

SCOPE OF WORK:

ALL NECESSARY STRUCTURAL AND COSMETIC WORK TO MITIGATE THE NOISE LEVEL AT LOBBY-TERRACE

A MODIFICATION TO THE ORIGINAL C.U.P. TO ALLOW FULL FOOD SERVICE ON THE TERRACE AND MARKETING.

A MODIFICATION TO THE ORIGINAL C.U.P. TO ALLOW SPECIAL EVENTS ON THE TERRACE.

A MODIFICATION TO THE ORIGINAL C.U.P. TO ALLOW LATER ALCOHOL SERVICE ON THE ROOF DECK.

A MODIFICATION TO THE EXISTING SOUTH ELEVATION WHICH CONSISTS OF THE INSTALLATION OF PERFORATED METAL SHADE AWNINGS EXTENDING OVER THE WALKWAY AND PARTIALLY OVER THE TERRACE.

NEW LIGHTING ON THE SUPPORT POSTS.

>ANY ELECTRICAL WORK UNDER A SEPARATE PLAN AND PERMIT <

DRAWINGS INDEX

ID-1.0 COVER / INDEX / SITE MAP

ID-1.2 TERRACE PATIO PLAN & ENLARGED ENTRANCE

ID-2.1 TERRACE PATIO REFLECTED CEILINGS

ID-2.2 PATIO REFLECTED CEILINGS (LOWEST LEVEL)

ID-3.1 TERRACE PATIO EXTERIOR ELEVATIONS

ID-3.2 HOTEL ENTRANCE ELEVATION & PATIO FACADE DETAILS

ID-3.3 ACOUSTIC REPORTS

ID-3.4 ACOUSTIC REPORT AND FABRIC DATA

ID-3.5 MATERIALS TECHNICAL DATA

S-0.1 GENERAL STRUCTURAL NOTES

S-0.2 GENERAL STRUCTURAL NOTES CONTINUED

S-0.3 SYMBOLS AND ABBREVIATIONS

S-0.4 TYPICAL WOOD DETAILS

S-2.1 CANOPY AND VESTIBULE FRAMING PLAN

S-3.1 ELEVATIONS

S-7.1 SECTIONS AND DETAILS

SHADE MANHATTAN BEACH 1221 N Valley Drive Manhattan Beach, California 90266 PROJECT #1306

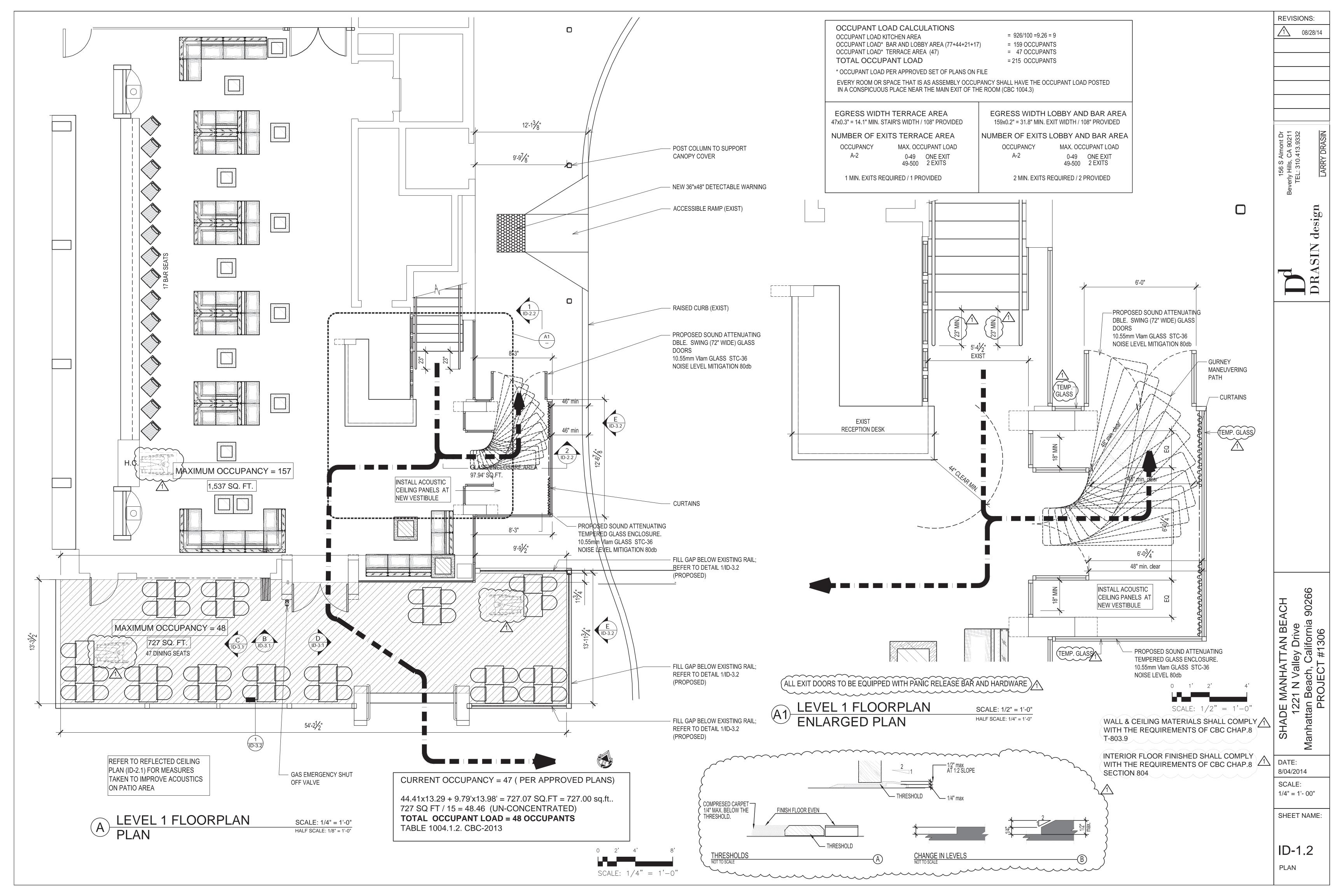
DATE: 08/04/14

SCALE: REFER TO PLAN

SHEET NAME:

ID-1.0

PLAN



SECTION THRU
PANEL

LIVERS - LENGTH OF OVERLAP VARIAS

1 THK FREROLASS

This pattern is randomly laid out on the panie and is therefore not duplicated "exactly" from panel to panie!

PANEL LAYOUT VARIATIONS

SECTION THRU
PANEL

LIVERS - LENGTH OF OVERLAP VARIAS

1 THK FREROLASS

GENERAL NOTES / MATERIAL SPECIFICATION

ACOUSTIC PANELS; 1" THICK PATTERN 821 SAND DUNE WITH QUARRY BLUE FABRIC STYLE 2335

SUSPENDED FROM UPPER PLASTER CEILING

C PARASOLIEL ALUMINUM PANEL Nukubalavu 1/8"
ALUMINUM NATURAL FINISH OR SIMILAR

LUMAsite RESIN / FIBERGLASS PANEL IN CRYSTAL

* CONFIRM ALL MATERIAL SELECTIONS WITH

* DRAWINGS ARE FOR DESIGN INTENT ONLY;

DRAWINGS FOR ALL FIXING SPECIFICATION

A ACOUSTIC ENTERPRISES INC.: FIBERGLASS

OR SIMILAR SIZE: 8'-0"x10'-0"

SEE ID-3.5 FOR REFERENCE.

II COLOR OR SIMILAR SEE ID-3.6 FOR

* FIELD VERIFY DIMENSIONS PRIOR TO

REFER TO ENGINEERED / FABRICATION

OWNER PRIOR TO INSTALL

REFERENCE.

FABRICATION

B FIBERGLASS ACOUSTIC INSULATION IN PERFORATED METAL BASKET CLOUD

921 Sand Dunes

FIRE SPRINKLER ALTERATIONS ARE SUBJECT TO ALL DECORATIVE MATERIALS SHALL BE CALIFORNIA STATE FIRE MARSHALL APPROVED ACOUSTIC PANEL APPLIED TO HARD CEILING: 360 SQFT. (49.51%) 'A SEPARATE PLAN REVIEW AND PERMIT BY THE FIRE RETARDANT. (20) 4'-0" X 4'-0" PANELS WALL & CEILING MATERIALS SHALL COMPLY (10) 2'-0" X 2'-0" PANELS WITH THE REQUIREMENTS OF CBC CHAP.8 6" HIGH, 7'-0" DIAMETER, PREFABRICATED METAL CLOUD, FILLED WITH SOUND ABSORBING MINERAL WOOL CLOUDS TO BE FLOATING BELOW ACOUSTIC PANELING - EXISTING FIRE SPRINKLER TO BE CONVERTED TO UPPER AND APPLIED TO CEILING. (TYP) REFER TO ID-3.5 FOR SPECIFICATIONS LOWER SPRINKLERS; REFER TO SECTION - EXISTING GLASS INSTALLED AT EAST ELEVATION; REFER TO **ELEVATIONS** 6" HIGH, 7'-0" DIAMETER, PREFABRICATED METAL CLOUD, FILLED WITH SOUND ABSORBING MINERAL WOOL. CLOUDS TO BE FLOATING BELOW ACOUSTIC PANELING APPLIED TO CEILING. (TYP) REFER TO ID-3.5 FOR SPECIFICATIONS 1 ID-3.2 PROPOSED SOUND GLASS PROPOSED (4) NEW CUSTOM PROPOSED (4) NEW CUSTOM INSTALLED AT FRONT BAY; REFER SCONCE AT EXISTING METAL POST SCONCE AT EXISTING METAL POST TO ELEVATIONS PROPOSED FABRIC COVERED - EXISTING METAL BANDS AT PATIO FIBERGLASS ACOUSTIC PANEL FACADE - APPLIED ACOUSTIC PANELS TO FLOATING BELOW APPLIED

EXISTING HARD LID; CONTINUOUS

SCALE: 1/4" = 1'-0"

HALF SCALE: 1/8" = 1'-0"

TOTAL CEILING AREA:

193 SQFT. (26.54%)

7' DIA. CLOUD = 38.6 SQFT EACH

(5) 7' DIA. CLOUDS = 193 SQFT.

APPLICATION

MID LEVEL CEILING
PATIO MID LEVEL CEILING

DECORATIVE MATERIALS SHALL BE

CALIFORNIA STATE FIRE MARSHALL APPROVED

(WAĽL & CEILÍNG MATERIĂLS ŠHAĽL CŎMPĽ

WITH THE REQUIREMENTS OF CBC CHAP.8

ACOUSTIC PANELS

44.41x13.29 + 9.79'x13.98' = 727.07 SQ.FT = 727.00 sq.ft.

ACOUSTIC PANEL APPLIED IN FLOATING CLOUDS:

0 2' 4' 8'

SCALE: 1/4" = 1'-0"

13.9332 DRASIN

Beverly Hills, CA 902 TEL: 310.413.93

REVISIONS:

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m ORASIN}$ design

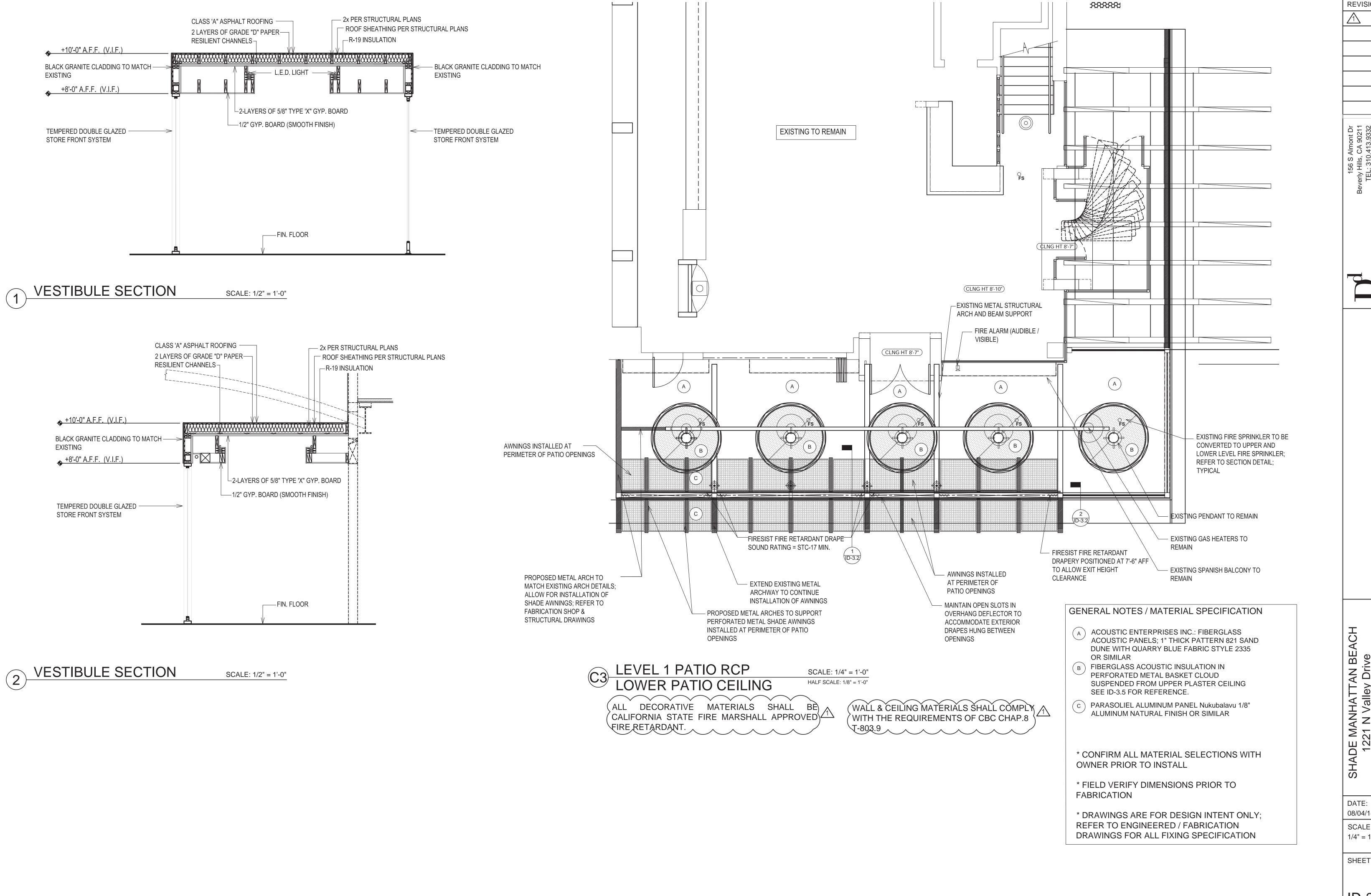
SHADE MANHATTAN BEACH 1221 N Valley Drive Manhattan Beach, California 90266 PROJECT #1306

DATE: 08/04/14

SCALE: 1/4" = 1'- 00"

SHEET NAME:

ID-2.1



REVISIONS:

156 S Almont Dr erly Hills, CA 90211 TEL: 310.413.9332

SHADE MANHATTAN BEACH 1221 N Valley Drive Manhattan Beach, California 90266 PROJECT #1306

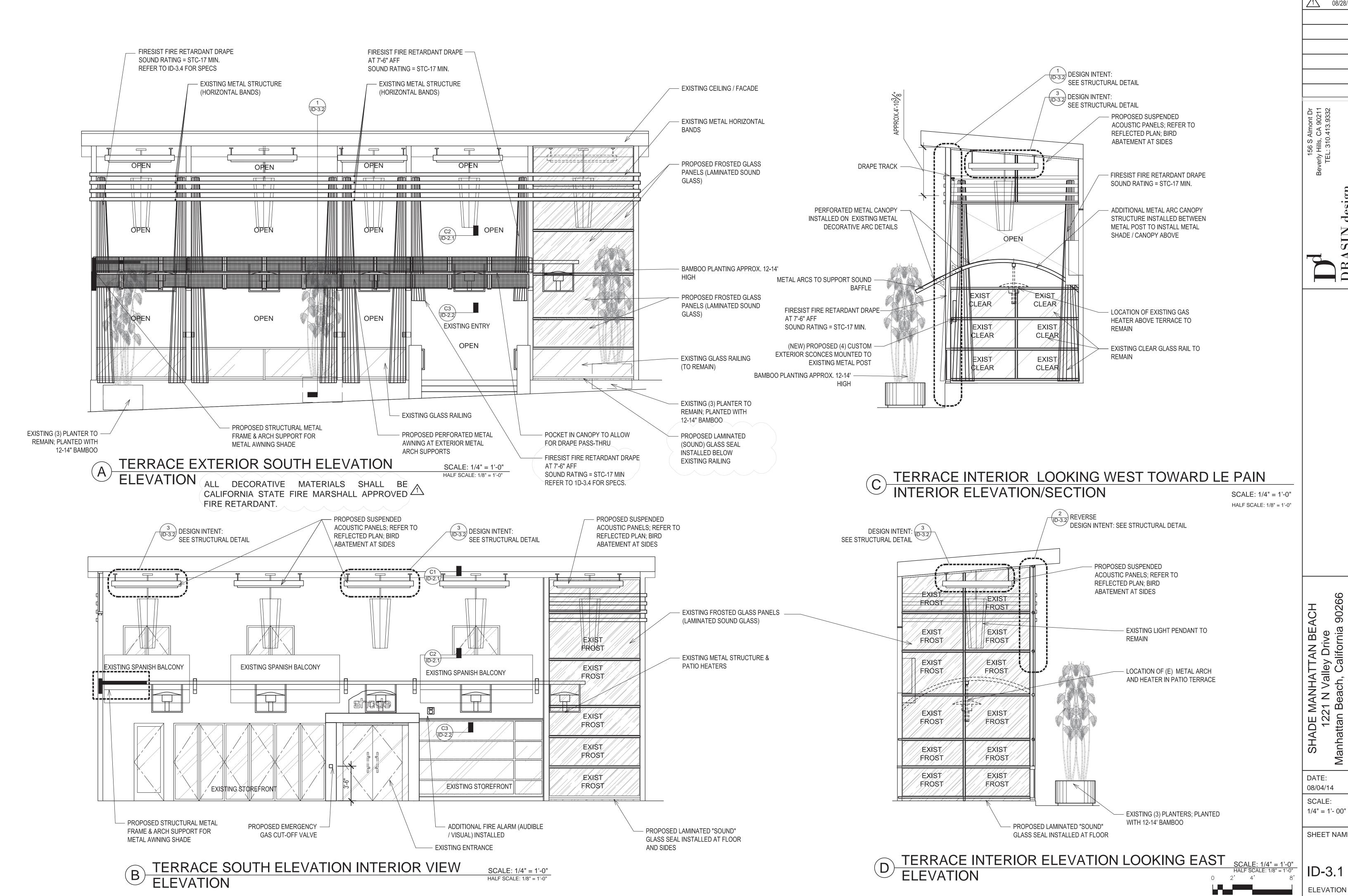
08/04/14

SCALE: 1/4" = 1'- 00"

SHEET NAME:

ID-2.2

PLAN



REVISIONS: 08/28/14

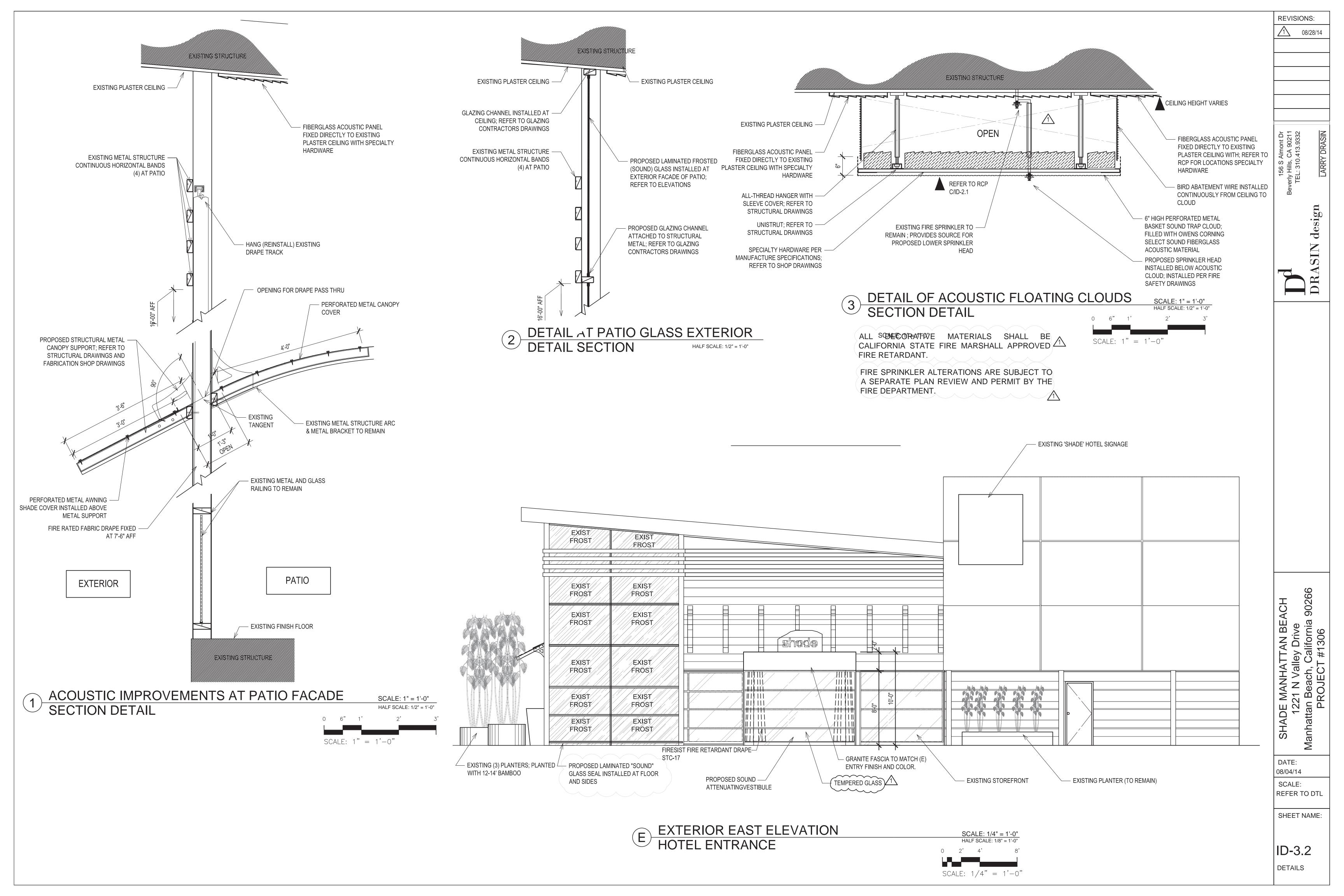
SHADE MANHATTAN BEACH 1221 N Valley Drive Manhattan Beach, California 90266 PROJECT #1306

1/4" = 1'- 00"

SHEET NAME:

ID-3.1

SCALE: 1/4" = 1'-0"



April 16, 2014

City of Manhattan Beach 1400 Highland Avenue Manhattan Beach, CA 90266

Attention: Laurie Jester, Planning Manager

Subject: Shade Hotel Noise Mitigation Evaluation Report

Dear Ms. Jester,

As requested, we have completed additional noise mitigation evaluation for the Shade Hotel, located at 1221 N Valley Dr in the City of Manhattan Beach. This report provides an assessment of mitigation measures provided in the plans dated February 19, 2014 to analyze the effective of these measures on noise levels experienced at the residential properties east of Ardmore Avenue.

This report deals with noise associated with the front entrance and south terrace of the hotel. Our previous assessment, dated February 4, 2014, addressed the effectiveness of the installation of a revolving door at the front entrance and curtains and acoustically absorptive material at the south terrace. These measures are incorporated into this analysis in addition to other proposed measures. The various mitigation measures that have been proposed for this latest analysis include sound rated curtains, an awning and an entrance door at the terrace, acoustically absorptive areas on the north wall of Petros consisting of 'Living Wall' panels and a canopy above the front entrance.

In addition, the sealing of gaps around the existing terrace wall glass panels and the installation of glass panels on one side of the interior reception desk has been proposed. The noise modeling software used for this analysis does not easily permit the assessment of these mitigation measures and these were not specifically modeled; however, this report does provide information on the expected effectiveness of these mitigation measures.

This report assesses the noise levels for the following combinations of noise sources and mitigation:

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Acoustics, Noise and Vibration Consultants

City of Manhattan Beach April 16, 2014 Page 2

Scenario No.	Noise Source	Mitigation Measures						
1	South terrace	Acoustically absorptive terrace ceiling panels Sound rated terrace curtains						
2	South terrace	Acoustically absorptive terrace ceiling panels Sound rated terrace curtains Terrace awning Acoustically absorptive terrace ceiling panels Sound rated terrace curtains Terrace awning Living wall on north façade of Petros						
3	South terrace							
4	South terrace	Acoustically absorptive terrace ceiling panels Sound rated terrace curtains Terrace awning Living wall on north façade of Petros Door at south entrance to terrace						
5	Front entrance	Revolving front entrance door Canopy above front entrance						
6	South terrace Front entrance	Acoustically absorptive terrace ceiling panels Sound rated terrace curtains Terrace awning Living wall on north façade of Petros Revolving front entrance door						
7	South terrace Front entrance	Acoustically absorptive terrace ceiling panels Sound rated terrace curtains Terrace awning Living wall on north façade of Petros Door at south entrance to terrace Revolving front entrance door						

As for previous reports, this report presents both calibrated unmitigated noise maps and predicted mitigated noise maps showing the noise after the proposed mitigation measures have been installed. In addition, 'noise difference maps' are presented. These maps are calculated by subtracting the mitigated noise level from the unmitigated level at every point over the mapped area. They therefore show the reduction in noise with the mitigation measures installed. In this report the color scale of the difference maps has been changed to a red and blue scale to permit easier assessment of the noise reduction.

When assessing the noise reduction, a decrease in noise level of 3 dB is just perceptible; a decrease of 5 dB is considered clearly noticeable and a decrease of 10 dB is very significant and

Behrens and Associates, Inc.

Acoustics, Noise and Vibration Consultants

City of Manhattan Beach April 16, 2014 Page 3

corresponds to a perceived halving in noise level. A minimum reduction of 5 dB must be achieved for the reduction to be considered significant. The term 'significant' means that the noise reduction will be noticeable but does not necessarily mean that the mitigation measure will reduce the noise to a level where it is no longer an issue for the residents.

All noise impact modeling was completed using SoundPLAN version 6.5. This noise model predicts noise levels based on the locations, noise levels and frequency spectra of the noise sources, and the geometry and reflective properties of the local terrain, buildings and barriers.

South Terrace Noise (Figures 1 through 9)

The unmitigated noise map for the south terrace noise only is presented in Figure 1. This is the same noise map presented in our previous noise assessment reports for the unmitigated scenario. This noise map was calibrated to noise measurements made as part of our original 2009 noise study. Although noise levels may be lower now than at that time, these levels have been used as a basis for this latest assessment to permit a like-for-like comparison of the various proposed mitigation measures across all the studies performed since 2009.

The noise maps in Figures 2 through 9 provide the estimated noise levels and difference maps for Scenarios 1 through 4. The noise maps in Figures 2 and 3 indicate that the upgraded sound rated curtains at the terrace (Scenario 1) will reduce the noise by up to 8 dB at the residences. This represents an improvement of only 1 dB compared to the existing curtains. This reason that a larger decrease in level is not achieved is attributed to the fact that the south entrance to the terrace remains open for this scenario. For this scenario it was assumed that the curtains would have a Sound Transmission Class (STC) rating of at least 17.

The noise maps in Figures 4 and 5 indicate the installation of the awning in addition to the sound rated curtains at the terrace (Scenario 2) will reduce the noise by up to 8 dB at the residences and will therefore not produce any further reduction in sound level. This is also true of the noise levels after the installation of the acoustically absorptive living wall on the north façade of Petros (Scenario 3), for which an 8 dB reduction is also observed (see Figures 6 and 7). The absorptive wall was modeled as covering the areas of the upper and lower façades of the north wall where it would not obstruct windows or doors.

Figures 8 and 9 indicate that the addition of a door at the south entrance to the terrace (Scenario 4) would significantly improve the noise reduction. For this scenario the estimated noise reduction at the residences is 16 dB.

Although the sealing of gaps in the existing terrace glass walls has not been specifically analyzed, it is our opinion that these gaps should be sealed to give the best chance of achieving

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City of Manhattan Beach

April 16, 2014 Page 4

the estimated sound reduction since even small holes in a wall can significantly reduce the sound reduction performance of the wall.

Front Entrance Noise (Figures 10 through 12)

Figure 10 provides a noise map of the unmitigated front entrance noise. The noise maps in Figures 11 and 12 indicate the installation of a canopy above the front entrance in addition to the revolving door and separate glass entrance door (Scenario 5) would reduce the noise level by 4 dB at the residences. The canopy therefore produces a slight increase in level compared to the front entrance scenario modeled in our February 2014 assessment, when the entrance was modeled without the canopy and 5 dB reduction was estimated. Further analysis of the noise levels indicates that the increase due to the canopy is approximately 0.3 dB. The change in noise reduction from 5 dB to 4 dB is due to the rounding the estimated value.

It is not possible to quantitatively assess the effect of the proposed interior glass partition at the reception desk. However, based on the size of the partition and assumed interior acoustical properties it is concluded that this partition would have little effect on the noise that would escape through the front entrance doors and windows. Due to the reflective nature of the noise inside the room, the partition would have to form a much larger partition between the entrance and the main Zinc lounge area.

Combined Terrace and Front Entrance Noise Levels (Figures 13 through 17)

Figure 13 shows the combined unmitigated noise levels of the south terrace and front entrance. The noise maps in Figures 14 and 15 indicate that the reduction in noise level of the combined sources due to the sound rated curtains, terrace awning, acoustically absorptive living wall and revolving front entrance door (Scenario 6) would be up to 7 dB at the residences. With the addition of an entrance door at the south terrace (Scenario 7), the noise reduction would be up to 13 dB.

Please contact the undersigned with any questions or comments.

Very truly yours,

Thomas Corbishley Acoustical Engineer Figure 1. Unmitigated South Terrace Noise Level at 1st Floor

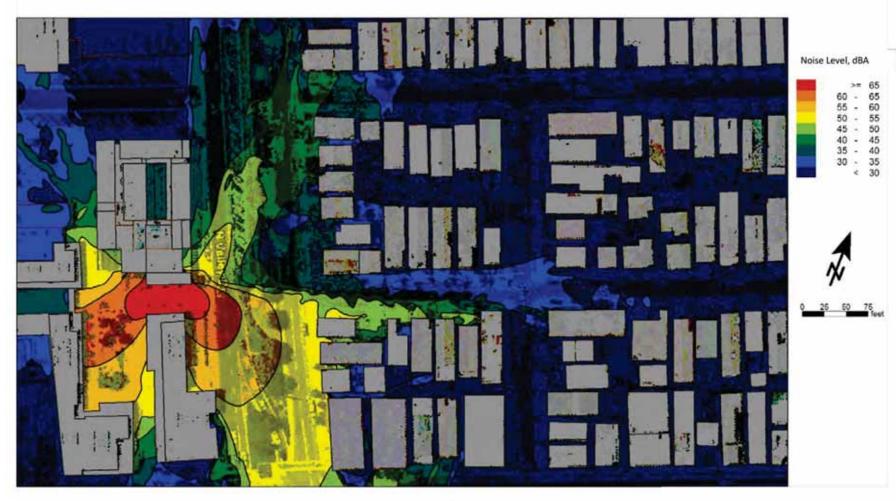


Figure 2. Mitigated South Terrace Noise Level at 1st Floor with Sound Rated Curtains (Scenario 1)

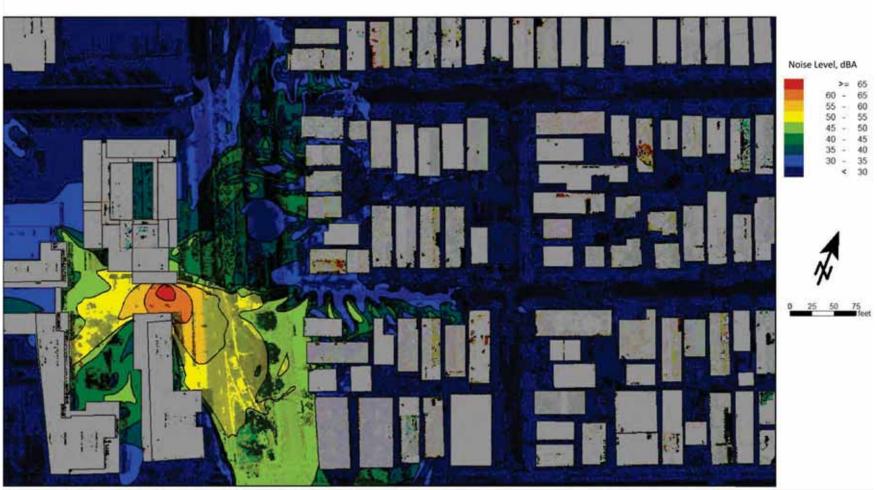


Figure 3. Mitigated South Terrace Difference Map at 1st Floor with Sound Rated Curtains (Scenario 1)

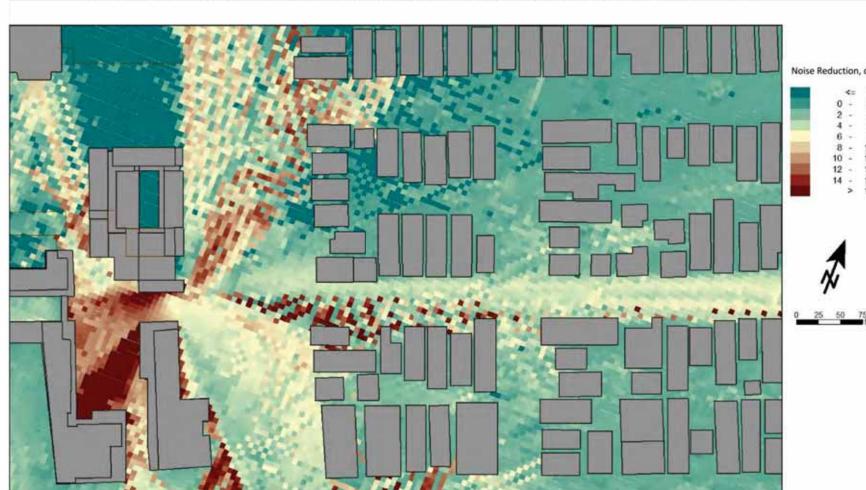


Figure 4. Mitigated South Terrace Noise Level at 1st Floor with Sound Rated Curtains and Awning (Scenario 2)

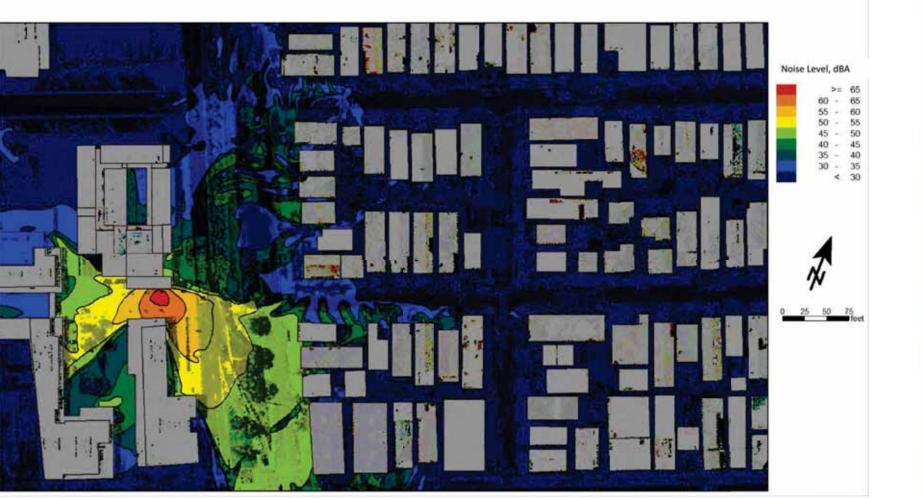


Figure 5. Mitigated South Terrace Difference Map at 1st Floor with Sound Rated Curtains and Awning (Scenario 2)

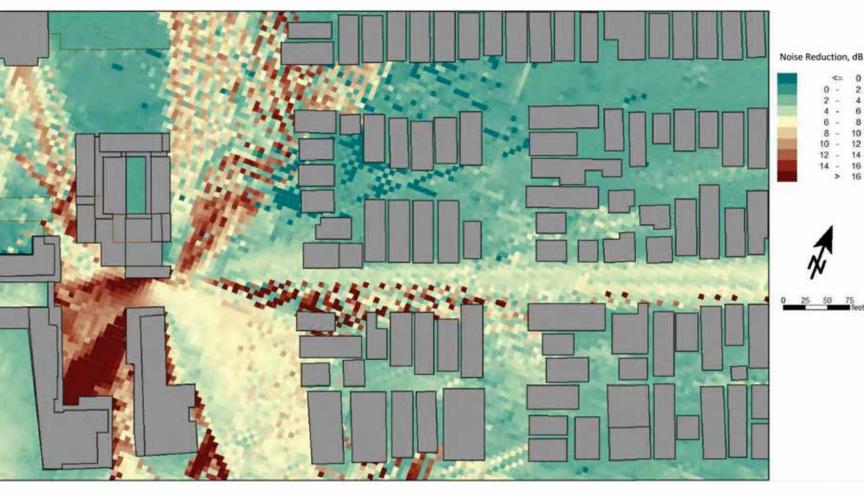


Figure 6. Mitigated South Terrace Noise Level at 1st Floor with Sound Rated Curtains, Awning and Petros Living Wall (Scenario 3)

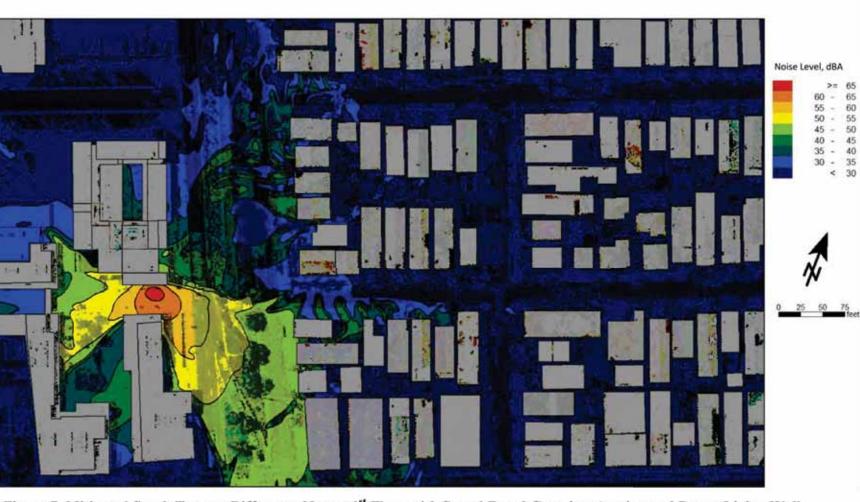


Figure 7. Mitigated South Terrace Difference Map at 1st Floor with Sound Rated Curtains, Awning and Petros Living Wall (Scenario 3)

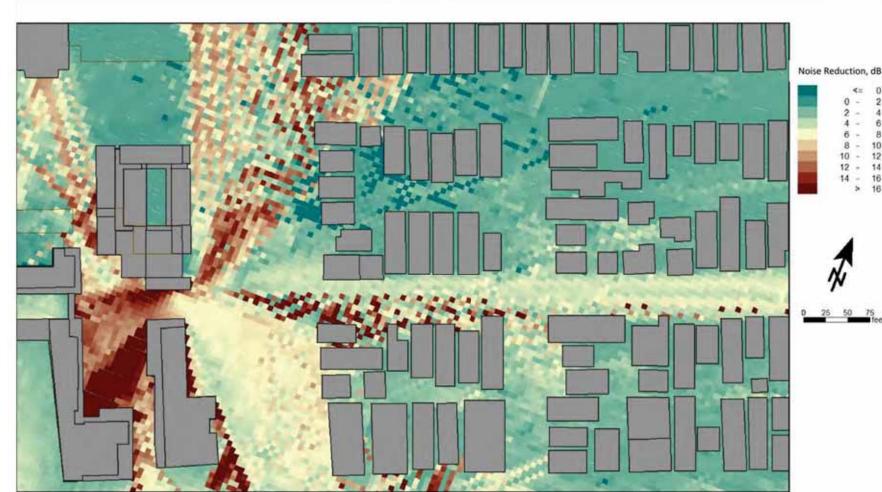
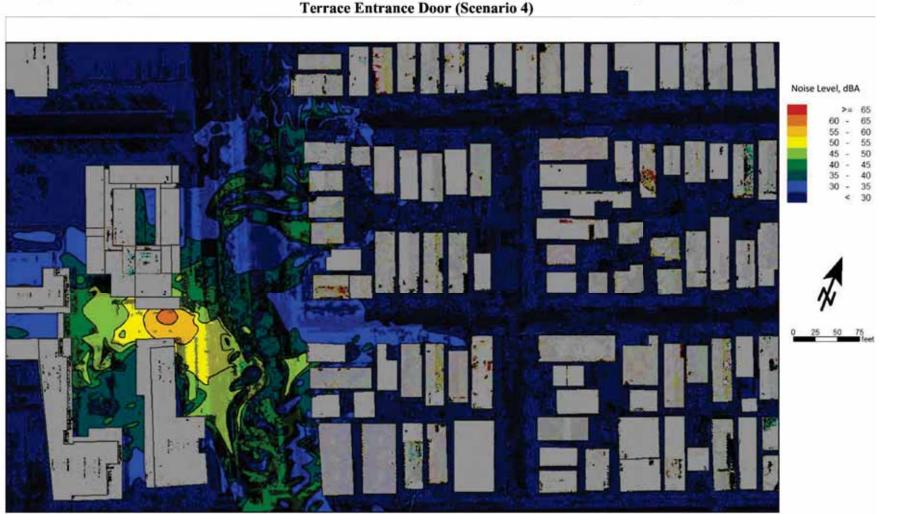


Figure 8. Mitigated South Terrace Noise Level at 1st Floor with Sound Rated Curtains, Awning, Petros Living Wall and



REVISIONS:

6 S Almont Dr iills, CA 90211 310.413.9332

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SHAL SHAL Manhat

SHEET NAME:

NONE

SCALE:

ID-3.3

ACCOUSTICAL REPORT

Figure 10. Unmitigated Front Entrance Noise Level at 1st Floor

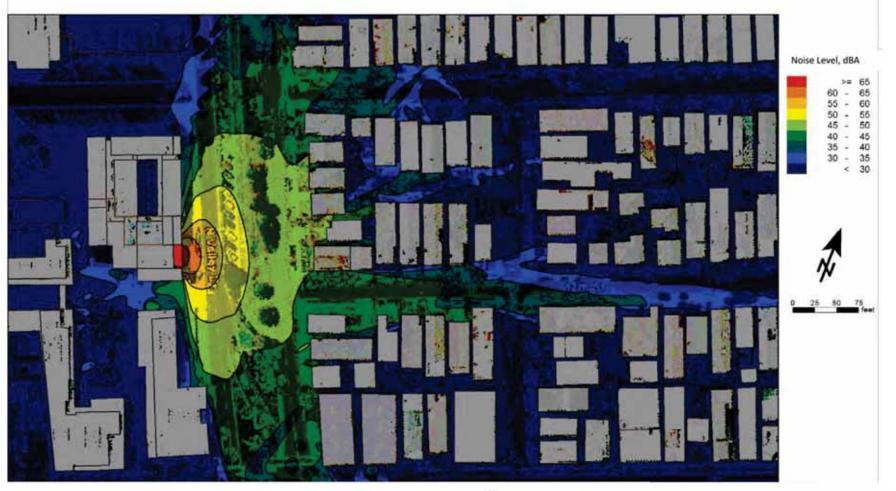


Figure 11. Mitigated Front Entrance Noise Level at 1st Floor with Canopy (Scenario 5)

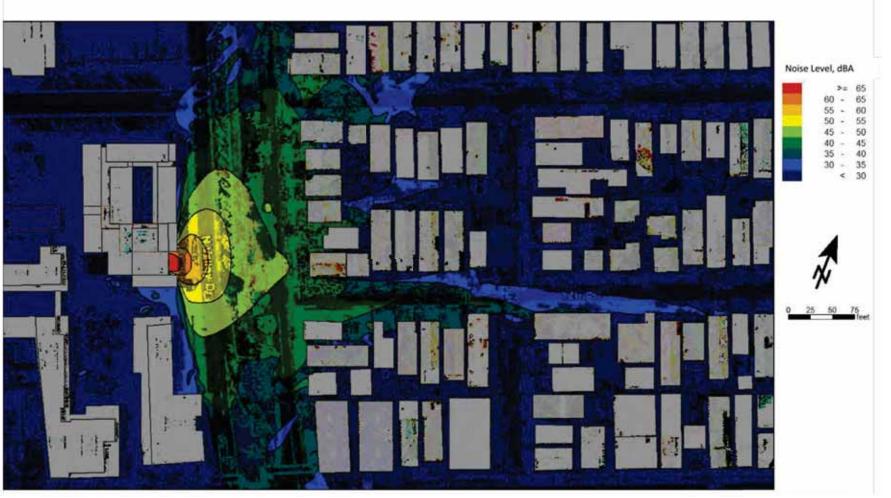
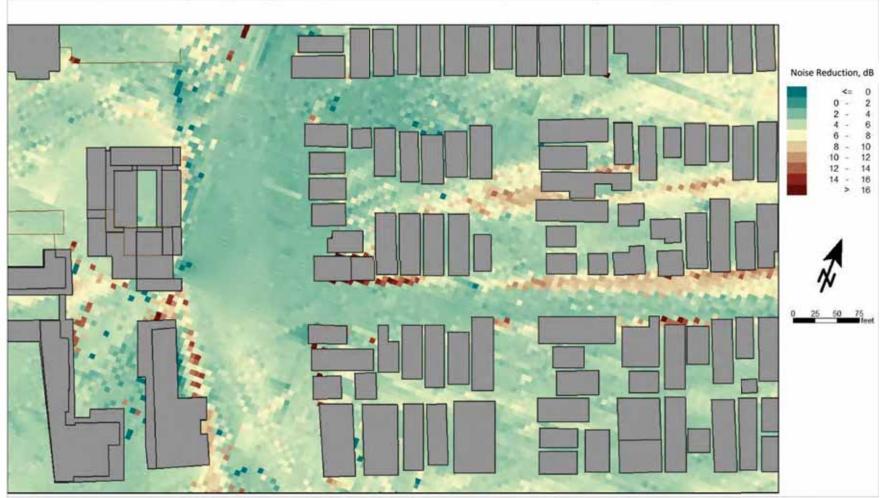


Figure 12. Mitigated Front Entrance Difference Map at 1st Floor (Scenario 5)



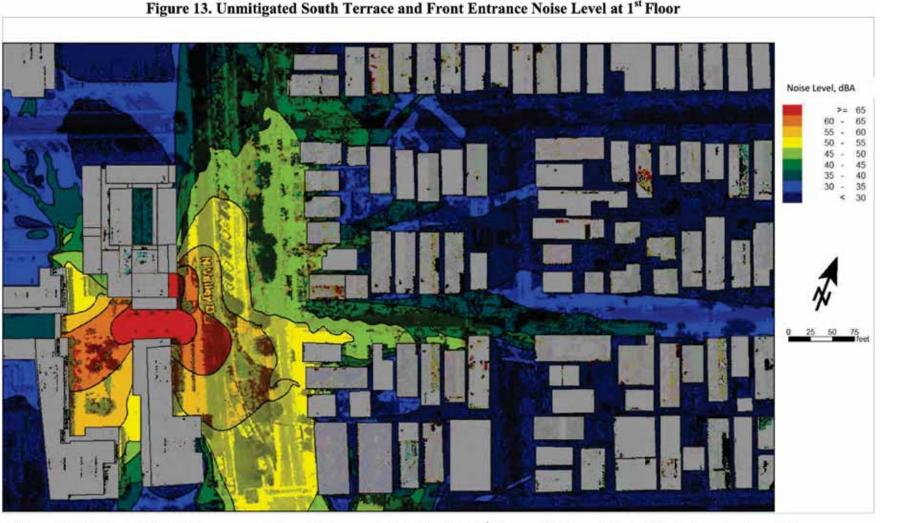


Figure 14. Mitigated South Terrace and Front Entrance Noise Level at 1st Floor with Sound Rated Curtains, Awning, Petros Living Wall, Terrace Entrance Door (Scenario 6)

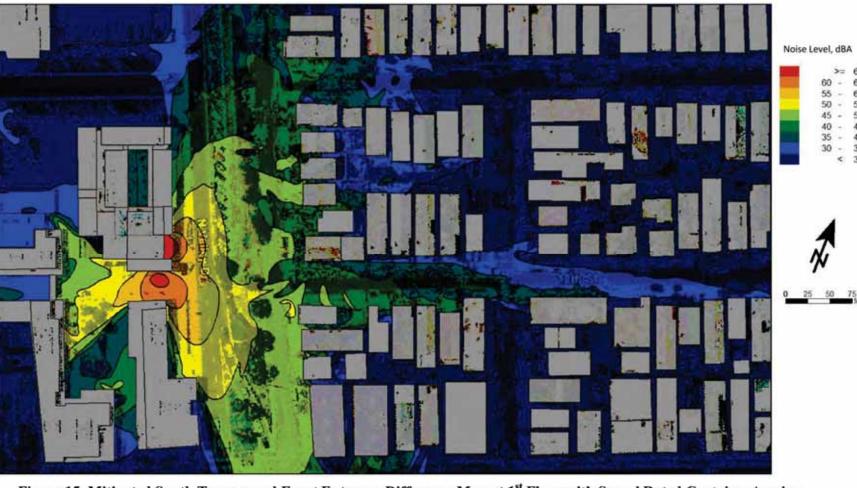


Figure 15. Mitigated South Terrace and Front Entrance Difference Map at 1st Floor with Sound Rated Curtains, Awning, Petros Living Wall, Terrace Entrance Door and Front Entrance Canopy (Scenario 6)

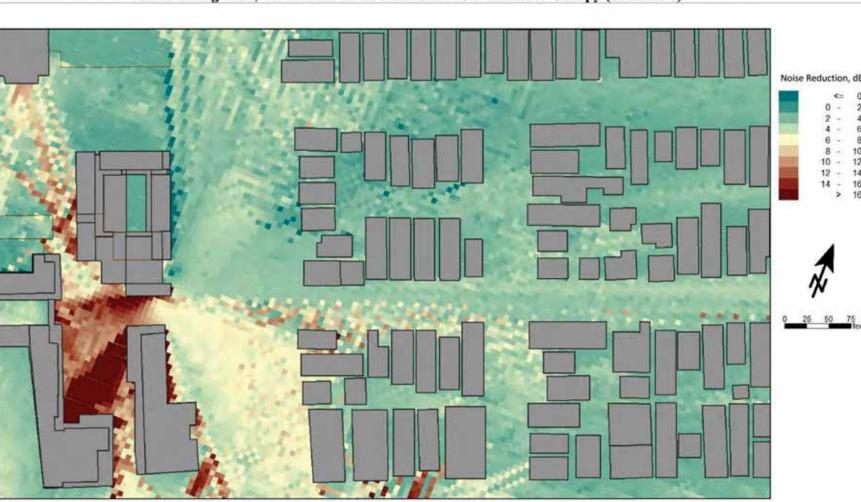


Figure 16. Mitigated South Terrace and Front Entrance Noise Level at 1st Floor with Sound Rated Curtains, Awning and Petros Living Wall (Scenario 7)

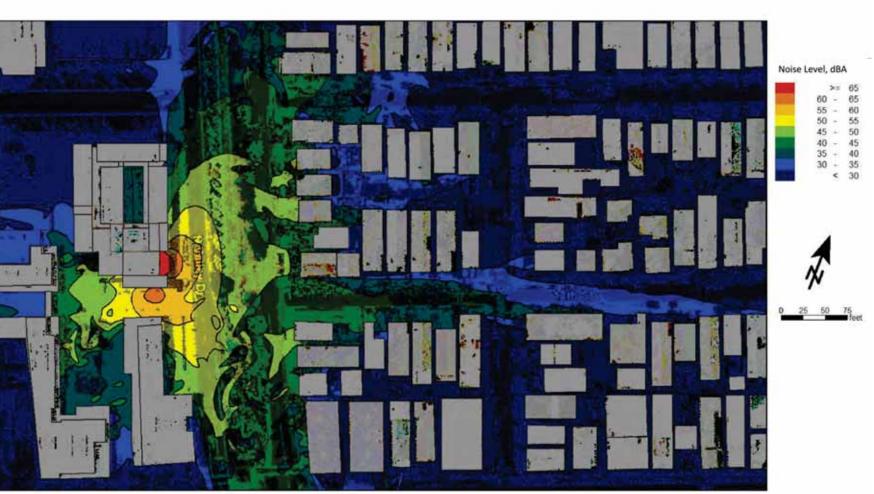
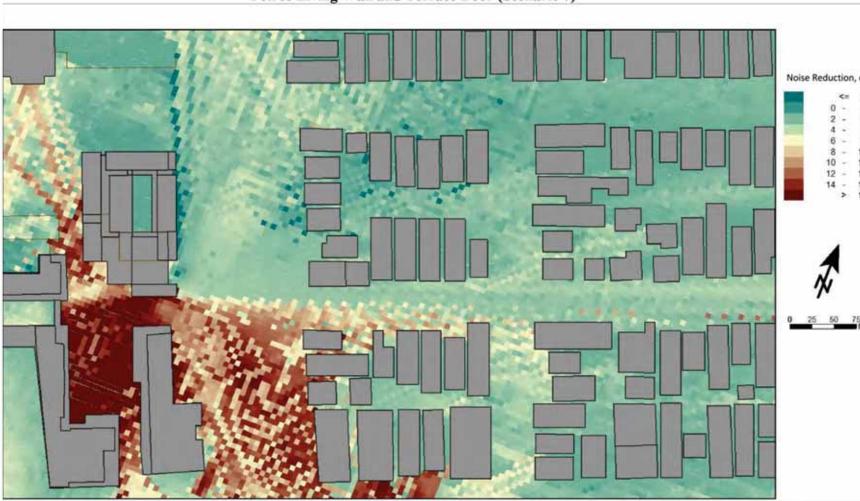


Figure 17. Mitigated South Terrace and Front Entrance Difference Map at 1st Floor with Sound Rated Curtains, Awning, Petros Living Wall and Terrace Door (Scenario 7)





FIRE RETARDANT

FIRESIST* delivers a state-of-the-art combination of flame retardant performance and UV resistance that exceeds industry standards.

WEATHER RESISTANCE

With over 100 years of outdoor awning experience, Glen Raven has engineered new coatings and finishes to maximize water repellency, sunlight resistance, and ease of cleaning.

The deep, rich colors and robust durability of FIRESIST deliver long lasting good looks to any application. Plus,

COLOR RETENTION & STRENGTH

workability improvements make cutting, sewing and welding easier than ever.

The new FIRESIST color palette focuses on popular solids, tweeds and stripes.

TECHNICAL DATA								
Weight	8.75 oz. per square yard							
Width	60"/ 152.4 cm							
Color	Solution dyed to resist color loss from UV exposure and weathering. Resistant to most chemicals, including bleach.							
WARRANTY	5 years against loss of color or strength.							
SURFACE	Plain weave - Highly water repellent and soil/stain release finish.							
UNDERSIDE	Urethane/acrylic coating							
TRANSPARENCY LEVEL	Lighter shades translucent for back-lighting applications.							
ABRASION RESISTANCE	Excellent							
FLEXIBILITY	Excellent in both hot and very cold conditions.							
FLAME RESISTANCE (PASSES ALL, BUT NOT LIMITED TO)	California State Fire Marshal Title 19 NFPA 701-99, test method II CPAI-84; Tent walls and roof FMVSS 302 FAA 25.853 (Aviation) UFAC Upholstered Furniture, Class 1							
MILDEW RESISTANCE	Excellent (with proper maintenance and cleaning)							
CHEMICAL RESISTANCE	Excellent							
WATER REPELLENCY	Excellent							
OIL RESISTANCE	Very good							
SEWABILITY	Excellent							
HEAT SEALING Can be heat sealed using sealing tape and heat source such a hot air, radio frequency welding, etc.								

WESTERN ELECTRO - ACOUSTIC LABORATORY A division of Veneklasen Associates, Inc.

TESTING • CALIBRATION • RESEARCH 25132 Rve Canyon Loop Santa Clarita, California 91355 Tel: (661) 775-3741 Fax: (661) 775-3742 www.weal.com

SOUND TRANSMISSION LOSS TEST REPORT NO. TL10-585

CLIENT: Complete Soundproofing 3750 Riviera Dr. #3 San Diego, CA 92109 TEST DATE: 30 August 2010

Page 1 of 2 8 October 2010

INTRODUCTION

The methods and procedures used for each test conform to the provisions and requirements of ASTM E 90-09, Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and ASTM E2235-04^{e1}, Standard Test Method for Determination of Decay Rates for Use in Sound Insulation Test Methods. Copies of the test standard are available at www.astm.org. The test chamber source and receiving room volumes are 204 and 148.4 cubic meters respectively. Western Electro-Acoustic Laboratory is accredited by the United States Department of Commerce, National Institute of Standards and Technology under the National Voluntary Accreditation Program (NVLAP) Lab Code 100256-0 for this test procedure. This test report relates only to the item(s) tested. This report must not be used to claim product certification, approval, or endorsement by WEAL, NVLAP, NIST or any agency of the federal government.

DESCRIPTION OF TEST SPECIMEN

The test specimen was a white vinyl curtain lining. According to the client the specimen was: Quiet Curtains STC 17 fire rated lining

Wood furring strips were used to secure the specimen against the edges of the 2 x 8's on the source room side of the test chamber around the entire perimeter. The specimen was caulked around the entire perimeter on the receiving room side. The net dimensions of the vinyl sheet were 1.37 m (53.8 inches) by 3.21 m (126.5 inches). The vinyl sheet weighted 5.90 kg (13 lbs.) for a calculated surface density of 1.34 kg/m² (0.275 lbs./ft²). The dimensions of the opening were 1.10 m (43.5 inches) wide by 1.97 m (77.5 inches) high. To calculate the sound transmission loss, the opening area, 2.18 m², (23.41 ft²), was

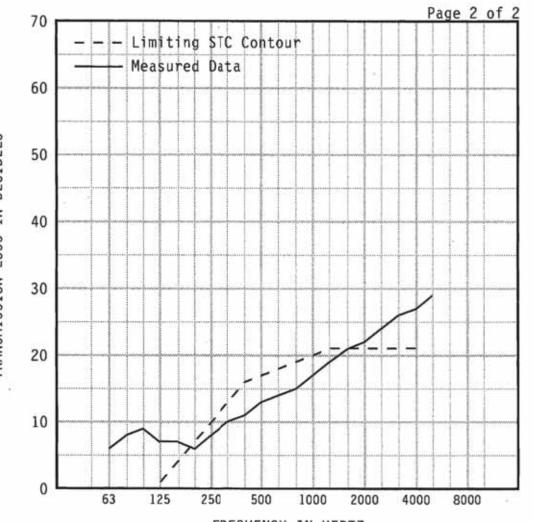
RESULTS OF THE MEASUREMENTS

One-third octave band sound transmission loss values are plotted and tabulated on the attached sheet. ASTM minimum volume requirements are met at 80 Hz and above. The Outdoor-Indoor Transmission Class rating determined in accordance with ASTM E 1332-90(2003) was OITC-12. The Sound Transmission Class rating determined in accordance with ASTM E 413-04 was STC-17.

Respectfully submitted, Western Electro-Acoustic Laboratory

Raul Martinez Acoustical Test Technician

WESTERN ELECTRO-ACOUSTIC LABORATORY Report No. TL10-585



FREQUENCY IN HERTZ

1/3 OCT BND CNTR FREQ 63 80 100 125 160 200 250 315 400 500 95% Confidence in dB | 1.42 | 1.92 | 2.07 | 1.47 | 0.89 | 0.76 | 0.80 | 0.52 | 0.36 | 0.38 | deficiencies (1) (2) (3) (5) (4) 1/3 OCT BND CNTR FREQ 630 800 1000 1250 1600 2000 2500 3150 4000 5000 TL in dB 95% Confidence in dB 0.29 0.44 0.38 0.39 0.36 0.56 0.55 0.31 0.32 0.50 deficiencies (4) (4) (3) (2) (0)

EWR OITC Specimen Area: 23.41 sq.ft. 18 12 Temperature: 78.3 deg. F

Relative Humidity: 43 % Test Date: 30 August 2010

FABRIC DATA

design

SIN

REVISIONS:

Almont Dr CA 90211 0.413.9332

90266

SHADE MANHAT 1221 N Valley Anhattan Beach, Ca

DATE: 08/04/14

NONE

SCALE:

SHEET NAME:

ID-3.4 **ACCOUSTICAL** REPORT

Dimensional Acoustic Panels (DAP) combine 3-dimensional designs with fabriccovered, sound absorbing acoustical panels to create a dynamic, beautiful product. Dimensional panels capture beauty and sound control for every environment where sound performance is necessary.

Dimensional Acoustic Panels

Standard size for DAP-1" or DAP-2" panels are 4'x8' (designs are formatted for this size). Custom sizes or smaller panels may require pattern resizing.

Hz 125 250 500 1000 2000 4000 N.R.C.

DAP-2" .21 .78 1.04 1.07 1.06 1.04 1.05

Please visit our website at www.dimensionalacoustics.com for all current

.02 .37 .87 1.09 1.01 1.00 .85

Custom designs require submittal of drawings.

SOUND ABSORPTION

PANEL PATTERNS

patterns and additional information

6-7 pcf fiberglass 1" or 2" thickness

4' x 8' standard Custom sizes as requested Designs formatted for standard size may require pattern resizing.

MOUNTING Back mounted with screw-in clips secured to substrate with Rotofast anchors, "Z" Clips, Impaling Clips or Adhesive, based on specifications.

Standard fabric: Guilford of Maine, Anchorage 2335 Other panel fabrics approved upon submittal

Standard = Square

Half Bevel (x2 sides or x4 sides) or Quarter Bevel (x2 sides or x4 sides) FIRE RATING

ASTM E84 Class "A" materials



SOUND ABSORBING ACOUSTICAL WALL TREATMENT - Section 09840

PART 2

2.1 SECTION INCLUDES 2.1.1 Dimensional 3-D Sculpted Acoustical Wall Panel

GENERAL

2.2 REFERENCES

2.2.1 ASTM C 423 - Standard Test Method for Sound Absorption. 2.2.2 ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building

Materials.

2.3 PERFORMANCE REQUIREMENTS

- 2.3.1 Acoustical Absorption: In accordance with ASTM C 423. Type A mounting method unless otherwise specified. 2.3.2 Flame Spread Rating: Provide all components with Class A flame spread rating when
- tested in accordance with ASTM E 84.

2.4 SUBMITTALS

- 2.4.1 Submit under provisions of Section 01300
- 2.4.2 Product Data: Manufacturer's data sheets on each product to be used, including: 2.4.2.1 Preparation instructions and recommendations
- 2.4.2.2 Storage and handling requirements and recommendations 2.4.2.3 Installation methods
- 2.4.2.4 Verification Sample Provided: One (1) 16" x 16" x 1" sample representing product, color and pattern for each product specified. Additional samples are charged according to size, type and fabric. These samples are manufactured for evaluation
- 2.4.2.5 Manufacturer's standard fabric is Guilford of Maine, Anchorage 2335. 2.4.2.6 Customer Own Material (C.O.M.) fabric will be subject to Acoustic Enterprises, Inc.
- (AEI) approval to determine if it is appropriate for panel use. A one (1) yard sample of C.O.M. fabric to be furnished to AEI for Verification Samples.
- 2.4.2.7 Mock-up panels that are actual size to the project would be charged as part of the

2.5 QUALITY ASSURANCE

- 2.5.1 Manufacturer Qualifications: Acoustic Enterprises developed the technology and experience in producing the acoustical product (s) specified herein.
- 2.5.2 Installer Qualifications: Must be a qualified and experienced Installer of Acoustical Wall

2.6 DELIVERY, STORAGE AND HANDLING 2.6.1 Protect acoustical products from moisture

- 2.6.2 After inspection of contents, products should remain in manufacturer's packaging until ready for installation.
- 2.6.2.1 Store materials flat, in dry, well-ventilated space. 2.6.2.2 Do not stand panels on end and protect all edges from damage
- 2.6.2.3 Protect panels from any damage.

2.7 PROJECT CONDITIONS

respectively.

2.7.1 Do not begin installation of acoustical products until building has been enclosed and environmental conditions approximate to those that will prevail when building is occupied. 2.7.2 Environmental Requirements: Do not install panels until wet work, such as concrete and plastering, is complete; the building is enclosed; and the temperature and relative

humidity have stabilized at 60-80 degrees F (16 - 27 degrees C) and 40% - 50%,

2.8.1 As per Architect requirements specified in Purchase Order.

PART 3 PRODUCTS

3.1 MANUFACTURERS

- 3.1.1 Acceptable Manufacturer: Acoustic Enterprises Inc., 7601 Miller Drive, Frederick, CO 80504. Telephone (303) 774-9992 or (888) 287-4183. FAX: (303) 774-0081. Email: acoustic@ecentral.com. Website: www.dimensionalacoustics.com.
- 3.1.2 Substitutions: Not Permitted.
- 3.1.3 Provide all acoustical products specified herein by Acoustic Enterprises, Inc.

3.2 DIMENSIONAL 3-D SCULPTED SOUND ABSORBING ACOUSTIC WALL PANELS

- 3.2.1 Fabric Wrapped Fiberglass Panels: Dimensional Acoustic Wall Panels. Fiberglass core of 6-7 pcf plus 1/8" 16 lb fiberglass with custom profiled design pattern on face, with hardened edges, seamless finish material wrapped and bonded to back side of panels. The acoustical panels are an exclusive Dimensional Acoustic Panel per architectural design and manufactured under a Patent Pending.
- 3.2.1.1 Thickness: 1 inch; NRC 0.85 3.2.1.2 Thickness: 2 inch; NRC 1.05
- 3.2.1.3 Size: 4' x 8' Standard. Custom sized as per drawings
- 3.2.1.4 Pattern Name & #: _____ Can be selected from the website http://reskin.com/panels/dimensional-acoustical-panels
- 3.2.1.5 Finish Material: Manufacturer's standard is Guilford of Maine, Anchorage 2335 3.2.1.6 Alternate Finish Material: Customer Own Material (C.O.M.) fabric

EXECUTION PART 4

4.1 EXAMINATION

3.2.1.8 Edge Detail: 3.2.1.8.1 Square 3.2.1.8.2 Beveled

3.2.1.9 Corners: Square

3.2.1.10 Hardware Options:

3.2.1.10.1 Impaling Clips / Angled

3.2.1.10.4 Rotofast Anchors

3.2.1.10.3 Adhesive & Impaling Clips

3.2.1.10.2 Z-Clips with resin hardened spots

4.1.1 Do not begin installation until substrates have been properly prepared.

3.2.1.7 Color: Select from manufacturer's standard or alternate C.O.M.

4.1.2 If substrate preparation is the responsibility of another installer, notify Architect or Designer of any unsatisfactory preparation before proceeding.

4.2 PREPARATION

- 4.2.1 Clean surfaces thoroughly prior to installation.
- 4.2.2 Prepare surfaces for achieving the best result for the substrate under the project

4.3 INSTALLATION

- 4.3.1 Install acoustical panels as per General Contractor's provisions and specifications.
- 4.3.2 Installation of the Dimensional Acoustic Panel is the same as any acoustical wall panel. No special requirements for installation. 4.3.3 Installer Qualifications: Must be a qualified and experienced Installer.
- 4.4 PROTECTION
- 4.4.1 Protect installed products until completion of project.



INSTALLATION INSTRUCTIONS

DIMENSIONAL AND FLAT WALL PANELS:

Particular care must be taken not to bend panels during installation, especially longer panels, as it could create bubbles in the fabric. Keeping panels in a vertical, straight upright position is the safest and required way to handle the panels.

When mounting Rotofast panel anchors or other types of hardware, please make sure you lay the panels on a clean flat surface free from dirt or debris so panels do not get soiled, punctured or damaged in any way. Never stand panels on their corners as it could cause crushing and de-laminate the material from the corner of the panel. The fiberglass core is a soft material that can be dented if proper care is not used when handling.

Please keep pencils, markers, liquid nails, knife blades and other such tools away from the face of the panels you are installing.

Baffles come with hardware already installed; it is a matter of hanging them in your designated space. Please use the same care instructions as the wall panels.

We make various types, sizes and configurations of clouds. Each type of cloud will come with its own type of assembly and installation instructions. Lay both parts on flat, smooth, clean surface. Use "U" channel labeled A-B, C-D, E-F to cross over to each half. Match up to inserted Rotofast anchors that are also marked A-B, C-D, E-F. Gently tighten screws thru the "U" channel to hold both halves into place. Hang cloud from holes drilled in ends of each 3' cross piece. Please use the same care instructions as the wall panels. AEI does not supply the wire hanging kits which come in 3 different lengths. We do recommend using Caddy Speed Link Wire hanging kits http://www.erico.us/products/LDwithLoop.asp.

Follow the instruction sheet that is provided in the package of Rotofast anchors. It is important that you screw the anchors in the back of the fiberglass panel only until the flat part of the anchor is just flush to the panel. If you screw the anchor in too far (especially in a 1" panel) you will create a bulge in the face of the panel. Never screw anchors into the fabric or material that is wrapped around the back of the panels, as it can delaminate the fabric from the corners and edges of the

Remove panels from the crate. Lie panels face-down on a clean or covered work surface.

Use Acoustic Enterprises Inc. placement recommendation sheet included with panel order for quantity and anchor location on panels and clouds

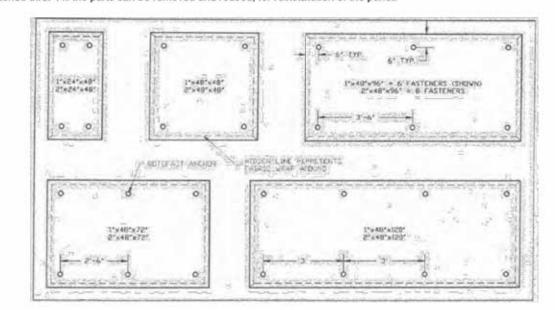
Using Rotofast Cloud Anchors: Insert loop into flat side of anchor until it snaps into locked position. Using the loop as a handle, screw clouds/anchor into

If cloud has a perforated white vinyl back (used for white light reflection), cut a small slot in vinyl to start anchor in.

When installing the screw with the black ratchet into either the white screw anchor or the wall with the screw only, leave the ratchet slightly loose for easier alignment.

Each Roto-fast anchor will hold up to 43 lbs. Each square foot of 7" panel weighs approximately 1/2 lb. Roto-fast anchors are used for easy installations of permanently mounted panels. If the white wall anchors are installed, and the black ratchet is screwed into it, upon removal the drywall will be torn. Semi-permanent installation can be

achieved by not using the white wall anchor. Panels can be removed, with a carpenter square by inserting the short side behind the panel, and the long side as a handle. Once panels are removed, and channel locks can be used to unscrew the yellow anchor, then the ratchet can be pushed thru. All the parts can be removed and reused, for reinstallation of the panel.



Using "Z" Clips:

Panels are fabricated with a line across the width. Resin hardened spots are poured across the line so the center of the "Z" clip can be installed on site on the line. The installer can mark the wall with the same measurement from the panel, and the "Z" bar, or "Z" clips can be installed for the desired panel location.

"Z" bar comes in six foot lengths or 2 each of the 2" "Z" clips can be used on both panel and wall.

Using Impaling Clips:

Clips should be installed using the Acoustic Enterprises Inc. placement recommendation sheet included with each panel

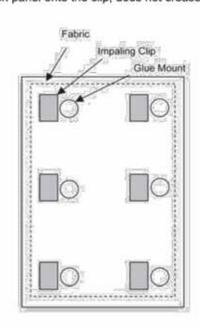
Mounting on drywall can be done with screws only or with screws and adhesive. Mounting on concrete or masonry with adhesive should be done ahead of installation time for maximum strength.

If the wall panels are not required to be removable, the easiest method of installation is Impaling Clips.

- . Impaling clips are shipped from the factory with the panels and should be screwed into the wall where the panels are to be installed. Care should be taken to screw the impaling clips into a stud when possible and to space the clips so that they will be evenly spaced on the back of the panel.
- . The back of the wall panel should be covered with a construction adhesive and placed onto the wall in the desired

The impaling clips will hold the panel in place while the adhesive sets

A flat board or plywood piece should be used on the face of the acoustical panel to make sure that pressure necessary to push panel onto the clip, does not crease or wrinkle the facing.



TANDARD NUMBER OF CLIPS PER PANEL PANEL LENGTH NUMBER OF CLIPS 48" × 72" 48" x 96"

Submittal Sheet



Durable Material Composition

or warp. The blanket's resilient

SelectSound Black acoustic blanket is

mposition resists job-site damage

Composed of inorganic glass fibers,

SelectSound Black acoustic blanket

This wider product improves job site

productivity and requires less seams.

Lightweight and resilient, SelectSound

fabricate and install. Both stick pins

available in standard thicknesses of 1"

and 2". A 1 1/2" thickness is available

in 72" W x 70' L rolls, while the 2"

through special order.

noncorrosive to steel, copper and

aluminum.

SelectSound® Black Acoustic Blanket

All Black Wool with Black Mat Finish

SelectSound Black acoustic blanket is

an all black wool product with a black

mat surface. It is excellent for

providing superior acoustical

Design Considerations

performance.

performance.

No.306-03-M.

Installation Procedure

eliminating light reflections while

Acoustical performance of interior

surfaces can generally be improved by increasing product thickness.

SelectSound Black acoustic blanket

with other Owens Corning acoustical

SelectSound Black acoustic blanket

requirements of ASTM C 553, Type III,

250°F maximum use temperature.

The noise reduction coefficients of

SelectSound Black acoustic blanket

were derived from tests conducted in

accordance with ASTM C 423 on a Type

A mounting. Meets New York City MEA

SelectSound Black acoustic blanket

block or precast concrete using

When installing insulation with

surface preparation and pattern,

adhesive, follow adhesive

can be installed on drywall, concrete

impaling pins or appropriate adhesives.

manufacturer's recommendations for

When using impaling pins, follow the

pin manufacturer's recommendations

for surface preparation, location and

subject to physical contact, protect pin

amount of pins. Pin length should be

selected to ensure tight fit. Where

Keep product dry during shipping,

storage and installation.

material to provide additional

Applicable Standards

complies with the property

can be specified for use in conjunction

dimensionally stable and will not shrink will not rot or mildew and is

Fast, High Quality Installation

Superior Acoustical Performance SelectSound Black acoustic blanket Black acoustic blanket is easy to handle, provides excellent acoustical performance for walls in multiplex and adhesives can be used to secure theaters, sound studios and insulation to drywall, concrete block performing arts centers. SelectSound or precast concrete. Black acoustic blanket is also ideal for Size Availability use above suspended metal ceiling systems. Depending on specified SelectSound Black acoustic blanket is

thickness, SelectSound Black acoustic blanket absorbs up to 100% of the sound striking its surface. SelectSound Black acoustic blanket

helps provide the highest quality audio
The 1" and 1 1/2" product is available reproduction by reducing sound reverberation within spaces. Sound transfer from space to space is also noticeably reduced.

(by weight)

product is available in a 72" W x 50' L Physical Property Data Test Method <3% by weight at 120°F (49°C), Water vapor sorption ASTM C 1104 95% R.H. ASTM C 1338 Meets requirement Fungi resistance ASTM C 665 Will not cause corrosion greater than Corrosiveness that caused by sterile cotton Corrosiveness Test on aluminum or steel*

Surface burning Flame spread CAN/ULC-S102-M** Smoke developed ! characteristics Maximum Air Velocity UL 181 6,000 fpm (30.5 m/sec.) Erosion Test

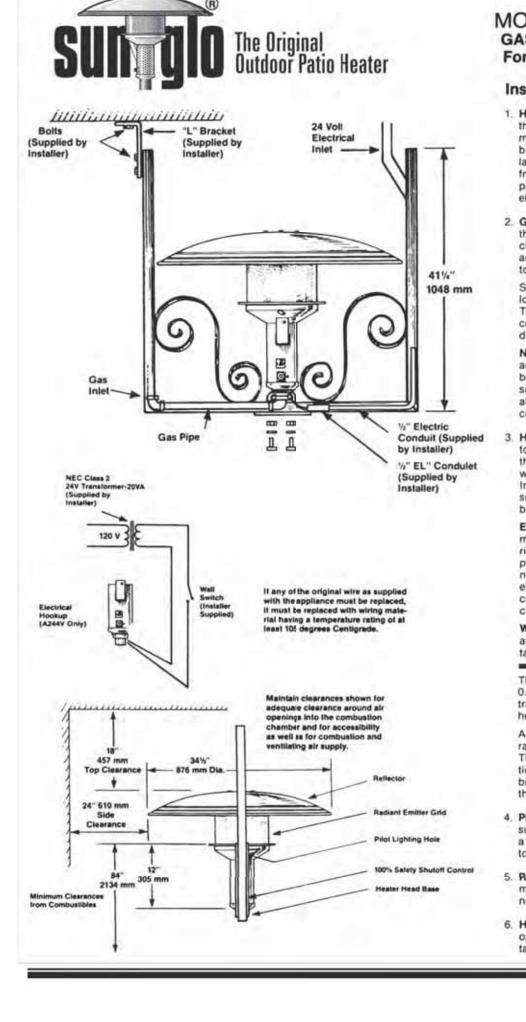
When wet, coated surfaces in contact with galvanized steel may cause discoloration of the sheet metal. ** The surface huming characteristics of these products have been determined in accordance with UL 723 and CAN/ULC-S102-M. These standards should be used to measure and describe the properties of materials, products or assemblies in response to heat and flame under controlled laboratory conditions and should not bused to describe or appraise the fire hazard or fire risk of materials, products or assemblies under actual fire account all of the factors which are pertinent to an assessment of the fire hazard of a particular end use. Values

Acoustical Performance

Tested Values - SelectSound Black Acoustic Blanket Sound Absorption Coefficients (ASTM C 423, Type "A" Mounting)

Product		ensity (kg/m³)		ckness (mm)	125	Octave 250	Band 500	Center F 1000	requent 2000	ies, Hz 4000	NRC	Thermal Resistan R-Value (hr*ft²*°F)/Btu
SelectSound Black	1.5	(24)	1.0	(25)	.10	.34	.64	.87	.91	.91	.70	4.2
Acoustic Blanket	1.5	(24)	1.5	(38)	.12	.62	1.07	1.10	1.01	0.95	0.95	6.3
	1.5	(24)	2.0	(51)	.27	.80	1.12	1.07	1.02	1.01	1.00	8.5

These data were collected using a limited sample size and are not absolute values. Reasonable tolerances must therefore be applied. All tests were conducted in accordance with ASTM C 423, Type A mounting (material placed against a solid backing such as a block wall). Owens Corning Granville Science & Technology Acoustics Lab is National Voluntary Laboratory Accreditation Program (NVLAP) approved.



MODEL A244 AND A244V **GAS-FIRED INFRARED HEATER** For Indoor or Outdoor Operation Installation Instructions Hanging Frame Mounting: Before attaching the heater to the "U" shaped hanging frame mount the frame in position to the overhead building structure. Use % inch diameter or larger bolts on each side leg. Position the frame to facilitate the connection of gas supply piping, and on models equipped with an electrical valve, the electrical supply wiring. 2. Gas Supply Piping: The piping provided with the heater is assembled to nestle in the channel of the hanging frame. Connect an additional length of 1/2 inch pipe long enough to clear the top of the frame. Screw the heater onto the 1/2 NPT x 1 inch ong nipple at the outlet end of the piping. The heater should be turned to allow the control handle to face in the desired Note: A 1/4 inch NPT plugged tapping, accessible for test gauge connection, must be installed immediately upstream of the gas supply connection to the heater. Use a suitable pipe thread sealant on all gas Heater Mounting: Set the heater (less reflector) with the piping assembly attached into the suspended hanging frame. The piping will nestle in the hanging bracket channel Install and tighten the two (2) % inch boits supplied with the frame and firmly secure the base of the heater in place. Electrical Supply: On the A244V 24 volt model, the electrical inlet is provided on the right side of the heater opposite the gas inlet piping. The electrician should supply a connection box as shown adjacent to the heater electrical inlet and run 's" rigid waterproof conduit up to the right just inside the frame WARNING: The minimum fire hazard clearance marked on the heater must be maintained from vehicles parked below the heater. The electrical input required to the heater is 0.550 Amps at 24V (rated at 8 Watts). A 40VA transformer will service up to three (3) A NEC Class 2, 24 volt transformer (20 VA rating) circuit must be supplied to the heater. The transformer is to be installed in the junction box or in accordance with local codes. but in no case closer than three (3) feet to the reflector. 4. Piping Hook-up: Connect the additional gas supply piping. Leak test all piping joints with a soap-water solution. Do NOT use a match to test for gas leaks. Reflector Mounting: Attach the reflector by means of the three (3) stainless steel wingnuts at the top of the heater. 6. Heater Start-up: Follow the lighting and operating instructions on the rating plate attached to the hanging frame.

> 90266 ACH TAN BEA

REVISIONS:

Almont Dr CA 90211 0.413.9332

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DATE: 08/04/14 SCALE:

anhatta

SHEET NAME:

NONE

ID-3.5 **ACCOUSTICAL** AND FIRE-RESISTANT DATA