs are beginning to show rot and more severe deterioration.

1 all logs rotted, deteriorated or missing, and are in danger of failure or are failing.

SILL LOG CONDITION

Sill log condition refers to the condition of the bottommost log in each wall. This member is ranked independent of the lower wall condition, but is ranked according to the same numerical scale.

A 5 log is tight and sound with minimal checking and no signs of rot.

A 4 log may have more checking and some minimal signs of deterioration.

A 3 log has more advanced checking, splitting and signs of loss.

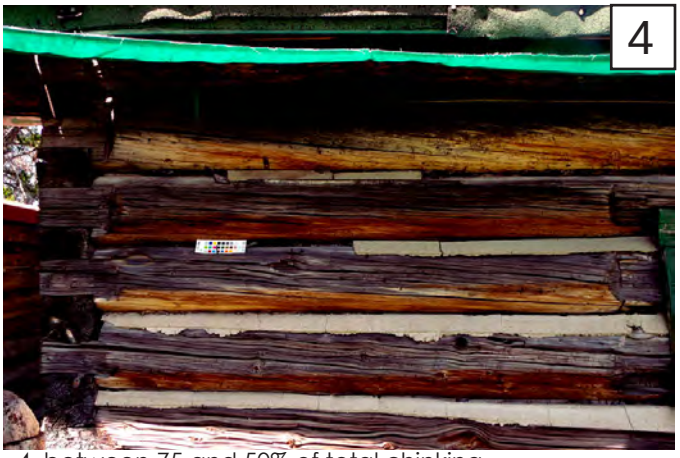
A 2 log is beginning to show rot and more severe deterioration.

A 1 log is rotted, deteriorated or missing, and in danger of failure or are failing.

PERCENTAGE OF CHINKING PRESENT

Percentage of chinking present is ranked on a 1-5 scale in which 5 is the greatest quantity of chinking material present in the joints (determined by percentage of total joint area of the wall) and 1 is the least amount of intact material present.

5 greater than 75% of total chinking material is present in the log joints.



4 between 75 and 50% of total chinking material is present in the log joints.

3 between 50 and 25% of total chinking material is present in the log joints.

2 between 25 and 10% of total chinking material is present in the log joints.

1 10% or less of total chinking material still is present in the log joints.

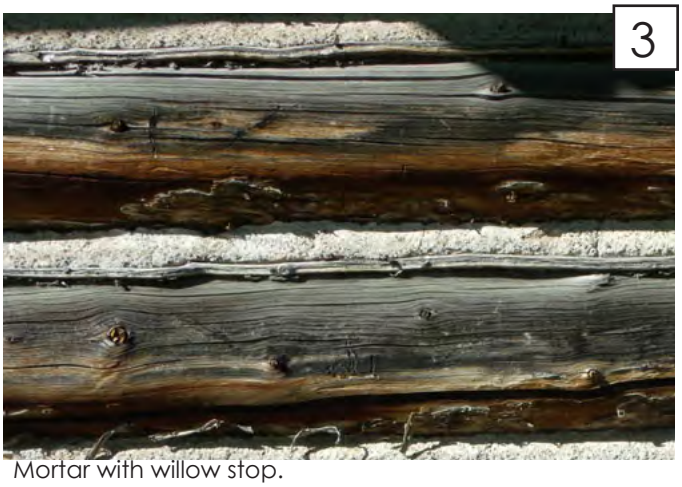
CHINKING TYPE

There are five different chinking types used on the buildings of the Bar BC.

5 Mortar
4 Mortar with lath stop
3 Mortar with willow stop
2 Full round log
1 Quarter round log

Mortar only.

Mortar with lath stop.



Mortar with willow stop.

Full-round log chinking.

Quarter-round log chinking.

CORNER CONDITION

Corner condition is ranked on a 1-5 scale in which 1 is poor and 5 excellent. 1 denotes failure of the corner, 2 denotes a severely deteriorated corner which is in danger of failure, 3 denotes a corner with rotted members and open joints, 4 denotes a basically stable corner with some signs of rot or deterioration, and 5 is a tight and sound corner with no rot and minimal deterioration.

5 corners are tight, with straight joining walls and no open joints.

4 corners may have some slight openings, but remain straight and well aligned.

3 corners have separation in the log joints, the construction my exhibit slight displacement.

2 corners usually require stabilization and exhibit extreme separation and deterioration.

1 corners exhibit deterioration to the point of failure.

TILTING

Tilting is defined as leaning of a wall, either back into the interior of the structure or forward and out toward the perimeter of the structure. Tilting is considered to be evident when the degree of tilt is greater than or equal to 20 degrees in either direction.

A wall with no lean.

A leaning wall.

RACKING

Racking is defined as a lateral shift in a wall in which the logs remain in plane but the corners become skewed. Racking is considered present when the degree of racking is greater than or equal to 20 degrees.

A wall which is not racked.

A racked wall.

DISPLACEMENT

Displacement refers to a condition in which a structure's foundation has shifted, causing one end of the structure to be higher or lower than the other. This may occur in addition to or independent of racking of the structure.

N

No displacement.

Y

Displacement evident.

WALL DEFORMATION

Wall deformation refers to a physical deformation of individual members of a roof or wall. It is a warping or bending of these members.

N

No deformation.

Y

Deformation evident in the remaining lower portion of this wall.

OPENINGS

In the conditions assessment survey, "openings" refers to both windows and doors. The survey lists number of closed openings over number of total openings present in a given wall section.

Closed.

Open.

VEGETATION

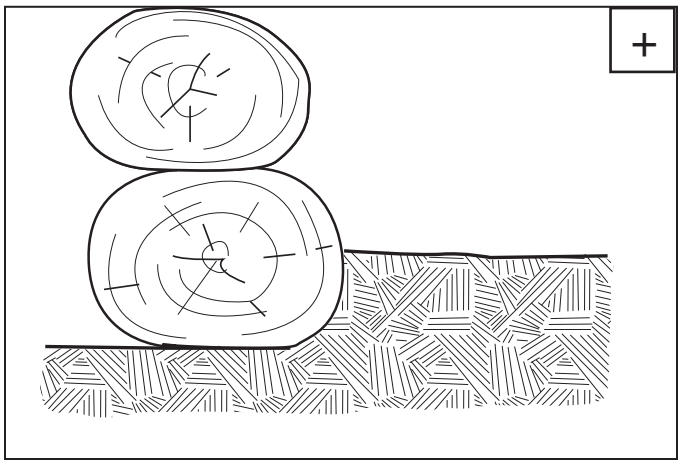
The conditions assessment survey lists the presence or absence of vegetation within one foot of the sill of each wall. The presence of vegetation refers to extensive plant growth and any amount of vegetation with a substantial root structure.

No vegetation.

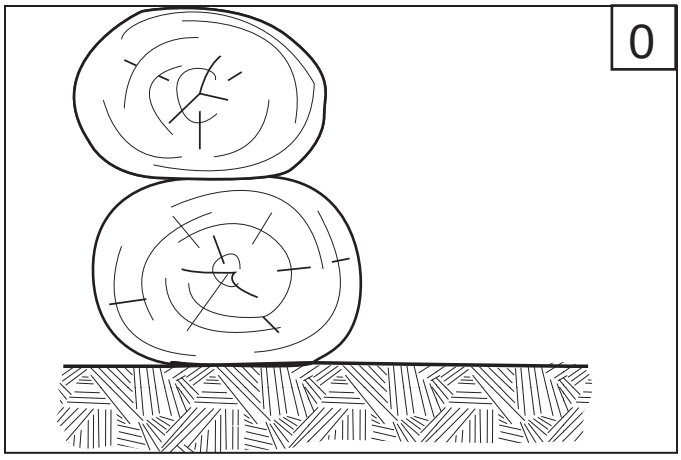
Vegetation present.

GRADE

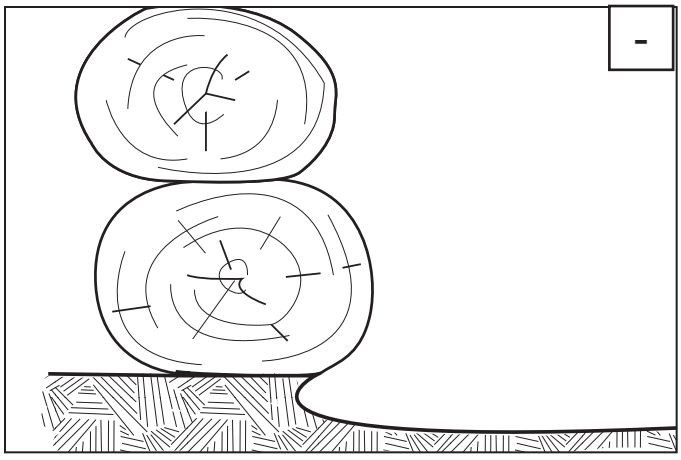
Ground level within one foot of the sill of each wall. Positive grade level is raised above the bottom of the sill.



Neutral grade level is even with the bottom of the sill.



Negative grade level is eroded below the bottom of the sill.



DRAINAGE

Drainage is related to grade and describes waste run-off patterns likely to occur at a given wall. Positive drainage is the condition in which run off is directed away from the wall sill.

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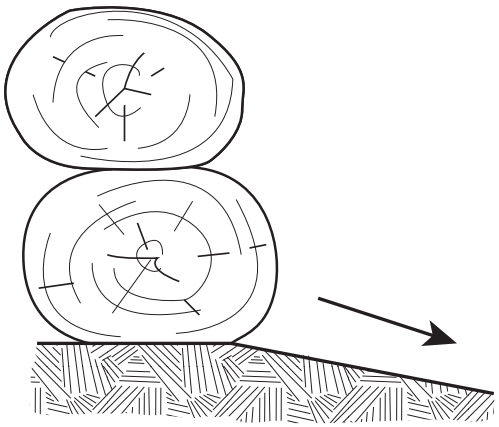

Neutral drainage is the condition in which run-off is not channeled in any particular direction.

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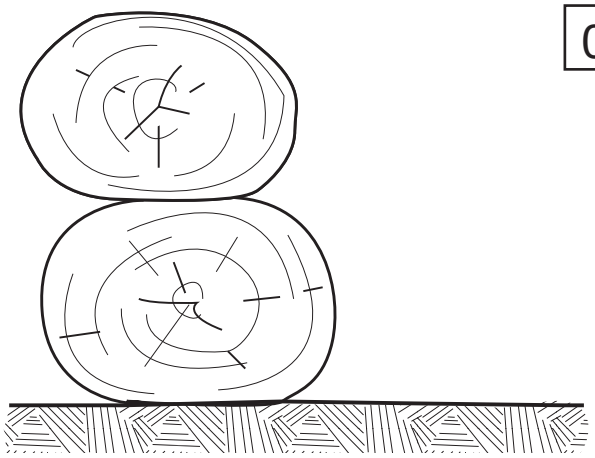

Negative drainage is the condition in which run-off is directed toward the wall sill.

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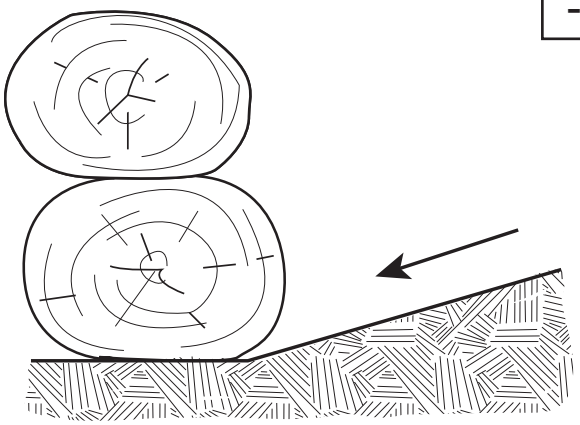


ROOF SLOPE ID

Roof slope ID is an identifier used to designate one roof plane from another within a single grade roof structure. It is defined as the first initial in the cardinal direction of which that particular plane faces.

ROOFING MATERIAL

Skin material is the type of roofing skin present on a building. Types of skins present include asphalt roll roofing, metal standing seam, sod, and temporary tarps.


Metal standing seam


Sod


Asphalt roll roofing


Temporary tarps

ROOFING SKIN COVERAGE

Roofing skin coverage refers to the total percentage of roofing skin extant on each roof slope. Skin coverage is ranked on a 1-5 scale in which 5 is the greatest amount of roofing skin present and 1 the least.

5 denotes 100% skin coverage.

4 denotes 90-99% coverage.

3 denotes between 50 and 89% skin coverage.

2 denotes less than 50% coverage.

1 denotes a total absence of skin coverage.

ROOFING SKIN CONDITION

Roofing skin condition gives a numerical rating of 1-5 to the material condition of the skin covering present on each roof slope. Specific conditions will vary for each roofing material type.

5 condition has no obvious condition or installation defect.

4 condition may have some patching or be aged.

3 condition may be puckered, incorrectly installed, or beginning to show wear.

2 condition exhibits a small to moderate degree of failure and deterioration.

1 condition is damaged, failed, or severely deteriorated.

SHEATHING CONDITION

Sheathing condition - the condition of the wood sheathing is rated on a scale of 1 -5, with 1 being poor and 5 excellent. Material deterioration, deformation, and loss all affect the sheathing condition rating.

5 sheathing is sound and complete.

4 sheathing exhibits some minor signs of deterioration.

3 sheathing shows signs of water infiltration, minor rot and some splitting.

2 sheathing is more severely deteriorated, with evidence of rot and other decay.

1 sheathing has reached the point of failure, material loss and extensive deterioration.

ROOF DEFORMATION

Roof deformation refers to noticeable bending, warping, or buckling of the roof from the outside. This is often noticeable along the ridge or eaves.

No roof deformation.

Roof deterioration evident.

INTERIOR FLOOR DEFORMATION

Floor deformation is recorded as either a "yes" or "no". If the floor exhibits any bending then it receives a "yes" for this category. A floor that is completely planar receives a "no".

No floor deformation.

Floor deformation present.

PURLIN CONDITION

The survey counts the number of intact purlins or purlins in good condition. This count is then divided into the number of total purlins originally installed. If the resulting figure is low, it can be assumed that the structure is suffering from missing or deteriorated purlins. Each purlin was examined in its entirety, with emphasis on the condition of the ends, as they form the critical juncture with the wall.


Purlin ends in 5 condition.


Three rotten purlin ends and one intact.


A purlin in poor, failing condition.


A rotten purlin end.


A failed purlin end.

TEMPORARY ROOF STABILIZATION

Temporary roof stabilization refers to interior supports for the roof structure or temporary covering, such as a plastic tarp.

PORCH TYPE

Two porch types were identified: "gable end" and "eave end". Multiple porches of the same type are identified according to their cardinal direction.


Gable-end porch.


Eave-end porch.

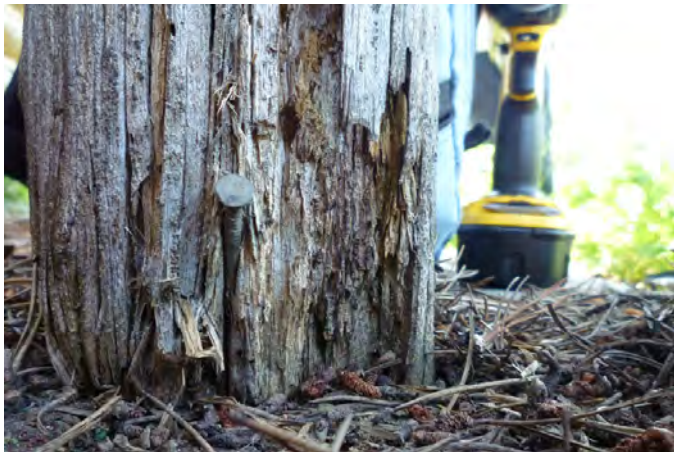
NUMBER OF PORCH POSTS

Number of porch posts records the number of posts present divided by the number of posts intended. This number represents missing posts.

PORCH POST BASAL ROT

Porch post basal rot is recorded as the number of posts exhibiting no signs of rot at their base divided by the number of posts present. The higher the number, the fewer number of posts exhibiting basal rot. Basal Rot is considered to be present when the base of a column is rotting from any cause.


No basal rot.


Basal rot evident.

PORCH POST JOINT CONDITION

Porch post joint condition describes the condition of the post joints on the porch. It is recorded as the number of closed joints divided by the number of total joints. Therefore, a higher number means the joints are in better condition than a building that receives a lower number (it is assumed that a closed joint is a better condition than an open joint).


Closed porch post joint.


Open porch post joint.

PORCH FLOOR SLOPE

A porch with a positive slope - the floor of the porch slopes away from the building.

Positive slope

A porch with a neutral slope - the floor has an approximate slope of zero and inclines neither towards nor away from the building.

Neutral slope

A porch with a negative slope -the floor of the porch slopes towards the building.

Negative slope

PORCH FLOOR BOARD CONDITION

Porch floor board condition is recorded on a scale of 1 – 5, with 5 representing straight, undamaged boards with no warping or signs of deterioration and 1 representing a severely deteriorated condition.

5 porch floor boards are straight and undamaged.

4 porch floor boards are basically straight and sound but may have some separation.

3 porch floor boards begin to exhibit slight warping and minor deterioration.

2 porch floor boards are warped and decayed.

1 porch floor boards are warped, deteiorated, and have substantial material loss.

CHIMNEY PRESENCE

Recorded as either a "yes" or "no" regardless of condition. If evidence shows that a chimney was part of the original construction, this field is recorded as "yes," regardless of whether the chimney is still extant.

No chimney or evidence of former chimney.

Chimney (evidence) present.

CHIMNEY TYPE

Chimney Type is recorded according to masonry type as either "rubble stone" or "cut stone".


Cut stone chimney.


Rubble stone chimney.

UPPER CHIMNEY CONDITION

Recorded on a scale of 1 -5, with 1 representing poor condition and 5 representing excellent condition. The upper and lower portions of the chimney were rated separately because often the upper half of a chimney fails before the lower portion. Therefore it is important to rate the two halves independently.

5 chimney condition exhibits no cracking or loss.

4 chimney condition exhibits some slight cracking or mortar loss but no major damage.

3 chimney condition exhibits loss that does not significantly affect structural integrity.

2 chimney condition exhibits major loss which penetrates to the interior of the structure.

1 chimney condition denotes total failure and loss.

LOWER CHIMNEY CONDITION

Lower chimney condition is recorded on a scale of 1 -5, with 1 representing poor condition and 5 representing excellent condition. The upper and lower portions of the chimney were rated separately because often the upper half of a chimney fails before the lower portion. Therefore it is important to rate the two halves independently.

5 chimney condition exhibits no cracking or loss.

4 chimney condition exhibits some slight cracking or mortar loss but no major damage.

3 chimney condition exhibits major loss that does not affect structural integrity.

2 chimney condition exhibits major loss which penetrates to the interior of the structure.

1 chimney condition denotes total failure and loss.

CHIMNEY CRACKING

Recorded as either "yes" or "no". The chimney must exhibit significant structural cracking to receive a "yes".

No cracking.

Cracking present.

CHIMNEY SEPARATION

Chimney separation is recorded as either "yes" or "no". A "yes" implies that the chimney structure is detached from the main building, usually greater than half an inch.

No separation.

Separation.

INTERIOR STABILIZATION

Interior stabilization is recorded as either "yes" or "no". A "yes" implies that stabilization efforts have been made that support the wall structure, often in the form of bracing.

No interior stabilization.

Interior stabilization present.

NUMBER OF DOORS

Number of doors present records the number of door openings within a given structure.

NUMBER OF ORIGINAL DOORS

Number of original doors records the number of doors still installed in their opening. It should be noted that doors that were removed and stored within the building are not included in this number.

NUMBER OF WINDOWS

The number of windows is recorded as the number of window openings within a given structure.

NUMBER OF ORIGINAL WINDOW FRAMES

Number of original window frames is recorded as the number of window frames still in place within a given structure.

NUMBER OF ORIGINAL WINDOW SASHES

Number of original sashes is recorded as the number of window sashes (including the majority of muntins and mullions) still intact within the window frame. It should be noted that the presence of window glass does not affect this number. Additionally, window sashes that have been removed and stored within the interior of the building were not counted.

INTERIOR FLOOR CONDITION

Interior floor condition reflects the material condition of the interior floor boards. A numerical rating of 1 through 5 was assigned with 1 being poor condition and 5 excellent.

5 condition floor boards are straight and show no signs of damage or deterioration.

4 floor boards may show signs of wear and minimal deterioration.

3 floor boards may be warped and moderately deteriorated.

2 floor boards have areas of loss, broken boards, warping and are severely deteriorated.

1 floor boards are extremely deteriorated, with material loss and failure.

RECOMMENDATIONS

The following recommendations address immediate and future actions required to preserve, re-use and interpret Bar BC Ranch as a significant cultural resource for Grand Teton National Park. Based on the current conditions survey and the many queries made considering the possible relationships of construction design, materials, environment and siting to existing conditions, the following recommendations, listed in the order of importance, are submitted pending further analysis including historic significance and integrity.

- Complete and integrate existing cultural resource reports for Bar BC Ranch.
- Develop a combined site assessment report using conditions, significance, and integrity surveys of the buildings and landscape of the Bar BC Ranch.
- Develop a phased program of preservation determining which structures will be restored and reused, interpreted, or stabilized and mothballed, based on the combined site assessment and current park site planning.
- Contract a structural engineering inspection for each building displaying possible structural failure such as tilting, racking, and displacement, as well as those with poor purlin conditions. The resulting report should include recommendations for stabilization of compromised buildings.
- Conduct detailed recording and investigations of high priority, poor condition buildings, including an HSR for the main cabin, and implement ongoing stabilization.
- Because poor roof condition and the close proximity of trees are related, clear cutting a 20' perimeter around each building in accordance with the current park fire plan is recommended.
- Because there is a clear correlation between poor roof condition and poor wall condition, all deficient roofs should be repaired and replaced, where necessary, and the current method of application of roll and tarp temporary roofing should be revised for greater durability.

RECOMMENDATIONS

- Because grade and sill conditions are related whereby negative slope (water run off being directed toward the building) and soil contact result in poor sill log condition, the grade level and slope around each building should be improved to clear log-ground contact, direct water away from the building and remove vegetation. The current practice of gravel drain installation around compromised structures should be expanded.
- Conduct a detailed interior survey.
- Install low raised stone or cement block footings for all buildings that require sill log replacement.
- Close gaps between wall-chimney junctures on affected buildings.
- Secure all buildings to prevent unauthorized entry.

FINDINGS

The sill logs of the cabins exhibited more damage than other components within each wall. This is due to the hazards that constantly surround the material and pose perpetual risk. Three of these hazards identified within the condition assessment were presence of dense vegetation, grade level and slope of drainage. Analysis of these relationships demonstrated that soil grade had the strongest relationship with the condition of the sill log. A positive soil grade was related to a lower sill log condition score, while a negative grade was related to a higher sill log condition score. A zero grade level had a less significant relationship to sill log condition, however, it was slightly negative. Each of the relationships studied showed a trend in environmental hazards and sill condition, yet no single hazard could be identified as the strongest indicator of condition.

The Access database and ArcGIS files that were produced as part of this survey can be used to further investigate relationships between the condition of cabin components and between cabins themselves. It is hoped that this information can aid the National Park Service in understanding the deterioration of the structures at the Bar BC Dude Ranch and assist in prioritizing maintenance and repair for each structure.