REV.	DESCRIPTION
J	NOTE BLOCK UPDATE

NOTES:

GENERAL NOTES:

1. ALL DIMENSIONS ARE SHOWN IN INCHES [AND MILLIMETERS] AND (REFERENCE)

2. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS LOCATING EXISTING CONSTRUCTION BEFORE FABRICATION OF NEW CONSTRUCTION BEGINS

FOUNDATIONS:

1. FOUNDATIONS HAVE BEEN DESIGNED TO REST ON UNDISTURBED STANDARD SOIL (PER EIA-411-A & RS-222-D) REFER TO TABLE 1 FOR SOIL DESIGN PARAMETERS

2. BACKFILL SHALL BE SUITABLE EXCAVATED MATERIAL OR OTHER SUITABLE MATERIAL COMPACTED IN 6" LIFTS TO 95% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557

3. THIS FOUNDATION IS A TYPICAL DESIGN ONLY. CERTIFICATION OF ITS SUITABILITY FOR A PARTICULAR INSTALLATION BY A PROFESSIONAL ENGINEER IS REQUIRED PRIOR TO ITS USE FOR ACTUAL FABRICATION

4. IF THIS FOUNDATION IS TO BE LOCATED IN AN AREA WHERE THE ANNUAL FROST PENETRATION DEPTH EXCEEDS THE DEPTH SHOWN PER FOOTING THICKNESS PER TABLE 1 (SHEET 2), THE LOCAL BUILDING CODE SPECIFYING A MINIMUM REQUIRED FOUNDATION DEPTH SHOULD BE CONSULTED

CONCRETE:

1. CONCRETE & RELATED WORK SHALL BE MIXED, PLACED AND CURED IN ACCORDANCE WITH THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" ACI 318 AND "SPECIFICATIONS FOR STRUCTURAL CONCRETE" ACI 301, PUBLICATION SP-15

2. CONCRETE SHALL DEVELOP COMPRESSIVE STRENGTH OF AT LEAST 3500 PSI [25 MPa] IN 28 DAYS WITH A MAXIMUM SLUMP OF 3" [76] AT TIME OF PLACING. CEMENT SHALL BE NORMAL PORTLAND CEMENT (TYPE 10) UNLESS LOCAL SOIL CONDITIONS REQUIRE THE USE OF SULPHATE RESISTANT CEMENT

3. CONCRETE SUBJECTED TO FREEZE-THAW CYCLES TO BE AIR ENTRAINED TO 5%-8%

4. REINFORCING BARS SHALL CONFORM TO ASTM A615 (SI) GRADE 60 DEFORMED TYPE Fy = 60000 PSI [400 MPa]

5. UNLESS OTHERWISE NOTED, CONCRETE COVER FOR REINFORCING BARS SHALL CONFORM TO THE MINIMUM REQUIREMENTS OF ACI 318

6. FABRICATION OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" ACI 315

7. PROVIDE 3/4" X 45° [19 X 45°] CHAMFER ON ALL EXPOSED CONCRETE EDGES

8. A TOLERANCE OF ±1/8" [3] APPLIES TO ALL ANCHOR BOLT LAYOUT DIMENSIONS

9. LEVEL ALL PLATES FOR STRUTS INDIVIDUALLY AND TO WITHIN ±1/4" [6] OF EACH OTHER

10. LEVEL PLATE FOR ANTENNA TO WITHIN 0.1° OF HORIZONTAL

△11 KEEP ALL NUTS AND FLAT WASHERS NOT USED TO SECURE ANCHOR PLATES. THESE WILL BE USED LATER FOR SECURING THE PEDESTAL AND OUTRIGGERS ⟨J⟩

GROUNDING SYSTEM:

1. THE GROUNDING SYSTEM SHOWN (SHEET 4) REPRESENTS THE MINIMUM REQUIREMENTS TO ACHIEVE SATISFACTORY GROUNDING. ACTUAL SITE CONDITIONS AND SOIL RESISTIVITY LEVELS WILL DETERMINE FINAL GROUNDING SYSTEM DESIGN TO COMPLY WITH THE FOLLOWING NOTES BELOW

2. ALL GROUND RING, GROUND ROD AND ANTENNA STRUCTURE CONNECTIONS TO BE ERICO® PRODUCTS INC. CALWELDO EXOTHERMIC TYPE WELDED ELECTRICAL CONNECTIONS OR EQUIVALENT

3. GROUND RODS SHALL BE DRIVEN TO A DEPTH BELOW PERMANENT FROST LEVEL (MINIMUM DEPTH SHOWN) AS DICTATED BY GEOGRAPHICAL LOCATION

4. THE ANTENNA STRUCTURE SHALL BE CONNECTED TO A GROUNDING ELECTRODE SYSTEM CONSISTING OF A NUMBER OF INTERCONNECTED GROUND RODS. THE SYSTEM SHALL MEET THE REQUIREMENTS OF THE UNDERWRITERS' LABORATORIES PUBLICATION No. UL96A FOR LIGHTNING PROTECTION

5. THE GROUNDING ELECTRODE SYSTEM TO EARTH RESISTANCE SHALL NOT EXCEED 10 ohms, MEASURED WITH A BIDDLE 3 TERMINAL DEVICE OR EQUIVALENT. THE GROUNDED CONDUCTOR (NEUTRAL) SUPPLIED TO ALL AC EQUIPMENT ON THE ANTENNA STRUCTURE SHOULD BE DISCONNECTED BEFORE TAKING MEASUREMENT

6. ACTUAL SITE CONDITIONS MAY REQUIRE LONGER GROUND RODS, ADDITIONAL GROUND RODS AND/OR LAND FILL ADDITIVES TO REDUCE SOIL RESISTIVITY LEVELS

7. AVOID SHARP BENDS WHEN ROUTING GROUNDING WIRE. GROUNDING WIRES TO ANTENNA STRUCTURE TO BE RUN AS SHORT AND AS STRAIGHT AS POSSIBLE

8. FINAL GRADE DIRECTLY ABOVE GROUNDING ELECTRODE SYSTEM TO BE WATER PERMEABLE

CONDUIT:

1. PRIME POWER STUB-UPS FOR C1 & C2 TO INCLUDE A 50-INCH [1270mm] PIG TAIL TO PERMIT THE FEEDER WIRE CONNECTION TO THE ANTENNA LOCATED LOAD CENTERS

2. CONDUITS C2 & C3 TO INCLUDE PULL ROPES FROM CUSTOMER BUILDING TO THE 9.4M ANTENNA FOUNDATION LOCATION

3. ALL CONDUITS TO STUB-UP 6-INCHES [152.4mm] ABOVE THE TOP OF THE ANTENNA FOUNDATION

4. ALL CONDUITS TO HAVE CAPS INSTALLED AFTER INSTALLATION TO PREVENT THEM FROM FILLING UP WITH WATER

5. INTERFACILITY CONDUIT BETWEEN THE CUSTOMER BUILDING AND THE 9.4m ANTENNA FOUNDATION TO INCLUDE SWEPT BENDS, NOT RIGHT ANGLES

6. INTERFACILITY CONDUIT BETWEEN THE CUSTOMER BUILDING AND THE 9.4m ANTENNA FOUNDATION TO INCLUDE PULL BOXES AS REQUIRED

△7 FOR HIGHER SIGNAL DENSITY PROJECTS, KRATOS RECOMMENDS A FOURTH SIGNAL CONDUIT C6, WITH A DIAMETER OF 4 OR MORE INCHES

△8 DO NOT STUB UP ANY CONDUITS DIRECTLY BEHIND THE TWO REAR OUTRIGGER FEET. THIS WILL CAUSE INTERFERENCE WITH THE TRAVEL OF THE ROLLING STAIRCASE ⟨J⟩

CONDUIT SCHEDULE

CONDUIT	PURPOSE	FROM	TO	SIZE INCH [MM]	NOTES
C1	UTILITY POWER	CUSTOMER LOAD CENTER	9.4M ANTENNA FOUNDATION	4 [101.6] 6 [152.4]	WITHOUT DE-ICE WITH DE-ICE
C2	TECHNICAL POWER	CUSTOMER LOAD CENTER	9.4M ANTENNA FOUNDATION	4 [101.6]	ALL 9.4M ANTENNA SITES
C3	SIGNAL/M&C	9.4M ANTENNA FOUNDATION	CUSTOMER BUILDING	4 [101.6]	ALL 9.4M ANTENNA SITES
C4	SIGNAL/M&C	9.4M ANTENNA FOUNDATION	CUSTOMER BUILDING	4 [101.6]	ALL 9.4M ANTENNA SITES
C5	SIGNAL/M&C	9.4M ANTENNA FOUNDATION	CUSTOMER BUILDING	4 [101.6]	MONITOR AND EXPANSION
△7 C6	OPTIONAL SIGNALS	9.4M ANTENNA FOUNDATION	CUSTOMER BUILDING	4[101.6]	EXPANDED SIGNAL CPACITY

MATERIAL
N/A

FINISH
N/A

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES
INTERPRET PER ASME Y14.5M-1994

TOLERANCES
1 PLACE .X ± 0.1
2 PLACE .XX ± 0.03
3 PLACE .XXX ± 0.005
ANGLES ± 0.1°

HOLE TOLERANCES
0 - 0.125: +.003/-.001
0.126 - 0.250: +.004/-.001
0.251 - 0.500: +.006/-.001
0.501 - 1.000: +.008/-.001

THIRD ANGLE PROJECTION

ALL SURFACES √ 63

DRAWN BY J.Richins 07MAR14
ECO 000005090202
MASS: - LBS

KRATOS
READY FOR WHAT'S NEXT™

LAYOUT,TYPICAL FOUNDATION,9.4M

SIZE	CAGE CODE	DOCUMENT NO.
D	4ZTA9	7586797

STATUS	DATE	REVISION	SHEET
RELEASED TO PRODUCTION	07SEP23	J	1 OF 4

9.4m Ka Foundation Loads (on axis)

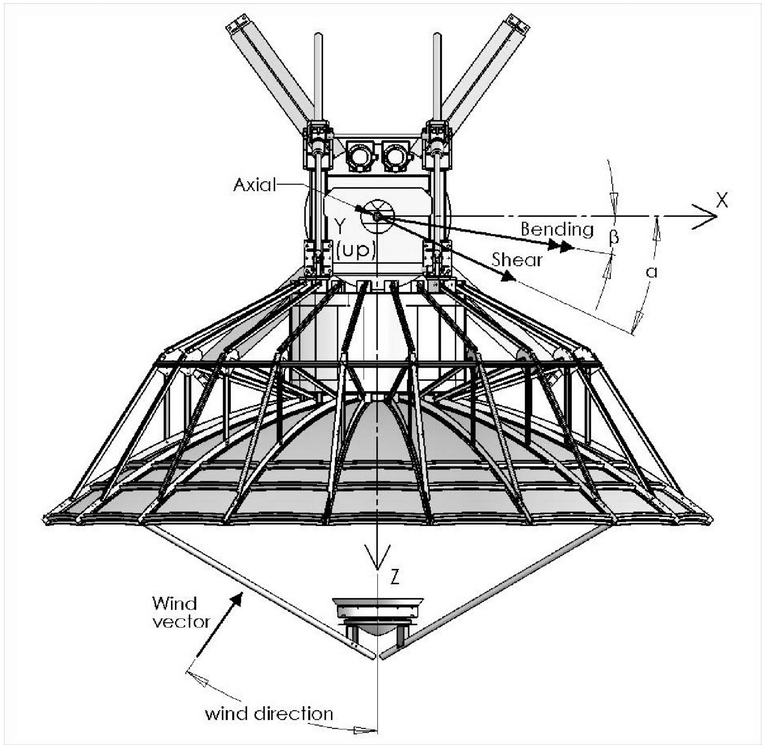
Wind speed 125 mph

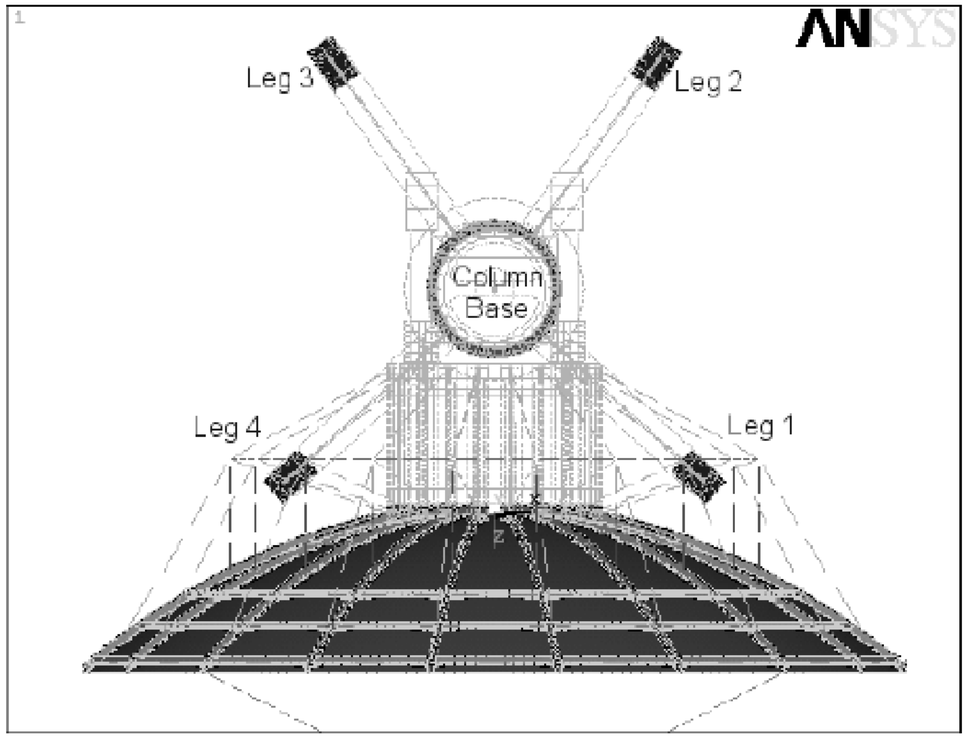
	Loads	0° elevation				30° elevation				60° elevation				90° elevation				
		0°wind	60°wind	120°wind	180°wind	0°wind	60°wind	120°wind	180°wind	0°wind	60°wind	120°wind	180°wind	0°wind	60°wind	120°wind	180°wind	Max Loads
Column Base	Fx (Lbs)	66	-1232	2432	75	86	935	-2630	-44	1	-1099	-5780	1	23	-6707	-6728	-20	-6728
	Fy (Lbs)	-10424	-11760	-21670	-24460	-35373	-31118	-16893	-15297	-52386	-31267	-14230	-14013	-11379	-12594	-15046	-16281	-52386
	Fz (Lbs)	2700	1364	-5015	-6538	-4218	-2392	-6433	-9620	-7977	-409	-6128	-13058	9931	5091	-4634	-9517	-13058
	Mx (Lbs-in	92763	81048	-34298	-69780	62532	50997	-32235	-54449	18898	14118	-22049	-41792	21738	10635	-12105	-23739	92763
	My (Lbs-in	-110	1454	-2936	-82	40	770	-2261	-50	-31	-221	-1133	-24	23	3	-19	-20	-2936
	Mz (Lbs-in	1229	-14907	31665	2012	-1230	-13579	39299	1055	376	7508	38146	289	-96	30899	31115	336	39299
Leg 1	Fx (Lbs)	-9810	-8901	5415	8497	-5846	-5530	6565	6851	-545	-291	6194	5654	-1763	2055	5190	3528	-9810
	Fy (Lbs)	14909	13472	-9007	-13854	8661	8179	-10837	-11280	328	-51	-10266	-9410	2386	-3739	-8690	-6066	14909
	Fz (Lbs)	-8828	-7992	4836	7647	-5263	-4971	5881	6163	-493	-264	5562	5085	-2614	1852	4673	3174	-8828
Leg 2	Fx (Lbs)	10690	9089	-2873	-7279	7513	5821	-2040	-6112	3022	2796	-489	-5033	3411	3903	823	-2747	10690
	Fy (Lbs)	-21729	-18463	5066	13971	-15395	-11991	3430	11667	-6470	-6066	396	9540	-7301	-8300	-2153	4988	-21729
	Fz (Lbs)	-14708	-12475	3891	10017	-10340	-7994	2754	8405	-4161	-3854	641	6922	-4692	-5376	-1141	3778	-14708
Leg 3	Fx (Lbs)	-10573	-9558	4099	7390	-7609	-6833	4951	6163	-3025	-2051	4369	5030	-3425	136	3228	2758	-10573
	Fy (Lbs)	-21491	-19554	7809	14201	-15594	-14106	9500	11774	-6478	-4550	8297	9537	-7331	-204	5969	5013	-21491
	Fz (Lbs)	-14548	-13186	5701	10169	-10474	-9422	6863	8479	-4165	-2817	6039	6921	-4711	195	4448	3794	-14548
Leg 4	Fx (Lbs)	9985	8198	-3565	-8316	5694	3949	-2001	-6766	547	1479	-36	-5652	2722	4407	1292	-3508	9985
	Fy (Lbs)	15179	12381	-6118	-13573	8425	5683	-3646	-11143	329	1822	-547	-9410	3801	6461	1544	-6032	15179
	Fz (Lbs)	-8984	-7399	3244	7485	-5128	-3563	1829	6087	-493	-1328	44	5085	-2447	-3965	-1164	3155	-8984

Notes:

Scale 8.1m shear forces and My by (9.4/8.1)^2

Scale 8.1m vertical forces and Mx, Mz by (9.4/8.1)^2 x (192.35/166.75) height change factor



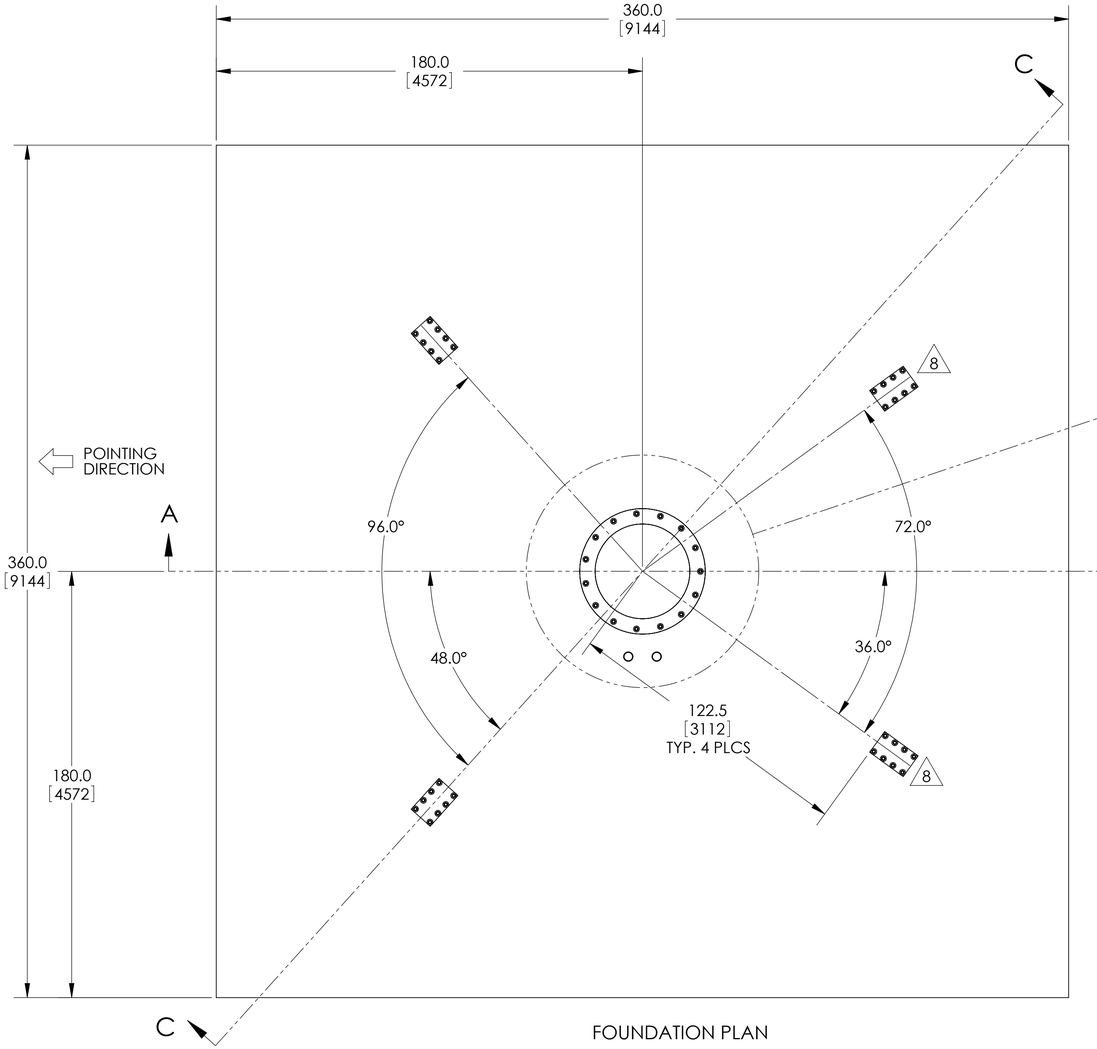


KRATOS
READY FOR WHAT'S NEXT™

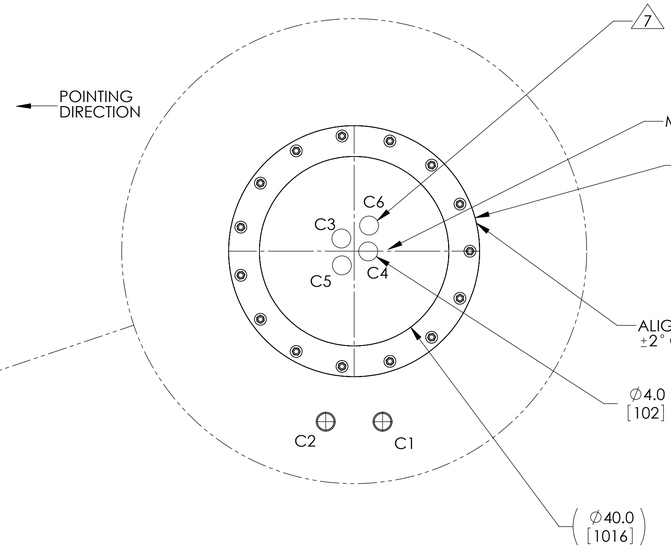
LAYOUT,TYPICAL FOUNDATION,9.4M

SIZE	CAGE CODE	DOCUMENT NO.
D	4ZTA9	7586797

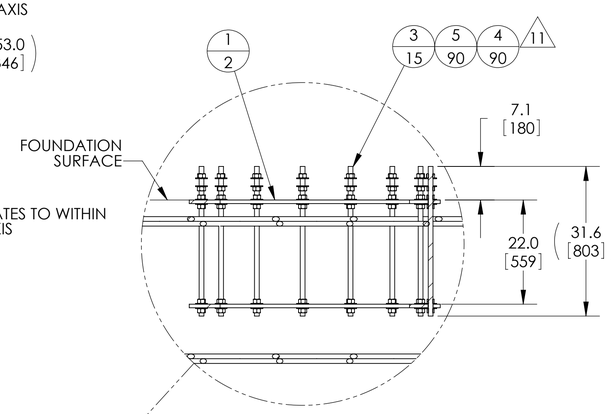
REVISION	SHEET
J	2 OF 4



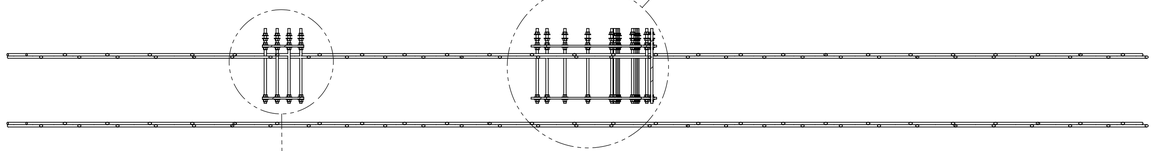
FOUNDATION PLAN



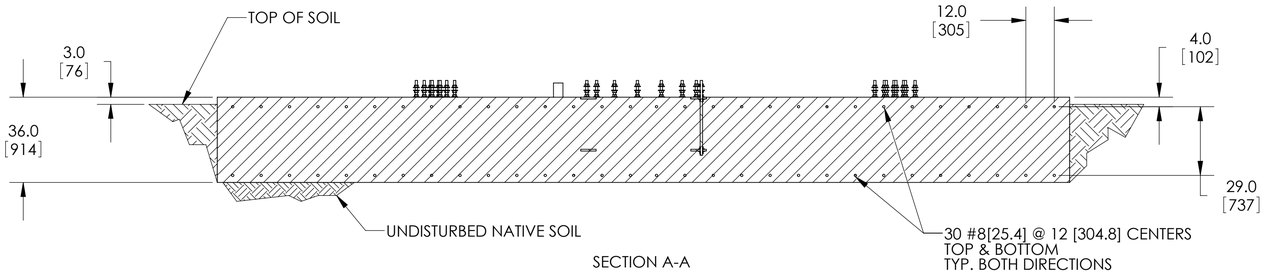
CONDUIT DETAIL: STUB-UP LOCATION
DETAIL B
SCALE 1 : 16



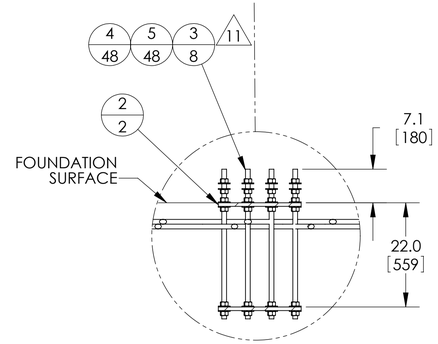
DETAIL E
SCALE 1 : 16



SECTION C-C
(ROTATED 90 DEG. CCW)



SECTION A-A



OUTRIGGER ANCHOR
4 PLACES
DETAIL F
SCALE 1 : 16

TABLE 1				
SOIL BEARING CAPACITY	MODULUS OF SUBGRADE REACTION	FOOTING THICKNESS	VOLUME OF CONCRETE	WEIGHT OF REINFORCING
2000 Psf [100kPa]	100 KIPS/ft3 [15000 Kn/M3]	36.0 [914]	100 CUBIC YARDS [76 CUBIC METER]	4.70 TONS [4.3 METRIC TONS]

QTY.	ITEM NO.	PART NUMBER	DESCRIPTION
282	5	9999-182	NUT,HEX,1-8,STL,HIGH STRENGTH,GALV
282	4	9997-177	WSHR,FLT,1.0,0.172,STL,GALV
47	3	175364	ANCHOR BOLT
8	2	175368	PLATE,STRUT,ANCHOR
2	1	7579320	PLATE, ANCHOR BOLT, 8.1M
KIT 7585069 BILL OF MATERIALS FOR REFERENCE ONLY			

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LAYOUT,TYPICAL FOUNDATION,9.4M

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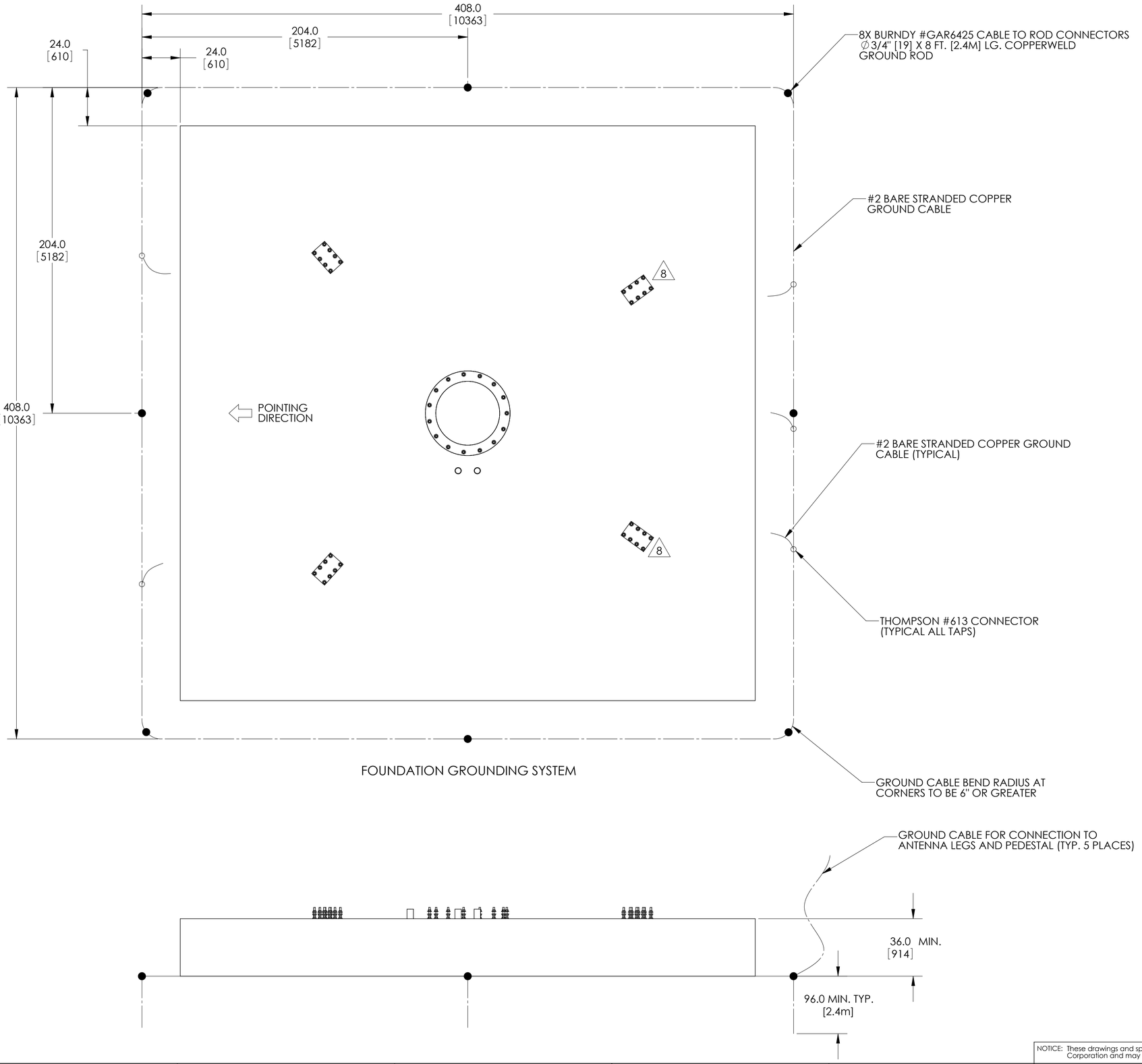
REVISION	SHEET
J	3 OF 4



KRATOS
READY FOR WHAT'S NEXT

LAYOUT,TYPICAL FOUNDATION,9.4M

SIZE	CAGE CODE	DOCUMENT NO.
D	4ZTA9	7586797

REVISION	SHEET
J	4 OF 4