



CULTURAL ARTS COMMISSION MEETING DECEMBER 15, 2021

ALPHARETTA CITY HALL
COUNCIL CHAMBERS
2 PARK PLAZA
12:00 PM

- I. CALL TO ORDER**
- II. ROLL CALL**
- III. ITEMS FROM STAFF**
- IV. APPROVAL OF MEETING MINUTES**
 - a. October 26, 2021 Meeting Summary
- V. PUBLIC COMMENT**
- VI. UNFINISHED BUSINESS**
- VII. NEW BUSINESS**
 - a. TPA GROUP SCULPTURES
 - b. NIKE Avalon Storefront
- VIII. ITEMS FROM COMMISSION MEMBERS**
- IX. ADJOURNMENT**



CULTURAL ARTS COMMISSION MEETING OCTOBER 26, 2021

ALPHARETTA CITY HALL
COUNCIL CHAMBERS
2 PARK PLAZA
6:00 PM

This summary is provided as a convenience and service to the public, media, and staff. It is not the intent to record proceedings verbatim. Any reproduction of this summary must include this notice. Public comments are noted as heard by the Commission, but not quoted or paraphrased. This document includes limited presentation by the Commission and invited speakers in summary form. This is not an official record of the Alpharetta Cultural Arts Commission Meeting proceedings. Official Minutes are recorded and available for review

I. CALL TO ORDER

II. ROLL CALL

a. Commission Members

- Dianna Smeal (Chair)
- Gene Andrews (Vice Chair)
- Michael Barsky
- Mary Beth Cornelius
- Sabine Genet
- Matthew Khodayari (Absent)
- Kendrick McLaughlin
- Melody Cookson (Alternate)

b. Staff

- Morgan Rodgers, Director of ARPS
- Kim Zane, Cultural Services Manager
- Elle Taylor, Administrative Office Coordinator

III. APPROVAL OF MEETING MINUTES

a. August 24 Meeting Summary

- ❖ Commissioner Cornelius offered a motion to approve.
 - Commissioner Cookson seconded the motion.
 - The motion was approved (6-0)

IV. NEW BUSINESS

a. Mural for Studio Movie Grill 7730 North Point Parkway Mansell Crossing

The Applicant presented proposed Mural.

- Color Rendering of Mural by George Baker
- Heavy Orange or Heavy Pink
- Rear Corner Elevation
- Backs up to Greenway
- Exclusive to Alpharetta
- No Lighting Planned
- Greenway Access
- Maintenance Plan

There was discussion on Heavy Pink option.

- ❖ Commissioner Barsky offered a motion to accept the Mural with the darker pink.
 - Commissioner Cookson seconded the motion.
 - The motion was approved (6-0)

V. OLD BUSINESS

a. Update on Aria Mural

There was no discussion on this item

VI. ITEMS FROM STAFF

a. Cultural Arts Commission Report October 2021

Kim Zane, Manager of Cultural Services presented:

Upcoming Cultural Happenings

- *Slice of Life Exhibit* – Alpharetta Arts Center Gallery – Exhibit Opens Oct 20 / Reception on Saturday Oct 23 at 6pm
- *New Georgia Woman Project: Black Women Speak* with Horizon Theatre Company – Fri-Sun, October 28, 29, 30 (Times – TBD)

Arts

- Last weekend of “Artober” Brochure - list of events celebrating National Arts & Humanities Month in Alpharetta
- *Milton High School 100th Anniversary Student Art Show* – City Hall Community Gallery Exhibit
- *Family Day at the Arts Center* – October 9
- *The Promise of Tomorrows* by Metropolitan Ballet – Alpharetta Arts Center Outdoor Terrace Oct 2
- Winter Guide for Cultural Arts Center

Public Art

- Public Art Guidelines Committee Update
- A-Sculpture Update
- New Outdoor Sculpture Exhibit Planning Begins Soon

Music & Performances

- *Shakespeare in the Park / The Tempest* – Wills Park Grand Pavilion Fri & Sat, October 15 & 16 and & 22 & 23 at 7:30pm
- Busking Guidelines Committee Update
- *Music Match Live Shows* through December (see attached line-up)

- Starting a partnership for an *Alpharetta Music Club 2nd Sunday of each month in the Arts Center Black Box* – Come listen to gifted artists & experience world-class classical music in an intimate setting. \$20 with all proceeds to the artists.

History

- *FFA Log Cabin Grand Opening* with Alpharetta Old Milton County Historical Society– Milton Avenue Park on October 16

General

- Black History & Celebration Discussions for 2022
- Marketing
 - New Cultural Services Website
 - Mid-Year Budget Requests Due
 - Ben Hollingsworth Proclamation – Nov 1 Council Meeting 6:30 p.m.

b. COMMUNITY REPORT

Arts Alpharetta - Nancy Murphy, President presented:

- History of organization
- Projects
- Funding

VII. PUBLIC COMMENT

There was no public comment.

VIII. ITEMS FROM COMMISSION MEMBERS

There were no items from the Commission Members

IX. ADJOURNMENT

Chair Smeal adjourned the meeting at 7:11 p.m.

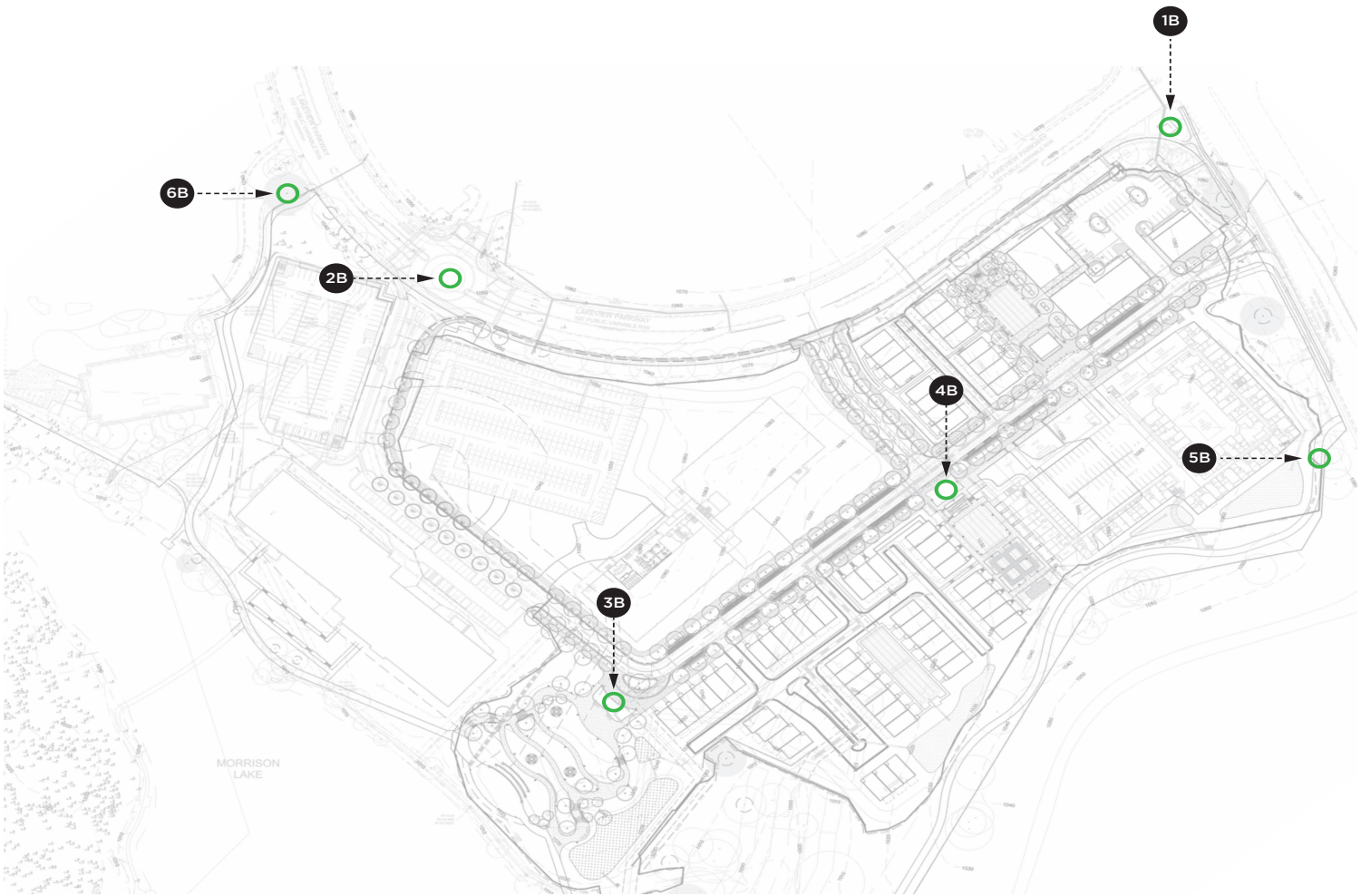
PACKAGE 11

Oct 11 , 2021

City of Alpharetta
Cultural Arts Commission
Presentation

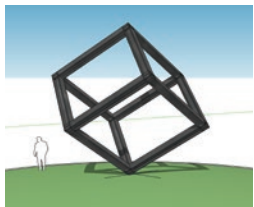
In Collaboration with
TPA GROUP
Site Solutions
Nelson

B - SITE SCULPTURE LOCATION PLAN



1B CORNER SCULPTURE

2B ROTARY SCULPTURE



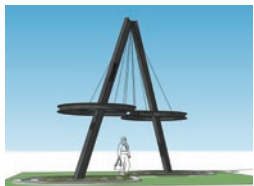
3B AMPHITHEATER SCULPTURE

4B CENTRAL SPINE SCULPTURE

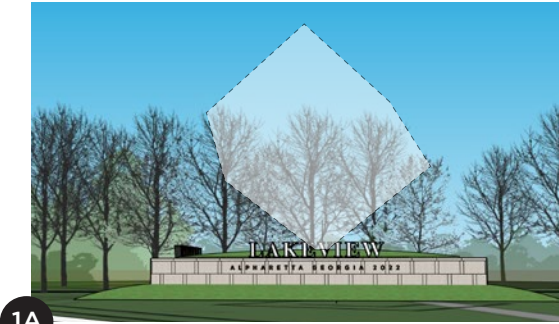
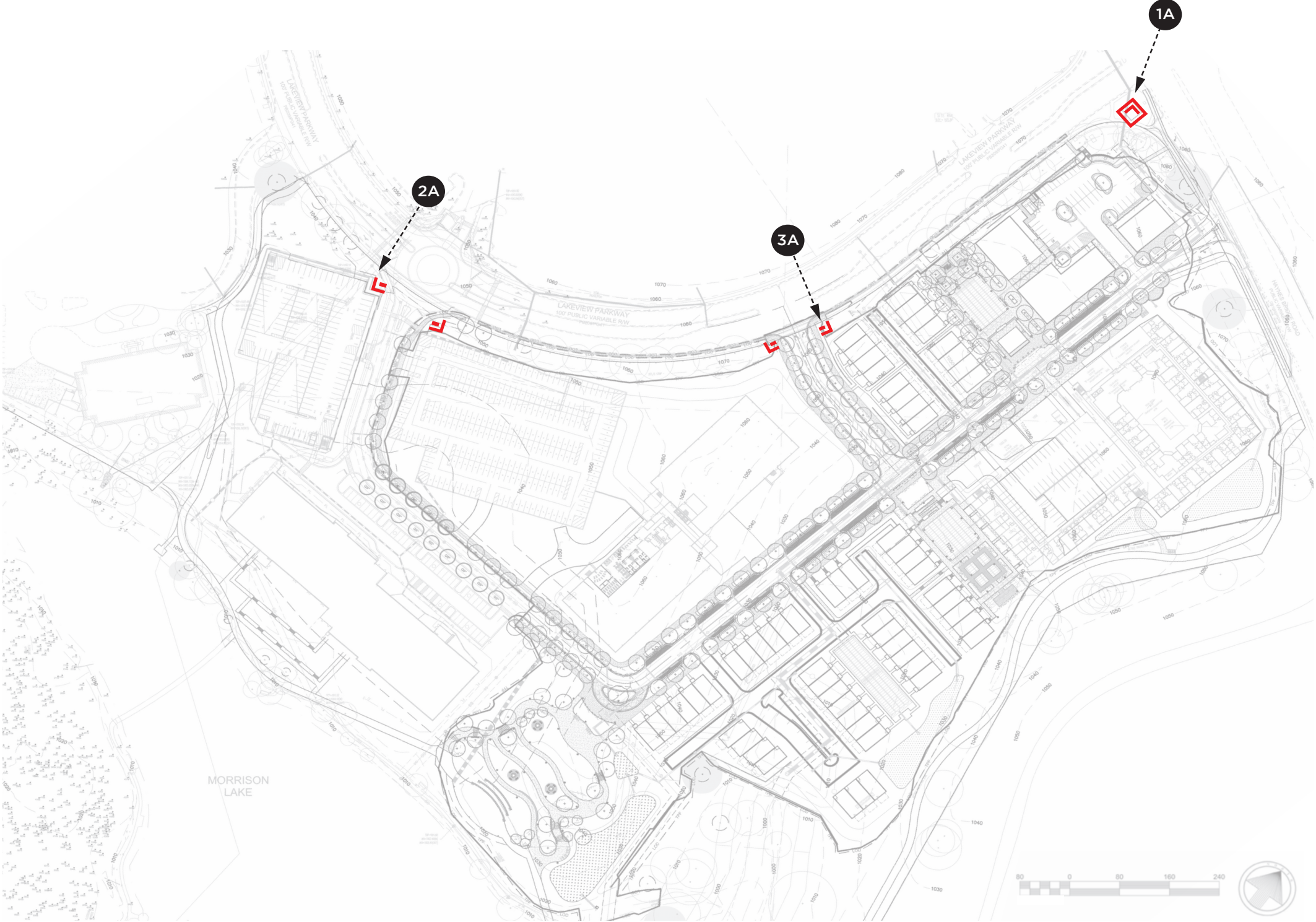
5B ALPHALOOP SCULPTURE



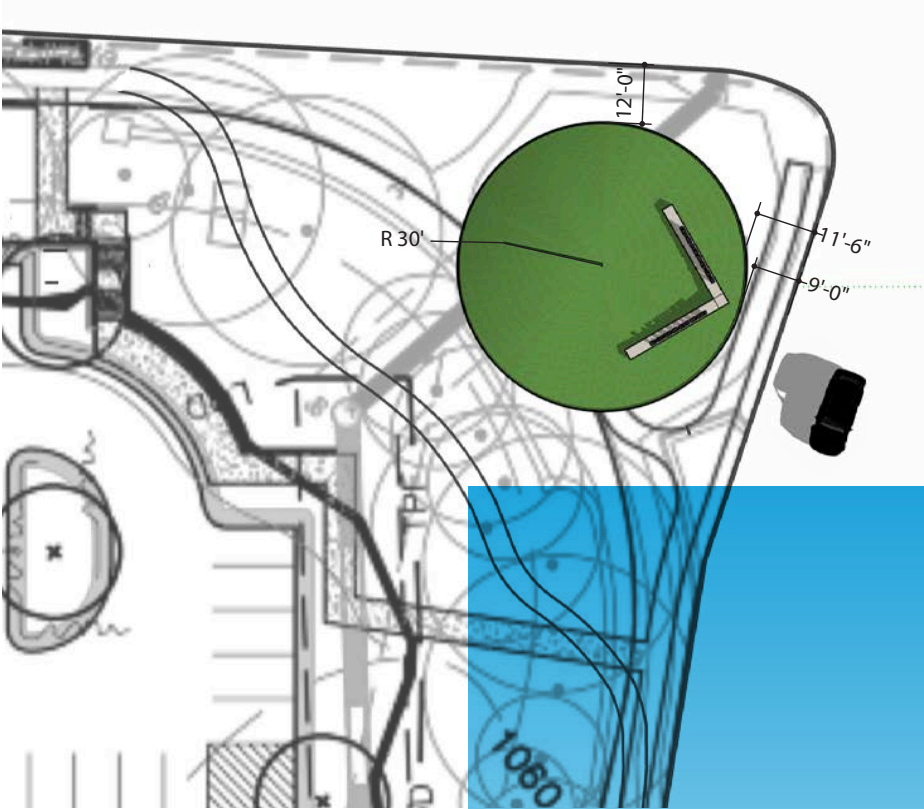
6B ALPHALOOP SCULPTURE



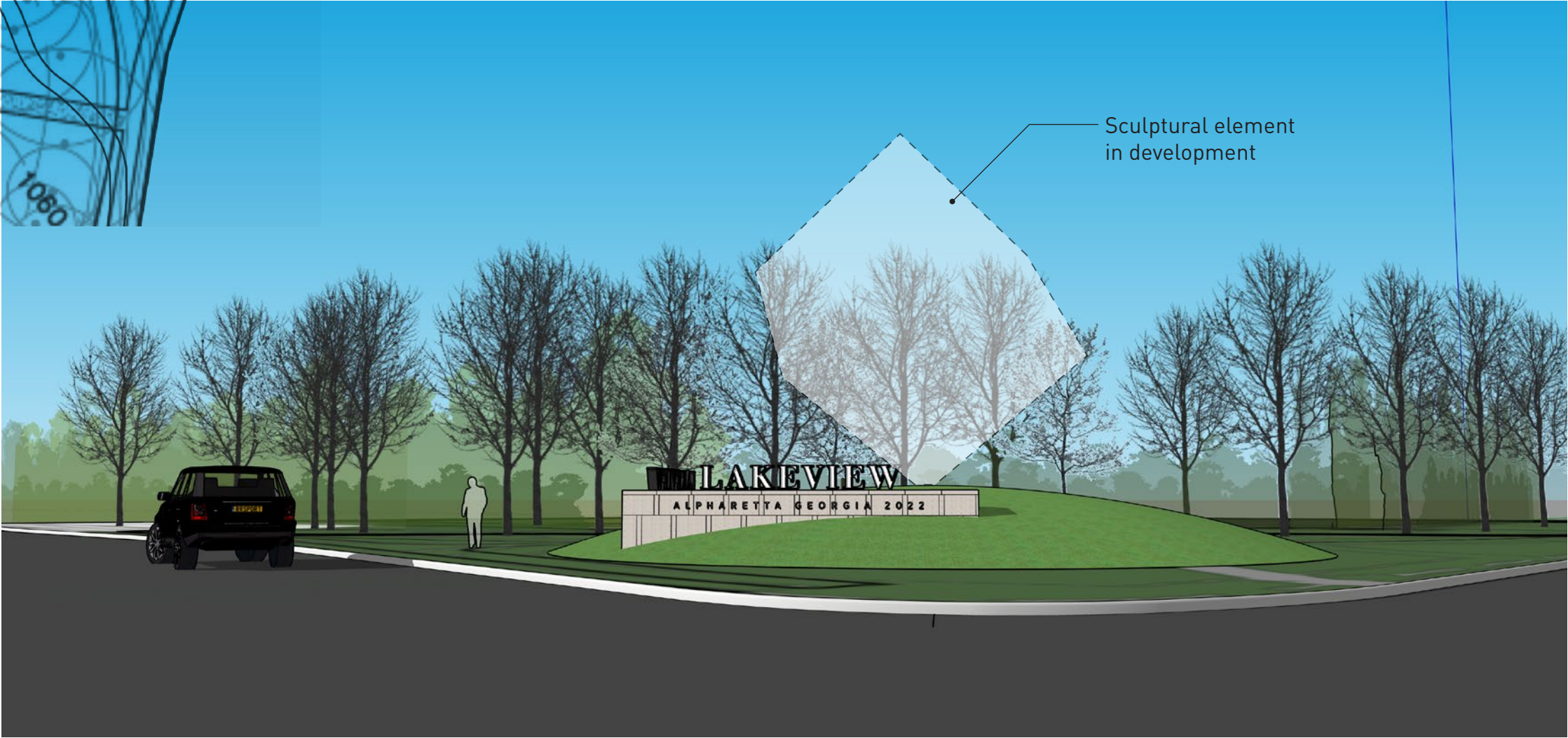
PRIMARY IDENTITY SITE PLAN



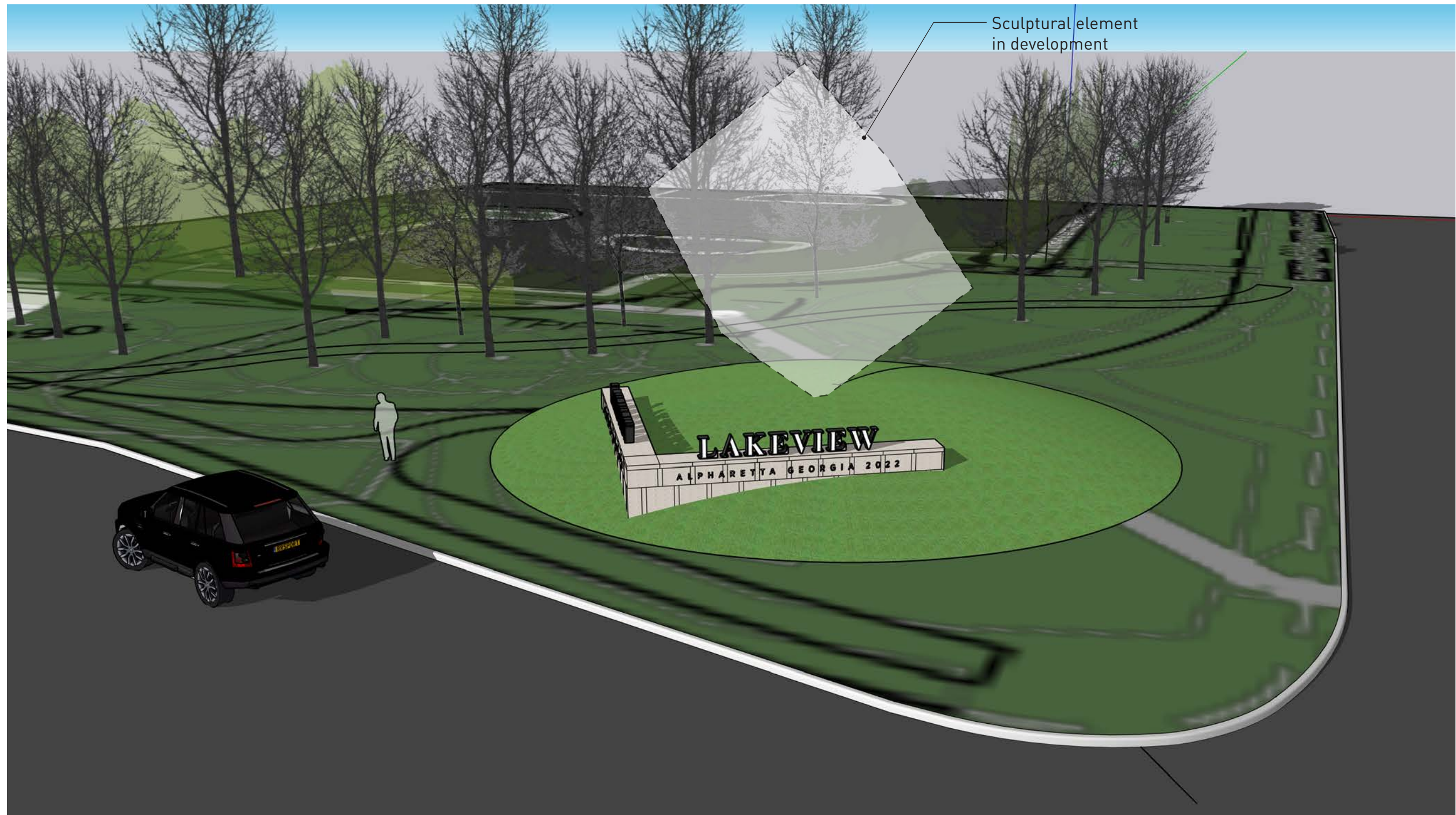
ST 1A MONUMENT ID - CORNER of HAYNES BRIDGE RD & LAKEVIEW PKWY



PLAN



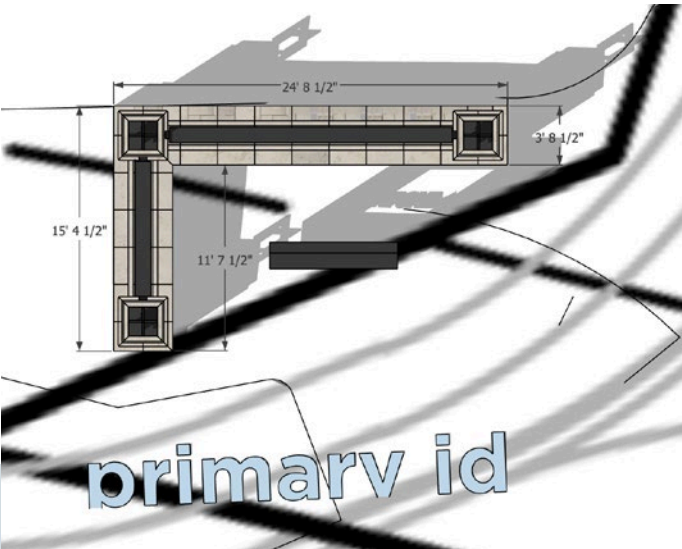
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ST 2A PLAN/PERSPECTIVE ROTARY ID - LAKEVIEW PKWY ROTARY



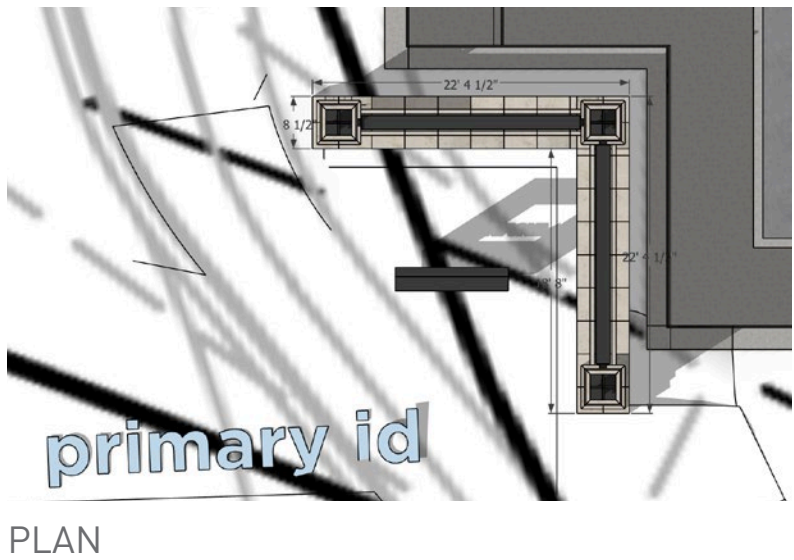
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PLAN



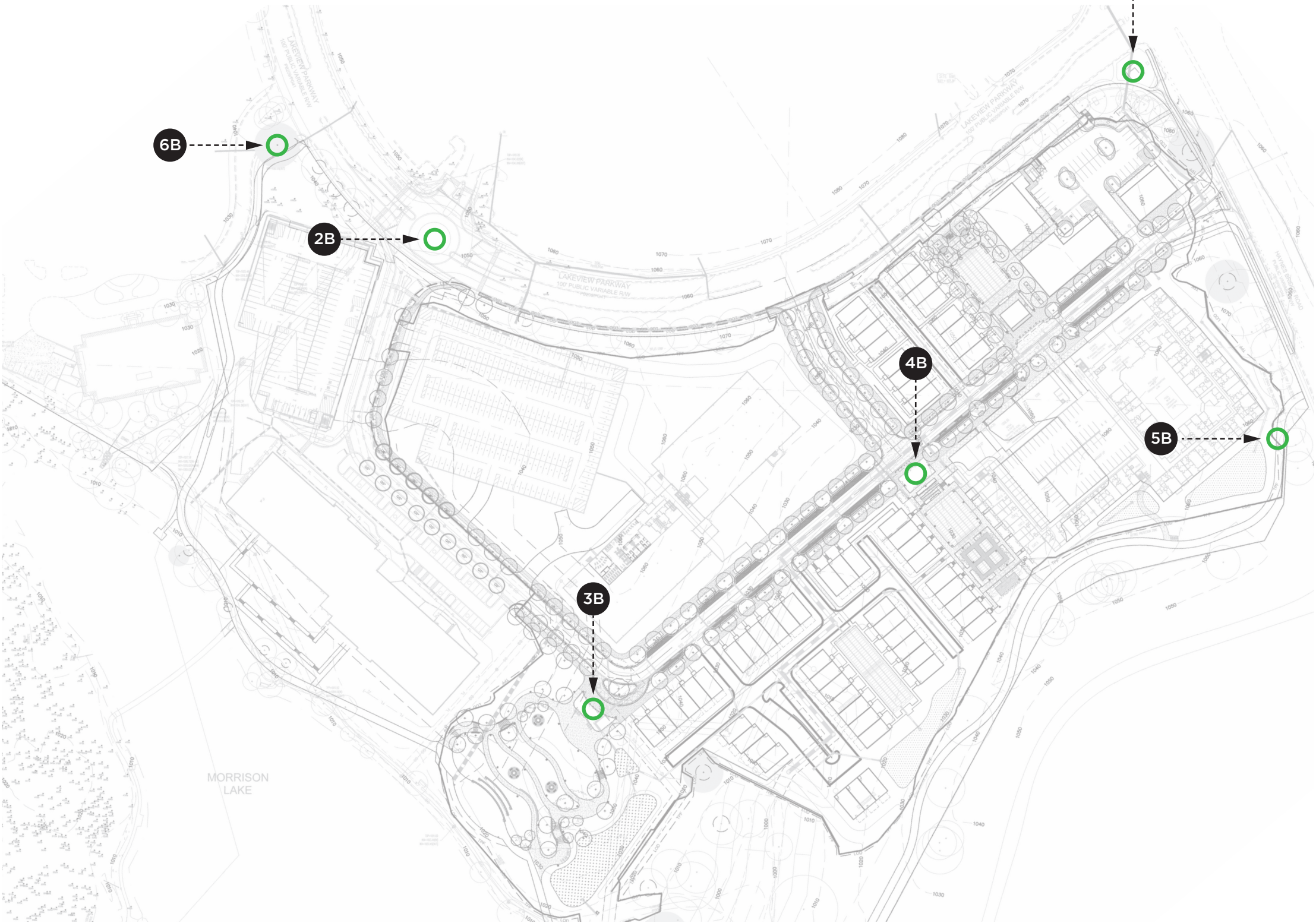
ST 2A PLAN/PERSPECTIVE ROTARY IDENTITY - RIGHT SIDE



ST 2A & 3A - MATERIAL DETAILS - LIMESTONE Vanderbilt Classic Silver Buff

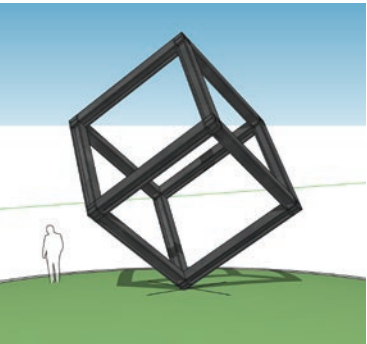


SITE SCULPTURE LOCATION PLAN



1B CORNER SCULPTURE

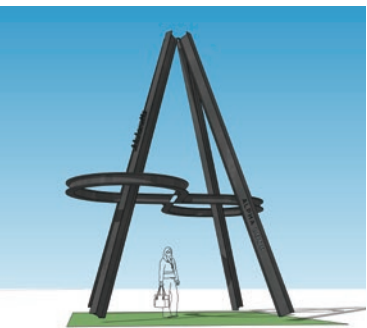
2B ROTARY SCULPTURE



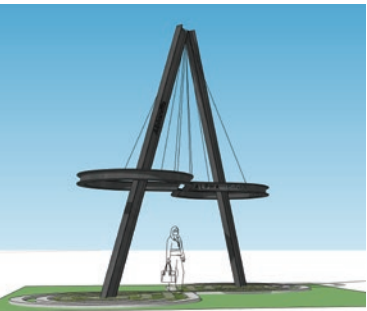
3B AMPHITHEATER SCULPTURE

4B CENTRAL SPINE SCULPTURE

5B ALPHALOOP SCULPTURE



6B ALPHALOOP SCULPTURE



SCULPTURAL STATEMENTS OF INTENT

Lakeview is a unique Alpharetta project, one that embraces a “modern sense of place” and community. Located in the Eco District which is one that is “eclectic industrial”. The proposed style of the district reflect back on solid, timeless values, modern yet transitional.

We have chosen to create a brand for Lakeview which embraces the district in the project signage and the site sculpture.

Our choice for the signage is one of stability and modern classical. Our choice for the site sculpture is one that embraces the essence of structure and balance.

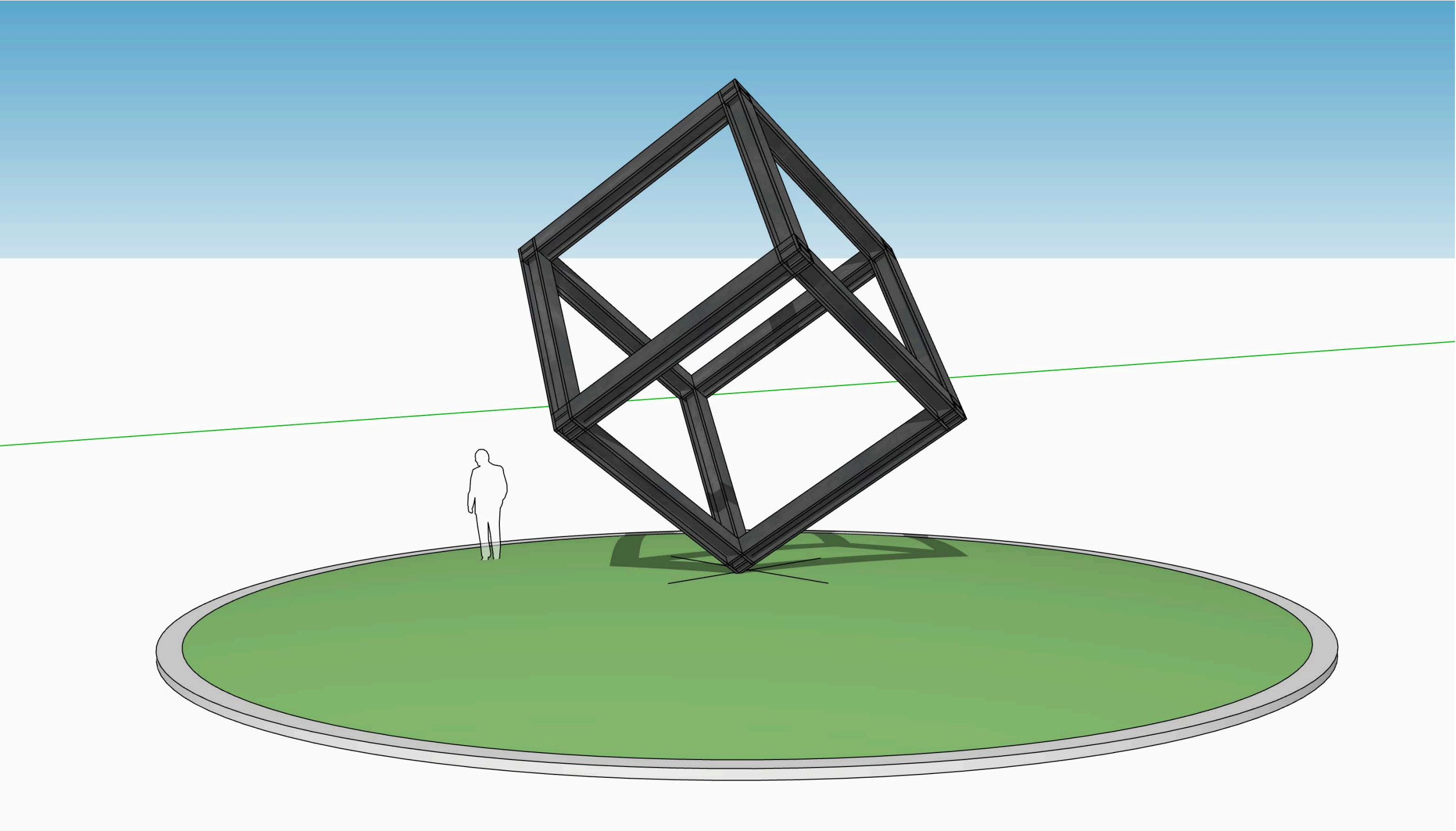
BALANCE

The cube is representative of the essence of successful building which is a stable foundation, a planned structure yet calling forth the dynamics of balance on the earth with its spherical impression. This is a balance of tension, stability, and the dynamics of form in peaceful tranquility

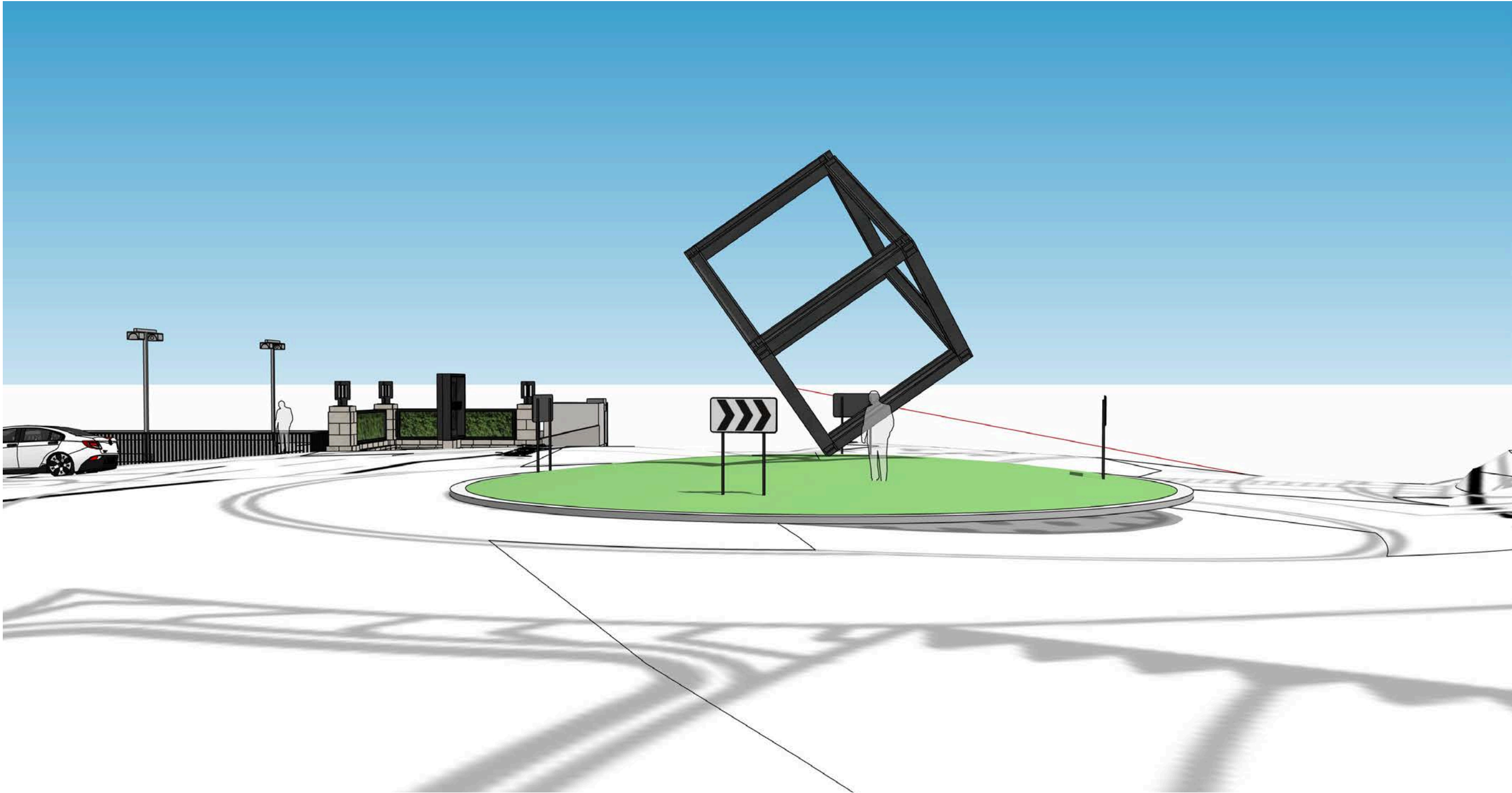
GATEWAYS

The entrance to the Alphaloop as they form a gateway into Lakeview are a dynamic, welcoming gateway with the hovering infinity loop floating above. We intend to cut the words ALPHARETTA into the vertical webs and ALPHALOOP into the infinity loop above.

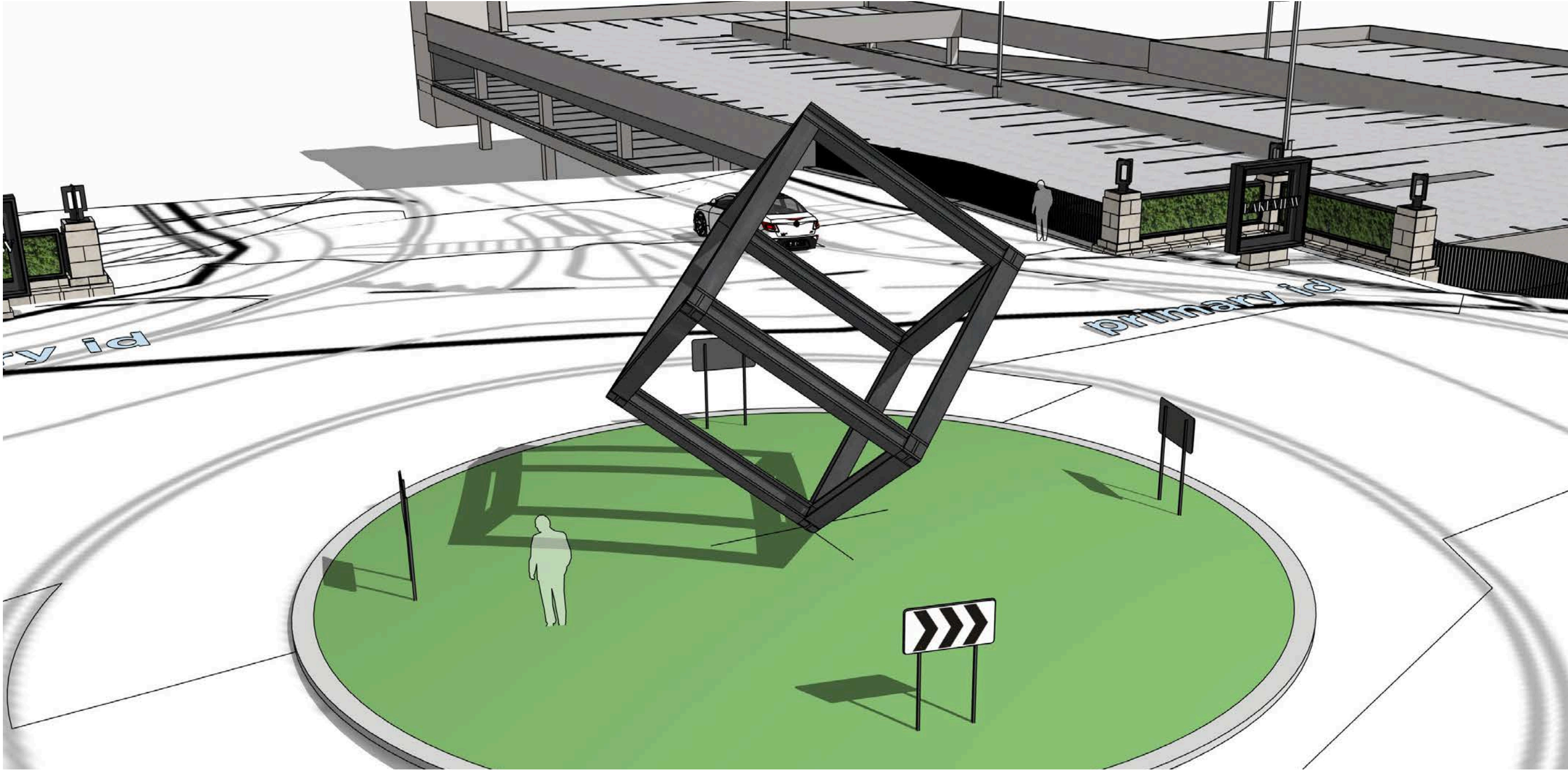
ST 2B ROTARY SCULPTURE



ST 2B ROTARY SCULPTURE



ST 2B ROTARY SCULPTURE



ST 2B ROTARY SCULPTURE



SIGN TYPE:
FABRICATED
STEEL
SCULPTURE
QTY:1
2,197 CUFT.



**& ENVIRONMENTAL
G R A P H I C S**
165 TIDWELL DRIVE, SUITE A
ALPHARETTA, GA 30004
PHONE: 770.569.5871
FAX: 770.569.5456

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CLIENT:
TPA GROUP

PROPERTY:

PROJECT:
CUBE SCULPTURE

ACCOUNT MANAGER:
SERENA JOHNSTON

PROJECT MANAGER:
ERIN MCCARVER

DATE:
07/14/21

VERSION: **SD 02**

REVISION LOG:

PAGE 1 OF 3

PROJ 34540



NOTE:
TOP CORNER POINT ALIGNS
VERTICALLY WITH BOTTOM
CORNER POINT

P1 13' CUBED STRUCTURE
ERECTED VERTICALLY ON
SINGLE CORNER
FABRICATED w/ RUST FREE CLEAN
STEEL - 12"x 12" I-BEAMS
(RYERSON -W BEAMS W12 x 65.0)
- 1/2" STEEL WELDED PLATES ON
CORNERS FOR BOLTING TOGETHER
w/ 1/2-13 STAINLESS STEEL THRU-BOLTS

1
3.0

FABRICATED STEEL
SUPPORT SADDLE w/
WELDED MOUNTING PLATE

12" SQ. (1/2" WALL)
A500 46KSI HSS STEEL POST
w/ WELDED MOUNTING PLATE

268 1/4"

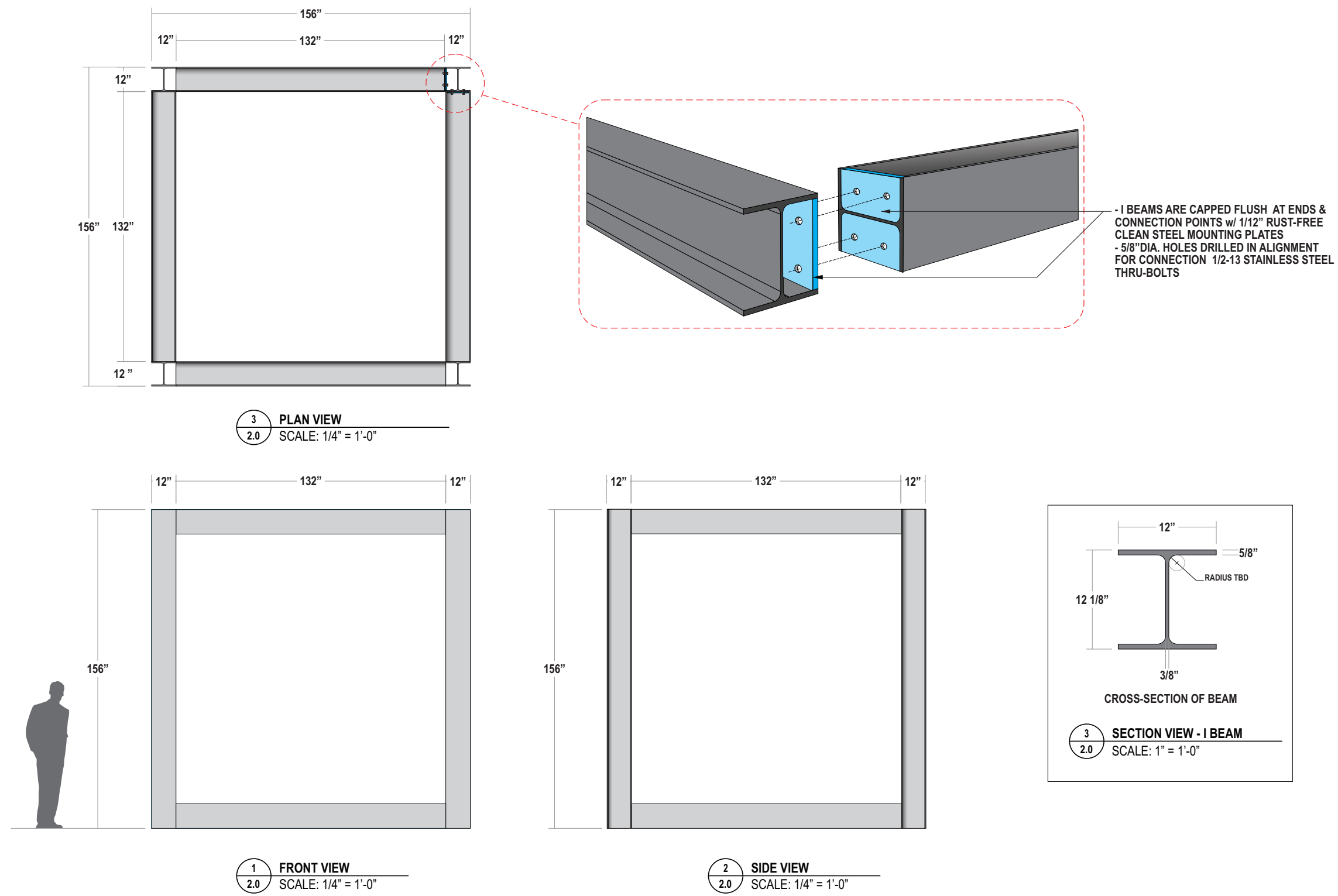
18''

GRADE _____

1 FRONT VIEW
1.0 SCALE: 3/8" = 1'-0"

**P1 FAUX BLACKEND STEEL
POWDER COATED
W/ CLEAR COAT**

SIGN TYPE: FABRICATED STEEL
SCULPTURE
DETAIL



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GRAPHICS
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ALPHARETTA, GA 30004
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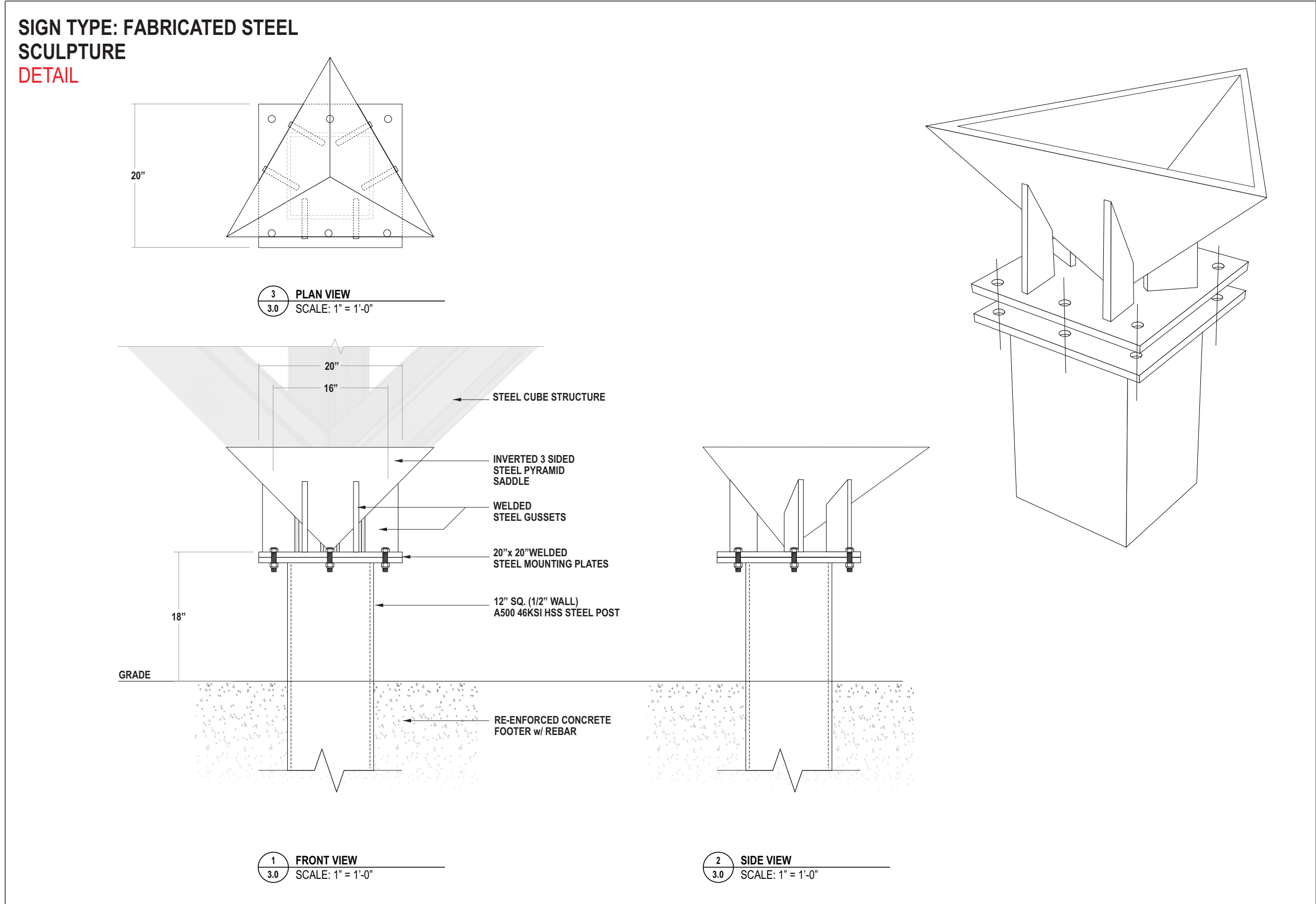
VERSION:
SD 02

HISTORY	DATE	DESIGNER
SD 01	07/14/21	RB
SD 02	08/26/21	RB

REVISION LOG:

PAGE
2 OF 3

PROJ
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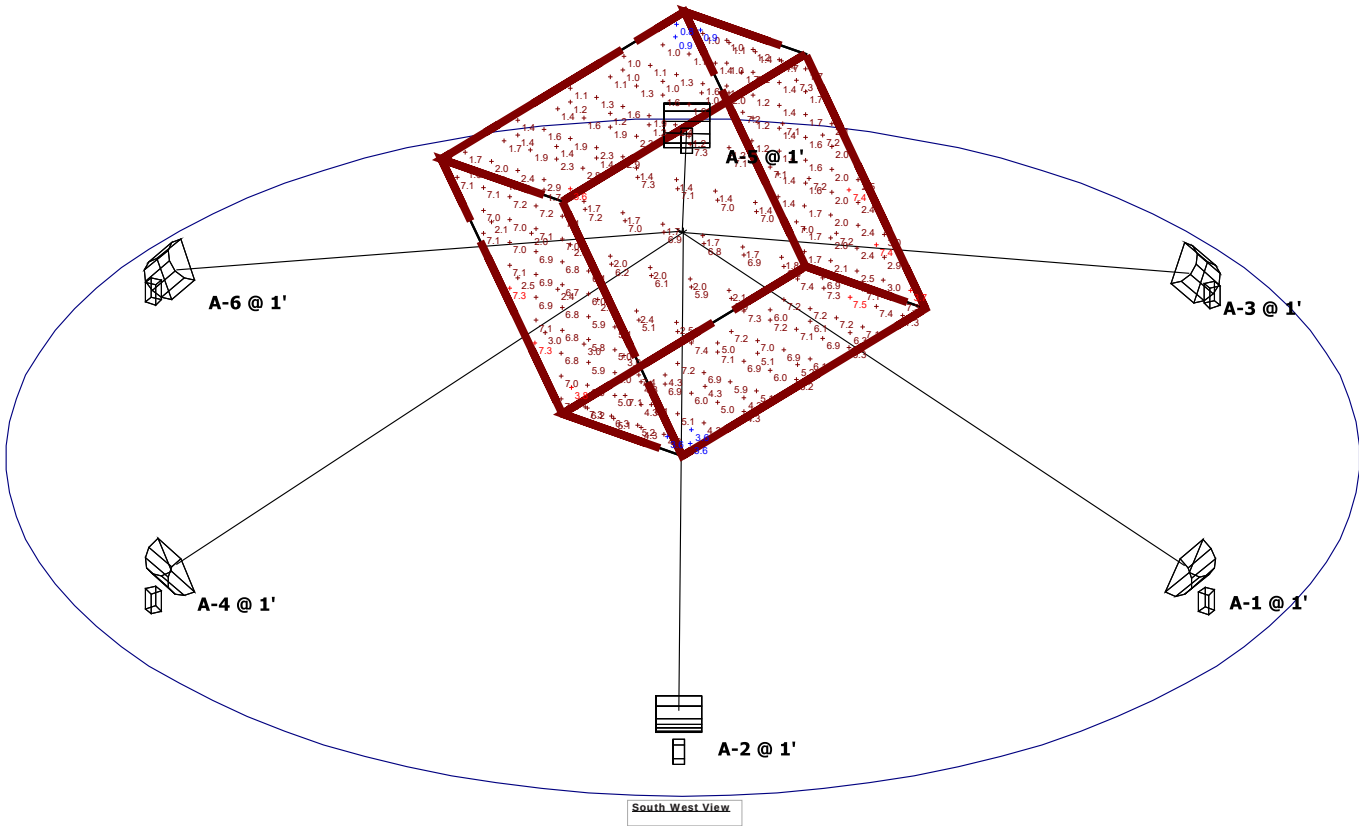
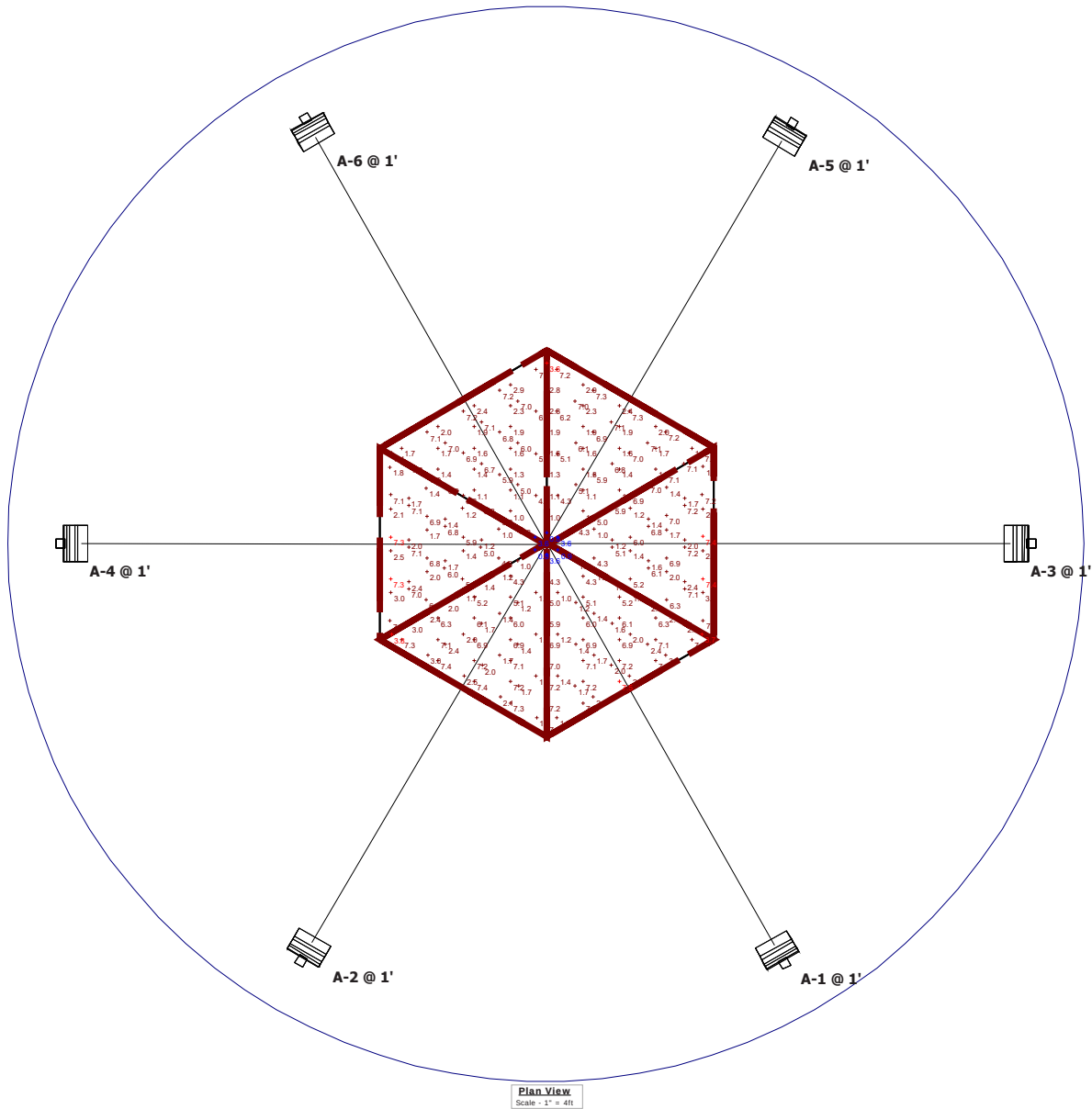
HISTORY	DATE	DESIGNER
SD 01	07/14/21	RB
SD 02	08/26/21	RB

REVISION LOG:

PAGE
3 OF 3

PROJ
34540

Cube Illumination - Provided by Georgia Power



City of Alpharetta - Roundabout sculpture

Schedule										
Symbol	Label	QTY	Manufacturer	Catalog Number	Description	Number Lamps	Filename	Lumens per Lamp	LLF	Wattage
	A	6	COOPER LIGHTING SOLUTIONS - STREETWORKS	UFLD-S-C15-X-U-66	LOW WATTAGE LED FLOODLIGHT	1	UFLD-S-C15-X-U-66 (1).IES	5858	0.912	51.2

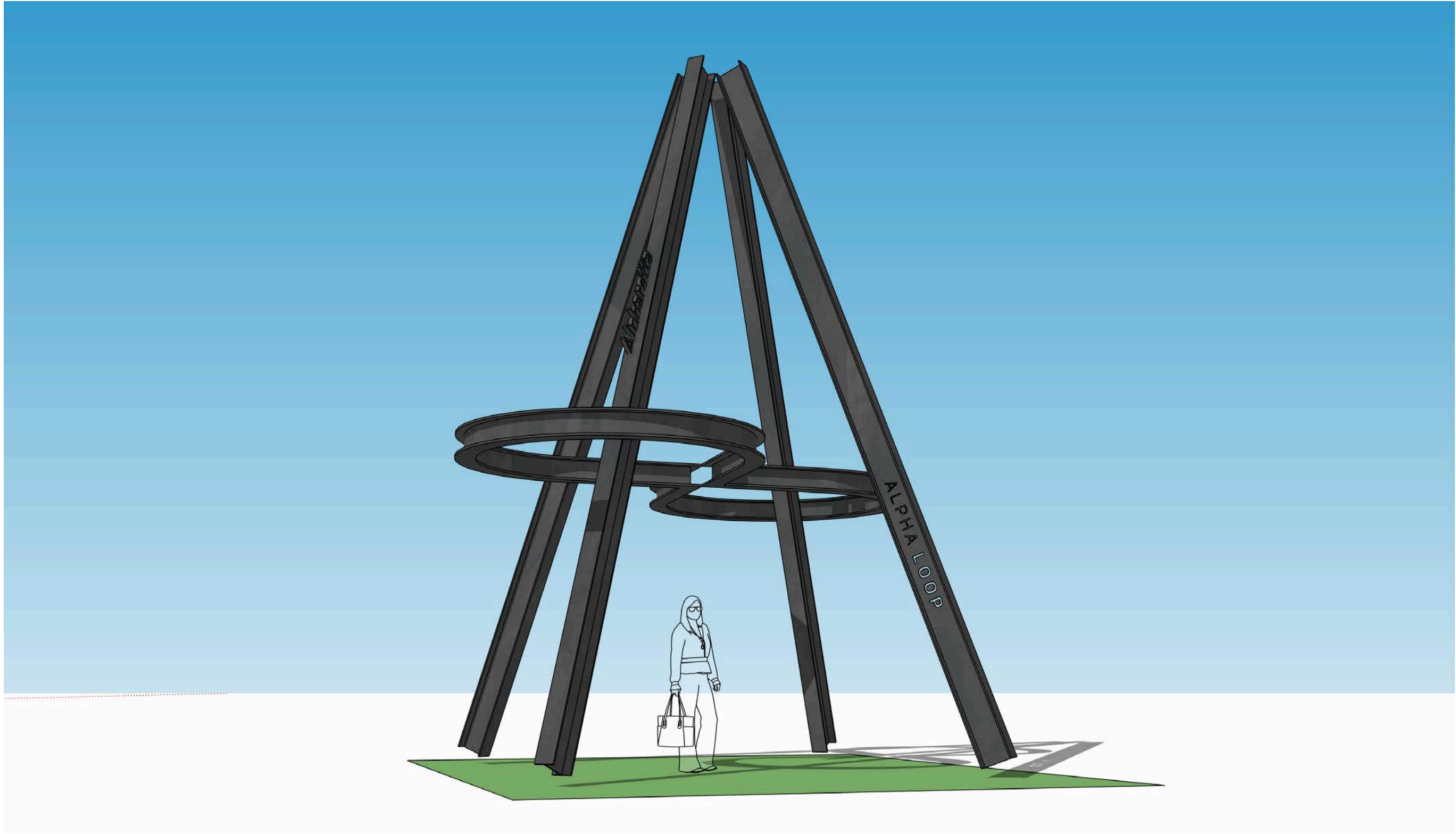
Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #1	+	1.8 fc	3.7 fc	0.9 fc	4.1:1	2.0:1
Calc Zone #2	+	1.7 fc	3.6 fc	0.8 fc	4.5:1	2.1:1
Calc Zone #3	+	6.3 fc	7.3 fc	3.6 fc	2.0:1	1.8:1
Calc Zone #4	+	6.4 fc	7.5 fc	3.6 fc	2.1:1	1.8:1
Calc Zone #5	+	6.4 fc	7.4 fc	3.6 fc	2.1:1	1.8:1
Calc Zone #6	+	1.8 fc	3.8 fc	0.9 fc	4.2:1	2.0:1
Combined Stats #1		4.1 fc	7.5 fc	0.8 fc	9.4:1	5.1:1

- Notes**
1. Readings are shown in units of maintained footcandles.
 2. Total Light Loss Factor (LLF) = .912 LLF for LED
 3. Test Plane = Surface of Sculpture
 4. Fixture Mounting Height = 1' Above grade
 5. Fixture Spacing = See Plan view.
 6. This photometric layout was calculated using specific criteria. Any deviation from stated parameters will affect actual performance.
 7. These lighting calculations are not a substitute for independent engineering analysis of lighting system suitability and safety.

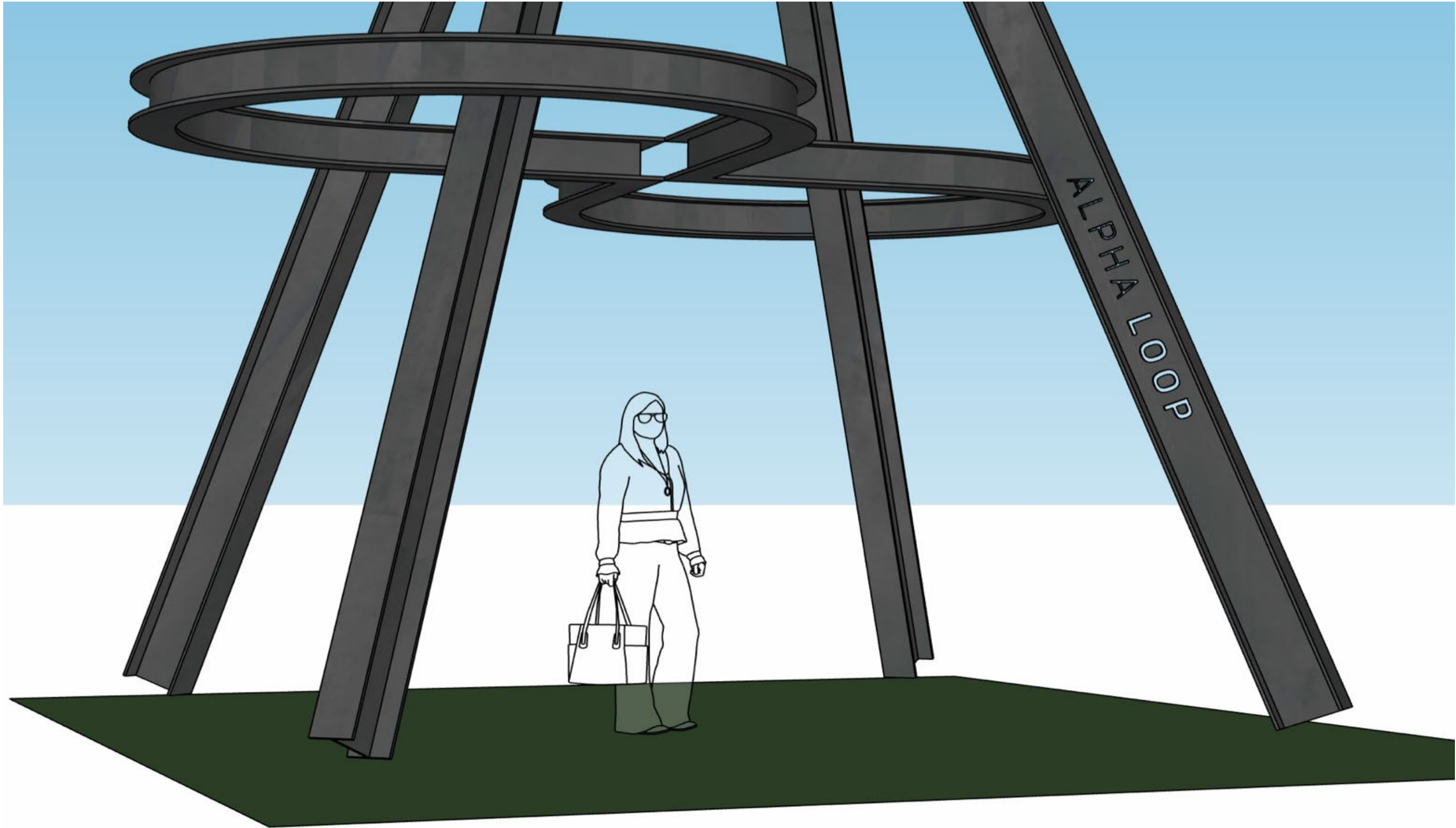
Disclaimer
This lighting design is not a professional engineering drawing and is provided for informational purposes only, without warranty as to accuracy, completeness, reliability or otherwise. Frazier Photometrics is not responsible for specifying the lighting or illumination requirements for any specific project. It is the obligation of the end-user to consult with a professional engineering advisor to determine whether this lighting design meets the applicable project requirements for lighting system performance, safety, suitability and effectiveness for use in a particular application. End-user environment and application (including, but not limited to, voltage variation and dirt accumulation) can cause actual field performance to differ from the calculated photometric performance represented in this lighting design. In no event will Frazier Photometrics be held responsible for any loss resulting from any use of this lighting design.

Designer
KF
Date
9/2/2021
Scale
As Shown
Drawing No.
S37421A2
Summary

ST 5B ALPHALOOP SCULPTURE



ST 5B ALPHALOOP SCULPTURE



ST 5B ALPHALOOP SCULPTURE



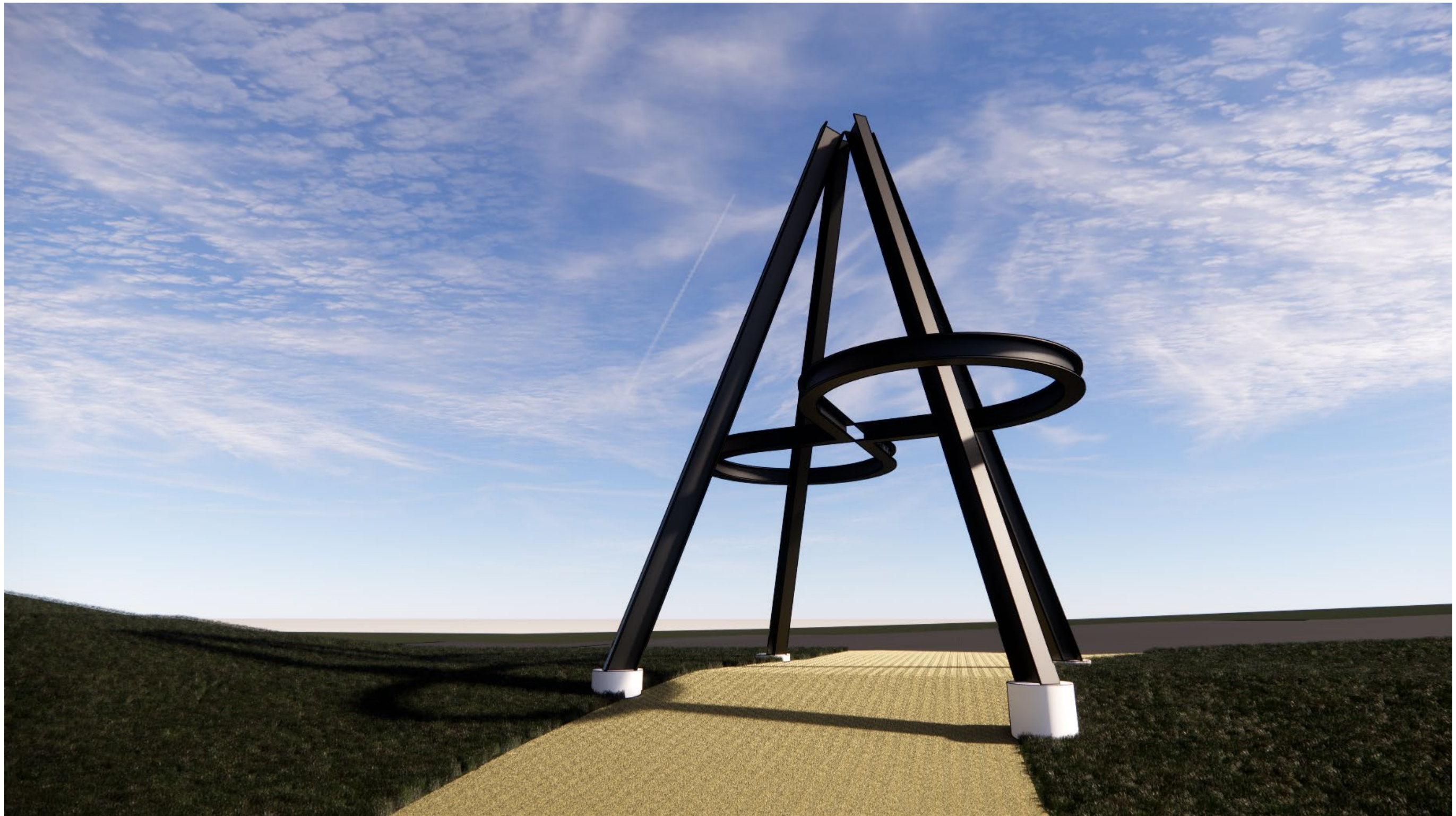
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ST 5B ALPHALOOP SCULPTURE



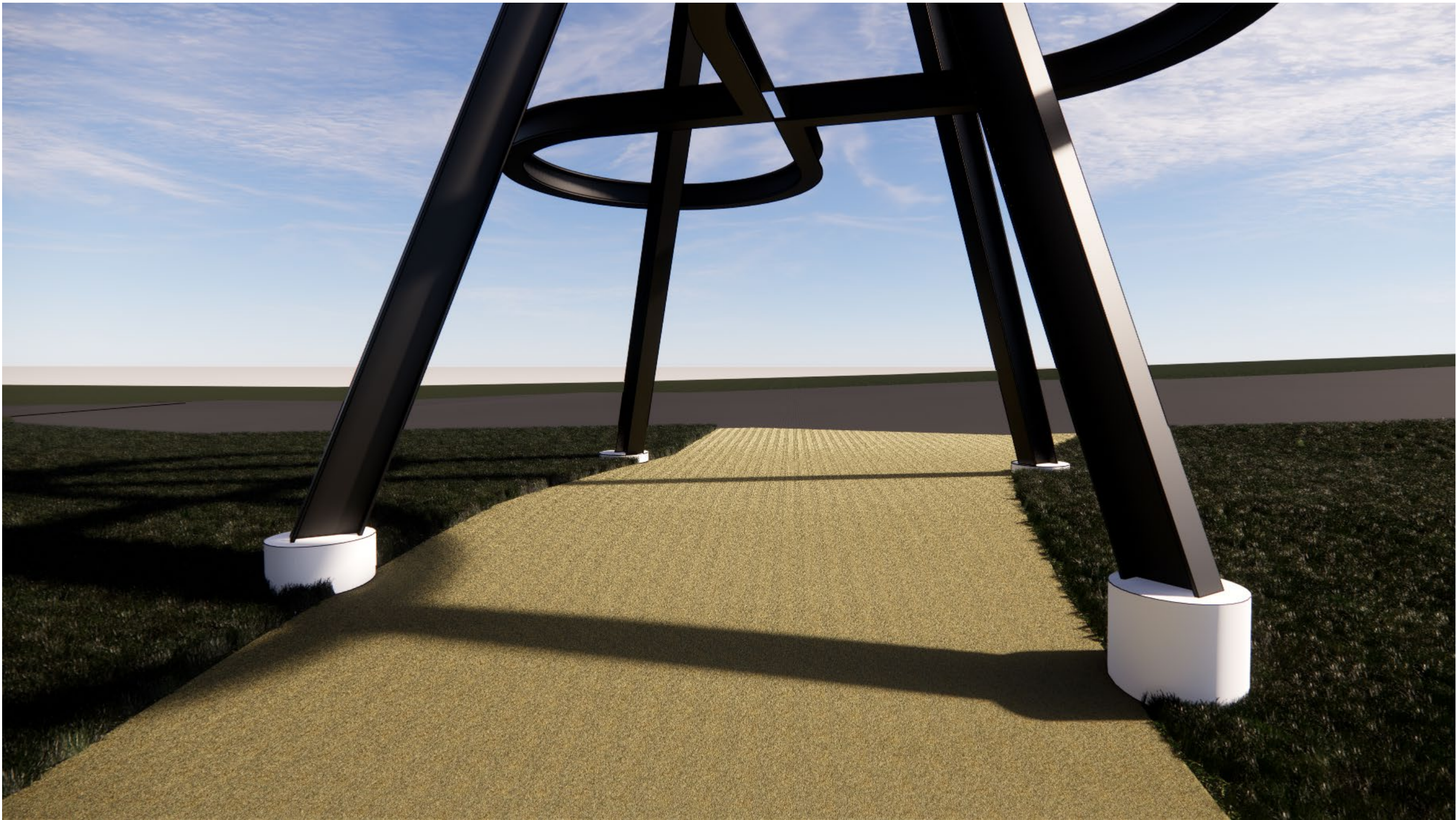
ST 5B ALPHALOOP SCULPTURE



ST 5B ALPHALOOP SCULPTURE



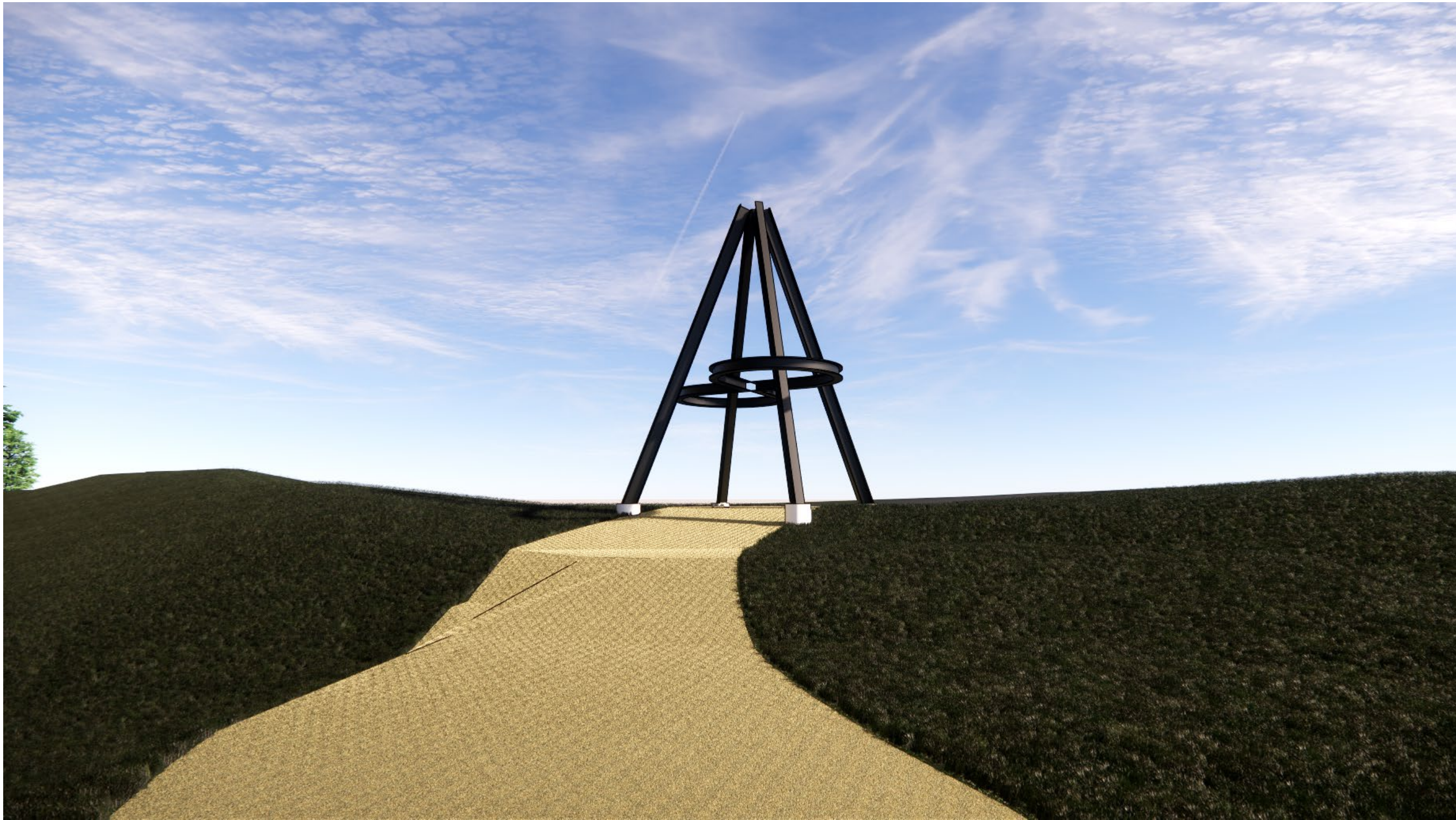
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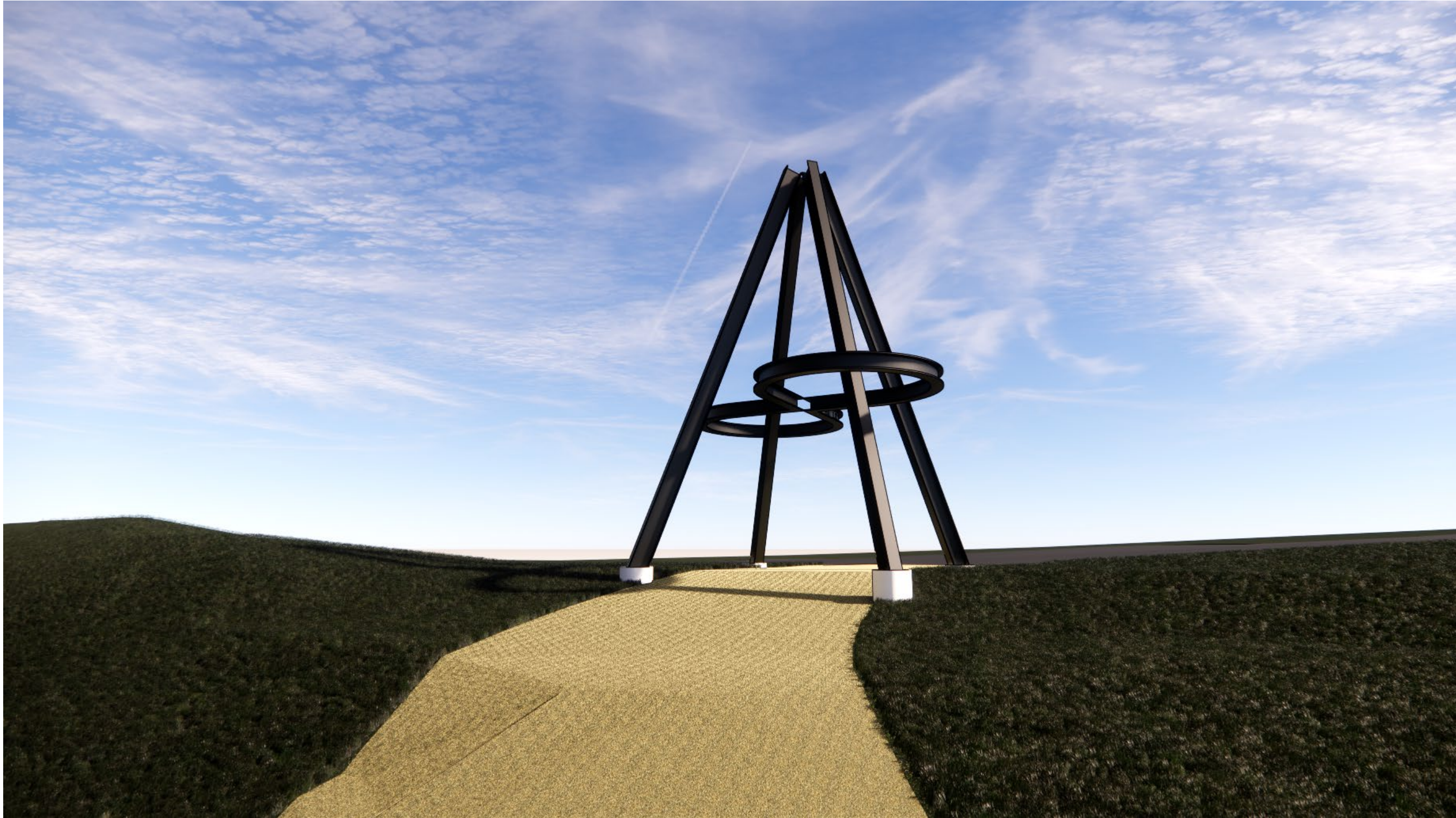
ST 5B ALPHALOOP SCULPTURE



ST 5B ALPHALOOP SCULPTURE



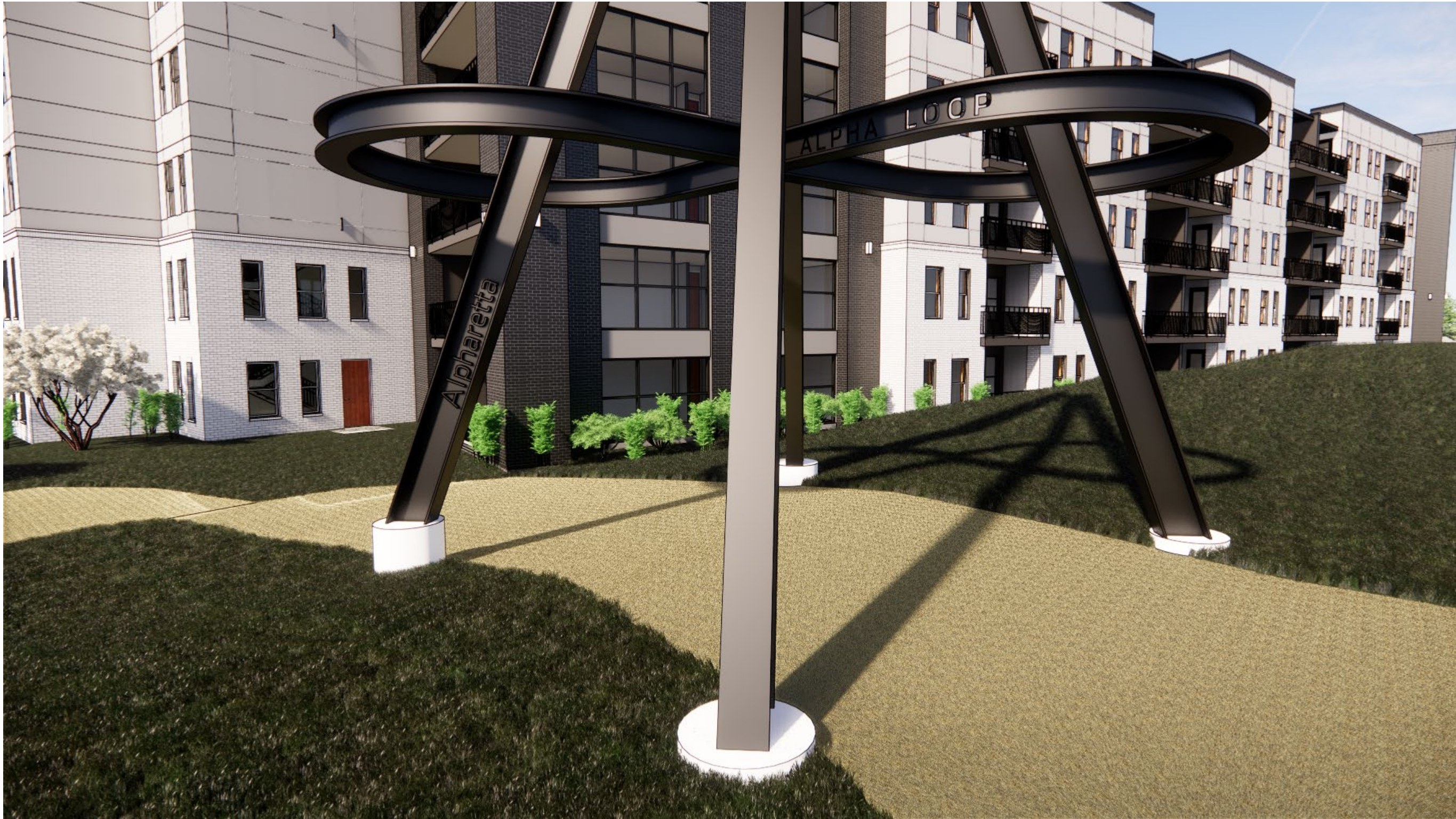
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ST 5B ALPHALOOP SCULPTURE



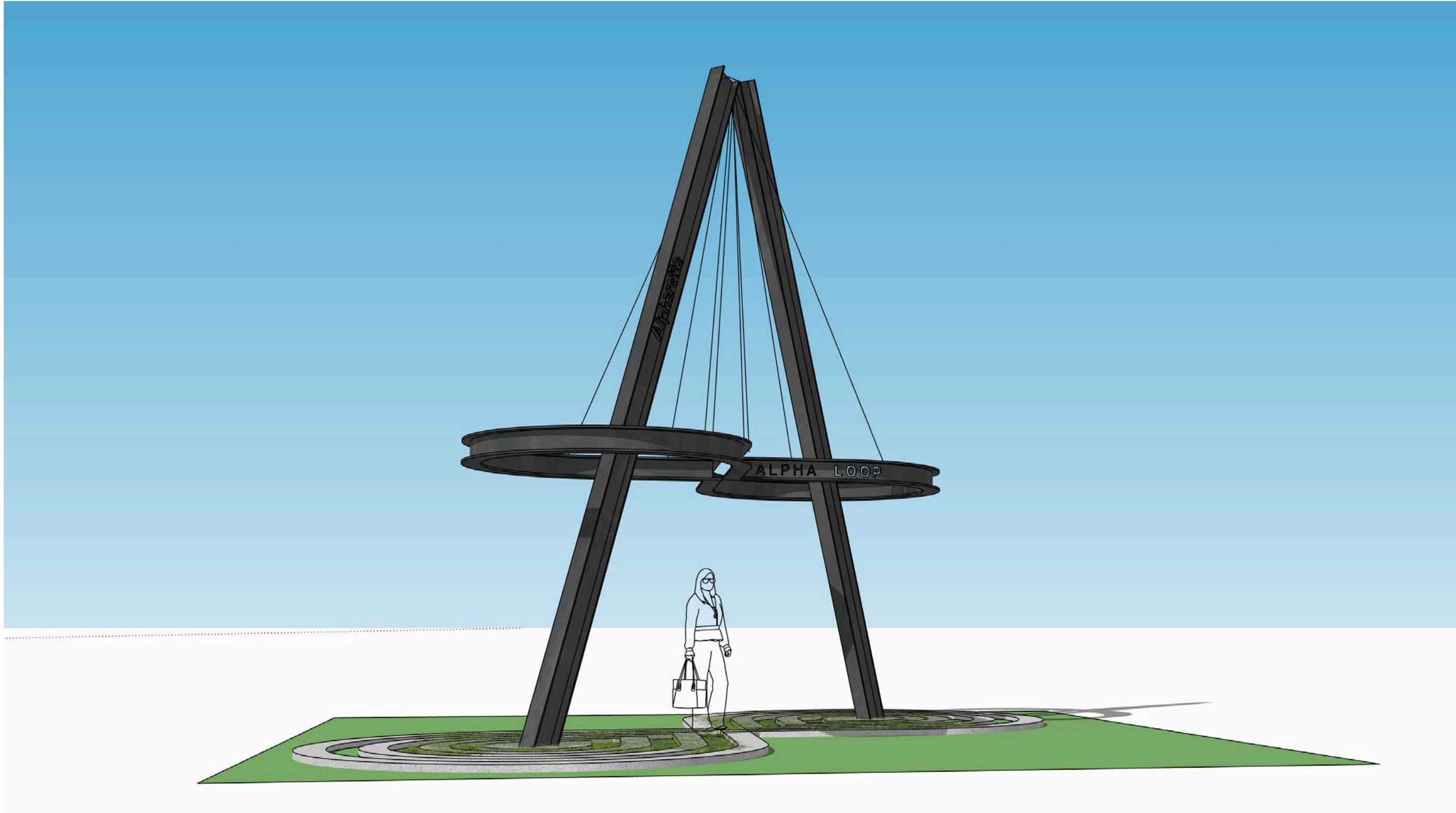
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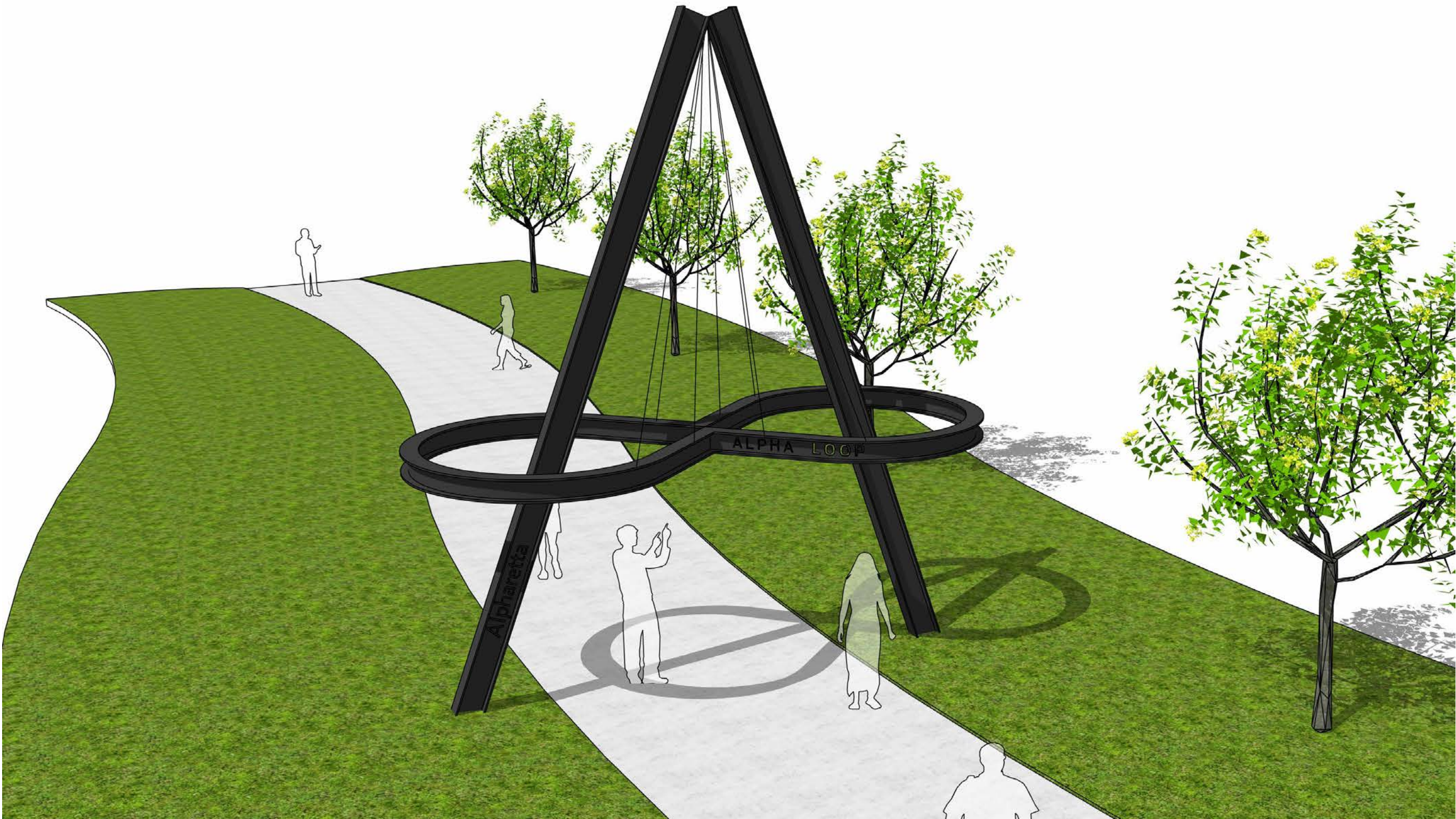
ST 5B ALPHALOOP SCULPTURE



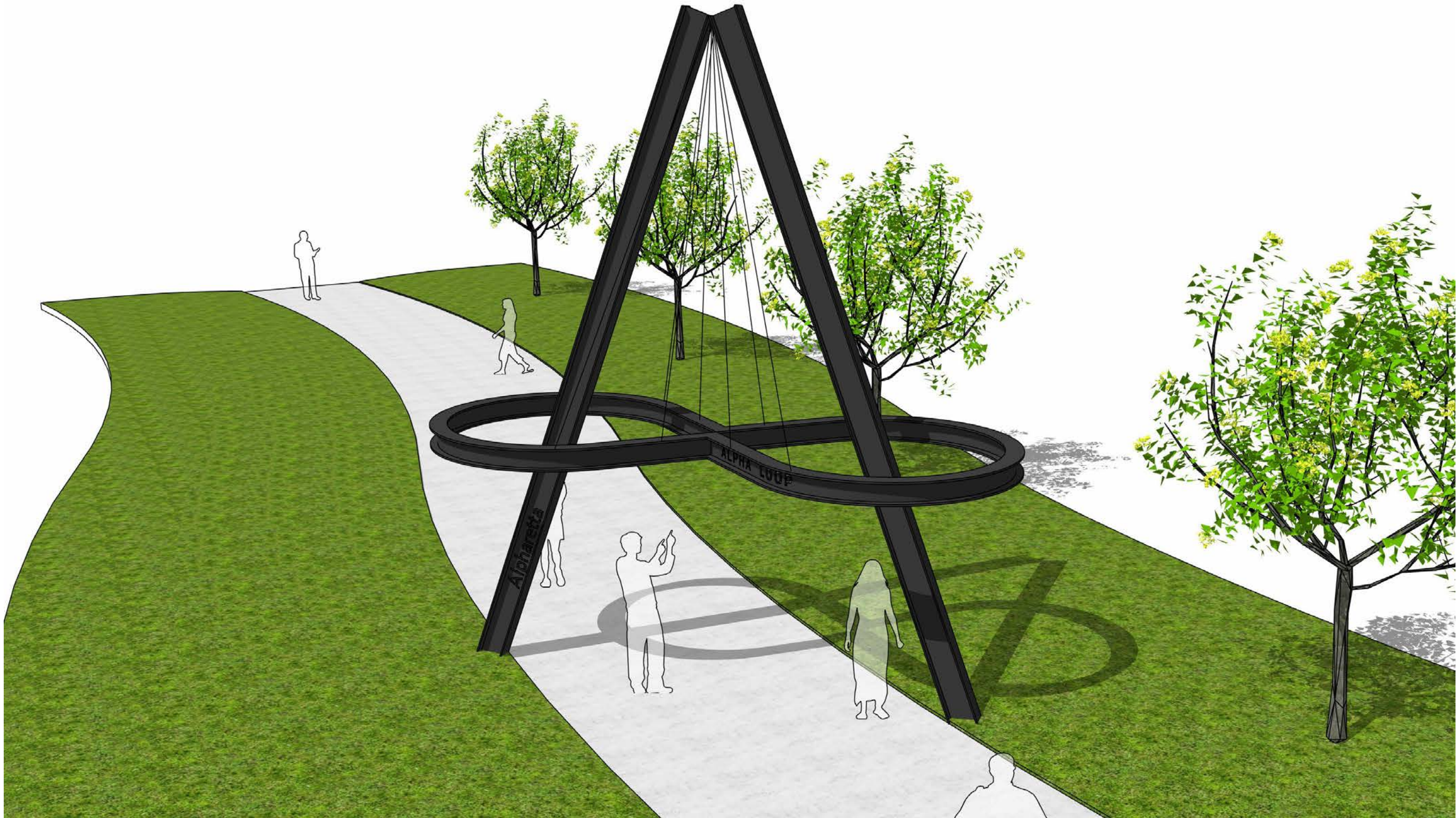
ST 6B ALPHALOOP SCULPTURE



ST 6B ALPHALOOP SCULPTURE



ST 6B ALPHALOOP SCULPTURE



Sculpture Materials

Cube is made of structural steel I beams with Stainless Steel Connections
Painted with Primer and overcoat of Poly-urathane to match blackened steel, This is a finish that is mottled finish as you may note below. This paint is overcoated with a poly-urathane coating to preserve the finish



The Alpha Loop gateways are made of structural aluminum I beams with a similar paint finish noted on the cube. The words ALPHARETTA and or ALPHALOOP are cut out of the I beam web.



Ground Cover under Cube

The gentle spherical berm raising the landform two feet to add greater dynamics on the balance of the form on the earth is covered with large variety of lyriope/monkey grass in order to provide a gentle flowing of the lawn in different weather conditions as well as to conceal the structural connections of the cube at its structural connection.



Cube Sculpture – Steel Painted Sign Maintenance

We recommend that the sculpture is cleaned a minimum of (1) time a year. This will prevent any dirt build up, which can lead to damage of the clearcoat.

Recommended Cleaning Procedure:

1. Rinse with water at LOW PRESSURE. Pressure washing at a high pressure can lead to failure of the clearcoat.
2. Lightly wash with mild soap like “Dawn” or “Simple Green” diluted with water (10/1) using a micro-fiber pad, or soft rag.
3. Rinse with water again at LOW PRESSURE
4. Air Dry

Things to Avoid:

1. HIGH PRESSURE water -
2. Stiff brushes or any rags
3. Abrasive pads or cleaners
4. Chemicals or solvents

All of these can lead to failure of the clearcoat, and void any warranty.

For Graffiti- Please Contact OPTION SIGNS for products and instructions.

09-15-21



2021 Public Art Application

Applicant Name: LWV TPA GA 400, LLC

**Application Contact plans and/or funds the proposed public art.*

Contact Role (Choose One): ☒ Developer ☐ Artist ☐ Community Group ☐ Other

Phone Number: 770-436-3400 Email: twakefield@tpa-grp.com

Public Art (Choose One): ☐ Mural ☒ Sculpture ☐ Memorial ☐ Community Art
☐ Integrated Architectural ☐ Landscape Architectural Work

Images (3) Three Enclosed: ☒ YES ☐ NO **Applicant must submit three (3) images with different vantage points for proposed public art piece. One (1) image of the (3) must reference the scale/size of the piece (Example- have a person in the photo with the art work). Artist renderings are acceptable.*

Artist Name: Jan Lorenc

Artist Contact (Website/ Email/Phone/Resume): https://lorencyoodesign.com/

Maintenance Plan Enclosed: ☐ YES ☒ NO

**Maintenance plan for the proposed public art is required with application. Plan must include a description of all materials; how the piece was created; paint colors specifications; and so on as it applies to the piece.*

Proposed Public Art Location Address: 2275 Lakeview Parkway, Alpharetta, GA 30009 (Roundabout)

Location Photos Enclosed: ☒ YES ☐ NO

**Photos of proposed public art location is required with application. Location photos must show the surrounding area and different vantage points. List in a separate word document any businesses, residents, etc. that might view the proposed public art on a daily basis.*

Describe the surroundings and how it fits the proposed location: Centerpiece of a newly constructed roundabout that will be uplit and in keeping with balance of masterplan art.

Owner of Property: LWV TPA GA 400, LLC

**Attach a Letter of Permission from the Property Owner to Install the Public Art Piece and length of agreement.*

Name of Conclusive Owner of Proposed Public Art: LWV TPA GA 400, LLC

**Final owner and responsible party for long term maintenance of the piece.*

Phone Number: 770-436-3400 Email: _____

Applicant Signature:  Date: 8.26.21

**I hereby certify that the above and attachments are true and correct to the best of my knowledge.*

Email application and following as separate attachments to Kim Zane, Cultural Services Manager kzane@alpharetta.ga.us.

☐ Public Art Application (Page 1 Completed)

☐ (3) Images of Proposed Public Art

☐ Maintenance Plan

☐ Location Photos of Proposed Public Art

☐ Letter of Permission from Property Owner to Install Public Art Piece

**All above requirements must be completed for a Public Art Committee Review to be scheduled.*



PAGE (2) STAFF TO COMPLETE

Public Art Review Committee Criteria & Discussion:

9-13-21

**Below is for Public Art Committee only and will be completed during your proposed public art review. Please read through and be prepared to discuss during the review.*

	YES	NO
1. Public Art is handmade and original; not a reproduction	<u>X</u>	<u> </u>
2. Overall quality & construction of the piece is of high standards	<u>X</u>	<u> </u>
3. Strength and power of public art piece is good to above average	<u>X</u>	<u> </u>
4. Public Art will add to the overall location	<u>X</u>	<u> </u>
5. Any concerns about messaging that could be misinterpreted	<u>X</u>	<u> </u>
6. Scale of the piece fits the location	<u>X</u>	<u> </u>
7. Piece meets consensus of community standards	<u>X</u>	<u> </u>

Additional Comments: see summary & comments page

Public Art Review Committee Recommendations:

✓ Approved as Proposed

**Route to Alpharetta Cultural Arts Commission for final approval. Meetings occur on the fourth Wednesdays of the month so please plan appropriately.*

 Approved with Minor Modifications / No Further Review Required

**Applicant & Review Committee agree to modifications. Route to Cultural Arts Commission for final approval.*

 Approved with Modifications / Further Review Committee Discussion Required

**Applicant works on modifications. A second Public Art Committee review will be scheduled when modifications are submitted to Cultural Services Manager.*

 Declined / Request for New Proposal / Further Discussion Optional

**Applicant revises approach with Public Art Review Committee recommendations and resubmits application with a new proposed public art piece.*

Alpharetta Cultural Arts Commission Final Monthly Review:

Added to Agenda: NO Commission Review Date: TBD

**Final reviews takes place on the fourth Wednesdays of the month with agendas on the third Wednesday, so please plan appropriately. Once approved, activation of public art piece may begin.*

9-14-21 Applicant requested two more sculptures to be reviewed, ^{3 total} so they need to take them to Public Art Review Committee



Public Art Review

Date: 9/13/21

Review Committee: Arts Alpharetta - Nancy Murphy & Ben Hollingsworth

Applicant(s) In Attendance: Tyler Wakefield  & Jan Lorenc (Artist)

Public Art Piece: Rotary Sculpture (Fabricated Steel Sculpture for Lakeview Development)

Comments and Recommendations:

- 1- Rotary Sculpture / art piece presented is for a business district entrance within the development roundabout.
- 2- Total of 6 sculptures planned for development (2 of these along the Alpha Loop).
- 3- Authenticity and inspiration from downtown design.
- 4- Described the piece as modern art and architecture combined with nature.
- 5- Add sculpture into an actual photo of the site to show the environment around the piece.
- 6- Will the two gateways in the renderings be onsite when sculpture is installed?
- 7- Tell the full story of how the sculpture evolved. Designed evolved from surroundings and cohesiveness. Wanted small section but larger sections joined together as squares at the corner which ended up being a better design.
- 8- Explain that the surface of the sculpture is painted and what type of surface you are creating with the paint. Painted finish over steel (automotive paint should last 15 years).
- 9- Submit Maintenance Plan with application.
- 10- Uniqueness of the piece was discussed by reviewer. Branding verses design? What will the other five sculptures look like? Recommend showing the vision and renderings for all 6 sculptures at one time. This will ensure that they are original and not branding the development site. Applicant stated each piece will be original and not a branded or duplication of the Rotary Sculpture presented at this review.
- 11- Is the sculpture lighted at night? GA Power has six lighting fixtures around parameter of piece. When lighted the sculpture will have a silhouette effect.
- 12- Can you walk up to the sculpture? No the piece will have landscaping around it and meant to be viewed from afar.

PAGE (2) STAFF TO COMPLETE

Public Art Review Committee Criteria & Discussion:

**Below is for Public Art Committee only and will be completed during your proposed public art review. Please read through and be prepared to discuss during the review.*

	YES	NO
1. Public Art is handmade and original; not a reproduction	☒	☐
2. Overall quality & construction of the piece is of high standards	☒	☐
3. Strength and power of public art piece is good to above average	☒	☐
4. Public Art will add to the overall location	☒	☐
5. Any concerns about messaging that could be misinterpreted	☒	☒
6. Scale of the piece fits the location	☐	☐
7. Piece meets consensus of community standards	☒	☐

Additional Comments: see review summary

Public Art Review Committee Recommendations:

☒ Approved as Proposed

**Route to Alpharetta Cultural Arts Commission for final approval. Meetings occur on the fourth Wednesdays of the month so please plan appropriately.*

☐ Approved with Minor Modifications / No Further Review Required

**Applicant & Review Committee agree to modifications. Route to Cultural Arts Commission for final approval.*

☐ Approved with Modifications / Further Review Committee Discussion Required

**Applicant works on modifications. A second Public Art Committee review will be scheduled when modifications are submitted to Cultural Services Manager.*

☐ Declined / Request for New Proposal / Further Discussion Optional

**Applicant revises approach with Public Art Review Committee recommendations and resubmits application with a new proposed public art piece.*

Alpharetta Cultural Arts Commission Final Monthly Review:

Added to Agenda: 12-13-21 Commission Review Date: 12-15-21

**Final reviews takes place on the fourth Wednesdays of the month with agendas on the third Wednesday, so please plan appropriately. Once approved, activation of public art piece may begin.*



Public Art Review

Date: 12/13/21

Review Committee: Arts Alpharetta - Nancy Murphy, Ben Hollingsworth, Shelton Cochran, & Mike Buchannan

Applicant(s) In Attendance: Barbara Polmino / Studio Superette, Eric Bourassa / Studio Superette, & Michael Greeby / Greeby Companies

Public Art Piece: Nike Live

Comments and Recommendations:

- 1- Application is presented is for an Avalon Business storefront.
- 2- Quality and Construction / Durability of piece – Sign will be installed by a third-party vendor; reference maintenance plan for materials and expected longevity.
- 3- Art is hyper focused with each Nike Location – 5-6 different artists were used to create a 2-consensus figurative artwork adapted to fit location for branding.
- 4- Strength is to create conjunction to other runners and engage with customers.
- 5- General Comments:
 - a. Shelton Cochran - Like the design. I get it. Not a mural but more of an enhancement of the space and environment. Enhancement is worth pursuing.
 - b. Eric Bourassa - Not a mural but branding. Storyboard of the location does not show Nike logo on clothes on the figures / runners. No Nike brand or swoosh on apparel. Sport is Nike but not exclusively Nike.
 - c. Mike Buchannan - Why all runners and not another sport? Shows women forward; two women and one man depicted in the image as runners; Female leading the race; Also mimics the women we see running around Avalon every day.
 - d. Nancy Murphy - Moving forward, the Review Committee would like to request another definition and evaluating criteria for reviews that are similar to Nike. They are not a mural but fits a category of enriching the environment through artistic "branding" with enhancement features to signs. These applications need artistic direction but are not fine art or murals.
 - e. Michael Greeby – Trend in redesign areas like this is variety of spaces with more art & expression combined with color & vibrancy. Past trend was monotone, so new goal is to enliven the environment and be more creative by adding art to commercial signs, storefront spaces.
 - f. Shelton Cochran – What does art become...fine art or graphic design. Doesn't change what it is but makes it more.



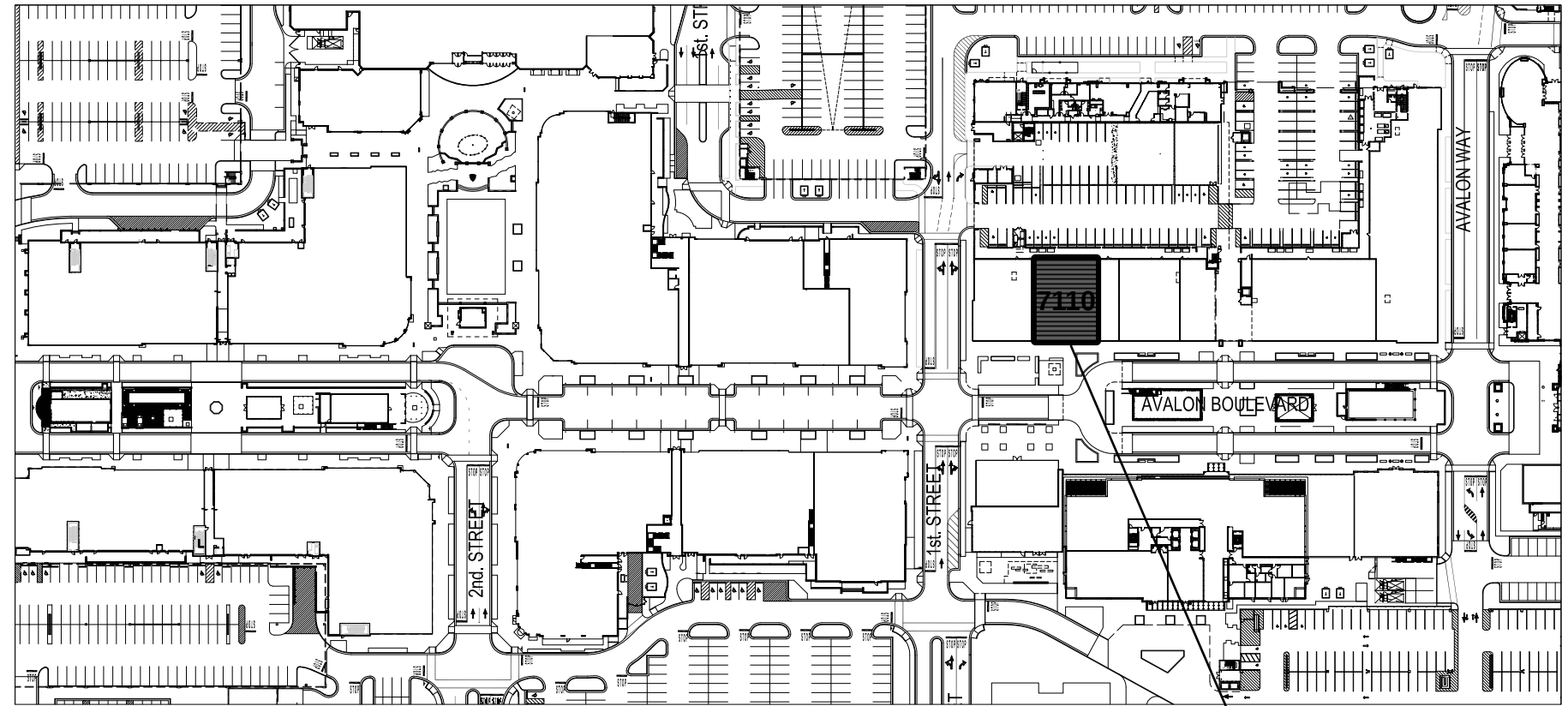
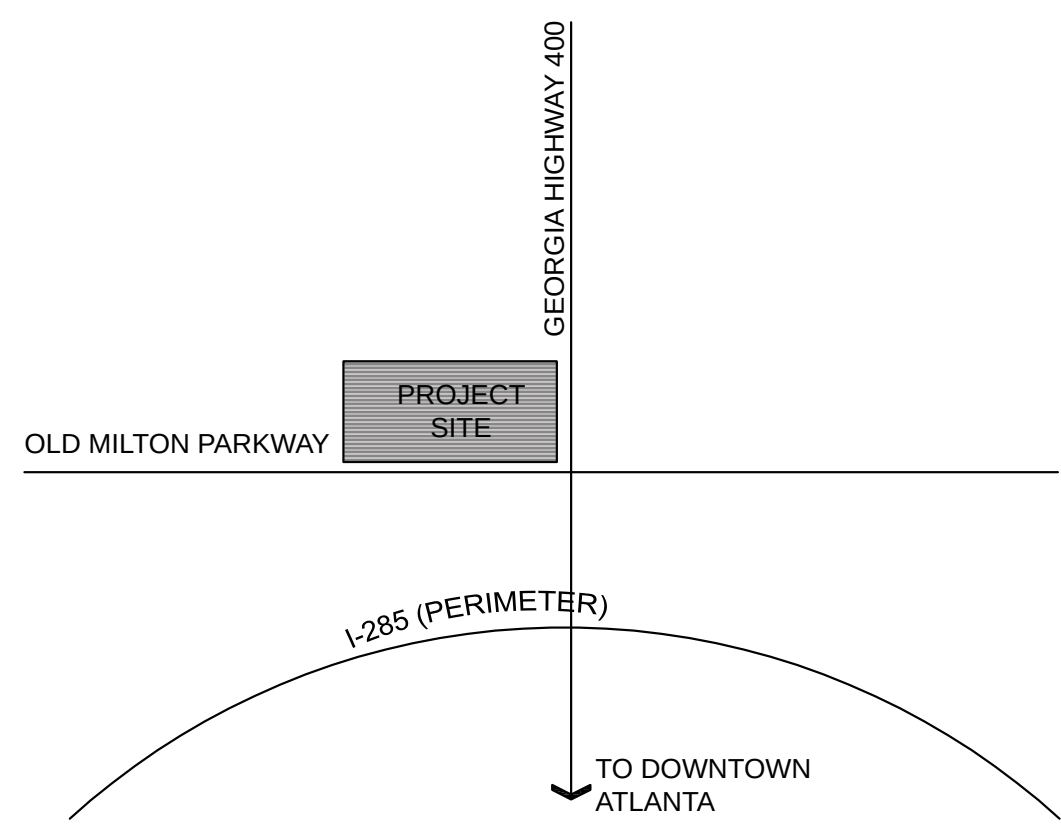
- g. Michael Greenby – Bring more to the environment than what people are accustomed to getting in this type of area. Fine art verse graphic digital art. Web bringing alive. Clicks to Bricks.



NIKE **LIVE**
BY ALPHARETTA (AVALON)

PREPARED FOR:
CITY OF ALPHARETTA

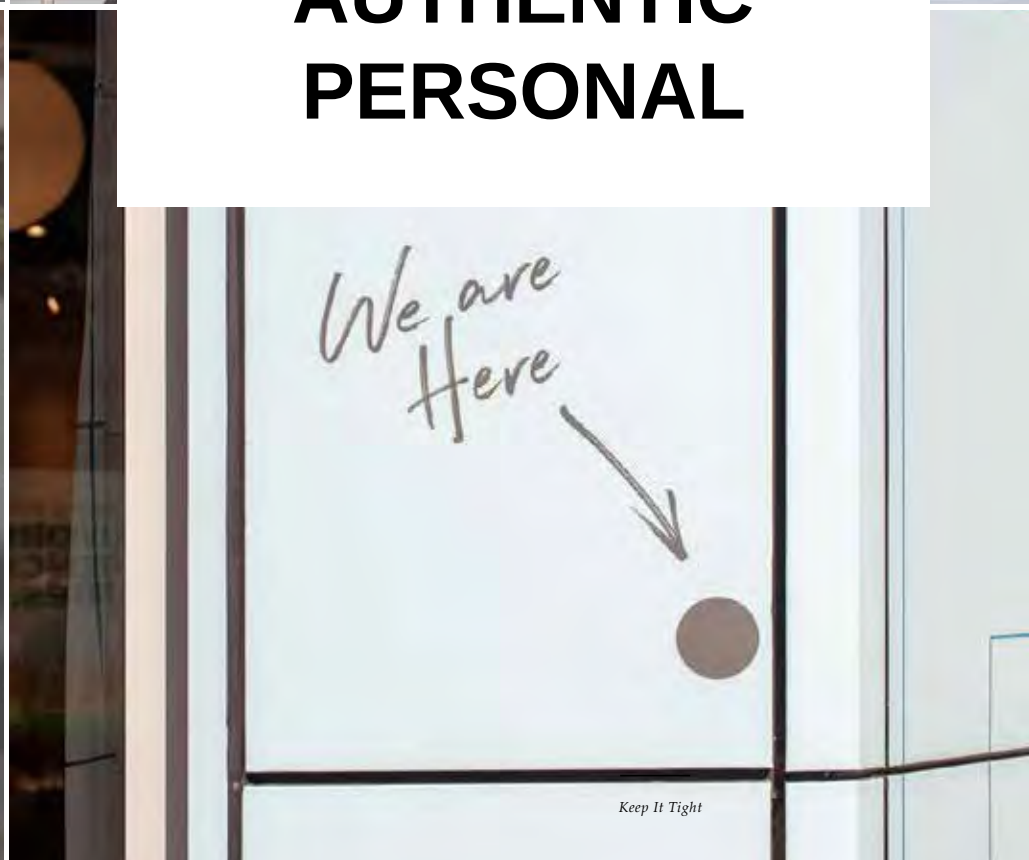
SITE



ARTWORK
HERE



**LOCAL
AUTHENTIC
PERSONAL**



PREVIOUSLY APPROVED EXTERIOR



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COLOR
PALETTE

Facade	
Welcome Curtain	
Perimeter Curtains	
PIPP	
Rugs	
Closet Doors + Framed Graphics	
BOH	

ARTIST

ABOUT SHAWNA X

Artist Bio



Shawna X was born and raised at a cultural crossroads; her Chinese heritage on the one side, and a newly-formed Asian American identity on the other. When she moved to the US from China at the age of 7, she quickly realized that language was a barrier to connecting with other kids. So she learned to cultivate a different, more universal kind of language—drawing.

Her work often touches on ethnicity, sexuality, tokenism, and cultural pride.

She is an independent artist & creative based in New York, known for her vibrant, visceral and highly graphical image-making across mediums in digital, spatial and motion spaces, creating experiences in music, fashion, sport, and technology.

Samples



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SHAWNA X-COLOR PALETTE

A neighborhood-specific or region-specific palette may be mixed as needed. Tints are acceptable but do not create additional colors. See next page for sample palettes.

Welcome Areas & Curtains

Welcome Gray

PMS: 425 @ 75%

CMYK: 52/40/40/14

Soft White

PMS: Opaque White

CMYK: 0/0/0/0

Figures & Color Blocks

Blue

PMS: 3015

CMYK: 100/35/3/21

Indigo

PMS: 2117

CMYK: 86/79/0/0

Violet

PMS: 2082

CMYK: 60/79/0/0

Fuchsia

PMS: 674

CMYK: 18/80/5/0

Amber

PMS: 1235

CMYK: 0/32/95/0

Yellow

PMS: 7406

CMYK: 0/20/100/2

Red

PMS: 179

CMYK: 0/87/85/2

PMS: 3015 @ 75%

CMYK: 82/37/13/0

PMS: 7687

CMYK: 100/85/15/3

PMS: 2756

CMYK: 100/96/27/19

PMS: 189

CMYK: 0/46/7/0

PMS: 1235 @ 50% Tint

CMYK: 0/16/45/0

PMS: 1805

CMYK: 21/96/90/12

PMS: 7580

CMYK: 17/80/92/6

PMS: 7457

CMYK: 25/3/8/0

Nearly Black

PMS: Black C

CMYK: 63/62/59/94

PMS: 189 @ 70% Tint

CMYK: 0/31/4/0

PMS: 1235 @ 25% Tint

CMYK: 0/7/20/0

PMS: 7577

CMYK: 7/61/87/0

Custom Rugs

Global

6029

Gleaming

CJ601

Orchid

5502D

Melon

7136D

Bravado

5972D

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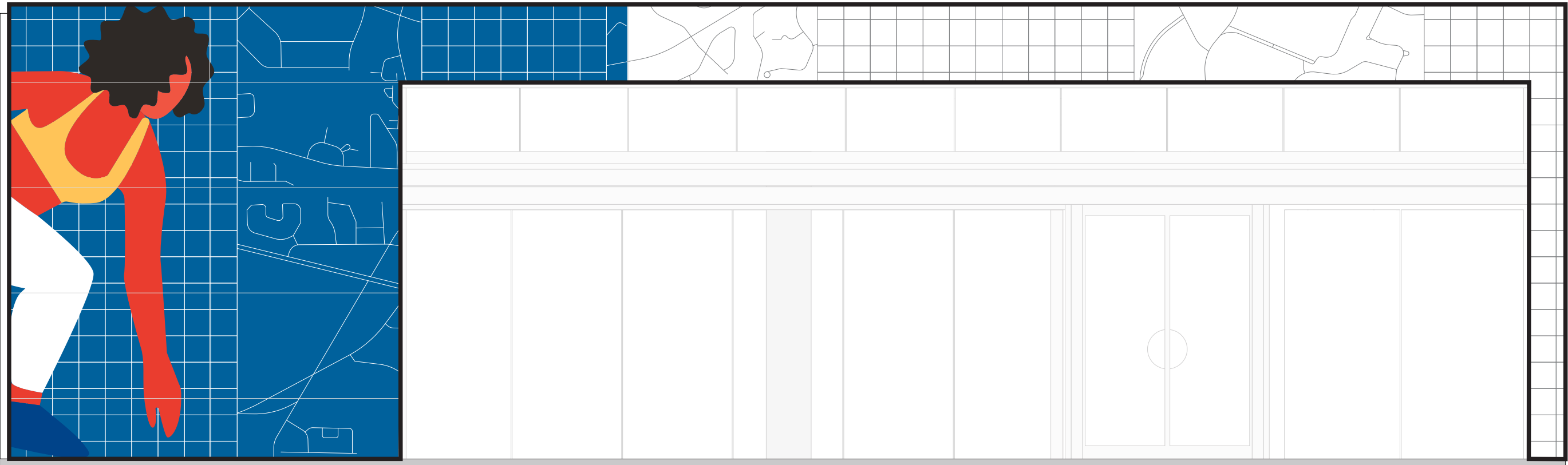
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7
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PROPOSED EXTERIOR ELEVATION



PROPOSED ARTWORK LAYOUT



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PROPOSED EXTERIOR PERSPECTIVE



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PROPOSED EXTERIOR



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VINYL

Characteristics

These are typical values for unprocessed product. Processing may change the values.

Physical Characteristics

Characteristic	Value
Material	Vinyl
Film Color	White
Thickness	Without adhesive: 2 mils (0.05 mm) With adhesive: 3 to 4 mils (0.08 to 0.10 mm)
Adhesive	Pressure sensitive
Adhesive Color	Gray pigmented for excellent hiding power
Liner	Layflat polyethylene coated paper
Adhesion, Typical 24 hours after application	Adhesion depends on the substrate material texture and application technique. See Test Procedure.
Chemical Resistance	Resists mild alkalis, mild acids and salt. Excellent resistance to water (this does not include immersion)
Flammability	Call 1-800-328-3908 for information

Application Characteristics

Characteristic	Value
Finished Graphic Application Recommendation	Application surfaces: Moderately-textured surfaces such as concrete block, brick, industrial stucco and tile, as found on flat walls and/or simple curved architectural elements such as columns. See Instruction Bulletin 5.37 for details. Substrate temperature: 40 ° to 100 °F (4 ° to 38 °C)
Applied Shrinkage	0.015 inches (0.4 mm)
Graphic Removal	Varies with type of substrate; using heat enhances removal of film; may leave adhesive residue, may remove some surface paint or finish, may damage mortar

**PDF with warranty information, install, & removal is attached with this document.*



***REFERENCE PROJECT FOR GRAPHIC APPLICATION ON ACM PANELS**

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3M™ Scotchcal™ Graphic Film
for Textured Surfaces

Product Bulletin IJ8624
Revision E, September 2017

IJ8624

For Piezo Inkjet Printing

Product Description

These are 2-mil removable graphic films designed for piezo inkjet printing. When heated and applied with 3M's application tools and techniques, this film conform to moderately textured surfaces on both flat and curved substrates, including concrete block, brick, industrial stucco and tile similar to those surfaces commonly found in sports arena, stadiums, restaurants, retail and other public venues.

Product Features

- Pressure sensitive adhesive
- Resists mild alkalis, mild acids, and salt
- Excellent resistance to water (this does not include immersion)
- IJ8624 is a durable, high performance cast film with excellent imaging capability. To ensure that this film meets your specific needs, 3M recommends that graphic manufacturers test this film for satisfactory printing, cutting, adhesion and removal characteristics for the intended end uses. This information does not imply a warranted durability period.
- Expected Performance Life of 7 years (unwarranted period for unprinted film with no graphic protection, applied to a flat, vertical, outdoor surface)
- Expected Performance Life for Textured Surface Graphics of 2 years (indoor in most applications); and 6-12 months (outdoor when not used in freezing and thawing cycles). See "Factors that Affect Graphic Performance Life" on page 4.

When constructed and used as described in this Bulletin, these types of graphics and end uses are covered by 3M's Basic Product Warranty. Please read the entire Bulletin for details.

- Graphics applied to indoor or outdoor moderately textured surfaces. See Application Characteristics on page 2 for details.

 **CAUTION**
Be aware that graphics installed outdoors can develop mold or mildew on top of or behind the graphic, which may be a health concern for some individuals, especially during graphic removal.

Recommended Compatible Products

See 3Mgraphics.com/warranties for a complete list of compatible products that are approved by 3M for use with the base film covered in this Bulletin and used for the creation of a graphic that may be eligible for the 3M™ MCS™ Warranty or 3M Performance Guarantee.

Piezo Inkjet Printing

- Any piezo inkjet ink or printer (test and approve)
- [3M™ Scotchcal™ Luster Overlaminate 8524](#)

OEM Inkjet Inks and Printers for the 3M Performance Guarantee

See the [3M Performance Guarantee Matrix](#) for a complete list of compatible OEM Inkjet Inks and Printers that are approved by 3M for use with the base film covered in the Bulletin and used for the creation of a graphic that may be eligible for the 3M Performance Guarantee.

Quick Links

[3M Graphics Warranties](#)

[Technical Information Selector](#)

[Safety Data Sheets \(SDS\)](#)

[Flammability \(ASTM E84 Reports\)](#)

[Videos](#)

Some of these links lead to web-based resources that are not product-specific.

3M™ Scotchcal™ Graphic Film

Graphic Protection

Graphic protection may improve the appearance, performance and durability of the graphic. Click on the graphic protection options listed in Product Bulletin or see the [3M Graphics Market Product Catalog](#) for more information.

 **IMPORTANT NOTE**

During installation, scratches may occur on film without graphic protection.

- [3M™ Scotchcal™ Luster Overlaminate 8524](#)
- [3M™ Revision™ Luster Wrap Overlaminate 8544](#)
- [3M™ Revision™ Gloss Wrap Overlaminate 9546G](#)

Application Tapes

There are two types of application tapes. See [3M Instruction Bulletin AT-1](#) to determine what application tape is recommended for your film or finished graphic.

Premasking Tape

Increases stiffness during application while preventing stretching and damage. Use when little or no liner is exposed. See [3M Instruction Bulletin 9-3](#) for complete details.

Prespacing Tape

Holds cut and weeded letters or graphics in place during application and after removing the film liner, while preventing stretching and damage. Use when large amounts of liner are exposed. See [3M Instruction Bulletin 9-2](#) for complete details.

Other Products

- [3M™ Edge Sealer 9030](#)
- [3M™ Edge Sealer Tape 8314](#)
- [3M™ Vision Channel Application Tool VCAT-2](#)

Certificate of 3M™ MCS™ Warranty

Graphic manufacturers who produce digitally printed graphics made with all 3M Graphics Products, including 3M Ink purchased through a qualified 3M Distributor or 3M Printing Partner, may register to be recognized with a Certificate of 3M™ MCS™ Warranty. Only graphic manufacturers having a current Certificate of 3M™ MCS™ Warranty are eligible to extend this warranty to their customers.

NOTE: For non-digitally printed Finished Graphics, check your eligibility for the 3M™ MCS™ Warranty by viewing the Warranty Period found within the Product Bulletin or using the warranty selector at www.3mgraphics.com/warranties.

Characteristics

These are typical values for unprocessed product. Processing may change the values.

Physical Characteristics

Characteristic	Value
Material	Vinyl
Film Color	White
Thickness	Without adhesive: 2 mils (0.05 mm) With adhesive: 3 to 4 mils (0.06 to 0.10 mm)
Adhesive	Pressure sensitive
Adhesive Color	Gloss pigmented for excellent hiding power
Liner	Levylid polyethylene coated paper
Adhesion, Typical 24 hours after application	Adhesion depends on the substrate material, test method, application technique. See Test Procedure.
Chemical Resistance	Resists mild alkalis, mild acids and salt. Exposed resistance to water (this does not include immersion).
Flammability	Class I-200-220-3000 for information.

Application Characteristics

Characteristic	Value
Finished Graphic Application Recommendation	Application surfaces: Moderately textured surfaces such as concrete block, brick, industrial stucco and tile, as found on flat walls and on simple curved architectural elements such as columns. See Instruction Bulletin 5-27 for details. Substrate temperatures: 40 °F to 100 °F (4 °C to 38 °C)
Applied Thickness	0.015 inches (0.4 mm)
Graphic Removal	Varies with type of substrate using heat enhanced removal; all films may leave adhesive residue; may remove some surface paint or finish; may damage mortar.

Warranty Information

 **IMPORTANT NOTE**

Warranty information including limitations and exceptions and warranty periods for this product can be found at 3Mgraphics.com/warranties.

3M Basic Product Warranty

3M Graphics Products are warranted to be free of defects in materials and manufacture at the time of shipment, and to meet the specifications stated in its applicable 3M Graphics Product Bulletin and as further set forth in the [3M Graphics Warranties 9 items](#).

Limited Remedy

The limited remedy applicable to each warranty is addressed in the 3M Graphics Warranties Bulletin found at 3Mgraphics.com/warranties.

Limitation of Liability

Except to the extent prohibited by law, 3M SHALL NOT UNDER ANY CIRCUMSTANCES BE LIABLE TO PURCHASER OR USER FOR ANY DIRECT (EXCEPT FOR THE LIMITED REMEDY PROVIDED HEREIN), INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, LARGER, NON-3M MATERIAL DAMAGES, LOSS OF PROFITS, REVENUE, BUSINESS OPPORTUNITY, OR GOODWILL) RESULTING FROM OR IN ANY WAY RELATED TO 3M'S GRAPHICS PRODUCTS, SERVICES, OR THIS BULLETIN. The limitation of liability applies regardless of the legal jurisdiction under which such losses or damages are sought.

Product Bulletin IJ8624 - Revision E, September 2017

3

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12
12/15/21

EXTERIOR FACADE ELEVATION



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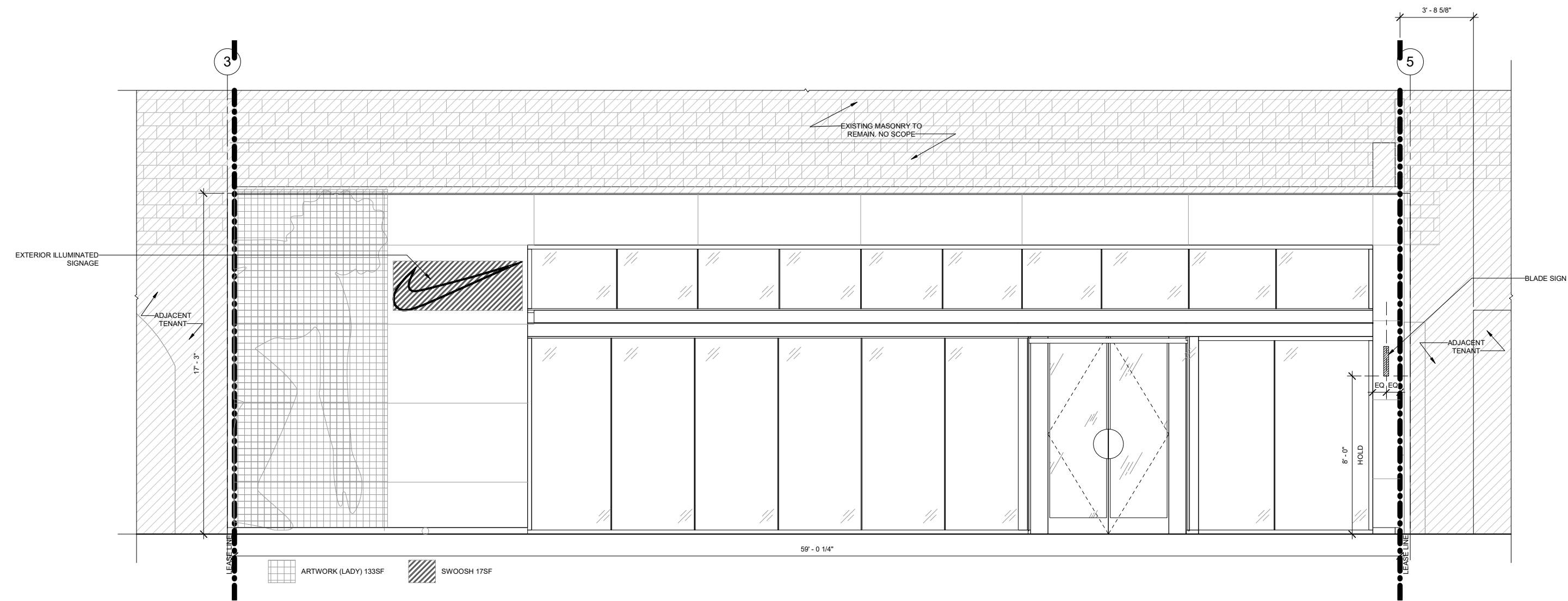
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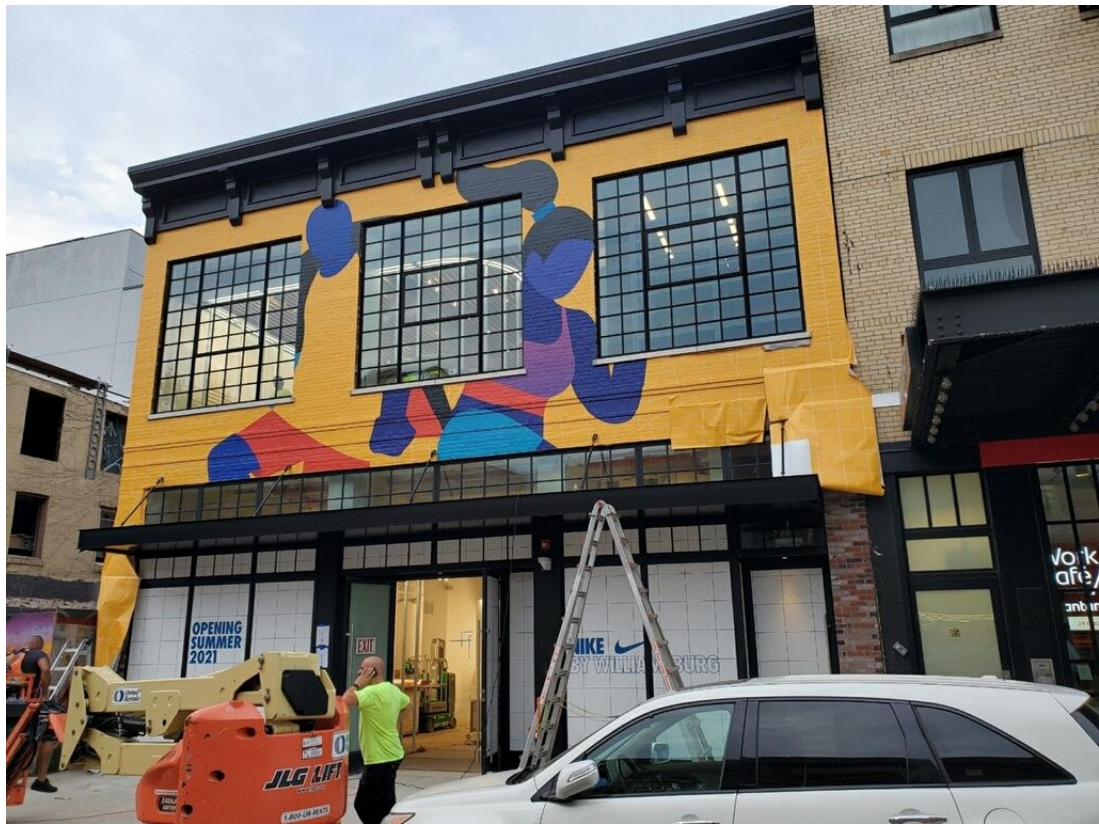


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A Guide to Understanding and Applying Graphics to Common Smooth and Textured Wall Surfaces

**Why you'll want to read this Bulletin
before you wrap another wall!**

It's all about a successful installation.

Low VOC paints are driving change in wall film applications. The chemistry of paints has been changing over the years to drive down the level of Volatile Organic Compounds, VOCs, due to both sustainability efforts and regulatory requirements. These new paint formulations have changed how the painted surface interacts with the adhesive on films, affecting the films' ability to adhere to the paint.

Simple steps can maximize film adhesion. Because the paint formulations are protected by trade secrets, it is difficult for any film manufacturer to understand how film adhesives interact with these paints. We have found through extensive testing that there is no single film or adhesive that works "best" on each paint tested. In fact, one film can perform well on one paint and poorly on another paint. However, by using the new 3M™ Enhanced Adhesion Cleaning Method and testing the film's adhesion to the walls, which are covered in this Bulletin, you can quickly, easily and successfully adhere almost any 3M wall film to nearly any paint.

Reading and following the techniques in this Bulletin can be the difference between a successful installation and a happy customer, and a graphic that falls off the wall prematurely.

Important Considerations

- Due to the wide variety of surface types and surface finishes, including low VOC paints, 3M provides only a Basic Product Warranty for unused material; no warranty is implied or offered for the adhesion, printed or applied appearance, durability or removability. See details on page 4.
- A change in gloss or wall staining after film removal is possible. It is usually the result of one or more of the following: the initial wall cleaning process, paint and pigment quality, exposure to heat and light, migrating particles in the paint, and/or adhesive residue. See details on page 8.

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Films Mentioned in This Bulletin

3M™ Envision™ Print Wrap Film 480Cv3
 3M™ Envision™ Gloss Wrap Overlamine 8548G
 3M™ Controltac™ Graphic Film with Comply™ V3 Adhesive IJ180Cv3-10
 3M™ Scotchcal™ Luster Overlamine 8524
 3M™ Scotchcal™ High Tack Graphic Film IJ39-20

1. Information for Designers, Specifiers, Graphics Manufacturers and Installers

1. Your Role in a Successful Installation

A successful installation is the result of a collaboration between designers, specifiers, graphics manufacturers (or converters) and installers in order to meet the needs of the customer. Being aware of the details of the installation will help ensure success.

2. Understand the Customer's Expectations

- Length of time the film must remain on the wall.
- Whether removability is a requirement. See Step 10, page 4.
- Expectations of wall appearance upon removing film.

3. Know the characteristics of each application surface (wall) and the environment to which the film will be exposed.

- **Jobs that include multiple walls.** Consider the characteristics of each wall, which may have various textures, exposures or finishes. If there are multiple types of walls, the graphics manufacturer may need to select more than one 3M film to complete the job.
- **Wall soundness.** The soundness of any wall may vary from spot to spot and no test can ensure consistent results over the entire application area.
- **Paint.** "Paint" includes all wall finishes. Some finishes may have silicone, graffiti-resistance or texturizing additives that can make film adhesion even more difficult.
- **Physical contact.** Exposure to physical contact with people, animals or equipment.
- **Indoor smooth walls**
 - Constant or variable temperature and/or humidity.
 - Direct or indirect sunlight.
 - Wallboard that conceals heating or cooling ducts, pipes or water source, behind or in close proximity. Moisture that seeps into wallboard, even if it has been sealed on the face, will likely result in further wall damage if the film is removed from it.
 - Block walls in front of equipment such as a pool. If well sealed and cured, may not cause a problem.
- **Outdoor textured walls**
 - **Excessive texture.** More than 1/8 inch (3 mm) variation in high and low spots of substrate texture and grout lines, as well as square cut or undercut grout lines, may result in lifting.
 - **Insufficient adhesion.** If installed film can be easily removed from a textured wall using a force of <2 pound/lineal inch (0.36 kg/cm), it is unlikely to be durable in an outdoor application.
 - **Exposure to moisture.** Film exposed to water from rain or irrigation systems can be trapped behind film applied outdoors, leading to lifting as well as the creation of mold. Applying a bead of sealant along the top of the film helps reduce these issues.



Caution

Mold or mildew on top of or behind the film may be a health concern for some individuals, especially during film removal.

– Excessive temperatures.

- Substrates that reach temperatures higher than 115°F (46°C) may exhibit lifting, especially in grout lines.
- **Freezing and thawing cycles.** For a textured masonry wall that has both an indoor facing side and an outdoor facing side and no effective moisture barrier, moisture vapor transmission occurs naturally when the indoor wall has a room environment that is warmer and moister than the outdoor wall. When film is applied to the outdoor wall and there are cycles of freezing and thawing, moisture can be trapped between the wall and result in film lifting, as well as in spalling both within the wall and on the outdoor facing wall. Such damage can be unsightly and costly to repair.

Salts passing through masonry may be trapped behind the film. Salt collection on the masonry wall for extended periods may cause staining or discoloration.

Always check and follow your local building codes. 3M is not responsible for damage caused by using this product for any wall application.

4. Graphics Manufacturing Considerations

- **Smooth Walls.** Film must retain some flexibility in order to achieve maximum adhesion. Do not use a stiff or thick overlaminate (over 3 mils) on the base film.
- **Textured Walls.** 3M film applied to a textured wall requires using the recommended overlaminate: Film IJ8624 with overlaminate 8524, or film 480Cv3 with overlaminate 8548G.
- **Imaging method.** Use only the inks recommended for the film you use and follow the ink's Product & Instruction Bulletin for proper use. Solvent inkjet printed film must have sufficient time for all solvent to evaporate before the graphics manufacturer applies the overlaminate (3M recommends 24 hours for best results). Failure to do so may result in outgassing when the film is applied, which can contribute to poor or inconsistent film adhesion.
- **Inform the installer.** The graphics manufacturer needs to convey details about the graphic construction to the installer.

5. Perform a 3M Wall Film Adhesion Test on the Walls and with the Films You Plan to Use

Important Note

Smooth walls: Testing the film adhesion on smooth walls takes less than 30 minutes.

Textured walls: Testing film adhesion on textured walls takes about 30 minutes to perform, but must stay in place for one week (recommended) to get an accurate assessment of adhesion strength. Plan ahead so you can complete this important test!

- **Either the graphics manufacturer or the installer can do film adhesion tests.** It's important to test both the films you plan to use and the walls that will receive film before the full job is printed. In many cases, the graphics manufacturer may be in the best position to do the adhesion tests. If testing is done by the installer, they need to report the results to the graphics manufacturer.
- Test the film(s) on each wall to receive film. The paint used on different walls may look the same but have a different paint chemistry or cure time—factors that affect adhesion.
 - 3M Smooth Walls Film Adhesion Test: see page 9.
 - 3M Textured Walls Film Adhesion Test: see page 12.

6. Examining Job Site Walls

At some point before the installation, it is a good practice to contact the property or building maintenance manager for the installation site to determine the following.

- Will any wall repairs be made in time to dry properly?
- Will any new finishes have the proper time to cure? Cure time varies greatly and can be as long as 30 days.

Important Note

It is critical that the paint be allowed to cure for the entire time period stated by the paint manufacturer.

- Does the wall show poor paint-to-substrate bond?
 - Obvious: peeling, lifting or bubbling of the paint.
 - Less obvious: multiple layers of paint on the substrate. The bond of one or more layers to another layer may not be adequate. The weight of the film on such a wall may contribute to the separation of paint layers, resulting in paint and film falling off the wall.

7. Considerations in Bidding a Job

- Include time for doing the 3M Wall Film Adhesion Tests. The wall test must include travel time and testing time. The following are estimates only based on 3M experience performing tests.
 - Testing 3 different films on 1 smooth wall: 30 minutes
 - Testing 1 film on 1 textured wall: 45 minutes. Remember, the film must be left in place for 1 week, so consider the time needed to return to the job site.
 - Cleaning a wall prior to installing the job: 30 minutes for 125 square feet (11.6 square meters)

8. Proper Wall Cleaning is an Essential Step to Good Adhesion

Using the **3M™ Enhanced Adhesion Cleaning Method** on page 14 helps make sure the wall is ready to receive and hold film. Adopting this as a best practice for every installation can make the difference between success and failure.

9. Using the Proper Installation Techniques

Installers must use the proper tools and installation techniques, as described in this Bulletin and any others recommended by 3M.

10. Limitations and Warranty

- 3M provides only a Basic Product Warranty only for unused material; no warranty is implied or offered for the adhesion, printed or applied appearance, or durability.
- 3M does not warrant easy or clean removal of any film, even film described as removable or changeable, from indoor or outdoor walls. Removal may damage the substrate by removing small to large amounts of paint, changing the gloss of the paint, or pulling the paper off the wallboard. The bond of a paint to the wall is often less than the bond of the film to the paint. Proper removal techniques may help minimize damage.
- The **3M Wall Film Adhesion Tests** (smooth walls, page 9, or textured walls, page 12) may not detect problems with pre-existing variations in the substrate, poor paint-to-substrate bond, poor bond between multiple layers of paint on a substrate, or insufficiently cured paint.
- Film applied to contaminated walls, or walls that exhibit visible signs of peeling, lifting, bubbling, or dampness are likely to fail.
- The color and/or shape of any underlying film or image may be visible after application of a new film. Films with a gray adhesive increase have increased hiding power.
- Under-cured paint may continue to outgas and cause bubbles in film that appears to be well applied right after application.

2. Worksheet for Walls

Important Note

The results of the 3M Wall Film Adhesion Tests will help determine which film is most suitable for the job. In some cases, one job may require using more than one film, depending on the adhesion that can be achieved on each different wall.

Make Copies of This Page As Needed

Installation Site Information	Adhesion Test Results		Finished Graphics To Be Installed		
Business Name	Test Strip Film Number	Adhesion Value	Graphic Description	Graphic Size (Square feet)	Location of Wall
Address					
City/State/Zip					
Customer Information					
Contact Name					
Business Name					
Address					
City/State/Zip					
Area Code/Phone					
Graphics Manufacturer					
Business Name					
Area Code/Phone					

Installation Site Information	Adhesion Test Results		Finished Graphics To Be Installed		
Business Name	Test Strip Film Number	Adhesion Value	Graphic Description	Graphic Size (Square feet)	Location of Wall
Address					
City/State/Zip					
Customer Information					
Contact Name					
Business Name					
Address					
City/State/Zip					
Area Code/Phone					
Graphics Manufacturer					
Business Name					
Area Code/Phone					

3. Wall Textures and Composition

A. Definitions

Application surface. The actual surface to which a film is applied. This may be the finish (paint, varnish, wallpaper), a high tack film applied to the substrate, a composite material or the bare substrate. The application surface is simply called a wall in this Bulletin.

Substrate. The supporting structure of a wall, such as wood framing members covered by wallboard, or hard surfaces such as brick, concrete block, stucco, etc.

Texture. This is the tactile feeling that every wall has. Texture can be as smooth as glass or as rough as heavily textured concrete—and everything in between. Whether it is smooth or rough, texture has a significant affect on film choice, ease of application, film adhesion and removal. These descriptions provide a way to generally categorize texture but are subject to interpretation. Use them in combination with the photos of textures on the next page to better understand the texture of your walls, and make the right film choices and use the proper installation techniques.

- **Smooth texture.** Little or no surface variation. Allows the easiest application since the adhesive can make contact with the entire surface.

Painted wallboard has more texture than you might expect. See page FIGURE 19, page 17, for details.

Film IJ8624/8524 is intended only for use on textured surfaces.

Film 480Cv3/8548G may be used on smooth walls or textured walls.
- **Unsmooth texture.** Has moderate high spots and low spots, which range from just a little texture (like fine sandpaper) to heavy texture (like brick). Extra effort and more time-consuming application techniques are needed to conform the film to the texture. The amount of variation in texture changes throughout any given textured substrate, and your results using the same measuring tool could vary. These descriptions help differentiate textures using the terms related to 3M film recommendations.
 - **Medium unsmooth texture.** Relatively equal distribution of moderately high and low spots.
 - **Heavy unsmooth texture.** Irregular and severe high spots and/or low spots.

Important Note	Do not use 3M's films for textured walls on substrates with loose surfaces, such as loose sand-textured block. The textured should be more firmly anchored, like sandpaper.
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B. Common Indoor Wall Composition

This describes the wall's substrate material.

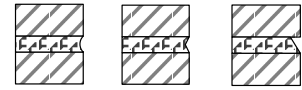
Brick. A kiln-dried, hard clay surfacing material, thicker than tile, for indoor or outdoor walls. Inherently smooth, but may be patterned or textured before firing. Usually has grout lines.

Concrete. A building material made from a mixture of portland cement, water, fine and coarse particles. Texture can range from smooth to heavy.

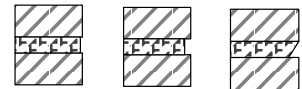
Concrete masonry (CMU). A usually hollow building block made with concrete. May be painted or unpainted. Texture is usually medium. Usually has grout lines.

Grout lines (mortar joints). A concrete or composite product used to hold together building materials such as concrete blocks and brick. Such lines can range greatly in width, depth, profile and texture. 3M films for textured walls work best if the grout lines are not more than about 1/8 inch deep, and are flush, concave or V-shaped. Excessive rough texture, excessively steep elevation change—such as Raked, or an undercut profile—such as Weathered or Struck, generally provide challenging applications that may not have the results you desire. The **Mosaic Graphic Technique** on page 22 is the most effective way to manage film in excessively deep grout lines.

Weather-resistant Grout Lines



Non Weather-resistant Grout Lines



Excessive Rough Texture

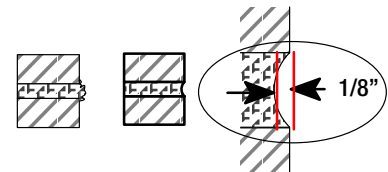


FIGURE 1 Grout Line Examples

Painted wallboard. Common indoor wall surface, primed, painted and thoroughly dried. Texture varies depending on paint technique.

Stucco. A cement or plaster mixture that is hand or machine applied to indoor or outdoor walls. The example is between smooth and medium texture, although texture can range from smooth to heavy.

Tile. A kiln-dried, thin, hard clay surfacing material for indoor or outdoor walls. May be glazed or unglazed. Texture is usually smooth or a smooth base with an irregular pattern of light texture. Usually has grout lines.

C. Common Wall Finishes

Vinyl or paper wallcovering. A thin to heavyweight material used to cover indoor walls. Texture can range from smooth to heavy and may have little to significant pattern. These materials may contain plasticizers that migrate to the surface and can cause premature film adhesion failure.

Note: Film intended for use on textured walls but applied to any vinyl or paper wall covering or wallboard, will typically also pull off the wall covering or wallboard paper during removal. Use at your own risk.

Paint. Refer to the Paint section, page 8.

Glaze, varnish or other surface sealant. A product applied to a wall to provide color, gloss, protection and/or cleanability.

Note: In this Bulletin, "paint" refers to any type of wall finish.

D. Photos of Textures

Use the descriptions on this page and the photos on page 7 to determine both the texture and wall composition of common wall surfaces. These characteristics are important in selecting and using the right film as well as determining if the wall is suitable for a successful film application.

Painted Wallboard -
Smooth Texture
☐ Use Smooth Wall Film



Vinyl Wallcovering -
Heavy Unsmooth Texture
☐ Use Textured Surface Film



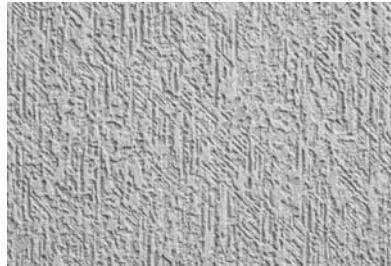
Concrete -
Heavy Unsmooth Texture
☐ Use Textured Surface Film



Painted Wallboard -
Medium Unsmooth Texture
☐ Use Smooth Wall Film



Vinyl Wallcovering -
Heavy Unsmooth Texture
☐ Use Textured Surface Film



CMU/Concrete Block, Painted/Unpainted
Medium Unsmooth Texture
☐ Use Textured Surface Film



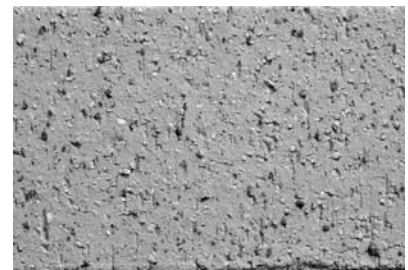
Painted Wallboard -
Heavy Unsmooth Texture
☐ Contact Technical Service



Glazed Tile -
Smooth Texture with Mortar Lines
☐ Contact Technical Service



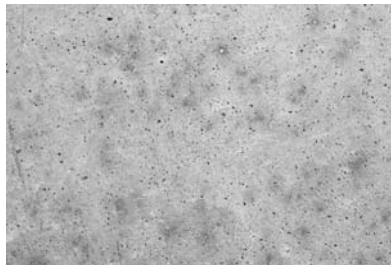
Medium Unsmooth Texture Brick
☐ Use Textured Surface Film



Vinyl Wallcovering -
Smooth Texture
☐ Use Smooth Wall Film



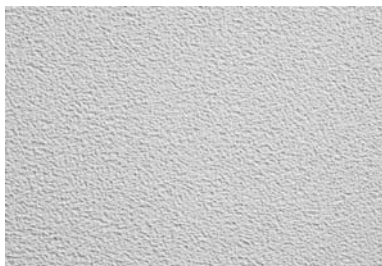
Poured Concrete -
Smooth Texture
☐ Use Smooth Wall Film



Industrial Stucco -
Medium Unsmooth Texture
☐ Use Textured Surface Film



Vinyl Wallcovering -
Medium Unsmooth Texture
☐ Use Textured Surface Film



Concrete -
Medium Unsmooth Texture
☐ Use Textured Surface Film



4. Understanding Paints and Wall Finishes

Important Note

Low VOC paints are driving change in wall film applications. The chemistry of paints and wall finishes has been changing over the years to drive down the level of Volatile Organic Compounds, VOCs, due to both sustainability efforts and regulatory requirements. These newer paint formulations have changed how the painted surface interacts with the adhesive on all films, affecting the films' ability to adhere to the paint.

Simple steps can maximize film adhesion. Because the paint formulations are protected by trade secrets, it is difficult for any film manufacturer to understand how film adhesives interact with these paints. 3M has found through recent testing with many low VOC paints that there is no single film or adhesive that works "best" on each paint tested. One film can perform well on one paint and poorly on another paint. However, by using the cleaning and testing procedures described in this Bulletin, you can quickly and easily determine how well the films you want to use will adhere, and then successfully install the job.

1. Outgassing resulting from uncured paint

As paint dries, it releases certain gases until it is fully dried and cured. Applying a film before the paint has fully cured can result in lifting, bubbles and a premature installation failure. Unfortunately, there is no way to test for this. Cure time varies greatly and can be as long as 30 days.

Important Note

It is critical that the paint be allowed to cure for the entire time period stated by the paint manufacturer.

2. Paint particle migration

Particles in the paint can migrate to the surface over time. The first time you clean the wall with the Isopropyl Alcohol mixture (you'll do it twice), you may notice a powdery substance on the cleaning cloth, the same color as the paint. See FIGURE 7, page 14, for an example of particles that have migrated to the surface.

Migrated particles not only affect initial adhesion if the wall is not properly cleaned, but can also affect film removal later on.

3. Differences in paint finishes

While films have historically adhered best to semi-gloss finishes, proper testing and preparation of every type of painted wall is now required to ensure success.

4. Textured paints or surfaces

3M offers films designed for use on smooth surfaces or textured walls. Performing the 3M Wall Film Adhesion Test helps ensure that the correct films are chosen for a job.

5. Change in surface gloss or appearance after film is removed

The cleaning procedure, heat, environmental exposure, natural fading of uncovered areas, and other factors can contribute to a change in the appearance of the paint's original gloss or staining on the wall.

5. Film Adhesion Characteristics and Testing: Smooth and Textured

A. All Walls - Adhesion Characteristics

Adhesion is the ability of the film's adhesive to bond to the wall. The amount of both initial and final adhesion varies with the type of adhesive used on the film, the texture of the wall, the paint characteristics, the application temperature and the application techniques. The adhesive bond builds with time. The film may never achieve its full bond if it is poorly applied or you are using the wrong film/adhesive combination for the wall and its paint.

- **Adhesion, final.** The maximum amount of bond achieved by a film, usually in 24 to 48 hours after installation except in cool temperatures or textured walls.
- **Adhesion, initial.** The amount of bond needed to hold the film in place during application.
- **Size of film.** The larger the piece of film, the greater the initial and final adhesive bond to the wall must be to support the weight of the film.
- **Imaging method.** Use only the inks recommended for the film you use and follow the ink's Product & Instruction Bulletin for proper use. Solvent inkjet printed film must have sufficient time for all solvent to evaporate before the graphics manufacturer applies the overlaminate (3M recommends 24 hours for best results). Failure to do so may result in outgassing when the film is applied, which can contribute to poor or inconsistent film adhesion.
- **Stretching the film.** Film stretched during application may later shrink. This affects the film's adhesion to the wall and may result in premature failure.

B. Effect of Overlamine on Adhesion

Film must retain some flexibility in order to achieve maximum adhesion. Do not use a stiff or thick overlaminate (over 3 mils).

Films that will be applied to textured walls using heat need the recommended overlaminate. The overlaminate is critical in helping conform the film to the texture.

Refer to the base film's Product Bulletin for the recommended graphic protection options. The most common constructions are:

- **Smooth walls**
 - One of the recommended films with overlaminate luster 8519 and matte 8520.
- **Textured walls**
 - Textured walls: Film IJ8624 with overlaminate 8524.
 - Textured walls: Film 480Cv3 with overlaminate 8548G.

6. 3M Wall Film Adhesion Test for SMOOTH Walls

A. Purpose of Wall Film Adhesion Test

This test is designed to show *initial adhesion capability measured in grams*, of the wall film you plan to use when the wall is cleaned according to 3M's recommendations and the film is applied to a fairly smooth indoor wall surface.

B. Limitations of Test and Cleaning Method

This test cannot detect problems with pre-existing variations in the wall or poor paint-to-wall bond. Such problems may result in poor film adhesion as well as wall damage upon attempted removal of the film. 3M is not responsible for the results of film installed on walls.

Important Note

Removal of any film from a painted wallboard wall always has a risk of pulling paint off the wall or even damaging the wall. Increasing the initial adhesion of film by using the processes described in this Bulletin may actually make attempted removal more challenging. If this is a concern for your customer, please see some **Options** on page 11.

C. Before Doing the Test

1. Review and use the **Walls Worksheet**, page 5.
2. Read and understand the types of wall surfaces and the variables that influence film adhesion. See **Wall Textures and Composition**, page 6.

D. Test Conditions

- Perform the adhesion tests in an inconspicuous area of the same wall on which you will be applying the actual job.
- If you will be applying film to more than one wall, perform the tests on each wall. While one wall may look the same as another in color and gloss, they may have been painted at different times and with different paint, which can affect the adhesion test results. Performing the test on a different wall/paint than will be used in the job will not give you the adhesion values and information you need to make a good evaluation.

Important Note

For each film being considered you will be testing **THREE** samples of the same film on the same wall and comparing the results.

E. Supplies Needed

- Spring scale
 - Scales are available from: Ohaus 29 Hanover Rd., Florham Park, N.J. 07932; 1-800-672-7722, www.ohaus.com.
 - 0-500 grams, part number 8002-MA
 - 0-1000 grams, part number 8003-MN
 - 0-2000 grams, part number 8004-MA
- 3M™ Rivet Brush RBA-1
- Copy or cut out the **Measured Reference Guide** from page 29. This will be used during the test to help you gauge how fast to pull the film strip.
- Hole punch
- Strips of each film you plan to test

Note: See **3M™ Enhanced Adhesion Cleaning Method** on page 14 for other supplies that will be needed.

F. Prepare the Film Test Strips

1. Cut three, 1 inch by 10 inch (2.5 cm x 25 cm) strips of each film you plan to test on a given wall.
2. Note the film name or number on each test strip and on the **Walls Worksheet**, page 5.
3. Remove about 2 inches (5 cm) of liner and fold over the film, adhesive to adhesive, to make a tab.
4. Punch a hole in the tab.



FIGURE 2 Preparing Film Strips

G. Film Adhesion Test Procedure

1. Clean the area of the wall you will be testing using the **3M™ Enhanced Adhesion Cleaning Method** on page 14.
2. Use your thumb to initially adhere the film strip (punched hole at the top) to the cleaned wall.

Important Note

You will test three strips of the same film on the same wall. You may apply all of them at one time, leaving a few inches between each.

3. Working in the long direction of the test strip and using the RBA-1 rivet brush, use firm pressure and a circular motion to go over the strip three times to firmly adhere it to the wall. See FIGURE 3.



FIGURE 3 Adhering Film Strips

4. Tape the **Measured Reference Guide** next to the film strip you are testing. See FIGURE 5.
5. Wait a full 15 minutes before proceeding with the test to allow some adhesion to build.
6. Make sure the scale is zeroed out per the scale manufacturer's recommendations.

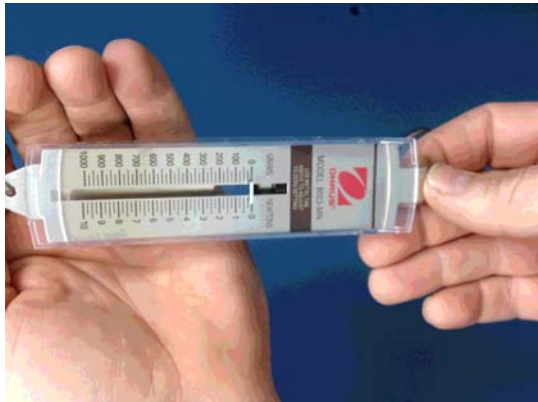


FIGURE 4 Zeroing Scale

7. After 15 minutes, slide the scale's S hook through the punched hole in the film strip.
8. Hold the scale in your palm, keeping it as straight as possible but without any portion of the scale or your hand contacting the wall during the test.
9. Pull the scale downward at a steady rate of about 1 inch (2.5 cm) in 5 seconds, using the **Measured Reference Guide** lines as a guide. **Once you have started pulling, DO NOT STOP until the film is fully released from the wall.**

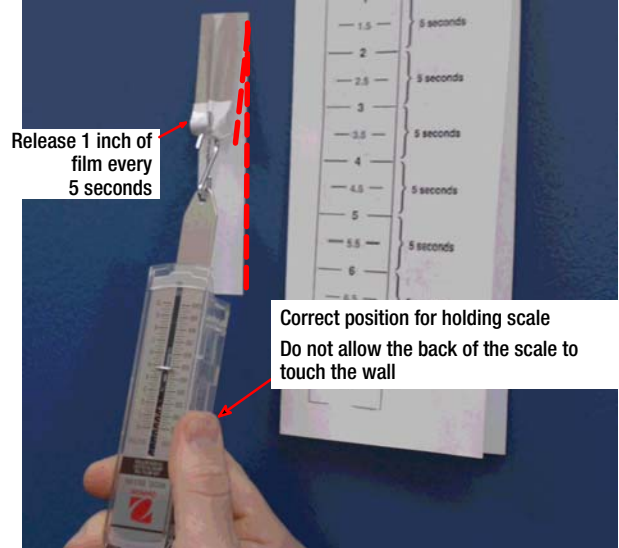


FIGURE 5 Release Test

10. As you pull down on the scale:
 - a. Observe the release characteristics of the film and compare to the table, below.
 - b. Note and record the grams/inch that register on the scale.
11. Repeat steps 2 to 10 for each of the same test strips. This is necessary so you can average the test results.

H. Test Evaluation - Smooth Walls Only

1. Averaging test results

If two or three out of three strips of the same film perform the same way, use those characteristics to judge the suitability of that particular film for that wall.

2. Interpreting scale values

Note: 450 grams equal 1 pound.

Scale Value	Release Characteristics	Recommendation
Less than 300 grams/inch	Removes very easily; little or no resistance	Unacceptable adhesion; do not use this film
300-1000 grams/inch	Smooth, consistent release; no jerkiness but more difficult to release	Acceptable adhesion; may be removable with heat/chemicals; removal may cause wall damage
Greater than 1000 grams/inch	Smooth consistent release; no jerkiness, but substantial resistance to releasing	Excellent adhesion; removal will cause damage

Note: Please see the next page for more important information about Test Evaluation--Smooth Walls Only.

H. Test Evaluation—Smooth Walls Only *continued*

3. Factors in unsatisfactory test results.
 - a. Test strip removes jerkily, unevenly.
 - Inconsistent or low adhesion value; due to high and low spots in the surface texture, the film's adhesive does not make full contact.
 - Cold wall and air temperature, which doesn't allow adhesive to flow or make full contact.
 - b. Test strip pulls paint off wall.

If any paint is pulled off with the test strip, the paint is not sufficiently bonded to the wall and film should not be applied until the problem is corrected, a new paint is fully cured, and the 3M Wall Film Adhesion Test is performed again with satisfactory results.
 - c. Poor film choice for the job.

All films being considered for a job should be tested before printing to ensure it is the right choice.
 - d. Films with Comply™ Adhesive (air release channels)

Films with Comply adhesive (e.g., film IJ180Cv3, 480Cv3), which have air release channels to ease installation, may be used for walls. However, if their tested adhesion values are too low, 3M recommends trying a film without Comply adhesive; such films typically have higher adhesion values.
4. Films that require greater adhesion level:
 - Films exposed to indoor environmental changes, such as direct sunlight or close proximity heat sources.
 - Overlaminated film (which adds weight).
 - Large pieces of film (which adds weight).

I. Options for Film That Must Be Removed or Changed

3M testing shows that using the **3M™ Enhanced Adhesion Cleaning Method** substantially improves film adhesion for almost every wall film. However, the higher adhesion means the film will be more difficult to remove and is likely to pull paint off the wall or damage the surface of the wallboard. There is no ideal solution, but the following options can be considered.

1. Construct a false wall.

Consider constructing a false wall and securing it to the original wall. Be sure to properly prime and paint the false wall and allow the paint to cure for the length of time specified by the paint manufacturer. Then, before installing the film, follow the cleaning and testing procedures described in this Bulletin. When the film is no longer needed, remove the false wall and repair any mounting holes.

2. Apply a new surface to an existing wall.

Some customers, such as at construction sites, may need to change film often. This option can be used on a false wall or on a wall that does not need to be reused at a later time.

Apply an aggressive film such as [3M™ Scotchcal™ High Tack Graphic Film IJ39-20](#) to the wall. Most removable or changeable 3M wall films will adhere very well to film IJ39-20 and remove reasonably well. Permanent adhesive films will not remove easily and may damage film IJ39-20. You can also apply one film over another if the new film has a gray pigmented adhesive, which offers good hiding power. Before installing the film that will be applied over film IJ39-20, follow the cleaning and testing procedures described in this Bulletin.

7. 3M Wall Film Adhesion Test for TEXTURED Walls

A. Purpose of Wall Film Adhesion Test

This test is designed to show whether a film for textured walls, when applied with heat and pressure, will continue to build adhesion during a one week (3M recommended) test period, or if it will peel off easily, indicating insufficient adhesive bond.

B. Limitations of Test and Cleaning Method

This test cannot detect problems with pre-existing variations in the substrate or poor paint-to-substrate bond. Such problems may result in insufficient film adhesion as well as wall damage if removing the film. 3M cannot be responsible for the results of wall installations.

Important Note	Removal of any film from a painted and/or textured wall has a risk of pulling paint, finish or texture off the wall. Increasing the film's initial adhesion by using the processes described in this Bulletin may increase potential damage to the substrate if removal is attempted.
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C. Before Doing the Test

1. Review and use the **Walls Worksheet**, page 5.
2. Read and understand the types of wall surfaces and the variables that influence film adhesion. See **Wall Textures and Composition**, page 6.

D. Supplies Needed

- Industrial heat gun with electronic readout, capable of achieving and sustaining 1000°F (538°C). Models you may want to consider are:
 - Steinel® HL 2010 E LCD Display IntelliTemp™ Heat Gun*
 - Milwaukee® 8988-20 Variable Temperature Heat Gun*
 - Bosch BOS1944LCDK Programmable Heat Gun Kit*
- *Other heat guns may meet your requirements. 3M is not responsible for the performance or suitability of these products.
- 3M™ Two-Handled Textured Surface Applicator TSA-4
- Heat resistant gloves
- Film/overlamine IJ8624/8524 and/or 480Cv3/8548G
 - **Option 1, preferred for most accurate results:** A 2 feet x 2 feet (61 cm x 61 cm) piece of film/overlamine, printed with the ink that will be used for the job
 - **Option 2:** A 2 feet x 2 feet (61 cm x 61 cm) piece of film/overlamine, unprinted
 - **Option 3:** A 8 inch x 11 inch (18 cm x 28 cm) piece of film/overlamine, unprinted—at least large enough to cover most of two blocks and one grout line

Important Note	Use the 3M recommended tools and procedures for this test. Any other methods will not result in accurate test results.
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CAUTION

When using any equipment or chemicals, always follow the manufacturer's instructions for safe operation.

E. Substrate Considerations

- **Pre-cast concrete material.** This material can have an oily surface and be speckled with dust because of the production process. These characteristics inhibit good film adhesion.
- **Greasy or sooty substrate.** Consider using TSP (tri-sodium phosphate) and water according to the manufacturer's instructions, or use 3M™ All Purpose Cleaner and Degreaser, diluted as recommended. Scrub the wall with a brush. Vacuum with a wet-dry vacuum, then allow to dry until it both looks and feels dry to the touch. Drying can take at least 24 hours and more in humid environments.
- **Outdoor unsealed surfaces** such as concrete can trap moisture, which may lead to film lifting or the growth of mold under the film. See Step 9, page 21, for a possible solution.

Important Note	Always check with the property or building maintenance manager before using any strong cleaning chemicals or harsh cleaning procedures.
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F. Film Adhesion Test Procedure

1. Follow the **3M™ Enhanced Adhesion Cleaning Method** on page 14 to prepare the area where you will apply the film.
2. Apply the film with the TSA-4 tool. See pages 18-21 for specific installation instructions.
 - a. **For film IJ8624/8524**, move at a rate of 2 inches/second (50 mm/second).
 - b. **For film 480Cv3/8548G**, move at a rate of 3 inches/second (75 mm/second).
3. 3M recommends leaving the film in place for one week to achieve full adhesion and to accurately assess adhesion.
4. After one week, inspect the film for obvious signs of lifting, and then try to remove the film. Loosen a corner and pull the film diagonally across itself (180 degree angle), holding it close to the wall. Compare your results to the following table.

G. Test Evaluation - Textured Walls Only

Release Characteristics	Conclusions
Film removes with some resistance; pulls off little or no paint	The film should perform satisfactory on this wall.
Film removes easily	No increase in adhesive bond; may result in premature graphic failure.
Removing the film pulls off substantial paint/finish/texture	No paint primer; insufficient paint curing.
Film popped out of grout lines	If the grout lines are deeper than 1/8 inch (3.2 mm) raked or under cut, but adhesion is otherwise good, trim the installed film using the Mosaic Graphic Technique on page 22, for the best results.

8. Health and Safety



CAUTION

Safety Data Sheets (SDS)

When handling any chemical products, read the manufacturers' container labels and the Safety Data Sheets (SDS) for important health, safety and environmental information. To obtain SDS sheets for 3M products go to [3M.com/MSDS](https://www.3m.com/MSDS), or by mail or in case of an emergency, call 1-800-364-3577 or 1-651-737-6501.

When using any equipment, always follow the manufacturers' instructions for safe operation.



WARNING

Physical Comfort

Any activity performed for a long period of time in an awkward position or with a high amount of force is potentially a risk for causing musculoskeletal strain, pain or injury. When applying graphics, follow these practices to improve comfort and avoid injury:

- Alternate your tasks during the application.
- Schedule regular breaks.
- Perform stretches or do exercises to improve circulation.
- Avoid awkward reaching.



WARNING

Risks of Using Heat Sources

- Read, understand and follow the safety instructions contained in both this 3M Instruction Bulletin as well as the heat-gun manufacturer's manual.
- Wear a heat-resistant glove on the hand(s) holding the applicator.
- Do not use heat sources near solvent mixtures or residues, or in areas where solvent vapors may be present at hazardous levels.
- Never use an open-flame heat source in this process.



CAUTION

Ventilation

Always provide adequate ventilation to remove emissions that may result from the use of heat. Failure to provide adequate ventilation can result in operator exposure.

Important Note

High Heat May Degrade Foam Rollers and Damage Substrate

High heat directed at the foam may degrade the foam. Always direct the heat toward the film, not the foam roller.

High heat may also damage the substrate: use with caution.

Important Note

Air Quality Regulations

State Volatile Organic Compound (VOC) regulations may prohibit the use of certain cleaning solutions. For example, the California South Coast Air Quality Management District prohibits use of certain solvent-based solutions without a permit and other California AQMD's prohibit use of certain solutions without a permit or a regulatory exemption. You should check with your State environmental authorities to determine whether use of this solution is restricted or prohibited.

9. 3M™ Enhanced Adhesion Cleaning Method

Important Note

For your safety, always wear protective eye wear and disposable gloves when cleaning walls.

Note: This cleaning procedure is also available in a one-page document. Look for **Instruction Bulletin Clean** at www.3Mgraphics.com.

A. Cleaning Procedure

1. Clean stubborn grease and grime with your preferred method.
2. Prepare a cleaning solution with 70% Isopropyl Alcohol (IPA) and 30% water in a spray bottle.
3. Soak a clean, lint-free cloth with the cleaning solution until it is dripping wet.



FIGURE 6 Soaking a Lint-free Cloth

4. Clean the test (or application) area with overlapping strokes. You may notice some migrated paint particles on the cloth.



FIGURE 7 Paint Particles After First Cleaning

Important Note

Change cleaning cloths often to avoid redepositing contaminants on another part of the wall. Soak each new cloth with the cleaning solution.

5. Thoroughly soak another clean, lint-free cloth with the cleaning solution and wash the wall again.
6. The alcohol in the cleaning solution will lower the surface temperature of the wall as much as 10 degrees F—a noticeable difference. When the alcohol has completely flashed off, which takes about 10 minutes, the wall will return to its normal temperature. You can use an IR gun to accurately measure the temperature before cleaning and immediately after cleaning, or simply touch the back of your hand to the cleaned area. When it no longer feels cool, it is dry and you can proceed with the film adhesion test, or if you are ready, with the film installation.

BEFORE CLEANING



IMMEDIATELY AFTER CLEANING

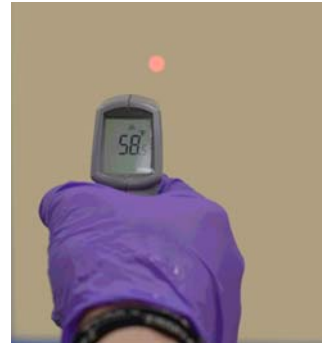


FIGURE 8 Testing Wall Temperature

Pro's Tip

1. Mark off sections of the installation area with masking tape and clean one area at a time to be sure you don't miss any areas.
2. Cleaning the installation area can reduce the gloss of the paint. Mark off the size of the graphic with masking tape and clean only within that area.

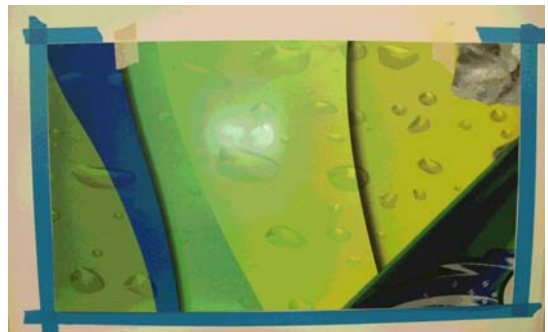


FIGURE 9 Clean Within Taped Area

B. Establish this Best Practice

3M recommends establishing this cleaning method as a best practice for every film adhesion test as well as every actual film installation.

C. Time Study for Job Estimating

In a time study, we determined that this cleaning method takes about 30 minutes for 125 square feet (11.6 square meters) which is approximately an 8 foot x 16 foot (2.4 m x 4.9 m) wall. Keep this in mind as you estimate your next job. It will be time well spent.

10. Installation to Smooth Indoor Walls - General Instructions

A. Tools and Supplies

- Scotch™ Masking Tape, 2 inch wide*
- 3M™ Power Grip Applicator CPA-1
- 3M™ Plastic Applicator PA-1 Gold Squeegee
 - Protect one edge with the loop side of 3M's Hook and Loop Tape
- 3M™ Rivet Brush RBA-1* and RBA-3*
- 3M™ Air Release Tool 391X*
- Cutting tools, such as a razor blade with a safety holder
- Liner cutter. This tool has a guide under the blade that slips between the film and liner so you cut through only the liner. This is sometimes called a wallpaper cutter. One option is "Seam Buster", a product from Advance Equipment Manufacturing. It is available online and at many hardware and home improvement stores.
- Industrial heat gun; must be capable of attaining 500° to 750°F (260° to 399°C), or equivalent

*Available from 3M Commercial Solutions

B. About Application Tape

An application tape is not recommended. Application tape may have a greater adhesive bond to the film than the film has to the wall surface. Removing the application tape generally lifts the film from the wall surface and compromises the adhesive bond of the film. If application tape is used on smooth surfaces, you must thoroughly rework the entire graphic and all edges after removing it.

C. Plan the Layout

To minimize application problems, which waste time, test your layout by temporarily positioning the film on the wall using masking tape.

- Certain areas of your film installations are more prone to damage than others from people or equipment rubbing against the edges. This includes areas around doors, openings such as vents, outside corners of walls and inside corners.
- Plan so the film edges are in the least vulnerable place possible.
- To reduce the risk of damage and lifting, trim the film 1/8 to 1/4 inch from the edge rather than wrapping the vulnerable edges.

Note: Knifeless™ Tape may be applied to the wall before the film to aid in cutting and trimming. See www.KnifelessTechSystems.com for details.

- Always plan time in your installation to rework all edges of the film to help ensure good edge adhesion.

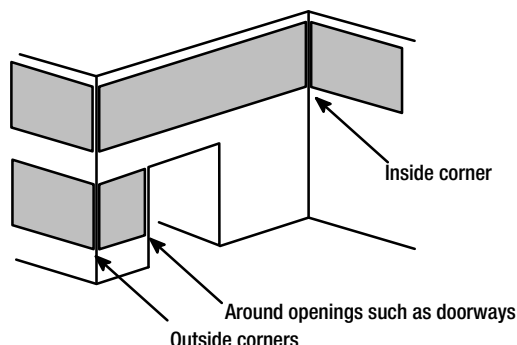


FIGURE 10 Planning the Layout

D. Hinge Methods

Important Note

Select the Hinge Method you prefer to use, review the procedure, but do not install the film until you review and follow the **General Installation Procedure**, page 16, which includes using the **3M™ Enhanced Adhesion Cleaning Method** on page 14

1. Horizontal Hinge Method—Most Common

Ideal for film panels that are longer than they are wide

- a. Tape the film to the wall in the desired position.
- b. Apply a piece of tape horizontally across the film, 6 to 8 inches below the top edge.
- c. Remove the positioning tape strips.
- d. Follow the Section E, **General Installation Procedure**, page 16.

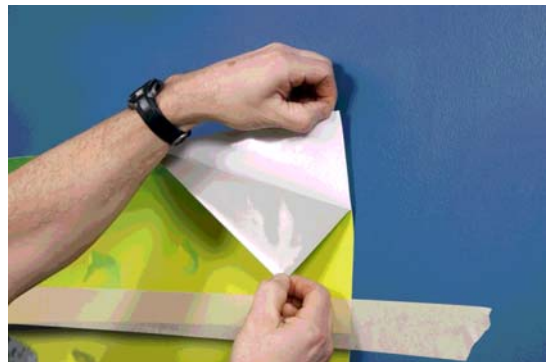


FIGURE 11 Horizontal Hinge

2. Vertical Hinge Method

Ideal for film panels that are wider than they are tall

- a. Tape the film to the wall in the desired position.
- b. Apply a strip of tape vertically down the middle of the film.
- c. Follow the Section E, **General Installation Procedure**, page 16.

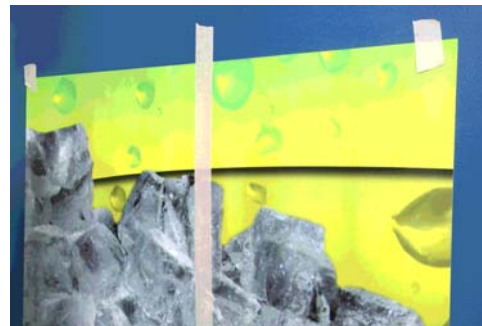


FIGURE 12 Vertical Hinge

3. Self Hinge Method

Ideal for smaller film panels; self hinge can be made at the top of the film or in the center of it (as shown)

- a. Lay the film side down on a clean work table.
- b. Using a liner cutter, cut through just the liner going across the shortest width of the film.
- c. Make another liner cut about four inches from the first, and remove the strip of liner.



FIGURE 13 Cutting Out Section of Liner for Self Hinge

- d. Position the film on the wall and use your fingers to lightly adhere the film to the wall in the area of the exposed adhesive.
- e. Squeegee the film along the exposed adhesive working toward the nearest edge.
- f. Follow Section E, **General Installation Procedure**, page 16.



FIGURE 14 Squeegeeing Exposed Adhesive for Self Hinge

E. General Installation Procedure

1. Follow the **3M™ Enhanced Adhesion Cleaning Method** on page 14.
2. Separate the liner from the film.

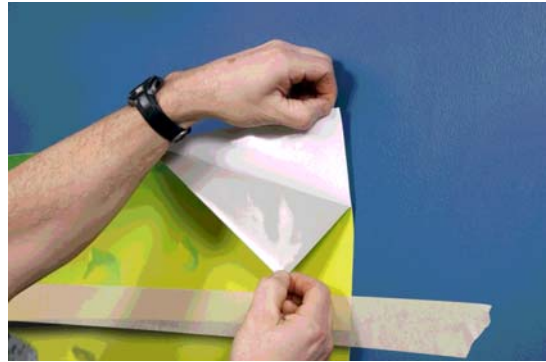


FIGURE 15 Separate the Liner from the Film

3. Roll back the edge of the film and use a liner cutter to make a straight cut through just the liner, right next to the tape hinge. Remove the liner, or as much as needed.

Note: If you need to touch exposed adhesive, keep your fingers 2 or more inches (5 cm) from the edge to avoid contaminating the vulnerable film edges.



FIGURE 16 Cutting Liner

4. Keep some tension on the film while squeegeeing to help it stay flat and smooth. Sometimes this requires holding both film and liner during part of the installation.



FIGURE 17 Keep Tension on the Unapplied Film

5. Starting in the middle of the film, squeegee to one edge, return to the center, and squeegee to the other edge.
 - a. Always push the air toward the nearest edge in either the 10:00 o'clock or 2:00 o'clock position.
 - b. Always end the squeegee stroke past the edge of the film.
 - c. Overlap every stroke by about half the width of the squeegee.



FIGURE 18 Squeegee with the 10:00 and 2:00 O'Clock Position; End Stroke Past Film Edge

6. As needed, lift the film, grasp both sides of the liner, and pull away a few inches of liner. Continue applying film as before.
7. Before the job is considered done:
 - a. Visually inspect how well the film is conforming—even to an apparently smooth wall. See the Important Note.
 - b. Take time to resqueegee all film edges, which are the most vulnerable and the first place film may begin to lift.

Important Note

Even an apparently smooth wall may have more texture than you realize. If you don't use firm, overlapping strokes, you may not get full adhesive contact with the wall. In FIGURE 19 notice the area circled in red. After rubbing a finger over this area, you can see that the film is now making more contact (a finer, tighter visual texture) with the wall than the adjacent areas that were poorly squeegeed.



FIGURE 19 Check for Full Adhesive Contact with Wall

11. Installation to Textured Walls - General Instructions

Note: Some tools and processes in this Bulletin are described and claimed in 3M Patents and pending Patent applications.

Important Note	Installation of film to textured walls requires the use of high heat, 3M's textured surface applicator tools and unique installation techniques. To help ensure a successful installation, you should view the 3M Wall and Textured Surface Videos , at 3Mgraphics.com, Tools & Support, or arrange for a training class, in addition to using this Instruction Bulletin. Please contact your local 3M sales representative to assist you with either of these options.
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- Scotch™ Masking Tape*, 2 inch (50 mm) wide
- Industrial heat gun with electronic readout, capable of achieving and sustaining 1000°F. The following are examples of heat guns that meet the needed criteria.
 - Steinel HL 2010E LCD Display IntelliTemp Heat Gun
 - Milwaukee 8988-20 Variable Temperature Heat Gun
 - Bosch BOS1944LCDK Programmable Heat Gun Kit
- 3M™ Textured Surface Applicator TSA-1* *Large Area Roller*
- 3M™ Textured Surface Applicator TSA-2* *Grout Line Roller*
- 3M™ Textured Surface Applicator TSA-3* *Edge Roller*
- 3M™ Two-Handled Textured Surface Applicator TSA-4* *Combination Heat Gun Holder and Roller*

Note: We recommend storing all foam tools neatly in a rigid plastic box when not in use. Storing them carelessly with heavy or sharp objects or exposing them to contaminants, can all damage the foam and reduce the effectiveness of the tools.

- 3M™ Air Release Tool 391X*
- Tweezers
- Cutting tools, such as a razor blade with break off tips in a safety holder

*Available from 3M Commercial Graphics

A. Tips for a Good Installation

Important Note	High Heat May Degrade Foam Rollers and Damage Substrate High heat directed at foam rollers may degrade the foam. Always direct the heat toward the film, not the foam roller. High heat may also damage the substrate: use with caution.
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1. Understand how film conforms to a textured wall.
 - **Heat.** High heat warms the film and adhesive to make it more conformable. Insufficient heating of the film during installation may result in a film that looks good immediately following installation, but may lift days or weeks later.
 - **Speed.** The proper speed allows the film to be warmed sufficiently to relax lifting stresses within the film, and conform effectively to the texture while the film is still pliable.
 - **Pressure.** Firm, consistent pressure on the roller allows the foam to conform the film into the texture. Since the film and adhesive cool very quickly when the heat source is moved away, adhesion occurs quickly.
2. When applying multiple film panels, use a 1/2 inch (13 mm) overlap.
3. Assess the grout lines for the wall on which you will be working to determine the proper technique for handling them. Refer to **Wall Textures and Compositions** on page 6 for more information and examples.
 - Less than 1/8 inch (3.2 mm) deep and fairly smooth. Bridge the grout lines so that at least 1 inch (25 mm) of film extends beyond the line. The heat and pressure of the roller will conform the film into the grout lines.

Film conforms well to shallow grout lines

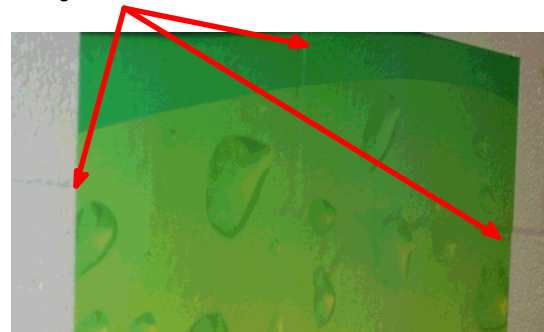


FIGURE 20 Shallow Grout Lines

- Greater than 1/8 inch (3.2) deep and/or heavily textured. Align the first outside corner on the corner of the brick or tile next to the grout line. After installing the film, trim the film from the grout lines as described in **Mosaic Graphic Technique** on page 22

Film bridges deep grout lines

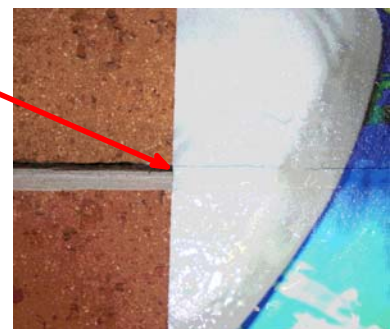


FIGURE 21 Deep Grout Lines

B. Using the 3M™ Two-Handled Textured Surface Applicator TSA-4

1. Consider this before mounting the gun:
 - a. Use a heat gun with a barrel of 1.53 to 1.55 inch (38.9 to 39.3 mm) diameter.
 - b. The gun must heat the film before the roller contacts the film.
 - c. In the orientation shown in these photos, the installer would always be leading with the left hand and following with the right hand. To lead with the right hand, rotate the tool 180 degrees.
3. Always move so the heat gun heats the film before the foam roller conforms the film.
4. Start every stroke just off the film so that the edges are well sealed.
5. Overlap every stroke by half the width of the TSA-4 roller. You can use the notch in the heat gun holder as a visual guide to align the next stroke with the bottom of the previous stroke.
6. Maintain a consistent temperature of 1000°F (538°C).

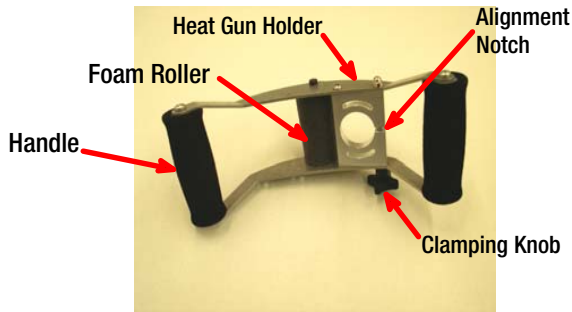
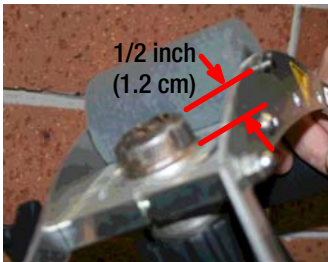


FIGURE 22 Applicator TSA-4

2. Position the heat gun in the Heat Gun Holder so only about 1/2 inch (1.2 cm) of the nozzle extends beyond the opening. Tighten the Clamping Knob snugly. The end of the nozzle should be about 1 inch (2.5 cm) above the film when the tool is in use.

CORRECT



INCORRECT



FIGURE 23 Positioning Heat Gun Nozzle in Heat Gun Holder

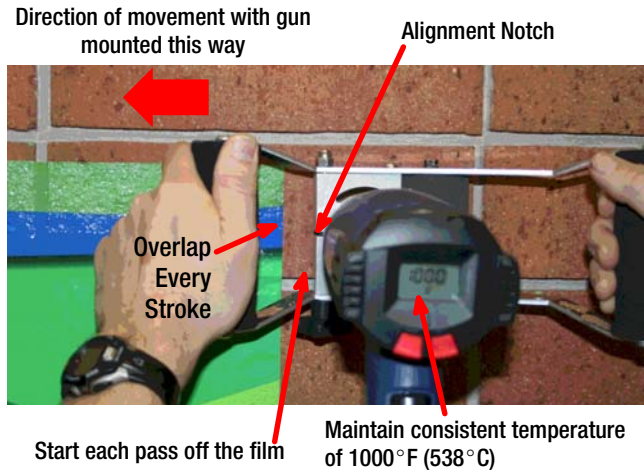


FIGURE 24 Good Installation Techniques

7. Use proper TSA-4 tool ergonomics.
 - a. Keep both handles parallel to the installation wall so the gun nozzle maintains an even distance from the wall so there is uniform pressure at both the top and bottom of the roller. Keep the gun nozzle at an even distance from the film.
 - b. Walk along with the tool, using your body staying centered in front of it for even pressure rather than extending your arms across a broad distance.
 - c. Use enough pressure to conform the film to the substrate.



Lean into the wall to get good, consistent pressure on the TSA-4 tool

FIGURE 25

8. Apply film/overlaminates at the right speed for consistent results.
 - a. For film IJ8624/8524, move at about 2 inches/second (50 mm/second).
 - b. For film 480Cv3/8548G, move at about 3 inches/second (75 mm/second).

Pro's Tip

Use this trick to learn how fast to work across the wall.

Measure the width of the film in inches (mm).

- For film IJ8624/8524, divide the width by 2 (5). It should take about 36 seconds to work across a 72 inch (189 cm) wide panel: $72 \div 2 = 36$ ($183 \div 5 = 36$).
 - For film 480Cv3/8548G, divide the width by 3 (7.5). It should take about 24 seconds to work across a 72 inch (189 cm) panel: $72 \div 3 = 24$ ($183 \div 7.5 = 24$).
- c. When following the speed of installation indicated above, these are the typical rates of installation:
 - film IJ8624/8524: less than 50 square feet/hour
 - film 480Cv3/8548G: less than 75 square feet/hour
 9. While working, stop occasionally to look at the applied film to identify problems that indicate you need to adjust speed, heat, pressure or overlaps. Working too slowly overheats the film and can cause burns in the film. Working too quickly does not permit good adhesion and conformability, which may appear as gloss banding. Here are some issues you may observe and how to improve your technique.
 - a. **Gloss banding.** Apply consistent pressure; overlap every pass by 50%.

Pro's Tip

Film for textured surfaces is protected by a gloss overlaminate. As you apply the film, the heat reduces the gloss. Observing variations in gloss of installed film helps you troubleshoot your installation technique.

- b. Blisters or burns. Do the next pass a little faster.
- c. Bubbles. Slow down a little and apply a little more pressure.

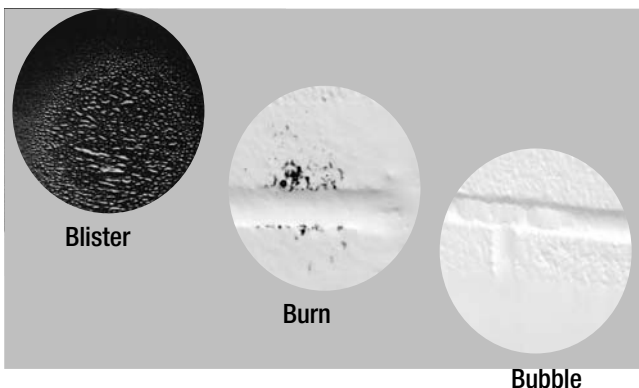


FIGURE 26 Examples of Installation Problems Related to Speed and/or Pressure

Pro's Tip

Practice on each type of substrate to which you will be applying film to learn the proper speed of installation.

The biggest problem inexperienced applicators have is moving too quickly.

C. Textured Wall Film Installation Procedure

1. Follow the **3M™ Enhanced Adhesion Cleaning Method** on page 14
2. Remove the liner using care not to allow the film's exposed adhesive to fold back on itself. Align the film to the wall, making sure no film edge is resting in the middle of a grout line. For larger pieces of film, use two people for this step.
3. Pass your hand lightly over the film to pre-adhere it to the wall. The texture of the wall will prevent the film from adhering too securely so you can easily straighten any wrinkles or adjust the alignment.



FIGURE 27 Use Your Hand to Pre-Adhere Film to the Wall

4. Set the heat gun to 1000°F (538°C) and allow it to come up to temperature.

5. Lightly set the film edges with the TSA-4 tool.
 - a. In general, sealing three of the four edges is sufficient. Leaving one edge open maintains an air escape route, especially when using film IJ8624/8524.
 - b. If the grout lines are shallow (1/8 inch/2.1 mm or less), the film will conform into these shallow lines.



Lightly set 3 film edges

FIGURE 28 Lightly Set 3 Film Edges

- c. If the wall has deep grout lines—greater than 1/8 inch (3.2 mm)—you can seal all four edges, if desired. Deep grout lines provide sufficient air escape as the film will not be conformed into the lines.



Lightly set 4 film edges when applying to deep grout lines, if desired

FIGURE 29 Lightly Set 4 Film Edges

6. Start the installation at an outside top corner, overlapping the wall and film, and leading with the heat gun. Work straight across the film without stopping until you have passed the other edge of the film. Remember to use these speeds:
 - a. For film IJ8624/8524, move at about 2 inches/second (50 mm/second).
 - b. For film 480Cv3/8548G, move at about 3 inches/second (75 mm/second).

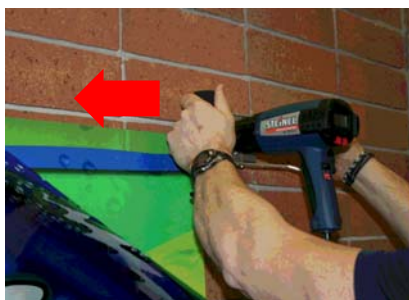


FIGURE 30 Starting Position

7. Make the next pass by starting at a place that overlaps the previous pass about 50%. An easy way to judge the overlap is to align the notch in the TSA-4 tool with the bottom of the previous pass.

Align this notch with the bottom of the previous pass to ensure a 50% pass overlap

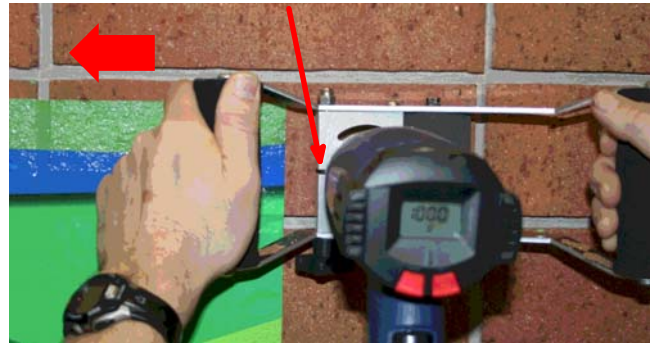


FIGURE 31 Use Notch in TSA-4 Tool to Ensure a 50% Pass Overlap

8. If you observe banding or evidence that the film is not well adhered in some areas, remove the heat gun from the TSA-4 tool. Use the gun to heat the film and conform it with the TSA-3 tool.

Note: Direct the heat at the film, not the foam roller of the tool.



FIGURE 32 Use the TSA-3 Tool and Heat Gun to Touch Up Poorly Adhered Areas

9. For outdoor installations, we recommend applying a bead of sealant along the top edge of the film. This can reduce trapping water from rain or irrigation systems behind the film and leading to lifting as well as the creation of mold.

D. Mosaic Graphic Technique

This technique removes the film that bridges grout lines. It is highly recommended when the grout lines are deeper than 1/8 inch (3.2 mm) and/or the mortar is highly textured. Failure to remove the bridged film may result in premature installation failure. Although time consuming, this technique creates the striking appearance of an image that is kiln fired onto the block or tile or even painted on.

1. Hold a clean, sharp razor against the edge of the block and cut the film as cleanly as possible around each block. Try to leave a very slim margin of film--about 1/16 inch (1.6 mm) around the blocks.

Note: The first cut on the side of a bridged grout line is always easiest since there is tension on the film. It may be helpful to hold the cut side with tweezers or an air release tool to maintain tension on the film as you make the parallel cut.



FIGURE 33 Cutting Film From Grout Lines

2. Heat and roll all edges of each block with the TSA-2 tool to ensure good adhesion. The flexibility of the foam will conform the film around the edges. Inspect the edges for good adherence

Note: Direct the heat at the film, not the foam roller of the tool.



FIGURE 34 Finishing Edges Around Blocks

Important Note	Attempting to force the film into deep grout lines will either tear the film or the film will pop back out of the grout lines.
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E. Working Around an Obstruction

The best technique for working around an obstruction on the wall, such as an electrical outlet, is to cut the film out around the obstruction.

1. Cover the obstruction with masking tape. This prevents the film from adhering to the obstruction.



FIGURE 35 Cover the Obstruction with Masking Tape

2. Position the film on the wall and create a tape hinge on one edge.
3. Remove the liner.
4. Drape the film over the obstruction and pre-adhere the edges of the film using your hand.
5. Cut the film away from the obstruction a little at a time, leaving about 1/8 inch (3.2 mm) all around the obstruction that will be tucked behind it.
6. Use the TSA-4 tool to lightly set the edges of the film on three sides.



FIGURE 36 Cut Away Film a Little at a Time

7. Heat the film around the obstruction and use a PA-1 plastic squeegee to conform the film around its edges.



FIGURE 37 Tuck Film Around Obstruction

8. Heat the film again and use the TSA-3 tool to conform 1 to 2 inches (25-50 mm) around the obstruction.

Note: Direct the heat at the film, not the foam roller of the tool.

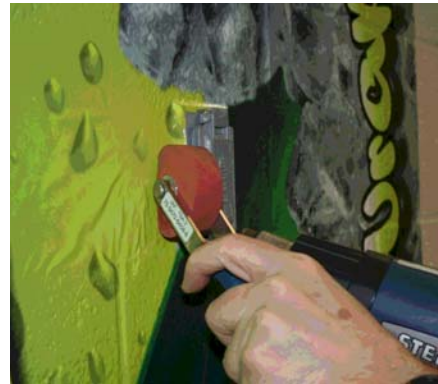


FIGURE 38

9. Apply as much film as possible making horizontal passes with the TSA-4 tool, above and below the obstruction.
10. Then finish applying the film to the left and right sides of the obstruction.

Conforming film from right edge to obstruction



Conforming film from obstruction to left edge

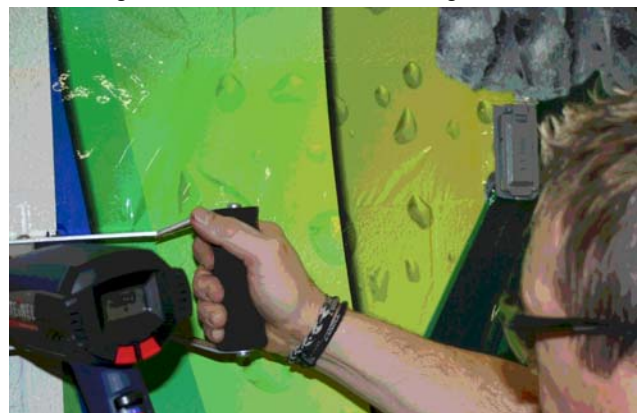


FIGURE 39 Conforming Film Around Obstruction

12. Graphic Maintenance, Repair, Removal: Smooth and Textured

A. Edge Lifting: Causes and Repair

Edge lifting is generally caused by inadequate adhesion. It may be due to insufficient wall cleaning, the wrong film being used, contaminants on the wall, poor edge finishing during initial installation, or abrasion by people or equipment, or environment. The following options for reattaching lifted edges can extend the life of the film and improve appearance, but are aggressive and will likely damage the wall.

- **Option 1:** Use this procedure if a large area of film has come loose, which is most likely to occur at the top edge. Pull down more film until it does not release easily. Protect the exposed adhesive with a piece of clean plastic sheeting. Follow the **3M™ Enhanced Adhesion Cleaning Method** on page 14. Reinstall the film using the normal procedure.
- **Option 2:** Apply a strip of two-sided 3M™ Transfer Adhesive 950 (5 mil thick, 1/2" x 60 yard roll) to the back side of the film, close to the edge. Use a rivet brush to work the film in a circular motion all around the outer edges.
- **Option 3:** Use mechanical fasteners such as staples.

B. Disposal of Film Liners and Used Film

3M products may be incinerated or may also be safely disposed of in a landfill per U.S. Environmental Protection Agency guidelines.

C. Cleaning

Refer to [Instruction Bulletin 6.5](#) for detailed cleaning guidelines.

D. Removal Risks

Important Note	Due to the great variety of wall surfaces, there is no guarantee against damage-free film removal, even if you are using a film described as removable or changeable. Be sure your customer is aware of the potential for damage, and use the techniques provided here at your own risk.
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- **Film that is exposed to extreme environmental conditions**, such as heat and sun, for long periods of time are the most difficult to remove. Typically, the greater the adhesion level of the film to the wall, the greater the risk for damaging the wall upon film removal.
- **Film removal from textured block walls.** 3M films IJ8624/8524 and 480Cv3/8548G may exhibit satisfactory removal characteristics from textured block walls depending on the amount of texture. The greatest risk in removal typically is:
 - loose mortar may be pulled off.
 - the finish on the wall may be damaged.
 - film exposed outdoors for a long time may be especially difficult to remove cleanly.
- **Hidden problems** such as cuts in the wall or moisture that has penetrated the wallboard will contribute to seriously damaging the paint and/or the wallboard when film is removed.
- **Difference surface gloss after film is removed.** The cleaning procedure, heat, environmental exposure and other factors can contribute to changing the original gloss of the paint or finish.

E. Basic Removal Techniques

Important Note	Removing film from walls is significantly different than removing film from semi-trailers and vehicles. Remove at your own risk. 3M is not responsible for damage to the paint or wall.
• Using two hands, start at the top of the film and pull it down slowly at a consistent 120 to 180 degree angle. • If the film is difficult to remove, cutting it into strips may ease the removal process. Do not cut the wall. • Do NOT use chemicals for indoor wall film removal. • If the walls are not made of wallboard, heating the film as you remove it may help. The heat softens the adhesive, reducing the pull-off force and making the film more elastic, which reduces the tendency to tear. • If the wall appears stained or the gloss has changed after graphic removal, it is usually the result of one of the following: the initial wall cleaning process, paint and pigment quality, exposure to heat and light, migrating particles in the paint, and/or adhesive residue. • See Instruction Bulletin 6.5 for more details.	

13. Troubleshooting

Pro's Tip

Every effort should be made to ensure that walls are in good condition before applying graphics. This generally reduces installation time while improving graphic appearance, and if applicable, removal characteristics.

- Review all troubleshooting options before deciding on a course of action.
- Every wall paint must be cured for the full amount of time recommended by the paint manufacturer. See page 8.
- Follow the 3M Wall Film Adhesion Test (page 9 for smooth walls and page 12 for textured walls) for every film you intend to use and on each different wall included in the installation.
- Every installation wall must be cleaned with the **3M™ Enhanced Adhesion Cleaning Method** on page 14 before doing the 3M Wall Film Adhesion Test and before doing the full installation.
- Report installation issues to the graphics manufacturer.

Problem	What To Look For	Recommended Solutions
A. Pre-Installation Problems - All Walls		
1	Unsound walls or sub-structures.	Evidence of a loose, inconsistent or damaged surface, loose paint, mixed surface finishes, abrasion, gouges, etc.
2	Concrete substrate is below grade and not sealed.	Repair wall as appropriate. Be sure new paint cures for the full amount of time recommended by the paint manufacturer before applying film. Reconsider whether to apply a film at that location.
3	Moisture behind a substrate.	Seal and cure the paint the full amount of time recommended by the paint manufacturer before applying film. Reconsider whether to apply film at that location.
4	Unclean substrate.	Look for boarded up windows or walls that back up to cooling systems, water pipes, overhead windows or water pipes. Notify the graphics manufacturer or customer that applying film in these locations could create condensation or drip water onto the film, resulting in premature failure.
5	Wall contamination such as dust, dirt, grease, food, vehicle exhaust or cleaning products.	Clean the substrate, using a degreaser if needed. Do not use cleaning solutions that contain lotions, waxes or oils. Then clean using the 3M™ Enhanced Adhesion Cleaning Method on page 14.
B. Installation Problems - Smooth Walls		
6	Film does not adhere well or falls off wall prematurely.	Film was not tested on the wall prior to installation.
7	Low VOC paint was used on the wall. Please read page 8.	Always perform the 3M Film Adhesion Test (page 9 for smooth walls and page 12 for textured walls) for each film and on each substrate before committing to the complete installation.
8	Wall repairs were not properly sealed, primed, painted or cured.	Always perform the 3M Film Adhesion Test (page 9 for smooth walls and page 12 for textured walls) for each film and on each substrate before committing to the complete installation.
9	Walls were not washed with 70% isopropyl alcohol and 30% water	Always follow the 3M™ Enhanced Adhesion Cleaning Method on page 14 to increase film adhesion.
10	The texture of the substrate is not well suited to the film being used.	If the wall texture is greater than just smooth, try film IJ8624/8524 or 480Cv3/8548G. • Some textured paint additives create too much texture for film intended for smooth walls. • A wall with too little texture may prevent proper air bleed during the installation of film IJ8624, which is necessary for a successful installation.
11	Substrate temperature tool low	Check the film's Product Bulletin to determine the installation temperature range.
C. Tool Problems - TEXTURED Walls Only		
12	Foam on the tool is falling apart.	Foam has been exposed to too much heat. Do not direct the heat from the gun at the foam, which causes it to degrade. Do not rub the tool against the hot barrel of the heat gun.
13	Foam tools have been improperly stored.	Store foam tools neatly in a rigid plastic box to avoid exposing to heavy or sharp objects or contaminants, which can damage the foam and reduce the effectiveness of the tools.
14	Tool is worn out.	Replacement foam rollers are available for TSA-1 and TSA-4 tools. Contact 3M Customer Service.

Problem	What to Look For	Recommended Solutions
D. Installation Problems - TEXTURED Walls Only		
13	Film does not conform to grout lines.	Mortar in grout lines is very rough or loose and/or flakey. Grout line has too much texture or too severe a profile for success.
14	Film is not conforming well to texture.	Refer to page 6 for more information on grout lines. Clean with a brush and dust away debris. Follow by the 3M™ Enhanced Adhesion Cleaning Method on page 14. Consider using 3M's film 480Cv3, which conforms better over rough mortar. Cut the film from grout lines for a Mosaic Graphic Technique on page 22.
15	Wall is too cold.	Be sure the heat gun is about 1 inch (25 mm) above the film. Increase the heat. Slow down a little. Use a little more pressure on the tool. Note: Most textured substrates do not hold heat well, and cause the film to cool more quickly than you might expect.
16	Film seems too stretchy; adhesive is delaminating from the film.	Temperature of the wall is too high.
17	Film melts or blisters.	The surface temperature of the wall should be less than 100°F (38°C) during the installation. Heat from the wall and heat gun can cause the film to become stretchy and the adhesive could delaminate from the film layer.
18	Film pops up from grout lines.	Heat was concentrated too long in one area. Move the gun and tool a little more quickly. Recommended speeds are: • Film IJ8624/8524: 2 inches/second (50 mm/second) • Film 480Cv3/8548G: 3 inches/second (76 mm/second)
19	The grout lines are too deep.	Wall tools typically apply only light pressure to grout lines that are deeper than 1/8". First, work out any air bubbles, then try re-rolling the grout lines by applying heat and conforming with the TSA-2 tool. A contour gauge can be useful for visualizing grout line depth. Finish the film with the Mosaic Graphic Technique on page 22.
20	The grout line is too sharp.	Film IJ8624 do not conform well to square-cut (raked) or undercut grout lines as the film requires more stretching and the tools do not reach the corners. Film 480Cv3 <u>may</u> adhere more successfully to rough mortar texture.
21	The film was not heated properly and worked well into the grout lines.	Typical rate of installation with a heat gun set to 1000° to 1100°F : • Film IJ8624/8524: less than 50 square feet/hour (4.6 m/hour) • Film 480Cv3/8658G: less than 75 square feet/hour (7 m/hour)
22	Film does not conform to the texture.	Perform the 3M Wall Film Adhesion Test (page 9 for smooth walls and page 12 for textured walls) before committing to the entire installation. Following the 3M™ Enhanced Adhesion Cleaning Method on page 14. As a last resort, apply 3M™ Primer 94 to the entire installation area before applying the film.
23	Film pops up from grout lines; leaks adhesive.	Printed film was not adequately dried prior to applying an overlamine.
24	Film lifts over caulked lines.	3M always recommends allowing solvent inkjet printed film to dry 24 hours before applying an overlamine.
25	Film bubbling and poor adhesion.	Using an acrylic caulk (even over existing caulk) may improve adhesion. Finish the film with the Mosaic Graphic Technique on page 22.
26	Bubbling and poor adhesion.	Exposure to rain, high humidity, or irrigation systems may make the textured wall too damp for some installations. Do not apply to a damp substrate or a substrate that cannot be adequately dried. Heating the substrate to dry it may help.

Problem	What to Look For	Recommended Solutions
D. Installation Problems - TEXTURED Walls Only <i>continued</i>		
25	Large bubbles appear behind the film.	Film was not fully adhered during first pass of the tool. Use enough pressure to press and conform the film into the lowest areas of the texture on the first pass with heat and the TSA-4 tool. Bridged areas (mortar lines) tend to lift more than the other areas.
26	Grout line is excessively deep.	Wall tools typically apply only light pressure to grout lines that are deeper than 1/8". First, work out any air bubbles, then try re-rolling the grout lines by applying heat and conforming with the TSA-2 tool. A contour gauge can be useful for visualizing grout line depth. Finish the film with the Mosaic Graphic Technique on page 22.
27	Adhesive channels through which air escapes were sealed before film was fully applied.	If air becomes trapped because all air release channels are closed off, use standard air release techniques, then apply heat and re-roll using a TSA tool.
28	Film was applied to flat, glazed tile.	For the best results, use film/overlamine 480Cv3/8548G. Use a flat squeegee and conventional vehicle installation techniques. Then re-roll the grout lines using the TSA-1 or TSA-3 tool. Do not overheat the substrate, which may crack the tiles. For very smooth tile with little surface texture or contour, consider using 3M film IJ180Cv-3 and finish grout lines with a TSA tool and light heat.
29	Difficulty wrapping textured columns.	Wrong product. Use film/overlamine 480Cv3/8548G for the best results. This is generally flexible enough to wrap on a textured column.
30	Film is not level/properly aligned.	Use a laser level to assure a level graphic.
31	Exposing too much adhesive at one time.	Wrap the columns by working around the circumference, and pulling away only a foot or two of the liner at a time.
E. Post-Installation Problems - Textured Walls Only		
32	Visual bands on applied graphic.	Installer did not overlap every pass of the tool. Overlap each pass of the tool by at least 50%, using the proper heat, pressure and speed of installation. See FIGURE 31, page 21, for a tip on overlaps. Typical installation speed and rate of installation: • film IJ8624/8524: 2 inches/second; about 50 square feet/hour or 20-30 minutes for a 4' x 8' panel. • film 480Cv3/8548G: 3 inches/second; about 75 square feet/hour or about 15 minutes for a 4' x 8' panel. Properly applied, the finished appearance of the film/overlamine will be more luster than gloss.
33	Film is popping off the substrate.	Film was not heated enough. See Installation Problems - Textured Walls Only, in this table.
34		Reworked an area that didn't go down well at first. Make every effort to apply the film well during the initial installation. Reheating and reapplying a day or two later is less effective.
35		Film was not heated evenly. Move at a consistent speed with even pressure, overlapping every pass.
36		Not enough heat was used. Use a digital heat gun with an internal temperature of about 1000° (538°C). Hold the gun 1 inch (25 mm) from the film being heated.
37		Too hot an environment. High environmental heat, such as locating the graphic on a hot sunny wall, may increase lifting, as well as make the film too stretchy. When possible, install the film in the coolest part of the day. Check the substrate temperature with an IR gun.
F. Post-Installation Problems - All Walls		
38	Edges of film lift prematurely.	Poor installation technique, or wrong tools. Review this Bulletin and make sure you are using the right film, right tools, and right techniques for your walls. Particularly for textured walls, lots of practice is critical for consistent success.
39	Large portion of film lifts or falls off prematurely.	Wrong film used. Perform the 3M Wall Film Adhesion Test (page 9 for smooth walls and page 12 for textured walls). Wall not properly cleaned. Follow the 3M™ Enhanced Adhesion Cleaning Method on page 14.
40		Under-cured paint. Be sure the paint is properly applied and fully cured before applying film.
41		Moisture behind wallboard causing wallboard paper to release. Avoid installations on walls that back up to cooling systems, water pipes, overhead windows or water pipes that could create condensation or drip water onto the graphic as well as boarded up windows.

42	The wall, its paint or wallcovering is damaged during graphic removal.	Poor bond of paint or wall-covering to substrate.	Enhancing film adhesion due to low VOC paints is likely to result in substrate damage even when removing removable or changeable films. If such damage is a concern to your customer, be sure you set the expectations prior to installation.
43		Improper removal technique.	See page 24 for the 3M recommended technique.
44		Cuts made to the graphic during the installation penetrated both the film and substrate.	Use caution when cutting film that near surfaces such as wallboard and wallpaper.
45		Wall is poured concrete.	The outer 0.5 to 1.0 mm of a poured concrete surface is often loosely bonded together, even though it doesn't appear that way to the eye. Even if the paint covering the wall is well cured and bonded, the force used in pulling off an adhesive product may fracture the concrete layer, pulling it and the paint off. Always perform the 3M Wall Film Adhesion Test in an inconspicuous area to determine the possibility of damage, with the understanding that this is not a definite test.
46	Film is popping off the substrate.	Texture is too severe.	It is difficult to force film into cavities of deeply recessed texture or sharp bumps. Experiment with increasing the heat and adjusting the installation pressure, as well as trying a variety of tools such as TSA-1, TSA-2, TSA-3 and CMP-1. 3M textured wall films are most successful on moderately textured walls.

G. Removal Problems - All Walls

47	Outdoor graphic caused substrate damage.	Film subjected to freeze-thaw cycles.	Freezing and thawing cycles can cause moisture vapor transmission issues. See the details on page 3. Salts that pass through masonry may be trapped behind film and result in staining or discoloration upon removing the film. Always check and follow your local building codes. 3M is not responsible for damage caused by using this product outdoors.
48	Substrate is being damaged as film is removed.	Film is too cold.	Warm the film with the heat gun set at about 250°F (121°C) while slowly pulling the film from the substrate.
49	Removal is difficult and time consuming.	Film has degraded	Over time and exposure to environmental conditions, film can degrade so that the adhesive and film layer do not stay together during removal.

14. Disclaimer

The information contained and techniques described herein are believed to be reliable, but 3M makes no warranties, express or implied, including but not limited to any implied warranty of merchantability or fitness for a particular purpose.

The [3M Graphics Warranty Brochure](#), along with the applicable film Product Bulletins, provide the details to any warranty offered for the 3M graphics products described in this Bulletin.

15. Limitation of Liability

Except where prohibited by law, 3M SHALL NOT UNDER ANY CIRCUMSTANCES BE LIABLE TO PURCHASER OR USER FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, LABOR, NON-3M MATERIAL CHARGES, LOSS OF PROFITS, REVENUE, BUSINESS, OPPORTUNITY, OR GOODWILL) RESULTING FROM OR IN ANY WAY RELATED TO SELLER'S PRODUCTS, SERVICES OR THIS BULLETIN. This limitation of liability applies regardless of the legal or equitable theory under which such losses or damages are sought including breach of contract, breach of warranty, negligence, strict liability, or any other legal or equitable theory.

16. Technical Service

For assistance in reviewing your film adhesion test results or other questions regarding wall installations, call 3M Technical Service at 1-800-328-3908.

17. 3M Related Literature

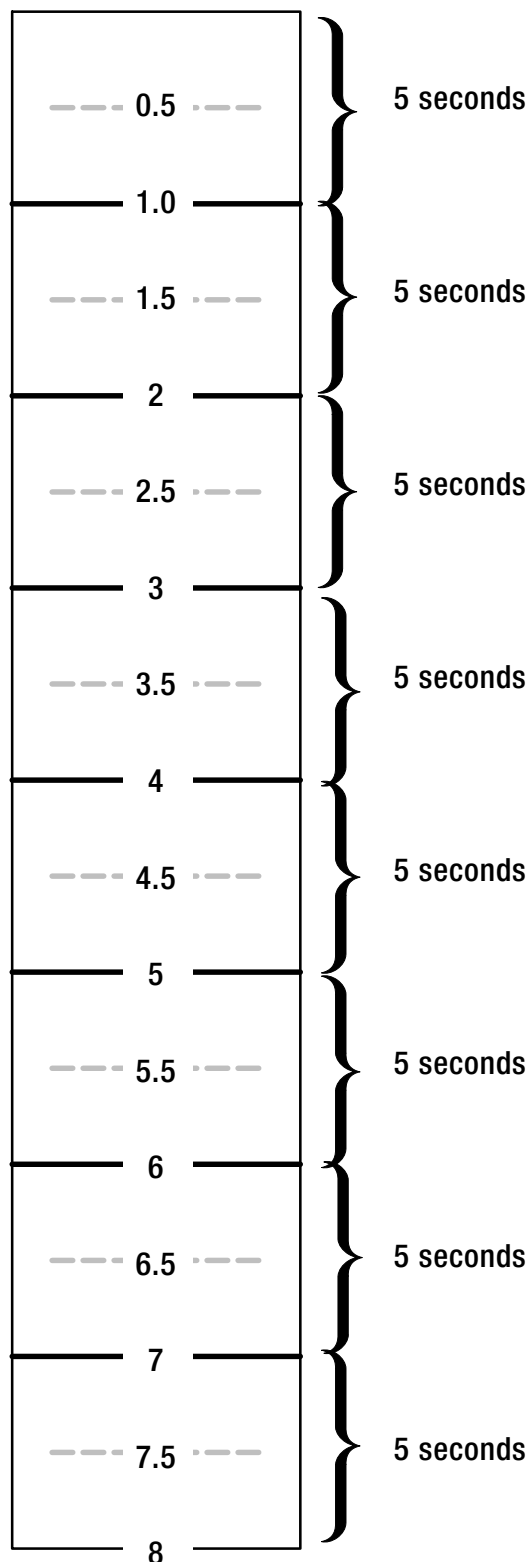
Before starting any job, be sure you have the most current Product and Instruction Bulletins.

The information in 3M Product and Instruction Bulletins is subject to change. [Current Bulletins](#) are available at 3Mgraphics.com. The techniques described in these Bulletins are required when applying a 3M warranted graphic, but are also practical recommendations when using promotional materials for non-warranted graphics. Additional Bulletins may be needed as indicated in the 3M Related Literature section of other 3M components you use.

18. Bulletin Change Summary

This bulletin has been substantially updated. Pay particular attention to the new information on low VOC paints, page 8, the 3M Wall Film Adhesion Test (page 9 for smooth walls and page 12 for textured walls) and **3M™ Enhanced Adhesion Cleaning Method** on page 14.

19. Measured Reference Guide



3M, Controllac, Comply, Envision, Scotch, Scotchcal and Scotch-Brite are trademarks of 3M. Steinel is a registered trademark and IntelliTemp is a trademark of Steinel. Milwaukee is a registered trademark of Milwaukee Electric Tool Corporation. All other trademarks are the property of their rightful owner(s).



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LX480mC SV480mC

Product Description

- Use LX480mC with Latex Inkjet inks
- Use SV480mC with Solvent Inkjet Inks
- Use LX480mC or SV480mC with UV Inkjet or Screen Print Inks
- High-performance, 2-mil, white, non-PVC film with a luster finish

Product Features

- Comply™ Adhesive with micro technology offers excellent air flow and leaves a smooth finish
- Optimized initial tack
- Slideability for easy positioning
- Non-visible air release channels for fast and easy, bubble-free installations
- Many finished graphic constructions can be stretched up to 150% (i.e., a 10 inch [25 cm] piece of film can stretch to 15 inches [38cm]) without primer or relief cuts and maintain lift resistance; see [“Stretchability” on page 8](#)
- Flexible and highly-conformable for use on compound curves, corrugations, deep channels, and rivets
- High dimensional stability, for installation in hot or cold temperatures
- Removable with heat from most surfaces within the Warranty Period
- Resists tearing in cooler temperatures
- Highly durable, guards against intense UV and even acid dew, when applied with recommended graphic protection.
- A horizontal warranty is offered when paired with the 3M™ Envision™ Wrap Overlaminates
- Expected Performance Life of 11 years (unwarranted period for unprinted film with no graphic protection, applied to a flat, vertical, outdoor surface)
- Expected Performance Life for Textured Surface Graphics of 2 years (indoor in most applications); and 6-12 months (outdoor when not used in freezing and thawing cycles). See [“Factors that Affect Graphic Performance Life” on page 5](#)



Greener Solutions

- Non-PVC, phthalate-free film
- Contains no added chlorine or halogens
- 8548G, 8549L, and 8550M made in part from bio-based materials
- Manufactured using 58% less solvent

Recommended Types of Graphics and End Uses

- Indoor and outdoor graphics and signs, including point-of-purchase and displays
- Fleet, vehicle, watercraft and transit graphics and wraps
 - Commercial vehicles and fleet trucks and trailers; emblems or striping
 - Personal vehicle graphics and wraps
 - Watercraft graphics (above the static water line only)
 - Bus graphics
 - Rail cars and lead cars of trains, light rail and subways
 - Non-vertical and horizontal vehicle wraps, watercraft and transit when protected with overlaminate 8528, 8548G, 8549L, or 8550M
- Small format original equipment manufacturer's (OEM) decorative and identification graphics, cautionary and safety labeling
- Smooth and textured walls graphics
 - Graphics applied to indoor smooth wall surfaces
 - Graphics applied to indoor or outdoor moderately textured surfaces when protected with overlaminate 8548G, 8549L, 8550M

When constructed and used as described in this Bulletin, these types of graphics and end uses may be warranted by the 3M™ MCS™ Warranty or the 3M Performance Guarantee. Please read the entire Bulletin for details.

Quick Links

[3M Graphics Warranties](#)
[Technical Information Selector](#)
[Safety Data Sheets \(SDS\)](#)
[Flammability \(ASTM E84 Reports\)](#)
[Videos](#)

Some of these links lead to web-based resources that are not product-specific.

Recommended Compatible Products

Graphic Protection

The recommended graphic protection options for 3M™ Wrap Films LX480mC and SV480mC are the following Envision™ Wrap Overlaminates, designed for optimal compatibility and conformability:

- [3M™ Envision™ Gloss Wrap Overlamine 8548G](#) *with horizontal vehicle warranty*
- [3M™ Envision™ Luster Wrap Overlamine 8549L](#) *with horizontal vehicle warranty*
- [3M™ Envision™ Matte Wrap Overlamine 8550M](#) *with horizontal vehicle warranty*

Alternative graphic protection options, listed below, are also compatible with LX480mC and SV480mC, however, the finished graphic may have lower conformability:

- [3M™ Scotchcal™ Gloss Overlamine 8518](#)
- [3M™ Scotchcal™ Luster Overlamine 8519](#)
- [3M™ Scotchcal™ Matte Overlamine 8520](#)
- [3M™ Scotchcal™ Gloss Overlamine 8528](#) *with horizontal vehicle warranty*
- [3M™ Décor Overlamine 8600](#)
- [3M™ Scotchcal™ Ultra Matte Overlamine 8915](#)
- [3M™ Screen Print Matte Clear 1930](#)
- [3M™ Screen Print UV Gloss Clear 9800CL](#)
- [3M™ Screen Print Gloss Clear 1920DR](#)
- [3M™ Screen Print UV Gloss Clear 9740i](#)
- [3M™ Screen Print Matte Clear 9730UV](#)

Application Tapes

See [3M Instruction Bulletin AT-1](#) to determine what application tape is recommend for the film or finished graphic.

Other Products

- [3M™ Edge Sealer 3950](#)
- [3M™ Edge Sealer Tape 8914](#)
- [3M™ Vehicle Channel Applicator Tool VCAT-2](#)
- [3M™ Roller L \(large hard roller\)](#)
- [3M™ Roller S \(small hard roller\)](#)
- [3M™ Textured Surface Application TSA-1](#)
- [3M™ Textured Surface Application TSA-2](#)
- [3M™ Textured Surface Application TSA-3](#)
- [3M™ Textured Surface Application TSA-4](#)

See the [3M Quick Reference Guide for Installation Tools](#) for more information.

Certificate of 3M™ MCS™ Warranty

Graphic manufacturers who produce digitally printed graphics made with all 3M Graphics Products, including 3M Ink purchased through a qualified 3M Distributor or 3M Printing Partner, may register to be recognized with a Certificate of 3M™ MCS™ Warranty. Only graphic manufacturers having a current Certificate of 3M™ MCS™ Warranty are eligible to extend this warranty to their customers.

NOTE: For non-digitally printed Finished Graphics, check your eligibility for the 3M™ MCS™ Warranty by viewing the Warranty Period found within the Product Bulletin or using the warranty selector at www.3mgraphics.com/warranties.

Characteristics

These are typical values for unprocessed product. Processing may change the values.

Physical Characteristics

Characteristic	Value
Material	High-performance non-PVC
Film Color	White, opaque
Thickness	Without adhesive: 2 mil (0.05 mm) With adhesive: 3–4 mil (0.08–0.10 mm)
Adhesive	Pressure-activated (slide, tack, snap-up, reposition) with air release channels
Adhesive Color	Gray
Liner	Polyethylene-coated paper
Adhesion, Typical 24 hours after application	ABS: 2–4 pounds/inch (0.36–0.72 kg/cm) Acrylic enamel: 2–4 pounds/inch (0.36–0.72 kg/cm) Aluminum, anodized: 5–7 pounds/inch (0.89–1.26 kg/cm) Aluminum, etched: 4–6 pounds/inch (0.72–1.08 kg/cm) Fruehauf pre-painted panels: 2–4 pounds/inch (0.36–0.72 kg/cm) Automotive clear coats: 3–5 pounds/inch (0.54–0.89 kg/cm)
Tensile Strength	11–13 pounds/inch at 73 °F (1.98–2.34 kg/cm at 23 °C)
Chemical Resistance	Resists mild alkalis, mild acids, and salt Excellent resistance to water (does not include immersion) Resists occasional fuel spills
Flammability	ASTM E84 report: SV480mC , LX480mC or go to the On-line Product Catalog at 3M.com/graphics All other test reports: call 1-800-328-3908

Application Characteristics

Characteristic	Value
Finished Graphic Application Recommendation	Sign and vehicle applications: Surface type: flat, with and without rivets, simple curves, compound curves, deep channels and corrugations Substrate type: ABS resins, aluminum, chrome, glass, fiberglass reinforced plastics, paint (check adhesion to powder-coated or water-based paints), fiberglass with gel coat Application method: Dry Application temperature (air and substrate): Flat without rivets: 40–105 °F (4–40 °C) Curves or corrugations with rivets: 50–105 °F (10–40 °C) Compound curves and/or watercraft: 60–95 °F (16–35 °C) Walls: 40–100 °F (4–38 °C)
Applied Shrinkage	Less than 0.015 inches (0.4 mm)
Temperature Range After Application	-65 to +225 °F (-60 to +107 °C) (not for extended periods of time at the extremes)
Graphic Removal	Removable with heat from most substrates within the Warranty Period at 50 °F (10 °C) minimum (air and substrate) 3M makes no claims as to the ease or speed of removal. See 3M Instruction Bulletin 6.5 for removal techniques.

Warranty Information

Warranty Coverage Overview

The warranty coverage for eligible graphics is based on the user both reading and following all applicable and current 3M Graphics Product and Instruction Bulletins. The warranty period for eligible graphics is as stated in the 3M Graphics Warranties Matrices at the time that the film was purchased. Information found at [3MGraphics.com/warranties](https://www.3Mgraphics.com/warranties) includes:

- [3M Graphics Warranties Bulletin](#)
 - This bulletin contains information on limitations and exceptions, and warranty period reductions for 3M Graphics Warranties. The warranty period may be reduced and stipulations may apply for certain constructions, applications, and graphic exposures as covered in this Bulletin.
- [3M Graphics Warranties Selector](#)
 - Use this selector to search for your vertical warranty period by product type, ink type, film name, and/or ink/printer platform.
- [U.S. Desert Southwest Region Map](#)
 - Use this map of hot, arid desert areas to determine if you are subject to reduced warranted durabilities.

The warranties set forth in this Bulletin are made in lieu of all other express or implied warranties, including any implied warranty of merchantability, fitness for a particular purpose, or arising out of a course of dealing, custom, or usage of trade.

3M Basic Product Warranty

3M Graphics Products are warranted to be free of defects in materials and manufacture at the time of shipment and to meet the specifications stated in its applicable 3M Graphics Product Bulletin and as further set forth in the [3M Graphics Warranties Bulletin](#).

Limited Remedy

The limited remedy applicable to each warranty is addressed in the 3M Graphics Warranties Bulletin found at [3MGraphics.com/warranties](https://www.3Mgraphics.com/warranties).

Limitation of Liability

Except where prohibited by law, 3M SHALL NOT UNDER ANY CIRCUMSTANCES BE LIABLE TO PURCHASER OR USER FOR ANY DIRECT (EXCEPT FOR THE LIMITED REMEDY PROVIDED IN THE 3M GRAPHICS WARRANTIES BULLETIN), INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, LABOR, NON-3M MATERIAL CHARGES, LOSS OF PROFITS, REVENUE, BUSINESS, OPPORTUNITY, OR GOODWILL) RESULTING FROM OR IN ANY WAY RELATED TO 3M'S GRAPHICS PRODUCTS, SERVICES, or THIS BULLETIN. This limitation of liability applies regardless of the legal or equitable theory under which such losses or damages are sought.

Warranty Period Matrices - Inkjet

See the 3M Graphics Warranties Matrices at [3MGraphics.com/warranties](https://www.3Mgraphics.com/warranties), for vertical warranty period information specific to your film.

IMPORTANT NOTE

The Adhesion Test Kit must be used to test adhesion characteristics of smooth indoor walls before application in order to be eligible for the 3M™ MCS™ Warranty. See [3M Instruction Bulletin 5.37](#) for full details.

The 3M Smooth Interior Wall Installation Checklist (located at the end of this Bulletin) must be completed in order for the finished graphic to be eligible for the 3M™ MCS™ Warranty.

Additional Limitations

See the 3M Graphics Warranties Bulletin at [3MGraphics.com/warranties](https://www.3Mgraphics.com/warranties), for terms, additional limitations of your warranty, if any, information on reduced warranties for different exposures, and limitations of liability.

Factors that Affect Graphic Performance Life

The actual performance life of a graphic is affected by:

- the combinations of graphics materials used.
- complete ink drying or curing.
- selection, condition and preparation of the substrate.
- surface texture.
- application methods.
- angle and direction of sun exposure.
- environmental conditions.
- cleaning or maintenance methods.

Factors that Affect Graphic Performance Life for Textured Surface Graphics

- **Installation techniques.** Improper installation techniques result in edge curling, lifting and/or poor adhesion.
- **Adhesion for outdoor graphics.** When testing film adhesion, the film is unlikely to be durable in outdoor applications if it can be easily removed from a textured surface (using a force of <2 pound/lineal inch (0.36 kg/cm)). See [Instruction Bulletin 5.37](#) for the proper Textured Wall adhesion test procedure.
- **Outdoor graphics exposed to water from rain or irrigation systems.** Water can be trapped behind graphics applied outdoors, leading to lifting as well as the creation of mold.
- **Surface temperature.** Textured substrates that reach temperatures in excess of 135°F (57°C) may exhibit lifting, especially in mortar joints.
- **Texture variation.** More than 1/8 inch (3 mm) variation in high and low spots of substrate texture and mortar joints, as well as square cut or undercut mortar joints, may exhibit lifting.
- **Freezing and thawing cycles.** For a textured masonry wall that has both an indoor facing side and an outdoor facing side and no effective moisture barrier, moisture vapor transmission occurs naturally when the indoor surface has a room environment that is warmer and moister than the outdoor surface. When a graphic is applied to the outdoor wall and there are cycles of outdoor freezing and thawing, moisture can be trapped between it and the wall and result in graphic lifting, as well as in spalling both within the wall and on the outdoor facing wall. Such damage can be unsightly and costly to repair.
- **Removal.** Unsound substrates, paint, texture-finished wallboard and textured wallpaper may be damaged upon graphic removal.

Graphics Manufacturing



CAUTION

Before using any equipment, always read the manufacturer's instructions for safe operation.

Inkjet Printing

Always read and follow the ink manufacturer's written instructions on usage.

Total Ink Coverage

The maximum recommended total ink coverage for this film is:

- **270%** when printed with all approved 3M solvent inkjet inks.
- **280%** when printed with all approved 3M UV inkjet inks.
- **250%** when printed on the Mimaki JV5 Series printer with HS ink series ([3M Performance Guarantee](#)).

Do not exceed the recommended total ink coverage for the ink series used on this product. Having too high a total physical ink amount on the product results in media characteristic changes, incomplete drying, overlamine lifting, and/or poor graphic performance. For additional details about total ink coverage, refer to the 3M Product and Instruction Bulletin for 3M inks or the [3M Performance Guarantee Matrix](#) for OEM inks.

Completely Dry Graphics

IMPORTANT NOTE

Incomplete drying or curing can result in graphic failure including curling, increased shrinkage and adhesion failure, which are not covered under any 3M Graphic Warranty.

See the ink's 3M Product and Instruction Bulletin for more details.

Printing on Sheeted Film

3M does not recommend inkjet printing on sheeted film because material handling can contaminate the film's surface and affect print quality.

Screen Printing

Formulations and processing conditions can affect ink durability. Refer to the Product and Instruction Bulletins for your ink for limitations and proper usage.

Cutting

See [3M Instruction Bulletin 4.1](#) for Sheeting, Scoring and Film Cutting details.

Graphic Protection

Graphic protection may improve the appearance, performance and durability of the graphic. Click on the graphic protection options listed in Product Bulletin or see the [3M Graphics Market Product Catalog](#), for more information.

IMPORTANT NOTE

During installation, scratches may occur on films without graphic protection.

Application Tapes

There are two types of application tapes. See [3M Instruction Bulletin AT-1](#) to determine what application tape is recommended for your film or finished graphic.

Premasking Tape

Increases stiffness during application while preventing stretching and damage. Use when little or no liner is exposed. See [3M Instruction Bulletin 4.3](#) for complete details.

Prespacing Tape

Holds cut and weeded letters or graphics in place during application and after removing the film liner, while preventing stretching and damage. Use when large amounts of liner are exposed. See [3M Instruction Bulletin 4.3](#) for complete details.

Application and Installation

In addition to other 3M Bulletins specified in this document, the following Bulletins provide details that you may need to successfully apply a graphic.

- [3M Instruction Bulletin 2.1](#) Design of graphics.
- [3M Instruction Bulletin 4.22](#) Lamination Basics for Inkjet Printed Graphics.
- [3M Instruction Bulletin 5.36](#) Application Techniques for Automobiles, Vans and Buses. Complete the 3M Pre-Installation Inspection Record found in this Instruction Bulletin prior to manufacturing or applying a graphic to an automobile, van, or bus.
- [3M Instruction Bulletin 5.37](#) A Guide to Understanding and Applying Graphics to Common Smooth and Textured Wall Surfaces
- [3M Instruction Bulletin 5.4](#) Application, Fleet Trucks.
- [3M Instruction Bulletin 5.42](#) Application, Special Considerations for Watercraft. Complete the 3M Pre-Installation Inspection Record found in this Instruction Bulletin prior to manufacturing or applying a graphic to a watercraft.
- [3M Instruction Bulletin 5.5](#) Application, General Procedures for Interior and Exterior Dry Application
- [3M Product and Instruction Bulletin V-Tools](#) 3M™ Vehicle Channel Applicator Tools.

IMPORTANT NOTE

UV inkjet inks may crack if too much heat is used during graphic application to complex curves and deep contours as well as around rivets. When using heat during application, make sure the film surface temperature does not exceed 212° F (100° C). For best results, **always do a test application** of a printed graphic to determine how much heat can be used without damaging the image.

IMPORTANT NOTE

3M recommends using additional heat in the post-application process for vehicle graphics. During this process, 3M only recommends using a heat gun to make sure the film surface temperature reaches a minimum of 200° F (93° C) and does not exceed 225° F (107° C).

IMPORTANT NOTE

For textured walls, 3M only recommends using a heat gun with appropriate application tools to apply the film to the textured surfaces.

Pressure-activated Adhesive

The pressure activated adhesive on this film offers:

- smooth sliding into position on a substrate;
- fast finger tacking to check position; and
- easy snap-up and repositioning when you need it.

The **snap-up and reposition feature is lost:**

- when firm pressure with a squeegee or other application tool is applied.
- at application temperatures above 100° F (38° C) even if only light finger pressure was used for tacking.
- if any part of the film is removed from the original liner and reapplied to the same or another liner.
- solvent from inkjet ink has not completely dried or cured, which affects both slideability and snap-up.

Working with Non-Visible Air Release Channels

Air release channels are a characteristic of films with Comply™ adhesive that allow trapped air to exit through the edges of the graphic.

- The channels will be damaged and effective air removal affected if the user removes and attempts to change liners or reapply the same liner.
- For the best results, always work from the center out to the edges of the graphic to allow trapped air to exit through the air release channels. If the channels are closed off by firm pressure and air is trapped, use an air release tool to aid in removing air bubbles. See [3M Instruction Bulletin 5.4](#) for details.

Stretchability

Many finished graphic constructions can be stretched without primer or relief cuts and maintain lift resistance.

- For Automobiles, Vans and Buses, see [3M Instruction Bulletin 5.36](#) for details and exceptions.
- For Straight trucks, semi-trucks and semi-trailers, see [3M Instruction Bulletin 5.4](#) for details and exceptions.

Primer

3M recommends the use of the following primers on substrates where the film will be stretched, particularly for the edges of the film. Use primer to maximize a graphic's bond to its substrate.

- 3M™ Tape Primer 94
- 3M™ Adhesion Promoter 111

IMPORTANT NOTE

Air Quality Regulations

Air quality regulations on the state and municipal level may restrict or prohibit the use of certain chemicals that contain Volatile Organic Compounds (VOC's). Check with your local state environmental authorities or air quality district to determine whether use of VOC containing products may be restricted or prohibited.

Maintenance and Cleaning

Use a cleaner designed for high-quality painted surfaces. The cleaner must be wet, non-abrasive, without solvents, and have a pH value between 3 and 11 (neither strongly acidic nor strongly alkaline). See [3M Instruction Bulletin 6.5](#) for details.

Removal

Removal may require heat. 3M makes no claims as to the ease or speed of removal. See [3M Instruction Bulletin 6.5](#) for details.

Shelf Life, Storage and Shipping

Shelf Life

The shelf life is **never more than 3 years** from the date of manufacture on the original box.

If you process the film, the shelf life is changed to **1 year** from the processing date, but not later than the 3 year maximum from the manufacturing date.

Storage Conditions

- 40° to 100 °F (4° to 38 °C)
- Out of sunlight
- Clean, dry area
- Original container
- Bring the film to room temperature before use

Shipping Finished Graphics

Flat, or rolled printed side out on 6 inch (15 cm) or larger core. This helps prevent the application tape, if used, from popping off.

Health and Safety

CAUTION

When handling any chemical products, read the manufacturers' container labels and the Safety Data Sheets (SDS) for important health, safety and environmental information. To obtain SDS sheets for 3M products go to [3M.com/SDS](https://www.3m.com/SDS), or by mail or in case of an emergency, call 1-800-364-3577 or 1-651-737-6501.

When using any equipment, always follow the manufacturers' instructions for safe operation.

LEED v4 Credits

This section describes some of the options for acquiring LEED credits using this product.

NOTE: Each application is different. It is the sole responsibility of the end user to evaluate and determine whether the LEED credits listed below are applicable.

ID+C MR Credit, Interiors Life-Cycle Impact Reduction

- Option 1: Interior Reuse - Product can be used to refinish salvaged, refurbished, or reused nonstructural materials.
- Option 2: Furniture Reuse - Product can be used to refinish salvaged, refurbished, or reused furniture and furnishings.

ID+C, BD+C EQ Credit, Low-Emitting Materials

- Product is GREENGUARD GOLD Certified, meaning it is in compliance with the General Emissions Evaluation requirements

BD+C MR Credit, Building Life-Cycle Impact Reduction

- Option 3: Building and Material Reuse - Product can be used to refinish permanently installed interior elements (e.g. walls, doors).

BD+C MR Credit, Furniture and Medical Furnishings

- Option 3: Multi-attribute assessment of products - Product can be used to refinish permanently installed interior elements (e.g. walls, doors).

O+M MR Credit, Purchasing - Facility Maintenance and Renovation

- Product can be used to refinish permanently installed interior elements (e.g. walls, doors)
- Product is GREENGUARD GOLD Certified, meaning it is in compliance with the General Emissions Evaluation requirements

Building Product Disclosure and Optimization Information

Environmental Product Declaration (EPD) or

Life Cycle Analysis (LCA) LCA information available under Confidential Disclosure Agreement

Raw Material Source and Extraction Reporting

Raw Material source and extraction information for this product is considered to be 3M confidential and is therefore not available

Extended Producer Responsibility

Take-back or recycling program for this product is not available

Bio-based Materials

Product does not meet criteria for bio-based materials

Wood Products

Product does not meet criteria for wood-based product

Materials Reuse

Product can be used to refinish salvaged, refurbished, or reused materials and furniture

Recycled Content

Product does not contain pre- or post-consumer recycled content

Material Ingredient Reporting

Product ingredient information for this product is considered to be 3M confidential and is therefore not available

3M™ Envision™ Print Wrap Film

GreenScreen Benchmark or Cradle to Cradle Certification

Assessment or Certification not available on this product

REACH Optimization

REACH Substance of Very High Concern certifications are on www.3M.com/SDS (US) or 3M.com/SVHC (Europe)

Location Valuation Factor

Based on supply chain, this product would not meet location valuation factor requirements of being extracted, manufactured, and purchased within 100 miles.

Commercial Solutions

3M Center, Building 220-12E-04
St. Paul, MN 55144

1-800-328-3908
3M.com/Graphics

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Revision D, February 2020 Please recycle.





2021 Public Art Application

Applicant Contact Name: Eric Bourassa and Barbara Pomilio

**Application Contact plans and/or funds the proposed public art.*

Contact Role (Choose One): ☐ Developer ☐ Artist ☐ Community Group ☒ Other

Phone Number: (917) 991-7312 / (646) 457-5800

Email: ericb@ssuperette.com, barbarap@ssuperette.com

Public Art (Choose One): ☐ Mural ☐ Sculpture ☐ Memorial ☐ Community Art

☐ Integrated Architectural ☐ Landscape Architectural Work

Images (3) Three Enclosed: ☒ YES ☐ NO **Applicant must submit three (3) images with different vantage points for proposed public art piece. One (1) image of the (3) must reference the scale/size of the piece (Example- have a person in the photo with the art work). Artist renderings are acceptable.*

Artist Name: Shawna X

Artist Contact (Website/ Email/Phone/Resume): <https://shawna-x.com/>

Maintenance Plan Enclosed: ☒ YES ☐ NO

**Maintenance plan for the proposed public art is required with application. Plan must include a description of all materials; how the piece was created; paint colors specifications; and so on as it applies to the piece.*

Proposed Public Art Location Address: 7110 Avalon Boulevard

Location Photos Enclosed: ☒ YES ☐ NO

**Photos of proposed public art location is required with application. Location photos must show the surrounding area and different vantage points. List in a separate word document any businesses, residents, etc. that might view the proposed public art on a daily basis.*

Describe the surroundings and how it fits the proposed location: The intent is to create a mural that represents and reflects the local community and the values of sport using the existing facade. Using artwork that will be unique to the Nike Live Alpharetta location, the facade will engage the center's users and invite interactions with the neighborhood.

Owner of Property: North American Properties

**Attach a Letter of Permission from the Property Owner to Install the Public Art Piece and length of agreement.*

Name of Conclusive Owner of Proposed Public Art: Nike

**Final owner and responsible party for long term maintenance of the piece.*

Phone Number: +1 (503)-869-1317

Email: Brittney.Francesconi@nike.com

Email the following as separate attachments to Kim Zane, Cultural Services Manager
kzane@alpharetta.ga.us

☐ Public Art Application (Page 1 Completed)

☐ (3) Images of Proposed Public Art

☐ Maintenance Plan

☐ Location Photos of Proposed Public Art

☐ Letter of Permission from Property Owner to Install Public Art Piece

**All above requirements must be completed for a Public Art Committee Review to be scheduled.*



PAGE (2) STAFF TO COMPLETE

Public Art Review Committee Criteria & Discussion:

**Below is for Public Art Committee only and will be completed during your proposed public art review. Please read through and be prepared to discuss during the review.*

	YES	NO
1. Public Art is handmade and original; not a reproduction	_____	_____
2. Overall quality & construction of the piece is of high standards	_____	_____
3. Strength and power of public art piece is good to above average	_____	_____
4. Public Art will add to the overall location	_____	_____
5. Any concerns about messaging that could be misinterpreted	_____	_____
6. Scale of the piece fits the location	_____	_____
7. Piece meets consensus of community standards	_____	_____

Additional Comments: _____

Public Art Review Committee Recommendations:

_____ **Approved as Proposed**

**Route to Alpharetta Cultural Arts Commission for final approval. Meetings occur on the fourth Wednesdays of the month so please plan appropriately.*

_____ **Approved with Minor Modifications / No Further Review Required**

**Applicant & Review Committee agree to modifications. Route to Cultural Arts Commission for final approval.*

_____ **Approved with Modifications / Further Review Committee Discussion Required**

**Applicant works on modifications. A second Public Art Committee review will be scheduled when modifications are submitted to Cultural Services Manager.*

_____ **Declined / Request for New Proposal / Further Discussion Optional**

**Applicant revises approach with Public Art Review Committee recommendations and resubmits application with a new proposed public art piece.*

Alpharetta Cultural Arts Commission Final Monthly Review:

Added to Agenda: _____ Commission Review Date: _____

**Final reviews takes place on the fourth Wednesdays of the month with agendas on the third Wednesday, so please plan appropriately. Once approved, activation of public art piece may begin.*