



## **Roof Structure Condition Assessment - Final Study Report**

for the

**Neon Museum Lobby Building  
Las Vegas Nevada**

prepared for

**Neon Museum  
770 Las Vegas Blvd. North  
Las Vegas, Nevada 89101**

prepared by

**Melvyn Green & Associates, Inc.  
Torrance, CA 90503**

in association with

**AQYER Consultants**

August 2024

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## **Scope and Intent**

### **Background**

The Neon Museum Lobby is a reinforced concrete thin-shell structure. It was originally located on the Las Vegas Strip as the lobby for the La Concha Motel. A new high-rise development was proposed for the site and the La Concha building was scheduled for demolition. Instead, with strong community support, the building was relocated to the current site as part of the Neon Museum complex by cutting it into eleven pieces and reassembling it.

The relocated building has been in use for more than a decade, and the concern is for the condition of the roof covering and whether there may be any cracks in the concrete shell due to minor settlement or other causes. If so there is the potential for water leakage through any hairline cracks.

### **Project Intent**

In support of the Neon Museum future maintenance and planning activities, Melvyn Green & Associates, Structural Engineer for the relocation project, in association with AQYER, digital consultants, inspected the building to identify conditions that will require structural repair or maintenance. The intent is to observe the roof covering, note any cracks, or other conditions on the exterior and interior surface of the shell, and identify other conditions that require maintenance or repair. This investigation does not include an independent evaluation of the roof covering's condition.



Photo 1 - La Concha at original site.

## Methodology

A site visit by the project team was conducted on November 29-30, 2023. A visual inspection of exposed, accessible, surfaces was conducted. No destructive removals of finishes was done.

A more close-up observation was then undertaken using a drone on both the interior and exterior surfaces as well as some less accessible areas. Thermal imaging was used as practical to detect possible density variances that might indicate issues.



Photo 2 - Original interior and lighting.



Photo 3 - Interior wiring today. In many areas the wires have lost their adhesion to the ceiling plaster.



## **Building Structural Condition**

### **Overview**

During reconstruction/rebuild it was found that the existing concrete in much of the shell, was generally weak and lightly reinforced. Stronger/denser concrete was observed in the "valleys" of the shell. The valleys are the areas that convey the mass of the structure to the support columns and footings and have greater stresses. (No physical tests of the concrete were made during the construction.)



Photo 4 - This photo shows how the various sections of the shell were cut. The sections were then stored for reassembly.

### **Rebuild Procedure**

Of the eleven pieces the "cap" or top section could not be reused. All of the reinforcing steel in the valleys of the shell, plus the reinforcing steel from the top of the wall and the "T" section were in the Cap and it had to be recast.

The other ten saved pieces of the shell were placed on scaffolding in their proposed location. The edges of each roof section were cut back about one foot or more to expose the reinforcing steel. The steel in each section was spliced with mechanical connectors or welded, depending on the specific condition. Forms were constructed and new concrete infill was placed to replicate the original shell. The stem of the "T," which extends into the support building, is a reinforced concrete wall. The back wall of shell is reinforced concrete masonry units (CMU). Reinforcing steel from the CMU wall and the "T" all come together in the cap which was reconstructed. It is a thicker section than the shell itself.

Concrete has qualities that often create conditions requiring maintenance. Of critical importance is shrinkage. As concrete cures, it shrinks. In this case this would be shrinkage along the new joint lines. In this building there are joints where cuts and infill were made. These occur on the sloping surface but near the top (cap), where the surface is almost horizontal. In such areas, rainwater may not flow off as quickly. The area where new and old concrete meet would be the potential locations for possible leakage. Of course there may be other cracks in the concrete that could permit water intrusion. The roof covering keeps the water from entering any cracks.

There is also a joint where the concrete shell meets the concrete block back wall. Typically, this is a conventional flashed joint where the water runs down the surface of the wall (above the roof) and the metal flashing directs it to the roof of the shell.

Thus, in all locations, the roof covering condition will be a key factor to prevent roof leaks.



Photo 5 - Example of the joint between the several concrete sections. Mechanical splices can be seen. In some cases, because of the reinforcing steel was too close to the surface, welding was required.

## Conditions Observed

In the work for this report, no obvious roof leaks were noted. Also the condition of the roof covering appeared solid. However the roof covering is about fifteen years old. In the Las Vegas environment, it will require replacement in the foreseeable future.

Leaks would become visible on the ceiling. One hairline crack was observed on the interior of the shell but it was not observed on the roof.

Along the interior side near the top of the back wall (southwest corner), there might be a small leak or it might be salts coming to the surface from the CMU and mortar. this is not an issue but might be unsightly if it continues. But it could be very minor leakage at the flashing between the roof and wall.

No delamination of the underside of the roof was observed on the interior. Possible loose plaster may occur where the lighting cables have become detached or when they are replaced.



Photo 6 - The shell and vertical wall intersection needs to be flashed to properly direct the water. Possible water intrusion may occur along the roof in the areas shown and at the window. This needs to be inspected and repaired.

## **Recommendations and Options**

### **Short Term Needs**

There were two areas of interest for the short term noted.

Roof/Wall flashing – There was some evidence of possible leakage at the back wall near the south doors. There might be some damage to the flashing and the joint between the roof and wall. It is recommended that a professional roofing contractor be retained to inspect and repair the flashing as needed.

Existing ceiling crack – The goal here is to patch any areas of possible leakage before the water might enter the roof concrete and rust the steel and leaks through the ceiling. The preferred option would be to repair this from the roof. This would require removal of a portion of the existing covering, filling the crack with a flow-able material, the patching the roof. Repairing for the underside of the roof might result in greater damage and interruption to use of the lobby.

### **Long Term Recommendations**

Replacement of the roof covering will be needed in the not to distant future. This should be planned for and the product selected. Research may be needed to find what product was originally used.

In the meantime the roof should be inspected and repaired as necessary.

## Appendices



AQYER, LLC  
2100 Huntington Drive, #8  
San Marino, CA 91108

Mr. Melvyn Green  
Melvyn Green & Associates, Inc  
3868 Carson Street, Suite 300  
Torrance, CA 90503

June 14, 2024

**Project Ref: 0323.04 The Neon Museum - Roof Investigation - DRAFT**

Further to your request, a multi-faceted investigation of the Neon Museum Visitor Center Roof was undertaken by AQYER, LLC. The investigation began with three days (November 28-30, 2023) of data capture in the field, followed by office-based data reduction and analysis.

The primary findings of the investigation, as well as the methods used, are described within this DRAFT report. Any conclusions drawn are the best professional opinions of the author based on their experience of similar projects elsewhere. The findings are also illustrated in drawings R-000 to R-301 (Appendix A), which should be read in conjunction with this report.

Additional supporting materials, including images, and 3D data / models referenced throughout the report, are available for download from Google drive, [here](#). Data can also be mailed on a physical drive upon request.

It is understood that the contents of this report may also be incorporated into the Roof Structure Condition Assessment Report prepared by Melvyn Green & Associates, Inc. with further analysis.

If you have any questions or would like to discuss the findings of this investigation in further detail, please do not hesitate to contact me.

Best Regards,



Alan White  
Partner

## EVALUATION INTENT & SCOPE

The Neon Museum comprises outdoor exhibition spaces and a visitor center located on Las Vegas Boulevard North, in Las Vegas, NV. The visitor center is housed in the former lobby of the La Concha Motel. The building, recognized for its iconic parabolic roof, was designed by renowned architect, Paul Revere Williams, FAIA. Saved from demolition, the structure was moved to the site of the Neon Museum in 2006.



The Neon Museum Visitor Center: 770 Las Vegas Blvd. North, Las Vegas, NV 89101

AQYER was commissioned to support an assessment of visible damage that had been identified at the soffit, which had sparked concern that further damage may occur. Given the complex geometry of the building, the history of deconstruction & reassembly, known issues of poor concrete consolidation, and constant exposure to extreme weather conditions, a thorough investigation was deemed necessary.

The Neon Museum organization and community at large take tremendous pride in the building and have a desire to properly maintain it. A first step in determining appropriate remediation is developing a better understanding of the problem. AQYER therefore proposed a number of non-destructive evaluation methods to identify and map potential defects that may be contributing to the known issue.

As well as general defect information, AQYER's methods can also produce accurate measurements and digital reconstruction of the complex building geometry, which will be most useful in precisely quantifying the extent of remedial work and in planning for implementation of those works.

The scope of work was focused on the roof of the visitor center building, specifically the area of visible damage above the check in desk, as highlighted in the image below and drawing R-103.



Visitor Center Soffit: Visible crack, approximately 18" in overall length, close to the back wall

Visual assessment was supported by a suite of non-destructive evaluation techniques including:

- Infrared Thermal (IRT) Imaging
- Ground-Penetrating Radar (GPR)
- Metal Detection
- Tap Testing (aka Sounding)

Measurement of the roof (and surrounding area) was undertaken using the following:

- Digital Photography & Photogrammetry
- 3D Laser Scanning

The methods used are described in more detail on the following pages.



## METHODS

The interior and exterior roof surfaces were imaged using a high-resolution infrared thermal (IRT) camera mounted on an unmanned aerial system (UAS / drone, for the exterior) operated from the city sidewalk. UAS operations were performed by an FAA Part 107 licensed operator in accordance with local and federal regulations and procedures for unmanned flight.



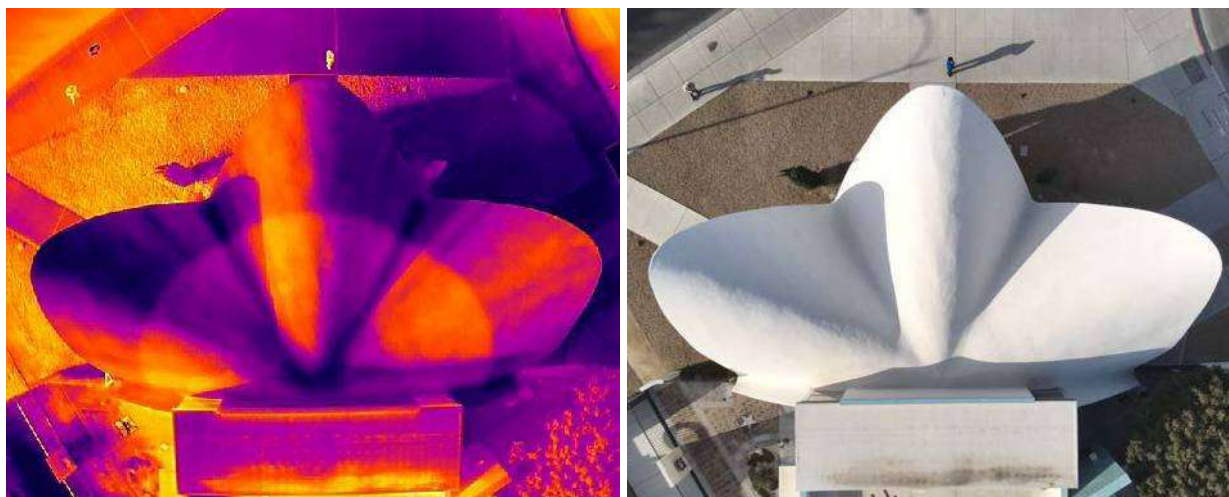
UAS Infrared Thermal Imaging at The Neon Museum: DJI Mavic 3T Enterprise

Over 150 thermal images (each with corresponding visible light images) were collected over two separate passes (one in soon after sunrise, and another when the structure had been in the sun for several hours), indicating temperature variations across the surfaces of the roof. Those temperature variations (anomalies) were evaluated to identify potential for current and incipient spalls, elevated moisture, and variations in construction.

By adjusting the thermal range and span of the IRT images (which were collected in .rjpg format) in specialist software and comparing them with high-resolution visible light photographs, a skilled technician could identify anomalies of interest and rule out those caused by variations in surface color, texture, sunlight, and other reflections.

When using IRT for the detection of defects, there is often a benefit to imaging before and after the subject area has been heated (in this case by the sun). Solid concrete structures, with a typically large thermal mass, tend to heat up gradually and consistently. Where a spall, patch, or other change has occurred, the material will heat at a different rate to its surroundings, resulting in a hotter (lighter) or cooler (darker) response in the thermal images.

Areas that are protected from direct sunlight (such as those with canopies, or the north elevations) will heat up more slowly throughout the day, so the results tend to be less distinctive.



Thermal Overview: Showing broad variations in temperature associated with shadows, and a contrast between the (warmer) semi-circular interior space and the (cooler) cantilevered roof sections

Ground-penetrating radar (GPR) is frequently used to non-destructively identify the construction arrangement and certain conditions within reinforced concrete structures. In this case, a number of sample areas (accessible by step ladder at the lower sections of the roof) were profiled to observe the changes in concrete thickness & reinforcement arrangement, and to look for areas of poorly consolidated concrete.

A battery-powered, handheld unit, (GSSI StructureScan Mini XT), was used to profile accessible sections of the structure as shown in the images on the following page. Radio waves were transmitted through the structure and it was an analysis of the reflections caused by interfaces within the structure that allowed a 3-dimensional reconstruction of the construction arrangement to be made. Embedded objects, voids and / or changes in material density create distinct responses within the data which can be interpreted in the field.

Findings can often be corroborated by the use of metal detectors, to improve confidence in the data interpretation.





GPR Data Collection: Identifying the reinforcement arrangement within the concrete roof (left) and demonstrating the identification of vertical reinforcement and cell grouting in the CMU wall (right)

Tap testing, also referred to as sounding, is the process of striking a surface with a hammer and listening to the audible response. Dull thuds typically indicate solid structure while a high-pitched ring can indicate a detached surface material, or thinning section. By striking the surface in a grid pattern over a selected area, a qualitative assessment can be made to identify the presence and extent of certain defects.

A small pin hammer was used to sound the exterior soffit of the roof overhang at the south east corner of the building where visible cracks were identified at the surface.



Tap Testing: Cracked surface at south east corner of roof overhang

Measurement of the roof structure was undertaken using a combination of photography and 3D laser scanning. High resolution imaging was performed at the interior using a tripod-mounted DSLR camera and at the exterior using a UAV-mounted digital action camera creating a valuable resource for identifying visible defects at the surfaces.

The images were reviewed in their raw format to identify visible defects and were also processed further to create a full 3D, photo-textured digital reconstruction of the structure which is shown on drawing R-301 and can be viewed online, [here](#). The 3D model can be downloaded by members of the current and future project teams to visualize and measure the structure. The ability to view the structure in any orientation, produce orthographic images (typically 2D plan views), section cuts, and accurately calculate surface areas is particularly relevant on a building with geometry as complex as the Neon Museum Visitor Center. A derivative model, also shown on Drawing R-301 and viewable online, [here](#), was used to calculate the roof surface areas.



DSLR Imaging: Capturing the interior soffit of the Visitor Center using a tripod

In order to produce a 3D reconstruction using photogrammetry (the process of deriving 3D geometry from 2D images), images were collected in a grid formation where subsequent images overlapped the previous ones by 50-70%. The grid approach ensured that every aspect of the subject is captured in at least three or more images, allowing computer software to identify matching pixels between images, triangulating the camera positions and ultimately identifying the 3-dimensional position of every pixel in each of the images. 3D Laser scan data, as described below, was used to precisely control and scale the photogrammetry models.

3D Laser scanning provides a means for capturing precise measurement of building geometry and can be used inside and out, it is particularly well suited to complex shapes where measurement by hand may yield insufficient precision and reliability. The data produced by a laser scan (called a point cloud) can therefore serve as the basis for developing accurate 2D drawings and 3D models of a structure. It is also used to provide scale to models generated using photogrammetry as described above.

Data was collected using a Leica RTC360 3D laser scanner (certified eye-safe, class 1 in accordance with IEC 60825-1:2014, 1550nm, invisible laser) to gather 3D point cloud data from multiple ground-based vantage points in and around the buildings.



3D Laser Scanning: Laser measurement of The Neon Museum Visitor Center

Approximately 60 vantage points were selected around the site to optimize coverage. Scans were primarily collected from a standard tripod (~5.5' tall) at ground level; a high-reach tripod (maximum reach 15') was used to collect data in a small number of areas to provide coverage on the upper roof surfaces. Areas that were not visible from ground-level were infilled with photo data.

The output from the scan was a precise database of visible surface geometry which can be interrogated for specific measurements and conversion to 2D drawings and 3D models.



## FINDINGS & DELIVERABLES

Building measurement was successfully completed using laser scanning and photogrammetry to deliver the following:

- A 3D Point Cloud - The 3D point cloud can be downloaded from Google Drive, [here](#), in either .RCP or .E57 format, industry standard for use in most architectural and 3D modeling applications.
- 2D Drawings - A set of architectural drawings developed in AutoCAD a site plan, floor plan, reflected ceiling plan and roof plan, as well as exterior elevations and a section. These drawings can be downloaded from Google Drive, [here](#), in either .DWG or .PDF format.
- 3D Models - A photo-textured model of the roof structure and an untextured model used for the calculation of surface areas. These models can be viewed on the Sketchfab model platform here (photo-textured) and here (untextured). From Sketchfab they can also be downloaded in multiple formats including .OBJ, an industry standard for use in most architectural and 3D modeling applications.
- Orthographic Images - High resolution, 2D orthographic images of the roof structure (plan and reflected ceiling plan) at 1mm per pixel, and a site plan including the visitor center and boneyard at 3mm per pixel. These can be downloaded from Google Drive, [here](#).



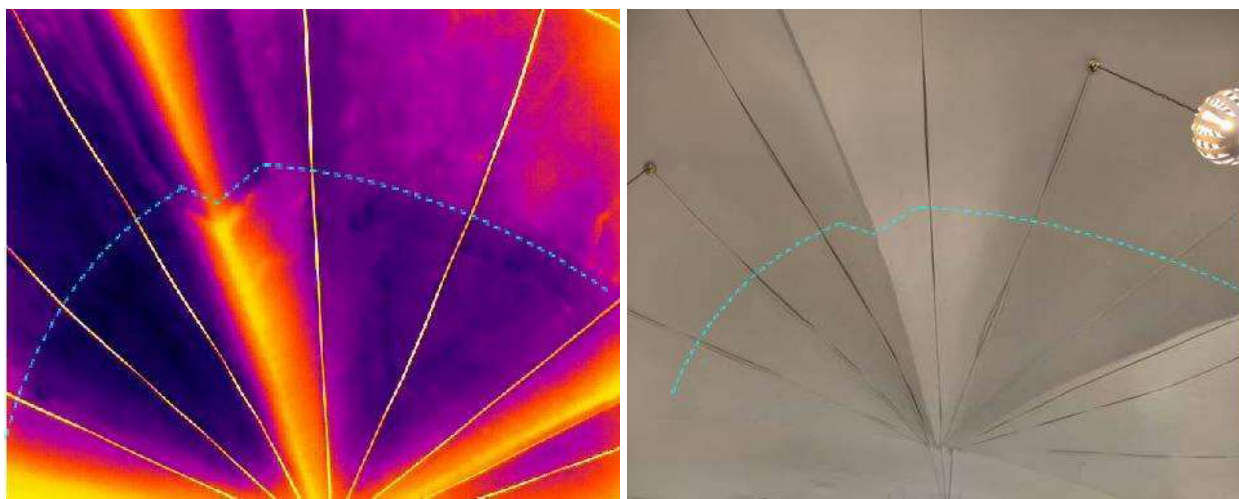
3D Point Cloud: Millions of individual measured points together as a point cloud

Thermal imaging at the interior and exterior identified a number of thermal anomalies in the roof structure, many of which could be disregarded as having been caused by inconsistent exposure to the sun (warmer responses in direct sunlight, cooler responses in shaded areas) as can be seen in the overview images shown on page 5 of this report.

Less distinct, but broad none-the-less, variations can be seen in areas where the thin shell structure changes in thickness and responds to warming and cooling at differing rates to the surrounding areas.

Other anomalies included multiple cooler responses on the interior soffit, likely caused by variations in material where prior interventions (such as shoring during the deconstruction and rebuilding) have been patched.

The most significant thermal response identified shows us where the structure was cut and later reconstructed. As highlighted in the interior soffit images below.



Thermal Image: A clear separation can be seen between sections of the reconstructed roof

No evidence of imminent spalls (separation of concrete) or other causes for immediate concern were identified within any of the thermal images collected.

The GPR trial showed that the reinforcement can be mapped, though plotting the findings is particularly difficult given the complex shape of the structure. The data collected identified multiple bars between 3 and 12" on center in multiple directions.

With better access, such as a scaffold or aerial lift, it would have been possible to inspect the crack at the soffit to see if it was related to a particular piece of reinforcement, low cover, and / or high congestion. In an area of cracking observed on the exterior soffit (south east corner, as marked on drawing R-103) it was possible to confirm that individual cracks were coincident with



individual reinforcement bars. Whether the cracks were caused by expansive corrosion of the bars or by thermal loading, the open cracks are susceptible to moisture infiltration which can exacerbate corrosion and lead to further deterioration. Tap testing was used across the area, and confirmed that the visible cracks extend deeper than the surface finishes, though none of the concrete tested appeared to be loose and in immediate danger of falling.

While GPR can be used for determining concrete thickness, the 3D point cloud data is considered more reliable, and was used to create a section through the cracked region at the visitor center interior; the section indicates that the concrete is as little as 3¼ to 3½ " thick at the crack location.

Aerial imaging of the roof structure allowed for us to get a close view of the entire roof surface. From this, a small number of areas exhibiting penetrative damage to the roof membrane / finishes were identified. Four locations are marked on the reflected ceiling plan shown in drawing R-103, and two are shown on the Roof plan shown in drawing R-104. Each of these defects is located at or close to the edge of the roof - extremities most exposed to weathering. Consideration should be given to repairing those areas before problems of moisture infiltration develop and the extents of the defects increase.



Membrane Damage: Image of defective membrane at north west roof overhang

Although the roof is not perfectly smooth, with many undulations and varying degrees of roughness, the membrane appears to be largely intact, with the exception of those 6 areas highlighted in drawings R-103 and R-104.

Given its proximity to the visible interior soffit crack, special consideration was paid to the block wall which forms the back of the visitor center and extends up above the main roof line. An album of images is available to view, [here](#), where the area can be further inspected. Given the susceptibility of CMU block walls to water infiltration, its interaction with the roof, and its interaction with the curtain wall, there should be a priority requirement to ensure proper

maintenance. A review of the flashing detail is and regular maintenance is recommended to curtail moisture infiltration that could pass down through the block wall and accumulate between the roof structure and the membrane.



Aerial Images: Intersection between the historic roof structure and the CMU block wall



# NEON MUSEUM

EXISTING CONDITION DOCUMENTATION, 2023



(A) SCALE 1/8" = 1'-0" LA CONCHA - VIEWED SOUTH EAST

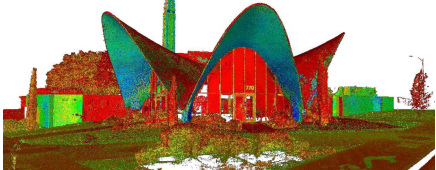


(F) SCALE 1/8" = 1'-0" NEON MUSEUM - VIEW FROM ABOVE



(B) SCALE 1/8" = 1'-0" LA CONCHA - 3D MODEL

(C) SCALE 1/8" = 1'-0" LA CONCHA - 3D MODEL



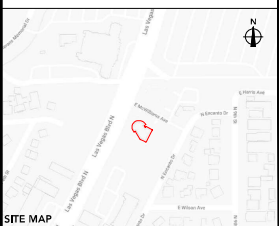
(D) SCALE 1/8" = 1'-0" LA CONCHA - 3D SCAN DATA



(E) SCALE 1/8" = 1'-0" LA CONCHA - AERIAL THERMAL IMAGE

## SHEET INDEX

SHEET	DESCRIPTION
R-000	PROJECT DATA
R-101	SITE PLAN
R-101B	SITE PLAN
R-102	FIRST FLOOR PLAN
R-103	REFLECTED CEILING PLAN
R-104	ROOF PLAN
R-201	EXTERIOR ELEVATIONS (NORTH WEST)
R-202	EXTERIOR ELEVATIONS (WEST)
R-203	EXTERIOR ELEVATIONS NORTH
R-211	INTERIOR ELEVATIONS (SOUTH EAST)
R-301	SECTIONS & DETAILS



NO.	REVISION/ISSUE	DATE
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PROJECT  
NEON MUSEUM  
LAS VEGAS BLVD NORTH  
LAS VEGAS, NV

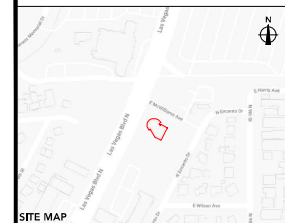
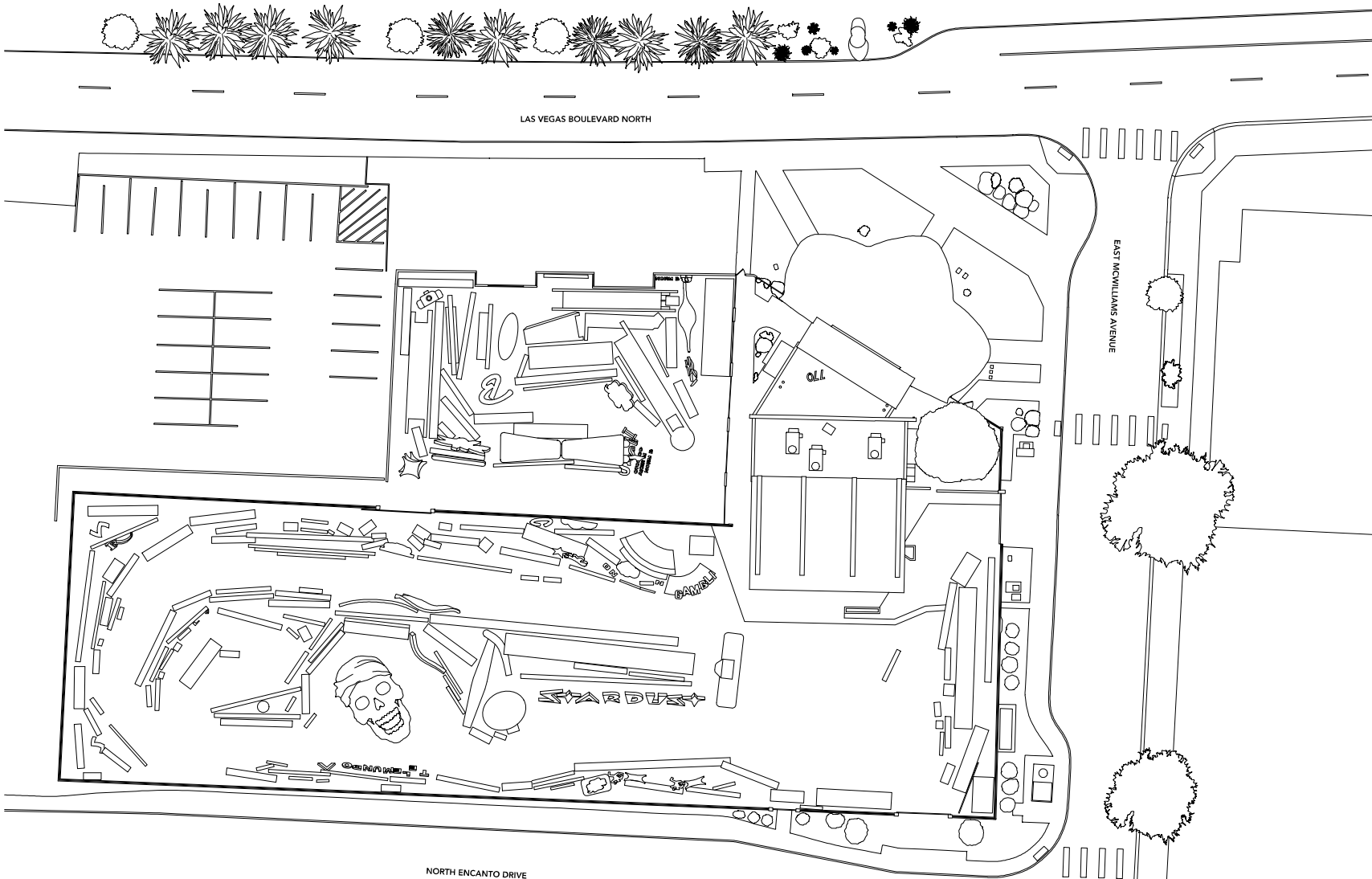
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MELVYN GREEN & ASSOC.  
3868 CARSON STREET, #300  
TORRANCE, CA 90503

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PROJECT MANAGER	ALAN WHITE
DRAWN BY	SM
CHECKED BY	AW
FILE LOCATION	
PROJECT NO.	0323.04
DATE	02/29/2024
SCALE	NTS
SHEET NAME	PROJECT DATA

SHEET NO.  
**R-000**

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NO.	REVISION/ISSUE	DATE

PROJECT  
NEON MUSEUM  
LAS VEGAS BLVD NORTH  
LAS VEGAS, NV

PREPARED FOR  
MELVYN GREEN & ASSOC.  
3868 CARSON STREET, #300  
TORRANCE, CA 90503

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FILE LOCATION	
PROJECT NO.	0323.04
DATE	02/29/2024
SCALE	1/16"=1'

SHEET NAME  
**SITE PLAN**

SHEET NO.  
**R-101**

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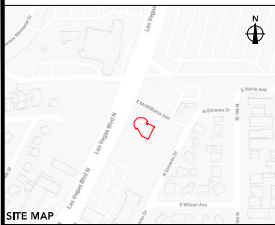




THE ORTHOGRAPHIC IMAGE WAS CREATED FROM UAV (DRONE) IMAGES USING A PHOTOGRAMMETRY PROCESS, SCALED WITH TERRESTRIAL 3D LASER SCAN DATA.

THE ORIGINAL HIGH RESOLUTION (3MM PER PIXEL) ORIGINAL IMAGE IS AVAILABLE TO DOWNLOAD IN .JPG AND .TIF FORMAT FROM GOOGLE DRIVE, BY CLICKING HERE.

CONTACT ALAN@AQYER.COM, QUOTING PROJECT NUMBER 0323.04, TO REPORT BROKEN LINKS OR MISSING DATA.



SITE MAP

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NO.	REVISION/ISSUE	DATE

PROJECT  
NEON MUSEUM  
LAS VEGAS BLVD NORTH  
LAS VEGAS, NV

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MELVYN GREEN & ASSOC.  
3868 CARSON STREET, #300  
TORRANCE, CA 90503

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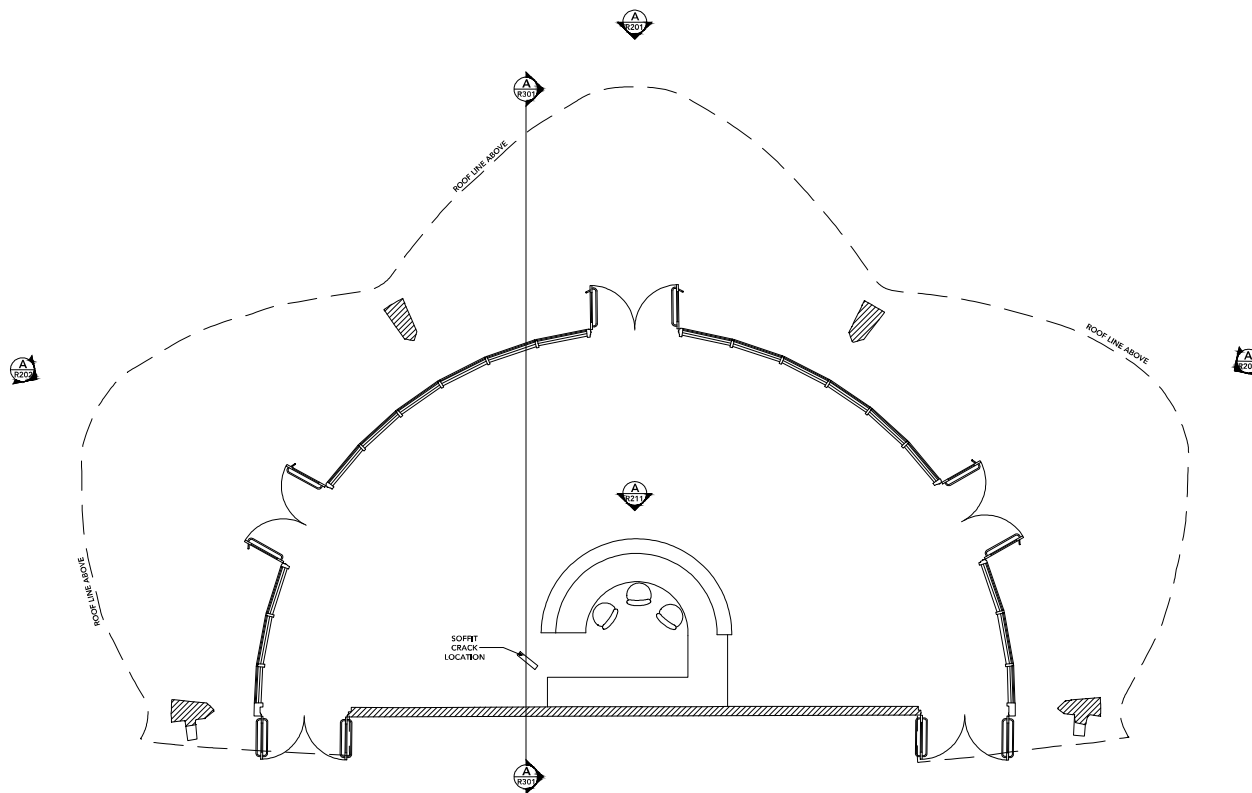
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DRAWN BY	SM
CHECKED BY	AW
FILE LOCATION	
PROJECT NO.	0323.04
DATE	02/29/2024
SCALE	1/16"=1'
SHEET NAME	SITE PLAN (ORTHO IMAGE)

SHEET NO.  
**R-101B**

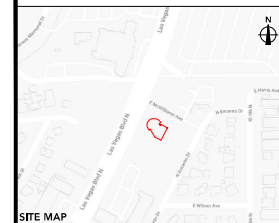
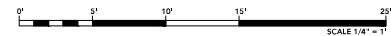
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A SCALE 1/4" = 1' LA CONCHA - FLOOR PLAN



SITE MAP

DRAFT

NO.	REVISION/ISSUE	DATE
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LAS VEGAS BLVD NORTH  
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3868 CARSON STREET, #300  
TORRANCE, CA 90503

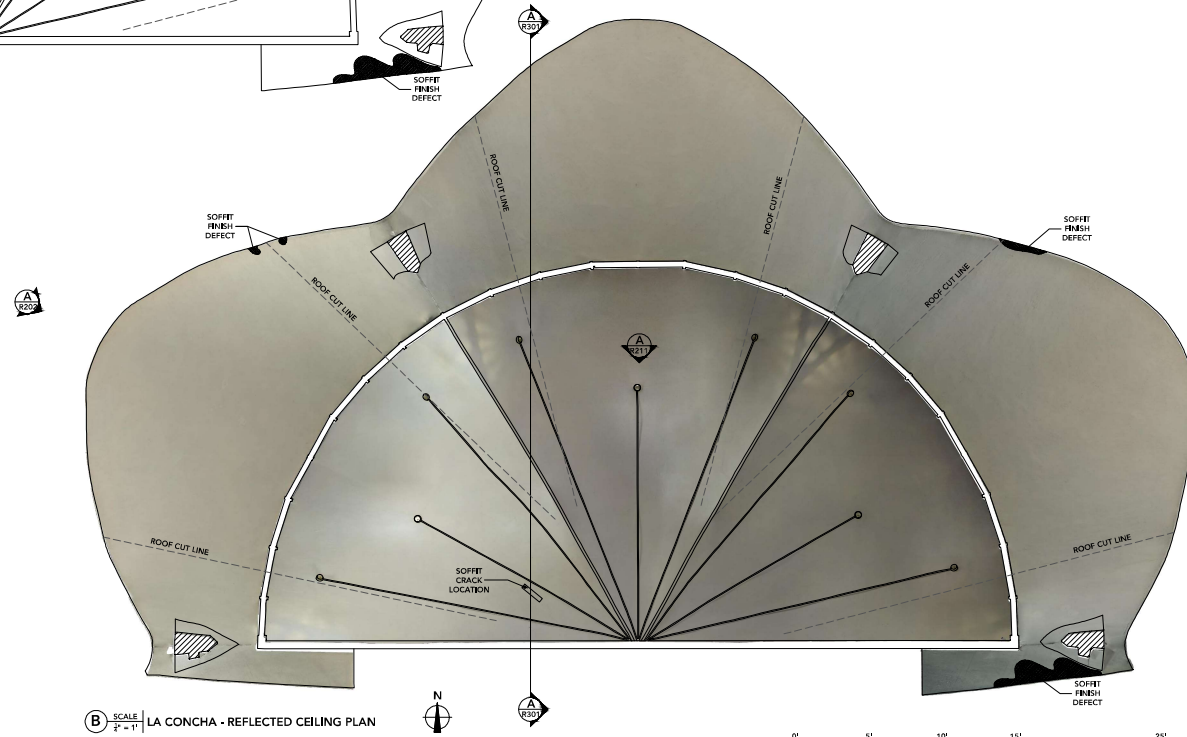
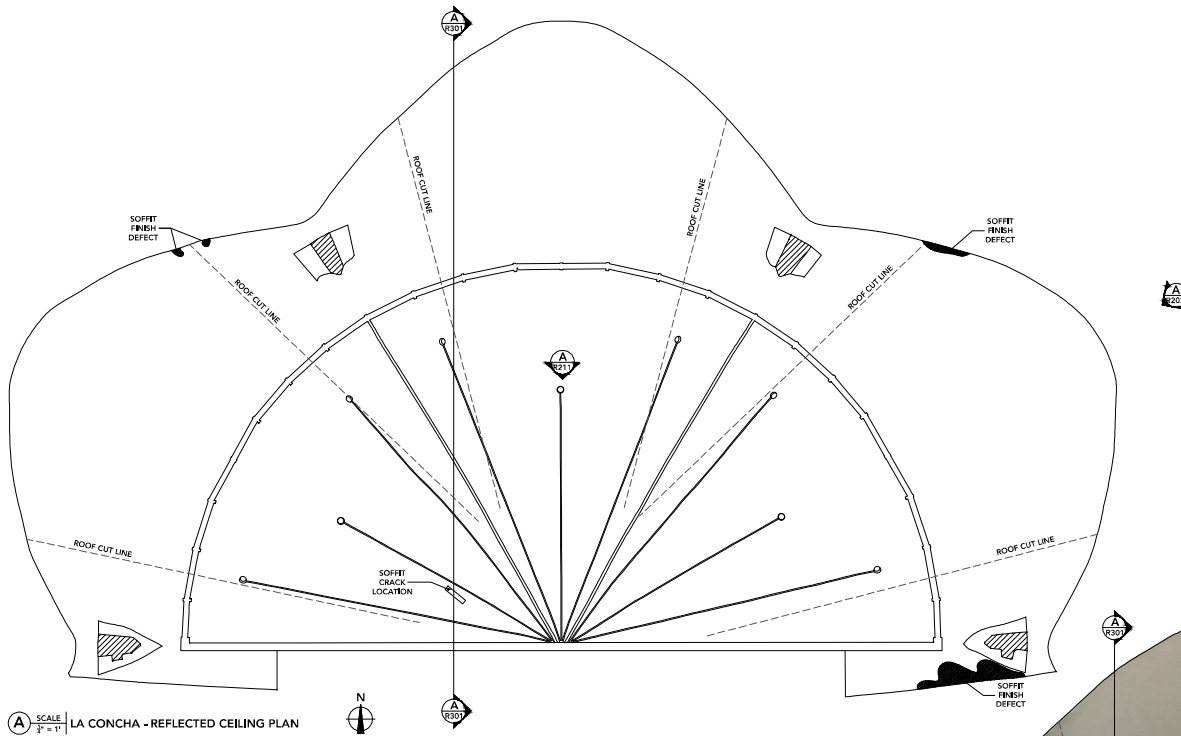
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PROJECT NO.	0323.04
DATE	02/02/2024
SCALE	1/4"=1'

SHEET NAME  
**FLOOR PLAN**

SHEET NO.  
**R-102**

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0' 5' 10' 15' 20'

SCALE 1/4" = 1"



DRAFT

PROJECT  
NEON MUSEUM  
LAS VEGAS BLVD NORTH  
LAS VEGAS, NV

PREPARED FOR  
MELVYN GREEN & ASSOC.  
3868 CARSON STREET, #300  
TORRANCE, CA 90503

**AQYER**  
DEFINING THE BUILT WORLD  
WWW.AQYER.COM

PROJECT MANAGER ALAN WHITE

DRAWN BY SM

CHECKED BY AW

FILE LOCATION

PROJECT NO. 0323.04

DATE 02/02/2024

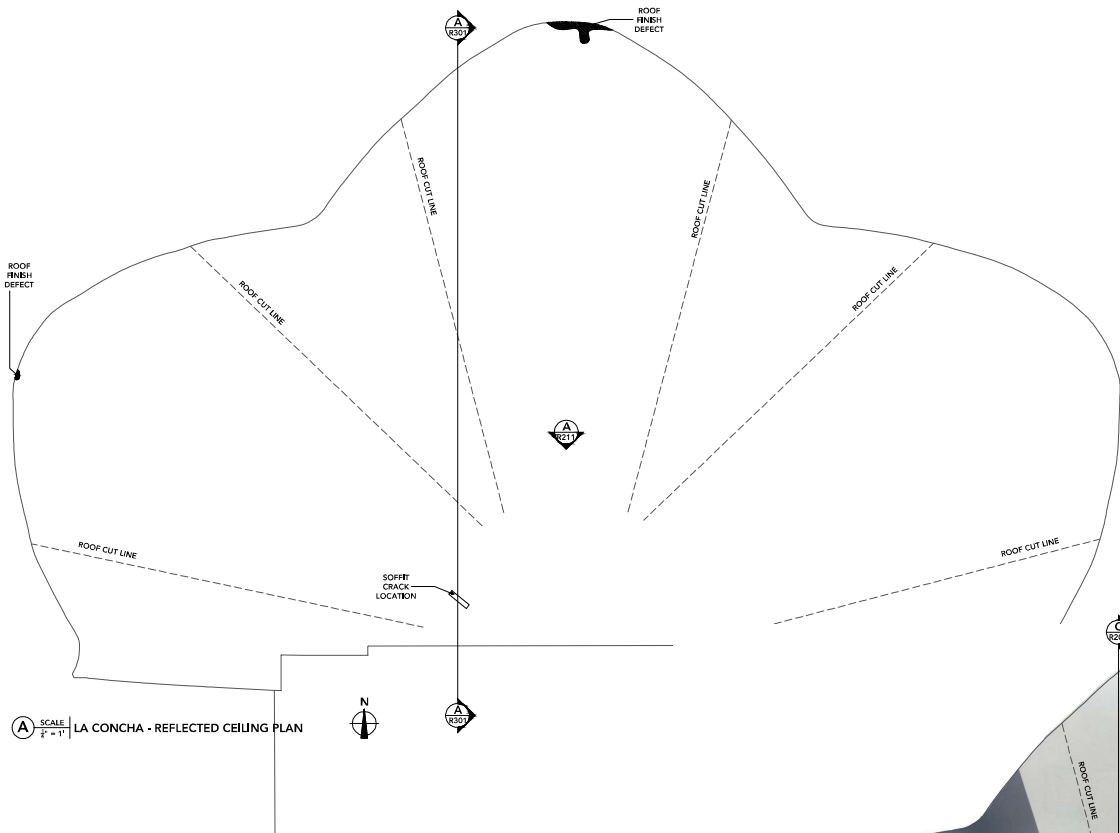
SCALE 1/4" = 1"

SHEET NAME  
REFLECTED CEILING PLAN

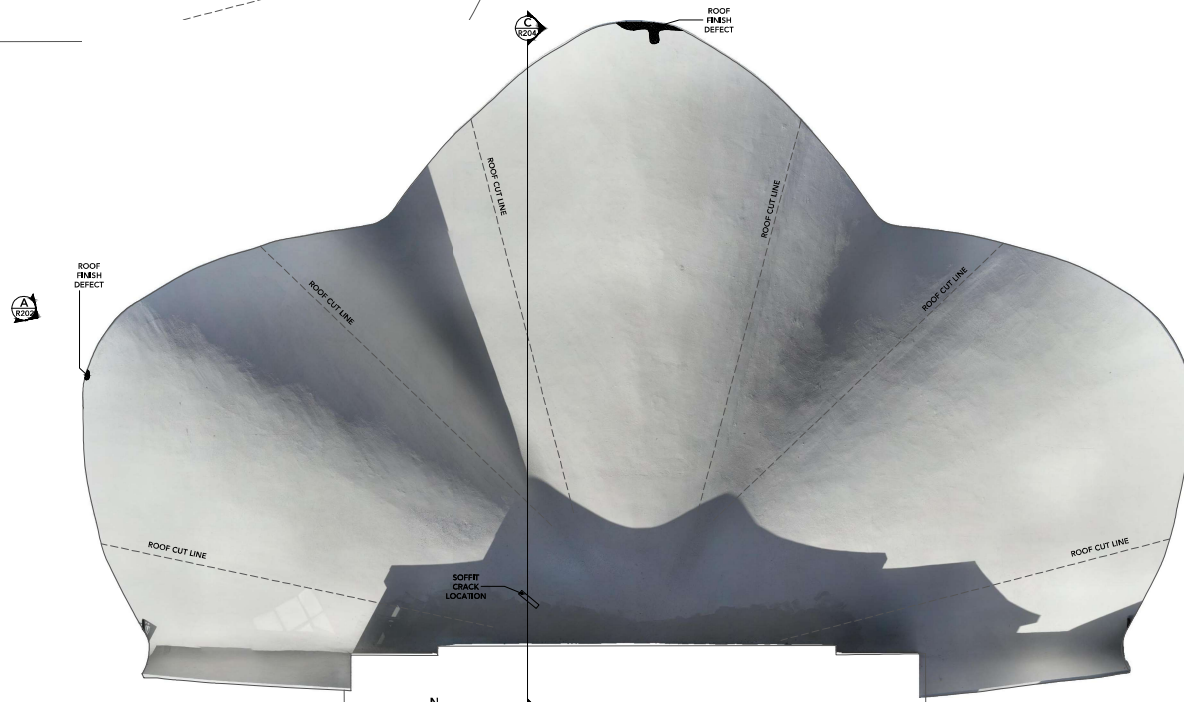
SHEET NO.

**R-103**

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(A) SCALE 1/4" = 1' LA CONCHA - REFLECTED CEILING PLAN



(B) SCALE 1/4" = 1' LA CONCHA - REFLECTED CEILING PLAN



SITE MAP

DRAFT

PROJECT  
NEON MUSEUM  
LAS VEGAS BLVD NORTH  
LAS VEGAS, NV

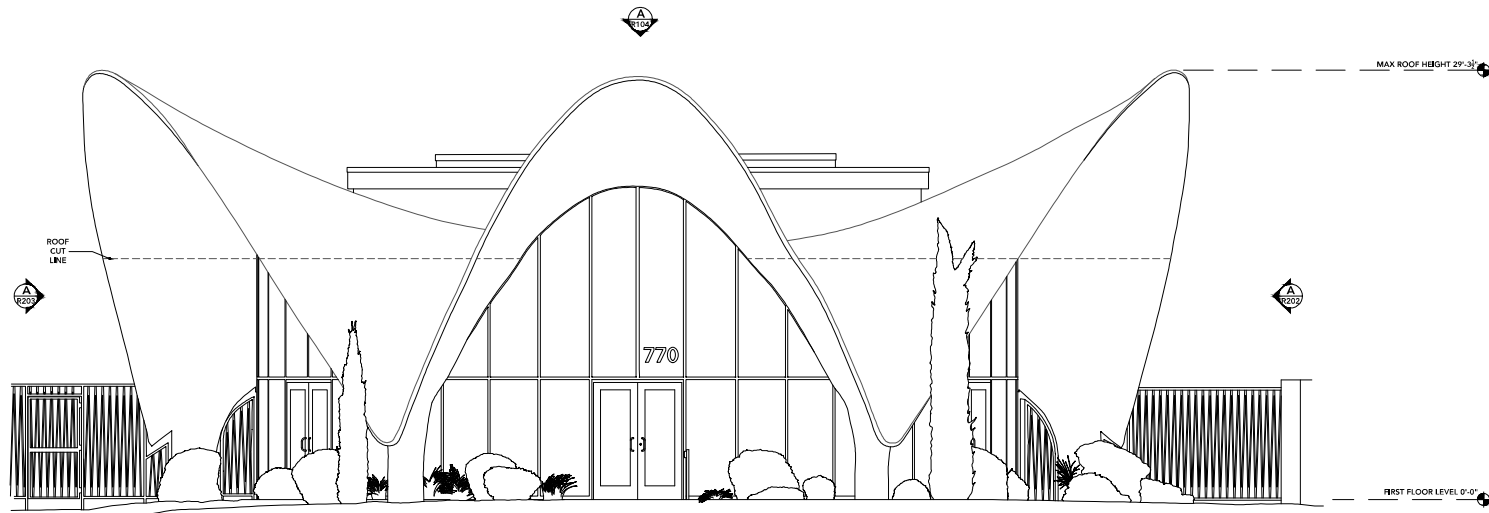
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FILE LOCATION  
PROJECT NO. 0323.04  
DATE 02/02/2024  
SCALE 1/4" = 1'  
SHEET NAME  
ROOF PLAN

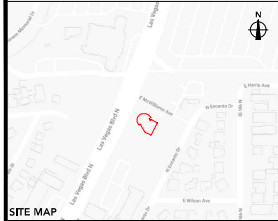
SHEET NO.  
**R-104**

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A SCALE 1/4" = 1' LA CONCHA - NORTH WEST ELEVATION (EXTERIOR)

0' 5' 10' 15' 20' SCALE 1/4" = 1'



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PROJECT  
NEON MUSEUM  
LAS VEGAS BLVD NORTH  
LAS VEGAS, NV

PREPARED FOR  
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3868 CARSON STREET, #300  
TORRANCE, CA 90503

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PROJECT MANAGER ALAN WHITE

DRAWN BY SM

CHECKED BY AW

FILE LOCATION

PROJECT NO. 0323.04

DATE 02/02/2024

SCALE 1/4" = 1'

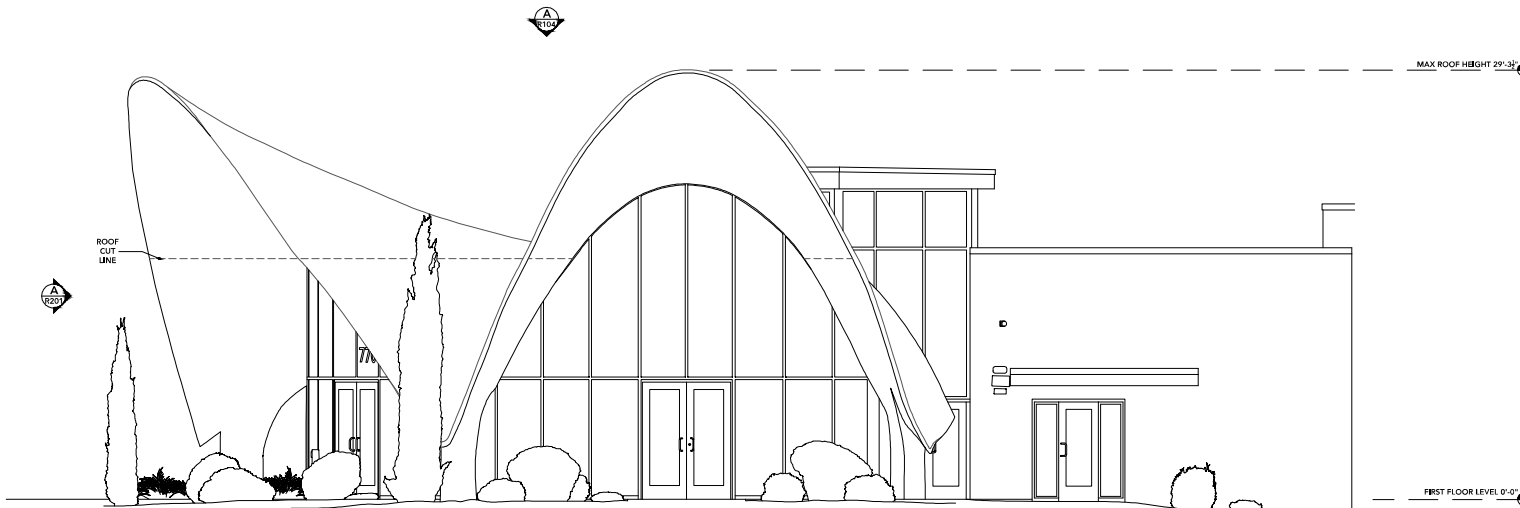
SHEET NAME  
EXTERIOR ELEVATIONS

SHEET NO.

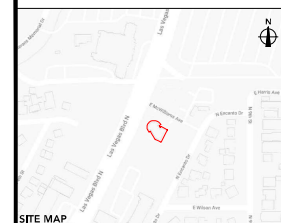
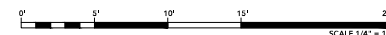
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(A) SCALE 1/4" = 1' LA CONCHA - WEST ELEVATION (EXTERIOR)



**DRAFT**

NO.	REVISION/ISSUE	DATE

PROJECT  
**NEON MUSEUM**  
**LAS VEGAS BLVD NORTH**  
**LAS VEGAS, NV**

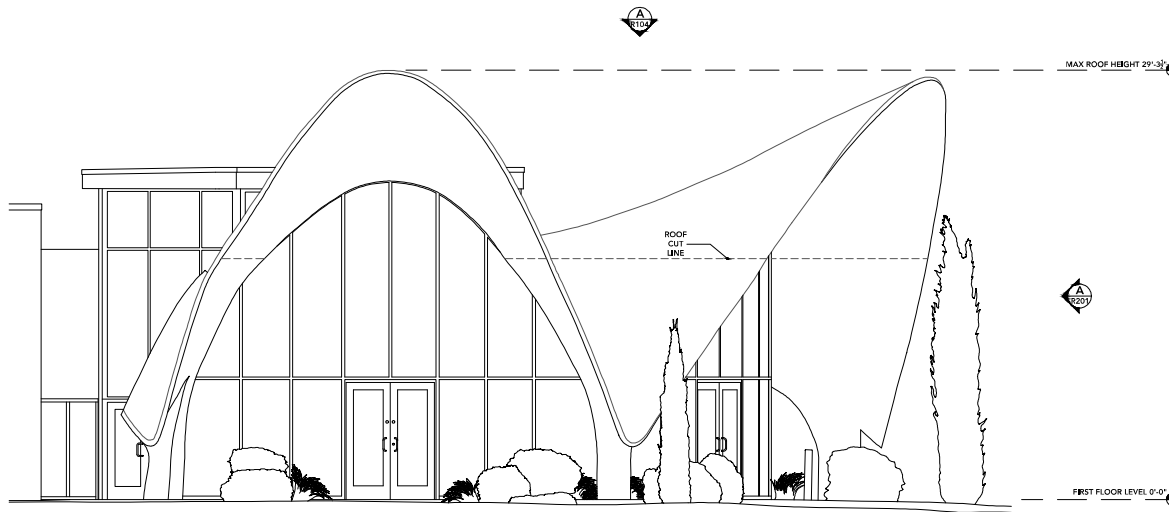
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**3868 CARSON STREET, #300**  
**TORRANCE, CA 90503**

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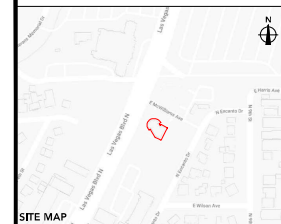
PROJECT MANAGER	ALAN WHITE
DRAWN BY	SM
CHECKED BY	AW
FILE LOCATION	
PROJECT NO.	0323.04
DATE	02/02/2024
SCALE	1/4"=1'
SHEET NAME	EXTERIOR ELEVATIONS

SHEET NO.  
**R-202**

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A SCALE 1/4" = 1' LA CONCHA - NORTH ELEVATION (EXTERIOR)



**DRAFT**

NO.	REVISION/ISSUE	DATE

PROJECT  
**NEON MUSEUM**  
**LAS VEGAS BLVD NORTH**  
**LAS VEGAS, NV**

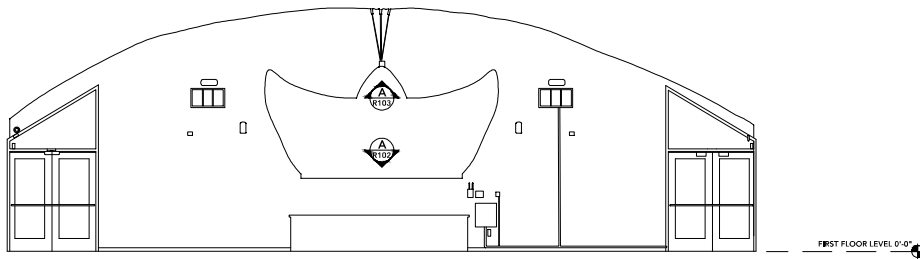
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**TORRANCE, CA 90503**

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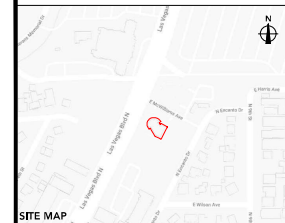
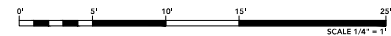
PROJECT MANAGER	ALAN WHITE
DRAWN BY	SM
CHECKED BY	AW
FILE LOCATION	
PROJECT NO.	0323.04
DATE	02/02/2024
SCALE	1/4"=1'
SHEET NAME	EXTERIOR ELEVATIONS

SHEET NO.  
**R-203**

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(A) SCALE 1/4" = 1' LA CONCHA - SOUTHEAST ELEVATION (INTERIOR)



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NO.	REVISION/ISSUE	DATE
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PROJECT  
**NEON MUSEUM  
LAS VEGAS BLVD NORTH  
LAS VEGAS, NV**

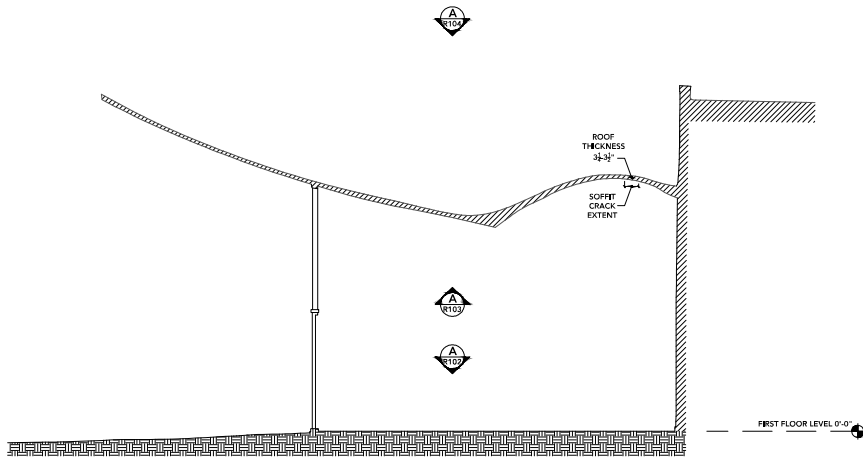
PREPARED FOR  
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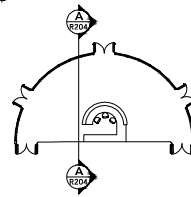
PROJECT MANAGER	ALAN WHITE
DRAWN BY	SM
CHECKED BY	AW
FILE LOCATION	
PROJECT NO.	0323.04
DATE	02/02/2024
SCALE	1/4"=1'
SHEET NAME	<b>INTERIOR ELEVATIONS</b>

SHEET NO.  
**R-211**

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**A** SCALE 1/4" = 1' LA CONCHA - SECTION 1

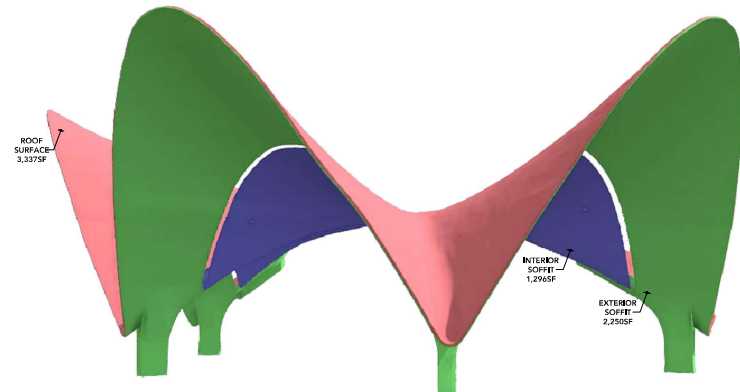


**B** SCALE 1/4" = 1' LA CONCHA - PHOTO TEXTURED MODEL

THIS PHOTO TEXTURED MESH MODEL WAS CREATED FROM A COMBINATION OF UAV (DRONE) AND DSLR IMAGES USING A PHOTOGRAMMETRY PROCESS, SCALED WITH TERRESTRIAL 3D LASER SCAN DATA.

MODEL FILE CAN BE VIEWED AND DOWNLOADED FROM THE ONLINE MODEL SHARING PLATFORM, [WWW.SKETCHFAB.COM](http://WWW.SKETCHFAB.COM).

CLICK HERE TO VIEW THE MODEL. CONTACT [ALAN@AQYER.COM](mailto:ALAN@AQYER.COM), QUOTING PROJECT NUMBER 0323.04, TO REPORT BROKEN LINKS OR MISSING DATA.

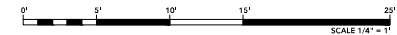


**C** SCALE 1/4" = 1' LA CONCHA - PHOTO SURFACE MESH MODEL

THIS COLOR-CODED MESH MODEL IS A DERIVATIVE OF THE PHOTO TEXTURED MODEL, AND WAS USED TO CALCULATE THE SURFACE AREAS OF THE ROOF AND SOFFITS (INTERIOR & EXTERIOR).

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NO.	REVISION/ISSUE	DATE

PROJECT  
**NEON MUSEUM**  
 LAS VEGAS BLVD NORTH  
 LAS VEGAS, NV

PREPARED FOR  
**MELVYN GREEN & ASSOC.**  
 3868 CARSON STREET, #300  
 TORRANCE, CA 90503

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PROJECT MANAGER	ALAN WHITE
DRAWN BY	SM
CHECKED BY	AW
FILE LOCATION	
PROJECT NO.	0323.04
DATE	02/02/2024
SCALE	1/4" = 1'
SHEET NAME	SECTIONS & DETAILS

SHEET NO.  
**R-301**

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