APPENDIX C:
KIT CARSON MONUMENT CONDITION ASSESSMENT REPORT

Christopher "Kit" Carson Monument, S. Federal Place, Santa Fe, NM.

Condition Assessment

Prepared by Crocker Ltd
11 November 2024

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Summary and Conclusion

Summary

At the request of the General Services Administration (GSA) and in accordance with the Purchase Order dated 7 October 2024, Crocker Ltd (Crocker) has conducted an assessment of the Christopher "Kit" Carson Monument (hereafter Monument) located at 106 South Federal Place, Santa Fe, NM. The goal of the assessment is to assist GSA in determining the future of the Monument. Results are presented in response to Section 1.2 of the GSA document titled *Statement of Work* dated 9 July 2024.

Prior to the field assessment Crocker reviewed two documents provided by the GSA:

> Raphael, Bettina. *Kit Carson Monument, Santa Fe, New Mexico First Phase Technical Study of Condition and Conservation Needs.* GSA Santa Fe. June 1997
>
> BPLW Architects. As-b*uilt Document Historical Restoration, Kit Carson Memorial Santa Fe, New Mexico; project 96052.032.* GSA Santa Fe, May 9, 2001.

In the interest of continuity, the following report references the labeling of the individual components of the Monument on pages 24 and 25 of the BPLW document (attached).

The Monument has been enclosed in a wood-framed plywood enclosure installed after threats of vandalism in 2020. Despite the protection, the Monument was partially toppled on the evening of 31 August 2023 resulting in irreparable damage to the obelisk.

The field assessment was accomplished on 22 October 2024. Present were Jess Crocker, Ed Crocker and Daniel Barboa of Crocker Ltd and Andrew Robinson representing the GSA. Access to the Monument was accomplished by removing one of the plywood panels on the north side of the protective enclosure and removing the tarpaulin covers previously installed to protect from paint vandalism. Over the course of roughly four hours the remains of the Monument were measured and photographed.

Throughout this report we refer to "stress" and "compression" cracks. In this instance "stress" refers to cracking caused by uneven or eccentric loading such as an uneven

mortar joint. "Compression" refers to failure caused by the inherent loads of the material above.

Once the assessment was complete the tarpaulin covers and plywood panel were replaced.

Subsequent to the assessment, on 31 October 2024, Crocker inspected the remnants of the obelisk currently in storage at the GSA Motor Pool yard.

Conclusion

Given the severely degraded condition of the sandstone components, including the remnants of the obelisk currently being stored, the Kit Carson Monument cannot be restored in place using existing materials, nor can it successfully be disassembled for transport in viable, reusable pieces. This report concludes that existing pathologies before the toppling were greatly exacerbated by the vandalism event of 31 August 2023 and that the destruction of the monument is deemed total.

It is our recommendation that the monument be disassembled and removed excepting the limestone base which can be conserved and interpreted in place.

Condition Assessment

1.1 General Notes

The Dorsey Ranch sandstone of which the Monument is constructed is a fine grained, evenly bedded material, easily dressed and suitable for construction. As noted in the Raphael condition assessment of 1997, the stone, then 112 years old, was displaying considerable levels of deterioration from weather, inherent weakness of the material and vandalism. Now, at 139 years old and despite the limited conservation efforts advanced in 2001, the stone is even more severely degraded. Disregarding the vandalism that resulted in the toppling of three-fourths of the obelisk in 2023, our report notes that the remaining components demonstrate two primary pathologies: Stress and compression cracks in the blocks comprising the center course B2, the inscription stone B3, the pedestal C1 and C2, and delamination along the bedding planes of the cornice B1.

The assessment team found numerous fragments of the obelisk and possibly the cornice on the ground in the area around the Monument. These were left in place.

1.2.1. Obelisk A4

Only one obelisk stone remains *in situ* today. Stones A1, A2, and A3 were toppled during the vandalism event of 2023.

A4 measures 25" x 25" x 34 ¾" tall. This stone is adhered to the cornice with original lime-based mortar that has been repointed per the BPLW report. The cornice and A4 share the same polar center which extends throughout the entirety of the Monument, including the layered limestone plinth.

A4 shows signs of deterioration both from age and intended use, as well as deliberate destruction. Age-related issues tend to show themselves in linear cracking and mortar loss. The south face of A4 has a structural crack at the base near the midpoint along the bottom edge. The crack extends upward approximately five inches. There appears to be another similar crack near the same location on the north face, but it is impossible to determine if this is the same crack extending through the entirety of the stone. However, this corresponding crack on the north face extends the full height of the element.

There is structural cracking on the lower left (NE) corner of the north face. Several interlocking cracks, corresponding to cracks in the same area of the east elevation suggest that a portion of the A4 in the bottom NE corner may be in jeopardy of spalling off. Exacerbating this is the condition of the mortar bed. The original lime-based mortar was repointed in 2001. That repointing has flaked away under part of the cracked section.

There is an area of about four-inches by four-inches in the bottom SE corner showing both horizontal and vertical cracking extending beyond where the cracks intersect. The horizontal crack extends across the entire face; the vertical extends to the top of A4.

The west face shows the least cracking, with a small crack in the NW corner, approximately four inches from the north edge, but is limited to approximately five inches in length.

All faces of A4 show various divots typical to the material and age. Some of these have been filled with Portland cement during previous phases of repair. Likewise, all exposed mortar beds of all faces have been repointed where the base sits on the cornice. All faces show signs of minor vandalism with the south face being the most noticeable with scratches and chipping.

The most notable damage is seen at the SE corner of A4. There is a large piece of material that has broken free affecting both the south and east faces. This is an obvious result of A3, A2, and A1 being pulled from A4. Virtually all the cracking identified may be attributed to rotational pivoting of A1 – A3 during the toppling event of 2023. The rotational stress pulled on the mortar bed between A3 and A4 and exacerbated any micro-fissures found naturally in the material. Sandstone is unable to withstand rotational forces which place the material in compression on one side and conversely cause tension forces in the opposite side.

Given the considerable degradation of A4 it is our opinion that it cannot be used in restoration/reconstruction.

1.2.2 Cornice B1

The cornice (B1) is comprised of two stones. The composite of the two measure 51"x51"and is 6 ¾" tall. The profile of the cornice is provided in the appendix. The two stones are laid such that the mortar joint between the two runs east / west, therefore the south and north edges of the cornice do not have a joint. The two stones are identified here as B1N (north) and B1S (south).

There is delamination along the bedding planes approximately midway through the top 1½-inches of the vertical face of B1S. This delamination appears to continue through all three exposed edges. There are signs of chipping across B1S. The worst damage is found at the SE corner where the combination of A1, A2, and A3 struck as it was rotated from A4. Diagonal cracking from the impact extends down through the remaining thickness of the stone. The remaining stone bounded by this cracking is subject to failure.

There are small divots, either from natural causes or minor vandalism. The exposed portions of mortar joints between B1N and B1S are largely compromised.

1.2.3 Central course B2 and inscription stone B3

B2 is the first course of sandstone beneath the cornice and above the inscription stone B3 which we have labeled as the central course. It measures 38 ½"x38 ½"x8" thick and is comprised of two stones laid along a a north-south axis: B2E (east) and B2W (west). B2 is in generally fair condition and shows very few signs of deterioration beyond what was identified in the BPLW report.

B3 is one, monolithic block, measuring 38 ½"x38 ½"x 20 ½" high. Deterioration to B3 presents as spalling and cracking. There have been several unfortunate attempts at repair using Portland cement that have led to accelerated failure. The large vertical cracks that run through the inscription stone on the north and east faces are cause for concern. We are unsure how deep the cracks extend but it appears inevitable that complete failure would result if the block were to be separated from the pedestal. B3 shows signs of minor vandalism with paint splotching and chipping. The paint has been mostly removed and the chipping is minor as are the surface divots.

It is our conclusion that the blocks comprising B2 and B3 cannot be successfully conserved and removed individually given the network of compression and stress cracks.

1.2.4 Pedestal C1, C2

It is our conclusion that the individual blocks comprising the pedestal cannot be successfully disassembled without considerable breakage and loss of material

1.2.5 Limestone Foundation D

Given the durability of the material and the rough dressing, all three courses of the limestone foundation can be conserved in place. This would involve removing the mortar presently under the sandstone pedestal and thoroughly cleaning the surface. In addition, the space between the foundation and the surrounding concrete flatwork can be cleared of vegetation and debris and sealed with an industrial grade caulking.

Logistical and safety issues

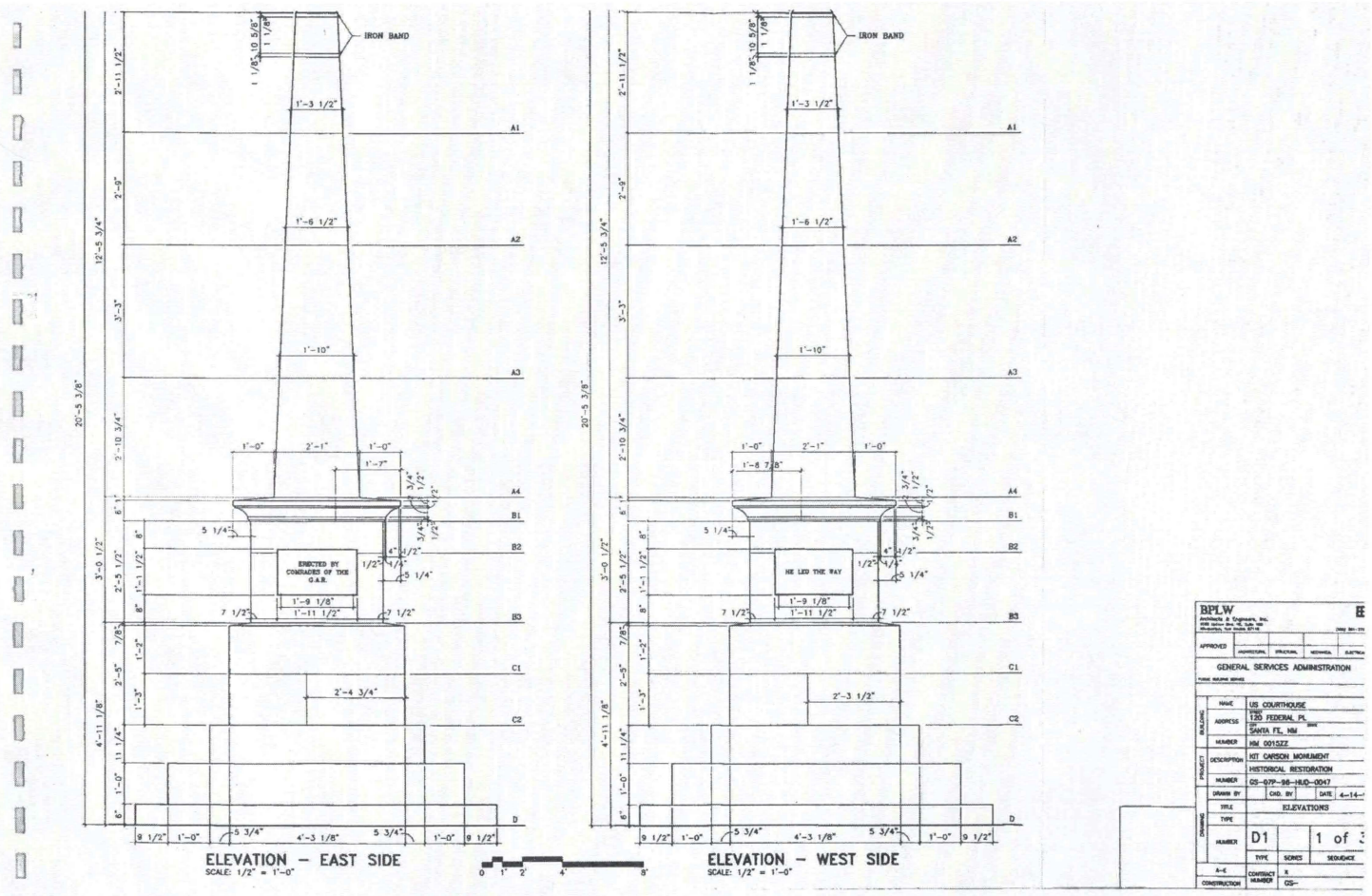
The Kit Carson Monument is degraded to the point of being unstable and presents a potential risk to the public if access is granted. The existing plywood enclosure should remain in place until the Monument is removed.

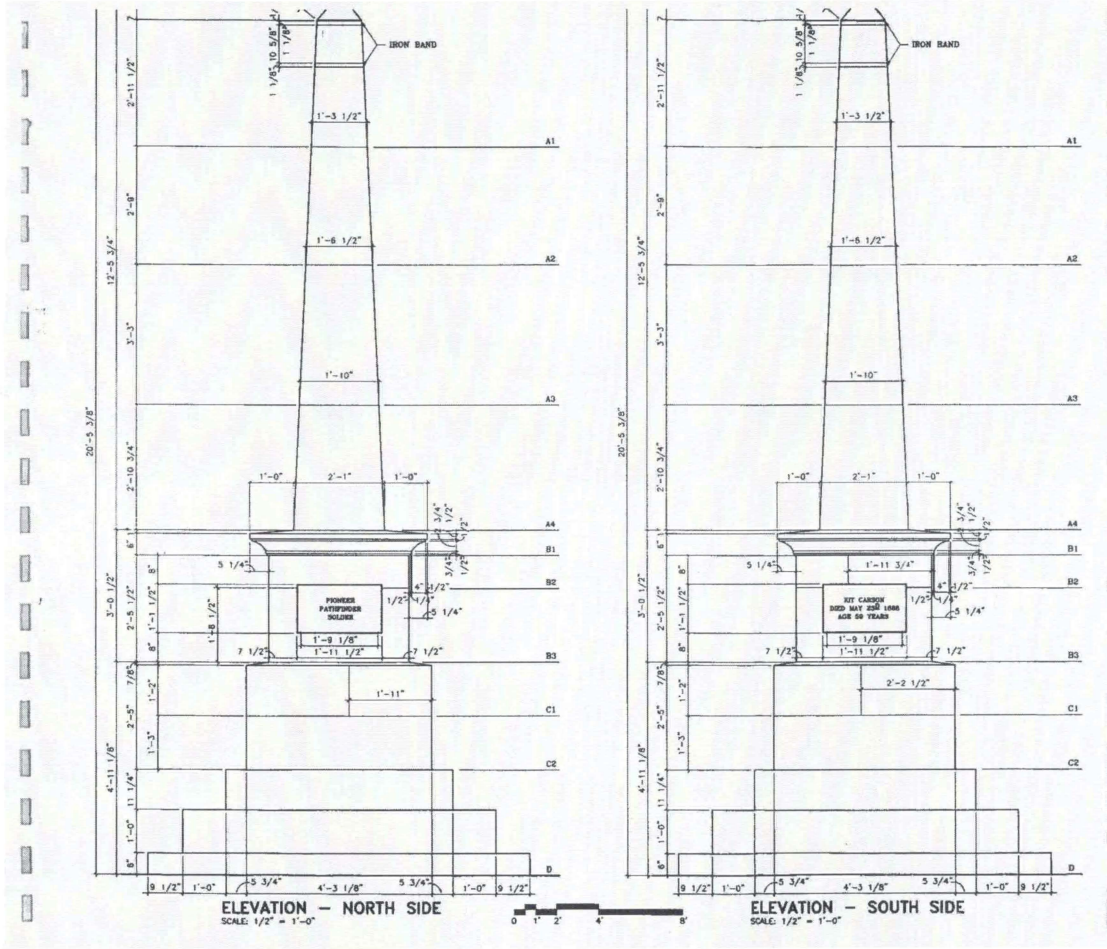
Prior to removal GSA will coordinate with the Federal Marshal Service and the City of Santa Fe to request vigilance. GSA to provide on-site personnel to address concerns of the public should they arise. If it is deemed necessary, Contractor to retain private security during the removal.

General Conditions
Supply and install temporary chain link fencing around the monument leaving adequate access to all sides; Contractor to coordinate with the City of Santa Fe to hood 8 parking meters to the east and west of the Monument; provide temporary sanitation facility; upon completion of the removal of the Monument and the treatment of the limestone foundation, demobilize fencing and portable toilet and leave the site clear of all materials and debris.

Removal of the Monument
Assume removal beginning early on a Sunday morning to minimize disturbance to the local businesses and activities in the Santiago E. Campos Federal Courthose; demo and dispose of the plywood enclosure; provide final documentation of the Monument before removal; protect the sidewalk and curb with plywood; using hand tools and a rubber-tired skidsteer, disassemble the stones; palletize and load on a vehicle for removal.

Conservation of Limestone Foundation
Using a power washer and brushes, remove the remnants of mortar from the upper surfaces; re-point mortar joints as necessary with lime rich Portland cement; clear the voids between the foundation and the surrounding flatwork of seedlings and debris; infil the space with industrial caulking; demobilize.


IRON BAND
1'-3 1/2"
1'-6 1/2"
1'-10"
A1
A2
A3
A4
B1
B2
B3
C1
C2
D
ERECTED BY COMRADES OF THE G.A.R.
HE LED THE WAY
ELEVATION – EAST SIDE
SCALE: 1/2" = 1'-0"
ELEVATION – WEST SIDE
SCALE: 1/2" = 1'-0"
GENERAL SERVICES ADMINISTRATION
US COURTHOUSE
120 FEDERAL PL
SANTA FE, NM
NM 00152Z
KIT CARSON MONUMENT
HISTORICAL RESTORATION
GS-07P-96-HUD-0047
ELEVATIONS
D1
1 of 3

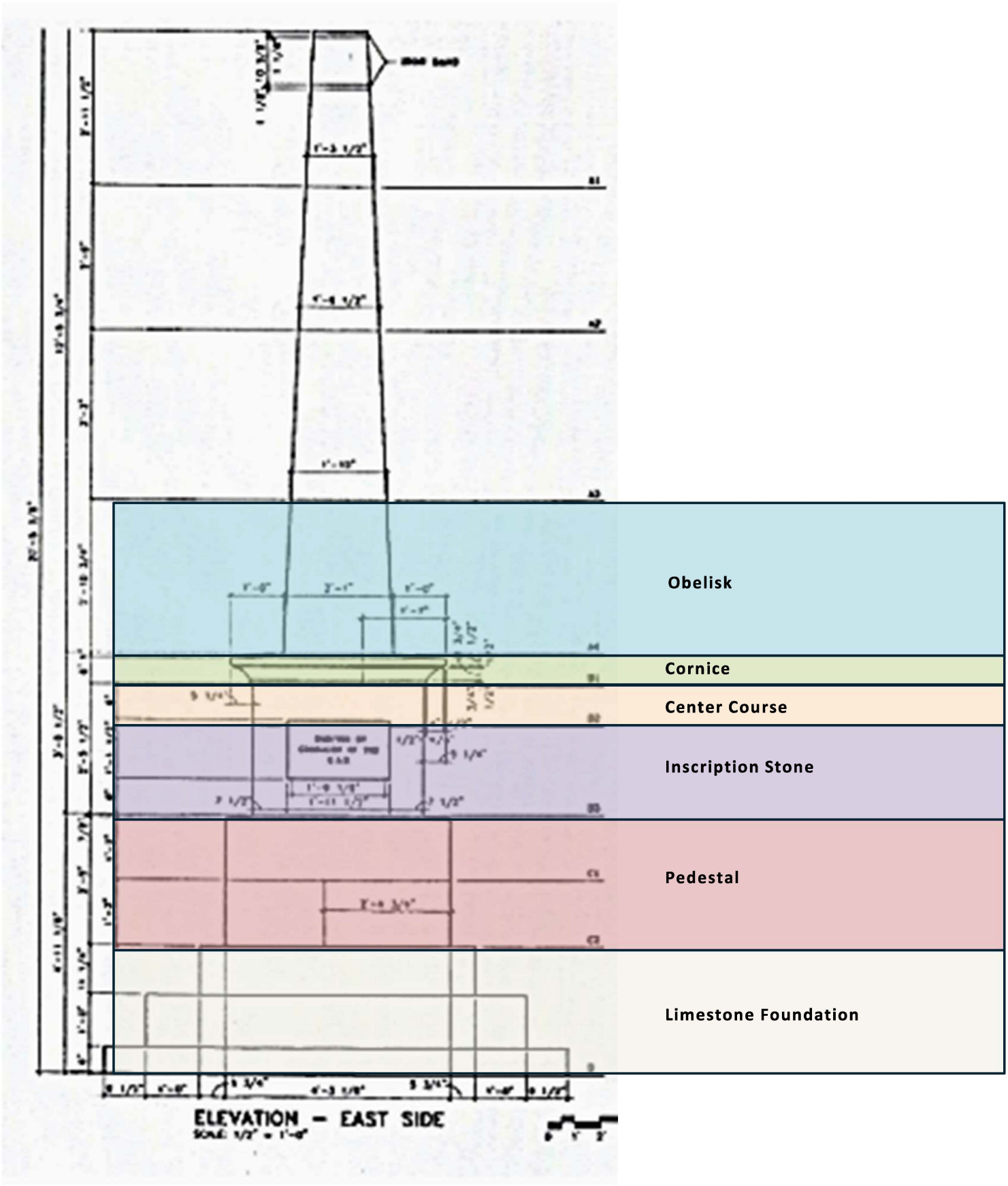


BPLW

GENERAL SERVICES ADMINISTRATION

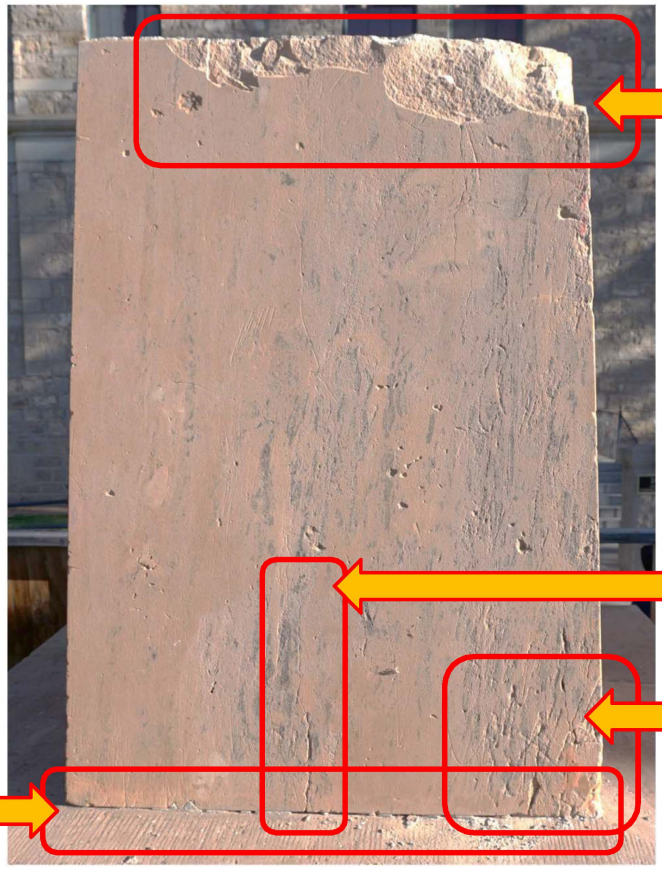
BUILDING	NAME	US COURTHOUSE
	ADDRESS	120 SOUTH FEDERAL PL SANTA FE, NM
	NUMBER	NM 0015ZZ
PROJECT	DESCRIPTION	KIT CARSON MONUMENT HISTORICAL RESTORATION
	NUMBER	GS-07P-96-HUD-0047
	DRAWN BY	CHD. BY: DATE: 4-14-1
DRAWING	TITLE	ELEVATIONS
	TYPE	
	NUMBER	D2 2 of 2
		TYPE SERIES SEQUENCE
A-E	CONTRACT NUMBER	

Stone Identification Key



Drawing from BPLW Report

Obelisk
Stone A4 south



Large fragmentation from rotational forces as A1, A2, & A3 were toppled.

Vertical cracking, potentially integral through the entirety of the material

Crushing at corner from rotation. Vandalism gouging with object harder that the stone.

Deteriorated mortar joint.

Obelisk
Stone A4 - east

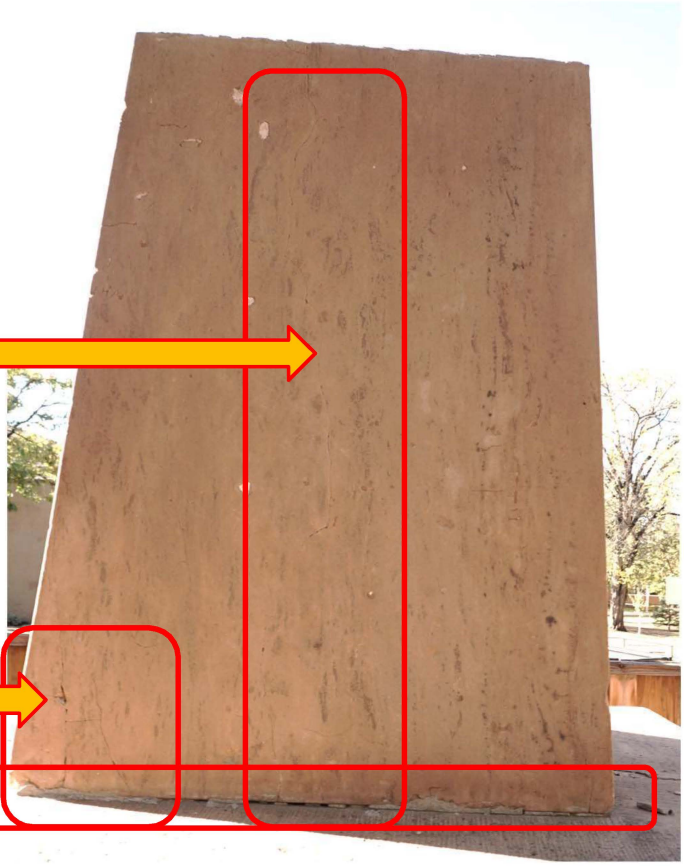
Large fragmentation from rotational forces as A1, A2, & A3 were toppled.

Crushing at corner. Large structural cracking.

Deteriorated mortar joint.

3

Obelisk
Stone A4 - north



Obelisk
Stone A4 - west

Cornice
Stone B1S – south

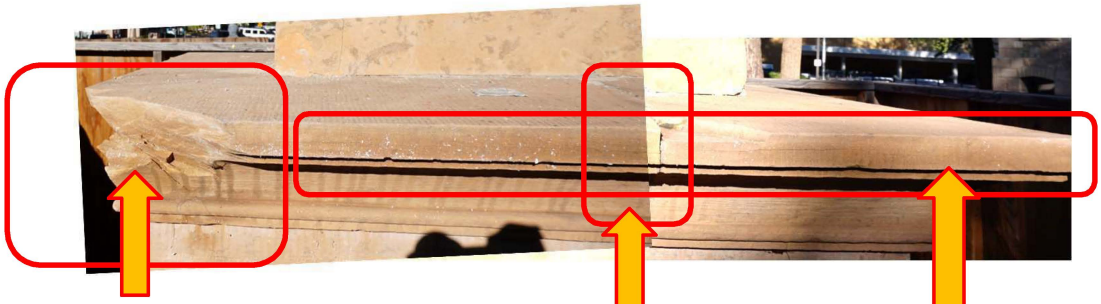
Material fragmentation from falling A1, A2, A3 impacting this corner.

Stratification separation

Cornice- southeast

Cornice
Stone B1S/B1N - east

B1S B1N

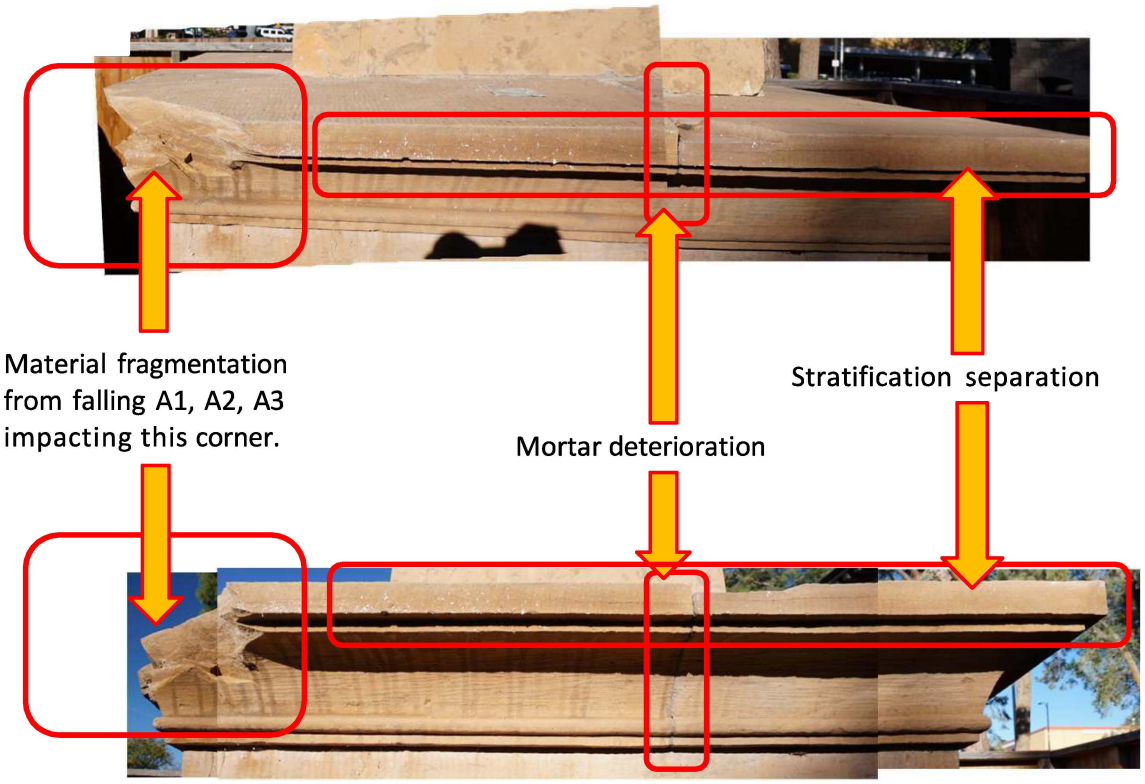


Material fragmentation from falling A1, A2, A3 impacting this corner.

Mortar deteri oration

Stratification separation

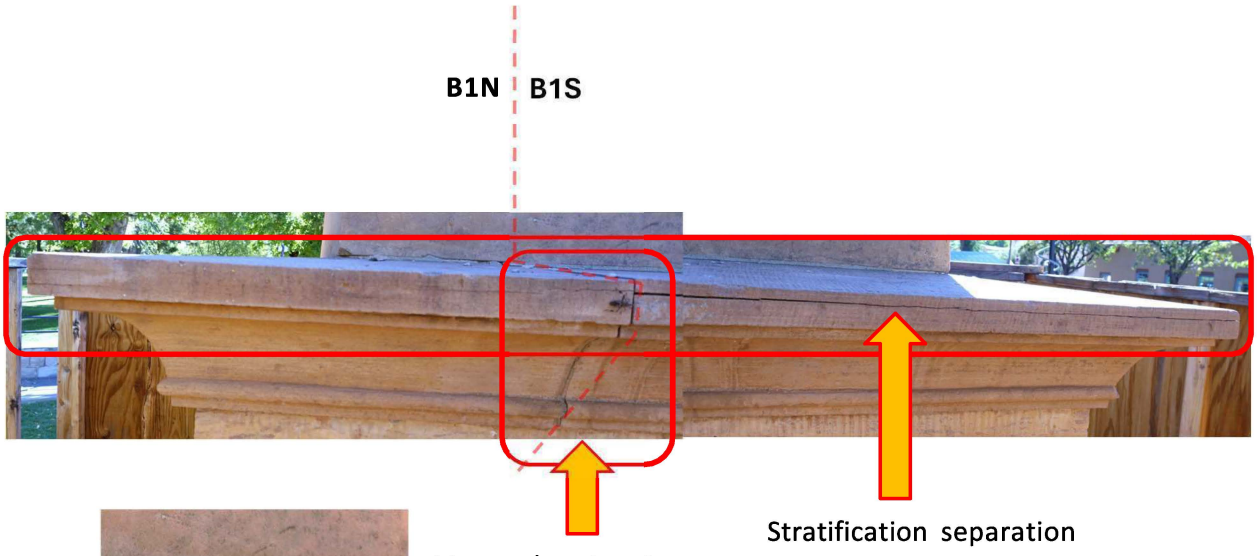
Cornice
Stone B1S – south



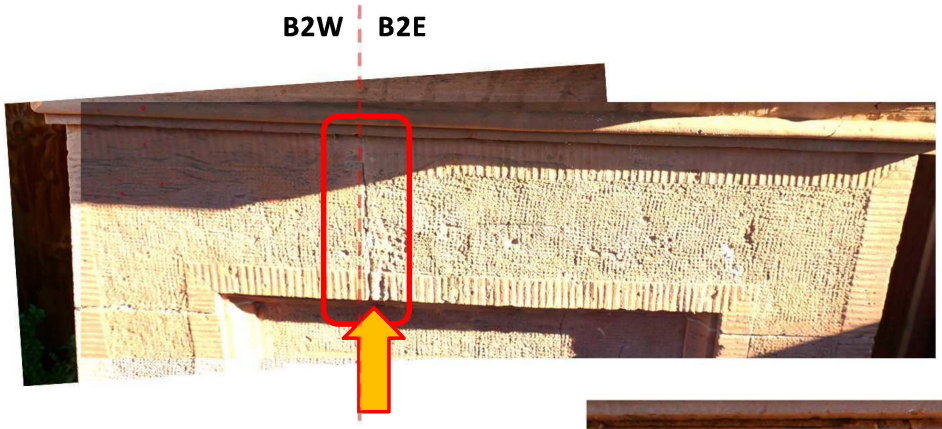
Cornice
Stone B1N – north

Stratification separation

Cornice
Stone B1N/B1S – west

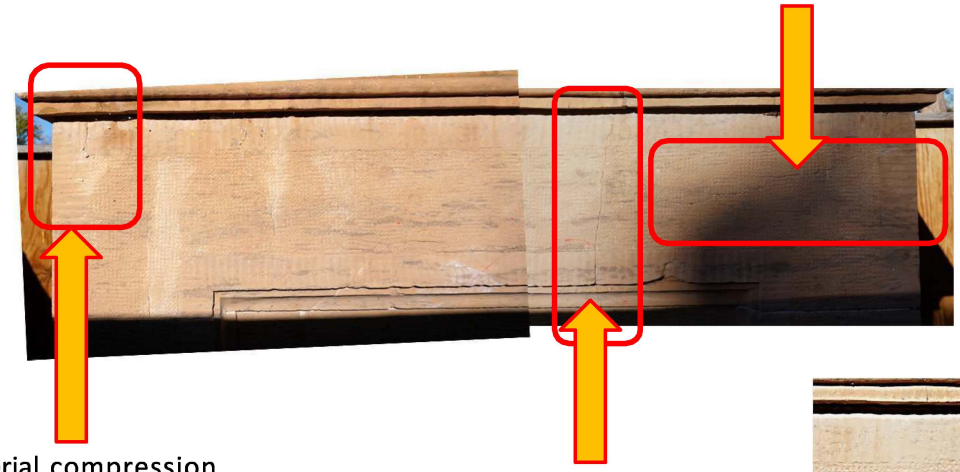


Center Course
Stone B2 – south



Center Course
Stone B2E – east

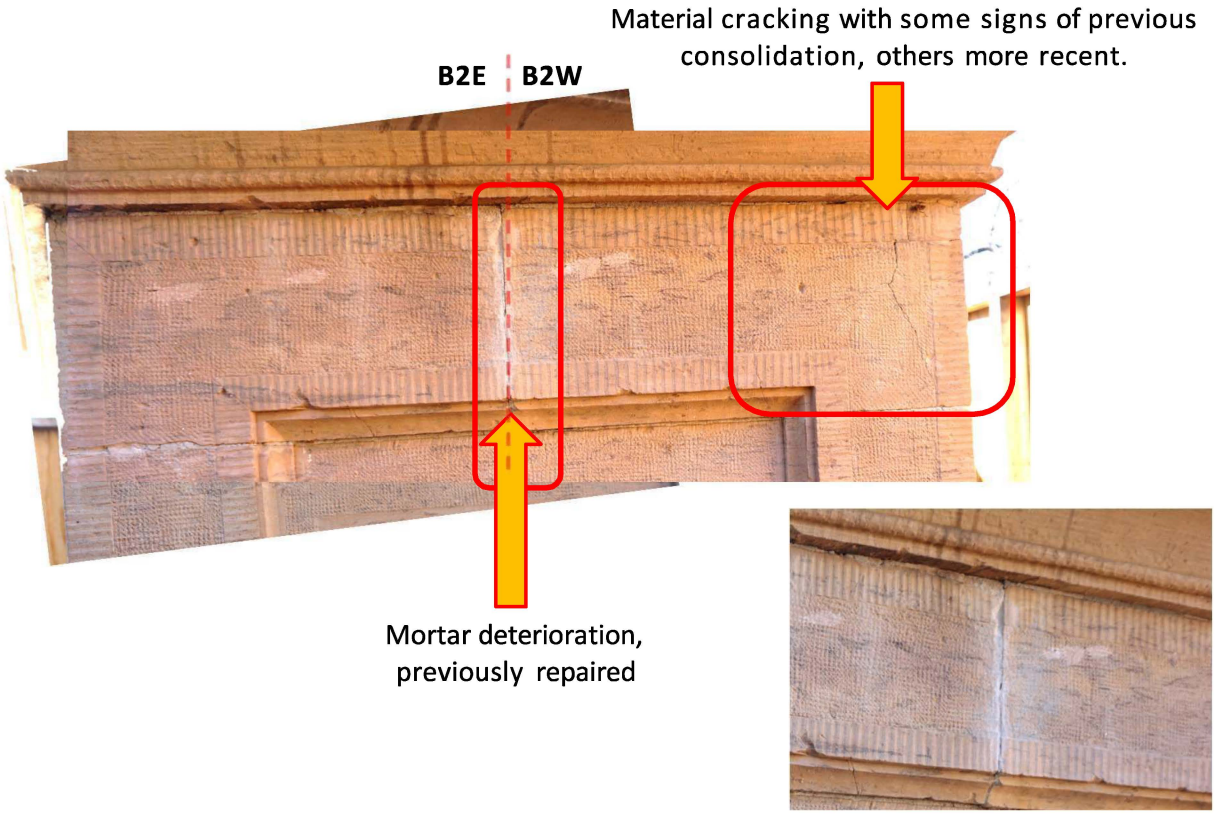
Material cracking, shows signs of previous consolidation repairs.



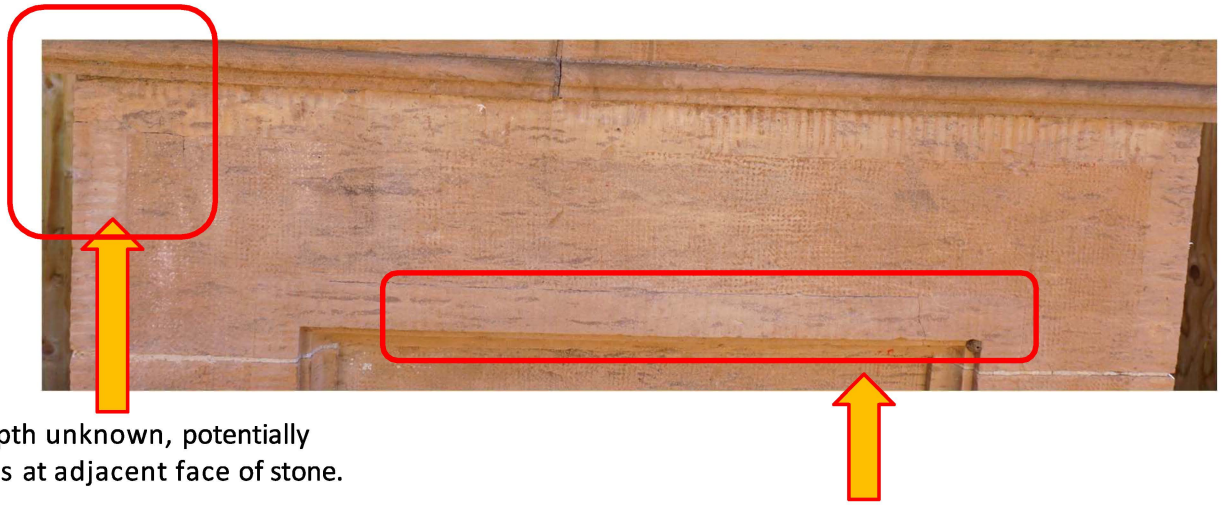
Material compression cracking, consistent with cornice above, caused by A1, A2, A3 collision.

Material cracking, depth unknown

Center Course
Stone B2 – north



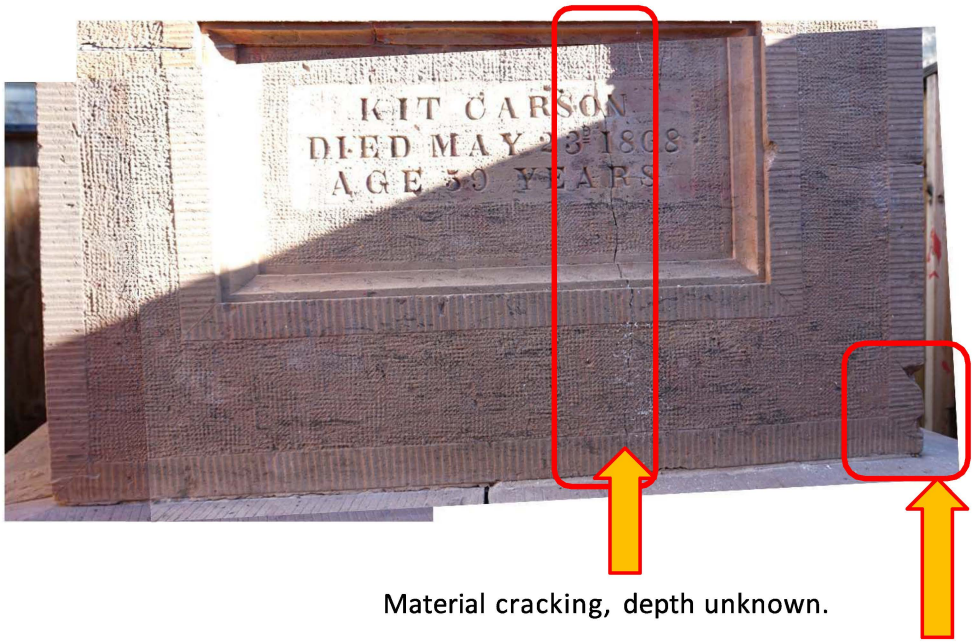
Center Course
Stone B2W – west



Material cracking, depth unknown, potentially continuation with cracks at adjacent face of stone.

Material cracking at textured transition, depth unknown.

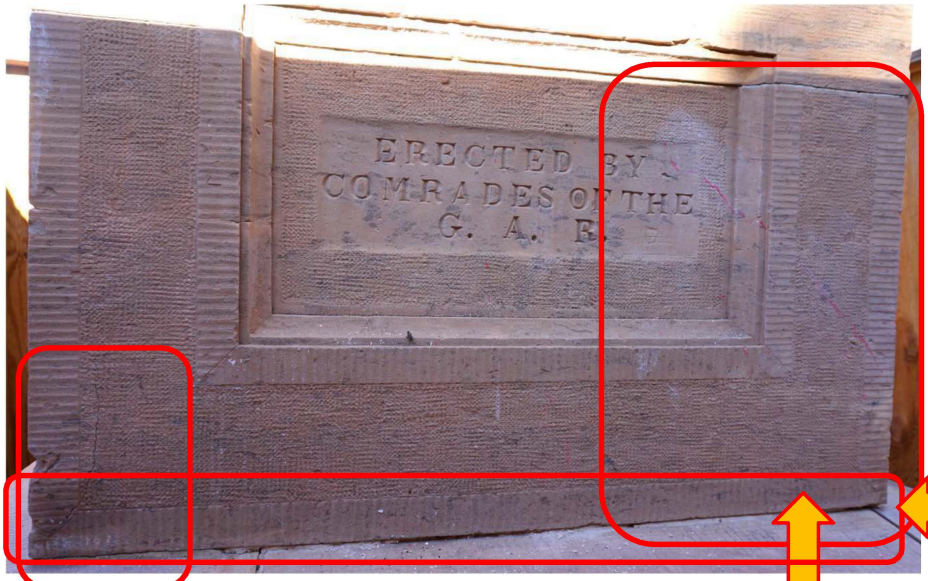
Inscription Stone
B3 – south



Material cracking, depth unknown.

Material cracking, depth unknown, may correspond with adjacent face which will eventually lead to fragmentation. Some natural chipping.

Inscription Stone
B3 – east



Mortar deterioration.

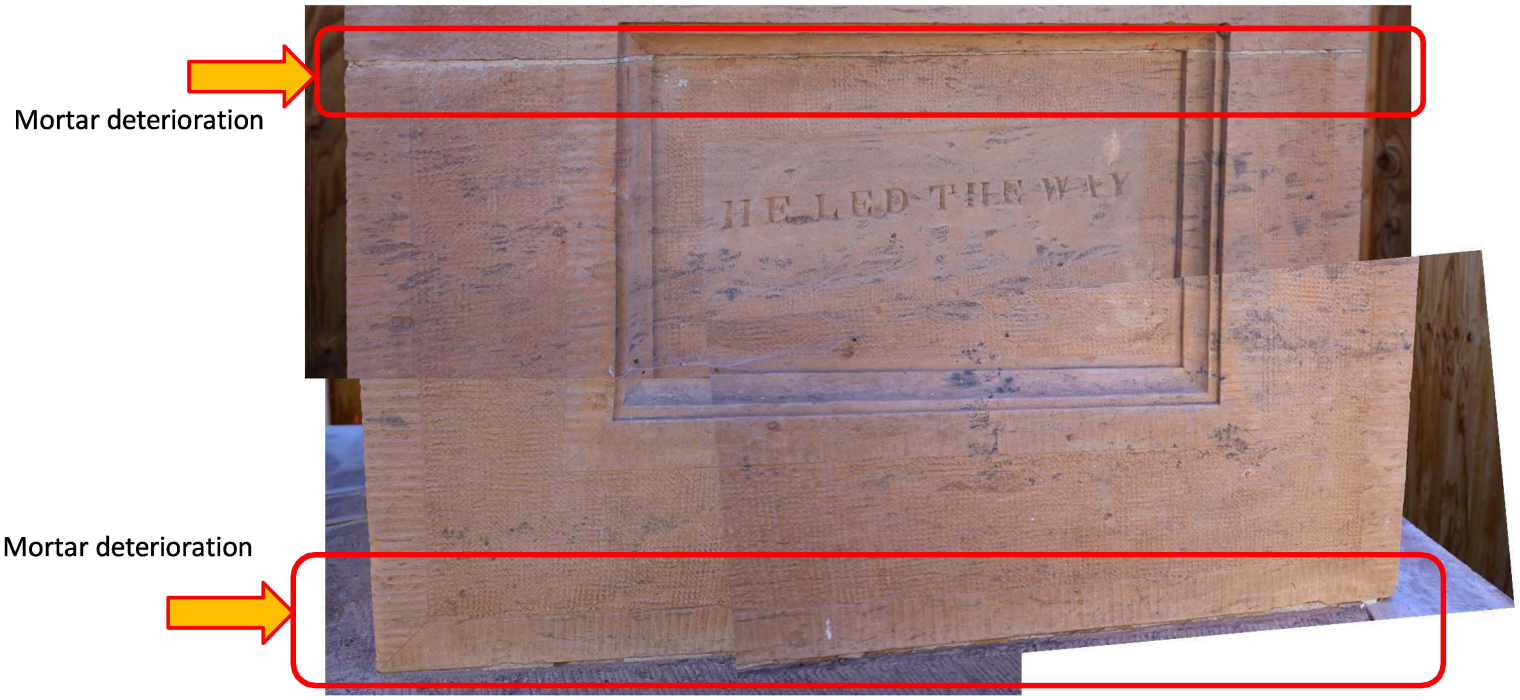
Evidence of vandalistic graffiti removal.

Material cracking, depth unknown.

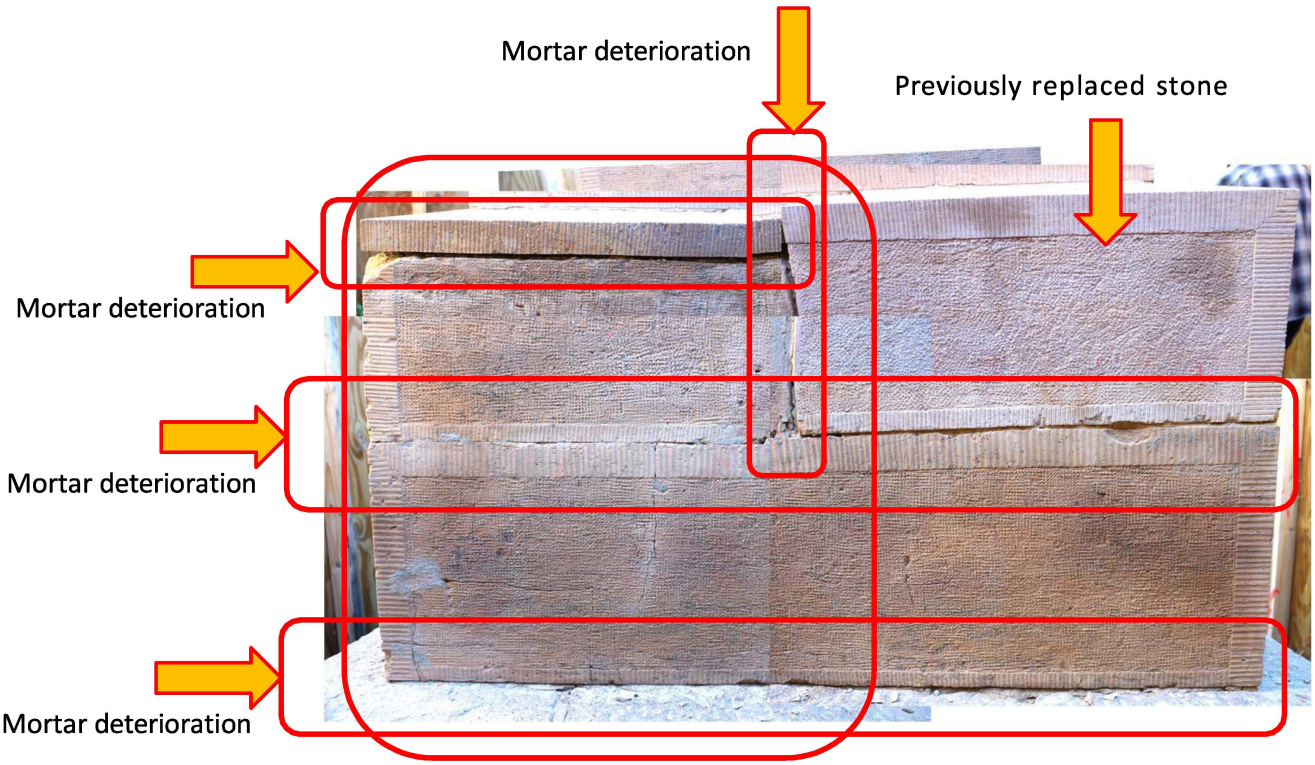
16

Inscription Stone
B3 – north

Inscription Stone
B3 – west



Pedestal
Section C – south



This region has severe cracking and chipping in both stones. There have been previous repairs attempted.

19

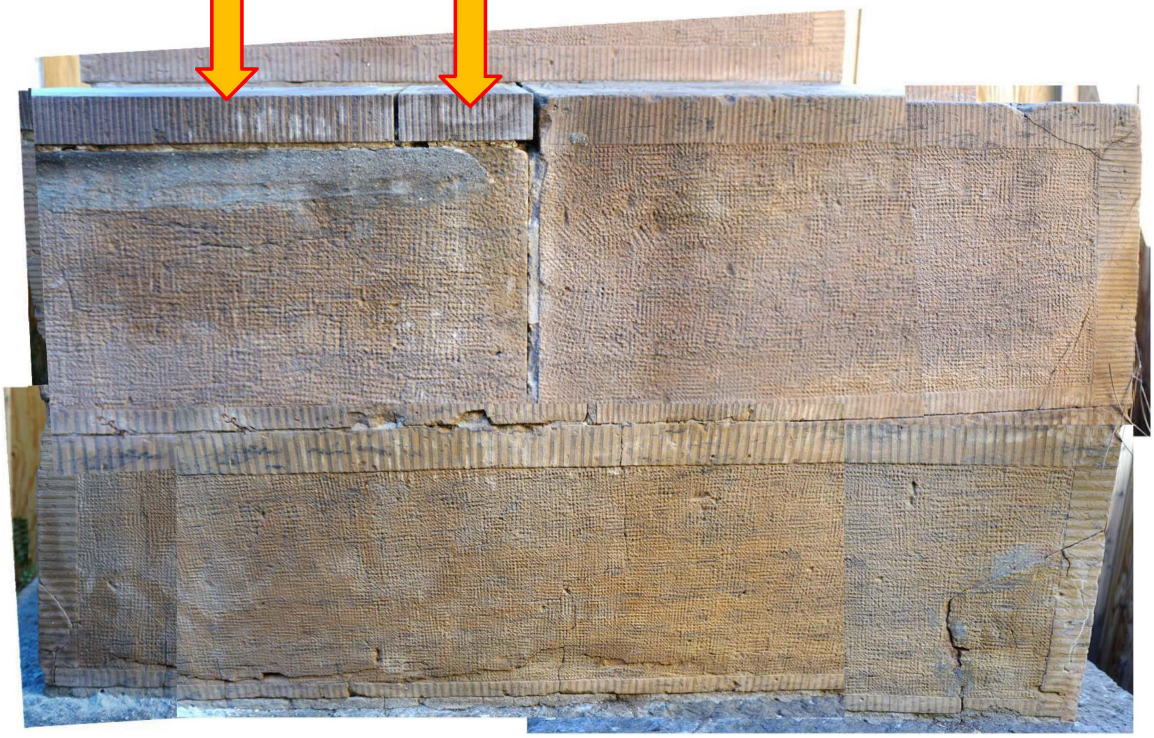
Pedestal
Section C – east

Aside from the replaced portion of C1, the extents of C is in poor condition. Mortar joints are failing or are fully removed. Previous attempts at repairs have since fully removed. New spalling, cracking, and fragmentation is rampant.

Previously replaced stone

Pedestal
Section C – north

Previously replaced stone



Aside from the replaced portion of C1, the extents of C is in poor condition. Mortar joints are failing or are fully removed. Previous attempts at repairs have either failed or have since fully removed. New spalling, cracking, and fragmentation is rampant.

Pedestal
Section C – west

Aside from the replaced portion of C1, the extents of C is in poor condition. Mortar joints are failing or are fully removed. Previous attempts at repairs have either failed or have since fully removed. New spalling, cracking, and fragmentation is rampant.

Previously replaced stone