| REV. | DESCRIPTION |
|---|---|
| K | REPLACED FOUNDATION LOADS TABLE ON SHEET 2 |

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

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 ERICOO 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

CONDUIT SCHEDULE

| CONDUIT | PURPOSE | FROM | TO | SIZE INCH [MM] | NOTES |
|---|---|---|---|---|---|
| C1 | UTILITY POWER | CUSTOMER LOAD CENTER | 9.4M ANTENNA FOUNDATION | 4 [101.6]<br>6 [152.4] | WITHOUT DE-ICE<br>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 |
| C6 | OPTIONAL SIGNALS | 9.4M ANTENNA FOUNDATION | CUSTOMER BUILDING | 4[101.6] | EXPANDED SIGNAL CPACITY |

△7

MATERIAL
N/A

FINISH
N/A

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

| TOLERANCES | | HOLE TOLERANCES | |
|---|---|---|---|
| 1 PLACE .X ± | 0.1 | 0 - 0.125: | +.003/-.001 |
| 2 PLACE .XX ± | 0.03 | 0.126 - 0.250: | +.004/-.001 |
| 3 PLACE .XXX ± | 0.005 | 0.251 - 0.500: | +.006/-.001 |
| ANGLES ± | 0.1° | 0.501 - 1.000: | +.008/-.001 |

THIRD ANGLE PROJECTION

ALL SURFACES √ 63

KRATOS
READY FOR WHAT'S NEXT

LAYOUT,TYPICAL FOUNDATION,9.4M

DRAWN BY J.Richins 07MAR14
ECO 000005090466

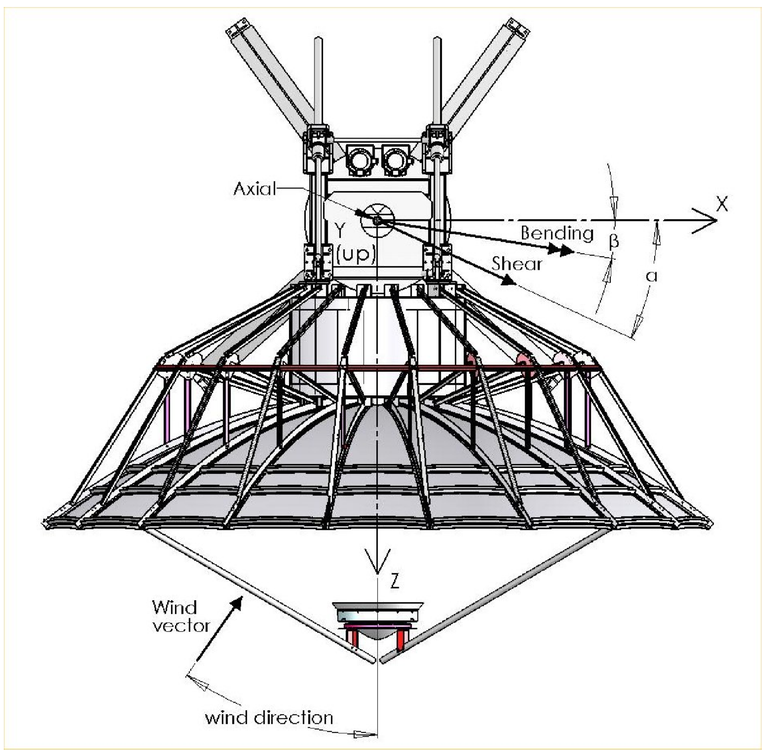
MASS: - LBS

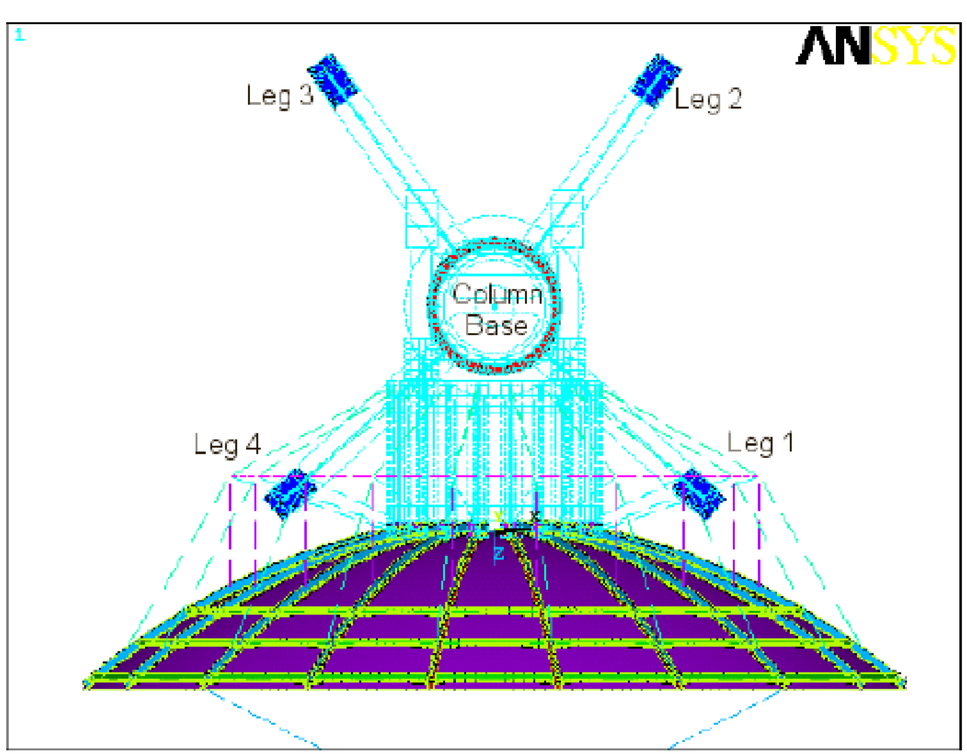
| SIZE | CAGE CODE | DOCUMENT NO. |
|---|---|---|
| D | 4ZTA9 | 7586797 |

| STATUS | DATE | REVISION | SHEET |
|---|---|---|---|
| RELEASED TO PRODUCTION | 13MAY24 | K | 1 OF 4 |

**9.4m Ka Foundation Loads (on axis)**
Wind speed 125 mph (K)

| | Loads | 0° elevation | | | | 30° elevation | | | | 60° elevation | | | | 90° elevation | | Max. Loads |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 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 | 90° wind | |
| Column Base | Fx (Lbs) | 24 | 4,496 | -8,399 | 23 | 115 | 923 | -2,615 | -14 | 30 | 567 | 2,762 | 34 | 9 | 7,076 | -8,399 |
| | Fy (Lbs) | 6,921 | 8,326 | 19,322 | 22,521 | 28,013 | 24,856 | 15,254 | 14,460 | 43,037 | 25,950 | 12,858 | 13,152 | 9,390 | 12,050 | 43,037 |
| | Fz (Lbs) | -5,109 | -3,466 | 5,608 | 7,986 | 1,961 | 538 | 7,026 | 10,875 | 6,394 | -687 | 6,345 | 13,957 | -11,346 | -933 | 13,957 |
| | Mx (Lbs-in) | 1,053,900 | 936,200 | -371,600 | -775,800 | 788,770 | 617,560 | -298,390 | -495,070 | 303,470 | 120,160 | -171,870 | -260,160 | 27,098 | -45,171 | 1,053,900 |
| | My (Lbs-in) | -585 | 930,140 | -1,755,900 | -2,333 | 45,953 | 471,100 | -1,393,100 | -25,341 | -60 | -137,290 | -694,520 | 8 | -9 | -5,726 | -1,755,900 |
| | Mz (Lbs-in) | 2,623 | -725,570 | 1,379,700 | 3,012 | -42,068 | -447,610 | 1,335,900 | 25,608 | 1,717 | 189,710 | 949,170 | 1,244 | 357 | 542,920 | 1,379,700 |
| Leg 1 | Fx (Lbs) | 9,658 | 7,551 | -3,161 | -8,419 | 5,686 | 4,690 | -4,421 | -6,762 | 579 | 559 | -4,666 | -5,564 | 2,766 | -3,259 | 9,658 |
| | Fy (Lbs) | -12,631 | -9,764 | 4,542 | 11,673 | -7,278 | -5,932 | 6,262 | 9,451 | -409 | -400 | 6,622 | 7,849 | -3,387 | 4,747 | -12,631 |
| | Fz (Lbs) | 8,679 | 6,737 | -2,748 | -7,565 | 5,108 | 4,190 | -3,898 | -6,073 | 521 | 508 | -4,155 | -4,996 | 2,482 | -2,929 | 8,679 |
| Leg 2 | Fx (Lbs) | -11,123 | -10,020 | 4,179 | 7,688 | -8,094 | -6,565 | 2,923 | 6,378 | -3,491 | -3,061 | 787 | 5,171 | -3,728 | -3,046 | -11,123 |
| | Fy (Lbs) | 19,286 | 17,228 | -6,442 | -12,753 | 14,105 | 11,410 | -4,330 | -10,524 | 6,271 | 5,597 | -801 | -8,485 | 6,718 | 5,620 | 19,286 |
| | Fz (Lbs) | 15,312 | 13,707 | -5,587 | -10,582 | 11,139 | 8,988 | -3,875 | -8,774 | 4,808 | 4,231 | -991 | -7,115 | 5,129 | 4,224 | 15,312 |
| Leg 3 | Fx (Lbs) | 11,110 | 9,413 | -3,119 | -7,702 | 8,125 | 6,982 | -4,267 | -6,418 | 3,478 | 2,393 | -4,075 | -5,186 | 3,729 | -1,976 | 11,110 |
| | Fy (Lbs) | 19,263 | 16,548 | -5,309 | -12,778 | 14,177 | 12,332 | -7,245 | -10,606 | 6,248 | 4,379 | -6,807 | -8,511 | 6,719 | -3,100 | 19,263 |
| | Fz (Lbs) | 15,294 | 13,044 | -4,458 | -10,601 | 11,191 | 9,662 | -6,020 | -8,835 | 4,789 | 3,276 | -5,698 | -7,136 | 5,130 | -2,751 | 15,294 |
| Leg 4 | Fx (Lbs) | -9,670 | -9,062 | 5,909 | 8,403 | -5,690 | -4,615 | 4,068 | 6,735 | -595 | -1,223 | 1,415 | 5,545 | -2,764 | -2,671 | -9,670 |
| | Fy (Lbs) | -12,647 | -11,862 | 8,363 | 11,652 | -7,286 | -5,858 | 5,867 | 9,417 | -432 | -1,290 | 2,269 | 7,823 | -3,385 | -3,262 | -12,647 |
| | Fz (Lbs) | 8,690 | 8,192 | -5,402 | -7,551 | 5,116 | 4,173 | -3,729 | -6,052 | 536 | 1,090 | -1,307 | -4,980 | 2,480 | 2,399 | 8,690 |

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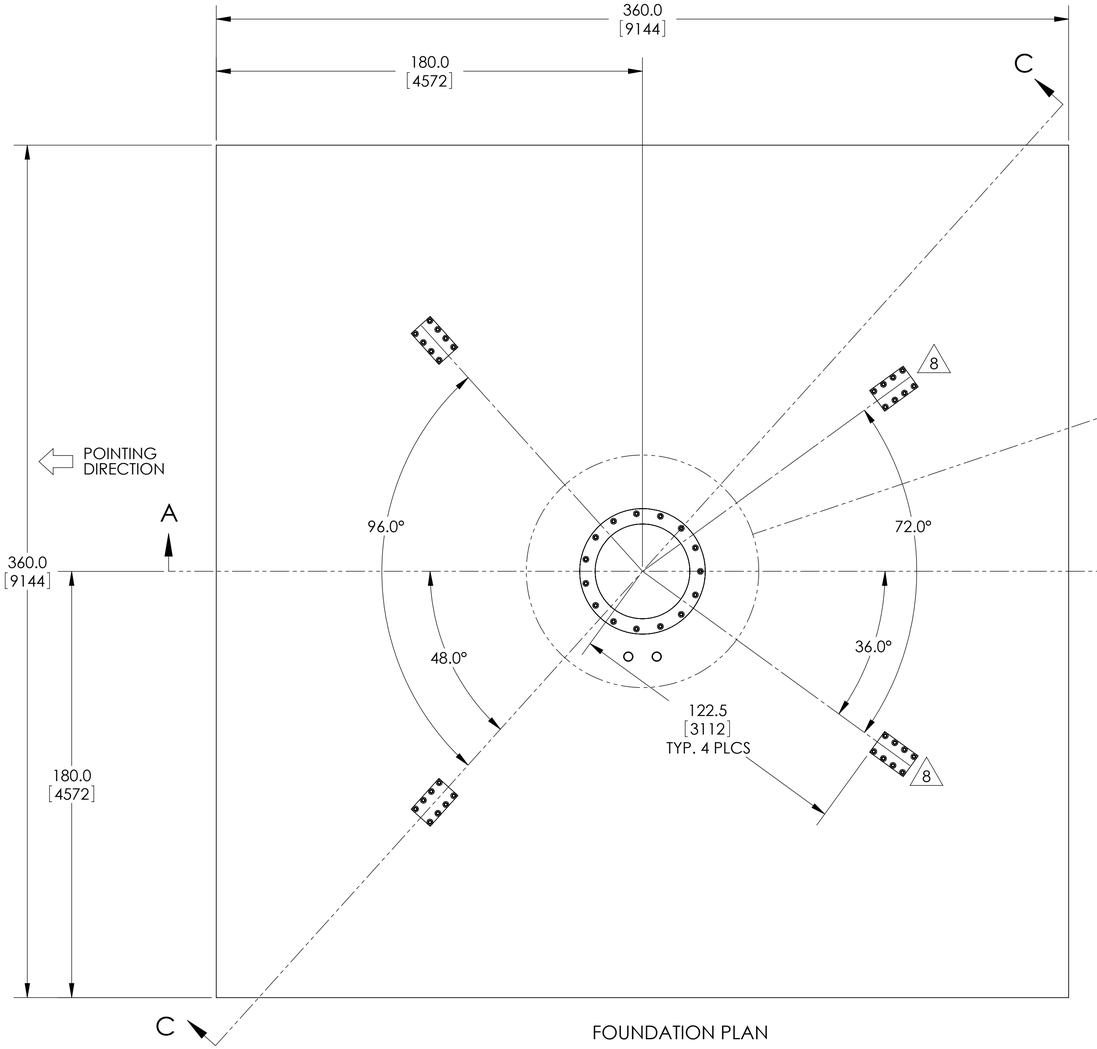
LAYOUT,TYPICAL FOUNDATION,9.4M

| SIZE | CAGE CODE | DOCUMENT NO. |
|---|---|---|
| D | 4ZTA9 | 7586797 |



| REVISION | SHEET |
|---|---|
| K | 2 OF 4 |

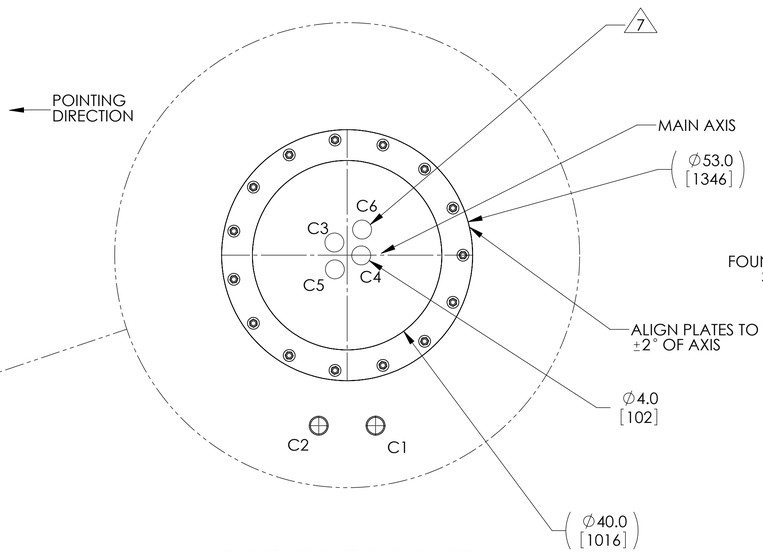



FOUNDATION PLAN

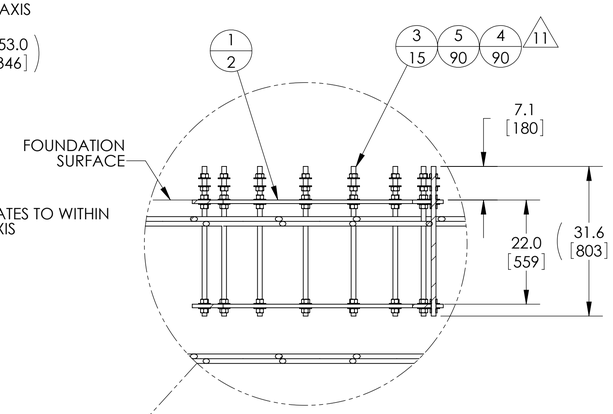



SECTION A-A

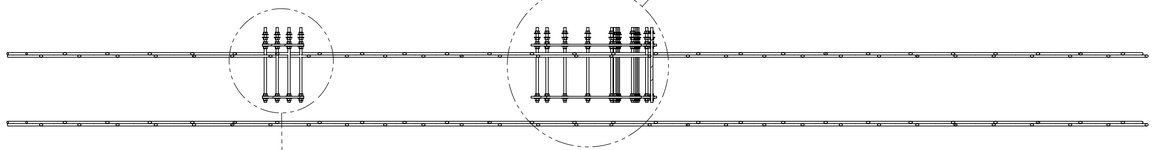
| TABLE 1 | | | | |
|---|---|---|---|---|
| SOIL BEARING CAPACITY | MODULUS OF SUBGRADE REACTION | FOOTING THICKNESS | VOLUME OF CONCRETE | WEIGHT OF REINFORCING |
| 2000 Psf [100kPa] | 100 KIPS/ft3 [15000 Kn/M3] | 36.0 [914] | 100 CUBIC YARDS [76 CUBIC METER] | 4.70 TONS [4.3 METRIC TONS] |



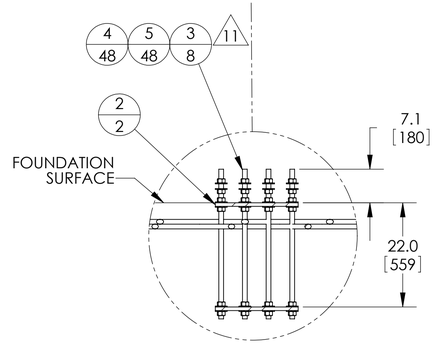

CONDUIT DETAIL: STUB-UP LOCATION
DETAIL B
SCALE 1 : 16




DETAIL E
SCALE 1 : 16



SECTION C-C
(ROTATED 90 DEG. CCW)




OUTRIGGER ANCHOR
4 PLACES
DETAIL F
SCALE 1 : 16

| 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

| SIZE | CAGE CODE | DOCUMENT NO. |
|---|---|---|
| D | 4ZTA9 | 7586797 |



| REVISION | SHEET |
|---|---|
| K | 3 OF 4 |

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|---|---|---|
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| REVISION | SHEET |
|---|---|
| K | 4 OF 4 |