

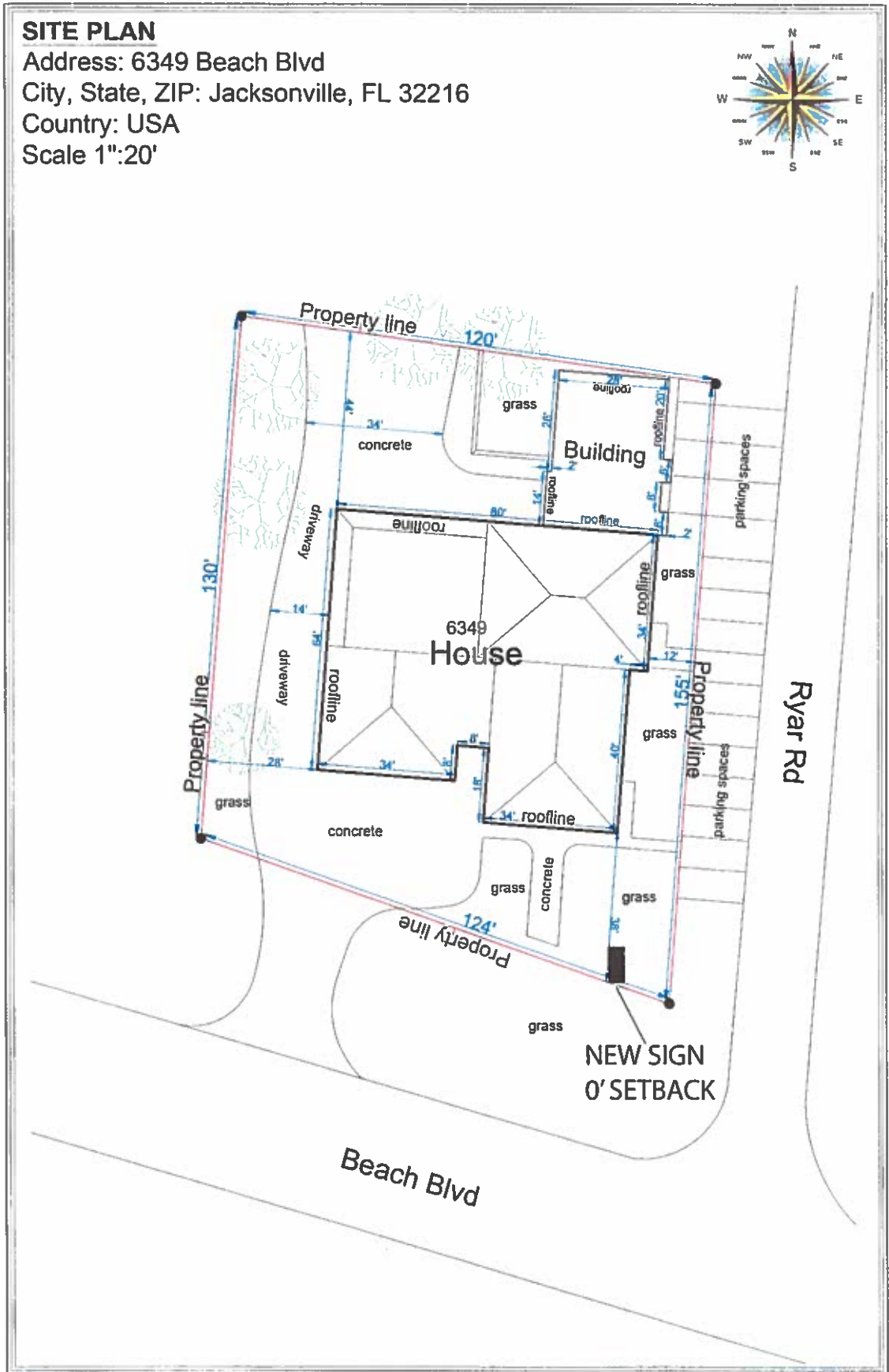
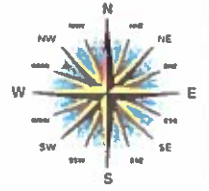
SITE PLAN

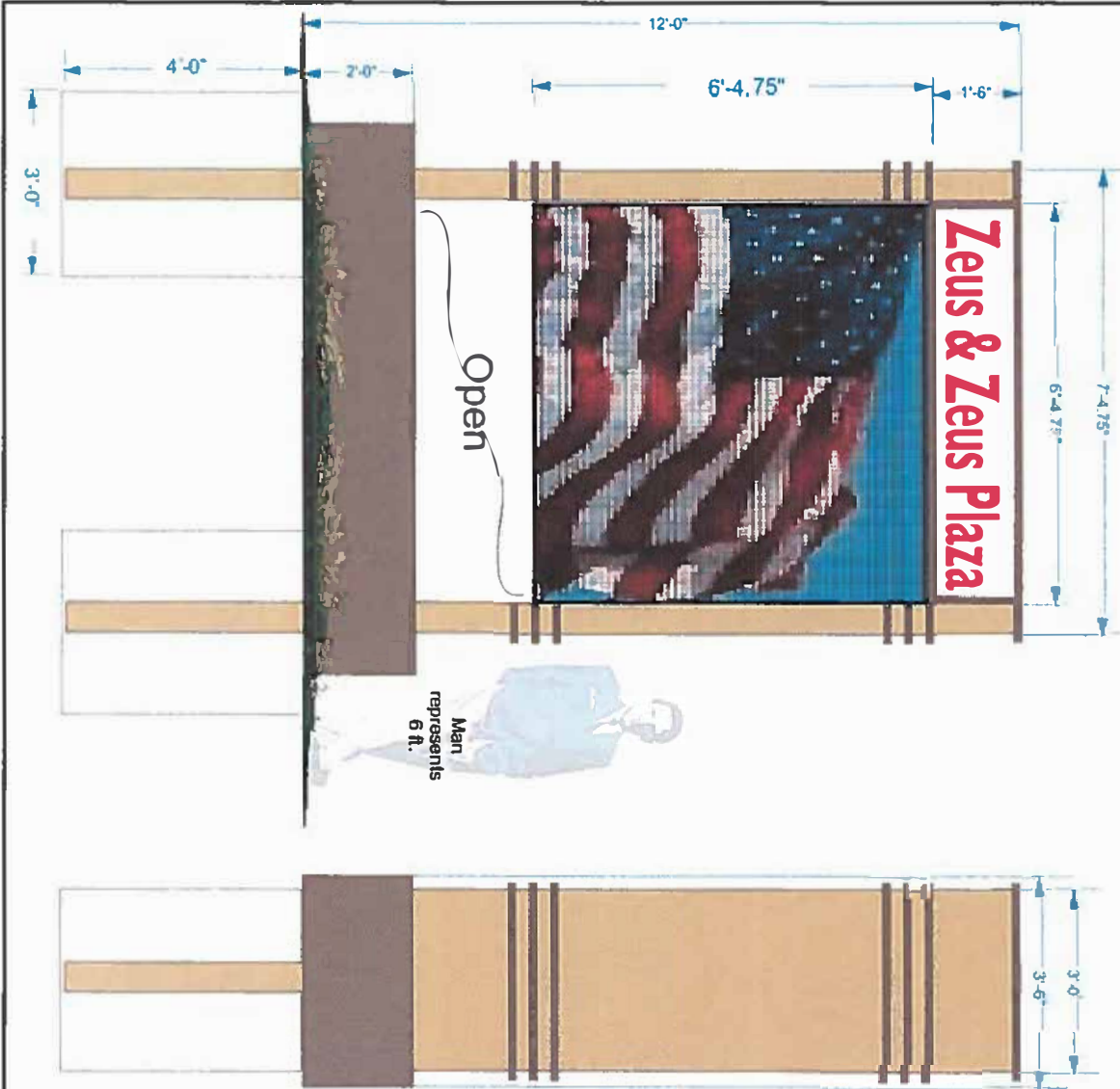
Address: 6349 Beach Blvd

City, State, ZIP: Jacksonville, FL 32216

Country: USA

Scale 1":20'





General Notes:

- NOTE: This report establishes the minimum requirements for wind load stability for the sign column and foundation design and square footage of signs as specified in outline drawing attached. Sign board and face design is by manufacturer. It is the owner, contractor, and sign manufacturer's responsibility to provide sign face attachment, materials and construction techniques, which comply with FBC 2017 requirements for the stated wind velocity.
- Construction Drawing Information
 - Basic Wind Speed: $V = 130$ MPH (10 second gust).
 - Wind Exposure = B.
 - Risk Category II
 - Internal Pressure Coefficient: $C_{pi} = N/A$
- Wind pressures are determined using the criteria in ASCE 7-10.
 - Sign Height = 12.0 ft, $K_z = 0.87$, $K_d = 0.85$.
 - Figure 6-20, Solid Free-standing Walls and Solid Signs; Aspect Ratio, $B/H = 6.0' / 0.5$; Exposure Ratio, $z/h = 6.0' / 1.0$; $C_e = 1.55$ for Case AAB.
 - Rigid structure, gust factor $G = .85$.
 - Velocity Pressure = $q_h = 0.00256 \cdot K_z \cdot K_d \cdot V^2 \cdot I = 0.00256 \cdot 0.87 \cdot 0.85 \cdot 130^2 \cdot 1.0 = 31.99 \text{ psf}$
 - Factored Wind Pressure = $P = q_h \cdot G \cdot C_e \cdot K_d \cdot 1.55 = 42.15 \text{ psf}$
 - Wind Force on Sign = $F = P \cdot A = P \cdot S_3 \text{ eqn 223.95 D}$
 - Moment at Grade = $M = F \cdot h = 6.0' = 13.40 \text{ kft}$
 - Design, detailing, fabrication, and erection shall conform to the following specifications: Florida Building Code 2017, ASTM specifications, ACI-318 for reinforced concrete, American Welding Society Code for Welding in Building Construction, AISI Specification for Design, Fabrication, and Erection of Structural Steel for Buildings.
 - Materials of construction: (Unless otherwise noted.)
 - Structural steel shall be A-36.
 - Structural steel tubing shall be A-500, Grade B, $F_y = 48 \text{ ksi}$.
 - Structural aluminum tubing shall be 6063, 6061, or equivalent, $F_y = 20 \text{ ksi}$ minimum.
 - Structural piping shall be A-53, Grade B, Type E or S, $F_y = 35 \text{ ksi}$.
 - Anchor bolts shall be A-307.
 - Connection bolts shall be A-325.
 - Rebar shall be Grade 60.
 - Concrete shall be 2500 psi.
 - Welding:
 - Design and fabrication according to AWS D 1.1
 - AWS certification required for all structural welders.
 - ETWXX electrodes for SMAW processes.
 - FTX-EXXX electrodes for SAW processes.
 - Soil type and conditions must be verified by the contractor to assure minimum bearing capacity of 2000 psf and minimum lateral bearing capacity of 200 psf per foot of depth. If there is a question about bearing capacity, a soil test must be performed.
 - Contractor shall verify all dimensions and conditions in the field before erection and notify the engineer of any discrepancies.
 - Sign Column Bending, $S = M / F_b / I = 13.40 \text{ kft} / 1.07 \text{ kft} / 146 \text{ ksi} / 86 = 11.56 \text{ in}^3$
 - 8" x 37" wall Standard pipe $S = 18.8 \text{ in}^3$
 - alternate #1: 6" x 6" x 1875" wall HSS Tube Steel $S = 13.9 \text{ in}^3$
 - Foundation Overturning
 - Orbital Shell Foundation: $M_c = 72 \cdot 0.7 \text{ kft} / 2 \text{ kft} = 1.25 \text{ kft}$
 - 3.07' dia x 4.0' deep concrete caisson foundation. Calculated using FOOT Bwrm method in sand soil with 30 degree friction angle or clay with 1 kpa, ft shear strength.

CERTIFICATION:
I hereby certify that the seal sign attachment and foundation design conforms with 2017 Florida Building Code

LIMITATION: This design is valid for one sign, at specified location. In case of conflict, structural requirements, scope of work, and building requirements control.

CNS Signs Inc	
LOCATION OF SIGN:	
PRINTED DATE:	
DRAWN BY:	CHECKED BY:
FINISH DATE:	
JOB NUMBER:	
DRAWING NUMBER	
S-1	
OF 1 SHEET	