



City of Portland, Oregon - Bureau of Development Services

1900 SW Fourth Avenue • Portland, Oregon 97201 • 503-823-7300 • www.portlandoregon.gov/bds



Sign Permit Application

Permit number _____

FOR INTAKE, STAFF USE ONLY

Application date _____ Other inspections _____
 Issued date _____ Map zone _____ Applicable zone _____
 Approved by _____ Overlay zone _____
 Structural engineer's approval _____ Plan / historic district _____

APPLICANT: Complete all sections below that apply to the project. Please print legibly.

Installation address 2620 SW 1st Ave Portland, OR Property tax account # _____

Business name Rivian

Legal owner of sign _____

Address of sign owner _____

Property owner name Harsch Investment Properties - Steve Barragar

Address _____

Sign contractor name Pronto Signs LLC Construction contractors board # 20161163

Address 4095 Cherry Ave NE Keizer, OR 97303

Day Phone 503-856-8871 FAX _____ email acctprontosignsllc@gmail.com

For electric signs

Electrician's name Alan Mills Electrician's license # 1002516

Which of the following best describes the proposed work?

- ☒ New sign ☐ New awning
☐ Alteration to existing sign ☐ Addition to existing awning
☐ Addition to an existing sign, size increased by _____% ☐ Addition of a sign to existing awning

Type of sign, check all that apply

- ☐ Freestanding ☐ Monument ☐ Projecting
☐ Sign on awning ☐ Fascia sign, over 400 lbs. ☒ Fascia sign 400 lbs. or less
☐ Painted wall/adhered ☐ Pitched roof ☐ Sign on marquee
☐ Other Wall Sign ☐ Sign attached to canopy

Proposed sign dimensions

width of sign face	height of sign face	overall sign height	depth of fascia sign	total area of sign
<u>12.6'</u> ft.	<u>2.5</u> ft.	<u>2.5</u> ft.	<u>2.5</u> in.	<u>31.25</u> sq. ft.

- ☒ [Y] [N] Do you have permission of the property owner to erect this sign?
☒ [Y] [N] Changing image features? If yes, area of change _____ sq.ft. ☒ [Y] [N] Illuminated?
☒ [Y] [N] Complete listing of existing signs attached. Required, a complete listing including type and size area.
☒ [Y] [N] Site plan attached. If a site plan is required it must show size and location of existing signs, for site plan requirements see the Sign Permit Program Guide.

Applicant's signature [Signature]

Applicant's name, printed Stephanie Cervantes Applicants phone # 503-856-8871

City Of Portland
REVIEWED FOR CODE COMPLIANCE
Date: 07/06/22
Permit #: 22-140252-000-00-SG

22-140252-000-00-SG



PORTLAND SERVICE CENTER

- R0 06.25.2021
- R1 08.10.2021
- R2 09.03.2021
- R3 09.23.2021
- R4 10.19.2021
- R5 10.21.2021
- R6 11.02.2021
- R7 12.08.2021
- R8 02.22.2022
- R9 04.19.2022

City Of Portland
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STADIUM FRWY

PROJECT LOCATION:
2620 SW 1ST AVENUE
PORTLAND, OR 97201

SW BARBUR BLVD

3RD AVENUE

SW 1ST AVE

HWY 99 ABOVE

SW ARTHUR ST

SW MEADE ST

VICINITY MAP
SCALE: N.T.S.



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JOB #: 261790-R9
DATE: 06.25.2021
DESIGNER: C. Clark
SALES REP: M. Bjorklund
PROJ MGR: R. Jensky

REV	DATE	BY	DESCRIPTION
1	06.10.21	CC	UPDATED PER COMMENTS
2	06.03.21	CC	UPDATED PER COMMENTS AND NEW SPECS
3	09.23.21	CC	UPDATED PER COMMENTS AND NEW PERMIT ARCHITECTURALS
4	10.19.21	CC	UPDATED PER COMMENTS AND UPDATED PERMIT ARCHITECTURALS
5	10.21.21	CC	UPDATED SITE PLAN: C1 MSGS, OCCUPANCY AND N1 ELEVATION
6	11.02.21	CC	UPDATED LIST SPACING ON EVAC MAPS
7	12.06.21	CC	ADDED RACEWAY TO E1 CHANNEL LETTERS
8	02.22.22	WAM	CONVERT SELECTED PAGES TO B/W
9	04.19.22	WAM	PREPARE SELECTED PAGES FOR SUBMITTAL
10	00.00.00	XX	XXXX

CLIENT APPROVAL	DATE
LANDLORD APPROVAL	DATE



RIVIAN
2620 SW 1st Ave
Portland, OR 97201

SHEET NUMBER

0.1

REV	DATE	BY	DESCRIPTION
1	08.10.21	CC	UPDATED PER COMMENTS
2	09.03.21	CC	UPDATED PER COMMENTS AND NEW SPECS
3	09.23.21	CC	UPDATED PER COMMENTS AND NEW PERMIT ARCHITECTURALS
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10	00.00.00	XX	XXXX

CLIENT APPROVAL

DATE

LANDLORD APPROVAL

DATE



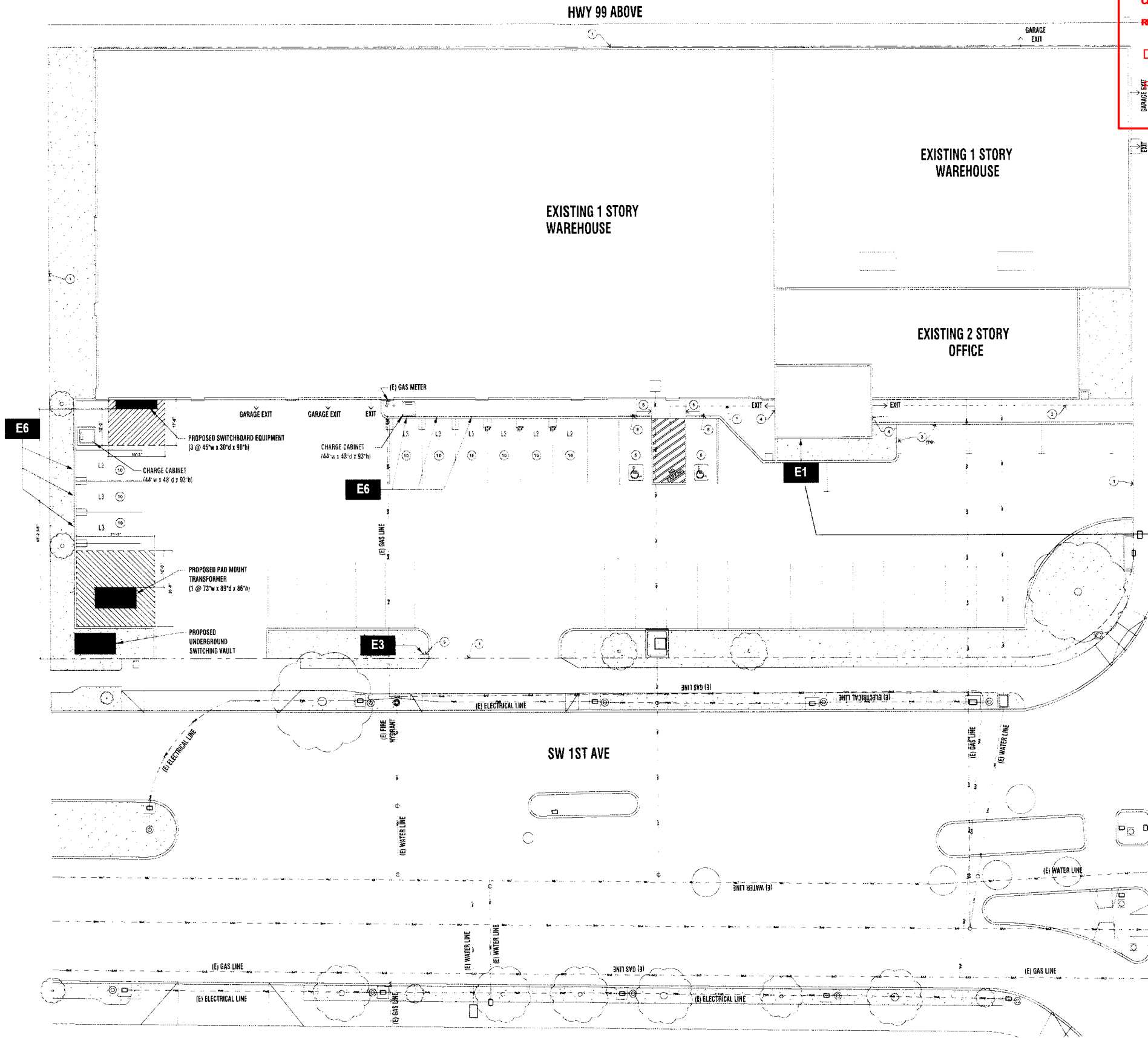
RIVIAN

2620 SW 1st Ave
Portland, OR 97201

SHEET NUMBER

0.2

SITE PLAN
SCALE: N.T.S.

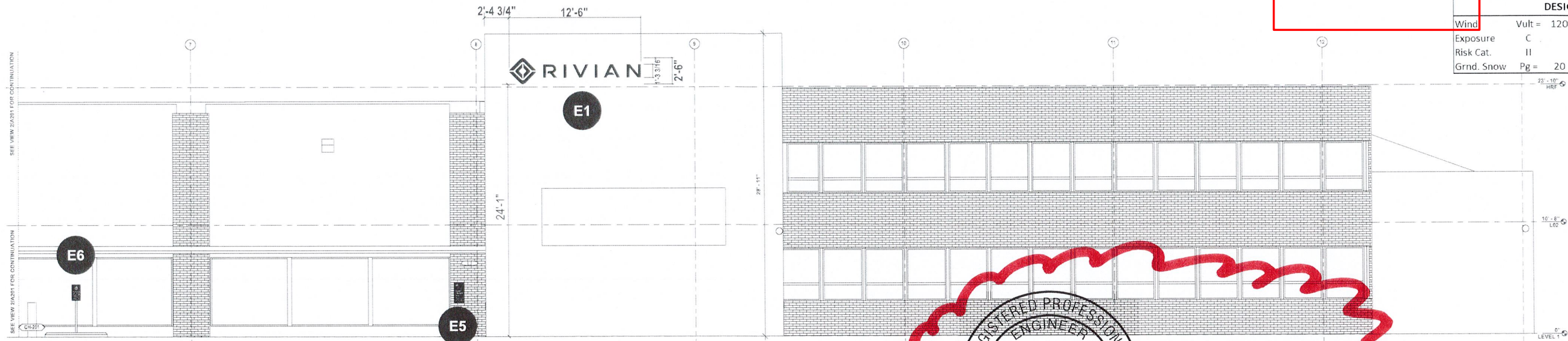


City Of Portland
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Main ID Sign to placed on exterior of building.
Refer to Sheet 0.3 and 0.4 for placement

22-140252-000-00-SG

City Of Portland REVIEWED FOR CODE COMPLIANCE Date: 07/06/22 Permit #: 22-140252-000-00-SG	DESIGN SPECIFICATIONS	
	IBC	2012 with Portland amendments
	ASCE	7-10 Minimum Design Loads for Buildings & Other Structures
	ACI	318-14 Building Code Requirements for Structural Concrete
	DESIGN LOADS	
	Wind	Vult = 120 mph
	Exposure	C
	Risk Cat.	II
	Grnd. Snow	Pg = 20 psf



EXTERIOR ELEVATION - WEST (RIGHT SIDE)
SCALE: 3/32" = 1'-0"

REGISTERED PROFESSIONAL
ENGINEER
92100PE
OREGON
MARCH 15, 2017
JERE MURDOCH
EXPIRES: 12/31/2022

MURDOCH
ENGINEERING
SIGN STRUCTURE PROFESSIONALS

2399 A-2 NJ-34
MANASQUAN, NJ 08736
(873) 570-1215 x0
Jere Murdoch
Jere Murdoch, PE
Professional Engineer
OR PE Lic. #92100PE

Rev. 3/1/2022
Rev. 6/7/2022

EXTERIOR ELEVATION - WEST (LEFT SIDE)
SCALE: 3/32" = 1'-0"

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JOB #: 261790-R9
DATE: 06.25.2021
DESIGNER: C. Clark
SALES REP: M. Bjorklund
PROJ MGR: R. Jensky

REV	DATE	BY	DESCRIPTION
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10	06.06.00	XX	XXXX

CLIENT APPROVAL	DATE
LANDLORD APPROVAL	DATE

RIVIAN
2620 SW 1st Ave
Portland, OR 97201

SHEET NUMBER
0.3

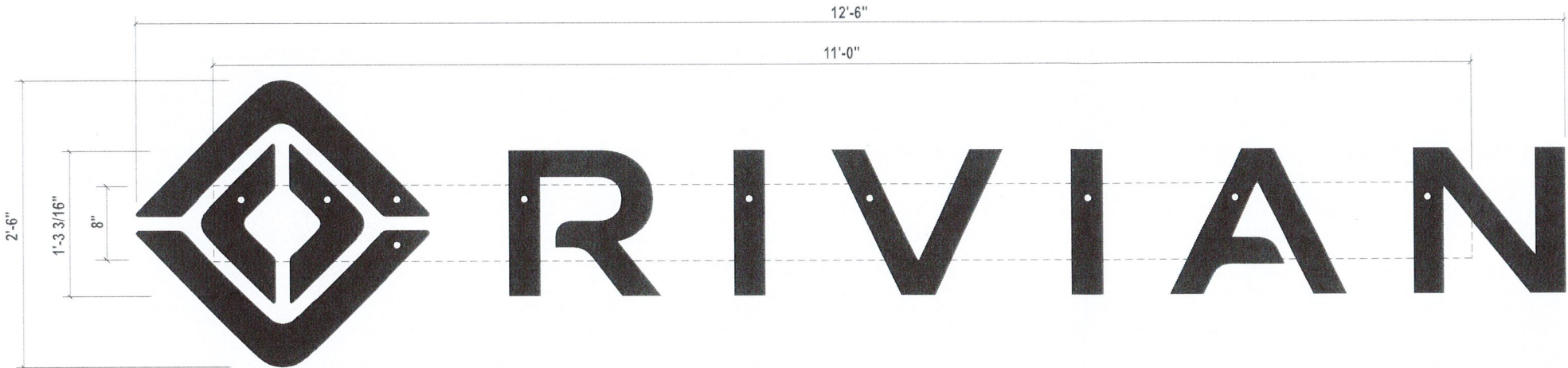
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E1 BUILDING ID HALO-LIT LETTERS (QTY 1)

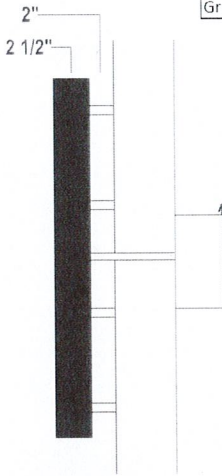
SQUARE FOOTAGE: 31.25

FIELD SURVEY REQUIRED

City Of Portland REVIEWED FOR CODE COMPLIANCE Date: 07/06/22 Permit #: 22-140252-000-00-SG	DESIGN SPECIFICATIONS			
	IBC	2012	with	Portland amendments
	ASCE	7-10	Minimum Design Loads for Buildings & Other Structures	
	ACI	318-14	Building Code Requirements for Structural Concrete	
	ANSI/AISC	360-10	Specification for Structural Steel Buildings	
	DESIGN LOADS			
	Wind	Vult =	120	mph
	Exposure	C		
	Risk Cat.	II		
	Grnd. Snow	Pg =	20	psf



FRONT VIEW
SCALE: 3/4" = 1'-0"



SIDE VIEW
SCALE: 3/4" = 1'-0"

Engineer's Note:

Concrete wall to be verified in field as min. 6" thk. for fastening applications, contact Murdoch Engineering if field conditions vary

SPECIFICATIONS

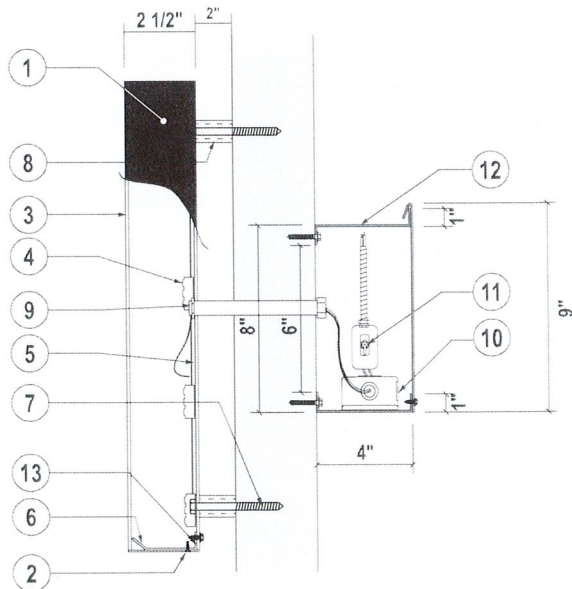
- .063" X 3" ALUMINUM RETURN P-4 WELDED TO ALUMINUM FACE, PREFINISH WHITE INSIDE
- COUNTERSUNK SCREWS P-4
- .125" ALUMINUM FACE P-4
- WHITE LED MODULES SECURED TO REMOVABLE BACK
- .150" WHITE POLYCARBONATE BACKS TEK SCREWED TO ALUMINUM TABS
- .125" ALUMINUM MOUNTING TABS FASTENED TO RETURNS WITH COUNTERSUNK SCREWS
- 1/4"x5" TAPCONS EMBD. MIN. 1-3/4" INTO CONCRETE WALL, [4] PER LETTER, [3] PER LOGO SECTION
- 3/8" O.D. PVC SPACERS P-1
- 7/8" ELECTRICAL HOLE / 3/4" COUPLER WITH FLEXIBLE CONDUIT TO INTERIOR RACEWAY; VISIBLE CONDUIT P-1
- LED POWER SUPPLY MOUNTED TO BOTTOM OF INTERIOR RACEWAY
- ETL APPROVED ELECTRICAL SHUT OFF SWITCH MOUNTED TO INTERIOR RACEWAY
- INTERIOR RACEWAY. .063" WHT/WHT BRAKE FORMED ALUMINUM WITH REMOVABLE FACE FOR ACCESS TO POWER SUPPLIES P-1.
- 1/4"Ø WEEP HOLES IN BACK OF LETTER

NOTES

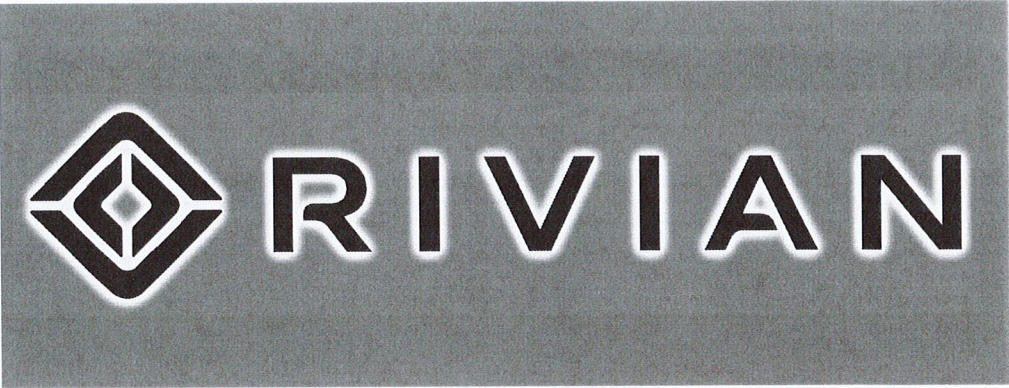
- ETL, MANUFACTURER & VOLTAGE TAGS ON TOP OF LETTER
- TYPICAL ELECTRICAL LEAD / WHIP LENGTH 6'-0"
- VOLTAGE: 120V
- 120V - 20 AMP PRIMARY ELECTRICAL CONNECTIONS TO BE MADE BY LICENSED ELECTRICAL CONTRACTORS

COLORS/FINISHES

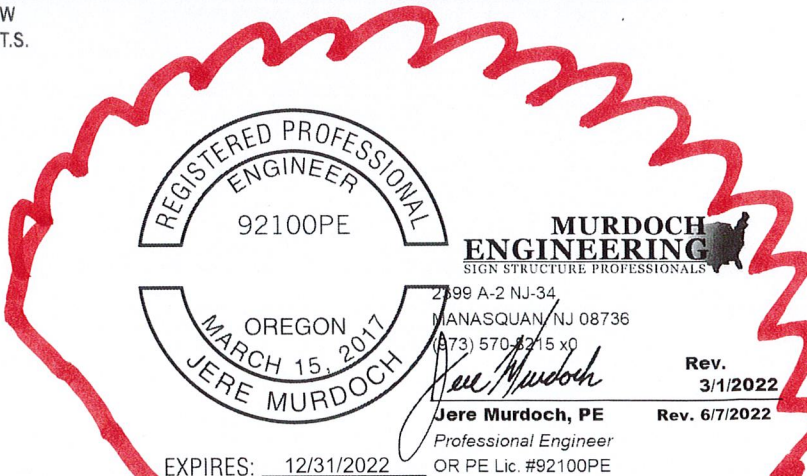
- P-4 MP TO MATCH RAL 9004 SIGNAL BLACK, MATTE FINISH
- P-1 MP TO MATCH RAL 9016 TRAFFIC WHITE, MATTE FINISH




CROSS SECTION VIEW
SCALE: N.T.S.



NIGHT VIEW
SCALE: N.T.S.



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	DATE: 06.25.2021	1	08.10.21	CC	UPDATED PER COMMENTS					
	DESIGNER: C. Clark	2	09.03.21	CC	UPDATED PER COMMENTS AND NEW SPECS					
	SALES REP: M. Bjorklund	3	09.23.21	CC	UPDATED PER COMMENTS AND NEW PERMIT ARCHITECTURALS					
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	10	06.00.00	XX	XXXX						

GENERAL:
1. ALL MATERIALS AND WORK SHALL CONFORM TO THE REQUIREMENTS OF THE APPLICABLE INTERNATIONAL BUILDING CODE (IBC).
2. CONSTRUCTION METHODS AND PROJECT SAFETY: DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE METHODS, PROCEDURES, OR SEQUENCE OF CONSTRUCTION. TAKE NECESSARY PRECAUTIONS TO MAINTAIN AND ENSURE THE INTEGRITY OF THE STRUCTURE DURING CONSTRUCTION. THE EOR WILL NOT ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL DESIGN, CONSTRUCT, AND MAINTAIN ALL SAFETY DEVICES AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE, AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS, AND REGULATIONS.
3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND SITE CONDITIONS PRIOR TO THE START OF CONSTRUCTION AND NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES OR INCONSISTENCIES THAT ARE FOUND. NOTED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. DO NOT SCALE DRAWINGS.
4. ALL OMISSIONS AND/OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND FIELD INSPECTOR. THE ENGINEER SHALL PROVIDE A SOLUTION PRIOR TO PROCEEDING WITH ANY WORK AFFECTED BY THE CONFLICT OR OMISSION.
5. WHERE NO CONSTRUCTION DETAILS ARE SHOWN OR NOTED FOR ANY PART OF THE WORK, CONSTRUCT IN ACCORDANCE WITH THE STEEL CONSTRUCTION MANUAL, 14TH EDITION OR 2010 ALUMINUM DESIGN MANUAL.
6. WHEN A DETAIL IS IDENTIFIED AS TYPICAL, THE CONTRACTOR IS TO APPLY THIS DETAIL IN ESTIMATING AND CONSTRUCTION TO EVERY LIKE CONDITION WHETHER OR NOT THE REFERENCE IS REPEATED IN EVERY INSTANCE.
7. ANY CHANGE TO THE DESIGN AS SHOWN ON THE DRAWINGS REQUIRES PRIOR WRITTEN APPROVAL FROM DESIGN ENGINEER OF RECORD BEFORE CONSTRUCTION.
8. WORK PERFORMED IN CONFLICT WITH THE STRUCTURAL DRAWINGS OR APPLICABLE BUILDING CODE REQUIREMENTS SHALL BE CORRECTED AT THE EXPENSE OF THE CONTRACTOR.
9. VERIFICATION: VERIFY ALL DIMENSIONS, ELEVATIONS, AND SITE CONDITIONS BEFORE STARTING WORK. NOTIFY THE EOR IMMEDIATELY OF ANY DISCREPANCIES.
10. DOCUMENT INSTALLATION OF FOOTINGS / ANCHOR BOLTS / EPOXY ANCHORS WITH PHOTOGRAPHS AND MEASUREMENTS

STEEL
1. STEEL SHAPES SHALL CONFORM TO THE FOLLOWING:
ROUND HSS ASTM A500, GR B Fy=42 KSI MIN.
SQUARE/RECT HSS ASTM A500, GR B Fy=46 KSI MIN.
THREADED ROD F1554 GR 55 Fy=55 KSI MIN.
STEEL PLATE ASTM A36 Fy=36 KSI MIN.
STD. PIPE ASTM A53, GR B Fy=35 KSI MIN.

2. BOLTS SHALL CONFORM TO ASTM A307 GRADE B
3. BOLTS AND THREADED ROD SHALL BE HOT-DIP GALVANIZED PER ASTM F2329 UNO.
4. ANCHOR BOLTS SHALL CONFORM TO ASTM F1554 UNO.
5. NUTS SHALL CONFORM TO ASTM A563
6. WASHERS SHALL CONFORM TO ASTM F844
7. STEEL HARDWARE SHALL BE HOT-DIP GALVANIZED PER ASTM A153 UNO
8. WELDING:
a. WELD STRUCTURAL STEEL IN COMPLIANCE WITH ANSI/AWS D1.1 AND AISC SPECIFICATION, CHAPTER J. WELDERS SHALL BE CERTIFIED AS REQUIRED BY GOVERNING CODE AUTHORITY. WELDING SHALL BE DONE BY ELECTRIC ARC PROCESS USING LOW-HYDROGEN ELECTRODES WITH SPECIFIED TENSILE STRENGTH NOT LESS THAN 70 KSI UNLESS NOTED OTHERWISE
b. ALL SHOP AND FIELD WELDS SHALL BE PERFORMED BY AN AWS OR ICC CERTIFIED WELDER WITH ACTIVE STATUS AT TIME OF WELDING
c. UNLESS A LARGER WELD SIZE IS INDICATED, PROVIDE MINIMUM SIZE WELDS PER AISC SPECIFICATION, SECTION J2, TABLE J2.4
d. BASE PLATES SHALL BE WELDED ON TOP AND BOTTOM WITH CONTINUOUS WELDS OF AT LEAST 1/4" (IF PLATE IS CUT TO FIT TUBE INTO PLATE)

ALUMINUM
1. FABRICATE AND ERECT ALUMINUM IN COMPLIANCE WITH THE ALUMINUM ASSOCIATION (AA) 2010 ALUMINUM DESIGN MANUAL (ADM) 1, THE SPECIFICATIONS FOR ALUMINUM SHEET METAL WORK (ASM35), AND IBC CHAPTER 20.
2. PIPE AND TUBE SHALL BE 6061-T6 PER ASTM B241 OR B429 WITH Ftu=38 KSI MIN, Fty=35 KSI MIN, Fluw=24 KSI MIN, Ftyw=15 KSI MIN.
3. STD STRUCTURAL PROFILES SHALL BE 6061-T6 PER B308 WITH Ftu=38 KSI MIN, Fty=35 KSI MIN, Fluw=24 KSI MIN, Ftyw=15 KSI MIN.
4. SHEET AND PLATE SHALL BE 6061-T6 PER ASTM B209 WITH Ftu=42 KSI MIN, Fty=35 KSI MIN, Fluw=24 KSI MIN, Ftyw=15 KSI MIN.
5. EXTRUSIONS SHALL BE 6061-T6 PER ASTM B241 OR B429 WITH Ftu=38 KSI MIN, Fty=35 KSI MIN, Fluw=24 KSI MIN, Ftyw=15 KSI MIN.
6. ALL SHOP AND FIELD WELDS SHALL BE PERFORMED BY AN AWS OR ICC CERTIFIED WELDER WITH CURRENT STATUS AT TIME OF WELDING
7. UNLESS A LARGER WELD SIZE IS INDICATED, PROVIDE MINIMUM SIZE WELD PER ADM. ALL ALUMINUM WELDED JOINTS SHALL HAVE WELD SIZES OF AT LEAST 1/8 INCH
8. FILLET WELDS SHALL NOT EXCEED THINNESS MEMBER WALL THICKNESS JOINED.
9. ALUMINUM WELD FILLER SHALL BE 5356 ALLOY
10. WELDING PROCESS GMAW OR GTAW SHALL BE IN ACCORDANCE WITH AWS D1.2
11. ALUMINUM CHANNEL LETTERS SHALL BE CONSTRUCTED OF 0.090" RETURNS AND 0.125" BACKS MINIMUM, UNLESS A LARGER SIZE IS INDICATED ON DRAWINGS. THIS NOTE SHALL SUPERCEDE DRAWING DETAILS.
12. PROVIDE NEOPRENE GASKET BETWEEN DISSIMILAR METALS TO PREVENT GALVANIC CORROSION
13. ALUMINUM DIRECTLY EMBEDDED INTO CONCRETE SHALL BE CAPPED AT BOTTOM AND COATED WITH BITUMINOUS COATING OR POLYURETHANE WHERE IN CONTACT WITH CONCRETE.
14. FASTENERS BETWEEN DISSIMILAR METALS SHALL BE STAINLESS STEEL 316.

CONCRETE & REINFORCEMENT
1. MINIMUM 28-DAY COMPRESSIVE STRENGTH (fc') SHALL BE 3,000 PSI. THE MAXIMUM WATER TO CEMENT RATIO SHALL BE 0.45 BY WEIGHT. A MINIMUM OF 5-3/4 BAGS OF CEMENT SHALL BE USED PER CUBIC YARD WITH A SLUMP OF 4" +/- 1.
2. REINFORCEMENT TO BE ASTM A615 GR 60, Fy=60 KSI UNO
3. CALCIUM CHLORIDE OR ADDED CHLORIDE IS NOT PERMITTED
4. VIBRATION: ALL REINFORCED CONCRETE SHALL BE CONSOLIDATED WITH MECHANICAL VIBRATORS
5. CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 318-14
6. PROVIDE A MINIMUM OF 2-1/2" COVER OF ALL EMBEDDED STEEL REBAR AND A MINIMUM OF 6 INCHES OF COVER FOR DIRECT BURIED PIPE OR TUBE MEMBERS.

FOUNDATIONS
1. CONCRETE POURED INTO CONSTRAINED EARTH EXCAVATIONS MUST CURE UNDER PROPER CONDITIONS FOR A MINIMUM OF 7 DAYS PRIOR TO SIGN BOX INSTALLATION. (EXCEPTION: IF THE OVERALL HEIGHT OF THE SIGN IS LESS THAN 20 FEET AND THE SIGN IS ADEQUATELY BRACED AGAINST WIND LOADS FOR A MINIMUM OF 4 DAYS, THE BOX MAY BE INSTALLED THE SAME DAY AS THE FOOTING IS POURED)
2. FOOTINGS MUST BE POURED AGAINST UNDISTURBED EARTH. SOIL BACKFILL IS UNACCEPTABLE. WHEN A SONOTUBE IS USED AS THE FORM, 3/4" BLUESTONE OR CONCRETE SHALL BE USED TO BACKFILL THE SPACE BETWEEN THE SONOTUBE AND UNDISTURBED EARTH.
3. COLD WEATHER PLACEMENT: PROTECT CONCRETE WORK FROM PHYSICAL DAMAGE OR REDUCED STRENGTH THAT COULD BE CAUSED BY FROST, FREEZING ACTIONS OR LOW TEMPERATURES. DO NOT POUR CONCRETE DURING OR WHEN FREEZING TEMPERATURES ARE ANTICIPATED WITHIN 3 DAYS OF POUR.

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4. REINFORCEMENT IS NOT REQUIRED FOR DIRECT BURIAL TYPE SIGN FOOTINGS FOR SIGNS OF 25 FEET OVERALL HEIGHT OR LESS. DIRECT BURIED STEEL SHALL EXTEND TO 6 INCHES FROM BOTTOM OF FOOTING
5. FOR ANCHOR BOLT/ BASE PLATE - SQUARE FOOTINGS, PROVIDE A MINIMUM OF #5 VERTICAL REBAR @ 12" O.C., 4" OFFSET FROM PERIMETER, TOP AND BOTTOM OF FOOTING. PROVIDE #3 HORIZONTAL TIES @ 12" O.C.
6. FOR ANCHOR BOLT/ BASE PLATE - ROUND FOOTINGS, PROVIDE A MINIMUM OF SIX (6) VERTICAL #5 REBARS, EVENLY SPACED, 4" OFFSET FROM FOOTING PERIMETER & #3 HORIZONTAL TIES, 12" O.C. UNLESS OTHERWISE NOTED.
7. ANCHOR BOLTS SHALL BE TIED TO REBAR CAGE AT A MINIMUM OF TWO LOCATIONS PER ANCHOR BOLT
8. FOOTING DESIGN ASSUMES FOOTING SHALL BE EXCAVATED AND POURED IN UNDISTURBED NATURAL EARTH, CAPABLE OF WITHSTANDING A MINIMUM 1,500 PSF VERTICAL DESIGN BEARING PRESSURE AND 150 LBS/SF/FT OF DEPTH OF LATERAL BEARING PRESSURE BASED ON SOIL DATA OBTAINED FROM THE USGS SOIL SURVEY
9. IF CLAY, SILTY - CLAY, ORGANIC OR FILL SOIL IS ENCOUNTERED UPON EXCAVATION, CONTACT MURDOCH ENGINEERING FOR FOOTING DESIGN MODIFICATION PRIOR TO CONSTRUCTION.

EXISTING CONDITIONS:
1. IF EXISTING CONDITIONS ARE NOT AS DETAILED IN THIS DESIGN, THE INSTALLER SHALL CEASE WORK AND NOTIFY MURDOCH ENGINEERING IMMEDIATELY.
2. MURDOCH ENGINEERING WILL NOT BE PERFORMING ON-SITE INSPECTIONS OR VERIFICATIONS. IT IS THE RESPONSIBILITY OF THE INSTALLER, STRUCTURE OWNER, AND PROPERTY OWNER TO IDENTIFY EXISTING CONDITIONS AND CONTACT MURDOCH ENGINEERING WITH ANY DISCREPANCIES OR CONCERNS
3. INSTALLER SHALL CONFIRM THE DIAMETER AND THICKNESS OF EXISTING MEMBERS AND NOTIFY MURDOCH ENGINEERING OF ANY DISCREPANCIES.
4. INSTALLER SHALL INSPECT AND CONFIRM THE QUALITY OF EXISTING STRUCTURE AS "IN GOOD REPAIR". IF THERE ARE ANY INDICATIONS THAT THIS IS NOT THE CASE, INSTALLER SHALL CEASE WORK IMMEDIATELY AND NOTIFY MURDOCH ENGINEERING.
5. ANY EXISTING INFORMATION SHOWN HAS BEEN FURNISHED BY THE PERSON(S) OR COMPANY THIS DOCUMENT WAS PREPARED FOR (SEE TITLE BLOCK). MURDOCH ENGINEERING IN NO WAY CERTIFIES THIS INFORMATION AS "AS BUILT". IF THERE IS ANY REASON TO BELIEVE THE EXISTING CONDITIONS DETAILED HEREIN ARE NOT ACCURATE, MURDOCH ENGINEERING SHALL BE NOTIFIED IMMEDIATELY.

SCOPE OF WORK





1. LIMITS OF LIABILITY TO EXTEND ONLY TO THE QUANTITY INDICATED. ATTEMPTS IN PART OR IN WHOLE TO INSTALL GREATER QUANTITIES THAN THOSE SPECIFIED WITHOUT CONSULTING MURDOCH ENGINEERING SHALL VOID ALL PROFESSIONAL LIABILITY AND COVERAGE.

SHEET INDEX

S.1 NOTES & ELEVATION

ADDITIONAL NOTES

SYMBOLS

STEEL (OR ALUM.)		EARTH	
CONCRETE		SAND (UNO.)	

Height of top	h	=	26.58	ft
Vertical dimension (for wall, s = h)	s	=	2.5	ft
Horizontal dimension	B	=	2.5	ft

DESIGN SUMMARY

Max horizontal wind pressure	p	=	57	psf
Max total horizontal force at centroid of base	F	=	0.36	kips
Max bending moment at centroid of base	M	=	9.04	ft-kips
Max torsion at centroid of base	T	=	0.09	ft-kips

ANALYSIS

Velocity pressure

$$q_h = 0.00256 K_h K_{zt} K_d V^2 I = 29.85 \text{ psf}$$

where: q_h = velocity pressure at mean roof height, h. (Eq. 29.3-1 page 307 & Eq. 30.3-1 page 316)

$$K_h = \text{velocity pressure exposure coefficient evaluated at height, h, (Tab. 29.3-1., pg 310)} = 0.95$$

$$K_g = \text{wind directionality factor. (Tab. 26.6-1, for building, page 250)} = 0.85$$

$$h = \text{height of top} = 26.58 \text{ ft}$$

Wind Force Case A: resultant force though the geometric center (Sec. 29.4.1 & Fig. 29.1-1)

$$p = q_h G C_f * 0.6 = 27 \text{ psf}$$

$$F = p A_s = 0.17 \text{ kips}$$

$$M = F (h - 0.5s) \text{ for sign, } F (0.55h) \text{ for wall} = 4.34 \text{ ft-kips}$$

$$T = 0.00 \text{ ft-kips}$$

where: G = gust effect factor. (Sec. 6.5.8, page 26).

C_f = net force coefficient. (Fig. 6-20, page 73)

$$A_s = B s$$

CONNECTION CALCULATIONS

Wind Pressure = 27psf @ uL V= 120 sL V =93mph

Risk Category = II

Wind Load @ TOS 27ft. = 171 lbs (Max.)

Check Connection at Building Wall

Maximum tension force on top fasteners

$$(((171) \times (1.25)) + ((93.8) \times (0.38))) / (2.50) \times s F1.0 = 99.70 \text{ (Actual =99.70)}$$

Total Fasteners = (2 Rows x 1 Fasteners) = 2.00 Total

Allowable tension:

1/4" Tapcon Anchor embd. 1-3/4" into min. 6" solid concrete

Allowable Per/Fastener: (Tension = 505.0 / Shear = 418)

Actual Tension = 100 lbs. < 505.0 lbs.Allowable

= OK

Actual Per/Fastener Shear = 56 < 418 lbs.Allowable P

= OK

Analysis:

Applied Load 0.10kips < 0.51kips Fastener Total = 0.41Kips

Minimum Fasteners @ Top Edge = (1) x (2) Rows = (2)

City Of Portland

REVIEWED FOR CODE COMPLIANCE

Date: 07/06/22

Permit #: 22-140252-000-00-SG

MURDOCH
ENGINEERING
SIGN STRUCTURE PROFESSIONALS

murdochengineering.com
(973) 570-8215
2399 NJ-34 A-2
Manasquan, NJ 08736

PREPARED FOR:

Jones Sign

**Rivian Exterior Signage
Calculations**

PROJECT ADDRESS:

2620 SW 1st Ave,
Portland, OR 97201

DESIGN SPECIFICATIONS

IBC 2012 with Portland amendments
Designed Per: OSBC 2019
ASCE 7-10 Minimum Design Loads for Buildings & Other Structures
ACI 318-14 Building Code Requirements for Structural Concrete
ANSI/AISC 360-10 Specification for Structural Steel Buildings

DESIGN LOADS

Wind Vult = 120 mph
Exposure C
Risk Cat. II
Grnd. Snow Pg = 20 psf

MURDOCH
ENGINEERING
SIGN STRUCTURE PROFESSIONALS

2399 A-2 NJ-34
MANASQUAN, NJ 08736
(973) 570-8215 x0

Jere Murdoch, PE
Professional Engineer
OR PE Lic. #92100PE

DWG TITLE:
NOTES & ELEVATION

SHEET: S.1	SIZE: B
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EXPIRES: **12/31/2022**

Preliminary Structural Checksheet Response

Permit #: 22-140252-000-00-SG

Date: 6-16-2022

Customer name and phone number: JR Cervante 503-856-8871 OR

*Note: Please number each change in the ‘#’ column. Use as many lines as necessary to describe your changes. Indicate which reviewer’s checksheet you are responding to and the item your change addresses. If the item is not in response to a checksheet, write **customer** in the last column.*

(503)
602-
5750

[illegible]

(for office use only)