

GENERAL STRUCTURAL NOTES

DESIGN CRITERIA:

BUILDING CODE: 2018 INTERNATIONAL BUILDING CODE (2018 IBC)

WIND:
V (3-SECOND GUST SPEED) = 108 MPH
RISK CATEGORY = I
EXPOSURE = C

SEISMIC:
IMPORTANCE FACTOR, IE = 1
MAPPED SPECTRAL RESPONSE ACCELERATIONS: $S_s = 0.128$, $S_1 = 0.064$
SITE CLASS = D
SEISMIC DESIGN CATEGORY = B

SNOW:
GROUND SNOW LOAD: $P_g = 15.0$ PSF

NOTES TO CONTRACTOR:

PROJECT SAFETY IS THE RESPONSIBILITY OF THE CONTRACTOR OR PERSONS IN CHARGE OF THE DAY-TO-DAY CONSTRUCTION. COMPLY WITH ALL OSHA REQUIREMENTS. PROVIDE TEMPORARY BRACING, SHORING, GUYING OR OTHER MEANS TO AVOID EXCESSIVE STRESSES AND TO HOLD STRUCTURAL ELEMENTS IN PLACE DURING ERECTION.

VERIFY EXISTING CONDITIONS SHOWN IN DRAWINGS. PROMPTLY NOTIFY THE ENGINEER IF DETAILS AND INFORMATION CONTAINED ON THESE PLANS DO NOT CONFORM TO THE CONSTRUCTION SITE CONDITIONS.

VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE DRAWINGS AND WITH ACTUAL FIELD CONDITIONS. DIMENSIONAL CONTROL IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR MECHANICAL, ELECTRICAL AND PLUMBING WITH APPROPRIATE TRADES, DRAWINGS AND SUBCONTRACTORS PRIOR TO CONSTRUCTION.

IF THERE ARE CONFLICTS IN THE DRAWINGS, THE COSTLIER ITEMS SHOWN SHALL GOVERN FOR BIDDING PURPOSES, OR SUBMIT A PRE-BID "REQUEST FOR CLARIFICATION".

ENGINEERING DESIGN PROVIDED BY OTHERS SHALL BEAR THE SEAL OF AN ENGINEER REGISTERED IN THE STATE OF NORTH CAROLINA.

FOUNDATION:

GROUND SCREWS SHALL BE INSTALLED IN UNDISTURBED SOIL. SOIL SHALL HAVE A FRICTION ANGLE EQUAL TO 28-32 DEGREES AND TOTAL UNIT WEIGHT OF 120-130 PCF FOR SOIL CLASS 4 CONDITIONS OR A COHESION OF 1,000-2,000 PSF AND A TOTAL UNIT WEIGHT OF 120-130 PCF.

THE ABOVE VALUES WERE UTILIZED FOR THE GROUND SCREW ANALYSIS PER CTL THOMPSON TESTING REPORT. A SITE SPECIFIC GEOTECHNICAL EVALUATION HAS NOT BEEN COMPLETED FOR THIS PROJECT. SML ENGINEERS ASSUMES NO LIABILITY WITH REGARD TO DIFFERENTIAL SETTLEMENT THAT COULD RESULT FROM FROST HEAVE OR THE PRESENCE OF EXPANSIVE OR COLLAPSIBLE SOILS. THIS STRUCTURE CAN TOLERATE SIGNIFICANT FOUNDATION MOVEMENT WITH LITTLE AFFECT ON ITS INTEGRITY AND WITHOUT PRESENTING ANY UNDUE LIFE SAFETY HAZARDS.

STRUCTURAL STEEL:

STEEL PIPE: ASTM A53, GRADE B ($F_u = 35$ KSI)
BOLTS AND PLAIN ANCHOR: ASTM F1554, GRADE 36

STRUCTURAL STEEL SHALL BE GALVANIZED OR PAINTED WITH RUST-INHIBITIVE PAINT TO PREVENT CORROSION.

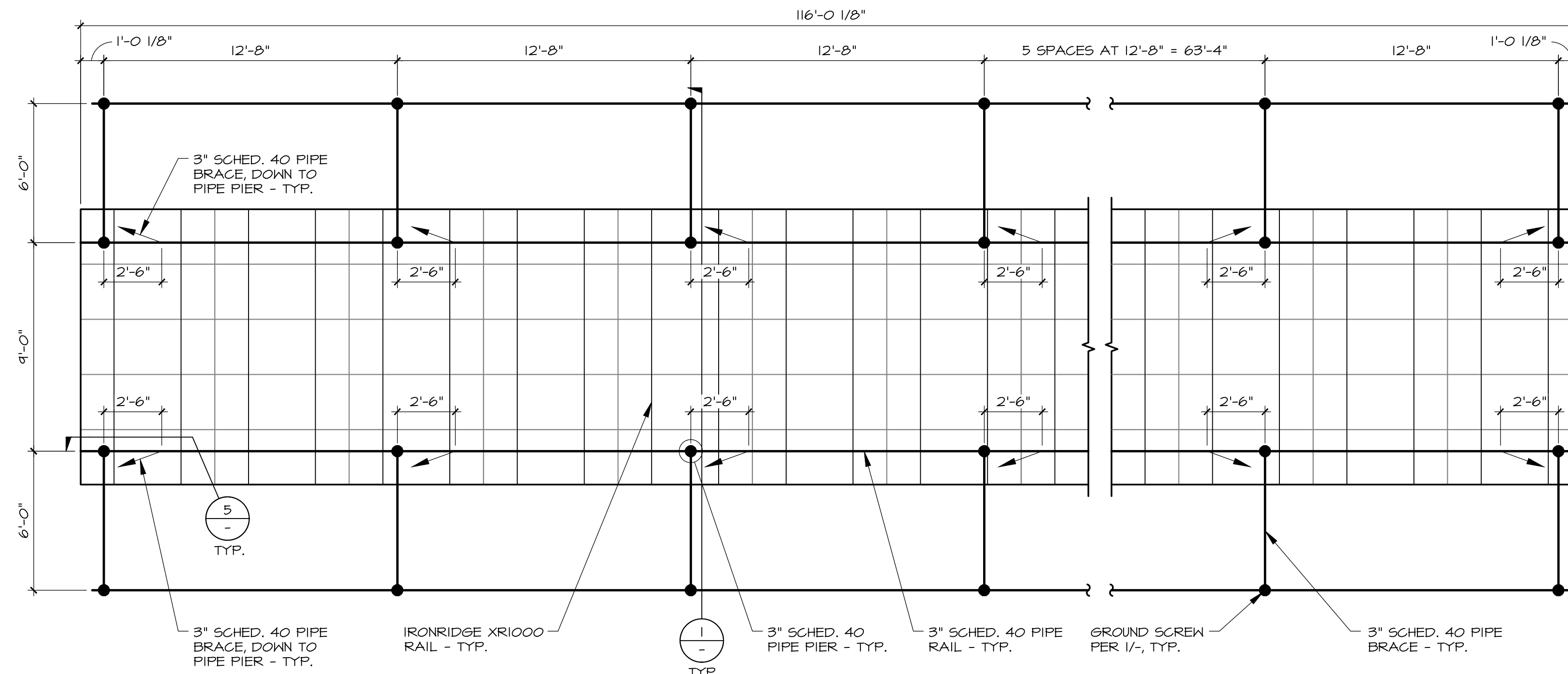
NOTE: PAINTED STEEL IS MORE SUSCEPTIBLE TO CORROSION THAN GALVANIZED STEEL DUE TO THE HIGHER POTENTIAL OF PAINT BEING CHIPPED AND/OR NICKED. OWNER TO BEAR RESPONSIBILITY OF CORROSION DAMAGE IF STEEL IS PAINTED.

IRONRIDGE COMPONENTS:

ALL IRONRIDGE COMPONENTS, INCLUDING THE CONNECTIONS AND ASSOCIATED HARDWARE, ARE TO BE INSTALLED IN A WORKMANLIKE MANNER IN ACCORDANCE WITH THE IRONRIDGE GROUND MOUNT INSTALLATION MANUAL AND GENERALLY ACCEPTED STANDARDS OF CONSTRUCTION PRACTICE.

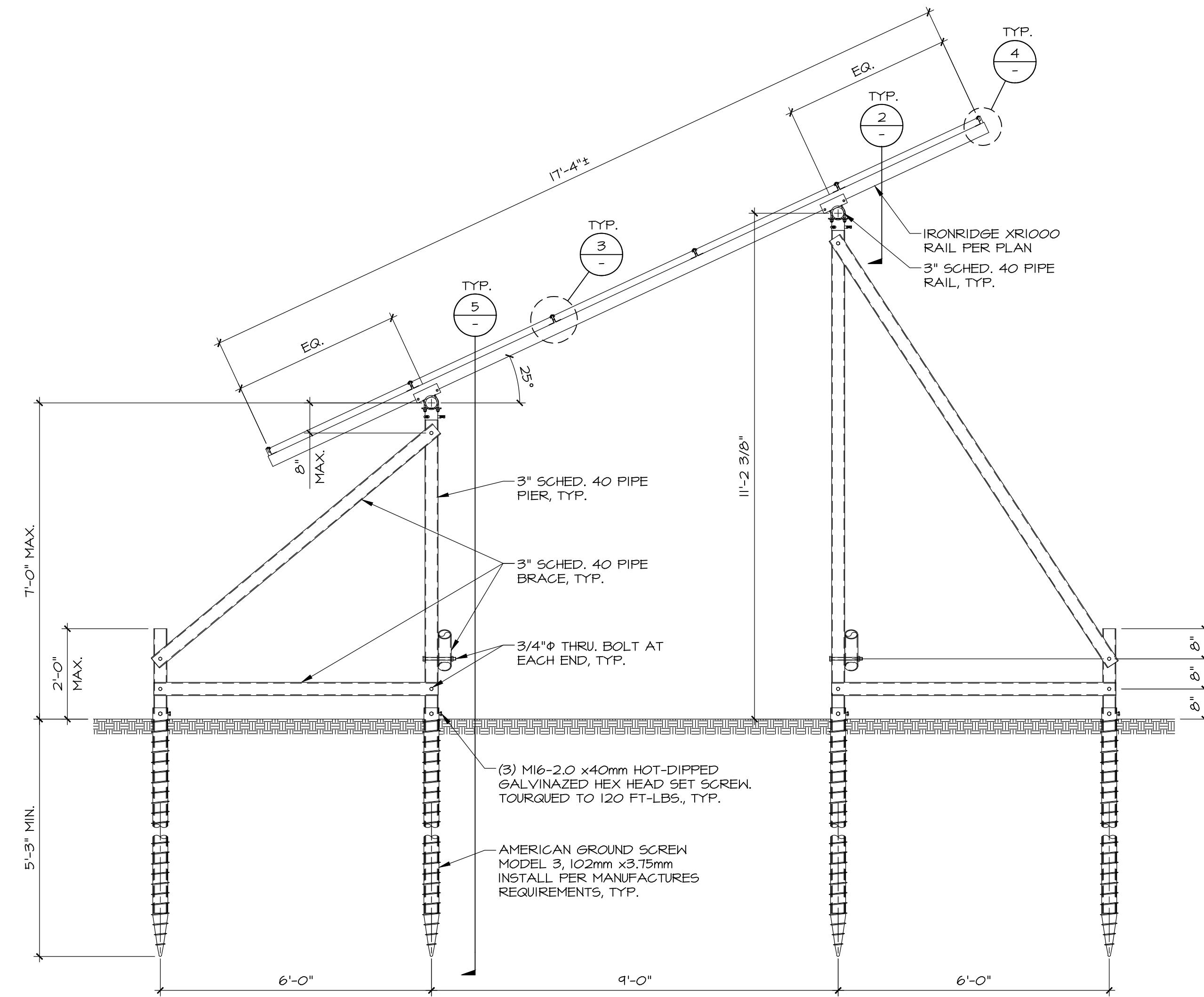
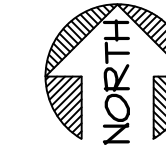
PV MODULES:

VERIFY PANEL MOUNTING LOCATIONS AND INSTALL MODULES PER MANUFACTURERS INSTALLATION MANUAL AND GENERALLY ACCEPTED STANDARDS OF CONSTRUCTION PRACTICES.



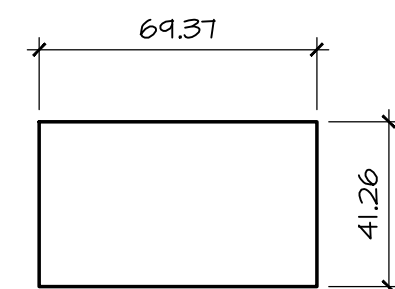
5x20 ARRAY - PLAN

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



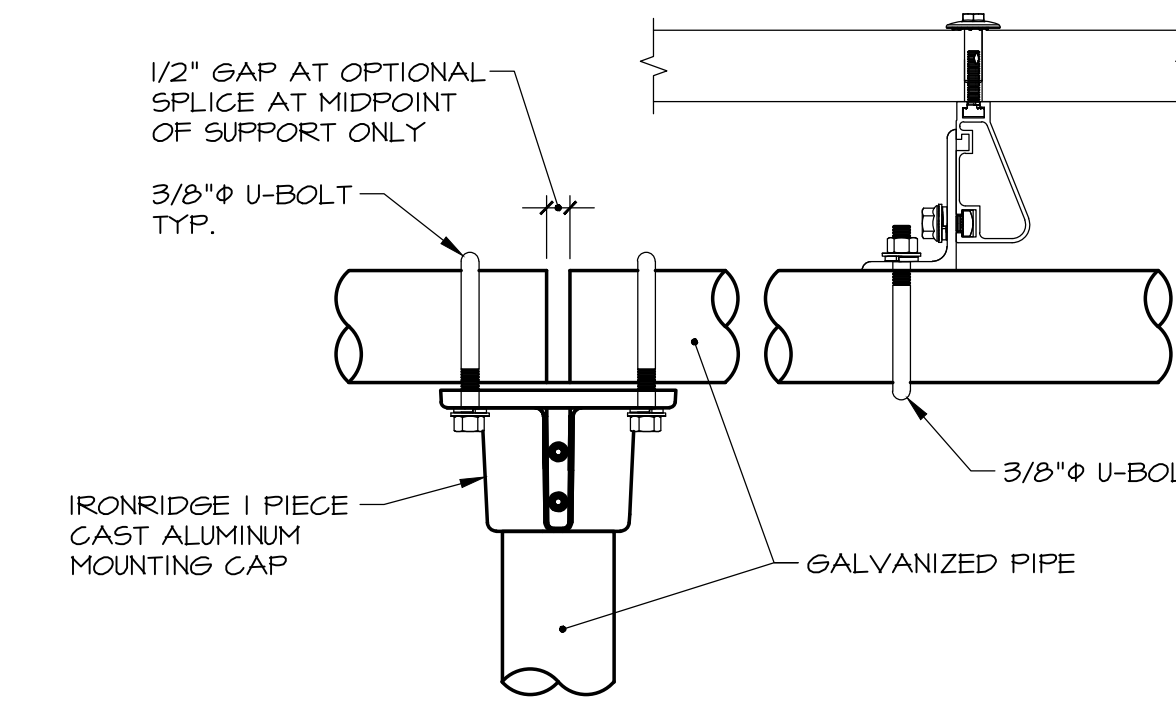
SECTION 1

SCALE: 1/2"=1'-0"



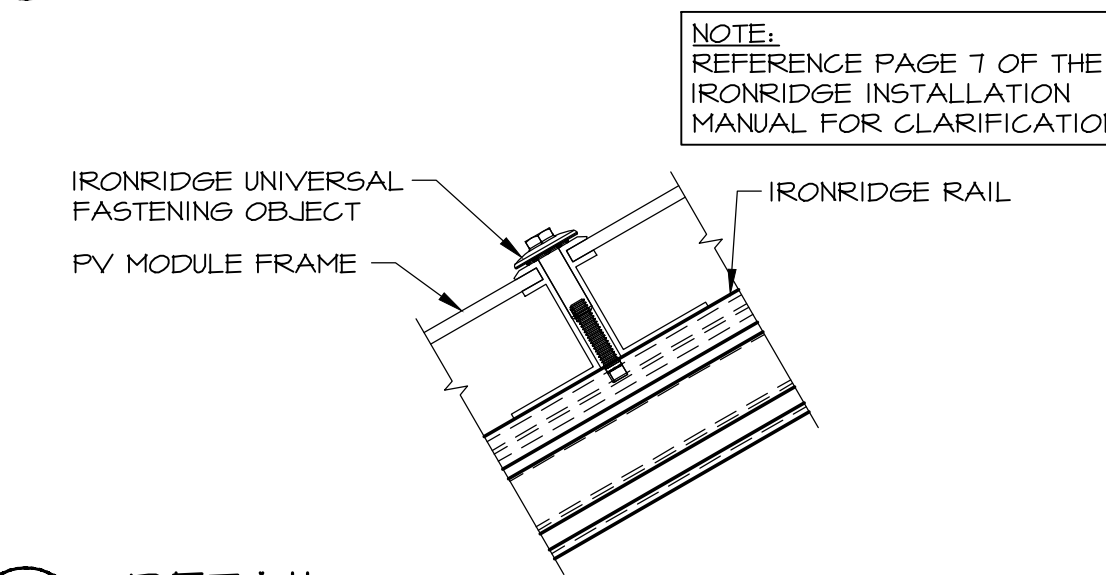
SOLAR MODULE PROFILE

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



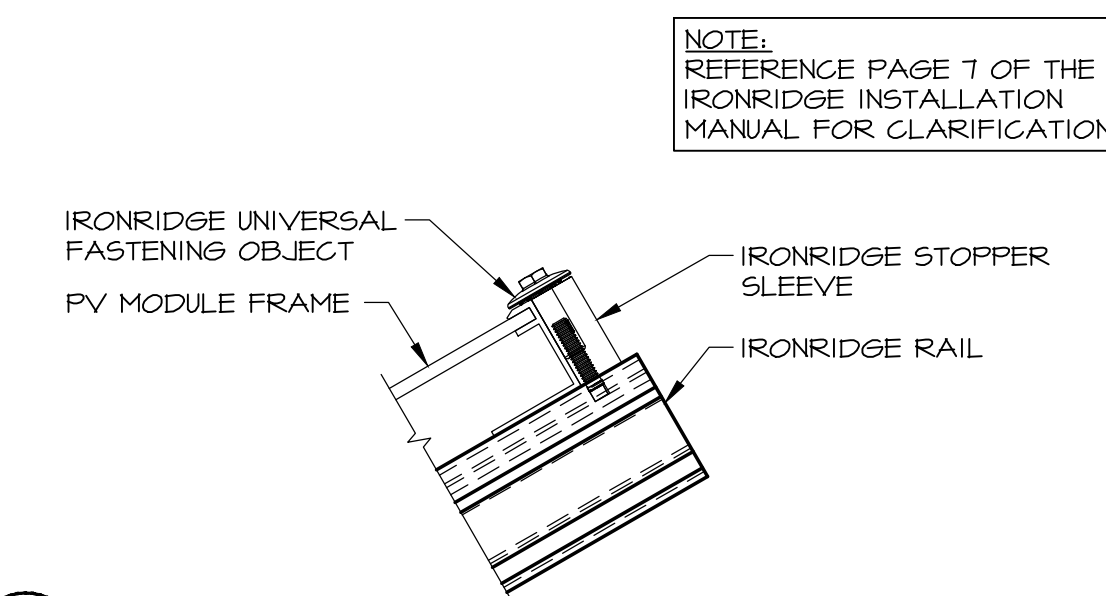
DETAIL 2

SCALE: N.T.S.



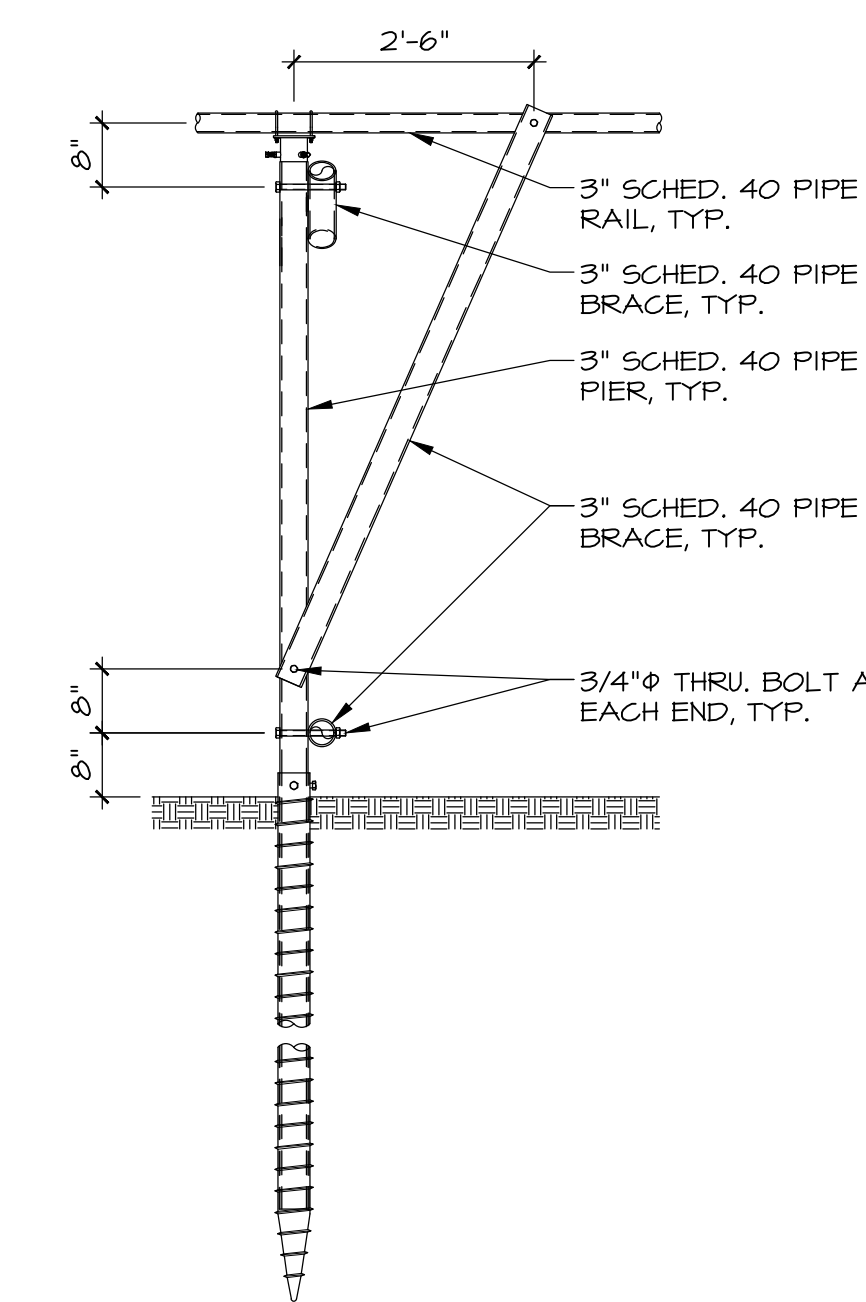
DETAIL 3

SCALE: N.T.S.



DETAIL 4

SCALE: N.T.S.



SECTION 5

SCALE: 1/2"=1'-0"



Consulting Structural and Forensic Engineers

Starling Madison Lofquist, Inc.
3600 E. University Dr. Suite 1400
Phoenix, Arizona 85034
(602) 438-2500
fax: (602) 438-2505



PRELIMINARY IF NOT SIGNED AND SEALED

DESIGN BY: R.B. DRAWN BY: J.S. CHK BY: J.L.

109-23

ZEMO
PV ARRAY
345 RAWLS CLUB RD
FUQUAY-VARINA, NC 27526

READY SOLAR
228 AIRPORT INDUSTRIAL DR.
CLAYTON, NC 27520

S1.0