DAJDESIGN
ARCHITECTURE+INTERIORS

HISTORIC STRUCTURAL ASSESSMENT

THE LOUISVILLE CABOOSE

1155 PINE STREET, LOUISVILLE, COLORADO

LOCATED AT THE EAST GATEWAY TO DOWNTOWN

August 13, 2025

Evaluated by:

Andy Johnson, AIA
DAJ Design
922A Main Street, Louisville, CO 80027
303-527-1100 | andy@dajdesign.com

DAJDESIGN
ARCHITECTURE+INTERIORS

This Project was paid for by the Louisville Preservation Fund grant.

TABLE OF CONTENTS

1.0 INTRODUCTION

1.1 RESEARCH BACKGROUND / PROJECT PARTICIPANTS

DAJ Design conducted an Historic Structural Assessment for The Louisville Caboose, located at 1155 Pine Street, Louisville, Colorado, to determine its feasibility as a candidate for historic landmark designation as defined under the Historic Preservation program of the City of Louisville. The structure is a historic railroad caboose. The City of Louisville Historic Preservation Commission found probable cause that the caboose may be eligible for landmarking under criteria in section 15.36.050 of the Louisville Municipal Code. Therefore, the Commission approved the Historic Structural Assessment to be paid for by the Louisville Preservation Fund grant.

The primary purpose of this HSA is to evaluate the caboose's current condition and to identify preservation priorities for the best use of rehabilitation funds. DAJ Design inspected The Louisville Caboose visually in July 2025 to identify areas of necessary maintenance and repair. It is possible that complications exist that were not visible, and therefore it is recommended that the property owner include contingency funding in any repair budget.

The Louisville Caboose is one of two historic railcars on the property. The caboose will serve as a visual and cultural centerpiece of a new 'Historic East Gateway' that the applicants are proposing to establish at the eastern entry point to Louisville's historic downtown. Its preservation and placement at this location are intended to celebrate the city's history and heritage while creating an iconic and welcoming landmark for visitors and residents alike.

LIST OF CONSULTANTS AND SOURCES:

STRUCTURAL ENGINEER
JESSE SHOLINSKY, PE
GLENN FRANK ENGINEERING, INC.
PO BOX 20708
BOULDER, CO 80308
303.554.9591

SOURCES
"Louisville Historic Preservation Commission Staff Report," December 18, 2023.
Other sources cited directly within the report

1.2 BUILDING LOCATION

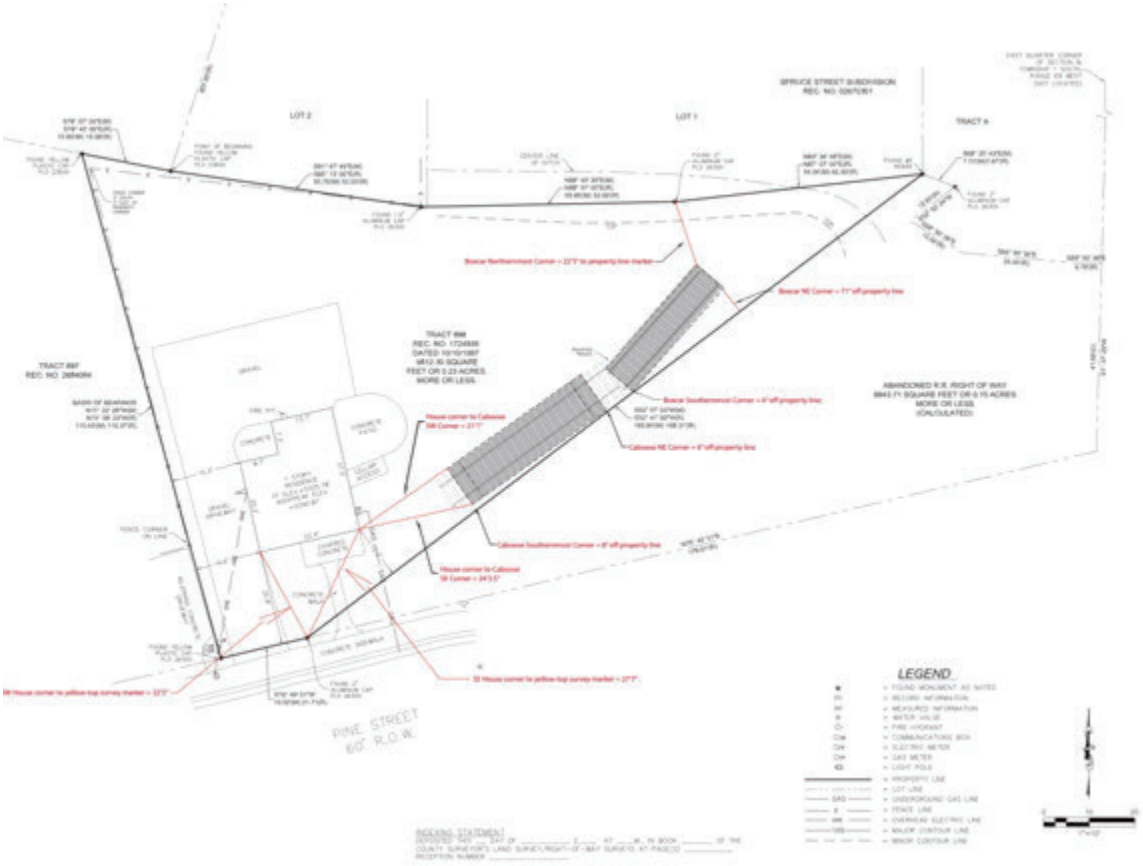
VICINITY MAP

LEGAL DESCRIPTION

TR 696 8-1S-69 (SEC T R TR PT SEC 8 T1S R69W)
Zoning: Community Commercial (CC)

SITE PLAN & DETAILS

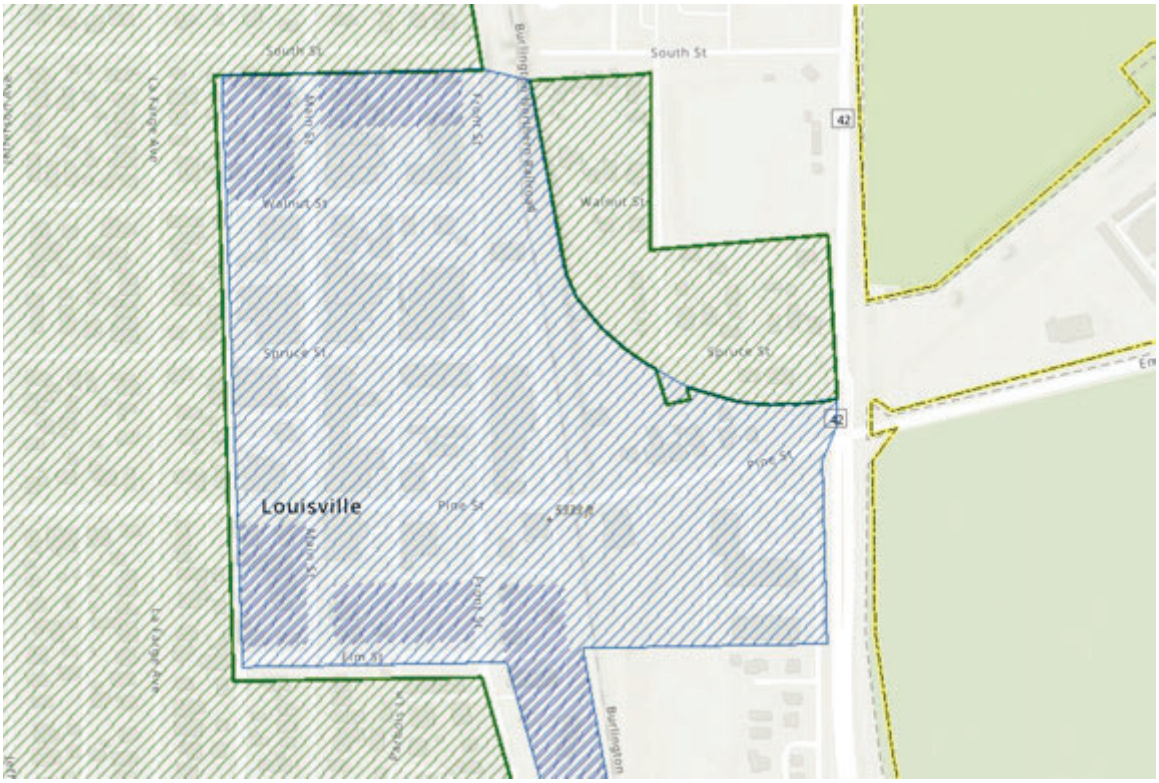
As shown in the illustration below, the caboose is situated along the southeast property boundary of the applicant's property at 1155 Pine directly adjacent to a small city park, named Tomeo Park. The caboose is positioned along railroad tracks in line with another railcar referenced in its own HSA, a Colorado & Southern boxcar, informally known as "The Steinbaughxcar". The caboose is also positioned in close proximity to a historic house on site known as "The Miners' Mansion" (also submitted for historic landmark approval and funding), and is intended to become part of a larger historic display at the East Gateway to downtown Louisville.



(Subject property at 1155 Pine, showing final, permitted placement of railcars)

It is important to note that the placement of the caboose (as well as the boxcar) are along a recreated section of the historic Colorado & Southern Railway, which served Louisville and its various coal mines (including the Acme and the Rex #1 and Rex #2 Mines, specifically) in the late 1800s and early 1900s.

(City of Louisville, circa 1909, Drumm's Map, showing subject property location along the Colorado & Southern Railway
https://www.louisvilleco.gov/exploring-louisville/historical-museum/drumm-1909-map-of-louisville)



(City of Louisville downtown Old Town Overlay, showing subject property location - https://www.louisvilleco.gov/)

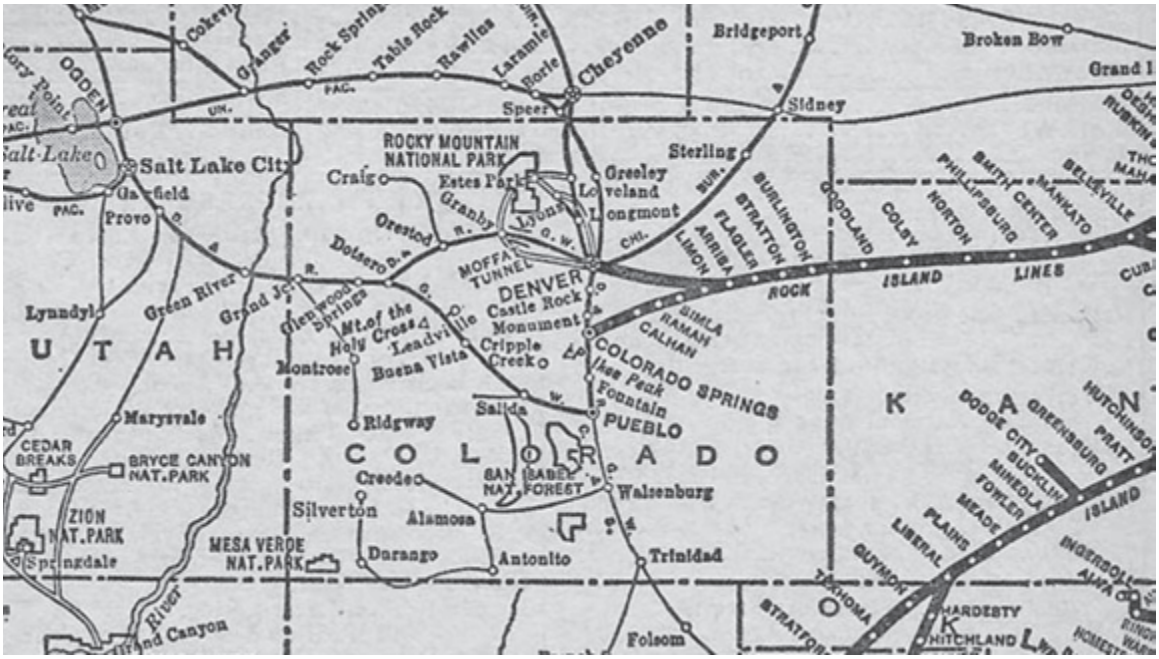
2.0 HISTORY AND USE

Year of Construction: Initial construction circa 1913-1915, rebuilt into caboose in 1942 (see discussion below)

The Louisville Caboose was originally built circa 1915 as a boxcar for the Rock Island Railroad, which ran heavy operations in Colorado as well as many other states. It is believed to have been part of the railroad's Class B-2 boxcar fleet, constructed with wood sheathing over a steel underframe. These boxcars were a staple of early 20th-century freight operations, often transporting a mix of general merchandise—such as flour, dry goods, produce, mining equipment, canned goods, and agricultural products—throughout the Rock Island's midwestern and western routes.

(Sample photo showing the style of the original construction of a B-2 boxcar - which The Louisville Caboose started its life as. Photo from https://myp48.wordpress.com/2019/10/25/modeling-rock-island-fowler-clone-boxcars/)

The Rock Island Railroad, or more formally, the "Chicago, Rock Island & Pacific Railroad (CRI&P)" operated an extensive network from Chicago through Kansas, Missouri, Oklahoma, Colorado, and New Mexico (see map below). It is likely that this boxcar traveled those routes during its service life. In Colorado specifically, Rock Island served a number of communities including Limon, Peyton, Calhan, Falcon, and Colorado Springs, with access into Denver via trackage rights starting in the late 19th century. Freight service often supported regional industries such as farming, quarrying, and mining, with goods transiting through key yards at Limon and Calhan en route to larger distribution hubs.



(Map circa 1910s showing Rock Island railway lines in Colorado - photo courtesy of https://denversrailroads.com/Rock.htm)

In 1942, the boxcar was converted into a caboose as part of the World War II effort, now representing a rare surviving example of a field-converted Rock Island caboose with external bracing. As wartime material shortages made the production of new rolling stock difficult, Rock Island undertook conversions of approximately 200 Class B-2 boxcars at its shops in Chicago and Silvis. The cabooses were shortened, equipped with end platforms, steel cupolas, and rudimentary interior fittings including bunks, a stove, a desk, and tool lockers. These converted cabooses remained in use for decades after the war.

(The Rock Island Shop in Silvis, ILL, ca 1940, where The Louisville Caboose was actually remade from a boxcar into a caboose as part of the effort to scale production for WWII - photo courtesy https://www.rrpicturearchives.net/showPicture.aspx?id=6198799)

The primary function of all cabooses was to serve as a lookout and mobile office post for the train crew. Conductors and brakemen used the space for paperwork, rest, and to monitor the safety and integrity of the train. One critical task was watching for 'hotboxes'—overheated wheel journal bearings caused by friction and lack of lubrication—which could lead to axle failure, causing trains to catch fire as they trundled down the tracks. Caboose crews watched for smoke or sparks from wheels, ensuring cargo safety and mechanical integrity long before modern wheel bearings were invented, as well as sensors to monitor train cars, rendering them no longer needed.

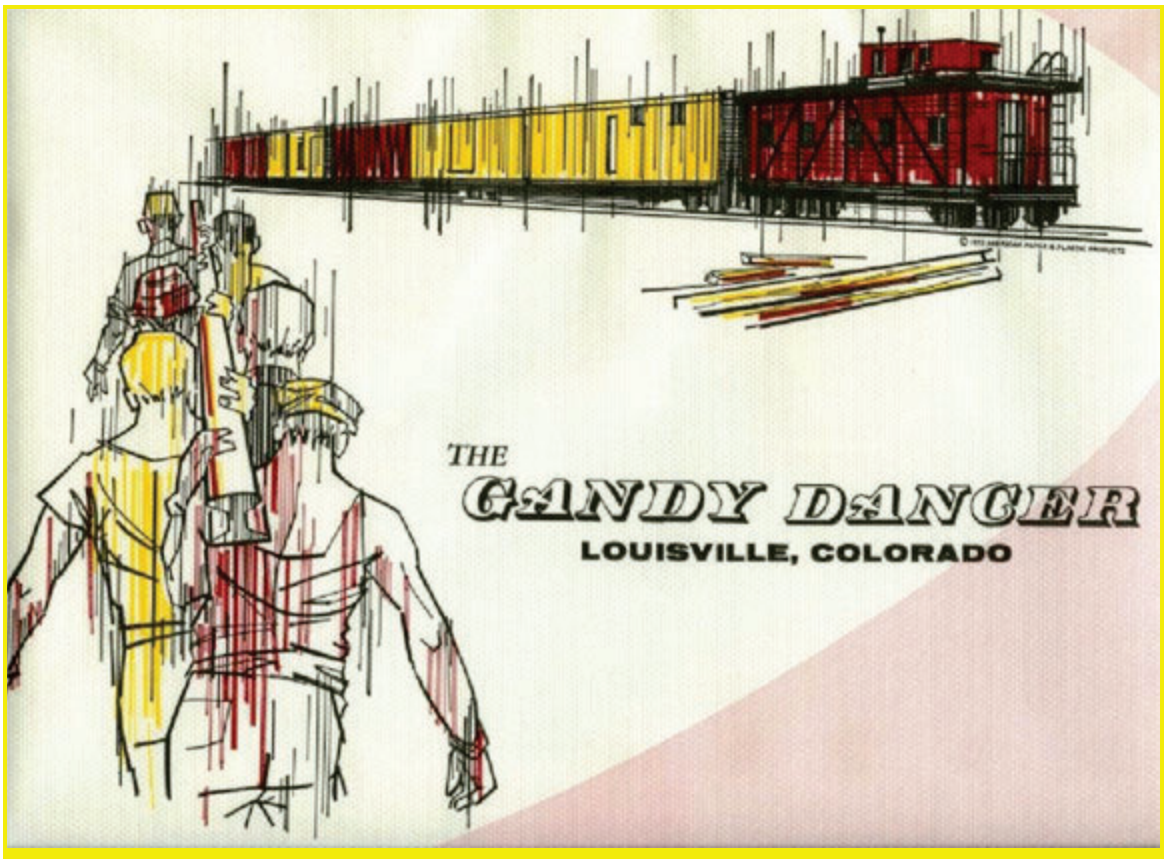
(Rock Island Caboose 17834, which was restored by the Oklahoma Railway Museum - https://oklahomarailwaymuseum.org/exhibits/rock-island-17834-caboose/)

One known example of another such RI caboose, which is preserved at the Oklahoma Railway Museum, is Rock Island Caboose #17834. It shares a nearly identical construction history and typology with The Louisville Caboose. These cabooses were easily identifiable by their visible diagonal bracing, ladder fixtures, steel trucks, and utilitarian form. The Louisville Caboose retains its original Bettendorf trucks and most of its exterior hardware, though only two of its original four steps remain (and ideally would need to be remade to return the caboose to its original fit and finish).

(The Louisville Caboose - RI Caboose #17743, photo June 2025)

The Louisville Caboose is believed to be Rock Island caboose #17743, as identified by railroad preservationists through online correspondence and archived sources such as the Rock Island Reporter and the Rock Island Lines preservation forums. While no visible serial plate remains, this identification places it among the Rock Island's wartime conversions of Class B-2 boxcars and ties it to known sister cabooses from the same build era.

After one lifetime riding the rails as a B-2 Boxcar, then another lifetime as a caboose, in the early 1970s the railcar was incorporated into a rail-themed restaurant at the intersection of Main St. and South Boulder Road in Louisville. The concept for the restaurant was spearheaded by Clifford Brock, Eva Brock, and William Arnold, who formed the A & B Company in 1969.



(Gandy Dancer Restaurant ad, circa 1972, showing an illustration of the Caboose)

Their vision became the Gandy Dancer Restaurant, part of a 14-acre master-planned site called Coal Creek Station. The trade name affidavit for the Gandy Dancer was filed in 1972. The caboose and several boxcars were positioned on replica tracks near the real rail line and welded in place after being lifted by crane. A central kitchen structure and a depot-style east addition were built, including a walk-in cooler and seating for over 100 guests. The caboose itself served as a bar/lounge and dance area, with patrons able to access the cupola. This created a unique dining experience with live music, themed decor, and upscale fare.

The restaurant later operated as Coal Creek Junction and in subsequent decades as Brothers Three, Kaddy Shack BBQ, and Hickory Sticks Smokehouse & Grill. The restaurant permanently closed in 2001, and the caboose sat abandoned until 2020.

(November 2019 Photo of applicant, Travis Ramos, in front of The Louisville Caboose at night)

In late 2019, the caboose along with the rest of the restaurant was slated for demolition. Travis and Laura Ramos, Louisville residents, led a community effort to save the caboose. After launching a grassroots, local campaign at the Louisville Parade of Lights in December 2019, the community preservation effort snowballed, appearing in multiple local news outlets including the Daily Camera, Denver7, and KOAA News among others..

(December 2019 Photo of two of applicant's children, Tate and Reid Ramos, at the Louisville Parade of Lights in 2019 spreading the word to "SAVE THE CABOOSE!")

On February 29, 2020—dubbed 'Crane Day'—a crowd of local supporters gathered to witness the 45,800lb caboose lifted and placed on a transport flatbed, cheered on by residents and volunteers. News articles described the structure as "a piece of town history worth saving," and documented the grassroots fundraising campaign organized by Travis and Laura Ramos. These stories highlighted not only the historic importance of the caboose, but also the strength of local commitment to preserving Louisville's cultural landmarks.

(February 29, 2020 photo of community members who came to help or support saving The Louisville Caboose form being demolished)

With the help of local volunteers, including families, high school students, and scout troops, the caboose was moved off-site on February 29, 2020. It was then preserved in temporary storage during the pandemic, until the Ramos Family was able to purchase the property at 1155 Pine St, and relocate it there in December 2023. Bringing the story full circle, the Ramos Family put the caboose itself in the Parade of Lights that year before placing it on the property, on early 1900s steel rails believed to be from the historic Denver Interurban Railroad; the same rails it sat on at Main and South Boulder for nearly 50 years.

(December 2023 photo of The Louisville Caboose preparing to be in the Louisville Parade of Lights)

(December 2023 photo of The Louisville Caboose being craned to its new home at 1155 Pine St.)

2.1 ARCHITECTURAL SIGNIFICANCE & CONSTRUCTION HISTORY

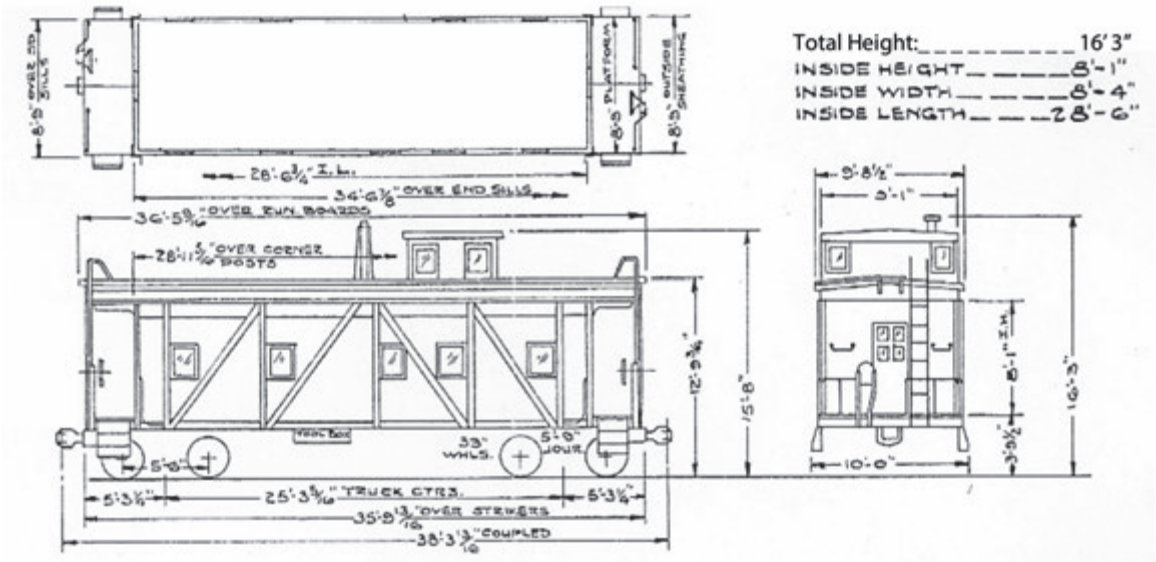
As noted in the previous section, The Louisville Caboose exhibits a classic early 20th-century railroad style, with utilitarian features characteristic of the transition between all-wood railcars and all-metal railcars. The car maintains a rectangular form with cupola on top, and defined window spacing typical of mid-century cabooses. Although it's lived several lifetimes, its overall configuration remains highly intact.

Originally constructed in 1913 as a boxcar, the structure underwent a conversion to a caboose around 1942. In 1973, it was relocated and incorporated into a commercial restaurant setting at 1032 E. South Boulder Road. As part of this adaptive reuse, modifications were made to the structure by removing approximately ⅓ of what is now the South wall, which was replaced when it was moved.

In February 2020, the caboose was removed from its restaurant setting and placed into storage during the pandemic. In December 2023, it was relocated to its current location at 1155 Pine Street. The structure now sits on a new ballast and railbed system and is undergoing planning for exterior restoration and future adaptive reuse. Despite its many different iterations - from boxcar to caboose to restaurant to caboose once again - the structure remains a rare and recognizable example of early 20th-century railroad vernacular in the Louisville area (and beyond).

2.2 FLOOR PLAN

Interior floor space is approximately 237.5 square feet (28'6" x 8'4"). The structure as it sits has been gutted inside and is currently a single-level open bay, with tongue-in-groove wood walls and flooring clad to steel framing. As a caboose, it has an all-steel cupola on top, five window openings on each long side, and one door on each end.



2.3 PROPOSED USE

The caboose is officially permitted by the City of Louisville to reside in its current location, and at this time is not connected to utilities. The interior was gutted to allow for replacement of deteriorated wood and to prepare for eventual rehabilitation. The vision for The Louisville Caboose is to preserve its historical integrity while enabling a future adaptive reuse to be determined. Although no specific programmatic use has been finalized at this time, the structure is being retained as a cultural landmark with the potential to support historically sensitive and community-oriented functions in the future, largely pending what the City will allow in terms of reuse of the structure.

3.0 STRUCTURE CONDITION ASSESSMENT

3.1 SITE

Description:

The caboose sits on a newly graded railbed, professionally constructed with approximately 12 inches of compacted road base topped with 10 inches of crushed granite. The ‘ballast’ bed also utilizes brand new BNSF Railroad ties (as of 2023), to which the rails are affixed using the traditional railroad spike method. It is positioned on historic narrow-gauge steel rails, as previously noted, which are approximately 40’ in length, believed to originate from the early 20th-century Denver Interurban Railway.

Condition Evaluation:

Good. Site condition is stable, and was recently prepared. Gravel extends under and around the caboose. Drainage away from the rail bed is sufficient.

Recommendations:

1. Add landscaping buffer around perimeter to limit erosion and provide context signage.
2. Overall site is graded at a 2% slope toward the drainage ditch to the North, and any future grading work should take into consideration the railcars' placement and ensure water continues to flow away from the structures and not pool underneath in any way.
3. We would also recommend adding gutters if possible to route precipitation away from the walls which could contribute to degradation over time.
4. Annual monitoring of the structures would also be recommended to ensure no unplanned settling is taking place.

3.2 STRUCTURAL SYSTEM

Description:

It should be noted that the structural system of the caboose, as a railcar, is fundamentally different from residential or other such structures commonly assessed for historic preservation work in Louisville. That said, the structural analysis encompasses the relevant facets of this type of construction, including the frame and how it is mounted to the wheels and affixed to the tracks.

The boxcar-turned caboose's frame is constructed with a heavy-gauge steel exoskeleton—a robust steel cage-like structure—to which the wooden cladding is affixed. This exoskeleton not only contributes to the heavy weight of the railcar, but has also contributed to its ongoing structural soundness, despite its age. The body of the caboose is set upon its correct 'trucks' (also known as wheel-sets), and its wheels are welded to the early 1900s-era steel rails, which are spiked to the railroad ties, which all sit on a new ballast bed as previously noted.

Condition Evaluation:

Good - The caboose is structurally sound. The steel framing shows no signs of notable corrosion or degradation, and continues to provide ample structural integrity. The structural condition and integrity of the caboose were assessed by Jesse Sholinsky of GFE Engineering.

Recommendations::

1. Depending on the adaptive future reuse, consider welding the body of the caboose to the trucks so it is firmly fixed in place.
2. Annual monitoring of the structure's exoskeleton to ensure no degradation over time.
3. To further mitigate from rust or water damage over time, replace all wood elements (excluding original ceiling wood inside), using historically appropriate, clear, vertical grain old-growth Alaskan Yellow Cedar or Douglas Fir 2x6 tongue-and-groove milled lumber.
4. Paint with appropriate, oil-based paint and properly seal all external junctions where water could infiltrate.


UY475B

3.3 ENVELOPE – EXTERIOR WALLS

Description:

The exterior walls are comprised of external-braced, heavy steel 'Z' beams which originally had 2x6 tongue-in-groove, clear, dense vertical grain, old-growth Douglas Fir wood siding affixed to the steel framing using traditional square-head hardware common to railcar construction of the era.

The northwest long-side of the caboose, as well as both short-sides, have their original wood cladding, but is severely weathered with various rotted sections, which have temporary patches of ½" plywood affixes with wood screws in an attempt to seal the building envelope.

The southeast, street-facing, long-side of the caboose is missing the entirety of its original wood cladding, and has had temporary sheathing consisting of 4x8 plywood panels installed in 2024 in an attempt to better seal the building envelope. All original window glass is missing, and both glass as well as the window frames need to be replaced. Approximately 30% of the floor wood also requires replacement. The wood for the entire exterior as well as ~30% of the flooring interior will need to be replaced, treated, and repainted using historically appropriate materials.

Condition Evaluation:

Poor and in need of complete replacement, as noted above.

Recommendations:

1. Replace all wood elements on the entire caboose (excluding original ceiling wood inside), using historically appropriate, clear, vertical grain old-growth Alaskan Yellow Cedar or Douglas Fir 2x6 tongue-and-groove milled lumber, likely from a mill in the Pacific Northwest.
2. Paint with appropriate, oil-based paint.
3. Properly seal all external junctions where water could infiltrate.

3.4 ENVELOPE – ROOFING & WATERPROOFING

Description:

The caboose has a new (as of June 2025) standing seam steel roof installed over newly rebuilt substructure of 1" thick plywood attached to the existing structure as specified by GFE Engineering (2025). The original catwalk is missing and needs to be reconstructed using old templated pieces to be period-correct. The roof of the cupola is a continuous 12 gauge piece of steelwork hot-riveted together to the vertical walls of the cupola, also 12-gauge steel. The structure is riveted to the steel frame of the railcar using ¾" hot-rivets common to railcar construction of the era.

Condition Evaluation:

Good. The roof over the caboose other than the cupola is new as of June 2025, and is in excellent shape. While the cupola's roof is sound, it needs prep and a coat of paint to stave off rust or being compromised by weathering. There are no gutters, however, which is recommended.

Recommendations:

1. Cupola should have proper surface preparation and a new coat of paint. Ideally Epoxy 2K primer topcoated with weather-resistant industrial grade paint.
2. Add gutters if possible to route precipitation away from the walls and base of the structure, which could contribute to degradation over time
3. Schedule annual inspections to ensure no degradation, UV, hail damage or otherwise. Periodically repaint Cupola as needed.

3.5 WINDOWS & DOORS

Description:

All windows were originally constructed of traditional wood framing seen in most railcars from the 1940s-era (when The Louisville Caboose was converted into a caboose). The windows are each set into the wood cladding on the body of the caboose (or in the case of the cupola, into the steel framing of the cupola). As shown in the following illustrations, there are 18 windows total, and they are of the fixed-window type. There are also two doors - one on each end, as shown in the photos. The doors are typical of railcars of the era - narrower than you'd find in residential use to accommodate the size of the railcar. They are set within the door frames, and currently inoperable as they are screwed shut to keep the building safely sealed off.

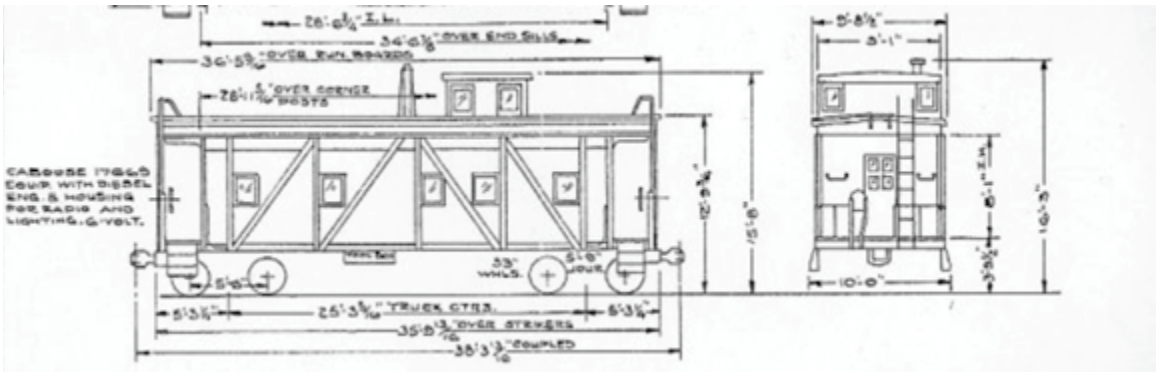
Condition Evaluation:

Poor. All windows are missing, and require full reconstruction. While the doors and door frames are generally intact and structurally sound, they also require restoration including refinishing, new windows and reglazing, and hardware replacement.

Recommendations:

1. Applicant saved one full, intact window to use as a template, and our recommendation is to use this template to have new windows constructed to emulate the original ones in fit and finish.
2. Also recommend removal and restoration of both doors with new windows and hardware. Use tempered glass where required for both doors and windows. Note: Replace windows only after siding is replaced and they are appropriately located as per original specifications. Applicant may consider replacing original fixed-windows with period-correct styled windows that have a functional swing-out ability to better facilitate future adaptive re-use of the structure.

(Diagram showing window locations for The Louisville Caboose)



(Second diagram showing window locations for The Louisville Caboose from the original blueprints)

(Close up of windows on Northwest side of caboose)

3.6 EXTERIOR DETAILS

Description:

The main components including the trucks (wheelsets) and external brake rigging appear to be intact on both platforms as well as underneath the caboose.

The original smokestack, which was used for the stove inside the caboose, is not currently installed on the structure but is in applicants' storage.

The catwalk along the roof (which was used by rail workers to access the roof to watch the train and give signals), is no longer present. Applicant kept the remaining pieces from it as well as documentation to properly reconstruct it.

The ladders to the roof on each end are present, but since there is no catwalk on the roof, they are unattached at the top.

Three of four corner step-up ladders are missing and will require reconstruction to match the original fit and finish.

All 'grab-irons' are intact and require painting or powder-coating and reinstallation.

The original corner lamps on the caboose are missing and should be replaced with as close to original units as possible.

Condition Evaluation:

Poor. While the majority of components are present on the caboose, many exterior details as noted above need restoration, replacement, or reconstruction.

Recommendations:

1. Media-blast, powder coat, and install the original smokestack in its proper location on the roof.

2. Reconstruct the catwalk along the roof using applicant's documentation and remaining pieces as templates from it. Wood for the catwalk should be the same as specified for the other facets of the caboose - correctly cut clear, dense, old-growth, vertical grain Alaskan Yellow Cedar or Douglas Fir.

3. Affix the ladders to the catwalk once it's been reconstructed.

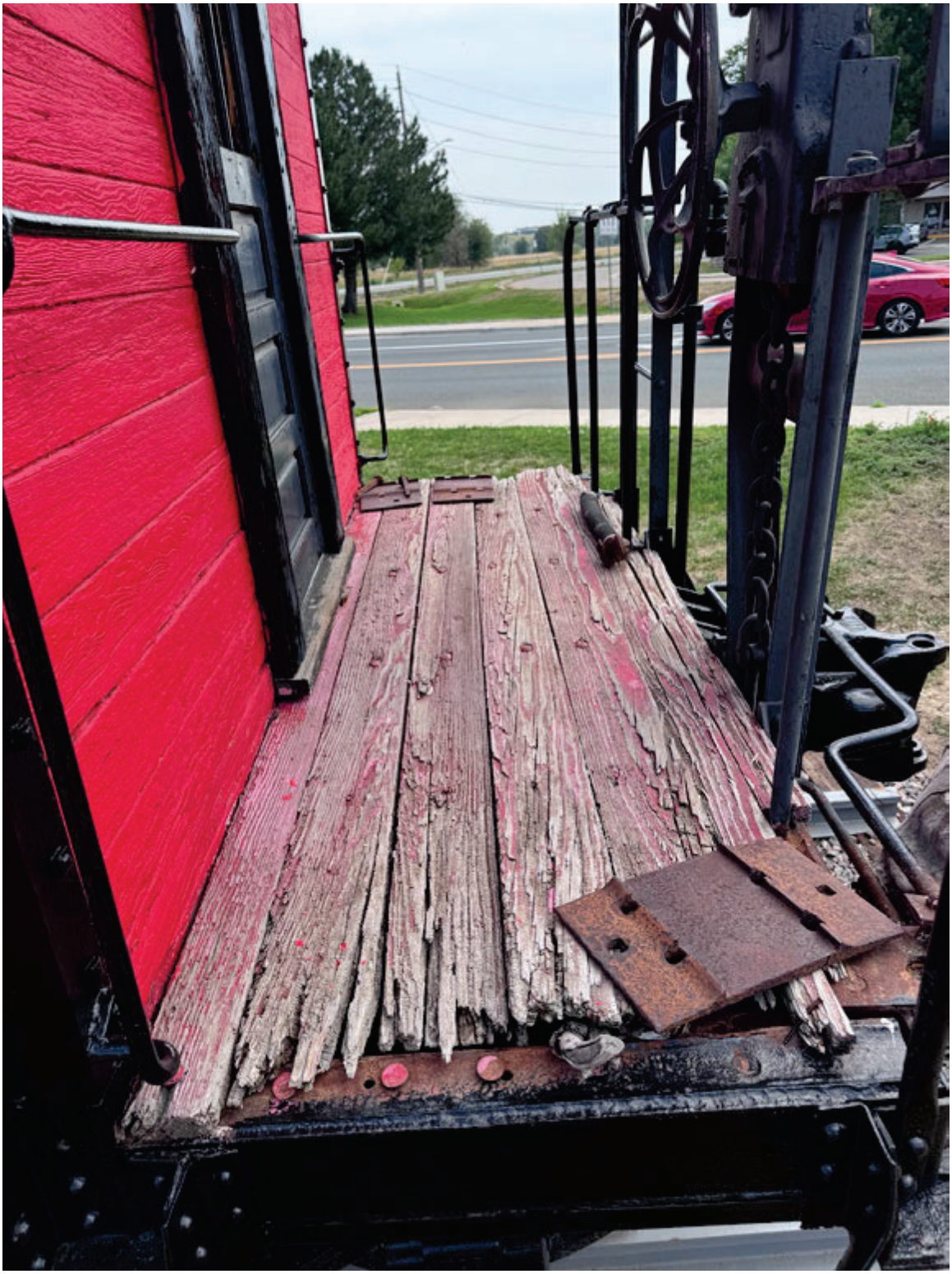
4. Use the existing step-up ladder as a template, have the other three ladders made to match in original fit and finish.

5. Paint or powder coat all 'grab-irons' and reinstall with proper square head hardware. .

6. Source original corner lamps for the caboose and replace with as close to original units as possible.

(The one remaining step ladder on The Louisville Caboose)

(Northeast Platform base on The Louisville Caboose)



(Southwest Platform base on The Louisville Caboose)

3.7 MECHANICAL SYSTEMS

Description:

No traditional residential-style mechanical systems present; structure is unheated and unplumbed. In its previous location at Main St. & South Boulder Road, it did have its own standalone HVAC system and was also connected to gas and electricity. The only thing that currently remains are light fixture sockets on the ceiling; all other systems were removed when caboose was moved from the site on Main and South Boulder Road.

Condition Evaluation:

[Non-existent]

Recommendations:

1. Depending on adaptive future reuse, consider adding gas, water and sewer connections.

3.8 ELECTRICAL SYSTEMS

Description:

While no electrical systems are currently installed, there are remaining light fixture sockets on the interior ceiling from the cabooses' former use as part of a restaurant.

Condition Evaluation:

[Non-existent]

Recommendations:

1. Both for safety, as well as for an adaptive future reuse, consider bringing electricity to the structure. Even a small, code-compliant electrical box with outlets could provide basic circuits for exterior and interior lighting to both light the structure at night as a display piece, as well as increase safety.

4.0 ANALYSIS AND COMPLIANCE

4.1 HAZARDOUS MATERIALS

Due to the age of the structure, the finish coatings may contain lead-based paint. A professional evaluation should be conducted prior to sanding or refinishing original materials.

4.2 MATERIALS ANALYSIS

Does not apply.

4.3 ZONING CODE COMPLIANCE

Note:

Structure is an accessory use and is currently not used for dwelling. Square footage under 500 SF is exempt from many commercial design standards. Current use is a non-inhabited structure, and setbacks, height, and FAR conform to code. The structure was officially permitted with the City of Louisville to be on-site as of June 2025 (permit number MISC-10718-2025).

Legal Description: TR 696 8-1S-69 (SEC T R TR PT SEC 8 T1S R69W),

City of Louisville, County of Boulder, State of Colorado

Lot Dimensions: Polygon

Lot Size: 0.236 acres (ISP) / 10,280.16 sf

Zoning: CC (Commercial Community); Downtown Design Handbook

Allowable Building Height (from existing grade):

Principal Buildings: 2 Stories & 35’ Min. / 3 Stories & 45’ Max.

Accessory Buildings: 20’

Lot Coverage:

Existing: 1,095 sf(House, Caboose, & Boxcar)

Max. Allowable: 50,000 sf

Setbacks:

Street-Facing Property Lines: 0’ Min. / 30’ Max.

Side Property Line: 10’

Rear Property Line: 20’

5.0 PRESERVATION PLAN

5.1 PRIORITIZED WORK

CRITICAL DEFICIENCY

1. Replace all wood elements on the entire caboose (excluding original ceiling wood inside), using historically appropriate, clear, vertical grain old-growth Alaskan Yellow Cedar or Douglas Fir 2x6 tongue-and-groove milled lumber, likely from a mill in the Pacific Northwest.
2. Paint with appropriate, oil-based paint.
3. Properly seal all external junctions where water could infiltrate.
4. All eighteen windows reconstructed and installed, emulating the original ones in fit and finish.
5. Recommended removal and restoration of both doors with new windows and hardware. Use tempered glass where required for both doors and windows.
6. Both for safety, as well as for an adaptive future reuse, consider bringing electricity to the structure. Even a small, code-compliant electrical box with outlets could provide basic circuits for exterior and interior lighting to both light the structure at night as a display piece, as well as increase safety.

SERIOUS DEFICIENCY

1. Depending on the adaptive future reuse, consider welding the body of the caboose to the trucks so it is firmly fixed in place.
2. Cupola should have proper surface preparation and a new coat of paint. Ideally Epoxy 2K primer topcoated with weather-resistant industrial grade paint.
3. Add gutters if possible to route precipitation away from the walls and base of the structure, which could contribute to degradation over time
4. Reconstruct the catwalk along the roof using applicant’s documentation and remaining pieces as templates from it. Wood for the catwalk should be the same

as specified for the other facets of the caboose - correctly cut clear, dense, old-growth, vertical grain Alaskan Yellow Cedar or Douglas Fir.
5. Affix the ladders to the catwalk once it's been reconstructed.

MINOR DEFICIENCY

1. Add landscaping buffer around perimeter to limit erosion and provide context signage.
2. Add gutters to route precipitation away from the walls which could contribute to degradation over time.
3. Media-blast, powder coat, and install the original smokestack in its proper location on the roof.
4. Use the existing step-up ladder as a template, have the other three ladders made to match in original fit and finish.
5. Paint or powder coat all 'grab-irons' and reinstall with proper square head hardware.
6. Source original corner lamps for the caboose and replace with as close to original units as possible.
7. Depending on adaptive future reuse, add gas, water and sewer connections.
8. Design and install interpretive signage for historic education

5.2 PHASING PLAN

Phase 1 (Completed): Relocation, construction of new rail bed, new roof & roof substructure, paint steel components.
Phase 2: Address deficiencies as noted in this report, starting with critical deficiencies in order to maintain safety and ensure the structure doesn't deteriorate further.

5.3 ESTIMATE OF PROBABLE COST OF CONSTRUCTION

Based on recent restoration efforts of comparable historical railcars, a credible estimate for restoring or rebuilding the requested elements of The Louisville Caboose in 2025, as the grant application reflects, is in the$175-200K range, allocated as shown in the accompanying spreadsheet.

For reference, comparable restoration projects analyzed include:

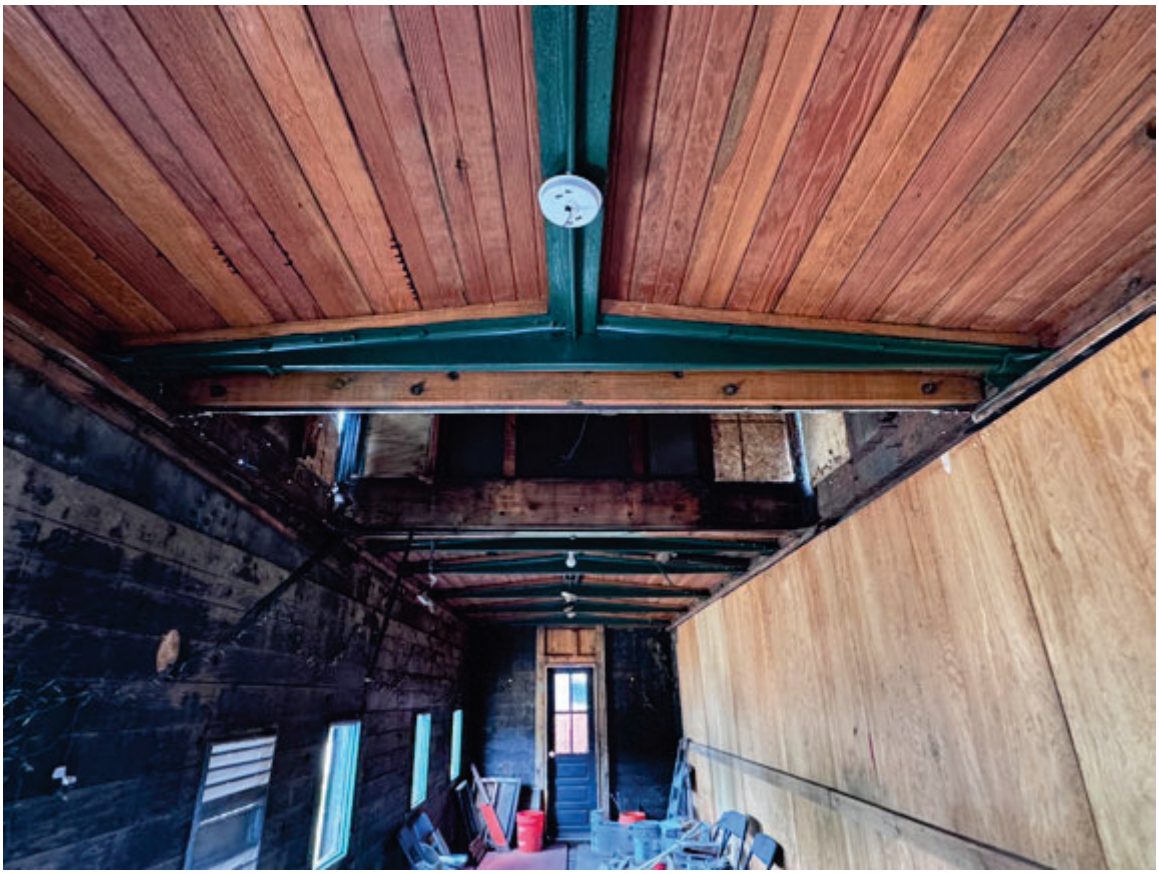
1. **Salida, Colorado**: The City of Salida restored its historic D&RGW caboose beginning in 2021, with estimated costs around $175,000 for full restoration, preservation, and interpretation (Ark Valley Voice).
2. **Windsor, Virginia**: In 2025, Windsor Town Council evaluated moving and restoring a 1927 Norfolk & Western caboose. Initial transport costs were

estimated at $8,350, and full restoration is expected to exceed $100,000 (The Tidewater News, Windsor Weekly).

3. **Billings, Montana:** Billings Depot Caboose - The Montana Department of Commerce awarded $150,000 through the Montana Historic Preservation Grant program for the restoration of the Billings Depot caboose.

These examples validate the 2025 cost projections for The Louisville Caboose, which reflect rising costs of labor, premium materials (e.g., vertical grain Douglas Fir or Alaskan Yellow Cedar), custom fabrication needs, and public-oriented historical preservation goals.

6.0 PHOTOGRAPHS AND ILLUSTRATIONS



(Ceiling and interior, facing North, on The Louisville Caboose)

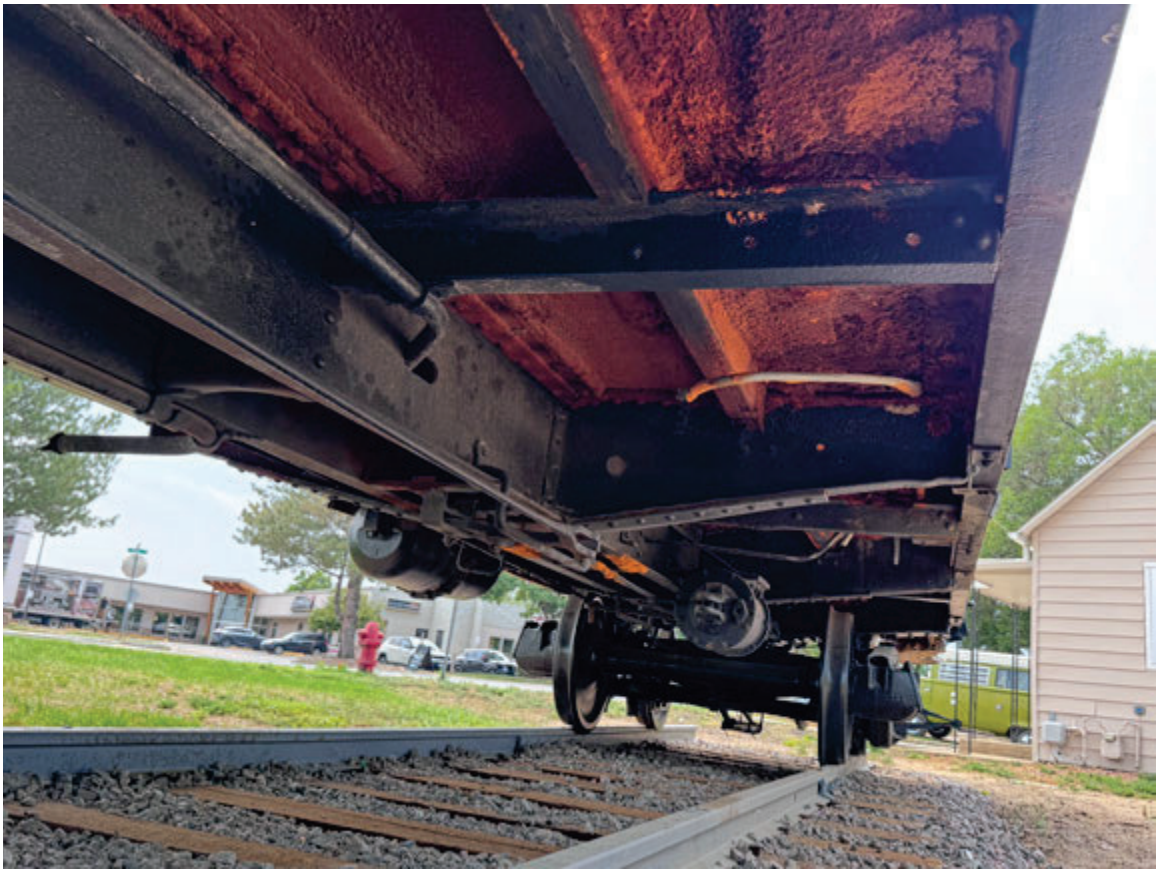
(Ceiling and interior, facing North, on The Louisville Caboose)

(Interior shot, southeast wall of The Louisville Caboose)

(Interior shot, Northwest wall of The Louisville Caboose, showing original wood cladding)

(Door on South side of The Louisville Caboose)

(Detail showing welded connection between wheels and train tracks of The Louisville Caboose. Applicant had these pieces laser cut with each his children's initials as shown above)



(Underneath shot of The Louisville Caboose)

(Platform on South side of The Louisville Caboose showing the remnants of the trunk of a tree that had grown around the corner of the caboose while it was at Main St. & South Boulder Rd. location)

(Detail on one of the structural beams on the side of The Louisville Caboose, dated Dec. 23, 1913)

(Detail of 'Bettendorf' trucks under The Louisville Caboose)

(View from south of The Louisville Caboose)

Prepared by DAJ Design | August 2025

End of Report.