



**NOTICE OF A JOINT WORK SESSION OF THE TOWN COUNCIL
AND HISTORIC PRESERVATION COMMISSION
OF THE TOWN OF CLARKDALE
WEDNESDAY, OCTOBER 25, 2023 AT 6:00 PM**

In Person: Clark Memorial Clubhouse, 19 N. Ninth St., Clarkdale AZ
OR

Join Zoom Meeting

<https://us02web.zoom.us/j/83315993753>

Meeting ID: 833 1599 3753

Town of Clarkdale Vision

The Town of Clarkdale connects our unique history, proximity to the Verde River, and small-town charm to a future with a vibrant economy.

We cultivate an environment where residents and businesses can thrive; providing services and jobs for our residents and capitalizing upon tourism.

We sustainably enhance our infrastructure, support the arts and education, and develop recreational opportunities to create a bright future for our entire community.

PURSUANT TO A.R.S. §38-431.02, NOTICE IS HEREBY GIVEN to the members of the Common Council of the Town of Clarkdale and to the general public that the Town of Clarkdale Town Council will hold a Work Session open to the public on Wednesday, October 25, 2023, at 6:00 PM in a hybrid meeting via Zoom Video Conference or in person at 19 N. Ninth Street, Clarkdale, Arizona, Clark Memorial Clubhouse, Men's Lounge. Members of the Clarkdale Common Council will attend either in person or by telephone, video or internet conferencing. Pursuant to A.R.S. §38-431.03, the Council may vote to recess the meeting and move into Executive Session on any item, which will be held immediately after the vote and will not be open to the public. Upon completion of Executive Session, the Council may resume the meeting, open to the public, to address the remaining items on the agenda.

Supporting documentation and staff reports furnished to the Council with this agenda are available for review on the Town website at www.clarkdale.az.gov and the Town Clerk's Office.

**ALL ITEMS ON THIS AGENDA ARE SCHEDULED FOR DISCUSSION AND POSSIBLE ACTION,
UNLESS OTHERWISE NOTED.**

1. CALL TO ORDER

A. Call to Order of Town Council

B. Call to Order of Historic Preservation Commission

2. ROLL CALL

A. Roll Call of Town Council Members

B. Roll Call of Historic Preservation Commission Members

3. DISCUSSION ONLY

A. Gazebo/Bandstand Update

Discussion only between the Town Council and the Historic Preservation Commission regarding the final draft of the engineer's report for the Gazebo/Bandstand.

B. Historic Clarkdale Building Assessment

Discussion only between the Town Council and Historic Preservation Commission regarding the final draft of the Historic Building Assessment.

4. ADJOURNMENT

A. Council Adjourn

B. Historic Preservation Commission Adjourn

Values

Values are the guiding principles that provide an organization with purpose and direction. The Town of Clarkdale's organizational values are:

COPPER

Customer focused

Open, transparent and equitable

Preserving our history, charm, and environment

Planning for a sustainable future

Economic and social resiliency

Resourceful and innovative

Mission

The Town of Clarkdale serves the community by providing amenities, infrastructure, services, and public safety to enhance quality of life. We are stewards of our history while we sustainably and resiliently plan for the future with an emphasis on community engagement and transparency.

Persons with a disability may request reasonable accommodations by contacting the Town Hall at (928) 639-2400 (TTY: 1-800-367-8939) at least 72 hours in advance of the meeting.



Staff Report

Item Number: 3.A.

Agenda Item: **Gazebo/Bandstand Update**
Discussion only between the Town Council and the Historic Preservation Commission regarding the final draft of the engineer's report for the Gazebo/Bandstand.

Staff Contact: Susan Guthrie, Town Manager

Meeting Date: October 25, 2023

Strategic Goal: This agenda item supports the following Clarkdale Strategic Goal Area:

- Goal Area 1 - Preserve and celebrate Clarkdale's unique, complex history.

Background: The Town of Clarkdale has received the final drafts of the engineer's reports for the Gazebo/Bandstand and the Historic Building Assessment.

Budget Impact: Undetermined at this time.

Recommendation: Discussion only. No recommendation.



OCTOBER 2023

CLARKDALE BAND STAND *STRUCTURAL EVALUATION*



ADVANCED STRUCTURAL ENGINEERING



October 10, 2023

Ms. Ruth Mayday
Assistant Town Manager
Town of Clarkdale
39 N Ninth Street
PO Box 308
Clarkdale, AZ 85324

Subject: Band Stand - Structural Evaluation
Clarkdale, AZ 85324

Dear Ms. Mayday:

This report contains the structural evaluation of the Band Stand located at Clarkdale Park bounded by Main and 1st South Streets and 10th and 11th Streets.

INTRODUCTION

Advanced Structural Engineering (ASE) was engaged to perform a structural evaluation of the Band Stand at Clarkdale Park, located between Main and 1st, and 10th and 11th in Clarkdale, Arizona. Our evaluation addresses the observations based on the site visit, the evaluation of the deficiencies, and the recommendations.

SCOPE OF WORK

ASE's scope of services is to perform a structural evaluation and report of the findings. Our scope of work is as follows:

Structural Evaluation Phase:

- Review of bandstand documents
- Site visit to determine existing conditions
- Evaluation
 - Roof Framing
 - Columns
 - Deck Framing
 - Deck Siding
 - Deck Railing
 - Stairs
- Prepare Recommendations
- Technical Review
- Coordination



Structural Report Phase

- Report Preparation
- Technical Review
- Coordination
- Review Meeting

ASE fulfilled these scope items by performing the following:

- ✓ We performed non-destructive observation of the structure during our site visit.
- ✓ We documented the deficient items and recommended the required repair, replacement or strengthening.
- ✓ We reviewed the report provided by Frost Structural Engineers.

DESCRIPTION OF FACILITY

The band stand was built in 1915, (per staff presentation document) and has undergone several renovations. Constructed of wood, it is a raised octagonal performance platform with handrails and a peaked roof. The roof has shake shingles. The floor is approximately five feet above the surrounding park. The location of the property is shown in photo 1.

The wood columns are supported by a concrete foundation. The exterior walls are supported separately by a concrete slab underneath, otherwise all components are lumber of various dimensions, which is reflective of the mixture of very old true dimension and more recently installed nominal dimension components. (See cover photo)

INVESTIGATIONS

The initial review of the building by ASE Structural Engineers, by Michael Puhlmann, PE, SE occurred on July 12, 2023. He was accompanied by Town staff, State Historic Preservation Office staff, and staff of contractor. An additional site visit occurred on August 23rd, 2023 by Douglas Pike, PE and Derek Cooksey. Ruth Mayday, Bob Pipkin, and Terry Norman of Clarkdale were present during this review.

OBSERVATIONS

Our observations are as follows:

- *Roof:* The roof is made of wood shingles. Viewed from underneath, and typical to such shingles, light is visible through them. Shingles typically "tighten" or "swell" in rainy weather and somewhat seal the interior structure.
- *Roof Deck:* The roof deck is composed of spaced 1x8's supporting the shingles. As it was not possible to directly measure the boards the measurement is an estimate. Generally the boards are in reasonable appearance. (See photo 2)
- *Roof Structure:* The octagonal shape of the structure is reflected in the make up of the roof supports. As is visible from below, the eight corner roof joists (2x6) come together around an octagonal block of wood appearing to match in depth the angle cut on the joists, though this is not visible. (See photo 2). Splitting the angle between these joists are 2x4 joists that do not extend to the crown but rather

are cut at an angle and nailed to the side of the larger joists. Two approximately 2x6 posts (one of relatively newer age based on its blonde appearance) are screwed to the side of a roof joist and a ceiling joist (see photo 2, 3 and 4). Two screws are at each end. It is not apparent if either post is a brace to either of the individual joists it is attached to or an additional level of support for either the roof or ceiling as a whole. We observed that one of the roof joists is split.

- *Ceiling Structure:* Spanning between the rim joists are dimensional 2x4's to support the 3" lath with a slight rounding used for the ceiling. A central beam runs corner to corner of the octagon and supports the 2x4 joists running (generally) perpendicular between it and the rim joists. (Photos 3, 4, and 5)
- *Ceiling:* The ceiling is made of thin 3" strips of rounded wood lath. There is a significant amount of wood debris on the ceiling that appears to be from the shingles as well as some trash. (See photos 3, 4 and 5). The debris obscures much of the top of the ceiling from sight and the condition of the ceiling wood is mostly indiscernible. The visible wood is covered in dirt. From below, the ceiling is painted white and the connection method is not visible though it is likely simply nailed to the ceiling joists. (see photos 6 and 7) The ceiling has a small hatch access hole offset from the center.
- *Roof Rim Structure:* The eight support posts of the structure are topped by 4x8 beams spanning from post to post (approximately 7' 7") and are sandwiched on either side by a 1x. (see photos 6 and 7) Diagonal bracing (4x8) between the posts and the beams is placed on either side of each post. The diagonal brace cross sections are slightly diminished due to some decorative scroll work. Both the roof and ceiling components tie into these rim beams.
- *Columns:* The eight 6x6 wood columns are the most visible outline of the structure. Each has damage, primarily from wood rot and disintegration at the base, some more extensively than others (see photos 8). Each of the columns, whether above the floor line or below, shows some degree of being out of plumb. Heavily painted, it is not discernable by cracks or other stress indicators if the alignment is due to shifts in the structure or ground support or is from the wood drying and twisting or is the alignment of the wood when originally placed in the structure.
- *Railings:* With the exception of staircase location, each pair of columns has a handrail supported between them and above the floor. The rectangular frame and mid-vertical are of 2x6s and the diagonals within each box are 2x4s. All connections appear to be nailed. (See photo 9). Additionally 3 wound wire cables are attached to interior sides of the railings. (See photo 10).
- *Deck:* The deck of the band stand is made of 2x6 planks. Slightly spaced, with some gaps larger than others, the floor is perceived as solid. Some planks have a slight give indicative of loose connections.
- *Deck Joists:* Below the floor are 2x8 joists at approximately 19" on center. These span across the octagon perpendicular to the staircase. They are supported in the middle on a doubled 2x10 joist spanning across the octagon in line with the middle of the staircase. Cantilevered at either end approximately 2' 6", it rests on three 4x4s roughly evenly spaced. These short posts sit on 1x lumber approximately 10" square lying on the concrete slab.
- *Floor Joist Supports:* Between the eight columns and supporting the floor joists are 2x8 rim beams. Each column is flanked by 2x4's which may or may not provide support to the rim beams.
- *Stairs:* The staircase consists of nine (9) 11" steps with nine (9) 6" risers and one half size riser at the bottom. The steps span the opening between two columns and consist of the same 2x6 planks found on the octagon deck. The handrails span two 4x4 columns at the bottom and middle and connect to the 6x6 columns at the top. Three 2x6 planks, evenly spaced form the rails with a 2x6 placed flat on the top rail and columns. A 1 1/2" +/- tube rail is attached to the top wood rail on both sides. The bottom end of the staircase appears to rest on the adjoining Clarkdale Park central patio, separate from the concrete work supporting the band stand and spanning between. (See photo 11)

- *Exterior Walls/Siding:* On both sides of the staircase and below the floor around the rest of the octagon, the area under deck is walled in with lap siding appearing to be made of 1x material. It is supported with a frame of 2x4's resting on the concrete slab and nailed to the adjoining columns and floor framing. (see photo 8)
- *Concrete Support System:* A concrete slab is visible under the octagon and extending outside the octagon approximately four inches. The columns appear to rest on separately poured piers approximately 18" square. No subsurface exploration was done and no subsurface dimensions are known. The top of the slab and piers is essentially ground level. A decomposed granite ground cover provides separation between the band stand and the park lawn and on some sides there is an inch or two difference between the ground surface and the concrete surface. (see photo 8)

DOCUMENT REVIEW

- *Council Presentation*
 - The 48 page power point presentation (<https://www.clarkdale.az.gov/DocumentCenter/View/1238/Bandstand-Powerpoint-Presentation-6-6-2023?bidId=>) accessible under the Town website "Gazebo/Bandstand FAQ's" was reviewed for context and concerns.
 - The power point not only provides documentation of the structures age, usage, construction, and rehabilitation, it also confirms the choices and practices made at those steps.
- *Frost Structural Engineering documents*
 - The city provided Advanced Structural Engineering with two documents previously provided the Town of Clarkdale by Frost Structural Engineering. The first is a report of opinions and recommendations dated March 11, 2022. The second is an addendum to the first dated September 26, 2022.

ANALYSIS

Advanced Structural Engineering analyzed several individual components to review concerns derived from the inspection of the structure.

Columns: The columns were reviewed for a maximum amount of vertical live and dead load. Though it is reasonable to assume each supports one eighth of the roof, the floor framing would maximize four columns with one fifth of the floor load. The vertical stress is well below allowable.

Railings: The railings are required to support a 500 lbs load applied laterally. The 2x6 rails bending stress for such a load is minimal, however, the shear load of 250 lbs at each end exceeds the capacity of nails whether in shear (138 lbs per nail) or pull out (40 lbs per nail) as the angle of each nail with respect to the load is uncertain and some reasonable percentage combination of the strengths would be applied as well as some amount discounted. These are considered to be unsafe.

Deck: The stresses found in 2x4s laid flat, supported at 19 inch intervals is minimal.

Deck Joists: The 2x8 joist stress with 100 psf live loads are well below allowable stress levels.

Rim Joists at Deck: The rim joists are more stressed, but are acceptable.



Central Deck Support Beam: Based on a significant potential live load (100 lbs per square foot) the central beam below the floor shows stresses exceeding allowable by 80%.

CONCLUSIONS/RECOMMENDATION

From a structural perspective, with few exceptions, the Gazebo/Bandstand in the Town Park, and its individual components are generally acceptable. Minor adjustments at several locations, such as the railings, would allay concerns. However, the continuous decay of the building components through poor maintenance or circumstances of construction lend to the following recommendations:

Minor Corrections, a minimalist approach for preservation:

- Use "Best Practice" revisions to connections by reworking all lumber connection (beam ends) with Simpson connections. Use of ties and other Simpson connectors that can be slipped into place without any disassembly are available.
- Removal and replacement of sections of wood, individual beams, columns, or floor boards that show signs of rot, damage, twisting or other deterioration.
- Repair the split roof joist.
- Re-insert the two adjacent beams to the central floor support beam. (see page 11 of the above referenced power point presentation - "Floor Beams Removed")

More Extensive Rehabilitation:

- Replacement of all columns. Each has some degree of displacement in its alignment vertically. Individual replacement could be accomplished by removing and replacing the column while bracing and blocking the rest of the structure in place. The insertion of new columns would likely entail significant customization of all of the effected connections to each column.
- Added bracing – The central supporting beam below the deck has three unbraced and poorly connected columns supporting it. Lateral bracing below the floor is needed for all of the joists and particularly the central beam.
- The ceiling structure is also without lateral bracing or a shear diaphragm. Reroofing the Gazebo and placing a deck on the roof would provide the needed bracing. Internal bracing should be added.
- Rebuild the railings. There are several architectural approaches to the appearance but the minimal approach would place bolts through the columns for connections at the end of the railings.
- Replacement of adjacent central floor support beams.

Stop The Deterioration:

- The structure is doomed to continue its deterioration as long as it sits on the ground and has drainage in contact with the wood. Two approaches would solve this; 1) lift the entire structure into the air and insert a footing around the entire octagon and stairway. This should be a minimum of one foot above finished grade. 2) Remove the siding and individually place 12" piers at each support (column or post) on the existing concrete. Pour stem walls under each siding wall area and reconstruct the siding to fit the new area.
- After the selected structural rehabilitation, repaint the structure and put in place a rigid inspection and maintenance schedule.



Rebuild The Structure:

- Combine the above recommendations to 1) incorporate appropriate design enhancements such as the railing and floor strengthening, the roof diaphragm and a stem wall footing, and 2) build a new structure.

The four stated approaches can be individually selected or reviewed for combined approaches.

In order to reopen the Bandstand to public use without restrictions to access, ASE recommends to perform the Minor Corrections and the More Extensive Rehabilitation approaches with continued inspections and maintenance as the years go by.

For a long-term solution, ASE recommends to perform the Stop the Deterioration or Rebuild the Structure approaches.

Conditions

The opinions and conclusions developed by this investigation are based on sound engineering knowledge and judgment constrained by the scope of work and consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions. No other representation, expressed, or implied, and no warranty or guarantee is included or intended.

This report is prepared for the exclusive use of the Town of Clarkdale and is considered confidential and proprietary data. The report presents the evaluation and opinions of ASE regarding the structural integrity of the assembly and is not intended for the use of others.

We did not tear out, core drill, or do damage of any kind to the existing structure to augment our observations. We only observed those conditions that were readily accessible and available to view. Visual observations of the structure were performed on elements of the structure readily accessible at the date and time of our investigation. Other than the structure this report does not address any other architectural, civil, electrical, mechanical or non-structural issues with the buildings.

Advanced Structural Engineering (ASE)



Michael S. Puhlmann, P.E., S.E.

Principal



APPENDIX

Site Location

Photos

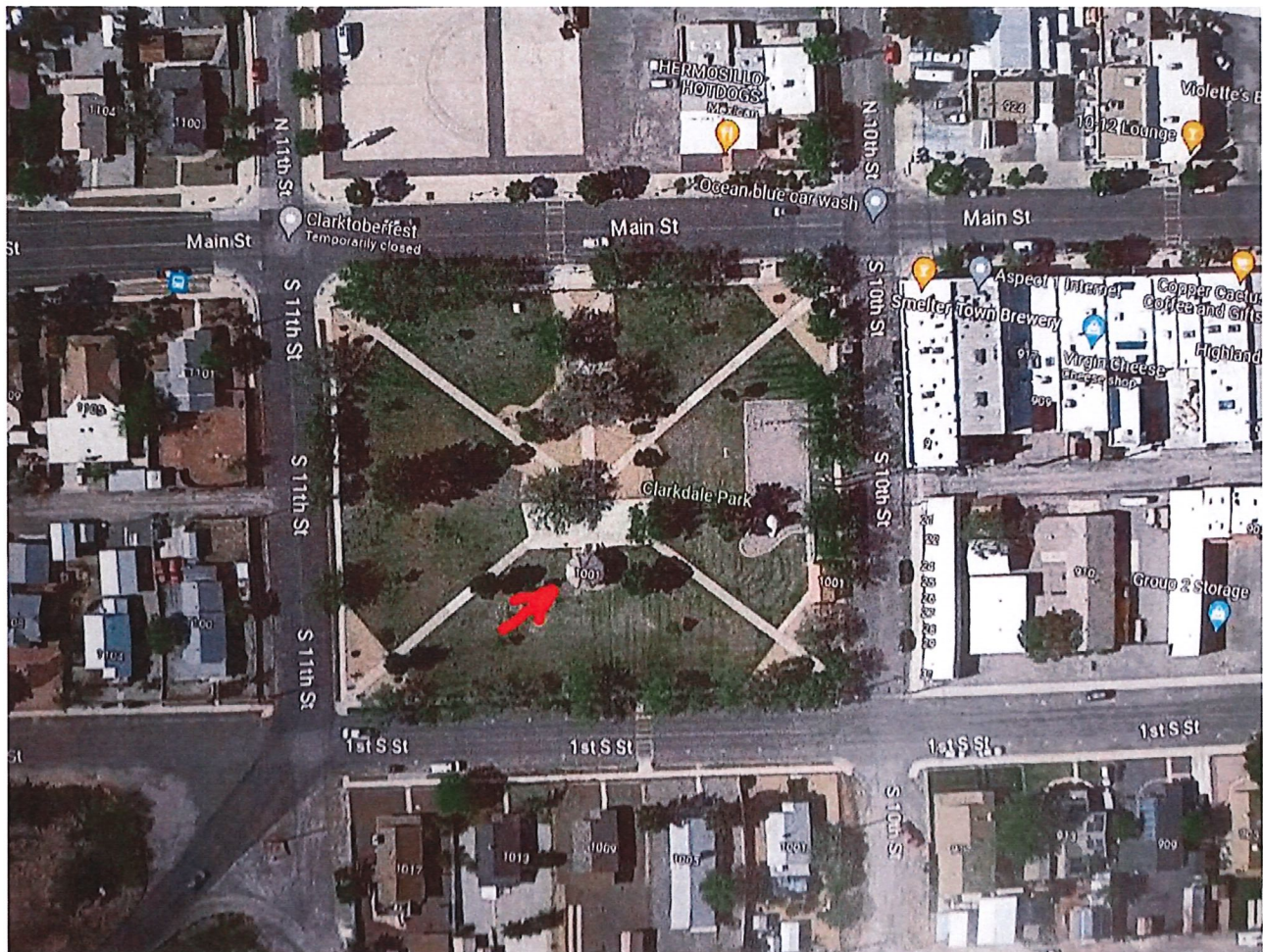


Photo 1 – Clarkdale Park with Bandstand noted



Photo 2 – Center of Underside of Roof



Photo 3 – Ceiling rafters and roof structure



Photo 4 – post in ceiling



Photo 5 – Ceiling rafters and roof structure



Photo 6 – View of Ceiling Lath and Column with knee bracing



Photo 7 – View of Ceiling Lath and Column with knee bracing



Photo 8 – Poor condition at base of column



Photo 9 – Railings

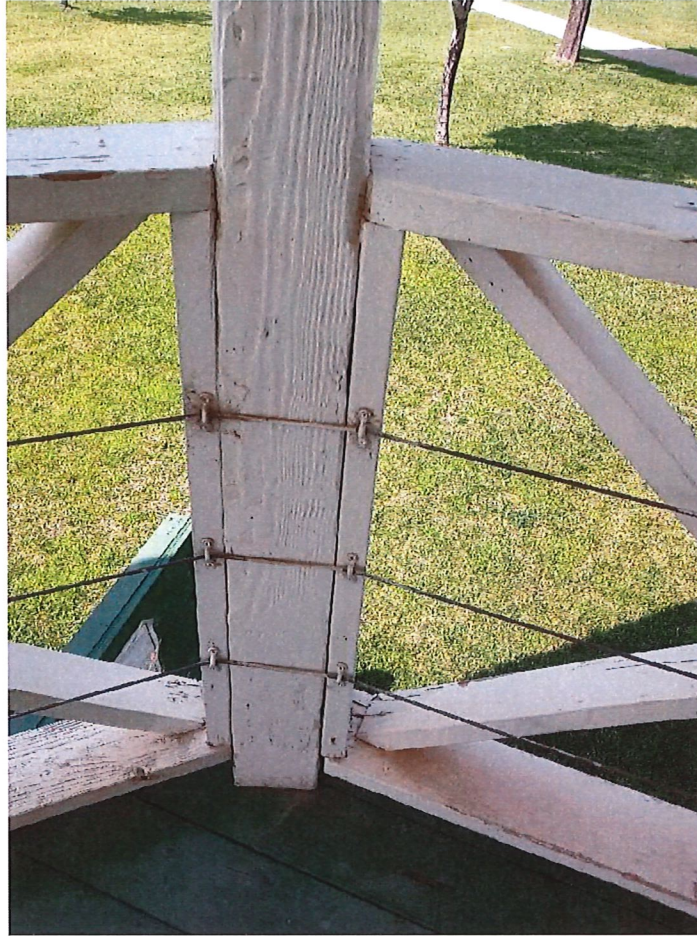


Photo 10 – Railings at Column – Wires at Railings

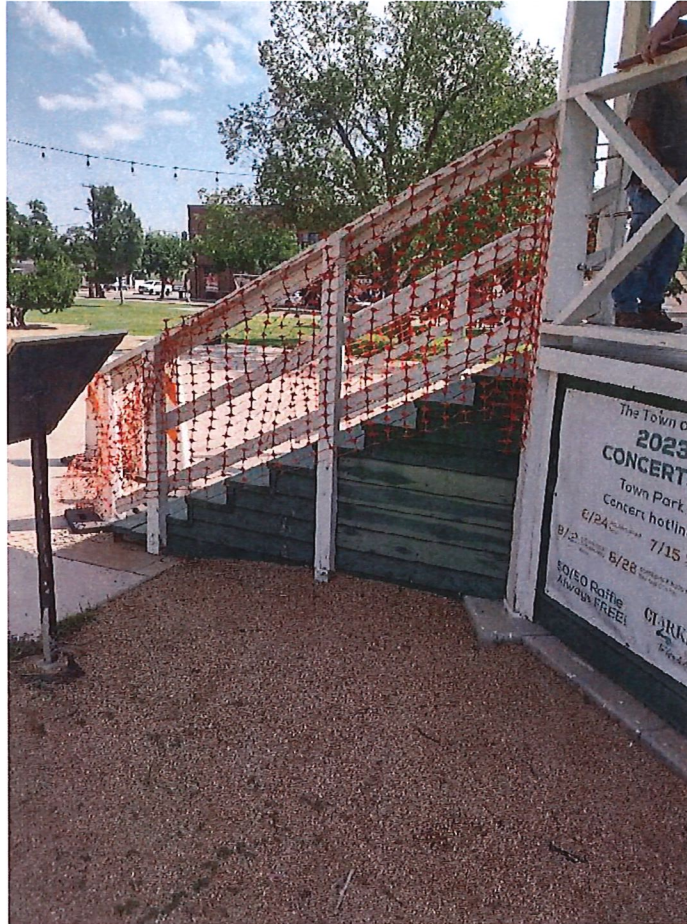


Photo 11 – Staircase

OCTOBER 2023

MUNICIPAL BUILDING ASSESSMENT CLARKDALE, ARIZONA



ADVANCED STRUCTURAL ENGINEERING



October 10, 2023

Ms. Ruth Mayday
Community and Economic Development Director
Clarkdale, AZ.
39 N 9th Street
P.O. Box 308
Clarkdale, AZ 86324

Reference: Municipal Building Assessment
Main & Ninth Street, Clarkdale, AZ 86324
ASE Project No. 20230031

Dear Ms. Mayday:

INTRODUCTION

Advanced Structural Engineering (ASE) was engaged by the Town of Clarkdale to perform an assessment of the municipal buildings at the northeast quadrant of Main and Ninth in Clarkdale, AZ., and address observations based on the site visit, condition of the buildings, assessment of walls of the buildings and general comments. This report only addresses the structural aspects of the inspection. The photos taken during the site visit are attached as part of the Appendix to this report.

SCOPE OF WORK

ASE's scope of services is to assess building wall cracks and prioritize recommended building repairs. The scope of work was as follows:

Buildings:

- Clarkdale Community Development and Public Works, 890 Main St.
 - Interior plaster wall cracks and water damage at windows
- Clark Memorial Clubhouse/Auditorium, 19 N. Ninth St.
 - Exterior stucco/unreinforced masonry wall cracks
 - Above windows
 - At building corners
- Clarkdale Town Hall Administration/Memorial Library, 39 N. Ninth St.
 - Interior plaster stair wall cracks at northwest corner of building
- Clarkdale Police Station, 49 N. Ninth St.

ASE fulfilled these scope items by performing the following:

- ✓ Visually inspecting the structural elements of the building, during our site visit we did not perform any destructive testing nor review any building drawings
- ✓ This report has been prepared and summarizes findings.

INVESTIGATIONS

The Clarkdale municipal buildings listed above are located at the intersection of Main and Ninth Streets in Clarkdale.

ASE Structural Engineer Michael Puhlmann P.E., S.E., visited the site on April 4th, 2023 and Douglas Pike P.E. visited the site on June 29th, 2023. Terry Norman, the Clarkdale Public Works Superintendent and Bob Pipkin, the Clarkdale Chief Building Official met with Doug Pike and escorted him through the buildings to visually inspect the buildings. The location of the buildings is shown in Photo 1.

OBSERVATIONS

During the tour of the four buildings multiple cracks were observed in the interior and exterior walls. Photos of several are included in the appendix. Both unreinforced masonry, CMU, and concrete walls are found in the structures. Most of the structures are provided with a covering stucco. A number of the cracks may not be through or into the wall and may only be expressed in the stucco. Photo 11 shows an area where stucco was lost and which may have been expressed with cracks in the stucco first.

- Clarkdale Community Development and Public Works

The Community Development and Public Works Building has interior plaster damage around the windows. This appears to be from water intrusion (Photo 2 and 3)

- Clark Memorial Clubhouse/Auditorium

A large portion of the soffit of the Club House is missing in one area (north side – photo 12) and has a variety of sizes of cracks in other areas, some corresponding with cracks extending down the wall.

Cracks as seen in photos 5 and 6 confirm the underlying construction and indicate that the crack is likely in both the stucco and wall.

Photos such as #4 and #7 display cracks that need confirmation of the underlying construction material. The cracks do not appear to be generated by cracks through the wall and could be stucco only.

- Clarkdale Town Hall Administration/Memorial Library

The stairwell at the rear of the library has extensive cracks in the wall around and the ceiling above (Photo 13-15). The exterior wall shows cracking that appears to confirm the crack extends into the wall (Photo 16).

- Clarkdale Police Station

No deficiencies were observed at the Police Station (Photo 17).

ASSESSMENT

No calculations were performed for this report. The scope of work includes an assessment of the buildings based on visual inspection. The suggested repairs need to be performed to protect the buildings from deterioration.

CONCLUSIONS/RECOMMENDATIONS

The buildings within the Municipal Complex appear to be in good condition. Upkeep and maintenance issues are apparent as painting and minor repair issues are observable. The scope was to review the cracking and observable water damage. As documented, some of the cracking is extensive but in no case was cracking observed that creates an imminent potential for failure. Some of the cracking on the clubhouse, if unrepaired, may cause the displacement of building elements and such displacement (a piece of the building falling) could cause harm. The repairs may require the removal of elements (such as stucco) that are not required as a structural element or for weatherization (such as on a concrete wall). Its replacement and painting are an architectural element and not considered herein.

- Clarkdale Community Development and Public Works

The exteriors of the windows and their frames should be scrapped, repaired, sealed, and repainted (if not replaced). The interior walls should have loose and broken plaster removed and the walls smoothed and painted. Any interior wall cracks at the windows or elsewhere should be reviewed for depth. If any of the cracks intrude into the mortar in the brick walls the mortar should be replaced and the bricks reset.

- Clark Memorial Clubhouse/Auditorium

Replacement and repair to prevent water intrusion and other damages needs to occur. The vertical cracks at soffit joints need to be filled with sealant. The wall cracks need to be confirmed for depth when verifying the underlying material. Block and brick constructed walls with cracks extending into the wall will need to have the mortar removed and replaced. The repair and replacement of missing and damaged soffit could be extensive as such large cracks exist as to call into question its long-term stability.

Cracks in the walls need a flexible sealant to prevent water intrusion that could contribute to extending the separation of the stucco or lengthening the crack.

Some cracks are reflected from the wall materials and need repair through mortar removal and brick or CMU replacement.

- Town Hall Administration/Memorial Library

Removal of the drywall and/or plaster, examination for structural integrity or issues that allowed the wall movement, and repair by replacing the wall panels needs to occur.

- Clarkdale Police Station

No work is recommended at the Police Station

- Next Steps

As for next steps, the recommendations suggest hands on treatment at each named location. Best practices and construction method should be selected and maintained by the contractor. Prioritization should be made with ongoing deterioration in mind. As material is removed to expose areas, the priorities may change based on observation and discovery.

A. For cracks, exploration with tools to determine depth, and removal of coverings to determine extent should be done carefully to not create more damage. A careful review of the interior surfaces opposite exterior cracks or openings should be made to determine if weather damage is occurring. If the cracks are in solid material (such as reinforced concrete) closing the crack with a pliable weather proof material, such as silicon, may be sufficient and viable for most size cracks. If the crack is in the mortar of brick or block walls, repointing is called for. This may also require the removal and replacement of all or part of the brick or block. This is determined on a case-by-case basis and is a review of the integrity of the material. Cracks in other materials (such as drywall) may call for replacement if patching is not acceptable.

B. Around windows the removal of damaged material may expose more extensive problems. All external horizontal surfaces need to be reviewed for slope and water retention. This should be minimized or even eliminated. This can be accomplished by changing the slope and or material of the surface.

C. Flashing, if used, usually leaves some portion exposed which may negatively altar the appearance and should be considered for appropriateness. Flashing is a "best practice". Any missing surfaces, such as soffits, are a priority for replacement.

PRIORITIES

A review of the recommendations allows for prioritization of the repairs based on need, potential for increased damage and cost.

1. The first priority should be placed on any existing/identified cracks or damage that is open to continued deterioration via exposure to the elements. Cracks or deterioration that led to water damage such as has been identified on the Public Works Building should be considered first. The windows at the Public Works/Community Development offices will need some demolition to delineate the problem more clearly. The Arizona State Historic Preservation Office should be consulted with to determine best practices for reconstruction and weatherization. The contractor should be given some options of materials to use that are within best practices so that if a proposed method negatively impacts the "preferred look" the contractor will have a viable option. Slope of drainage and impervious materials are musts.

2. The open soffits on the Clubhouse are also a higher priority. The cracks in the Clubhouse walls do not have interior damage identified as associated with them and thus have a lower priority than the work associated with the Public Works Building. The soffits of the Clubhouse are well above the ground and the attic space behind them may not have any accessibility but those locations require physically handling the

building material to determine its stability and look at the connections to the structural system. These are not qualities that can be determined from the ground.

3. The interior damage of the Municipal Building/Library staircase do not appear to be the result of weatherization issues and thus would be a lower priority.

Cost is always a factor and should be reviewed with respect to not only the priorities created by other factors but whether prohibitive costs will be allowed to remove projects from the list of proposed work. In order to implement some repairs others may need to be postponed.

Any repair work should follow best practices where possible. Work on historic buildings is subject to additional scrutiny however the correct end result should be reached via a method demonstrated as effective regardless of the imposed limitations. The visual assessment did not measure crack depth or other dimensions. The potential damage is not related to a dimension and cannot be predicted. A missing soffit can admit a family of raccoons or bats. A 3/8" crack can allow a beehive. A hairline crack can bring a flood. It is impossible to predict which current damage will result in the greatest costs or long-term effects. There may never be any additional ill effect. However, that is not a wise assumption.

CONDITIONS

The opinions and conclusions developed by this investigation are based on sound engineering knowledge and judgment constrained by the scope of work and consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions. No other representation, expressed, or implied, and no warranty or guarantee is included or intended.

This report is prepared for the exclusive use of the Town of Clarkdale and is considered confidential and proprietary data. The report presents the evaluation and opinions of ASE regarding the structural integrity of the assembly and is not intended for the use of others.

We did not tear out, core drill, or do damage of any kind to the existing structure to augment our observations. We only observed those conditions that were readily accessible and available to view. Visual observations of the structure were performed on elements of the structure readily accessible at the date and time of our investigation. Other than the structure this report does not address any other architectural, civil, electrical, mechanical, or non-structural issues with the buildings.

Sincerely,

Advanced Structural Engineering (ASE)

Michael S. Puhlmann, P.E., S.E.

Principal





APPENDIX

Site Location

Photos of the Structure

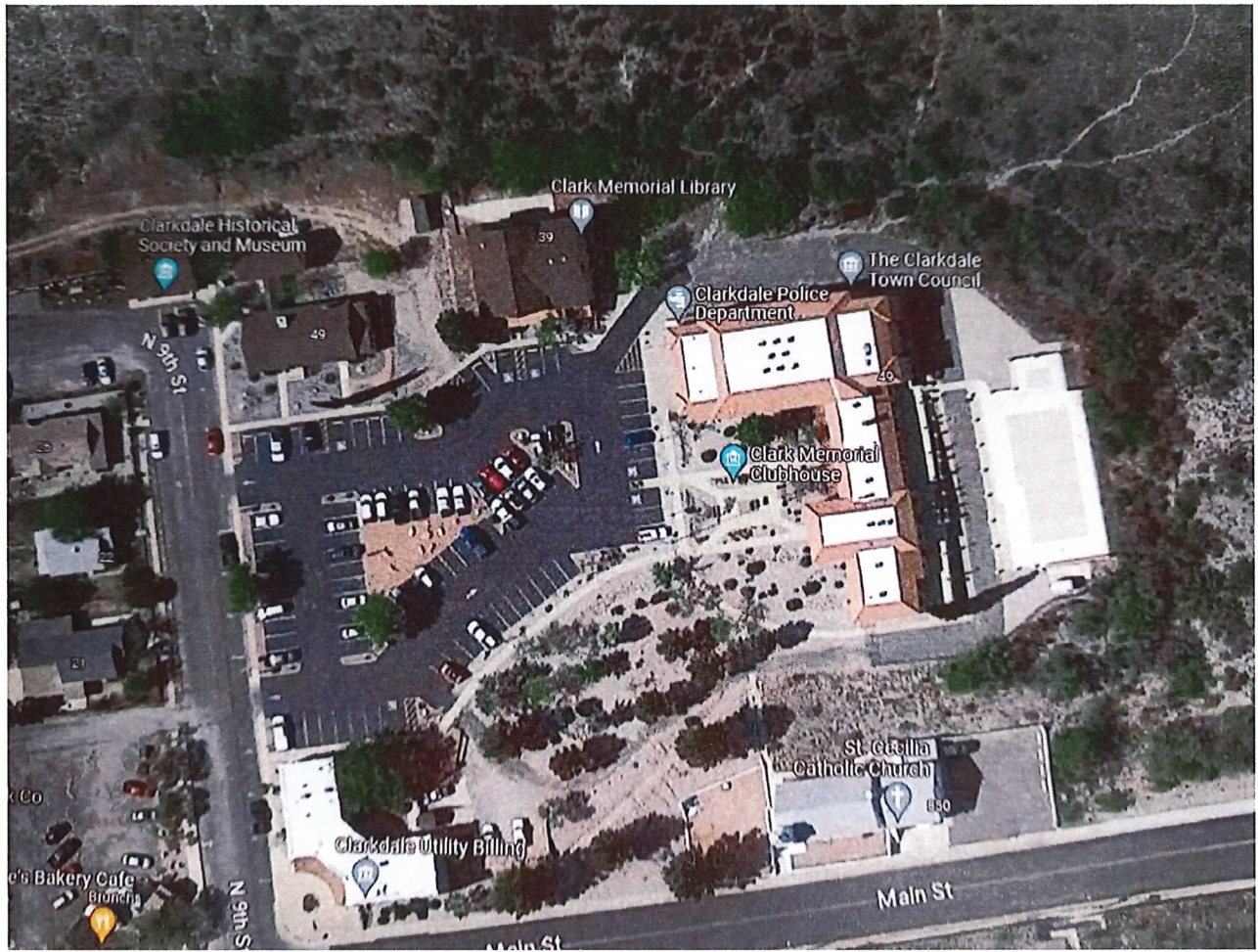


Photo 1 – Clarkdale Municipal Complex from Google Maps



Photo 2: Window Damage - Public Works Building



Photo 3: Window Damage - Public Works Building



Photo 4 – Crack over Doorway of Clubhouse



Photo 5 – Large Crack at soffit and below, Memorial Building



Photo 6 – Crack at Corner of Memorial Building (East Side)



Photo 7 – Cracks in Wall, Memorial Building, North Side



Photo 8 – Cracks in Wall



Photo 9 – Cracks at Doorway, Memorial Building, South Side



Photo 10 – Multiple Cracks in Wall, Memorial Building, South End, West Side



Photo 11 – Stucco Loss, Memorial Building, South Side



Photo 12 – Soffit missing - Memorial Building – North Side



Photo 13 – Wall Crack at Stairwell of Library



Photo 14 – Wall Crack at Stairwell of Library

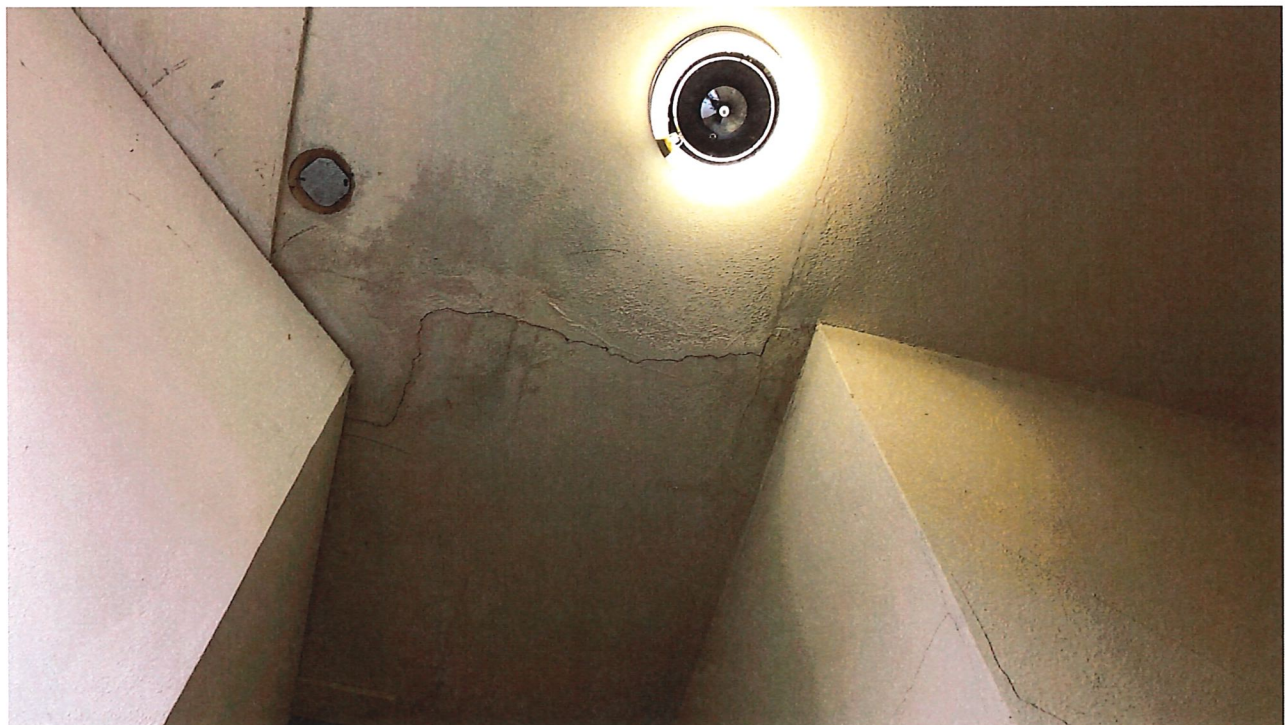


Photo 15 – Ceiling Crack at Stairwell of Library



Photo 16 – Stairstep Cracks below window, Administration/Library Building



Photo 17 – Police Dept. Building