CITY OF CONWAY, ARKANSAS
Office of the Mayor
1201 Oak Street Conway, Arkansas 72032
Mayor Tab Townsell
Phone 501-450-6110 Fax 501-450-6145

ADDENDUM #4

RFP Project 25 Phase 2 Trunked Radio System

Notice Date: July 21th, 2015 @ 4:00pm

City of Conway IT Department

A. Purpose

The purpose of this Addendum No. 4 is to correct and clarify Section 5.5 Communications Shelter

5.5 Communications Shelter:

5.5.1 Specifications

The following specifications shall be considered the minimum specifications required.

Vendor shall furnish and install item(s) described below.

1. A minimum of 12'W (OD) x 20'L (OD) x 9'H (ID) shelter (equivalent or better) See "Sample Shelter" attachment. Sample of Andrews's shelter has been provided as an example only. It is not the intent of The City to limit different models or brands of communication buildings.
2. Shelter foundation(s) – The building shall be placed and anchored on an 8" thick Monolithic slab with light broom finish, #4 rebar each way with a 3' apron at the front side of the building. Provide ¾ min chamfer at AU exposed edges. All grounding should be compliant with Motorola R56 Grounding Specifications

   Note:

   Interior and exterior grounding system, etc. to comply with Motorola R56 standard. Cable tray layout and electrical connections for equipment

3. Structural:
    - Slab Thickness – 2F 2” Thick
    - Design Live load – PSF200F 200 PSF Live Load
    - Roof – OH3R 3” overhang
    - Design Snow Load – PSF125F 60 PSF Snow Load
    - Walls – 4W 4” Thick

4. Interior Finish:
    - No Sub Floor
    - Floor Finish – FFTF Vinyl Composition Tile
    - Ceiling – FRP50C ½” FRP
    - Walls – FRP50C ½”FRP
5. Insulation
    - Floor – R13F Nominal R13 Floor
    - Roof – R13R Nominal R13 Roof
    - Walls – R13W Nominal R13 Walls

6. Panel Finish
    - Floor – Hard Trowel Finish
    - Roof – FBR Broom Finish
    - Walls – FAW Exposed Aggregate
7. locations and size of Coax Access Port, PVC Wall Conduit for Grounding and Telco, Generator Receptacle, Generator Wall Conduit, Electrical Service Entry and Door Entry and Lighting. TBD
8. Entry: 3670 Steel Door
    - Aluminum Threshold and Weather-stripping
    - Simplex Lock Set
    - Pick Guard
    - Hydraulic Closer with ‘hold’ feature
    - Door Hood
    - Door ‘hold open’ hook
9. Lighting: 4 each 4’ LED interior lights
    - LED Exterior light
    - Motion detector
    - Photocell
    - Interior light timer
    - Battery backup emergency light

10. Grounding: #2 stranded green halo
    - 2 each 4" x 24" x ¼" ground bar (one inside and one outside)
    - Ground cable ladder at walls
11. Coax Access Port, PVC Wall Conduit for Grounding and Telco, Generator Receptacle, Future Generator Wall Conduit, Electrical Service Entry and Door Entry and Lighting
12. Ice bridge
13. Program manage project, deliver and set shelter(s) onto foundation pad(s).
14. Ceiling and cable tray heights in the equipment rooms should be such as to accommodate 7- 1/2-foot equipment racks, bottom of cable tray shall be 8' from finished floor elevation and the ceiling should be 9 feet.
15. Overhead Cable Ladder/Tray: 24" aluminum cable tray
16. 3 Phase Transfer switch to be located on the inside of the shelters.
17. Transfer switch to disconnect only after the meter.
18. 3 Phase uninterrupted power supply (UPS).
19. Service Configuration: 60 Hertz, 120/240 volt
    - 300Amp Electrical service
20. HVAC (Wall Mount Standard): Redundant
    - 2 each 4 ton
21. Distribution Equipment: Load Center with main breaker Automatic transfer switch with built in surge protective device.

5.5.2 Warranty:

1. Contractor to provide a minimum 1-year warranty on HVAC system; Contractor to provide 24-hour name and contact phone number;
2. Contractor to provide a building warranty; Contractor to provide 24-hour name and contact phone number.
3. Contractor to provide a structural warranty; Contractor to provide 24-hour name and contact phone number.

5.5.3 The City to provide

1. A cleared 100'x100' area, included with end the 100' area a 70'x70' Tower/Shelter compound, to be provided by the vendor, and access roadway to the tower site. Any additional site improvements and/or modifications to the specified tower/shelter location site, as necessary to accommodate the contractor's required material and work, shall be the responsibility of the contractor and must be factored into each Proposal's cost estimate.
2. Power & High Speed Fiber to building(s) coordinated by The City;
3. Generator, fuel source, and foundation for generator
4. Site landscaping;
5. Site fencing by The City only after work is complete;
6. Security Cameras and Locks (Proxy cards & Key Pad)

5.5.4 Permits and Licensing:

1. Contractor is responsible for obtaining all permits and Licenses.

5.5.5 Delivery

1. The Communications Equipment Shelter shall be delivered to Clearwell Road RF site Conway Arkansas 72034

If you have any additional questions regarding this addendum, please contact Lloyd Hartzell, at Lloyd.Hartzell@cityofconway-ar.gov or 501.513.3521.

REVISIONS				
INIT.	REV	DESCRIPTION	DATE	APPROVED
SL	–	RELEASE FOR APPROVAL	3/28/00	C. BRADSHAW
SL	A	REVISED DESIGN CRITERIA	7/13/00	

ANDREW CORPORATION

SHELTER MODEL RCS1020-355T1-95

SAMPLE DOCUMENT SHOWN AS EXAMPLE ONLY

REQUEST FOR QUOTE IS NOT BRAND NAME SPECIFIC

DESIGN OPTIONS

SPECIFIC PROJECT DRAWINGS SHALL SPECIFY WHICH OPTIONS APPLY TO A PARTICULAR SHELTER MODEL.
ALL UNITS OF A PARTICULAR MODEL NUMBER SHALL BE CONSTRUCTED WITH THE SAME DESIGN OPTIONS.

STRUCTURAL

FLOOR

SLAB THICKNESS
- ■ 2F 2" THICK
- □ 3F 3" THICK

DESIGN LIVE LOAD
- □ PSF125F 125 PSF LIVE LOAD
- ■ PSF200F 200 PSF LIVE LOAD

ROOF

OVERHANG
- □ OHØR NO OVERHANG
- ■ OH3R 3" OVERHANG

DESIGN SNOW LOAD
- ■ PSF60R 60 PSF SNOW LOAD
- □ PSF100R 100 PSF SNOW LOAD

WALLS

WALL PANEL THICKNESS
- □ 3W 3" THICK
- ■ 4W 4" THICK

INTERIOR FINISHES

FLOOR

SUBFLOOR
- ■ SFØF NO SUBFLOOR
- □ SFWF PLYWOOD, _____ THICK
- □ SFCF CEMENT BOARD, ____THICK

FLOOR FINISH
- ■ FFTF VINYL COMPOSITION TILE
- □ FFOF OTHER _____

CEILING

PANELLING
- ■ FRP50C 1/2" FRP
- □ FRP75C 3/4" FRP
- □ CFOC OTHER _____

WALLS

PANELLING
- ■ FRP50W 1/2" FRP
- □ FRP75W 3/4" FRP
- □ WFOW OTHER _____

INSULATION

FLOOR
- ■ R13F NOMINAL R13 FLOOR

ROOF
- □ R2R NOMINAL R2 ROOF
- ■ R13R NOMINAL R13 ROOF
- □ R24R NOMINAL R24 ROOF

WALLS
- □ R2W NOMINAL R2 WALLS
- ■ R13W NOMINAL R13 WALLS
- □ R24W NOMINAL R24 WALLS

PANEL FINISH

FLOOR

INTERIOR SURFACE
- □ FFF FLOAT FINISH
- ■ FTF HARD TROWEL FINISH

ROOF

EXTERIOR SURFACE
- ■ FBR BROOM FINISH

WALLS

EXTERIOR SURFACE
- ■ FAW EXPOSED AGGREGATE
- □ FSW SMOOTH (FLOAT)
- □ FFLW FORMLINER _____
- □ FOW OTHER _____

DESIGN CRITERIA

FLOOR LIVE LOAD*, PSF	200			
ROOF LIVE (SNOW) LOAD*, PSF	60			
		WINDWARD	LEEWARD	ROOF
WIND LOAD, MPH (3 SECOND GUST)	150			
UBC, PSF		48.8	−30.5	−42.7
BOCA, PSF		60.2	−42.0	−54.1
SBCCI, PSF		54.5	N/A	−63.6
OBBC, PSF		60.2	−42.0	−54.1
ASCE7		29.7	−35.9	−76.3

SEISMIC ZONE IV "Z"="Aα"=0.40

UBC, HORIZONTAL SEISMIC COEFFICIENT	0.37
BOCA, HORIZONTAL SEISMIC COEFFICIENT	0.22
SBCCI, HORIZONTAL SEISMICCOEFFICIENT	0.22
OBBC, HORIZONTAL SEISMIC COEFFICIENT	0.22

FIRE RATING OF WALLS

3" WALL (OPT "3W")	1 HOUR
4" WALL (OPT "4W")	2 HOURS

* DEPENDS ON DESIGN OPTION SELECTED.

BUILDING CODE DATA

MODEL CODE	EDITION	CONSTRUCTION TYPE	OCCUPANCY/ USE GROUP
UBC	1994	V-N	S2
	1997	V-N	S2
BOCA	1996	5B	S2
	1999	5B	S2
SBCCI	1994	VI-UNPROTECTED	S2
	1997	VI-UNPROTECTED	S2
OBBC	1996	5B	S2
	1998	5B	S2
NEC	1993	–	–
	1996	–	–
	1999	–	–

MODEL NUMBER DESIGNATION

RCS 10 −20 − 355T1 − 95

- REINFORCED CONCRETE SHELTER SYSTEM
- WIDTH: 8' − 12'
  EXAMPLE: 11.5' = 115
  EXAMPLE 10.0' = 10
- LENGTH: 8' − 32'
- SHELTER OPTIONS
- FINISHED INTERIOR HEIGHT: 9'−6"

TITLE: SYSTEM DESIGN DATA DIAL CALL, INC. NEXTEL COMMUNICATIONS			ER0032764
SIZE: B	FSCM NO.	DRAWING NUMBER: RCS1020-355T1-95	CAD NO.
SCALE: 1/4"=1"-0"	PLOT SCALE: .25=12	SHEET 1 OF 9	

ITEM	QTY	U/M	PART NO.	DESCRIPTION
1	1	EA	RCS1020-355T-295	CONCRETE SHELTER CASTING
2				
3	1	EA	367981-123CE-6	DOOR, 3'-6"x7', NH, 18GA, CYLINDRICAL PREP, PAINTED COCOA
4	1	EA	367978-17	RHRB LOCKSET, UNICAN (1000-2B-US26D)
5	1	EA	379890-8-2	BEST Z1 CORE W/CORE KEY
6	1	BX	379890-10-1	HINGES, 4 1/2" X 4 1/2" STD. DUTY
7	1	EA	367981-164-360	THRESHOLD, 3'-6"
8	1	EA	379890-12	LOCKGUARD, PICKPLATE
9	1	EA	J21310	DRIP CAP, 44"
10	1	EA	367966-52	DOOR CANOPY, 30" x 42" - PAINTED COCOA
11	1	EA	-	OPEN DOOR ALARM (367959-1)
12	1	EA	367991-13	DOOR HOLDER
13	1	EA	379902-108	LITERATURE, HOLDER
14	1	EA	367986-318	SWITCH, MOLDED CASE/60 AMP (PART #Q0200)
15	6	EA	366175-17-1	LIGHT, INTERIOR FLUOR. W/LENS & COVER
16	1	EA	366176-13	EMERGENCY LIGHT
17	1	EA	D21930-1	LIGHT, EXTERIOR WITH PHOTOCELL (WEATHERPROOF)
18	1	EA	367986-114	DISTRIBUTION PANEL COVER
19	12	EA	-	BULB, FLUORESCENT COOL WHITE (D21550)
20	1	EA	-	BULB, INCANDESCENT 100W (D21570)
21	1	EA	366250-15	SWITCH, MANUAL TRANSFER SP/200A
22	1	EA	367981-172-3	42" DOOR SHOE, 16 GA ALUMINUM
23	1	EA	367986-40	DISTRIBUTION PANEL 200A, 40 SPACE
24	1	EA	-	GROUND BAR KIT, PK18GTA (DIST) (D21990)
25	1	EA	367981-170-2	1/4" BENT PLATE, THRESHOLD
26	4	EA	-	BREAKER, 15A/120V (D21410)
27	8	EA	-	BREAKER, 20A/120V (D21430)
28	2	EA	367986-139	BREAKER, 45A/240V
29				
30	8	EA	367986-3	BREAKER, 30A/240V
31	2	EA	-	BOX, 6" X 6" (367973-60)
32				
33				
34	1	EA	368016-4-2	POWER FAILURE ALARM
35	1	EA	367989-83	SURGE ARRESTOR , TRANSTECTOR #CP2365
36	2	EA	367328-31-9	A/C MARVAIR AVP 5 TON #AVP60ACA5N
37	1	EA	-	TOWER LIGHT CONTROLLER (CUSTOMER SUPPLIED & INSTALLED)
38	1	EA	367961-14	TIMER 24 HOUR
39	2	EA	367986-32	BREAKER 30A/120V
40	2	EA	367316-1-6A	A/C INSTALLATION KIT
41	1	EA	367961-30	7-DAY TIMER (LEAD LAG)
42	1	EA	367960-72	APPLETON GENERATOR RECEPTACLE #AJA20034-200RS
43				
44	1	EA	D21470	BREAKER 15A/240V
45				
46	3	EA	-	LUG, 2 HOLE FOR #2 SOLID (367970-67)
47	2	EA	E21590	HI/LO TEMP
* 48	75	FT	-	WIRE, #2 SOLID TINNED COPPER (367956-26)
49	28	FT	367982-10	TRIM, 1/2" EDGE TRIM FOR TELCO BOARD
50	1	EA	368013-4-103.5	PANELING, FRP, 1/2" x 48" x 103.5"
* 51	5	FT	-	2" RUNNING THREAD (367952-22)
52	50	EA	-	HALO GROUND STAND-OFFS (367959-30)
* 53	10	EA	-	DOUBLE CRIMP CONNECTOR, #2 -#2
* 54	10	EA	-	DOUBLE CRIMP CONNECTOR, #2 -#6
* 55	200	FT	-	WIRE, #2 GREEN COPPER STRANDED (367956-8)
* 56	55	FT	-	WIRE #6 GREEN COPPER STRANDED (D23170)
57				
58	2	EA	368007-40-1	WAVEGUIDE PLATE, 24 PORT, 4"
* 59	4	EA	-	LUG, 2 HOLE, CRIMP, #2 WIRE (367970-52)
* 60	28	EA	-	LUG, 2 HOLE, CRIMP, #6 WIRE (208172)
61	2	EA	367964-41	GROUNDBAR, 1/4" x 4" x 30"
* 62	2	FT	-	WIRE, #2 WELDING CABLE (367956-121)
63	3	EA	-	CADWELD, WELD METAL #XL65 (379996-4)
64	1	EA	366250-43	SWITCH, FUSED 2P/200A SQD#D224NRB
65	4	EA	367963-27	FUSES
* 66	20	FT	-	WIRE, #3/0 THHN CABLE (367956-22)
67	1	EA	368FT-1020	FLOOR TILE KIT
68	1	EA	368RR13-1020	CEILING INSULATION & FRAMING KIT
69	1	EA	368WR13-1020-95	WALL INSULATION & FRAMING KIT
70	1	EA	368P4-1020-95	INTERIOR FRP PANELLING KIT
71	2	EA	-	1 1/2" PVC TERMINAL ADAPTORS, SCH. 40, (367996-124)
72	2	EA	-	1/2" PVC TERMINAL ADAPTORS, SCH. 40 (367996-18)
73				
74				
75	2	EA	-	GROUNDING BUSHING - 2" (367950-15)

ITEM	QTY	U/M	PART NO.	DESCRIPTION
76	1	EA	367964-42-2	TRAPEZE GROUND BAR KIT
77	2	FT	-	PVC, 1/2", SCH. 40, (367996-65)
78	1	EA	-	BOX, 2" x 4" WEATHERPROOF (367973-3)
79	1	EA	-	COVER, 2" x 4" DUPLEX WEATHERPROOF (367973-109)
80	1	EA	-	RECEPTACLE, DUPLEX GFI, 20A/120V (366200-63)
81				
82	7	EA	-	RECEPTACLE, DUPLEX 20A/120V (D22790)
83				
84	2	EA	-	SWITCH, 15A/120V (D22990)
85				
86	1	EA	242315-1	TELCO GROUND BAR 4" x 10"
87	24	EA	367954-45	HANGER, HANGER BRACKET
88	1	EA	367976-45-36	WEATHERSTRIP, 3'-6" LONG
89	24	EA	-	HANGER, HAT BRACKET (J21430)
90	12	EA	367954-23	CLAMP, CORNER
91	4	EA	367954-26	CLAMP, SPICE
92	2	EA	367974-36-2	WIREWAY, CLOSING PLATE (4" x 4") W/O KNOCKOUTS
93	4	EA	367954-123-24	CABLE LADDER, 24"
94	1	EA	367974-16	WIREWAY, 4" x 4" x 5'
95	2	EA	367976-45-7	WEATHERSTRIP, 7'-0" LONG
96	1	EA	367976-20-5	WEATHERSTRIP, 3'-6" LONG (THRESHOLD)
97	1	EA	367962-18-1	FAN OUTLET ASSEMBLY
98	1	EA	367962-18	SQUIRREL VENT FAN
99	2	EA	-	1" FLEX CONDUIT 90° CONNECTOR (367984-5)
* 100	1	EA	-	2" LB W/COVER & GASKET (368016-109-1)
* 101	14	FT	-	1" FLEX CONDUIT (367984-4)
* 102	2	EA	-	1" FLEX CONDUIT STRAIGHT CONNECTOR (367984-6)
103	2	EA	-	UNISTRUT 1 5/8" (368017-22)
104				
105	1	EA	368007-51	WAVEGUIDE PLATE, 12 PORT, 4" 2x6 CONFIG
106				
107	6	EA	367976-76-2	CAULK VULKEM, BRONZE
108	1	EA	368007-29-1	WAVEGUIDE, 18-PORT 4"
109	1	EA	367968-53	FIRE EXTINGUISHER, 20 LB.
110	1	EA	367959-24	SMOKE DETECTOR, 120V
111	1	EA	367959-24-1	SMOKE DETECTOR RELAY
112	1	EA	379902-193	EYE WASH KIT
113				
114	.250	GAL	367988-30-5	PAINT, KEM-AQUA 600T, COCOA #8598 (FOR DOOR)
115	.250	GAL	367988-30-1	PRIMER, POLANE W2, GRAY (FOR DOOR)
* 116	1	EA	-	2" EMT CONDUIT (367967-16)
117	2	EA	367996-122-207	2" X 7" NIPPLE
118	1	EA	-	2" EMT BOX CONNECTOR (367969-1)
* 119	7	EA	-	2" LOCKNUTS (367951-7)

REVISIONS				
INIT.	REV	DESCRIPTION	DATE	APPROVED
SL	-	RELEASE FOR APPROVAL	3/28/00	G. BRADSHAW
SL	A	REVISED REVISION BLOCK	5/16/00	G. BRADSHAW
MH	B	ADDED ITEMS 22, 25, 116, 117, 118, 119	5/16/00	G. BRADSHAW
SL	C	DELETED ITEM #22, REVISED #116, 118, & 119	7/13/00	G. BRADSHAW
DP	D	UPDATED REV LEVEL OF SHEET 6	09/14/00	B FERNANDEZ
DP	E	UPDATED REV LEVEL OF SHEETS 3 & 4	09/25/00	
RH	F	ADDED ITEM #22, DOOR SHOE	10/27/00	
DP	G	UPDATED REV LEVEL OF SHEET 6	12/14/00	

NOTE: QTY'S IN MATERIAL LIST WITH "*" ARE LISTED FOR REFERENCE ONLY. ACTUAL AS-BUILT QUANTITIES MAY VARY.

SHEET	1	2	3	4	5	6	7	8	9
REVISION	A	G	D	C	A	C	-	C	-

12/14/00

TITLE: BILL OF MATERIAL
DIAL CALL, INC.
NEXTEL COMMUNICATIONS

SIZE B | FSCM NO. | DRAWING NUMBER RCS1020-355T1

SCALE 1/4"=1"-0" | PLOT SCALE .25=12 | SHEET 2 OF 9

CAD NO. ER03277G

SYMBOL LEGEND

- 4"x4" JUNCTION BOX
- 20A 125V SINGLE RECEPT. IN A 4"x4" BOX
- 20A 125V DUPLEX RECEPT. IN A 4"x4" BOX
- 20A 125V DOUBLE DUPLEX RECEPT. IN A 4"x4" BOX
- 20A 250V SINGLE RECEPT. IN A 4"x4" BOX
- 20A 125V SINGLE RECEPT. IN A 2"x4" BOX
- 20A 125V DUPLEX RECEPT. IN A 2"x4" BOX
- 2"x4" JUNCTION BOX
- 15A 120V LIGHT SWITCH IN A 4"x4" BOX
- 2-15A 120V LIGHT SWITCHES IN A 4"x4" BOX
- 15A 120V LIGHT SWITCH IN A 2"x4" BOX
- HINGE COVER BOX (HINGE TO LEFT IS SHOWN)

REVISIONS				
INIT.	REV	DESCRIPTION	DATE	APPROVED
SL	–	RELEASE FOR APPROVAL	3/28/00	G. BRADSHAW
MH	A	ADDED ITEMS 22, 25, 116, 118, 119	5/18/00	
SL	B	ADDED (OPTION D) TRAPEZE GROUND BAR	7/13/00	
DP	C	REPOSITIONED TRAPEZE OPTIONS TO HAVE AN 8" CLEARANCE TO ANY WALL	09/25/00	
RH	D	MODIFIED PER TASK LIST 100	11/03/00	

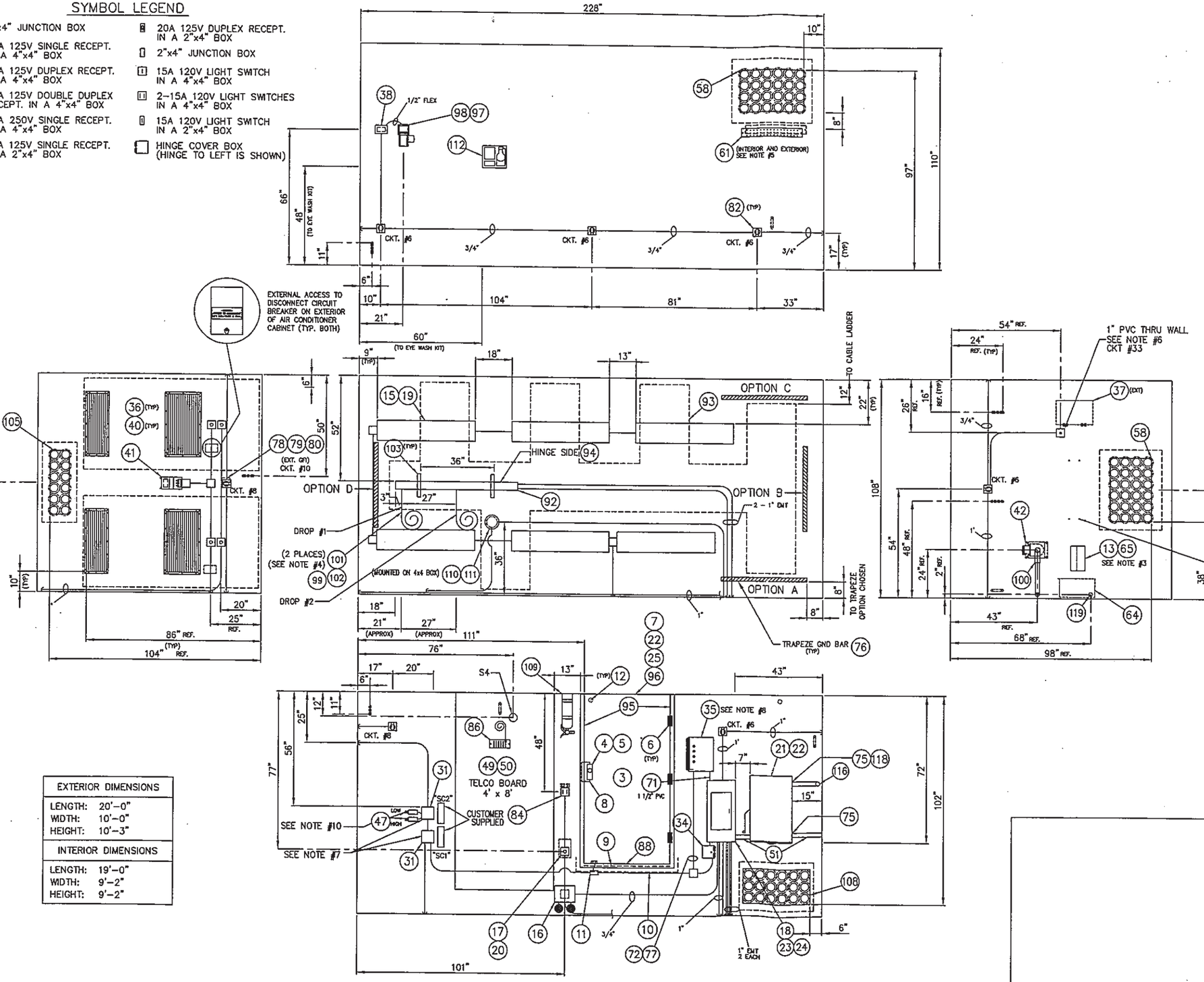
NOTES:

1. CONDUIT TO BE EMT OR RIGID UNLESS NOTED. MINIMUM SIZE OF CONDUIT AND FITTINGS IS 1/2" OR AS NOTED. UPSIZING IS PERMITTED. LAYOUT LOCATIONS ARE FOR REFERENCE ONLY AND MAY VARY UNLESS OTHERWISE NOTED.
2. ALL BOXES, LIGHT FIXTURES AND ELECTRICAL EQUIPMENT TO BE ± 1/2" UNLESS OTHERWISE NOTED. BOXES OR RECEPTACLES 6"x6" OR SMALLER SHALL NOT BE INSTALLED ON PANELING TRIM.
3. PACK EXTRA SET(S) OF FUSES (ITEM #65) IN LITERATURE HOLDER.
4. FOR RECTIFIER DROPS (STARTING ON THE LEFT AND PROCEEDING TO THE RIGHT:

   RECTIFIER DROP #1 (PRIMARY) – COIL 7 FEET OF 1" FLEX WITH 5 FEET OF WIRE PAST END AND TY-RAP. INCLUDES:
   - RECTIFIER #1 (CKT #17,#19)
   - RECTIFIER #2 (CKT #18,#20)
   - RECTIFIER #3 (CKT #21,#23)
   - RECTIFIER #4 (CKT #22,#24)

   RECTIFIER DROP #2 (SECONDARY) – COIL 7 FEET OF 1" FLEX WITH 5 FEET OF WIRE PAST END AND TY-RAP. INCLUDES:
   - RECTIFIER #5 (CKT #25,#27)
   - RECTIFIER #6 (CKT #26,#28)
   - RECTIFIER #7 (CKT #29,#31)
   - RECTIFIER #8 (CKT #30,#32)

5. SEE SHEET 4 FOR GROUNDING LAYOUT AND SHEET 5 FOR GROUNDING DETAILS.
6. COIL 5 FEET OF WIRE FROM CKT. #21 FOR FUTURE CUSTOMER USE.
7. INSERT ROMEX CONNECTOR IN KNOCKOUT IN 6X6 BOXES TO ALARM BLOCKS. IDENTIFY THE SHELTER ALARMS & PIGTAIL 2' OF ALARM WIRE IN 6" X 6" BOX FOR FUTURE TERMINATION IN RADIO INTEGRATION.
8. SURGE ARRESTOR (#35) TO BE INSTALLED IN RADIO INTEGRATION. POWER & ALARM WIRES TO BE TERMINATED AT END OF SURGE ARRESTOR CONDUIT LOCATION. COIL AN EXTRA 3 FEET OF WIRE FOR CONNECTION OF EQUIPMENT.
9. EXTERIOR TOWER LIGHT CONTROLLER/BOX IS CUSTOMER SUPPLIED AND INSTALLED BY OTHERS. IT IS ON THE BOM DRAWING FOR REFERENCE ONLY.
10. LABEL HI & LO TEMP ALARMS



EXTERIOR DIMENSIONS	
LENGTH:	20'-0"
WIDTH:	10'-0"
HEIGHT:	10'-3"
INTERIOR DIMENSIONS	
LENGTH:	19'-0"
WIDTH:	9'-2"
HEIGHT:	9'-2"

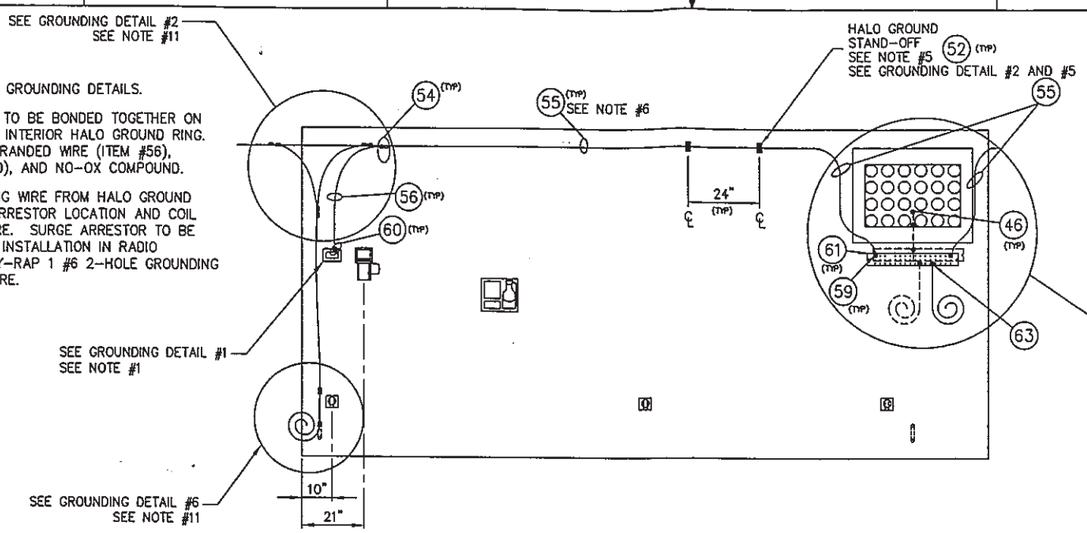
TITLE: EQUIPMENT LAYOUT DIAL CALL, INC. NEXTEL COMMUNICATION			ER03278D
SIZE: B	FSCM NO.	DRAWING NUMBER: RCS1020-355T1-95	ACAD NO.
SCALE: 1/4"=1"-0"	PLOT SCALE: .25=12	SHEET: 3 OF 9	

NOTES:

1. GROUND ALL BOXES AND METALLIC OBJECTS LARGER THAN 4" x 4" WITH #6 AWG AS SHOWN–ADD GREEN STRANDED WIRE (ITEM #56) AND 2–HOLE CRIMP LUGS (ITEM #60)
2. A NO–OXIDE COMPOUND IS TO BE APPLIED TO ALL CONNECTIONS, GROUND BARS AND HALO. EXCESS GREASE IS TO BE WIPED CLEAN. REMOVE PAINT AND APPLY THE NO–OXIDE COMPOUND BETWEEN ALL GROUNDING LUG CONNECTIONS AS SPECIFIED.
3. MAINTAIN A 9" RADIUS MIN. WHEN BENDING ALL GROUNDING WIRE FOR THE HALO.
4. INSTALL A 2–HOLE MECHANICAL LUG (1 EACH, ITEM #46) TO THE GENERATOR RECEPTACLE AND EXT. DISCONNECT.
5. HALO GROUND RING IS TO BE #2 GREEN COPPER STRANDED WIRE AND TO BE MOUNTED 6" OFF THE CEILING.
6. ALL GROUND POINTS ARE TO BE DIRECTED TOWARD THE NEAREST GROUND EXIT. ALL CONNECTIONS TO INTERIOR HALO GROUND RING TO BE DOUBLE CRIMPED.
7. CADWELD (1 EACH, ITEM #63) #2 (TINNED) SOLID WIRE (ITEM #48) TO THE INTERIOR AND EXTERIOR GROUND BARS WITH 10 FOOT COILS.
8. #2 AWG WELDING CABLE (ITEM #62) TO BE USED TO GROUND THE DOOR TO THE DOOR FRAME USING 2–HOLE CRIMP TYPE LUGS (ITEM #59).
9. CADWELD (ITEM #63) #2 (TINNED) SOLID WIRE (ITEM #48) TO THE EXTERIOR GROUND BAR AND CONNECT TO THE WAVEGUIDE ENTRY PORT WITH A 2–HOLE MECHANICAL LUG (ITEM #46).
10. #2 AWG WELDING CABLE (ITEM #62) TO BE USED TO GROUND THE EXTERIOR DOOR CANOPY TO THE DOOR FRAME USING 2–HOLE CRIMP TYPE LUGS (ITEM #59).
11. OMNI DROPS TO CONSIST OF #2 GREEN COPPER STRANDED (ITEM #55) (TOP PART) CRIMPED TO #2 SOLID TINNED COPPER (ITEM #48) (BOTTOM PART) COILED 10 FEET.
12. INTERIOR GROUND BAR TO BE CONNECTED TO INTERIOR HALO GROUND RING VIA 2–HOLE CRIMP TYP LUGS. (ITEM #60) AND #2 WIRE (ITEM #56). (TYPICAL 2 PLACES)
13. SEE SHEET 5 FOR GROUNDING DETAILS.
14. CABLE LADDER IS TO BE BONDED TOGETHER ON ONE SIDE AND TO INTERIOR HALO GROUND RING. USE #6 GREEN STRANDED WIRE (ITEM #56), 2–HOLE (ITEM #60), AND NO–OX COMPOUND.
15. RUN #6 GROUNDING WIRE FROM HALO GROUND RING TO SURGE ARRESTOR LOCATION AND COIL 2 FEET EXTRA WIRE. SURGE ARRESTOR TO BE GROUNDED AFTER INSTALLATION IN RADIO INTEGRATION. TY–RAP 1 #6 2–HOLE GROUNDING LUG TO COILED WIRE.

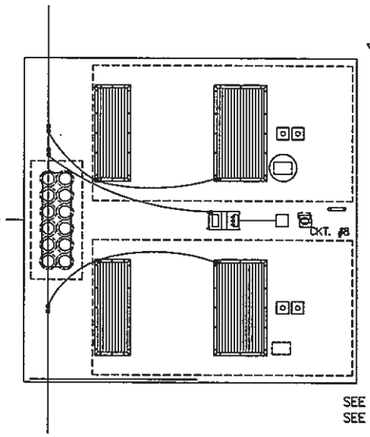
REVISIONS

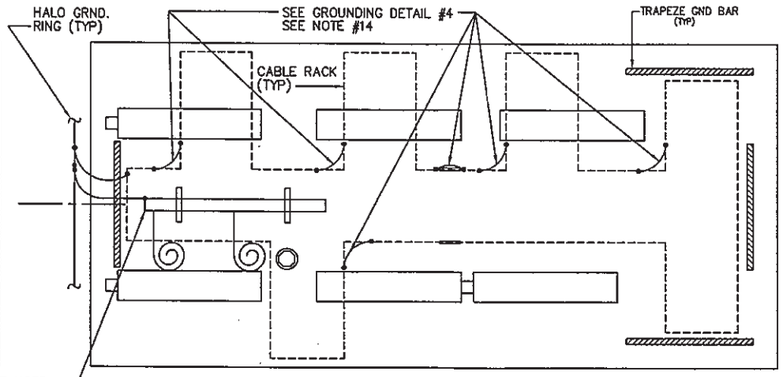
INIT.	REV	DESCRIPTION	DATE	APPROVED
SL	–	RELEASE FOR APPROVAL	03/28/00	G. BRADSHAW
SM	A	REVISED "ATTENTION #2" NOTE	07/10/00	G. BRADSHAW
SL	B	REVISED "ATTENTION #2" NOTE	07/12/00	G. BRADSHAW
DP	C	UPDATED HALO DETAIL AROUND THE WAVEGUIDE	09/25/00	

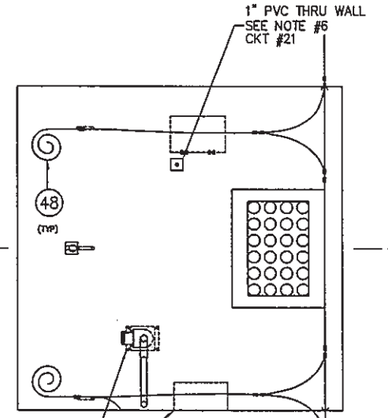


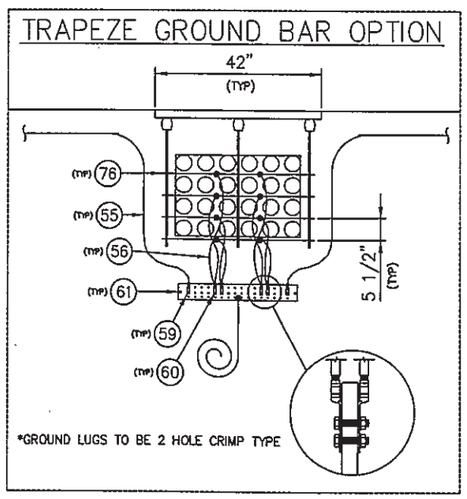
ATTENTION #1: GROUNDING ON GROUND BAR SHOWN ON SIDEWALL FOR REFERENCE ONLY. LOCATE GROUNDING AT ACTUAL LOCATION OF GROUND BAR.
SEE NOTE #9 AND #12
SEE GROUNDING DETAIL #3

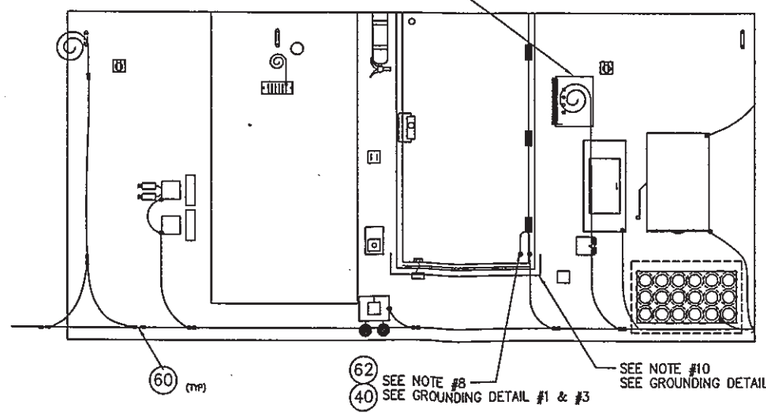
ATTENTION #2: INSTALL GROUND BAR (INTERIOR AND EXTERIOR) IN EQUIPPING
SEE NOTE #7











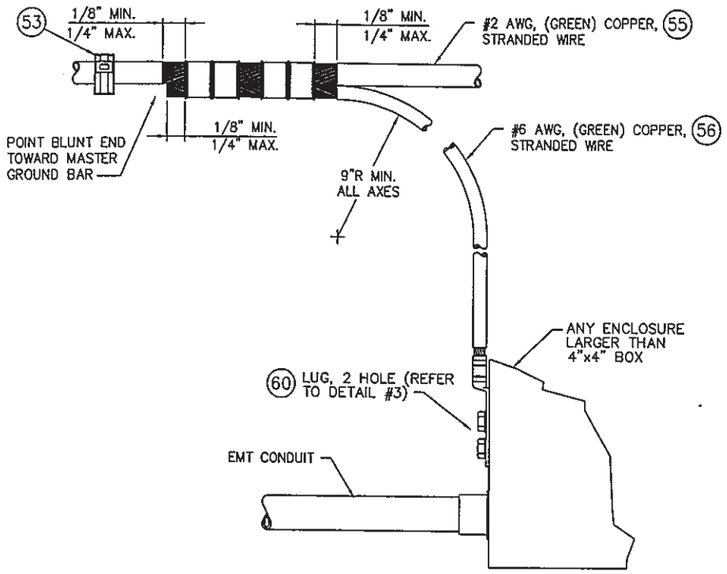
TITLE: GROUNDING LAYOUT
DIAL CALL, INC.
NEXTEL COMMUNICATIONS

SIZE	FCSM NO.	DRAWING NUMBER
B		RCS1020–355T1–95

SCALE	PLOT SCALE	SHEET OF
1/4"=1"–0"	.25=12	4 9

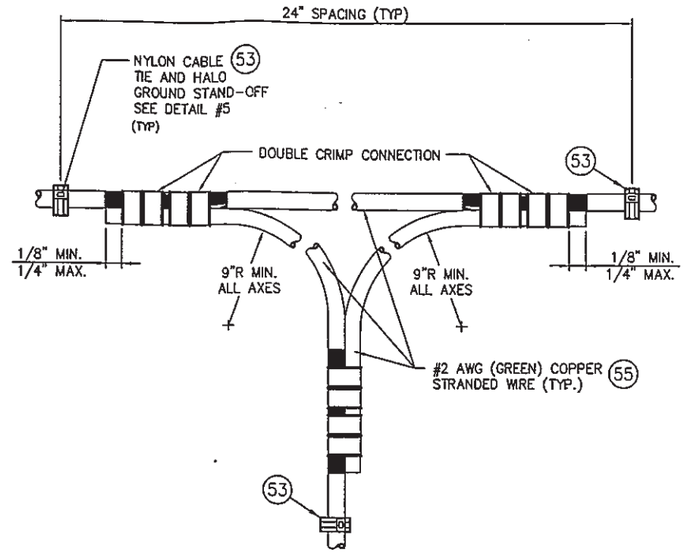
ACAD NO. ER03279C

REVISIONS				
INIT.	REV	DESCRIPTION	DATE	APPROVED
SL	–	RELEASE FOR APPROVAL	3/28/00	
RH	A	MODIFIED PER TASK LIST 100	11/03/00	



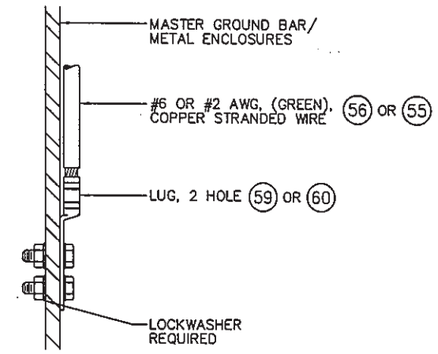
DETAIL #1

#6 STRANDED TO BOX



DETAIL #2

HALO RING OMNI DROP CONNECTIONS

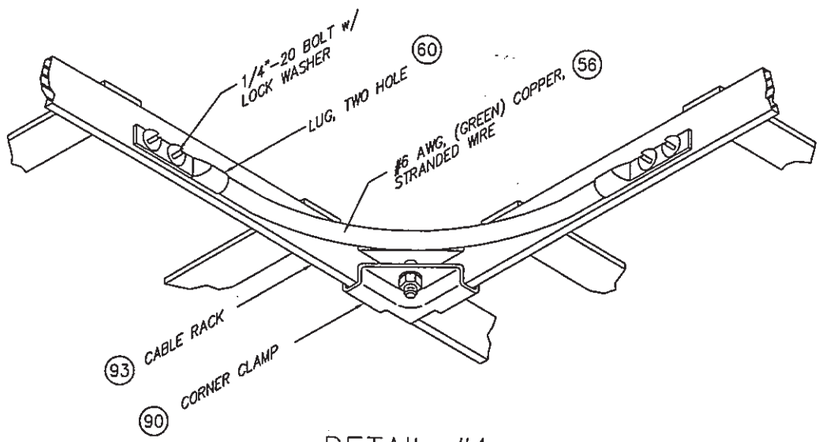


NOTES:

1. CHOOSE BOLT LENGTH TO ALLOW A MIN. OF TWO THREADS EXPOSED.
2. BURNISH MOUNTING SURFACE TO REMOVE PAINT IN THE AREA OF THE LUG.
3. APPLY ANTI-OXIDANT COMPOUND TO MATING SURFACE OF LUG AND WIPE OFF EXCESS COMPOUND

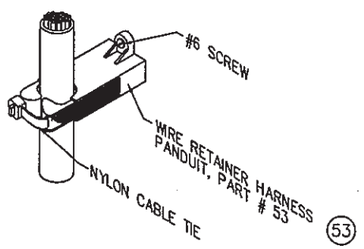
DETAIL #3

#6 OR #2 AWG STRANDED TO A FLAT SURFACE



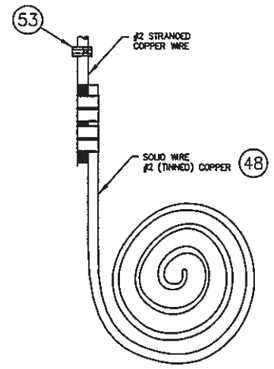
DETAIL #4

#6 AWG STRANDED TO CABLE RACK (ALSO TYPICAL FOR SPLICE CLAMPS)



DETAIL #5

HALO WIRE SUPPORT HARNESS (TYPICAL FOR HALO RING AND DROPS)



DETAIL #6

TYPICAL OMNI DROPS (BOTTOM)

TITLE
HALO GROUNDING DETAILS
DIAL CALL, INC.
NEXTEL COMMUNICATIONS

SIZE	FCSM NO.	DRAWING NUMBER
B		RCS1020-355T1-95
SCALE 1/4"=1"-0"	PLOT SCALE .25=12	SHEET 5 OF 9

ACAD NO. ER03280A

REVISIONS				
INIT.	REV	DESCRIPTION	DATE	APPROVED
SL	–	RELEASE FOR APPROVAL	3/28/00	
DP	A	REMOVE NOT #10 AND ALL REFERENCES TO THE NOTE	09/14/00	
RH	B	MODIFIED PER TASK LIST 100	11/03/00	
DP	C	UPDATE SCHEMATIC PER DEVIATION ANG00-D021	12/14/00	

APPLETON AR20034RS
(367960-72)
FRONT EXTERIOR VIEW OF GENERATOR RECEPTACLE

ALARM NOTES
1. PIGTAIL ALL ALARMS IN 6x6 BOX ON TELCO BOARD
2. ALL ALARM WIRE TO BE 22GA SOLID.
3. ALARMS WILL CLOSE IN ALARM CONDITION. ALARMS ARE NORMALLY OPEN.
4. LABEL INDIVIDUAL ALARMS AS LISTED
5. TAG EACH ALARM WIRE TO IDENTIFY SOURCE CONNECTION.

NOTES:
1. ALL WIRE COLORS FOR #6 AND LARGER SHALL BE MARKED AT 40" INTERVALS MAX.
2. GROUNDING BUSHINGS MUST USE THE SAME SIZE OR LARGER GROUND WIRE AS ON SERVICE ENTRANCE, OR LARGEST SIZE ACCEPTED BY BUSHING.
3. ALL WIRE (UNLESS NOTED OTHERWISE) IS TO BE:
   * #12 AWG.
   * STRANDED.
   * THHN ONLY
   * SOLID, FOR THERMOSTAT (18 GA MIN.).
   * SOLID, FOR ALARM (22 GA MIN.).
4. CONDUIT TO BE EMT OR RIGID UNLESS NOTED. MINIMUM SIZE OF CONDUIT AND FITTINGS IS 1/2" OR AS NOTED. UPSIZING IS PERMITTED. LAYOUT LOCATIONS ARE FOR REFERENCE ONLY AND MAY VARY UNLESS NOTED OTHERWISE.
5. ALL BOXES, LIGHT FIXTURES AND ELECTRICAL EQUIPMENT TO BE +/- 1/2" UNLESS OTHERWISE NOTED. BOXES OR RECEPTACLES 6"x6" OR SMALLER SHALL NOT BE INSTALLED ON PANELLING TRIM.
6. ALL ALARM WIRING INSTALLED BY ANDREW IS ASSUMED TO BE CLASS 1 WIRING PER 1999 NEC 725 UNLESS OTHERWISE SPECIFIED BY THE CUSTOMER AND NOTED ON THESE DRAWINGS.
7. WIRE COLORS ARE AS FOLLOWS:
   * ALL PHASE "A" WIRES ARE TO BE BLACK.
   * ALL PHASE "B" WIRES ARE TO BE RED.
   * ALL PHASE "C" WIRES ARE TO BE BLUE. (IF APPLICABLE)
   * ALL GROUND WIRES ARE TO BE GREEN.
   * ALL NEUTRAL WIRES ARE TO BE WHITE.
   * ALL SWITCHED WIRES ARE TO BE YELLOW.
   * ALL TRAVELER WIRE ARE TO BE ORANGE AND/OR BROWN.
8. AMPACITY RATING TO BE PER TABLE 310-16 (1999 NEC).
9. CONDUIT FILL TO BE PER CHAPTER 9 (1999 NEC).
10. LUG TEMP RATING TO BE 75°C .
11. POWER SUPPLY CONDUCTORS FROM OUTSIDE SERVICE DISCONNECTS PROVIDED BY OTHERS IN ACCORDANCE WITH APPLICABLE CODES AND STANDARDS. IF SUPPLY CONDUCTORS ARE NOT FROM A SERVICE DISCONNECT THAT PROVIDES OVERCURRENT PROTECTION, PLEASE CONTACT ANDREW ENGINEERING.
12. IF GENERATOR SUPPLY CONDUCTORS ARE NOT FROM A SERVICE DISCONNECT THAT PROVIDES OVERCURRENT PROTECTION, PLEASE CONTACT ANDREW ENGINEERING.

SYMBOL LEGEND
- 4"x4" JUNCTION BOX
- 20A 125V SINGLE RECEPT. IN A 4"x4" BOX
- 20A 125V DUPLEX RECEPT. IN A 4"x4" BOX
- 20A 125V DOUBLE DUPLEX RECEPT. IN A 4"x4" BOX
- 20A 250V SINGLE RECEPT. IN A 4"x4" BOX
- 20A 125V SINGLE RECEPT. IN A 2"x4" BOX
- 20A 125V DUPLEX RECEPT. IN A 2"x4" BOX
- 2"x4" JUNCTION BOX
- 15A 120V LIGHT SWITCH IN A 4"x4" BOX
- 2-15A 120V LIGHT SWITCHES IN A 4"x4" BOX
- 15A 120V LIGHT SWITCH IN A 2"x4" BOX
- HINGE COVER BOX (HINGE TO LEFT IS SHOWN)

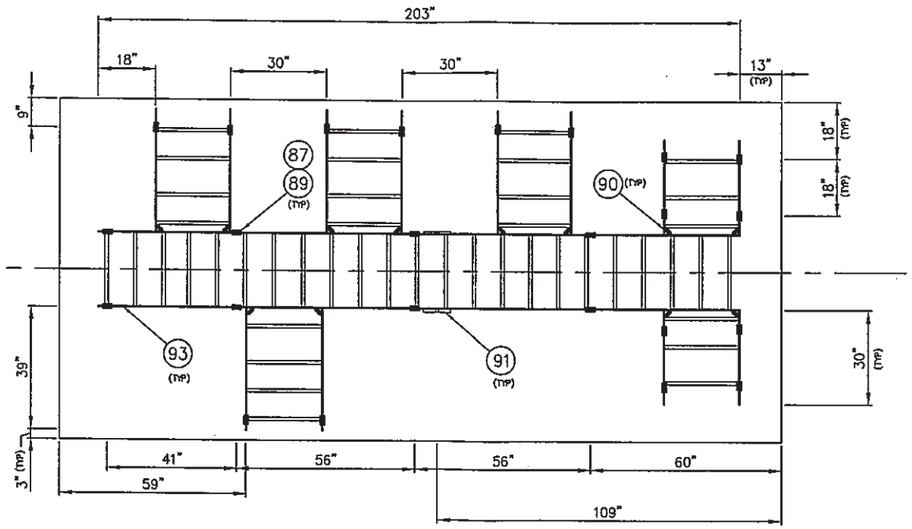
CONTACTS SHOWN W/ COIL ENERGIZED (NORMAL CONDITION)

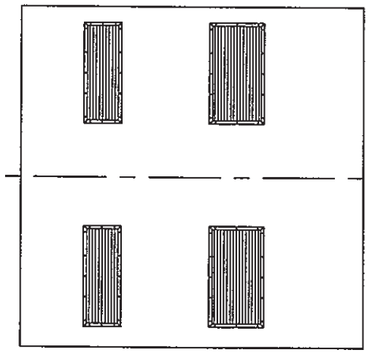
TITLE: ELECTRICAL SCHEMATIC
DIAL CALL, INC./NEXTEL
SIZE: B | FSCM NO. | DRAWING NUMBER: RCS1020-355T1-95
SCALE: 1/4"=1"-0" | PLOT SCALE: .25=12 | SHEET 6 OF 9
ACAD NO. ER03281C

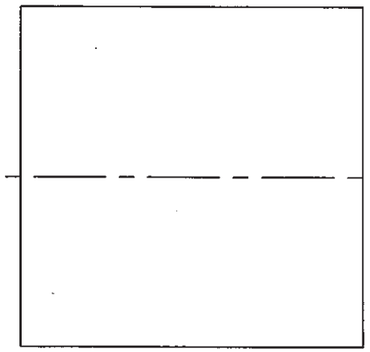
REVISIONS				
INIT.	REV	DESCRIPTION	DATE	APPROVED
SL	–	RELEASE FOR APPROVAL	3/28/00	

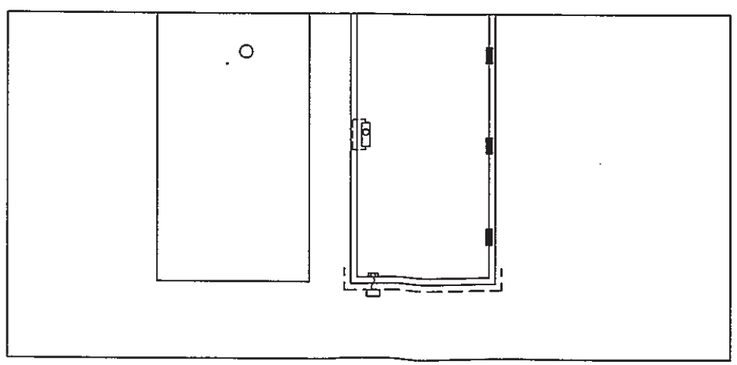
NOTES

1. CABLE LADDER TO CONFORM TO SYS-RCS, SHT 12 OF 18
2. CABLE LADDER TO BE PLACED 90" A.F.F.
3. NO OX TO BE USED AT ALL SPLICES AND TEES.









TITLE
CABLE LADDER LAYOUT
DIAL CALL, INC.
NEXTEL COMMUNICATIONS

SIZE	FCSM NO.	DRAWING NUMBER
B		RSC1020-355T1-95
SCALE	PLOT SCALE	SHEET OF
1/4"=1"-0"	.25=12	7 9

ACAD NO. ER03282

PACK-UP MATERIALS

(IN ADDITION TO ITEMS FROM PACK-UP INSTRUCTIONS)

ITEM	QTY.	U/M	PART NO.	DESCRIPTION
1				
2	1	EA	368024-11	CONCRETE TIE DOWN KIT (4 PLATES)
3				
4	2	EA	367976-76-1	BUFF, VULKEM
5	1	EA	367976-76-2	CAULK, BRONZE VULKEM
6	5	SF	379902-88	TILE (SAME LOT # AS INSTALLED)
7	2	EA	-	FUSES (TO BE PLACED IN LITERATURE HOLDER) (367963-27)
8				
9	2	EA	-	ALARM PUNCH BLOCK COVER (367959-25-1)
10	1	EA	368051-2	PACK-UP BOX (275# FULL OVERLAP) 42"(L)x14"(W)x7"(H)
11				
12	276	FT	FSJ4-50B	SUPER FLEX 1/2", 50 OHM CABLE (SEE NOTE 5)
13	14	EA	F4PNMV2	TYPE N MALE CONNECTOR
14	362	FT	-	DC POWER CABLING (D23170-3)
15	362	FT	-	DC POWER CABLING (D23170-2)
16	125	FT	-	EQUIPMENT GROUNDS (5 RUNS @ 25FT) (367956-8)
17	25	FT	-	MAIN BUSS GROUNDS (367956-123)

PACK-UP INSTRUCTIONS FOR PRE-INSTALLED ITEMS

1) ITEMS BELOW APPLY TO THIS SHIPMENT.

   A) SECURE 6 (QTY.) FLUORESCENT LIGHTS IN PLACE.

   B) REMOVE AND PACK THE FOLLOWING ITEMS WITH HARDWARE:

QTY.	DESCRIPTION
1	EXTERIOR LIGHT (LABEL WIRES)
1	EXTERIOR GROUND BAR(S)
1	DOOR CANOPY WITH GROUNDING STRAP ATTACHED
1	FIRE EXTINGUISHER

   C) SECURE 1 (QTY.) STEEL DOOR(S) WITH DEADBOLT.

   D) INCLUDE EQUIPMENT WARRANTIES AND OTHER PERTINENT INFORMATION IN LITERATURE HOLDER.

   E) INSTALL ANDREW DATA PLATE ON OUTSIDE OF DISTRIBUTION PANEL.

   F) INSTALL THIRD PARTY INSPECTION INSIGNIA ON FRONT OF DISTRIBUTION PANEL (IF APPLICABLE).

   G) INSTALL STATE INSIGNIA WHERE REQUIRED (IF APPLICABLE).

2) DRAWINGS IN DRAWING LIST MARKED WITH AN ASTERISK (*) ARE TO BE INCLUDED IN THE SHELTER PACK-UP MATERIALS.

3) SEAL ALL OPENINGS PRIOR TO SHIPMENT.

4) PLACE ALL PACK-UP MATERIALS AS CLOSE TO DOOR AS POSSIBLE AND SECURE.

REVISIONS					
INIT.	REV	DESCRIPTION	DATE		APPROVED
SL	-	RELEASE FOR APPROVAL	3/28/00	G. BRADSHAW	
SL	A	DELETED ITEM #1 ON PACK-UP BOM	5/16/00	G. BRADSHAW	
SL	B	REVISED ITEM #16 & 17	7/14/00		
RH	C	REMOVE ITEM #9 ALARM PUNCH BLOCK COVER	11/28/00		

DRAWING LIST

SEE NOTE 2	DRAWING NO.	SHEET	SIZE	TITLE OF DRAWING
*	RCS1020-355T1-95	1 OF 9	B	SYSTEM DESIGN DATA
*	RCS1020-355T1-95	1A OF 9	B	EXTERIOR ELEVATIONS
*	RCS1020-355T1-95	2 OF 9	B	BILL OF MATERIAL
*	RCS1020-355T1-95	3 OF 9	B	EQUIPMENT LAYOUT
*	RCS1020-355T1-95	4 OF 9	B	GROUNDING LAYOUT
*	RCS1020-355T1-95	5 OF 9	B	HALO GROUNDING DETAILS
*	RCS1020-355T1-95	6 OF 9	B	ELECTRICAL SCHEMATIC
*	RCS1020-355T1-95	7 OF 9	B	CABLE LADDER LAYOUT
*	RCS1020-355T1-95	8 OF 9	B	SHIPPING/SET-UP INSTRUCTIONS
*	RCS1020-355T1-95	9 OF 9	B	FOUNDATION
*	RCS1020-355T-295	1 THRU 7	B	CASTINGS
*	RCS-FND-001	1 OF 1	B	RCS SLAB FOUNDATION RECOMMENDATION
*	L-001-2	1 OF 1	B	LIFTING DRAWINGS
*	T-001-2	1 OF 1	B	TRANSPORTATION DRAWINGS
*	I-RCS-A	1 OF 1	B	ANGLE PLATE TIE DOWN KIT DRAWING
*	I-RCS-P	1 OF 1	B	ANGLE PLATE TIE DOWN KIT DRAWING
*	-	-	-	PREVENTIVE MAINTENANCE MANUAL
*	RCS-SYS-SHIM	18 OF 18	B	SHIM RECOMMENDATION

FIELD SET-UP INSTRUCTIONS

RESPONSIBLE PARTY			ITEMS CHECKED MUST BE INSTALLED AFTER DELIVERY OF SHELTER. REFER TO OWNER'S MANUALS AND/OR DRAWINGS INDICATED.	REFERENCE ITEM OR DWG#
ANDREW		CUSTOMER		
FIELD CREW	DRVR.			
		X	TIE-DOWN SHELTER TO FOUNDATION	SYS-RCS, SHT 13 OF 18
	X		TRANSPORT SHELTER	T-001-1
X			OFFLOAD SHELTER	L-001-3
X			INSTALL EXTERIOR LIGHT, LENS & BULB	
X			INSTALL DOOR CANOPY W/GROUND STRAP	

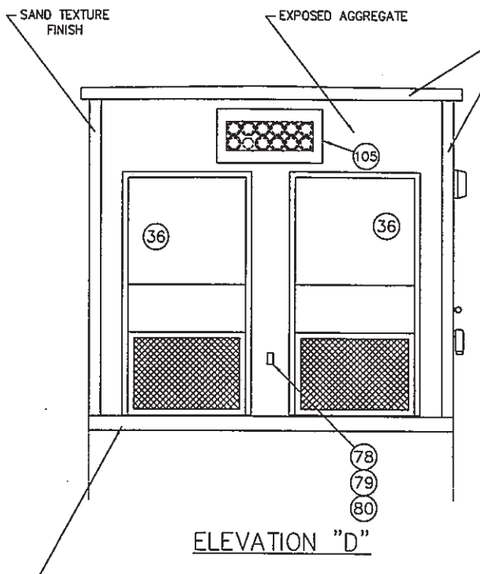
SHIPPING SPECIFICATIONS
BLDG. LENGTH: 22'-0" W/OVERHANGS BLDG. WIDTH: 10'-6" W/OVERHANGS OVERALL BLDG. HEIGHT: 10'-5" APPROX. BLDG. WEIGHT: 35,000 LBS.
OFFLOADING REQUIREMENTS
■ CABLE OFFLOAD: REF. DWG.# L-001-2 FOR CRANE SUPPLIED CABLES, SHACKLES & SPREADER BAR.

TITLE
SHIPPING/SET UP INSTRUCTION
DIAL CALL, INC.
NEXTEL COMMUNICATIONS

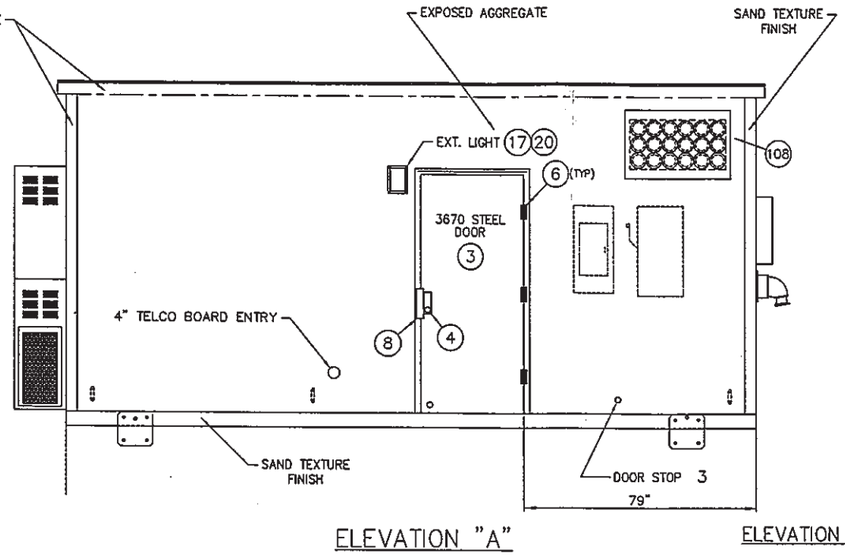
SIZE	FCSM NO.	DRAWING NUMBER
B		RCS1020-355T1-95
SCALE 1/4"=1"-0"	PLOT SCALE .25=12	SHEET 8 OF 9

ACAD NO. ER0328.3C

REVISIONS				
INIT.	REV	DESCRIPTION	DATE	APPROVED
SL	--	RELEASE FOR APPROVAL	3/28/00	



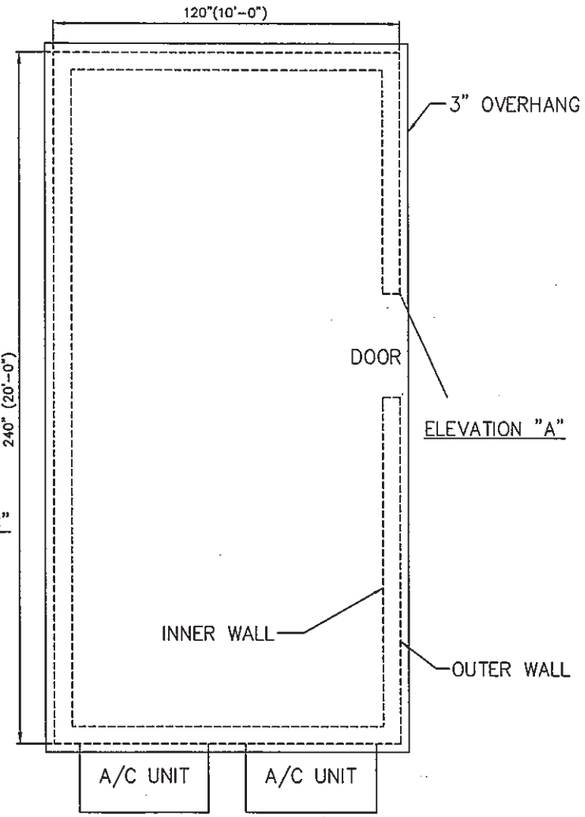
ELEVATION "D"



ELEVATION "A"

ELEVATION "C"

ELEVATION "B"



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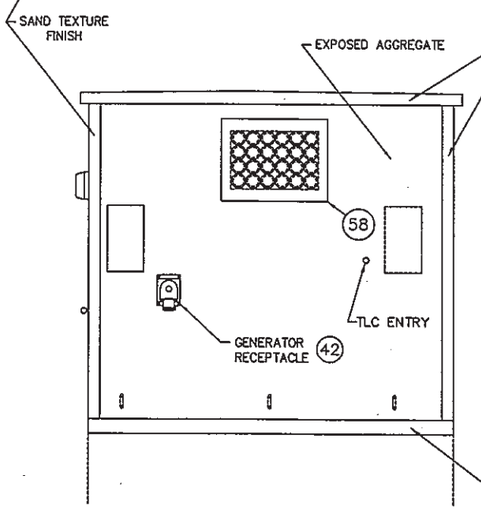

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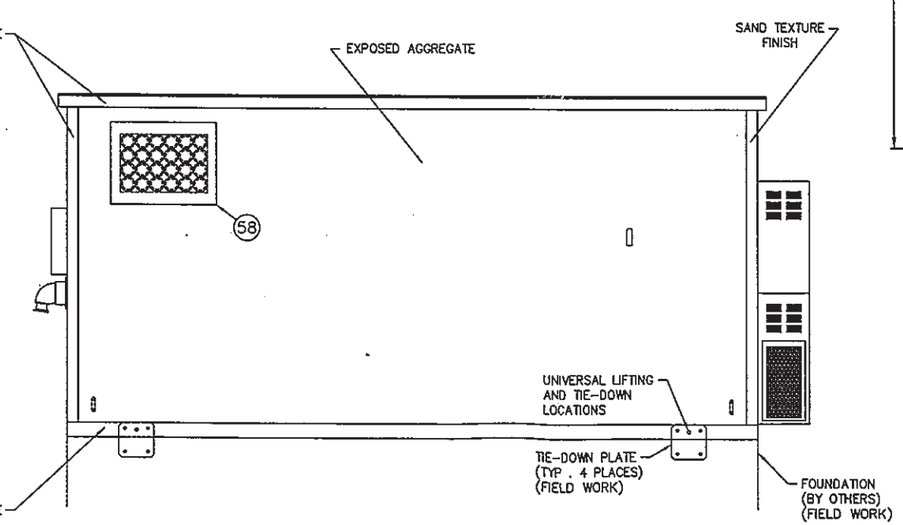
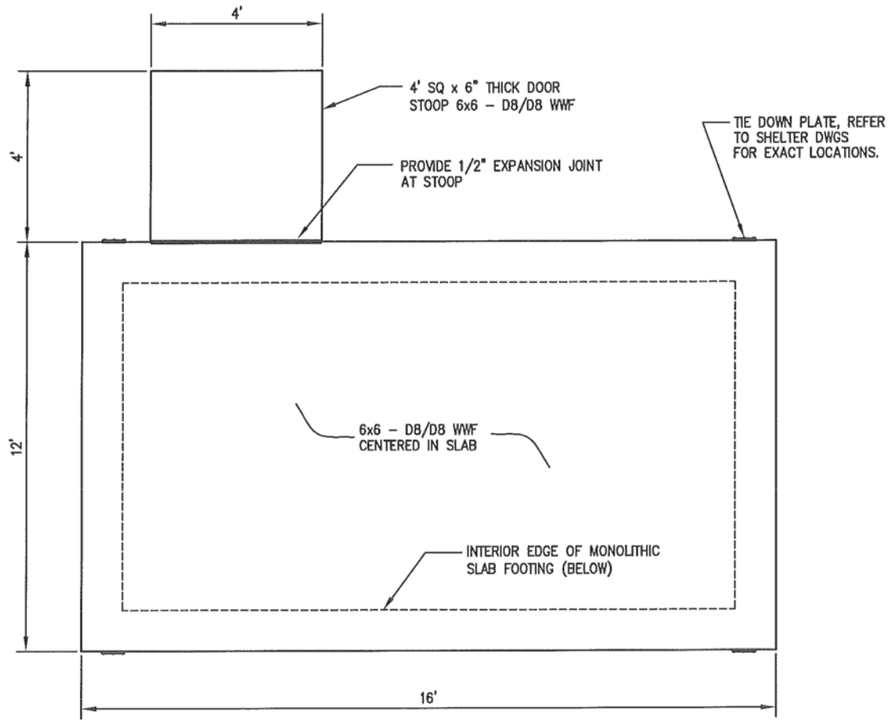


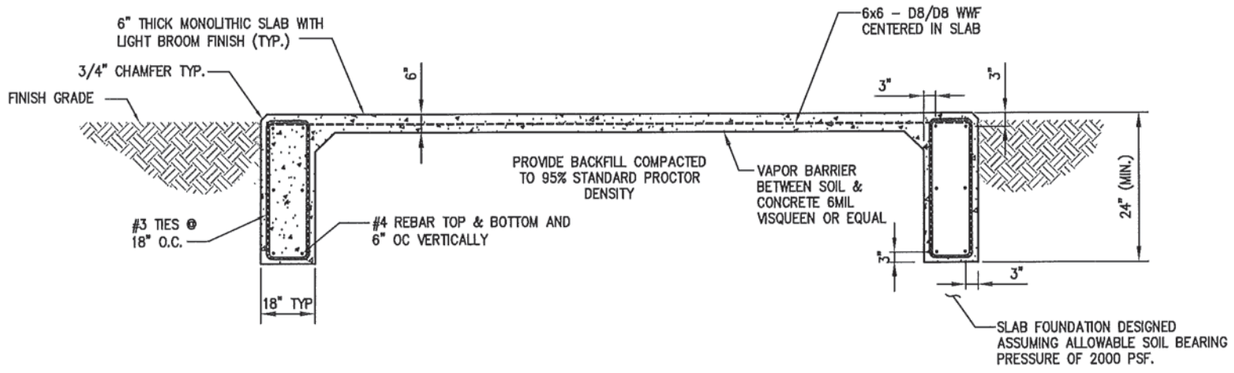
ELEVATION "C"

TITLE
EXTERIOR ELEV./FLOOR PLAN
DIAL CALL, INC.
NEXTEL COMMUNICATIONS

SIZE	FCSM NO.	DRAWING NUMBER	ACAD NO.
B		RCS1020-355T1-95	ER03284
SCALE 1/4"=1'-0"	PLOT SCALE .25=12	SHEET 9 OF 9	



1 MONOLITHIC SLAB DETAIL
SCALE: NOT TO SCALE



2 MONOLITHIC SLAB SECTION
SCALE: NOT TO SCALE

REINFORCED CONCRETE NOTES:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN & CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
2. SITECAST CONCRETE FOR SLABS AND POST FOOTINGS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS. CONCRETE TESTING IS NOT REQUIRED FOR SLABS AND POST FOOTINGS UNLESS NOTED OTHERWISE OR REQUIRED BY THE JURISDICTION HAVING AUTHORITY.

   SLUMP – 4" MIN. / 6" MAX.
   AIR ENTRAINMENT – 2% TO 3% BY VOLUME

   CLASSES OF CONCRETE

CLASS	28 DAY STRENGTH (PSI)	MAX WATER/CEMENT RATIO	PLACEMENT LOCATION	NOTES
TYPE I	3000	0.55	SLABS & POST FOOTINGS	NORMAL WEIGHT
TYPE III *	5000	0.45	SLABS & POST FOOTINGS	HIGH EARLY STRENGTH

   * IF REQUIRED BY THE CONSTRUCTION SCHEDULE THE CONTRACTOR MAY SUBSTITUTE TYPE III HIGH EARLY STRENGTH CONCRETE WITH THE APPROVAL OF THE CONSTRUCTION MANAGER.
3. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES FOR REBAR SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNO. LAPS FOR WELDED WIRE FABRIC SHALL BE AT LEAST 8 INCHES, UNO.
4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:

   CONCRETE CAST AGAINST EARTH.....3"
   CONCRETE EXPOSED TO EARTH OR WEATHER
   #6 AND LARGER.....2"
   #5 AND SMALLER & W.W.F.....1-1/2"
5. MAXIMUM COARSE AGGREGATE SIZE SHALL BE 3/4".
6. MAINTAIN THE TEMPERATURE OF CAST IN PLACE CONCRETE AT BETWEEN 50 AND 90 DEGREES FAHRENHEIT. IF COLDER OR HOTTER CONDITIONS EXIST, THE CONCRETE MIX DESIGN SHALL BE ADJUSTED ACCORDINGLY.
7. DO NOT USE RETEMPERED CONCRETE.
8. INSTALLATION OF CONCRETE ANCHORS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN SPECIFICATIONS. THE ANCHOR BOLT, DOWEL, OR ROD SHALL CONFORM TO THE ANCHOR MANUFACTURER'S SPECIFICATIONS FOR MATERIAL STRENGTH, EMBEDMENT DEPTH, SPACING, AND EDGE DISTANCE OR AS DETAILED ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL WHEN DRILLING HOLES IN CONCRETE. EXPANSION BOLTS SHALL BE PROVIDED BY RAMSET/REDHEAD, HILTI, OR APPROVED EQUAL. IF THE MANUFACTURER'S SPECIFICATIONS AND DETAILS ARE FOUND TO CONFLICT WITH THAT SHOWN HEREIN, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
9. THE CONTRACTOR SHALL VERIFY FROST LINE AND FOOTING DEPTH REQUIREMENTS WITH THE JURISDICTION HAVING AUTHORITY PRIOR TO CONSTRUCTION.

EQUIPMENT SHELTER FOUNDATION DETAIL

GROUNDING NOTES

1. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION, AND AC POWER GES'S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.

2. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS. TESTING SHALL BE IN ACCORDANCE WITH SPECIFICATION 24782-000-3PS-EG00-00001. USE OF OTHER METHODS MUST BE PRE-APPROVED BY CONTRACTOR IN WRITING.

3. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS. WHEN ADDING ELECTRODES, CONTRACTOR SHALL MAINTAIN A MINIMUM DISTANCE BETWEEN THE ADDED ELECTRODE AND ANY OTHER EXISTING ELECTRODE EQUAL TO THE BURIED LENGTH OF THE ROD. IDEALLY, CONTRACTOR SHALL STRIVE TO KEEP THE SEPARATION DISTANCE EQUAL TO TWICE THE BURIED LENGTH OF THE RODS.

4. THE SUBCONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT.

5. METAL CONDUIT AND TRAY SHALL BE GROUNDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 AWG COPPER WIRE AND UL APPROVED GROUNDING TYPE CONDUIT CLAMPS PER NEC AND AT&T ND-00071.

6. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.

7. CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED. BACK-TO-BACK CONNECTIONS ON OPPOSITE SIDES OF THE GROUND BUS ARE PERMITTED.

8. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.

9. USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED. IN ALL CASES, BENDS SHALL BE MADE WITH A MINIMUM BEND RADIUS OF 8 INCHES.

10. EACH INTERIOR BTS CABINET FRAME/PLINTH SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH #2 AWG STRANDED, GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES. EACH OUTDOOR CABINET FRAME/PLINTH SHALL BE DIRECTLY CONNECTED TO THE BURIED GROUND RING WITH # 2 AWG SOLID TIN-PLATED COPPER WIRE.

11. ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING, SHALL BE #2 AWG SOLID TIN-PLATED COPPER UNLESS OTHERWISE INDICATED.

12. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE. CONNECTIONS TO ABOVE GRADE EXTERIOR UNITS SHALL BE MADE WITH EXOTHERMIC WELDS WHERE PRACTICAL OR WITH 2 HOLE MECHANICAL TYPE BRASS CONNECTORS WITH STAINLESS STEEL HARDWARE, INCLUDING SET SCREWS. HIGH PRESSURE CRIMP CONNECTORS MAY ONLY BE USED WITH WRITTEN PERMISSION FROM MOTOROLA MARKET REPRESENTATIVE.

13. EXOTHERMIC WELDS SHALL BE PERMITTED ON TOWERS ONLY WITH THE EXPRESS APPROVAL OF THE TOWER MANUFACTURER OR THE CONTRACTORS STRUCTURAL ENGINEER.

14. ALL WIRE TO WIRE GROUND CONNECTIONS TO THE INTERIOR GROUND RING SHALL BE FORMED USING HIGH PRESS CRIMPS OR SPLIT BOLT CONNECTORS WHERE INDICATED IN THE DETAILS.

15. ON ROOFTOP SITES WHERE EXOTHERMIC WELDS ARE A FIRE HAZARD COPPER COMPRESSION CAP CONNECTORS MAY BE USED FOR WIRE TO WIRE CONNECTORS. 2 HOLE MECHANICAL TYPE BRASS CONNECTORS WITH STAINLESS STEEL HARDWARE, INCLUDING SET SCREWS SHALL BE USED FOR CONNECTION TO ALL ROOFTOP BTS EQUIPMENT AND STRUCTURAL STEEL.

16. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR USING TWO HOLED MECHANICAL TYPE BRASS CONNECTORS AND STAINLESS STEEL HARDWARE.

17. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.

18. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.

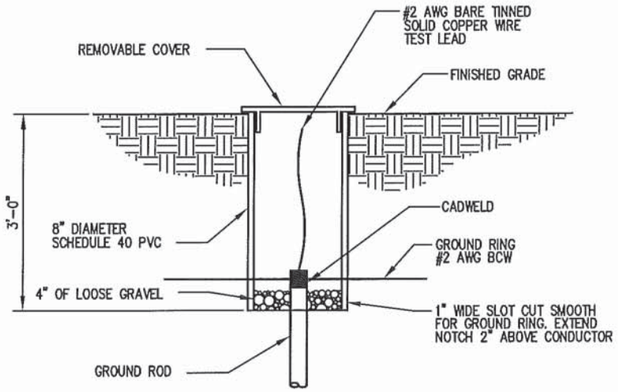
19. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.

20. BOND ALL METALLIC OBJECTS WITHIN 6 FT OF THE BURIED GROUND RING WITH # 2 SOLID AWG TIN-PLATED COPPER GROUND CONDUCTOR.

21. GROUND CONDUCTORS USED IN THE FACILITY GROUND AND LIGHTNING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES THROUGH WALLS OR FLOORS. WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON-METALLIC MATERIAL SUCH AS PVC PLASTIC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (E.G., NON-METALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT WITH LISTED BONDING FITTINGS.

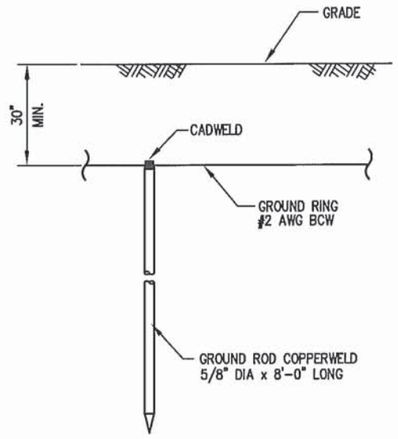
22. GROUND ALL RF EQUIPMENT INCLUDING BUT NOT LIMITED TO COAX, DIPLEXERS, SURGE ARRESTORS, TMA's, ANTENNAS, & ANTENNA MASTS PER NEC.

GROUNDING NOTES



GROUND ROD INSPECTION WELL

NOT TO SCALE



GROUND ROD DETAIL

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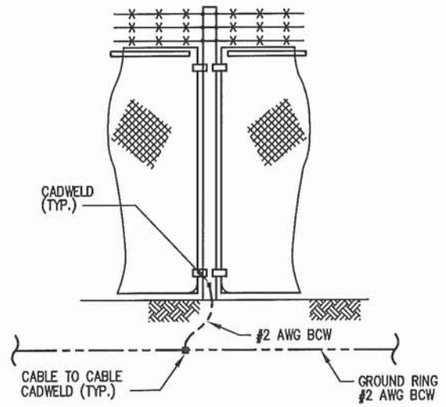

FENCE GROUNDING

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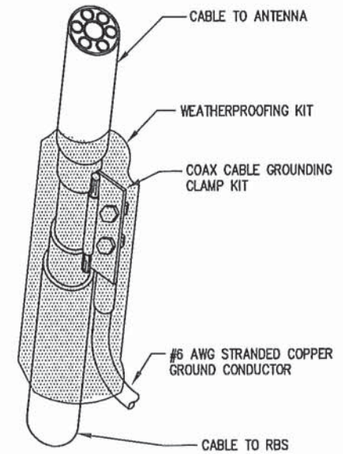
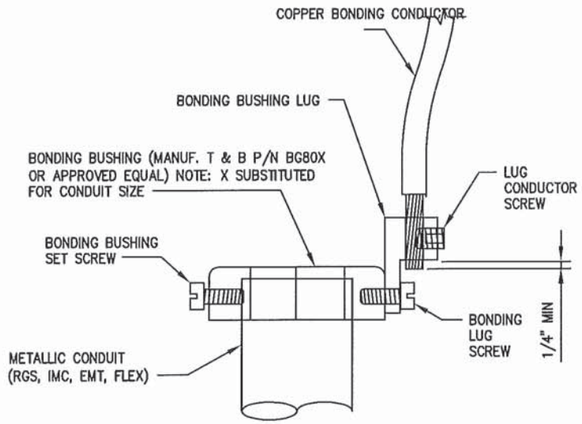


NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND.
2. ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR
3. GROUNDING KIT & WEATHER PROOFING KIT SHALL BE TYPE & PART # AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.

COAX CABLE GROUND KIT

NOT TO SCALE

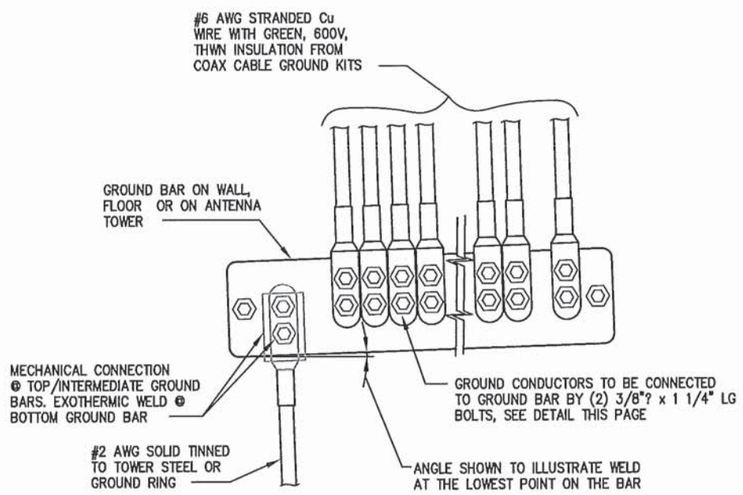


DIRECTIONS:
1. MOUNT BONDING BUSHING ONTO CONDUIT
2. TIGHTEN BOND BUSHING SET SCREW
3. INSERT COPPER CONDUCTOR INTO LUG
4. TIGHTEN LUG CONDUCTOR SCREW
5. TIGHTEN BONDING LUG SCREW

NOTE: BONDING BUSHING, SET SCREW, LUG, LUG SCREW, COND. LUG SCREW, SHOWN AS COMPLETE UNIT.

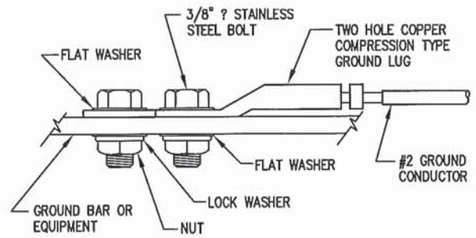
CONDUIT BOND/GROUND BUSHING

NTS



INSTALLATION OF GROUND WIRE TO COAX CABLE GROUND BAR

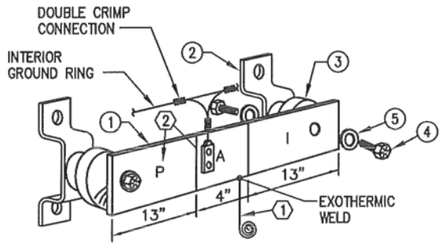
NTS



MECHANICAL GROUND CONNECTION

NOT TO SCALE

NEWTON INSTRUMENT COMPANY, INC. BUTNER, N.C.			
NO.	REQ.	PART NO.	DESCRIPTION
①	1	1/4"x4"x30"	SOLID GND. BAR
②	2	A-6056	WALL MTG. BRKT.
③	2	3061-4	INSULATORS
④	4	3012-1	5/8"-11x1" H.H.C.S.
⑤	4	3015-8	5/8 LOCKWASHER



EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

SECTION "P" – SURGE PROTECTORS

CABLE ENTRY PORTS (HATCH PLATES) (#2)
GENERATOR FRAMEWORK (IF AVAILABLE) (#2)
TELCO GROUND BAR (#2)
COMMERCIAL POWER COMMON NEUTRAL/GROUND BOND (#2)
+24V POWER SUPPLY RETURN BAR (#2)
-48V POWER SUPPLY RETURN BAR (#2)
RECTIFIER FRAMES.
COAX SUPPRESSION

SECTION "A" – SURGE ABSORBERS

INTERIOR GROUND RING (#2)
EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING) (#2)
METALLIC COLD WATER PIPE (IF AVAILABLE) (#2)
BUILDING STEEL (IF AVAILABLE) (#2)

SECTION "I" – ISOLATED GROUND ZONE

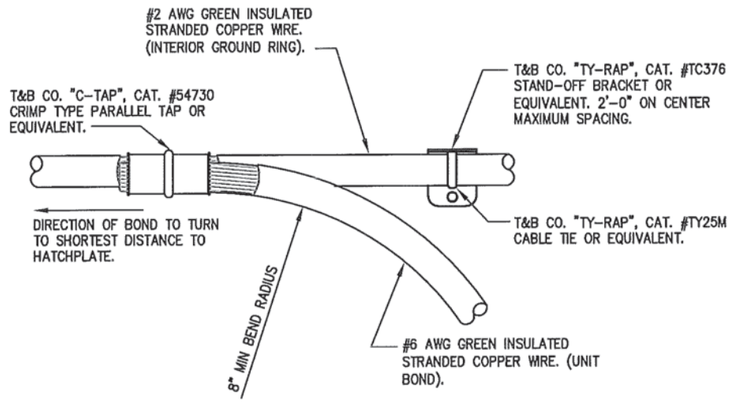
ALL COMMUNICATIONS EQUIPMENT FRAMES.
ISOLATED GROUND BAR – IGB (#2)

DETAIL NOTES: ⬡

1. EXOTHERMICALLY WELD #2 AWG BARE TINNED SOLID COPPER CONDUCTOR TO GROUND BAR. ROUTE CONDUCTOR TO BURIED GROUND RING AND PROVIDE PARALLEL EXOTHERMIC WELD.
2. USE PERMANENT MARKER TO DRAW THE LINES BETWEEN EACH SECTION AND LABEL EACH SECTION ("P", "A", "I") WITH 1" HIGH LETTERS.

(RGB) REFERNECE GROUND BAR DETAIL

NTS



HALO GROUND RING WALL SUPPORT AND C-TAP DETAIL

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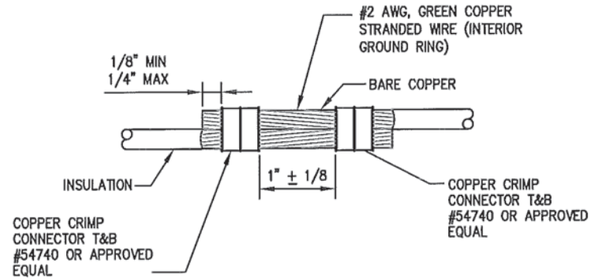

HALO GROUND RING SPLICE DETAIL

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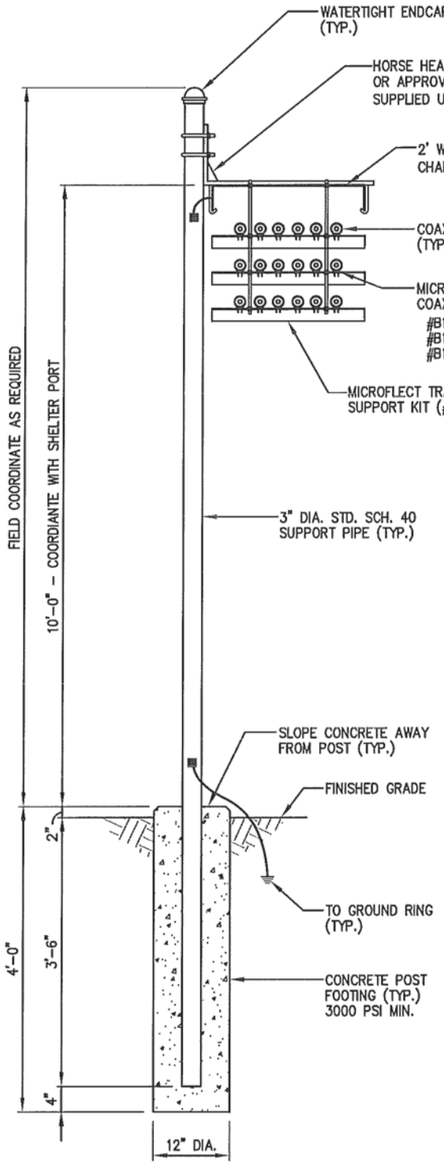
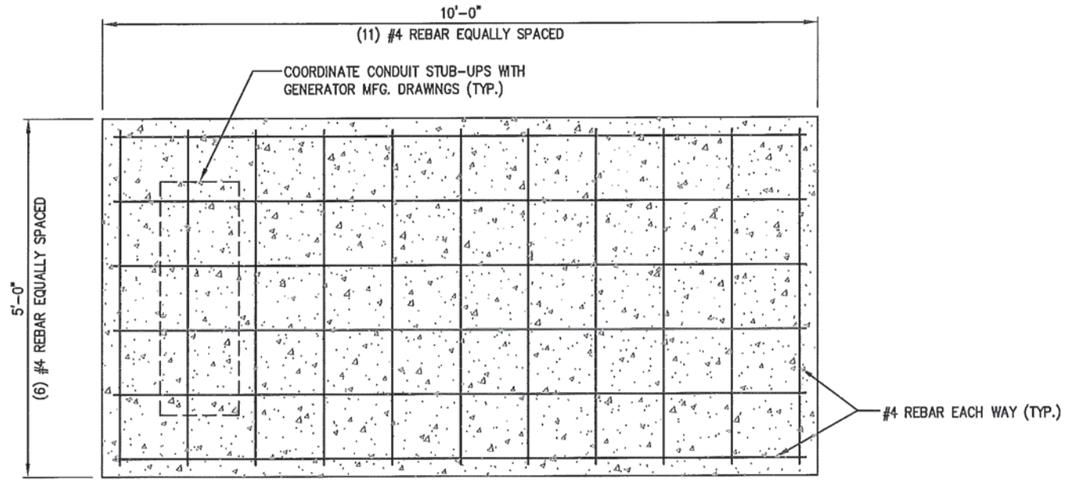
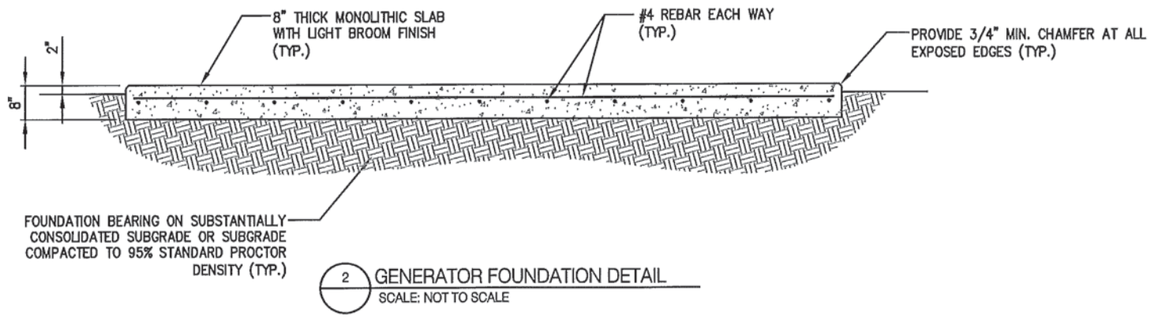


1 24' ELEVATED ICE BRIDGE SECTION (WITH SINGLE SUPPORT POST)
SCALE: NOT TO SCALE





2 GENERATOR FOUNDATION DETAIL
SCALE: NOT TO SCALE

NOTE: PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL COORDINATE THE GENERATOR AND/OR LP TANK MODELS WITH THE FOUNDATION DETAILS SHOWN HEREIN TO ENSURE COMPLIANCE WITH THE MANUFACTURER'S DETAILS AND SPECIFICATIONS. PAD SIZES MAY BE ADJUSTED AS NEEDED. WWF MAY BE USED IN LIEU OF REBAR WITH APPROVAL OF MOTOROLA CONSTRUCTION MANAGER OR OWNER'S REPRESENTATIVE. CONSULT THE ENGINEER WITH ANY ISSUES THAT CANNOT BE REASONABLY RESOLVED IN THE FIELD.

ICE BRIDGE AND GENERATOR FOUNDATION DETAIL