JOHN THURSTON

ARKANSAS SECRETARY OF STATE

May 25, 2023

Sen. Terry Rice
Rep. Jeff Wardlaw
Co-Chairs
Arkansas Legislative Council

Re: Arkansas's Contribution to the National Statuary Hall Collection

Sen. Rice and Rep. Wardlaw,

In accordance with Arkansas Code Annotated §1-4-134 (e)(4)(A), I wish to submit the attached engineering reports for both the Daisy Bates and Johnny Cash statues for review by the Arkansas Legislative Council.

Please do not hesitate to contact me if you have any questions.

Sincerely,

Michael Harry
Arkansas Secretary of State's Office

Enclosures

State Capitol • Suite 256 • 500 Woodlane Street • Little Rock, Arkansas 72201-1094
501-682-1010 • Fax 501-682-3510
e-mail: arsos@sos.arkansas.gov • www.sos.arkansas.gov

Johnny Cash

National Statuary Hall Replacement
Proposal for the Great State of

Arkansas

Full Size Clay Model
by
Kevin Kresse

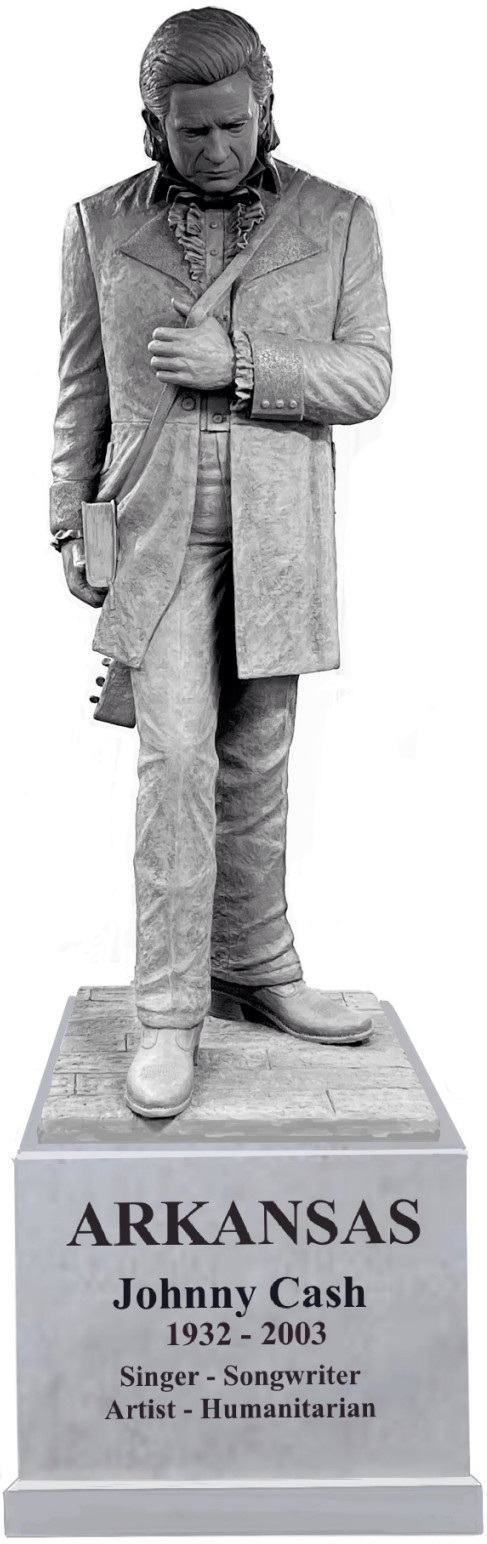
Overall Dimensions & Weight

Sculpture Height
Including Self Base

97” (8’1”)

Total Height
131”
(10’11”)

Base Height
34”



Silicon Bronze Sculpture
Approximated Weight
1200 lbs

Weight of Stone
1104 lbs

Weight of Interior
Steel Structure
388 lbs

Total Weight of Pedestal
1492 lbs

Approximated Total Weight
Of Completed Statue
2692 lbs

Full Size Clay Sculpture Depicted on Pedestal

Front View

Full Size Clay Sculpture Depicted on Pedestal

Proper Left View

Direct quote from Johnny Cash. Verified and approved by Johnny Cash's children.

Approved by the Arkansas National Statuary Hall Steering Committee.

Full Size Clay Sculpture Depicted on Pedestal

Proper Right View

Lyrics from Johnny Cash's Song, "Man In Black" Reviewed and Approved by Johnny Cash's Children.

Approved by the Arkansas National Statuary Hall Steering Committee.

Full Size Clay Sculpture Depicted on Pedestal

Rear View

Full Size Clay, Portrait Detail

Structural Cutaway Diagram

1" SS* Threaded Rod

1" Diameter SS Nut
Welded to Top of 304 SS Angle

Nut
Circumferentially
Welded
to Angle

304 SS Angle
(2" x 2" x 1/4" thick)

Top
Layer
of
Stone

Upper Steel Plate
of Base's Interior
Steel Structure

304 SS Angle
Welded to Interior
Flange
of Self Base
of Bronze Sculpture

Top Metal Plate
of Base Steel Structure
(With Two Drilled Holes
Corresponding to Holes
Drilled in 304 SS
Diagonal Bracket)

1" Dia SS Washer

1" Dia SS Lock Washer

1" Diameter SS Nut.

Interior Steel Structure

4 Vertical Steel Tubes
4 Steel Tubes Bracing
In Between on Bottom
& 4 Steel Tubes
Bracing on Top

All are Square Steel
Tubes 1.5"

Bottom Metal Plate

*SS = Stainless Steel

Removable Back Panel

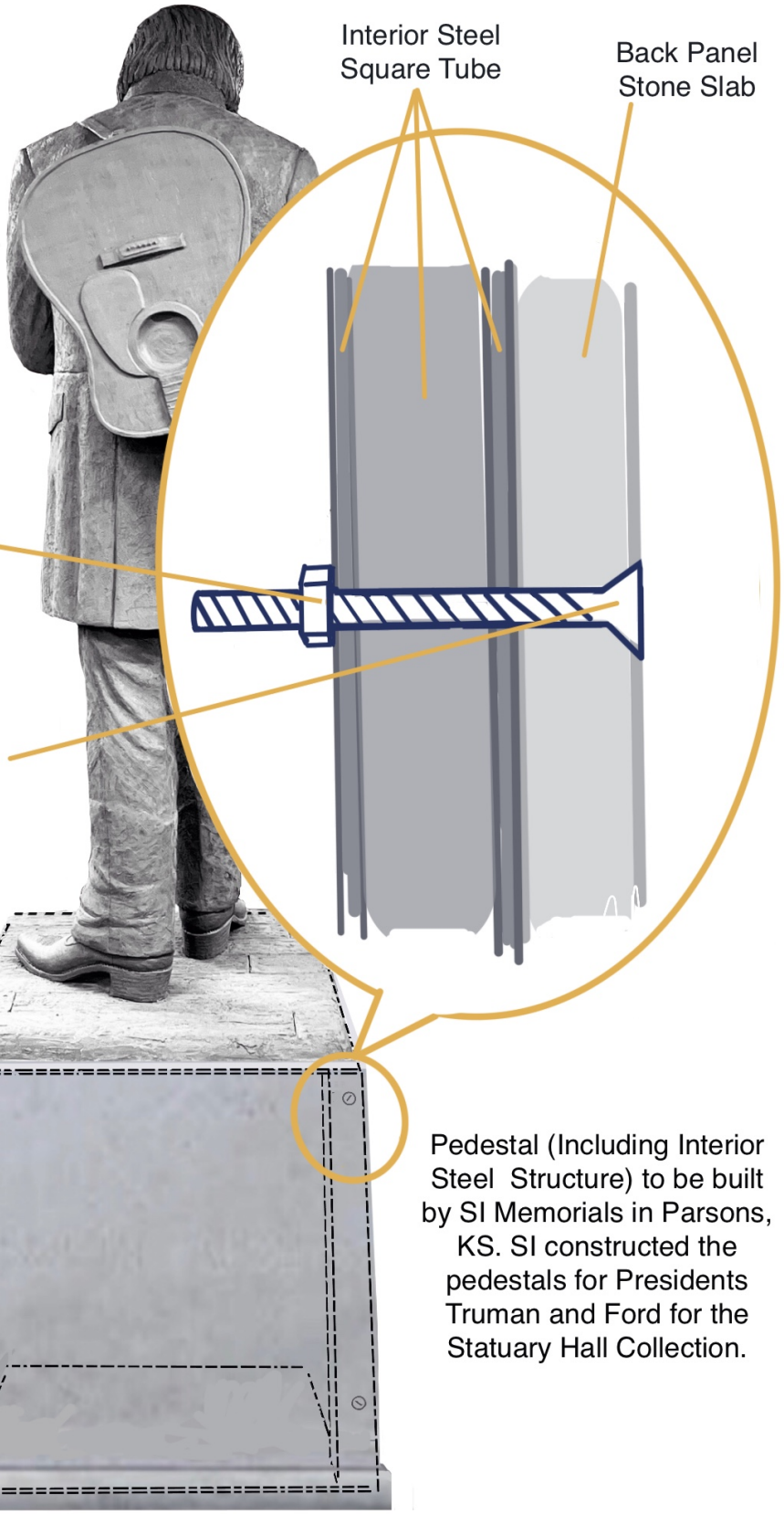
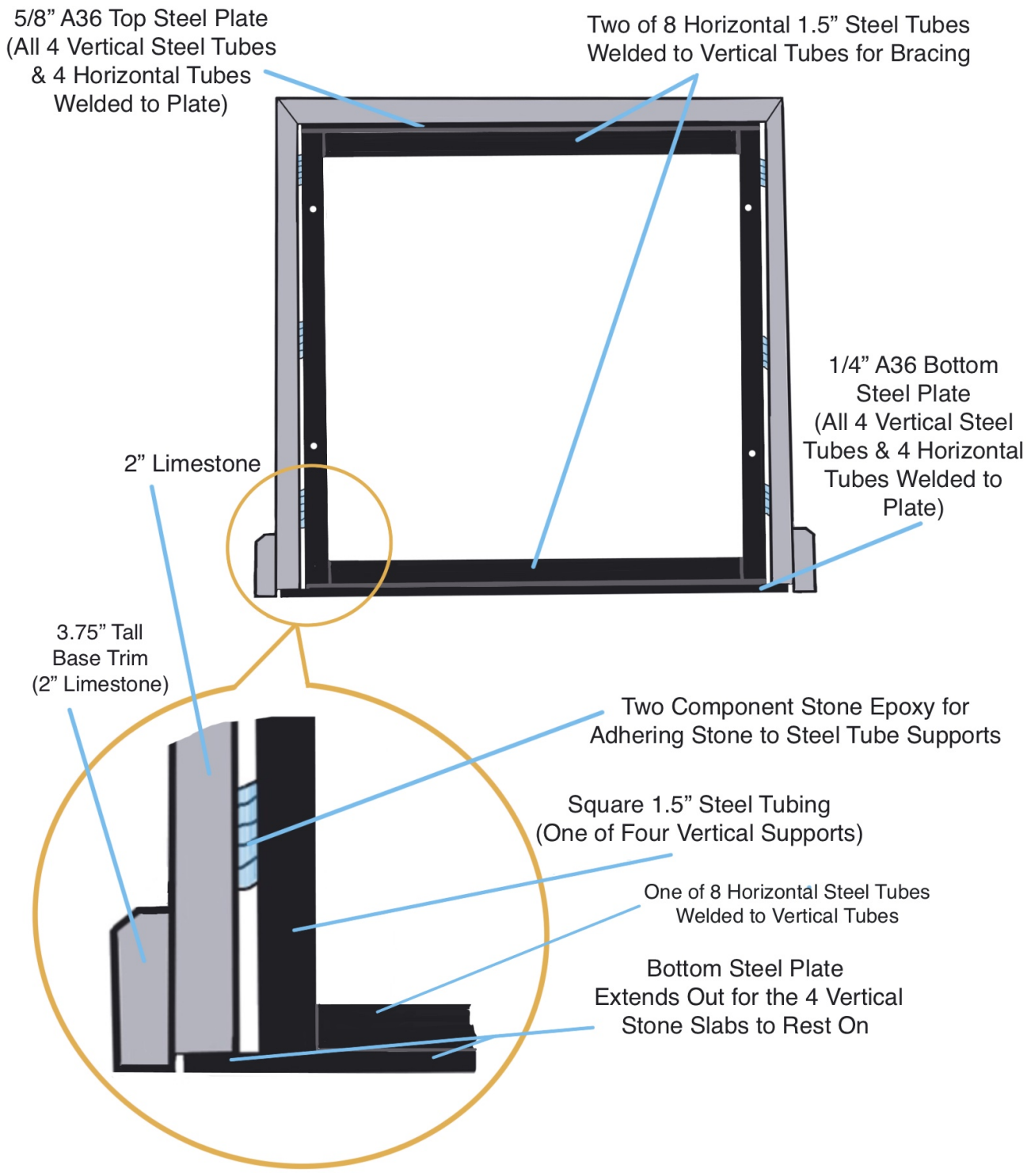
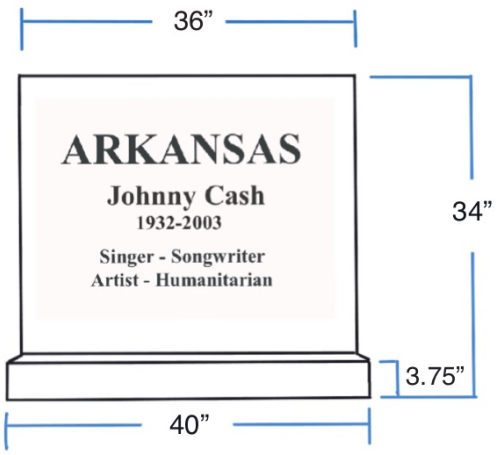


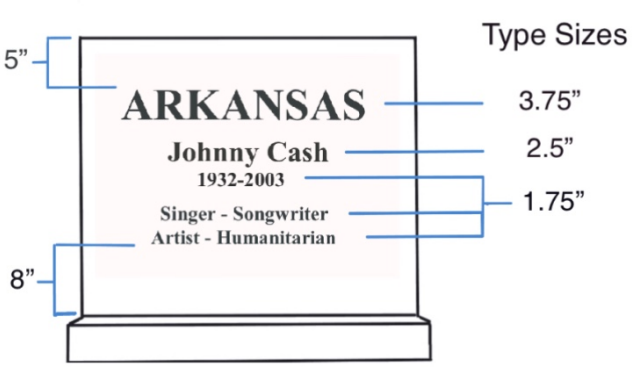
Diagram of Stone Attachment to Steel Structure



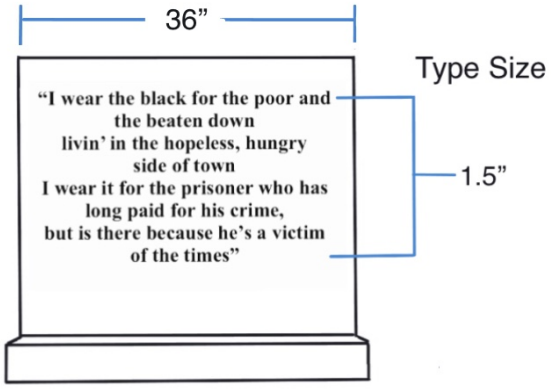
Pedestal Profiles



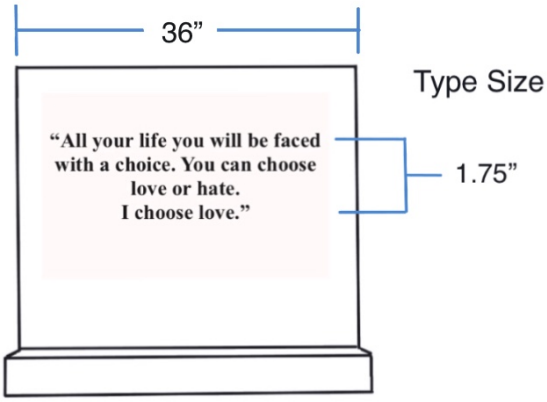
Front View 1



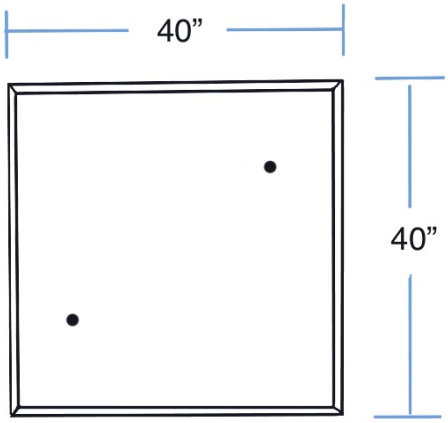
Front View 2



Proper Right View



Proper Left View



Top View

ORIGIN ENGINEERING

P.O. Box 241927
Little Rock, AR 72223
(501) 766-5282
DGoad@OriginEngineering.org

December 15, 2022

Kevin Kresse
2800 West 6th Street
Little Rock, AR

Re: **Sculpture Base Frame Drawings & Calculations - REVISED**
Project: U.S. Capitol Building Sculpture – Johnny Cash
Location: Washington D.C.

Dear Mr. Kresse:

As requested, I performed engineering design calculations and produced the steel base frame shop drawings to support the Johnny Cash Sculpture. The design calculations and shop drawings were produced with the following information that was provided to Origin Engineering, LLC:

- Overall Sculpture Base Dimensions: 36" wide x 36" deep x 34" tall
- 2" thick Stone veneer will be installed on the sides and top of the steel base frame.
- The sculpture base will not be fixed to the floor but will be leveled using 2"x2" minimum acrylic shims located beneath the corners of the base frame.
- The sculpture will be connected to the base frame using two 1" stainless steel threaded rods, washers, and nuts.
- The back face of the sculpture base provides access to assemble and disassemble the sculpture-to-base connection. This back face will be attached to the steel frame using 0.25" stainless steel bolts.
- Front, sides and top stone veneer are to be attached to the steel frame using an epoxy adhesive.

Note that any changes to the above assumptions should be submitted to Origin Engineering so that updates can be made if necessary.

Included in this report are the following:

- Steel Base Frame Shop Drawings
- Sculpture & Base Stability Calculations
- Steel Base Frame Design Calculations
- Epoxy Adhesive Technical Data Sheets

Please let me know if you need any other assistance on this matter.

Thanks,

Daniel Goad, P.E., S.E.
Owner

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 16667
DANIEL R. GOAD
12/15/2022

CERTIFICATE OF AUTHORIZATION
ORIGIN ENGINEERING, LLC.
No. 3791
ARKANSAS

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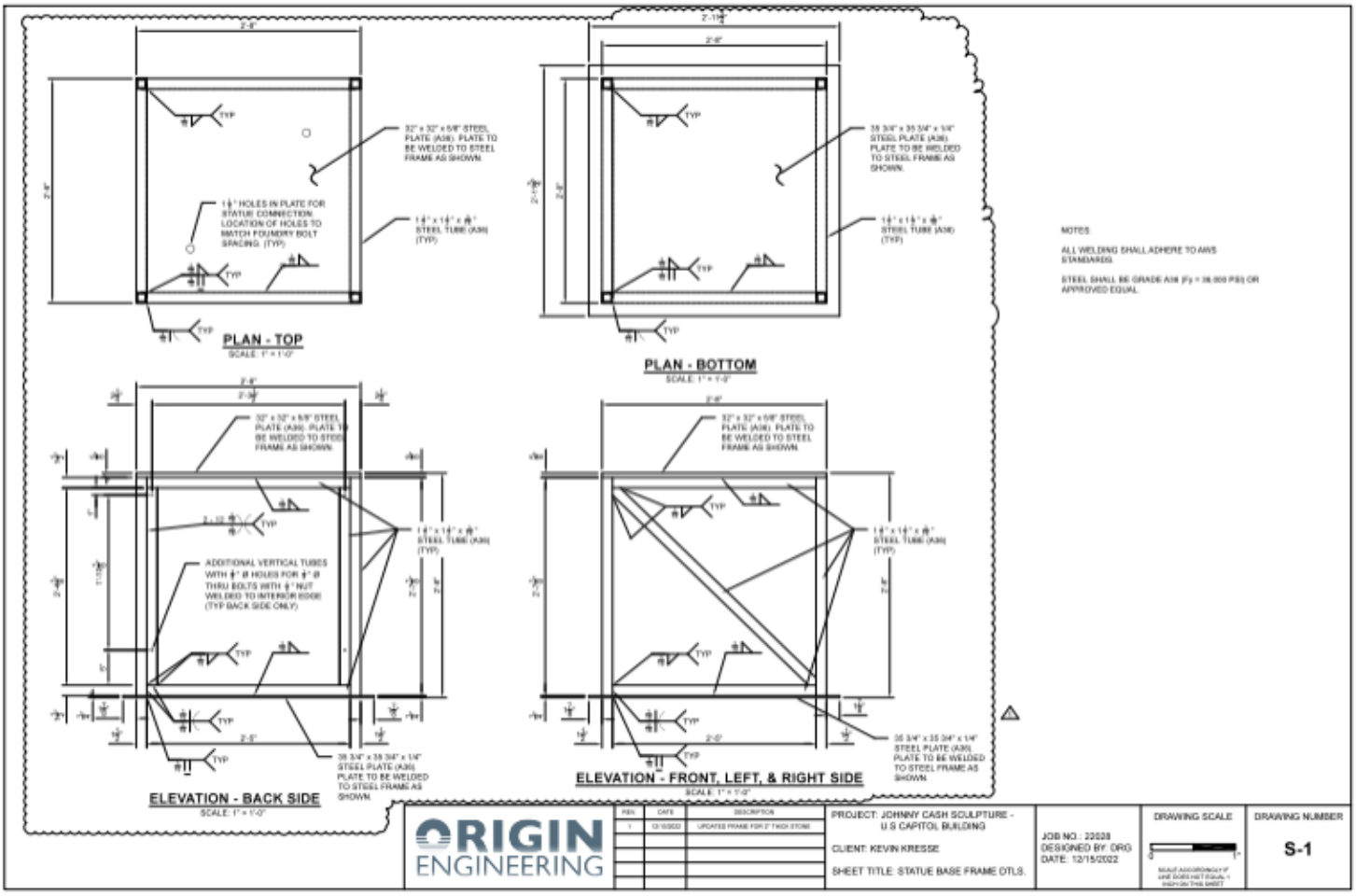
ENGINEERING

STEEL FRAME SHOP DRAWINGS


PLAN - TOP
SCALE: 1" = 1'-0"
PLAN - BOTTOM
SCALE: 1" = 1'-0"
ELEVATION - BACK SIDE
SCALE: 1" = 1'-0"
ELEVATION - FRONT, LEFT, & RIGHT SIDE
SCALE: 1" = 1'-0"
NOTES:
ALL WELDING SHALL ADHERE TO AWS STANDARDS
STEEL SHALL BE GRADE A36 (Fy = 36,000 PSI) OR APPROVED EQUAL
ORIGIN ENGINEERING
PROJECT: JOHNNY CASH SCULPTURE - U.S CAPITOL BUILDING
CLIENT: KEVIN KRESSE
SHEET TITLE: STATUE BASE FRAME DTLS.
JOB NO.: 22028
DESIGNED BY: DRG
DATE: 12/15/2022
DRAWING SCALE
DRAWING NUMBER
S-1

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ENGINEERING

STEEL FRAME DESIGN CALCULATIONS

Johnny Cash Sculpture Base Design Calculations

Inputs/Givens

Input Cell

γ_{stone}	=	150.00	pcf	Limestone Unit Weight
γ_{steel}	=	490.00	pcf	Steel Unit Weight
W_{statue}	=	1200.00	lbs	Bronze Sculpture Weight
t_{panel}	=	2.00	in	Stone Panel Thickness
B_{base}	=	36.00	in	Statue Base Width
H_{base}	=	34.00	in	Statue Base Height
D_{base}	=	36.00	in	Statue Base Depth
B_{trim}	=	3.75	in	Base Trim Width
t_{trim}	=	3.75	in	Base Trim Thickness
L_{trim}	=	43.50	in	Base Trim Length (One Side)
F_y	=	36000.00	psi	Yield Strength of Steel
w_{tube}	=	3.04	plf	Tube Steel Weight Per Foot
L_{tube}	=	44.00	ft	Total Length of Tube Steel in Frame
$t_{top,PL}$	=	0.625	in	Top Plate Thickness
$t_{btm,PL}$	=	0.25	in	Bottom Plate Thickness

Overall Stability of Statue & Base

Stone Base Dead Load

Frt/Bck Panel	=	189.06	lbs x	2 sides	=	378.13	lbs
Side Panel	=	168.06	lbs x	2 sides	=	336.11	lbs
Side Trim	=	53.10	lbs x	4 sides	=	212.40	lbs
Top Slab	=	177.78	lbs		=	177.78	lbs
					Sum =	1104	lbs

Steel Base Frame Dead Load

Tube Steel	=	L_{tube}	x	w_{tube}	=	133.76	lbs
Top Steel PL	=	181.48	lbs		=	181.48	lbs
Btm Steel PL	=	72.59	lbs		=	72.59	lbs
					Sum =	388	lbs

Bronze Sculpture Dead Load

W_{statue} = 1200 lbs

Total Dead Load

W_{total} = 2692 lbs

Sculpture Overturning Resistance

$$M_R = \frac{W_{total} \times B_{base}}{2} = 4038 \text{ lb-ft}$$

Lateral Load Required to Overturn Sculpture

At 3' Above Ground:	1346	lbs
At 4' Above Ground:	1010	lbs
At 5' Above Ground:	808	lbs
At 6' Above Ground:	673	lbs

Conservatively assume average person can exert 150 lbs of lateral force, therefore OK.

See additional stability calculations on following pages.

Conclusion:

Based on the design calculations provided, it is my professional opinion that the Sculpture and Base are stable.

Structural Connection Calculations

Bolt Connection

Check load perpendicular to Bolt Spacing

Load at Height of Bolts	=	1346	lbs		
Load Per Bolt	=	673	lbs		
Shear Strength of 1" Dia Threaded Rod	=	10,500	lbs	(F.S. = 2)	Therefore OK

Vertical Load of Sculpture to be transmitted from Bronze floor directly to Base Frame. Therefore, bolts not transmitting vertical load but resisting shear load.

Top Plate Moment Capacity

Plate Width	=	32	in	
Plate Thickness	=	0.625	in	
PL Section Modulus	=	2.08	in^3	
PL Moment Capacity	=	3125	lb-ft	(F.S. = 2)
Moment at Top PL	=	2019	lb-ft	(Worst case loading required to overturn sculpture)

Therefore, OK

Conclusion:

Based on the design calculations provided, the bolt and top plate capacity exceeds loading required to overturn the sculpture. Therefore, connections are acceptable.

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Sheet No. 1 Of 2

Project JOHNNY CASH SCULPTURE Job No. 22028

Subject ADDITIONAL STABILITY CALCULATIONS Date 11/28/22

RESISTING MOMENT, M_R = 3771 lb·ft (SEE PREVIOUS CALCS)

AS REQUESTED, SEE THE FOLLOWING LOADING STABILITY CHECKS:

1.) 350 lb LATERAL LOAD APPLIED AT TOP OF PEDESTAL (2'-10" HEIGHT)

- $350^{lb} \times 2.83' = 992^{lb \cdot ft}$
- FACTOR OF SAFETY = $\frac{3771}{992} = 3.8$ ∴ OK

2) 200 lb LATERAL LOAD APPLIED AT MID-HEIGHT OF STATUE

- TOTAL HEIGHT OF STATUE = 34" BASE + 97" SCULPTURE = 131" = 10'-11"
  → $\frac{H}{2} = 5.46'$
- $200^{lb} \times 5.46' = 1092^{lb \cdot ft}$
- F.S. = $\frac{3771}{1092} = 3.45$ ∴ OK

3) 75 lb LATERAL LOAD APPLIED AT TOP OF STATUE

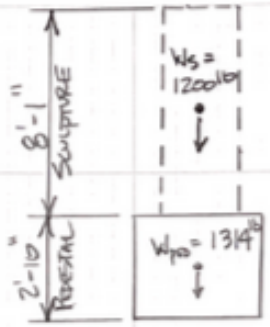
- $75^{lb} \times 10.917' = 819^{lb \cdot ft}$
- F.S. = $\frac{3771}{819} = 4.61$ ∴ OK

4) SEE NEXT SHEET FOR SEISMIC CHECKS

NOTE: FACTOR OF SAFETY FOR OVERTURNING IS TYPICALLY SET @ 2.0 MIN. WHEN USING UNFACTORED LOADS, WHICH ALL LOAD CASES EXCEED THIS.

TAKING WORST-CASE LOADING (CASE 2 ABOVE) & FACTORING LOADS: $0.9D + 1.6L \rightarrow \frac{0.9(3771)}{1.6(1092)} = 1.94 > 1.0$ ∴ OK

4.) SEISMIC CHECK



a) CENTER OF GRAVITY:

$$\frac{\Sigma Wy}{\Sigma W} = \frac{(1200^{lb})\left(2.83' + \frac{8.083}{2}\right) + (1314^{lb})\left(\frac{2.83'}{2}\right)}{1200^{lb} + 1314^{lb}}$$

C.O.G. = 4.02' ABOVE GROUND

$\therefore$ SAY 5' (CONSERVATIVE)

b) VARIABLES PROVIDED BY ARCHITECT OF THE CAPITOL

$a_p = 2.5$; $S_{DS} = 0.160g$; $I_p = 1.0$; $R_p = 2.5$; $h = 70'$

z: CVC = 0' ; USC 1ST FLOOR = 6' ; USC 2ND FLOOR = 25'

c.) CALCULATE SEISMIC DESIGN FORCE PER ASCE 7:

$$F_p = \frac{0.4 a_p S_{DS} W_p}{\left(R_p / I_p\right)}\left(1 + 2\left(z/h\right)\right)$$

2ND FLOOR CONTROLS

$$F_p = \frac{(0.4)(2.5)(0.16)(2514^{lb})}{\left(2.5/1.0\right)}\left(1 + 2\left(\frac{25'}{70'}\right)\right) = 276^{lb}$$

$F_{p,MAX} = 1.6 S_{DS} I_p W_p = (1.6)(0.16)(1.0)(2514^{lb}) = 644^{lb}$

$F_{p,MIN} = 0.3 S_{DS} I_p W_p = (0.3)(0.16)(1.0)(2514^{lb}) = 121^{lb}$

$\therefore$ $F_p = 276^{lb}$ APPLIED @ 5' FROM BOTTOM = $1380^{lb \cdot FT}$

- $F_{p,V} = \pm 0.2 S_{DS} W_p = (0.2)(0.16)(2514^{lb}) = 81^{lb} \uparrow$ (VERTICAL SEISMIC LOAD)
- EFFECTIVE RESISTING MOMENT, $M_R = \frac{(2514^{lb} - 81^{lb})(3' \text{ BASE})}{2} = 3649^{lb \cdot FT}$
- FACTOR OF SAFETY $_{OT} = \frac{3649^{lb \cdot FT}}{1380^{lb \cdot FT}} = 2.64 > 1.0$ $\therefore$ OK

CONCLUSION: SCULPTURE + PEDESTAL BASE ARE STABLE.

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ENGINEERING

EPOXY ADHESIVE SPECIFICATIONS

Bonstone Materials Corporation
800-425-2214 / www.bonstone.com

TECHNICAL DATA SHEET

FILE UNDER DIVISION 4

1. PRODUCT NAME

BONSTONE™ CLEAR GEL EPOXY

2. MANUFACTURER

Bonstone Materials Corporation

3. PRODUCT DESCRIPTION

A two-component, exterior grade, clear epoxy adhesive. Two hour set, gel viscosity.

Basic Uses:

- Stone patching, mending, repairing and bonding
- Anchor bolt adhesive
- Bonding stone to other construction materials
- Laminating; bullnoses & aprons

Limitations:

Use on dry stone. Use on oil, grease, and coating free stone. Some yellowing and chalking will occur when exposed to ultra-violet light.

Color:

Clear product- Use Touchstone tints for tinting

4.TECHNICAL DATA:

(see next page)

5. INSTALLATION

General Instructions

If using cartridges, additional usage directions are available. See our information sheet labeled "Cartridge use directions". See separate doweling,- laminating, and patching instructions for more specific instructions. CSI format specifications are available.

Surface Preparation & Use:

Use gloves, wear eye protection, and avoid skin contact. When grinding cured joints, wear a dust mask. Substrate to be bonded must be completely dry and dust free. Mix only the amount of epoxy which can be used in 10 minutes. Avoid stressing joint before complete cure of epoxy. Mask areas which must be kept free of epoxy. Clean tools with uncured epoxy using toluene or xylene. Use caution, these solvents are flammable and ensure local ventilation. Remove cured epoxy mechanically.

Mixing instructions:

All materials should be at or above 55°F. Combine the two ingredients at the following volume ratio: Two parts of **A** to one part **B**.

Temperature dependency:

Temperature will affect the working properties of the material. Every 15°F results in doubling the speed of cure. Therefore, at 90°F set time is cut in half, at 60°F the set time is doubled. Do not use on substrate at a temperature below 55°F.

Coverage: Approximately 30 square feet per gallon when applied at 50 mils (1/16th of an inch). 231 cubic inches per gallon.

6. AVAILABILITY

Packaging and storage:

Bonstone Clear Gel is available in quarts, gallons, 5 gallon pails and cartridges. Thickening powders are available for increasing viscosity.

** If **Part A** is exposed to below room temperature conditions for extended periods of time, it may crystallize, giving it a stiff, grainy consistency. The product must be reconstituted before use by heating it to 150°F degrees. Stir until it becomes a homogeneous liquid.

7. WARRANTY

This product's warranty is limited to replacement of defective material and freight charges to destination only. Bonstone Materials Corp. is not responsible for consequential damages.

8. MAINTENANCE

Designed for application in areas inaccessible to maintenance procedures

9. TECHNICAL SERVICE

Specification Service

- specs for various applications
- spec writing dept. for unique applications

4. TECHNICAL DATA BONSTONE™ CLEAR GEL

Mixed Properties	*Values*	*Test Methods*	
Mix Ratio:	**2 parts A to 1 part B by volume**		
Pot Life at 75°F:	**15 minutes**		

Cured Properties

Initial set time at 75°F:	**2 hours**		
Full cure time at 75°F:	**within 24 hours**		
STRENGTHS:			days cured
Tensile:	**2,044 psi**	**ASTM D-638**	**7 days**
Compressive:	**8,182 psi**	**ASTM D-695**	**7 days**
Flexural:	**9.896 psi**	**ASTM D-790**	**7 days**
MODULUS			
Tensile:	**458,763 psi**	**ASTM D-638**	**7 days**
Compressive:	**106,191 psi**	**ASTM D-695**	**7 days**
Flexural:	**536,751 psi**	**ASTM D-790**	**7 days**
Tensile Elongation at break:	**1.16%**	**ASTM D-638**	**7 days**

Daisy Lee Gatson Bates

National Statuary Hall Replacement
Proposal for the State of
Arkansas

Full Size Clay Model

Sculptor: Benjamin Victor

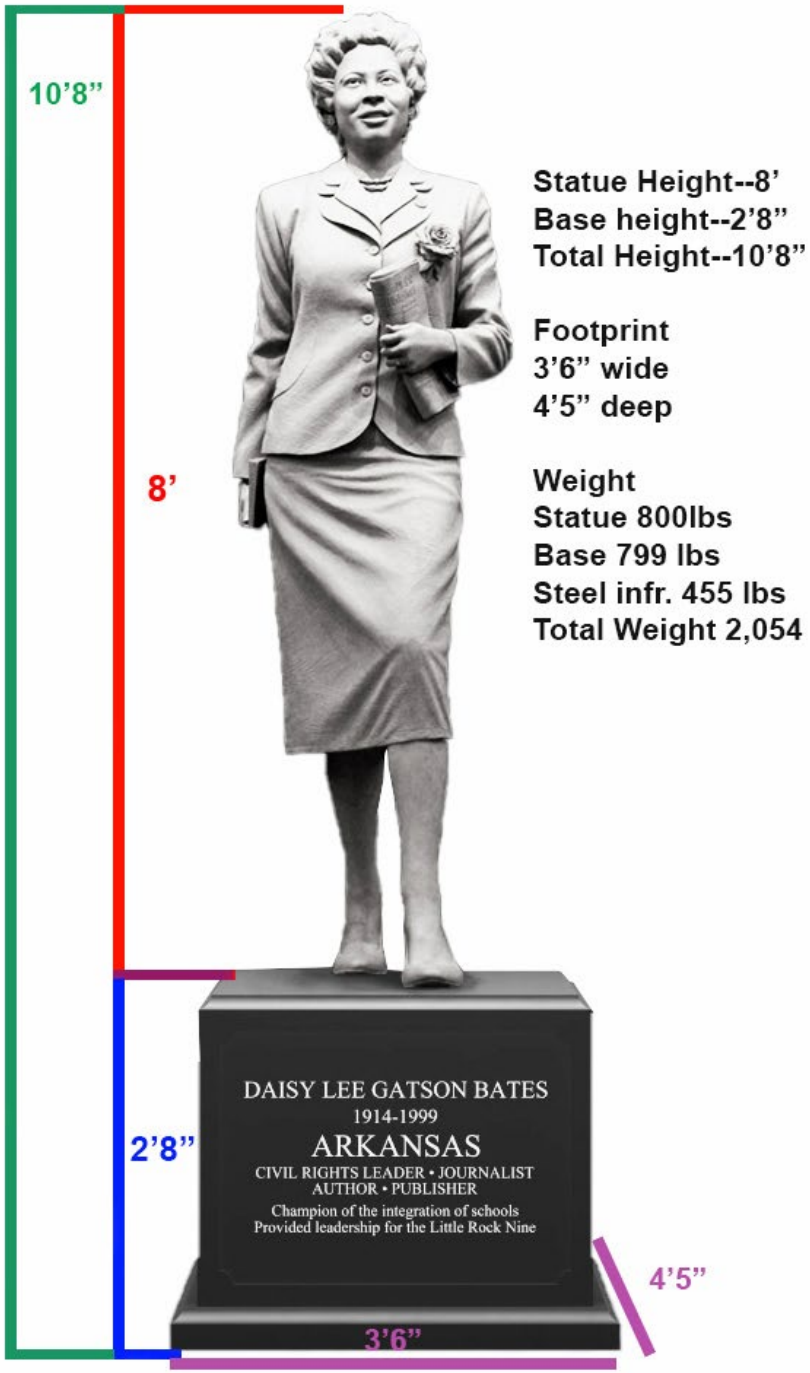
Description

Daisy Bates is depicted stepping forward as a metaphor of the woman who led the way as an activist for equal rights for Black Americans. She strides forward, just as her heroic actions as a leader in The Civil Rights Movement helped our nation make strides forward for African Americans.

She holds her notebook and pen in her right hand, signifying her role as a Journalist, Author, and Writer. In her left hand, she clasps the Arkansas State Press newspaper, an icon for her role as a Publisher and as an African American business owner.

She looks ahead, with an optimistic smile. Her expression of joy and empowerment is a testament to her optimism and energy.

Full size Sculpture Clay Dimensions and Weight



Statue Height--8’
Base height--2’8”
Total Height--10’8”

Footprint
3’6” wide
4’5” deep

Weight
Statue 800lbs
Base 799 lbs
Steel infr. 455 lbs
Total Weight 2,054

Full Size Sculpture
Clay Sculpture Rendered
With Base:
Front

Copyright Benjamin Victor Studios. All rights reserved.

Full Size Sculpture
Clay Sculpture Rendered With Base:
Viewer Left Side View

Copyright Benjamin Victor Studios. All rights reserved.

Actual, direct quote from Ms. Daisy Lee Gatson Bates on base.
Approved by the Daisy Bates Home and Museum Board of Directors.

Full Size Sculpture
Clay Sculpture Rendered With Base:
Viewer Right Side View

Actual, direct quote from Ms. Daisy Lee Gatson Bates on base.
Approved by the Daisy Bates Home and Museum Board of Directors.

Full Size Sculpture
Clay Sculpture Rendered
With Base:
¾ Viewer Left View

Copyright Benjamin Victor Studios. All rights reserved.

Full Size Sculpture
Clay Sculpture Rendered
With Base:
¾ Viewer Right View

Copyright Benjamin Victor Studios. All rights reserved.

Full Size Sculpture
Clay Sculpture Rendered
With Base:
Back View

Full Size Sculpture
Clay Front View

Final bronze will not have self base. The bronze figure will be attached directly to the granite base.

Full Size Sculpture
Clay Left Side View

Final bronze will not have self base. The bronze figure will be attached directly to the granite base.

Full size Sculpture
Clay Right Side View

Final bronze will not have self base. The bronze figure will be attached directly to the granite base.

Full size Sculpture Clay
¾ Left View

Final bronze will not have self base. The bronze figure will be attached directly to the granite base.

Full size Sculpture Clay
¾ Right View

Final bronze will not have self base. The bronze figure will be attached directly to the granite base.

Full size Sculpture Clay
Rear View

Final bronze will not have self base. The bronze figure will be attached directly to the granite base.

Full size Sculpture Clay
Detail Portrait,
Rose, and Lapel Pin

Full size Sculpture Clay

Detail Newspaper

Full size Sculpture Clay
Detail Notebook

Explanation of Iconography: The Newspaper

The Newspaper works on many levels. It is historically accurate, as shown in the photo of Ms. Bates to the right. It also is a symbol to denote Ms. Bates's role in the press as a Journalist and Publisher.

For my sculpture of Daisy Bates, I worked with The Board for the Daisy Bate's Home and Museum, and Arkansas historians and Archivists to get a scan of the Arkansas State Press. I then carved the actual headlines into the clay newspaper. The newspaper is dated October, 4th 1957. The articles on the folded newspaper that is cradled in her left hand and forearm bring the viewer into the time period represented in the sculpture. The main headline highlights the 9 courageous students. The following page is a scan of the actual Newspaper used as a reference for carving the sculpture.

Daisy Bates
First Lady of Little Rock

Explanation of Iconography:
Scan of the Actual Newspaper

9 Negroes Enter Second Week at Central High School Under Guard

Mirror of Public Opinion:

The Caroline Times:

"Just how low can a human being sink, even the governor of a southern state, when aspiring for power and public office, has been most graphically told by the Washington Post and Time magazine. Both of these periodicals pulled the cover off Governor Faubus last week and left him stark naked in the noon day sun to be gazed at by all respectable citizens of this country."

The Herald-Dispatch:

". . . This man, Governor Orval Faubus, not only defies the constitutional rights of Negro men and women, but sends armed troops against defenseless Negro children. . . ."

AFL-CIO News:

". . . The only alternative to law and order is, of course, chaos. Ever since the dawn of civilization men have found law and order the best tools they can devise for getting along with one another on a basis of justice and equality. But the veneer of civilization in some, rubs thin when emotions like hate and fear take over from reason.

And when it cracks, law and order have to be restored in the interest of the common good. That's why Pres. Eisenhower merits the complete support of all right-thinking people for his action in sending federal troops into Little Rock. What alternative, one wonders, did the hate-mongers give him? . . . . . "

Enquirer and News, Battle Creek, Mich.:

"Feelings are likely to run a bit higher upon looking squarely at these days. For instance, one is apt to think unkindly of such demagogues as Gov Orval Faubus of Arkansas, who deliberately defies federal authority in barring Negroes from schools under the guise of "preserving the peace."

Governor Faubus, and other southerners like him, make people of such states as Michigan, which pays more than its share of federal taxes, wish that federal aid could be denied to those southern states which would like to withdraw from the Union every time they don't like the way things are going.

But we can quickly forget such unpleasant personages as the misled Arkansas governor in thinking of that lone, 15-year-old Negro girl, Elizabeth Eckford, who repeatedly tried to enter Little Rock Central High School.

All alone—jeered at by the crowd, barred by National Guardsmen who must have shuddered with shame at what they were being ordered to do—this little girl tried time and time again to enter the school. She was upholding her rights. . . . . "

EDITORIAL

Sure, It's Bad - - But Let's Face It

Pictures Don't Exactly Lie . . .

There have been quite a few gripes about the publicity given Little Rock and Arkansas during the past four weeks. Most of the complaints have come from the center of the controversy. They claim that the news is distorted and one-sided. They even say that the foreign reporters are here to defame the state and its people.

This is no effort to defend the reporters who are covering the crisis in Little Rock. They do not need it. Reporters are here to do a job and they are doing just that, and if any such fair chance to the world can what is happening in Little Rock without disgracing Little Rock, he is not disloyal to the profession by the Arkansas governor or to the community, his state and his country.

It is true that there has not happened in Little Rock, there would have been no need for foreign reporters here, for there would not have been anything of interest for them to record. And the facts that have been set in print were not pried, they were action shots.

The little fifteen-year-old Negro girl did not pose for any conversation with a howling mob at her heels and Arkansas National Guards looking on pleasingly. The Negro spectators who were hounded and set up all by mobs of angry whites, with the fury of wild beasts, did not pose for these pictures. As a matter of fact they preferred to not have been subjects.

When the reporters said to the world readers that the Arkansas National Guards had been ordered around Central H school, to prevent nine Negroes from entering school, were they distorting the news? Your own beloved governor Faubus, himself, stated the same thing, was he distorting the news?

As a matter fact, from where we stand, the news stories were distorted. But they were distorted in our favor. If the reporters had given a word picture of the savage looks on the face of so-called civilized white people who made up the mob at Central hi school, it would have been a spectacle that would have shot to the minds of the readers only when the readers died themselves.

Let's face it, and stop bellyaching, the reporters didn't make the news, we did it. Step our stupidity, and our inability to think. They only wrote what they saw, and not all of that.

"America's Insurable Disease."

Leading Japanese dailies have been featuring the "battle of Arkansas."

The leading opposition daily is Seoul, Korea. Inked the race outrages in the school cases to recent shooting of Koreans by United States soldiers. "We feel American service boys's safety may have been influenced by racial outbreak," the paper said.

ARKANSAS State Press

VOLUME 17—NUMBER 22 LITTLE ROCK, ARKANSAS FRIDAY, OCTOBER 4, 1957 PRICE TEN CENTS

Mob Law Rules Little Rock, Russian Schoolrooms Told

According to an AP dispatch from London the Russians built a somewhat fictional radio drama around the real-life Negro schoolgirl of Little Rock and broadcast it today to schoolrooms in the Soviet Union.

This was the sort of exploitation President Eisenhower has said can be expected from glee-ing enemies of the United States.

Moscow Radio guidoes, if ever, had a better ready-made pattern to exploit its constant theme of Communist paradise vs. capitalist jungle.

The Soviet radio told Russian listeners that lawless mobs have taken over in Little Rock.

Soviet school children were given a special program on the episode which, the radio said, "have cast a shadow through all human people in the world over."

The program was a dramatized account of racial violence terrorizing a Negro school girl named Elizabeth, Eckford (the real name of one of the Little Rock nine) trying to get into a desegregated school at Little Rock.

A Russian actor took the leading part in the drama. He said Elizabeth got her first shock while walking to school.

"She stopped in fright, dropped her satchel with her books and felt her hair stand on end," the radio said. "A corpse hanging from a lamp post swung to and fro in the wind.

"On its chest was a board with the inscription: 'This will happen to all who dare to set on a schoolbench next to a white person.'

"No. It's a dummy and not a corpse . . . and the girl heaved a sigh of relief.

"They might do the same to me,' reflected Elizabeth. 'No, come what may, I'll carry on. . . ."

In another program for adult Russian listeners, Moscow said: "It is hard to believe that all this (the Little Rock troubles) is taking place in the 20th century, in a country priding itself on its civilization, in a country proclaiming the Democratic liberties for all to hear."

In Europe this side of the Iron Curtain leftwing papers pulled out all the stops in blasting Arkansas Gov. Faubus and his white supporters in Little Rock.

Wrong Again, Mr.! Violence Is Not The Answer

A very disturbed high governmental official last week during the height of racial tension, said that a local Negro editor in Little Rock, identified himself and told him that Negroes were forming and armed to march on Central hi school. The editor, according to the official in the justice department, wanted to know what the government was going to do. "I may own try to stop it," quired the Negro editor nervously, in a country priding itself on its civilization, in a country proclaiming the Democratic liberties for all to hear."

In Europe this side of the Iron Curtain leftwing papers pulled out all the stops in blasting Arkansas Gov. Faubus and his white supporters in Little Rock.

The official was relieved when he was informed that the call from the editor concerning the Negroes forming an army was similar to many other things he has encountered in the past. The government attorney quickly recalled another situation of the same editor that gave aid to Governor Faubus in his stand for violence, and discussed the whole affair.

The official was given to understand that the Negro editors violence and is to increase has been an instigator. The Negro leaders well that violence is not the answer for the solution to racial problems that's evidenced in actions and disguised acts in the south.

Press of Nation Praises Courage of Negro Pupils

White Girl Tells of Integration Experience

In an interview with Dave Emory of the Press-Telegram, 16-year-old Virginia Cook, white of Long Beach, California related experience in a mixed school and how integration works.

The blond ed-ed was the only white teenager in a 27,000-square-mile area of British West Africa.

She attended Centralski Secondary School at Makeni, Sierra Leon, where her father was temporary principal.

"The kids were super," Virginia says. "They almost adopted me as their mascot. They were friendly and generous—and they wept when I left Africa to come home."

The Cooks, who live at 2017-1-2 California Ave., are members of the United Brethren Church, which supports the African Methodist Episcopal Zion Church.

Calmness Prevails As Guards Stand by

Feeling of Security Among Negroes Catches Hold as Troops Enter City

Entering their second week at the Central hi school under the protection of federal troops are nine Negroes who were barred by Arkansas National Guard placed around the school by Arkansas's governor, Orval E. Faubus, whose determination was to defy a federal court approved integration order.

Three weeks and one day after they were barred from entering the school, President Eisenhower's orders to take the Negro children in the school were obeyed, following a day of circling when local police made efforts to carry out the school board's plans of gradual integration.

As this is written (Tuesday) things are pretty quiet, despite an inflamatory address by the chief executive Thursday nite, who expressed his resentment of the presence of troops carrying out the order of integration after he had sworn it could not be done without violence.

But despite the governor's speech, very little hostility over the Negroes' attendance at the school was evidenced. It is not known whether the governor-cuse-

ALL IS NOT WELL— — — KIDS CATCHING HELL . . .

PAGING MAJOR GENERAL EDWIN WALKER . . .

A report from the nine children Tuesday evening states that Tuesday was the roughest day they have had since entering Central hi school. Tuesday morning the Arkansas National Guards whom Governor Faubus used to bar the children from the school, replaced the 101st paratroopers, and all "hell breaks loose" while the guards watched, as they allegedly watched the mob in action a few days ago. White students took over, and molested the Negroes knocking books out of their arms, trying to trip them, pumping into them in halfways and other places, and using many words of threat. This was all done, according to the children in the presence of the federalized national guards. Even the students who had befriended the Negroes and accepted them, were faced with threats by the hoodlum type of Central hi.

sided picture of the state of affairs and his dispute in rendering order where a condition of violence having no immediate relief, it is the consensus of opinion that he has announced himself whom the whole of Arkansas can see him for just what he is For the most part, after his

see STUDENTS—page four

Backs Eisenhower On Little Rock

CHICAGO—A telegram of support was sent to President Eisenhower today by Ralph Helstein, President of the United Packinghouse Workers of America, AFL-CIO for his "forthright statement" and "firm and decisive action" to the situation at Little Rock.

The UPWA President told the White House.

Bishop W. J. Walls Lauds Ike for Action in Crisis

Bishop W. J. Walls, titular head of the AME Zion church, whose membership is reported to be one half million, acclaimed President Eisenhower's sending federal troops to Little Rock as the action that would save America's face in the eyes of a troubled world.

He likened Eisenhower to Lincoln who when he saw that he could not save a situation without taking drastic action proceeded to do it. Bishop Walls said that the President had reacted in his action after using every available means possible but definitely could not prevail mob rule to prevail in this demo-

See WALLS—page four

Mrs. Bates Commended by Naacp Board Chairman

NEW YORK—The entire nation is indebted to Mrs. L. C. Bates for her steadfast, sober, calm and courageous leadership and guidance" in the Little Rock crisis, Dr. Channing H. Tobias, chairmen of the NAACP Board of Directors, said this week in a letter to Mrs. Bates president of the Association's organization in Arkansas.

"Considering the provocation confronting you," he said, "the situation, without your leadership might well have deteriorated into disastrous conflict. Never has there been greater need than today in Little Rock for perception, and decisive leadership such as you have shown."

Mrs. Bates' work in Little Rock, he asserted, "demonstrates the need for strong NAACP state and local units. This is a challenge which our branches and state conferences throughout the country must meet. You have demonstrated what can be done. It remains for all of us in the organization, and indeed for all liberty-loving Americans to rally to your support through increased memberships and contributions to the Association which for nearly a half-century has borne the brunt of the struggle for equal rights."

Praising the courage of the Negro school children, Dr. Tobias said: "I am sure that these young people have been inspired by the fine example set by you. Your dedication exemplifies to them the role they may play in today's struggle and in the future. History will accord to them, and to you, full recognition of the role they and you have played in many impending struggle for human justice."

Arkansas Tragedy Has Far-Reaching Effects

TOKYO—Judging by newspaper and magazine articles appearing during the past two weeks, American coverage in the Far East has taken a nose-dive as a result of the violence in Little Rock.

This week's issue of Asahi Pictorial News, Japan's leading pictorial news magazine, carries a double-page spread showing scenes of attacks against Negroes in Arkansas. The caption on top of the pages reads:

News from Little Rock Brings Death

WICHITA, Kan.—T. E. "Tobe" Gravelly died here Sept. 25 shortly after arrived at a local hospital where he was rushed following a sudden heart attack. The veteran Kansas political figure was listening to news reports of the Little Rock, Ark. school integration problems when the attack occured.

Tuesday, his sister-in-law who lives in Little Rock and has a son among the nine Negro students admitted to Central high school, called Mr. Gravelly and related developments up to the present time.

Mr. Gravelly was a retired city employee and active political figure in Sedgwick county and Kansas politics for a number of years. He was former chairman of the Sedgwick County Republican central committee. A native of Batesville, Ark.

Explanation of Iconography:
The NAACP Lapel Pin

The NAACP lapel pin is an important icon for the legacy of the combined efforts of so many African American leaders. Daisy Bates proudly wears the NAACP lapel pin, and it serves as a historical reminder of her role as President of the NAACP Little Rock chapter. It also denotes the year 1957, which was the year of her effort and implementation of integration
of the Little Rock Nine at Central High School.

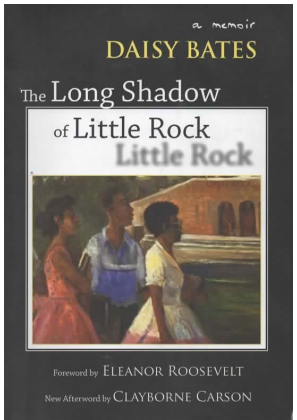
National Association for the Advancement of Colored People (**NAACP**), is an organization that was created to work for the abolition of segregation and discrimination in housing, education, employment, voting, and transportation; to oppose racism; and to ensure African Americans their constitutional rights.

The NAACP is America's oldest and largest civil rights organization, and it played a pivotal role in the civil rights movement of the 1950s and 1960s. One of the organization's key victories was the U.S. Supreme Court's 1954 decision in *Brown v. Board of Education* that outlawed segregation in public schools.

By wearing the NAACP pin, Daisy steps forward with the mantle of her legacy of leadership along with the legacies of W.E.B. Dubois, Ida B. Wells, Thurgood Marshall, and many other giants of civil rights.

Explanation of Iconography: The Single Rose Boutonnier

As shown in the photo on the right, Daisy Bates loved flowers. The specific idea of designing a single rose into the composition came from a very powerful passage in her book, “The Long Shadow of Little Rock”. In that passage, Daisy’s Father, who was perhaps the most influential person in her life, gives her advice while he is on his deathbed. He tells her not to let hate overtake her, and instead to channel the anger from injustice into positive action. After he speaks his last words and then dies, young Daisy Bates speaks to a white person for the first time in many years. The hatred is gone like poison leaving her veins, and she walks outside and reflects on the beauty of a single red rose. She states that she was “reborn” at that moment. I have included scans of the passage on the next two pages.



Explanation of Iconography:

Passage About The Single Rose From Daisy Bates' Book, "The Long Shadow of Little Rock" pp. 28-31

Daddy smiled. "Are you really that good?" he asked me.

Before I could answer, Mother snapped, "You stop that kind of talk. Can't you see what you're doing—you and your Saturday night poker games!"

Mother didn't allow me to wait for Sunday. She dragged me off that evening for Wednesday night prayer service, so I could ask God to forgive me for my sins.

The summers of the following years, for the most part, were spent on our farm in eastern Arkansas where my grandmother lived with a brown hound dog, and old gray riding horse, a temperamental milk cow, and pigs fattening for winter meat. Occasionally we would take a trip to other states, or I would be sent to visit friends or relatives of my parents.

I was in my teens. On one of my visits away from home my mother sent for me. My father had been taken to the hospital. When I arrived home, the doctor told me it was just a matter of time. Daddy was gravely ill. The bottom dropped out of my world.

One night Daddy told Mother to go home and get some sleep. "Daisy will stay with me," he assured her.

When Mother and the nurse had left, I stood looking down at his tired dark face against the white of the bed linen. I saw the wrinkles etched deep by a lifetime of struggle, and I saw a stubborn chin and proud high forehead. I started to cry, softly. He opened his eyes. "Don't cry for me, Daisy," he moaned. "I know I'm going to die, but—"

I started to protest, but his upraised hand stopped me. He knew I knew, and to deny it would make meaningless the honesty we'd always held to in our lifelong relationship with

each other. He said calmly, "I'll be better off." I knew this was so. He had cancer.

"I haven't much to leave you, Daisy, so come close and listen and remember what I have to say to you."

I drew a chair up close and placed my hand in his.

"You're filled with hatred. Hate can destroy you, Daisy. Don't hate white people just because they're white. If you hate, make it count for something. Hate the humiliations we are living under in the South. Hate the discrimination that eats away at the soul of every black man and woman. Hate the insults hurled at us by white scum—and then try to do something about it, or your hate won't spell a thing."

"I'm listening to every word you say, Daddy, and I'll try to do what you say. But rest—you must rest now."

He closed his eyes and shook his head impatiently. "I'll decide when I need rest."

How I loved this strong man who all his life had not been able to use his strength in the way he wanted to. He was forced to suppress it and hold himself back, bow to the white yoke or be cut down. And now that his life was ebbing, he was trying to draw on that reservoir of unused strength to give me a lasting inheritance.

"Daisy," he resumed, "nothing's going to change all of a sudden, and any Negro speaking out alone will suffer. But more and more will join him, and the blacks, acting together will one day . . ."

His voice grew faint. I held my breath. Starting afresh, he continued haltingly, "I remember the day of your mother's funeral. I went to the post office for the mail. I had on my best dark suit. When I came out of the post office, there were three young white hoodlums standing on the steps. One of them said, 'Look at that dressed-up ape! You live here, boy?'

Explanation of Iconography:

Passage About The Single Rose From Daisy Bates' Book, "The Long Shadow of Little Rock" pp. 28-31

When I didn't answer, two of them blocked my path and the other one said, 'I know what's wrong, he needs something red on!' He picked up a brush from a paint bucket. It was left there by painters who'd been painting the brick foundation around the buildings. He painted a red streak down the back of my coat. Then they walked away, laughing. I stood there with murder in my heart. I could've crushed the life out of him with my bare hands. But I knew if I touched one hair on his head I could be lynched.

"On my way home I met one of the deputy sheriffs. I showed him my coat and told him what had happened. He laughed and said, 'Don't get so upset about a little thing like that. They were just having a little fun. Turpentine will take the paint out of your coat.' "

Daddy stopped talking and closed his eyes. I just sat there, constantly patting his hard knuckles, hoping he would speak again. He did. This time his voice, still distinct, was softer than before but more labored.

"Sometimes," he said, "you know later when you should have died. I ought to have died the day they put the paint on my coat. I should have taken those guys and wrung their necks like chickens. But I wanted to live—for what, I sometimes wonder."

I stopped patting the back of his hand, and he drifted off into a sleep. Looking at him, I sensed he would never awaken. It was now nearly daybreak. When the Catholic Sister came into the room, I greeted her warmly. It was the first time in several years that I had spoken to a white person in a pleasant voice.

I walked out into the silent streets. The grass, heavy with dew, caught the sun's early rays. In most of the yards flowers still bloomed, and in many, red roses. I thought of another

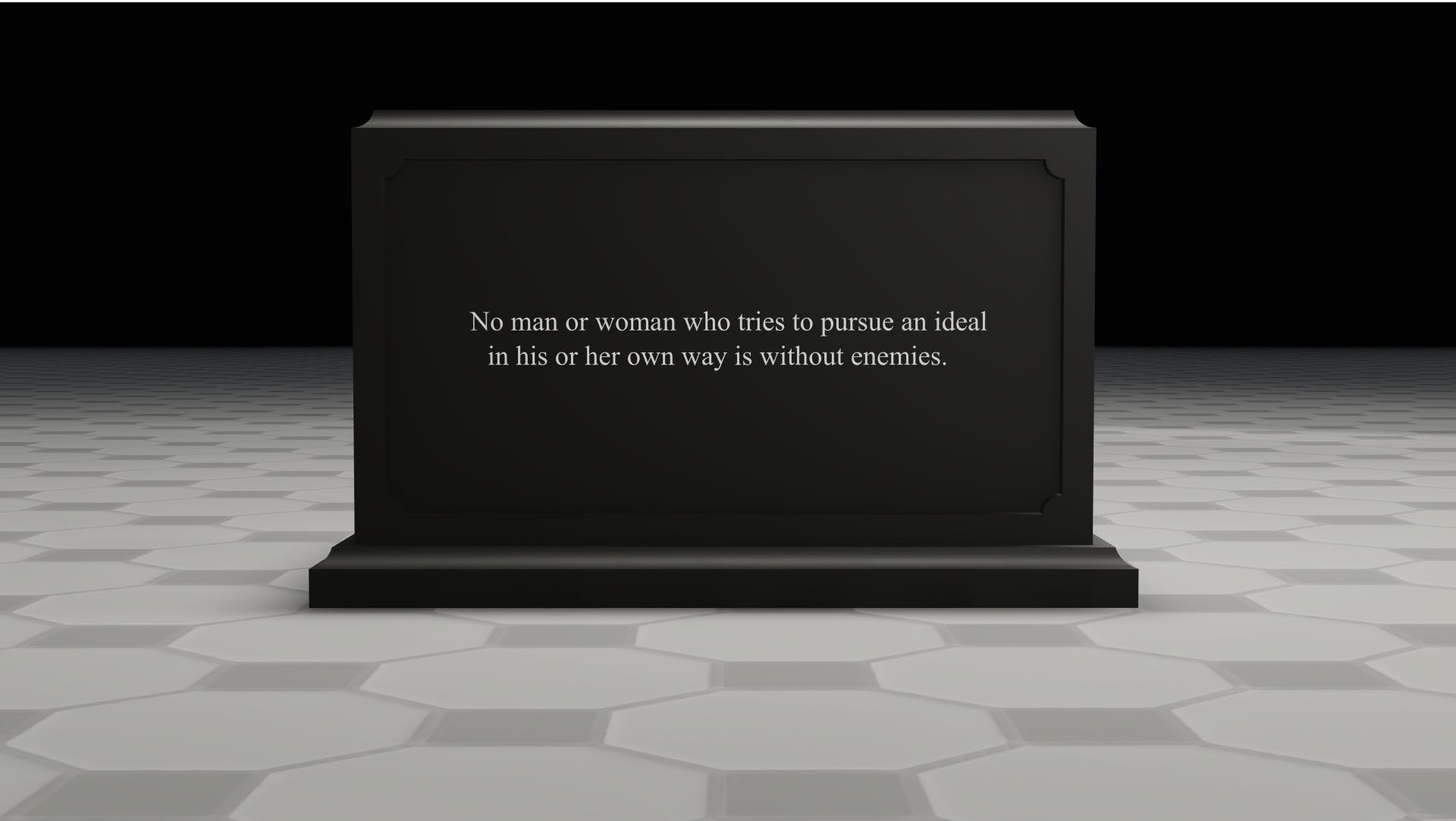
such morning years ago, and of the red rose I couldn't bear to pick. I knew like that rose which clung to its branch in a last, flaming farewell, my father would die before the end of the day. I did not cry now for I realized that he was at peace with himself for the first time in years.

As I walked along the street taking in the freshness of the early morning air, I knew that as surely as my father was dying, I was undergoing a rebirth. My father had passed on to me a priceless heritage—one that was to sustain me throughout the years to come.

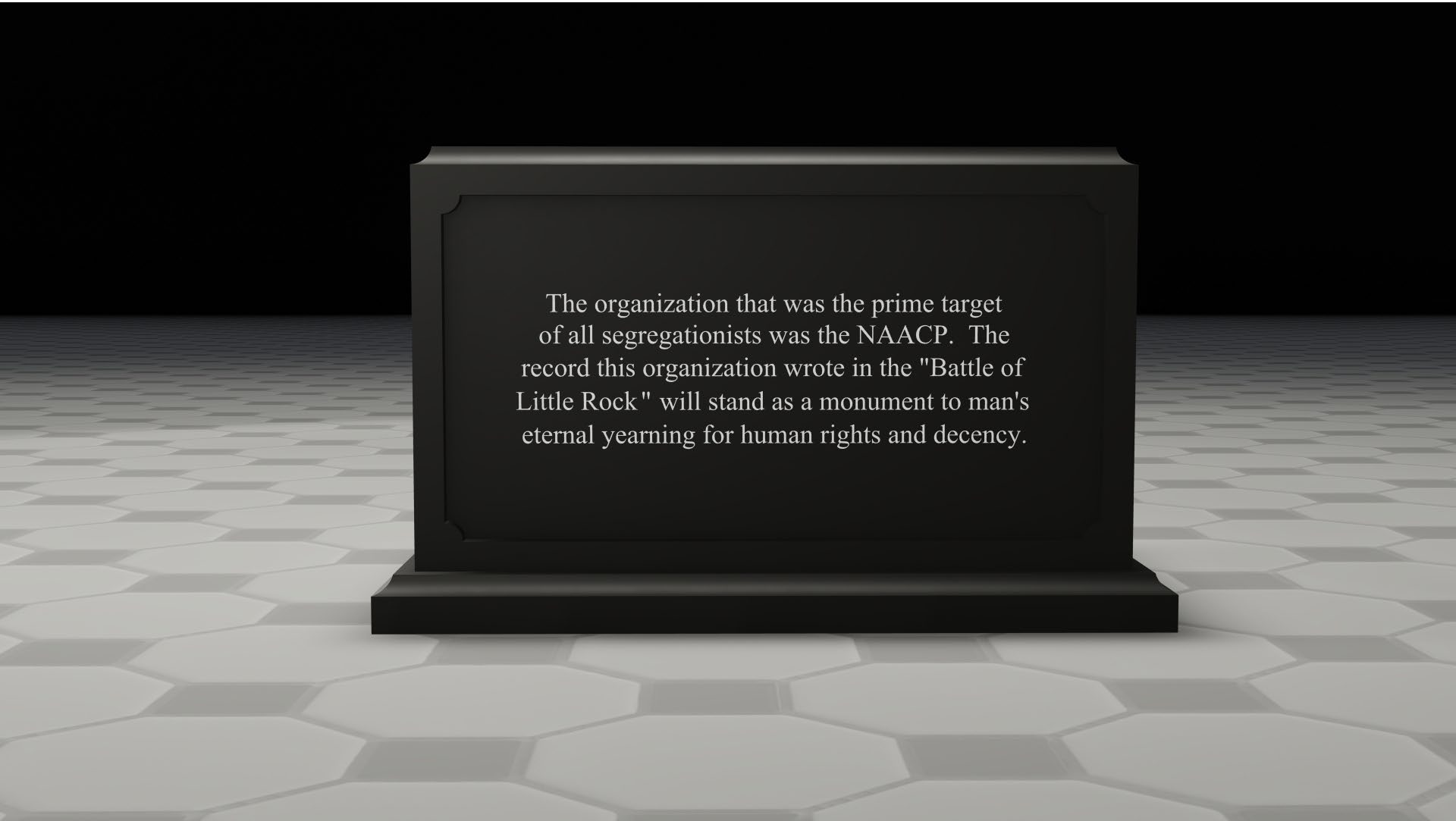
Base elevations:

Front

Base elevations:
Viewer Left (Proper Right)



Base elevations:
Viewer Right (Proper Left)



Base elevations:

¾ Viewer Left (3/4 Proper Right)

Base elevations:

¾ Viewer Right (3/4 Proper Left)

Engineering & Technical Services Inc.

Duane Boice P.E.
President

"ARKANSAS" STATUE BASE
U.S. CAPITOL BUILDING
WASHINGTON, D.C.

FOR

Benjamin Victor Studios
10619 W. Victory Rd.
Boise, ID 83709

By
Engineering & Technical Services, Inc.
1101 N Heritage Parkway
Tea, SD 57064

Date of Issue: July 29, 2022

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Engineering & Technical Services Inc.

Duane Boice P.E.
President

TABLE OF CONTENTS

Arkansas Statue Base

I) General Notes

1) Stone is black granite provided by Grassland Granite from Aberdeen, SD.

2) All panel edges are precision milled as shown on shop drawings.

3) Precision milled edges are joined with Bonstone Clear Gel Epoxy.

4) All welding to meet AWS standards

5) Leveling to be done with acrylic shims.

6) ¼"Ø Stainless steel bolts to secure removable back panel.

7) ½"Ø stainless steel bolts to be capped and shall have a head that requires a special tool to remove.

II) Technical data sheets for Bonstone Clear Gel Epoxy. (2 pages)

III) Technical data sheets for Bonstone Match Hardener B-431. (2 pages)

IV) Shop drawings for stone base elements/metal support. (3 pages)

V) Assembled Drawings from Benjamin Victor Studio. (2 pages)

VI) Weights of base assembly components, sculpture, and total weight. Stability calculations and final conclusion. (2 page)

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II) TECHNICAL DATA SHEETS FOR BONSTONE CLEAR GEL EPOXY

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www.engtecsrv.com

Bonstone Materials Corporation
800-425-2214 / www.bonstone.com

TECHNICAL DATA SHEET

FILE UNDER DIVISION 4

1. PRODUCT NAME

BONSTONE™ CLEAR GEL EPOXY

2. MANUFACTURER

Bonstone Materials Corporation

3. PRODUCT DESCRIPTION

A two-component, exterior grade, clear epoxy adhesive. Two hour set, gel viscosity.

Basic Uses:

- Stone patching, mending, repairing and bonding
- Anchor bolt adhesive
- Bonding stone to other construction materials
- Laminating; bullnoses & aprons

Limitations:

Use on dry stone. Use on oil, grease, and coating free stone. Some yellowing and chalking will occur when exposed to ultra-violet light.

Color:

Clear product- Use Touchstone tints for tinting

4.TECHNICAL DATA:

(see next page)

5. INSTALLATION

General Instructions

If using cartridges, additional usage directions are available. See our information sheet labeled "Cartridge use directions". See separate doweling,- laminating, and patching instructions for more specific instructions. CSI format specifications are available.

Surface Preparation & Use:

Use gloves, wear eye protection, and avoid skin contact. When grinding cured joints, wear a dust mask. Substrate to be bonded must be completely dry and dust free. Mix only the amount of epoxy which can be used in 10 minutes. Avoid stressing joint before complete cure of epoxy. Mask areas which must be kept free of epoxy. Clean tools with uncured epoxy using toluene or xylene. Use caution, these solvents are flammable and ensure local ventilation. Remove cured epoxy mechanically.

Mixing instructions:

All materials should be at or above 55°F. Combine the two ingredients at the following volume ratio: Two parts of **A** to one part **B**.

Temperature dependency:

Temperature will affect the working properties of the material. Every 15°F results in doubling the speed of cure. Therefore, at 90°F set time is cut in half, at 60°F the set time is doubled. Do not use on substrate at a temperature below 55°F.

Coverage: Approximately 30 square feet per gallon when applied at 50 mils (1/16th of an inch). 231 cubic inches per gallon.

6. AVAILABILITY

Packaging and storage:

Bonstone Clear Gel is available in quarts, gallons, 5 gallon pails and cartridges. Thickening powders are available for increasing viscosity.

** If **Part A** is exposed to below room temperature conditions for extended periods of time, it may crystallize, giving it a stiff, grainy consistency. The product must be reconstituted before use by heating it to 150°F degrees. Stir until it becomes a homogeneous liquid.

7. WARRANTY

This product's warranty is limited to replacement of defective material and freight charges to destination only. Bonstone Materials Corp. is not responsible for consequential damages.

8. MAINTENANCE

Designed for application in areas inaccessible to maintenance procedures

9. TECHNICAL SERVICE

Specification Service

- specs for various applications
- spec writing dept. for unique applications

4. TECHNICAL DATA BONSTONE™ CLEAR GEL

Mixed Properties	*Values*	*Test Methods*
Mix Ratio:	**2 parts A to 1 part B by volume**	
Pot Life at 75°F:	**15 minutes**	

Cured Properties

Initial set time at 75°F:	**2 hours**	
Full cure time at 75°F:	**within 24 hours**	
STRENGTHS:		days cured
Tensile:	**2,044 psi**	**ASTM D-638 7 days**
Compressive:	**8,182 psi**	**ASTM D-695 7 days**
Flexural:	**9.896 psi**	**ASTM D-790 7 days**
MODULUS		
Tensile:	**458,763 psi**	**ASTM D-638 7 days**
Compressive:	**106,191 psi**	**ASTM D-695 7 days**
Flexural:	**536,751 psi**	**ASTM D-790 7 days**
Tensile Elongation at break:	**1.16%**	**ASTM D-638 7 days**

Engineering & Technical Services Inc.

Duane Boice P.E.
President

III) TECHNICAL DATA SHEETS FOR BONSTONE HARDENER B-431

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www.engtecsrv.com

Bonstone Materials Corporation
800-425-2214 / www.bonstone.com

TECHNICAL DATA SHEET

FILE UNDER DIVISION 4

1. PRODUCT NAME

BONSTONE ™ MATCH
(hardener B-431)

2. MANUFACTURER

Bonstone Materials Corporation

3. PRODUCT DESCRIPTION

A two-component exterior grade epoxy adhesive. Thick paste viscosity. Thickening powders available to make this product knifegrade.

(MATCH Family Includes
A-101-T, A-111-T, A-121-T,
A-131-T,A-181-T, A-191-T)

Basic Uses:

- Patching and mending stone
- Laminating stone to other construction materials
- Bonding stone to stone
- Anchoring bolts in stone and concrete

Limitations:

Use on dry stone. Use on oil, grease, and coating free stone. Some yellowing and chalking will occur when exposed to ultra-violet light.

Colors:

Cream, rust, buff(tan), gray, red, white. Custom colors available.

Applicable Standards:

Indiana Limestone Institute specifications for units preassembled with thermosetting resins

4.TECHNICAL DATA:

(see second page)

5. INSTALLATION

General Instructions

(See separate doweling, laminating, and patching instructions for more specific instructions. CSI format specifications are available.)

Surface Preparation & Use:

Use gloves, wear eye protection, and avoid skin contact. When grinding cured joints, wear a dust mask. Substrate to be bonded must be completely dry and dust-free. Mix only the amount of epoxy which can be used in 10 minutes. Avoid stressing joint before complete cure of epoxy. Mask areas which must be kept free of epoxy. Clean uncured epoxy from tools with toluene or xylene. Use caution, these solvents are flammable. Ensure local ventilation. Remove cured epoxy mechanically.

Mixing instructions:

All materials should be at or above 50°F. Combine the two ingredients at the following weight ratio: two parts MATCH part a to one part B-431. Mix thoroughly--- ingredients must be blended homogeneously for proper cure. Best to mix using double mix method, see reverse side.

Temperature dependency:

Temperature will affect the working properties of the material. Approximately every 15°F results in doubling the speed of cure. Therefore, at 95°F set time is cut in half, at 60°F the set time is doubled. Do not use on a substrate with a temperature below 45°F.

Coverage: Approximately 30 square feet per gallon when applied at 50 mils (1/16th of an inch). 231 cubic inches per gallon.

6. AVAILABILITY

Packaging and storage:

MATCH is available in quarts, gallons, and 5 gallon pails. Shelf life is approximately one year if kept in unopened cans in a dry area at 75°F. **If BONSTONE™ MATCH family is exposed to below room temperature conditions for extended periods of time, it may crystallize, giving it a stiff, grainy consistency. The product must be reconstituted before use by heating it to 150°F. Stir until it becomes a homogeneous liquid.

7. WARRANTY

This product's warranty is limited to replacement of defective material and freight charges to destination only. Bonstone Materials Corp. is not responsible for consequential damages.

8. MAINTENANCE

Designed for application in areas inaccessible to maintenance procedures.

9. TECHNICAL SERVICE

Lab Service

- Spectrophotometric color maching
- Techniques for textured replication of stone.

Specification Service

- Specifications for various applications
- Specification writing dept. for unique applications

4. TECHNICAL DATA BONSTONE ™ MATCH with B-431 hardener

Mixed Properties	*Values*	*Test Methods*
Mix Ratio:	2 parts A to 1 part B-431 by weight	
Mixed viscosity at 75°F:	Creamy paste	
Pot Life at 75°F:	20 minutes	
Cured Properties		
Initial set time at 75°F:	2 hours	
Full cure time at 75°F:	within 24 hours	
STRENGTHS		
Tensile:	3,822 psi	ASTM D-638
Compressive:	26,498 psi	ASTM D-695
Flexural:	8,297 psi	ASTM D-790
MODULUS		
Tensile:	48,050 psi	ASTM D-638
Compressive:	163,976 psi	ASTM D-695
Flexural:	420,250 psi	ASTM D-790
ELONGATION		
Tensile: Elongation at break	8.3%	ASTM D-638
Shore D Hardness:	90	ASTM D-1706
Heat Distortion Temperature:	130°F	ASTM D-648
Water Absorption	0.06%	ASTM D-570

DOUBLE MIX METHOD:

The double mix method is used to completely and uniformly mix an epoxy product. The two components are mixed in one container, transferred to another, and remixed. This allows the contractor to scrape the final mixing container extremely clean without the possibility of using unmixed product.

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President

IV) SHOP DRAWINGS FOR STONE BASE ELEMNTS/METAL SUPPORT

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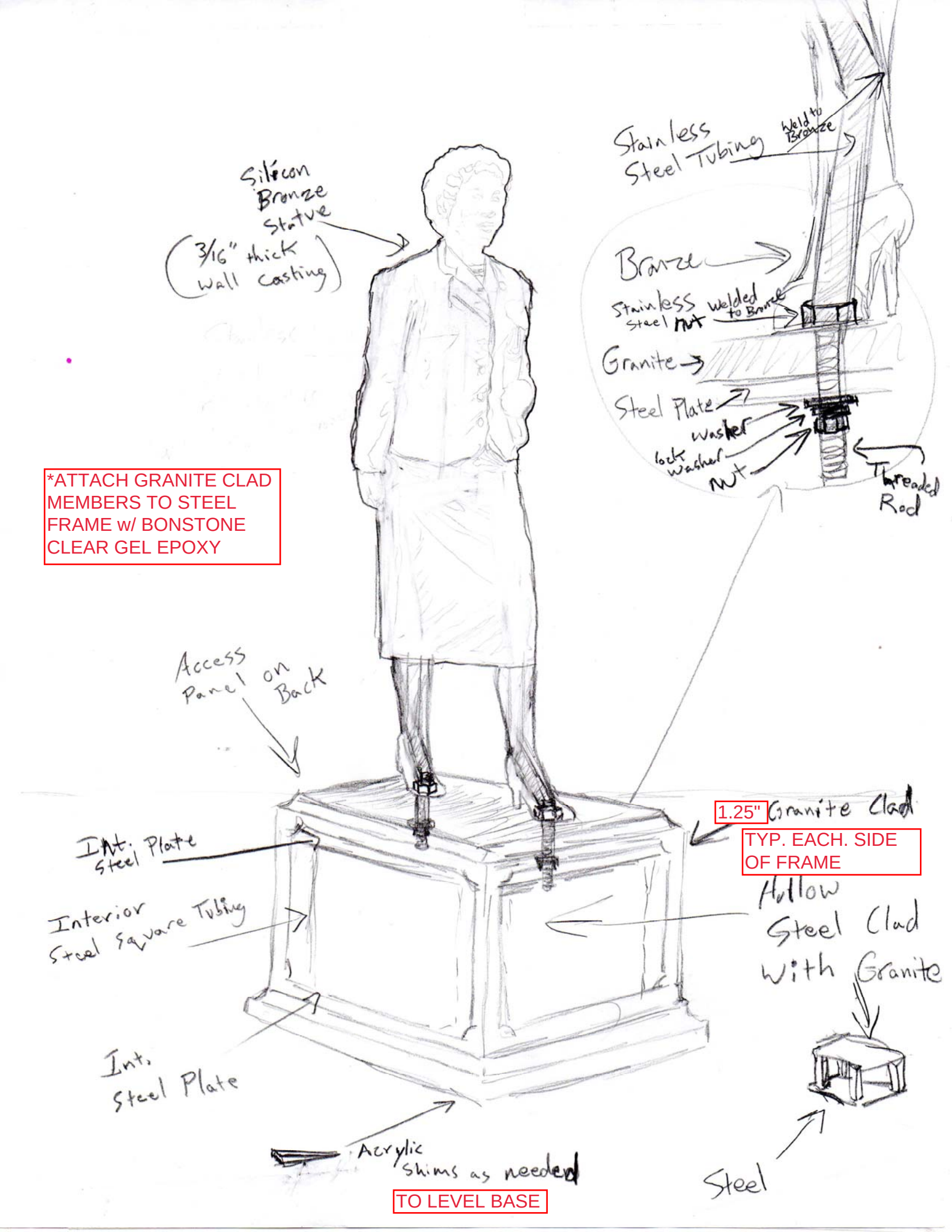
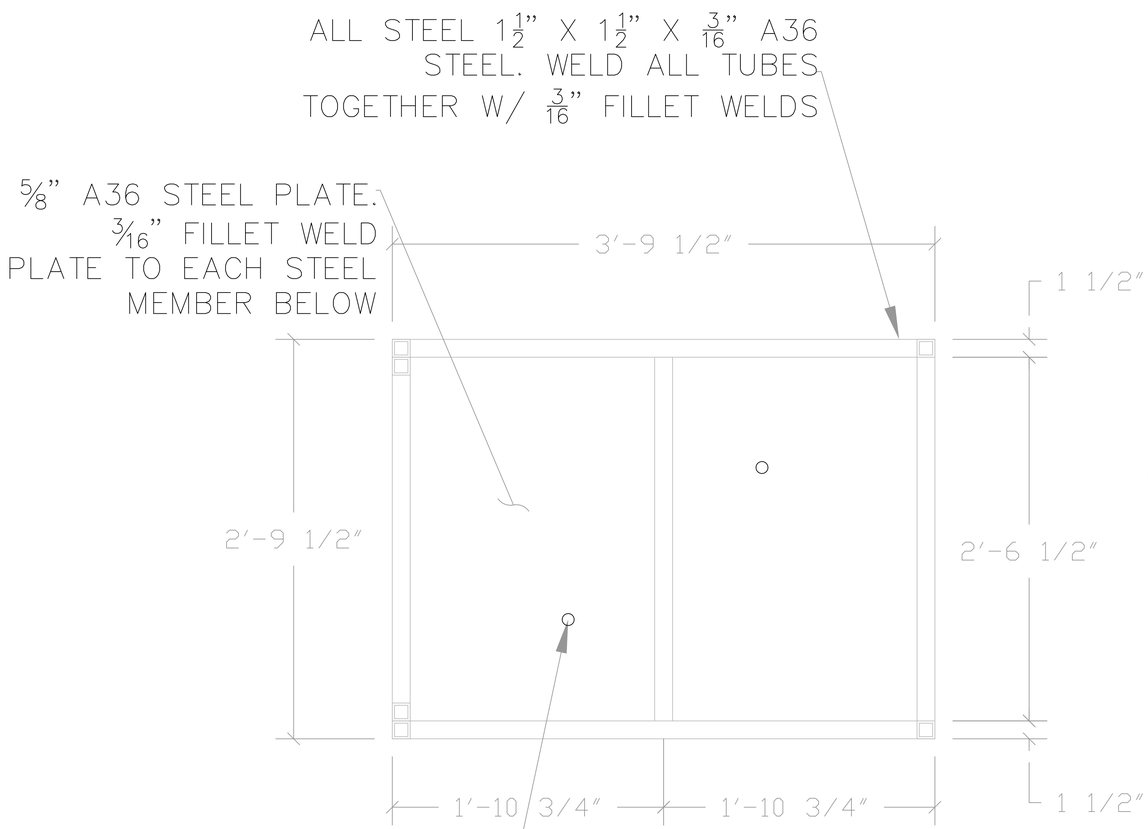
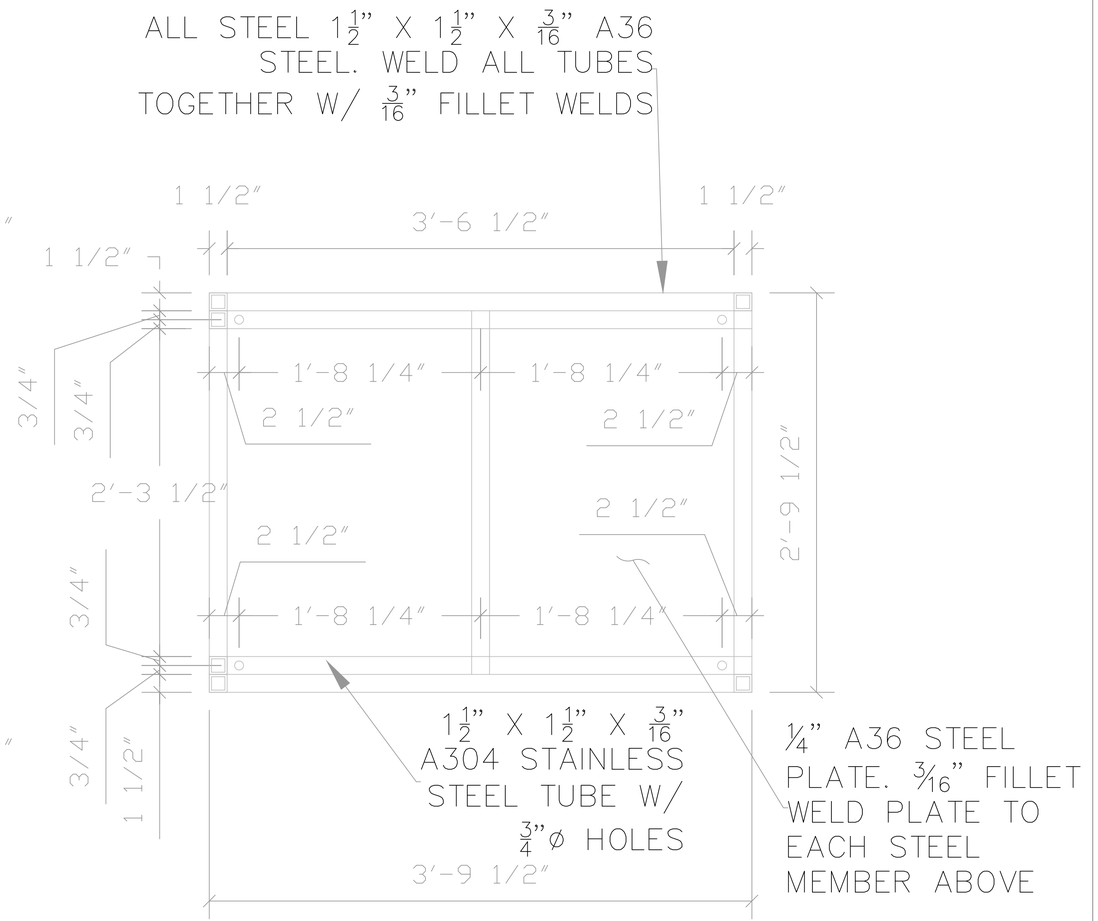

Silicon Bronze Statue
(3/16" thick wall casting)
Stainless Steel Tubing
Weld to Bronze
Bronze
Stainless Steel nut
welded to Bronze
Granite
Steel Plate
Washer
lock washer
nut
Threaded Rod
*ATTACH GRANITE CLAD MEMBERS TO STEEL FRAME w/ BONSTONE CLEAR GEL EPOXY
Access Panel on Back
Int. Steel Plate
Interior Steel Square Tubing
1.25" Granite Clad
TYP. EACH. SIDE OF FRAME
Hollow Steel Clad with Granite
Int. Steel Plate
Acrylic shims as needed
TO LEVEL BASE
Steel



TOP VIEW



BOTTOM VIEW

PROJECT: BENJAMIN VICTORY STUDIOS - DAISY BATES STRUCTURE

LOCATION: U.S. CAPITOL BUILDING

SHEET TITLE: STATUE METAL FRAME BASE

SCALE: NOT TO SCALE

ENGINEERING & TECHNICAL SERVICES, INC.
STRUCTURAL ENGINEERING & DESIGN
27121 469th Ave
TEA, SD 57064-8100
(605) 498-2798 OFFICE
(605) 498-1299 FAX

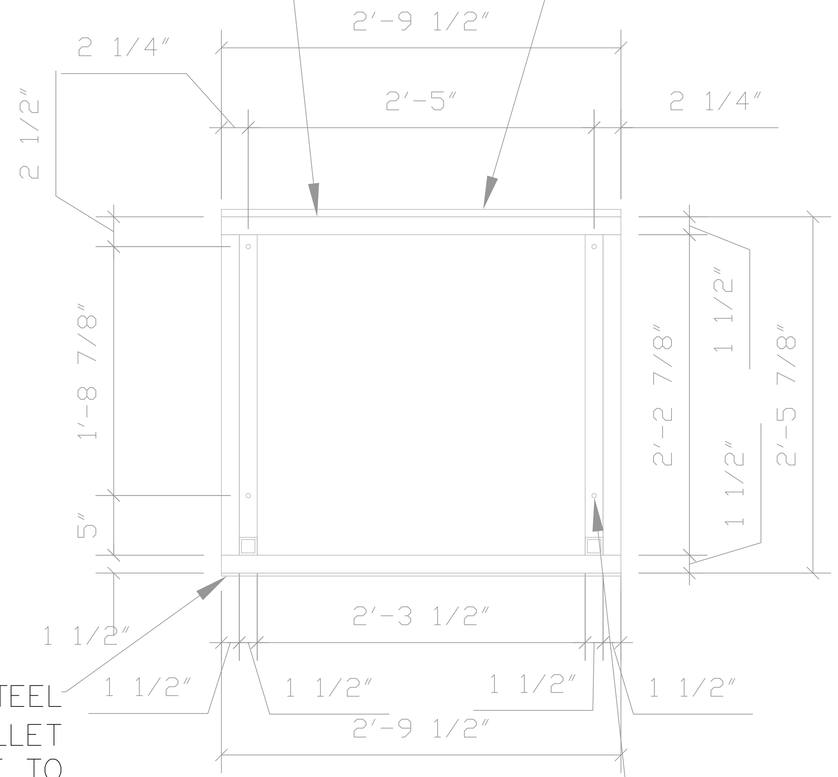
DATE: 22JUL29
DWN BY: JLE
DESIGN BY: JLE
CHK. BY: D.D.B.
REV:

SHEET NO.:

S-1

ALL STEEL $1\frac{1}{2}$" X $1\frac{1}{2}$" X $\frac{3}{16}$" A36 STEEL. WELD ALL TUBES TOGETHER W/ $\frac{3}{16}$" FILLET WELDS

$\frac{5}{8}$" A36 STEEL PLATE TO FIT FLUSH AT TOP OF FRAME. WELD PLATE TO TOP STEEL MEMBERS W/ $\frac{3}{16}$" FILLET WELD



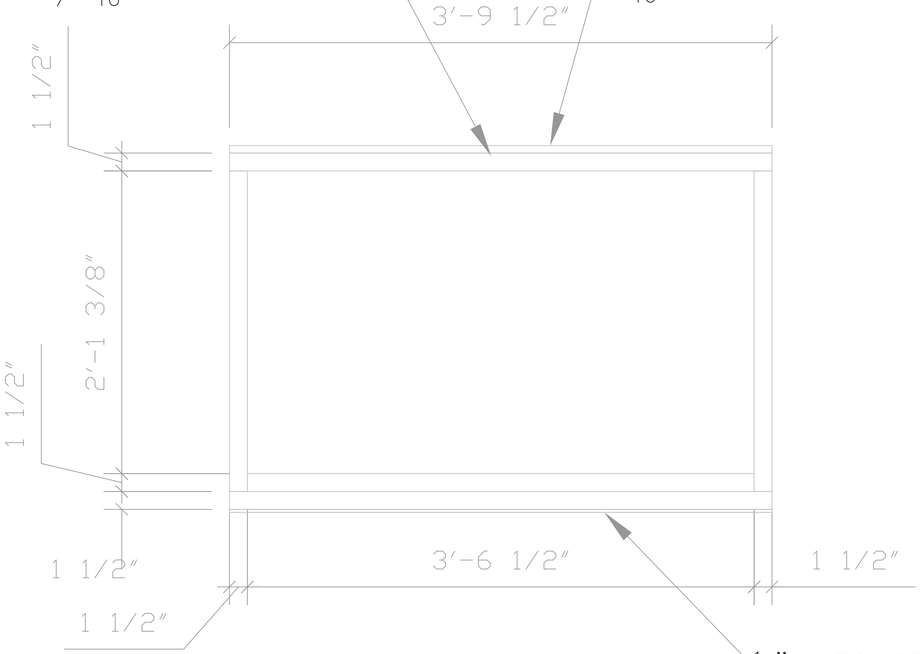
FRONT/REAR VIEW

$\frac{1}{4}$" A36 STEEL PLATE. $\frac{3}{16}$" FILLET WELD PLATE TO EACH STEEL MEMBER ABOVE

ADDITIONAL VERTICAL WEBS @ REAR PANEL ONLY W/ $\frac{3}{8}$"ø HOLES FOR $\frac{1}{4}$" THRU BOLTS W/ $\frac{1}{4}$" NUT WELDED TO INTERIOR EDGE

ALL STEEL $1\frac{1}{2}$" X $1\frac{1}{2}$" X $\frac{3}{16}$" A36 STEEL. WELD ALL TUBES TOGETHER W/ $\frac{3}{16}$" FILLET WELDS

$\frac{5}{8}$" A36 STEEL PLATE TO FIT FLUSH AT TOP OF FRAME. WELD PLATE TO TOP STEEL MEMBERS w/ $\frac{3}{16}$" FILLET WELD



LEFT/RIGHT VIEW

$\frac{1}{4}$" A36 STEEL PLATE. $\frac{3}{16}$" FILLET WELD PLATE TO EACH STEEL MEMBER ABOVE

PROJECT: BENJAMIN VICTORY STUDIOS - DAISY BATES STRUCTURE

LOCATION: U.S. CAPITOL BUILDING

SHEET TITLE: STATUE METAL FRAME BASE

SCALE: NOT TO SCALE

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DATE: 22JUL29
DWN BY: JLE
DESIGN BY: JLE
CHK. BY: D.D.B.
REV:

SHEET NO.:

S-2

Engineering & Technical Services Inc.

Duane Boice P.E.
President

V) ASSEMBLED DRAWINGS FROM BENJAMIN VICTOR STUDIOS

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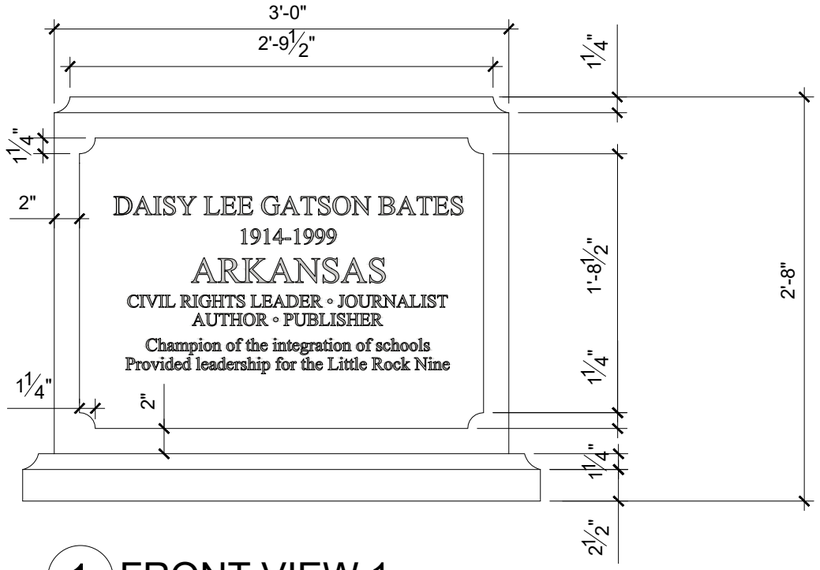
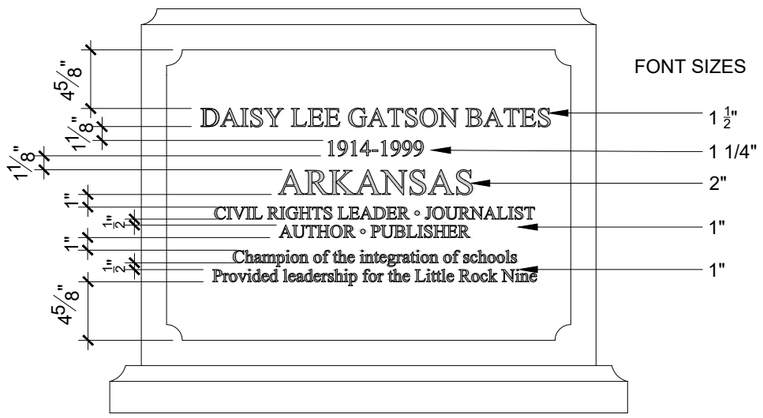
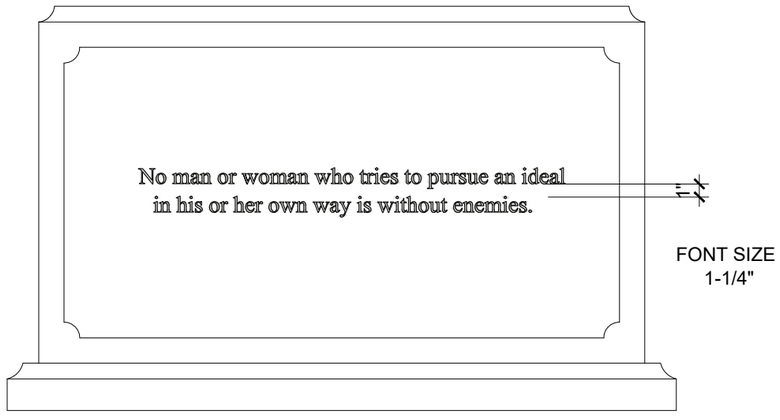


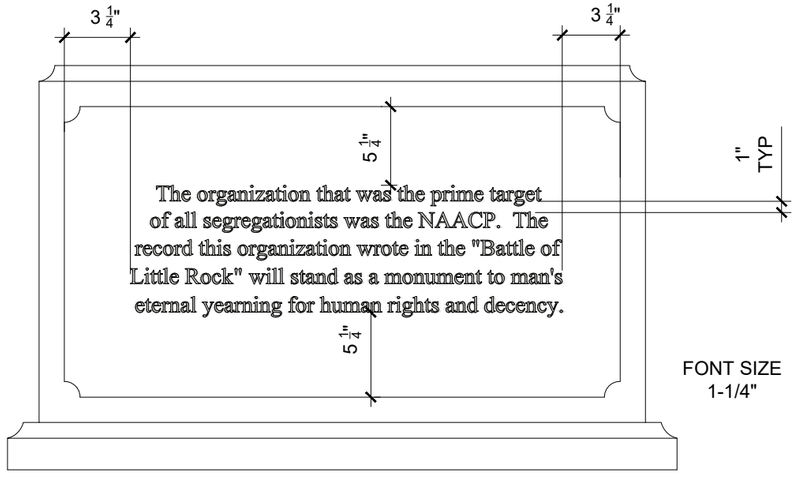
1 FRONT VIEW 1



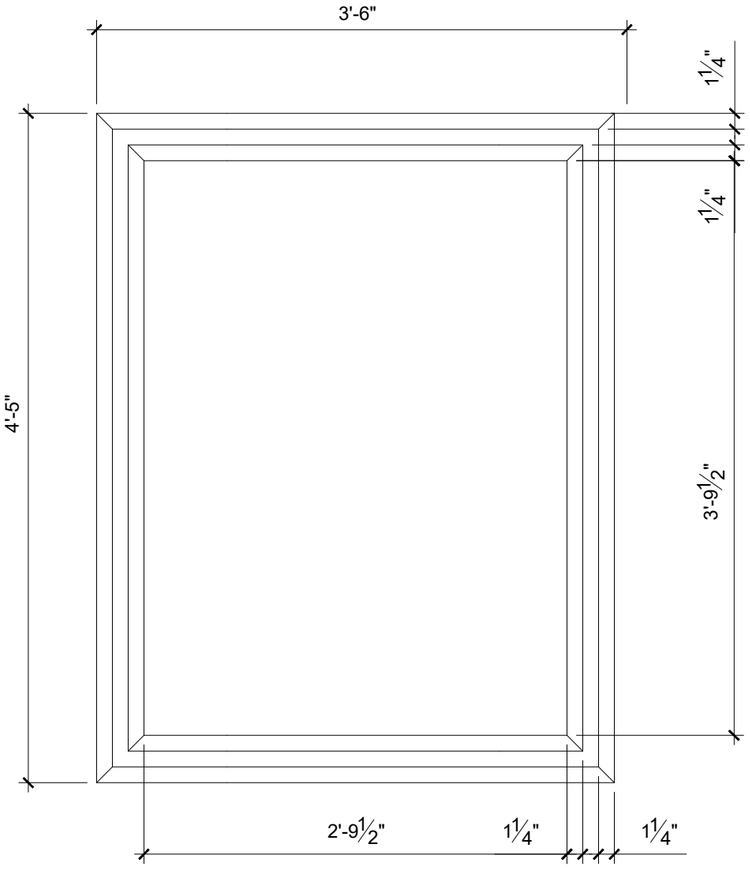
2 FRONT VIEW 2



3 LEFT VIEW



4 RIGHT VIEW



5 PLAN VIEW

DAISY BATES STATUE

SCALE 1" = 1'

BENJAMIN VICTOR

July 28th, 2022

LAYOUT & MEASUREMENTS

1.0

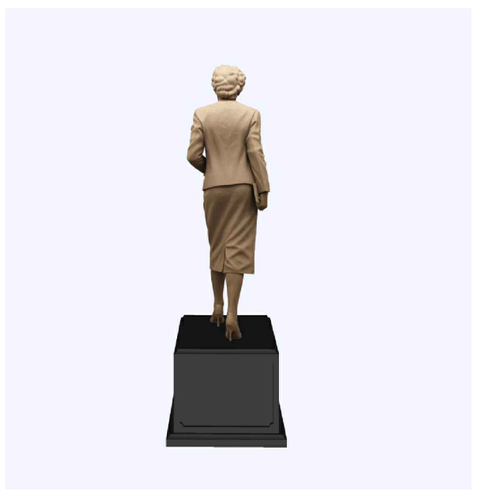
6 FRONT PERSPECTIVE

7 LEFT PERSPECTIVE

8 LEFT VIEW

9 RIGHT PERSPECTIVE

10 RIGHT VIEW



11 REAR PERSPECTIVE

DAISY BATES STATUE

BENJAMIN VICTOR

July 28th, 2022

PERSPECTIVES

2.0

Engineering & Technical Services Inc.

Duane Boice P.E.
President

VI) WEIGHTS OF BASE ASSEMBLY COMPONENTS, SCULPTURE, AND TOTAL WEIGHT. STABILITY CALCULATIONS AND FINAL CONCLUSION

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Engineering & Technical Services, Inc.
27121 469th Ave / PO Box 308
Tea, SD 57064-8100
Phone:(605) 498-1290 Fax:(605) 498-1299

Client:	**Benjamin Victor Studio's**	Job #:	-
Job Name:	**Arkansas Statue Base**	Date:	7/31/2022
Location:	**U.S. Capitol Bld, Washington, D.C.**	Designed by:	**JLE**

Design Weights

Absolute Black Granite:	212	PCF
Statue Weight:	800	#
Top Slab Weight:	216	# (2'-8" x 3'-8" x 1.25")
Front/Rear Slab Weight:	169	#/Side (2'-1" x 3'-8" x 1.25")
Left/Right Slab Weight:	123	#/Side (2'-1" x 2'-8" x 1.25")
Front/Rear Flare Weight:	0	#/Side (3" x 4'-6" x2")
Left/Right Slab Weight:	0	#/Side (3" x 3'-6" x 2")
Total Stone Weight:	799	#
1.5"x1.5"x3/16" Weight:	3.382	plf
2"x2"x3/16" Weight:	4.67	plf
Density of Steel Plate:	0.2836	pci
1.5"x1.5" Steel Total Length:	31.2	ft
2"x2" Steel Total Length:	0.0	ft
Top Steel Plate:	880.0	(2'-8"x3'-8"x5/8")
Bottom Steel Plates:	352.0	#/Side (2'-1" x 3'-8" x .25")
Total Steel Weight:	455	#
Total Dead Load:	2054	#

Base Width @ Floor = 3'-0"

$$\text{Overturning Resistance } (M_R) = 2054\#x\frac{3'}{2} = 3{,}081 \text{ ft\#}$$

Lateral Load Required to overturn the statue: $F = \frac{3{,}081 \text{ft\#}}{X}$

1) X = 3'-0" Above Floor = 1,027#

2) X = 4'-0" Above Floor = 770#

3) X = 5'-0" Above Floor = 616#

4) X = 6'-0" Above Floor = 514# (AVERAGE FORCE FOR AN ADULT MALE IS 107#)

Conclusions:

It is my professional opinion that this sculpture and base is stable. Lateral force required to tip the structure likely exceeds the static friction resistnace which would result in sliding.

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Client:	**Benjamin Victor Studio's**	Job #:	-
Job Name:	**Arkansas Statue Base**	Date:	7/31/2022
Location:	**U.S. Capitol Bld, Washington, D.C.**	Designed by:	**JLE**

Check Bolt Connection

$$\text{Overturning Resistance } (M_R) = 2054\#x\frac{3'}{2} = 3{,}081 \text{ ft\#}$$

Length between Bolt Connection:	1	FT	(min)
Dia. Of Bolt:	0.75	in	
Bolt Tension Force:	11.929	kips	
Moment Resisted by Bolt Connection:	11929	ft#	

Check Moment Applied to Plate

Width of Plate =	32	**in**	
Depth of Plate=	0.625	in	
Length of Plate=	44	in	
Zx=	4.296875	in^3	
Sx=	2.864583333	in^3	
Fy =	36	ksi	
Max. Moment Resisted by Plate=	7718.937126	ft#	Therefore okay
Pa =	799	#	
M(applied due to axial) =	732.1281161	ft#	THEREFORE okay

Conclusions:

It is my professional opinion that this sculpture and base is stable. Lateral force required to exceed moment resisted in plate is higher than force required to slide or overturn structure.