GENERAL NOTES

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
   CONTRACTOR – BECHTEL
   SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
   OWNER – AT&T WIRELESS SERVICES.
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.

   ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
4. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
6. "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR.
7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR.
9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.
10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
13. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.
14. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS. ALL CONCRETING WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.
15. ALL STRUCTURAL STEEL WORK SHALL BE DONE IN ACCORDANCE WITH AISC SPECIFICATIONS.
16. CONSTRUCTION SHALL COMPLY WITH SPECIFICATION 24623-033-3APS-A00Z-00002, "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF AWS SITES."
17. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
18. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.
19. SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.

DETAIL 300 —

PROJECT INFORMATION

SCOPE OF WORK:	UNMANNED TELECOMMUNICATIONS FACILITY MODIFICATIONS
SITE ADDRESS:	PRESUMSCOT STREET PORTLAND, ME
LATITUDE:	43.6996°
LONGITUDE:	–70.2585°
JURISDICTION:	CITY OF PORTLAND
COUNTY NAME:	CUMBERLAND, ME
CURRENT USE:	TELECOMMUNICATIONS FACILITY
PROPOSED USE:	TELECOMMUNICATIONS FACILITY

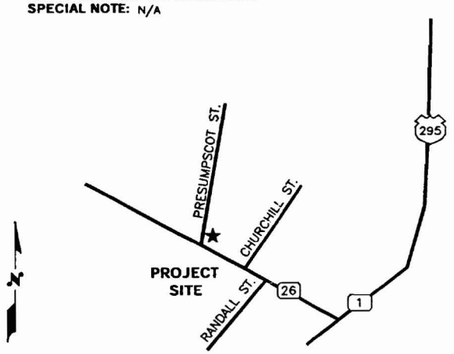
DRAWING INDEX

SITE TYPE

MONOPOLE WITH OUTDOOR EQUIPMENT ON GROUND

VICINITY MAP

DIRECTION: FROM I-95 EXIT 8, TAKE LEFT AT LIGHT ONTO RIVERSIDE. AT FIRST LIGHT TAKE A LEFT ONTO BRIGHTON AVE. APPROXIMATELY 1.5 MILES TAKE A LEFT ON STEVENS AVE. FOR 1 MI, TAKE A RIGHT ON WALTON ST. FOR 7/10 MI, TAKE A LEFT ON OCEAN AVE AND CROSSING WASHINGTON AVE. (RT. 26) FOR A TOTAL OF 2 MI TO INTERSECTION WITH PRESUMPSCOT ST. THE SITE IS RIGHT OFF THE INTERSECTION.
SPECIAL NOTE: N/A



STRUCTURAL NOTES

REFER TO STRUCTURAL ANALYSIS BY OTHERS IF APPLICABLE.

AT&T

AT&T WIRELESS

AWS SITE NO: PTLDME 5022
SITE NAME: EAST DEERING

APPLICABLE BUILDING CODES AND STANDARDS

SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.
BUILDING CODE:
BOCA NATIONAL BUILDING CODE 1999
ELECTRICAL CODE:
NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 70 – 99SB, NATIONAL ELECTRICAL CODE
LIGHTNING PROTECTION CODE:
NFPA 780 – 1997, LIGHTNING PROTECTION CODE
SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS.
AMERICAN CONCRETE INSTITUTE (ACI) 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MANUAL OF STEEL CONSTRUCTION, ASD, NINTH EDITION
TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-F, STRUCTURAL STANDARD FOR STRUCTURAL ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES
INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) 81, GUIDE FOR MEASURING EARTH RESISTIVITY, GROUND IMPEDANCE, AND EARTH SURFACE POTENTIALS OF A GROUND SYSTEM
IEEE 1100 (1999) RECOMMENDED PRACTICE FOR POWERING AND GROUNDING OF ELECTRONIC EQUIPMENT
IEEE C62.41, RECOMMENDED PRACTICES ON SURGE VOLTAGES IN LOW VOLTAGE AC POWER CIRCUITS (FOR LOCATION CATEGORY "C3" AND "HIGH SYSTEM EXPOSURE")
TIA 607 COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS
TELCORDIA GR-1503 COAXIAL CABLE CONNECTIONS
FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

DETAIL 303 BOS

STATE OF MAINE
TRICHUR A. VENKATARAMAN
No. 9943
REGISTERED PROFESSIONAL ENGINEER

Status	DOCUMENT REVIEW STATUS
1	Issue for Use
2	Receive Comments
3	Resubmit Rev.:

Review does not constitute acceptance or approval of design detail, calculations, analysis, test methods or materials developed or selected by the supplier. It also does not relieve the supplier from fully complying with contractual obligations.

Reviewed By: / Date:	Eng					

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EAST DEERING
SITE NO. PTLDME 5022
PRESUMPSCOT STREET
PORTLAND, ME

AT&T
AT&T WIRELESS SERVICES, INC.
400 BLUE HILL DRIVE, SUITE 100
WESTWOOD, MA 02090

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	02/19/04	ANTENNA CONFIGURATION CHANGES	EXT		
0	01/19/04	ISSUED FOR CONSTRUCTION	JX		

SCALE: AS SHOWN | DESIGNED BY: JX | DRAWN BY: JX

AT&T WIRELESS
TITLE SHEET
EAST DEERING
DRAWING NUMBER: 5022-01 | REV: 1

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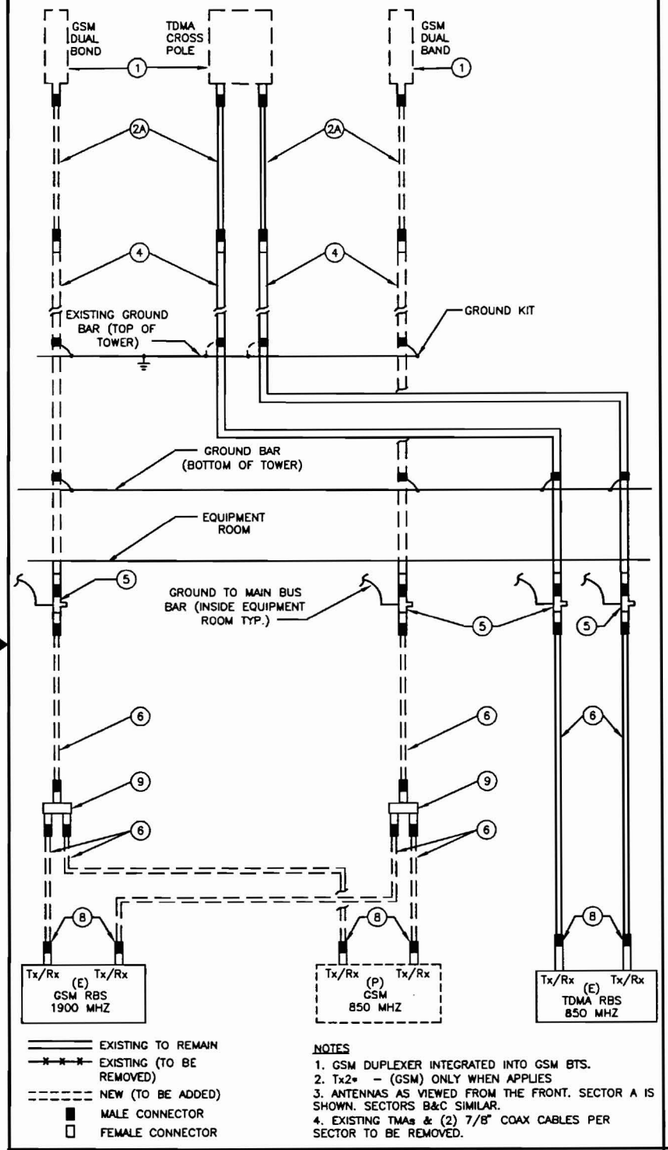

NOTES

1. GSM DUPLEXER INTEGRATED INTO GSM BTS.
2. Tx2∘ – (GSM) ONLY WHEN APPLIES
3. ANTENNAS AS VIEWED FROM THE FRONT. SECTOR A IS SHOWN. SECTORS B&C SIMILAR.
4. EXISTING TMAs & (2) 7/8" COAX CABLES PER SECTOR TO BE REMOVED.

ANTENNA CONFIGURATION, SECTORS: A, B & C

ITEM NO.	ITEM DESCRIPTION	SYS.	ALPHA SECTOR – A AZIMUTH 30°				ALPHA SECTOR – B AZIMUTH 150°				ALPHA SECTOR – C AZIMUTH 270°				TOTAL QUANTITY	SUPPLIED BY
		TDMA	——	TX/RX		——	——	TX/RX		——	——	TX/RX		——		
		GSM	TX/RX	——		TX/RX	TX/RX	——		TX/RX	TX/RX	——		TX/RX		
1	ANTENNA		7334.00 ALLGON 11.5	7391.00 ALLGON 13.5		7334.00 ALLGON 11.5	7334.00 ALLGON 11.5	7391.00 ALLGON 13.5		7334.00 ALLGON 11.5	7334.00 ALLGON 11.5	7391.00 ALLGON 13.5		7334.00 ALLGON 11.5	9	BECHTEL
	MECHANICAL DOWNTILT		–4°	–4°		–4°	–4°	–4°		–4°	–4°	–4°		–4°	——	——
2A	ANTENNA JUMPER L4A-PDMDM-3 (ANDREW)		1	USE EXISTING	USE EXISTING	1	1	USE EXISTING	USE EXISTING	1	1	USE EXISTING	USE EXISTING	1	6	BECHTEL
3	TMA KRY-112-71/2		——	——	——	——	——	——	——	——	——	——	——	——	——	BECHTEL
4	MAIN COAX 1 5/8"		181 FT	USE EXISTING	USE EXISTING	181 FT	181 FT	USE EXISTING	USE EXISTING	181 FT	181 FT	USE EXISTING	USE EXISTING	181 FT	1086 FT	BECHTEL
5	COAX SURGE ARRESTOR (ANDREW) (SEE NOTES 1 & 2)		1	USE EXISTING	USE EXISTING	1	1	USE EXISTING	USE EXISTING	1	1	USE EXISTING	USE EXISTING	1	6	BECHTEL
6	JUMPER FSJ4-50B (ANDREW) (SEE NOTES 3,4,5 & 6)		3	USE EXISTING	USE EXISTING	3	3	USE EXISTING	USE EXISTING	3	3	USE EXISTING	USE EXISTING	3	18	BECHTEL
7	ANTENNA SHARING KIT (ERICSSON) (SEE NOTE 7)		——				——				——				——	BECHTEL
8	UNATTACHED DIN CONNECTOR F4PDMV2-C (ANDREW)		2	USE EXISTING	USE EXISTING	2	2	USE EXISTING	USE EXISTING	2	2	USE EXISTING	USE EXISTING	2	12	BECHTEL
9	DIPLEXER AFD41A8020-13		1	——		1	1	——	——	1	1	——	——	1	6	BECHTEL
	ID TAG (SEE NOTES 4, 5 & 6)		ALPHA (A1)	ALPHA (A2)		ALPHA (A4)	ALPHA (A1)	ALPHA (A2)		ALPHA (A3)	ALPHA (A1)	ALPHA (A2)		ALPHA (A3)	AS REQUIRED	G.C.
	COLOR CODE		SEE NOTES 4, 5 & 6				SEE NOTES 4, 5 & 6				SEE NOTES 4, 5 & 6				AS REQUIRED	G.C.

NOTES:

1. EXISTING SURGE ARRESTORS MUST PASS 25 VOLT DC TEST. IF IT FAILS THE TEST, THEN REMOVE AND DO NOT REPLACE SURGE ARRESTOR.
2. CABLE SHIELDS, AND TOWER CONDUITS SHALL BE GROUNDED AT THE TOP OF THE TOWER, WITHIN 10 FEET OF THEIR CONNECTORS, AND AT THE BOTTOM OF THE TOWER ABOUT 6 INCHES BEFORE THEY TURN TOWARD THE FACILITY. THEY SHALL BE GROUNDED AT THE MIDPOINT OF TOWERS THAT ARE BETWEEN 150 FEET AND 300 FEET HIGH, AND AT INTERVALS OF 150 FEET OR LESS ON TOWERS THAT ARE HIGHER THAN 300 FEET.
3. SUBCONTRACTOR SHALL VERIFY THE REQUIRED LENGTH IN FIELD BEFORE CUTTING THE JUMPER AND ATTACHING THE UNATTACHED CONNECTORS.
4. FOLLOW THE EXISTING SCHEME FOR COLOR CODING AND CABLE TAGGING NEW JUMPERS WHEN ALL OF THE FOLLOWING CONDITIONS ARE MET:
   - EXISTING ANTENNAS AND/OR TOP JUMPERS ARE NOT MODIFIED OR REPLACED
   - NO WORK OF ANY KIND IS PERFORMED AT OR NEAR THE ANTENNA END(S) OF EXISTING MAIN FEEDLINE(S)
   - NO WORK IS PERFORMED ON EXISTING MAIN FEEDLINE COMPONENTS SUCH AS CONNECTORS, GROUND KITS, CABLE SUPPORTS, WEATHERPROOFING, ETC
5. FOLLOW STANDARD DETAIL 600 AND THE AWS DOCUMENT NO. WNS-00217, REVISION 1.2, TOWER/ANTENNA CABLE MARKING GUIDELINE FOR COLOR CODING AND TAGGING ALL (TDMA AND GSM) COAX CABLES WHEN ANY OF THE FOLLOWING CONDITIONS ARE MET:
   - EXISTING ANTENNAS ARE MODIFIED OR REPLACED
   - WORK OF ANY KIND IS PERFORMED AT OR NEAR THE ANTENNA END(S) OF EXISTING MAIN FEEDLINE(S).
   - MAIN FEEDLINE COMPONENTS SUCH AS CONNECTORS, GROUND KITS, CABLE SUPPORTS, WEATHERPROOFING, ETC. ARE INSTALLED, MODIFIED OR REPLACED.
6. COMPLETE A CABLE PORT DIAGRAM PER DETAIL 601 AND POST ONE COMPLETED COPY AND TWO BLANK COPIES OF THE DIAGRAM IN A PROTECTIVE PLASTIC SLEEVE IN THE SHELTER.
7. USE THE REQUIRED LENGTH OF JUMPERS DEPENDING UPON FIELD CONDITIONS. THE END CONNECTIONS WILL BE MADE BY ERICSSON.
8. WHEN MODIFYING EXISTING 2G TDMA COAXIAL CABLES AND ANTENNAS, REMOVE ALL EXISTING N TYPE CONNECTORS AND REPLACE WITH NEW 7/16 DIN STANDARD CONNECTORS.
9. ANTENNA CIRCUIT SWEEP TESTING SHALL BE PERFORMED AND REPORTED IN ACCORDANCE WITH THE REQUIREMENTS OF AWS PROCEDURE DOCUMENT NO. WNS-00284, LATEST REVISION. CONTRACTOR WILL NOT ACCEPT A RADIO SIGNAL CABLE INSTALLATION WITH UNSATISFACTORY SWEEP TEST RESULTS.
10. PROPOSED GSM 850 OVERLAY 1 5/8" CABLES TO BE ROUTED IN PLACE OF EXISTING 7/8" COAX CABLES FROM THE ANTENNAS DOWN THE ICE BRIDGE TO PROPOSED ERICSSON GSM CABINET.

DETAIL 505/BOS

STATE OF MAINE
TRICHUR A. VENKATARAMAN
No. 9943
REGISTERED PROFESSIONAL ENGINEER

RF BILL OF MATERIALS

BAY STATE DESIGN
Bay State Design Associates, Inc.
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0	01/19/04	ISSUED FOR CONSTRUCTION	JX		

SCALE: AS SHOWN | DESIGNED BY: JX | DRAWN BY: JX

AT&T WIRELESS

ANTENNA SCHEMATIC & BILL OF MATERIALS
EAST DEERING

DRAWING NUMBER: 5022-07 | REV: 1

CONCRETE AND REINFORCING STEEL NOTES:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE.
3. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNO.
4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:

   CONCRETE CAST AGAINST EARTH.....3 IN.
   CONCRETE EXPOSED TO EARTH OR WEATHER:

   #6 AND LARGER .....2 IN.
   #5 AND SMALLER & WWF.....1 1/2 IN.

   CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:

   SLAB AND WALL .....3/4 IN.
   BEAMS AND COLUMNS.....1 1/2 IN.

5. A CHAMFER 3/4" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
6. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN 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 OR APPROVED EQUAL.

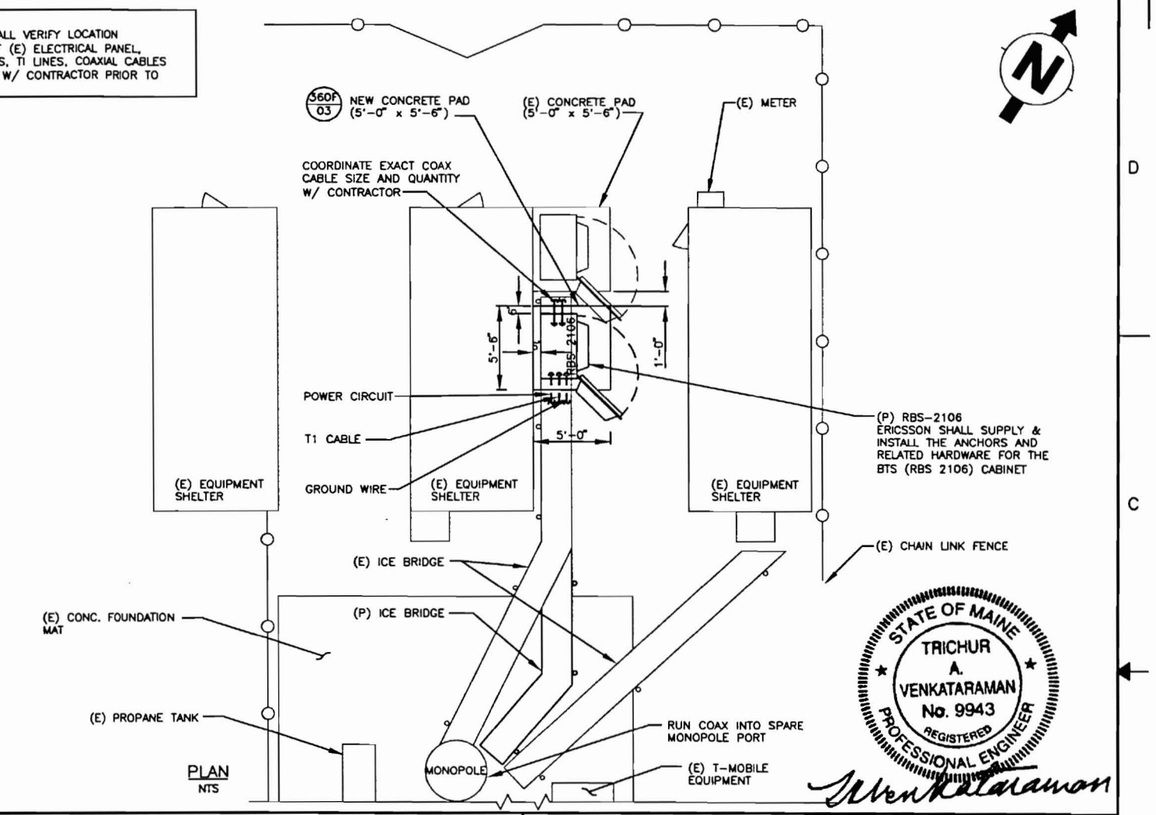
CONCRETE AND REINFORCING STEEL NOTES (302/-)

GENERAL NOTES FOR EXISTING AWS CELL SITES

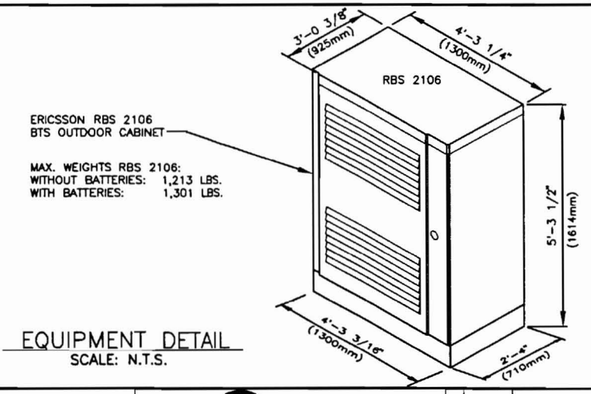
1. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.
2. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
3. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.
4. SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.
5. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.
6. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.

DETAIL NTS (300A/-)

NOTE:
SUBCONTRACTOR SHALL VERIFY LOCATION AND ORIENTATION OF (E) ELECTRICAL PANEL, ELECTRICAL CONDUITS, T1 LINES, COAXIAL CABLES & GROUNDING WIRE W/ CONTRACTOR PRIOR TO INSTALLATION.



PLAN
NTS



EQUIPMENT DETAIL
SCALE: N.T.S.

CONSTRUCTION NOTES

1. FIELD VERIFICATION:
   SUBCONTRACTOR SHALL FIELD VERIFY SCOPE OF WORK, AT&T ANTENNA PLATFORM LOCATION AND ANTENNAS TO BE REPLACED.
2. COORDINATION OF WORK:
   SUBCONTRACTOR SHOULD COORDINATE RF WORK AND PROCEDURES WITH CONTRACTOR.
3. CABLE LADDER RACK:
   SUBCONTRACTOR SHALL FURNISH AND INSTALL CABLE LADDER RACK, CABLE TRAY, ICE BRIDGES AND CONDUIT AS REQUIRED TO SUPPORT CABLES TO THE NEW BTS LOCATION.
4. ALL COAXIAL CABLES, POWER CIRCUITS, T1 CABLES AND GROUND WIRES SHALL BE SUPPORTED AT A MIN. 3'-0" O.C. SPACING.

DETAIL (301/BOS)

LEGEND

EXIST. EQUIP.
PROPOSED EQUIP.
FUTURE EQUIP.
CONDUCTORS AND RACEWAY TO BE FURNISHED & INSTALLED BY SUBCONTRACTOR

STATE OF MAINE
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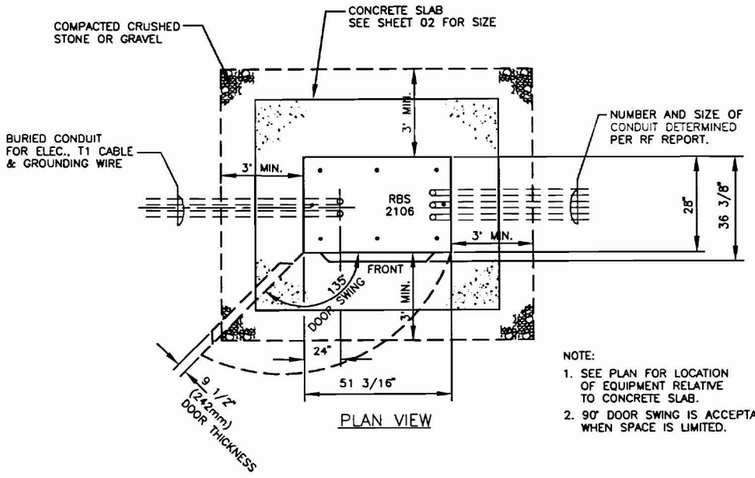
0	01/19/04	ISSUED FOR CONSTRUCTION	JX		

SCALE: AS SHOWN | DESIGNED BY: JX | DRAWN BY: JX

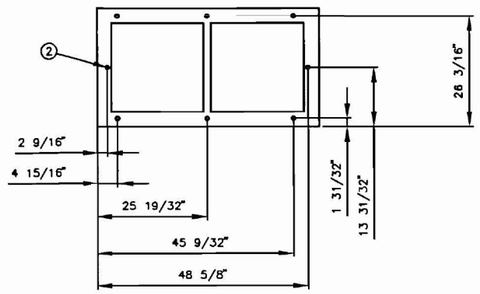
AT&T WIRELESS
EQUIPMENT LAYOUT
EAST DEERING
DRAWING NUMBER: 5022-02 | REV: 1



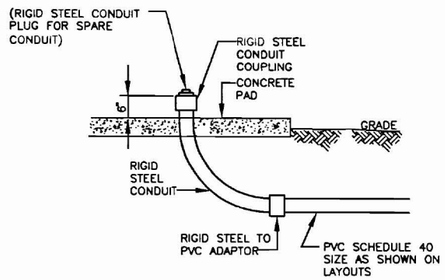
PLAN VIEW

NOTE:
1. SEE PLAN FOR LOCATION OF EQUIPMENT RELATIVE TO CONCRETE SLAB.
2. 90° DOOR SWING IS ACCEPTABLE WHEN SPACE IS LIMITED.

1. ALL DIMENSIONS TO BE FIELD VERIFIED.
2. RECOMMENDED CABINET MOUNTING ANCHORS ARE HILTI KWIK BOLT II 5/8" HOLE DIAMETER AT A MIN. 2.75" EMBED.
3. FOR SIZE AND THICKNESS OF CONCRETE SLAB SEE DETAIL 360F
4. FOR CONCRETE NOTES SEE DETAIL 302/02

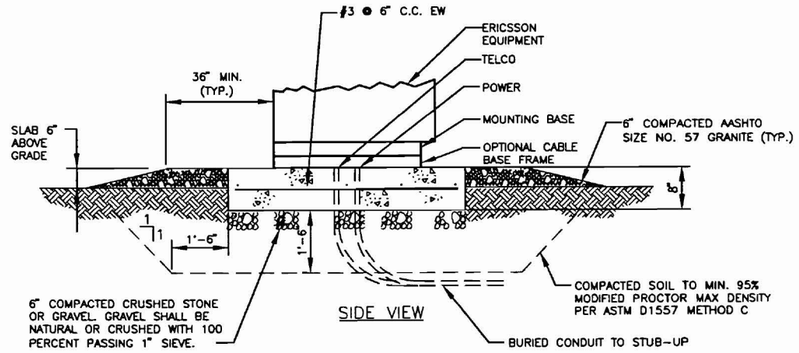


BASE FRAME FOOTPRINT
SCALE: N.T.S.



UNDERGROUND CONDUIT STUB-UP

DETAIL NTS 566/—



SIDE VIEW

CONCRETE EQUIPMENT PAD/ SLAB ON GRADE

ERICSSON RBS 2106 DIMENSIONS	
CABINET	HEIGHT x WIDTH x DEPTH
RBS 2106	63 5/8"Hx51 3/16"Wx36 3/8"D (1616.5mm x 1300mm x 925mm)
FOOTPRINT (INCLUDING INSTALLATION FRAME)	63 5/8"Hx51 3/16"Wx28"D (1616.5mm x 1300mm x 710mm)

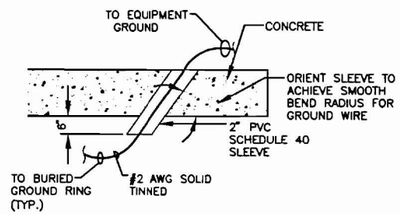
ERICSSON RBS 2106 WEIGHT & FLOOR LOADING		
CABINET	APPROX. MAX. WEIGHT	MAX. FLOOR LOADING
RBS 2106	1213 LBS (WEIGHT WITHOUT BATTERIES)	1301 LBS (WEIGHT WITH BATTERIES)

CABINET ANCHORING BY ERICSSON SHALL BE BASED ON A PEAK ACCELERATION VALUE OF 0.12G.

NOTE:
STANDARD HEIGHT SHOWN ON THE TABLE INCLUDES MOUNTING BASE FRAME (56.5mm H) PROVIDED BY ERICSSON. OPTIONAL CABLE BASE FRAME (150mm H) IS NOT INCLUDED.

ERICSSON RBS 2106 MINIMUM CLEARANCES	
DIRECTION	USB 2001 2 BAY MINIMUM CLEARANCE
CABINET FRONT	52"
CABINET REAR	2"
CABINET RIGHT	0"
CABINET LEFT	0" (3' MIN. FOR 135° DOOR SWING)
ABOVE THE CABINET	—

DETAIL NTS 360F/BOS



SLEEVE DETAIL
IF REQUIRED TO ROUTE GROUND WIRE THROUGH SLAB (REQUIRED FOR LARGER CONCRETE SLAB)

EQUIPMENT ON SLAB ON GRADE
FOR ORIENTATION SEE PLAN

DETAIL NTS 569F/BOS

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DETAILS
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DRAWING NUMBER: 5022-03 | REV: 1

ELECTRICAL INSTALLATION METHODS AND MATERIALS

1. WIRING, RACEWAY, AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELCORDIA.
2. SUBCONTRACTOR SHALL MODIFY EXISTING CABLE TRAY SYSTEM AS REQUIRED TO SUPPORT RF AND TRANSPORT CABLING TO THE NEW BTS EQUIPMENT.
3. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MAXIMUM CABLE SEPARATION AS REQUIRED BY THE NEC AND TELCORDIA.
4. CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.
5. EACH END OF EVERY POWER, GROUNDING, AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC & OSHA, AND MATCH EXISTING INSTALLATION REQUIREMENTS.
6. POWER PHASE CONDUCTORS (I.E. HOTS) SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). PHASE CONDUCTOR COLOR CODES SHALL CONFORM WITH THE NEC & OSHA AND MATCH EXISTING INSTALLATION REQUIREMENTS.
7. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING, AND BRANCH CIRCUIT ID NUMBERS (I.E., PANELBOARD AND CIRCUIT ID'S).
8. PANELBOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS.
9. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
10. POWER, CONTROL, AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#14 AWG AND LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90° WC (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED.
11. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (#6 AWG AND LARGER), 600 V, OIL RESISTANT THHN OR THWN-2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 90° WC (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED.
12. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED OUTDOORS, OR BELOW GRADE, SHALL BE SINGLE CONDUCTOR #2 AWG SOLID TINNED COPPER CABLE.
13. POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#14 AWG AND LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90° WC (WET AND DRY) OPERATION; WITH OUTER JACKET; LISTED OR LABELED FOR THE LOCATION USED.
14. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND IRENUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRENUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75° WC (90° WC IF AVAILABLE).
15. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.
16. NEW RACEWAY OR CABLE TRAY WILL MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.
17. ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40, OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
18. ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
19. GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.
20. RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80) SHALL BE USED UNDERGROUND; DIRECT BURIED, IN AREAS OF OCCASIONAL LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.
21. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
22. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.
23. CABINETS, BOXES, AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.
24. CABINETS, BOXES, AND WIREWAYS TO MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.
25. WIREWAYS SHALL BE EPOXY-COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
26. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES, AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL, SHALL MEET OR EXCEED UL 50, AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS
27. METAL RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED, OR NON-CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
28. NONMETALLIC RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
29. THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
30. THE SUBCONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.

TRANSIENT VOLTAGE SURGE SUPPRESSION (TVSS)

1. TVSS DEVICES FOR AC POWER SHALL BE INSTALLED IN ALL EXISTING FACILITIES THAT ARE MISSING TVSS DEVICES OR HAVE UNSUITABLE TVSS DEVICES.
2. SURGE SUPPRESSION AND PROTECTION DEVICES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) ART 250, 280, AND CHAPTER 8, AS APPLICABLE.
3. EACH EXISTING AC POWER SERVICE DISCONNECT SHALL HAVE AN INTEGRATED COMMON MODE TVSS MODULE. THE TVSS MODULE SHALL BE EITHER CUTLER-HAMMER, CLIPPER POWER SYSTEM, MODEL CPS-SX, 120 KA (WITH THE BASIC DIAGNOSTIC PACKAGE AND FORM-C ALARM CONTACTS) OR (FOR AWS SITES WITHOUT THE INTEGRATED CUTLER-HAMMER PANELBOARD) INNOVATIVE TECHNOLOGIES MODEL PTX-160-1S101 FOR SINGLE PHASE OR PTX160-3Y101 FOR 3-PHASE (OR OWNER APPROVED EQUAL).
4. THE AC POWER COMMON MODE SURGE SUPPRESSOR SHALL BE CONNECTED TO THE COMMERCIAL POWER INPUT SIDE OF THE MANUAL TRANSFER SWITCH.
5. IN MARKETS WITH LIGHTNING ZONE > OR = TO 4, RF TVSS DEVICE SHALL BE INSTALLED AT THE ENTRANCE TO THE SHELTER OR AS CLOSE AS POSSIBLE TO THE BTS CABINET FOR OUTDOOR SITES TO PROTECT AGAINST LIGHTNING AND TRANSIT VOLTAGES. THE RF TVSS DEVICES SHALL BE D.C. PASSING, 1/4 WAVE GAS TUBE WITH 7/16 DIN CONNECTORS.
6. SEE DETAILS 520 AND 527 FOR ADDITIONAL RF COAXIAL TVSS REQUIREMENTS.
7. A T1 TRANSPORT TVSS DEVICE SHALL BE INSTALLED AT ALL SITES BETWEEN THE NIU AND THE BTS. THE T1 TVSS SHALL BE ATLANTIC SCIENTIFIC MODEL NO. 90700 WITH 5" DIN RAIL #21605 FOR UP TO 4 TVSS MODULES.

TRANSPORT (T1) LINES

1. ALL RACEWAY SHALL COMPLY WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC, NFPA 70), CHAPTER 8.
2. ALL SPECIFIED MATERIAL FOR EACH LOCATION (E.G., OUTDOORS, INDOORS-OCCUPIED, INDOORS-UNOCCUPIED, PLENUMS, RISER SHAFTS, ETC.) SHALL BE APPROVED, LISTED, OR LABELED AS REQUIRED BY THE NEC.
3. METALLIC CONDUIT OR TUBING FOR T1 LINES SHALL BE BONDED TO GROUND AT BOTH ENDS.
4. FOR ERICSSON GSM BTS CABINET ONLY – ERICSSON SHALL BE NOTIFIED FOR T1 CABLE LENGTH GREATER THAN 100' (LENGTH IS BETWEEN TELCO PANEL AND ERICSSON SUPPLIED BTS). SUPPLY & INSTALLATION OF T1 CABLE BY ERICSSON.
5. FOR NOKIA GSM BTS CABINET ONLY – THE T1 CABLE SHALL BE IDENTIFIED AT BOTH ENDS WITH A COMPUTER-PRINTED SELF-LAMINATING POLYESTER WIRE MARKERS (BRADY CORP. OR EQUAL). USE THE "FROM" LOCATION FOLLOWING TYPICAL ID NAME AT THE NIU AND AT THE NOKIA BTS:

AWS GSM T1
LEC CCT#

DETAIL 506

DETAIL 512

GROUNDING NOTES

1. THE SUBCONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC (AS ADOPTED BY THE AHJ), THE SITE-SPECIFIC (UL, LPI, OR NFPA) LIGHTING PROTECTION CODE, AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.
2. 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.
3. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR NEW GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
4. 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.
5. EACH INDOOR BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH SUPPLEMENTAL EQUIPMENT GROUND WIRES, #6 AWG OR LARGER.
6. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
7. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
8. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
9. SURFACES TO BE CONNECTED TO GROUND CONDUCTORS SHALL BE CLEANED TO A BRIGHT SURFACE AT ALL CONNECTIONS.
10. EXPOSED GROUNDING CONNECTIONS SHALL BE MADE WITH COMPRESSION CONNECTORS WHICH ARE THEN BOLTED TO EQUIPMENT USING STAINLESS STEEL HARDWARE. INSTALLATION TORQUE SHALL BE PER MANUFACTURE'S REQUIREMENT.
11. ALL OUTDOOR METAL SUPPORT POSTS FOR ICE BRIDGE AND TRAY SHALL BE BONDED TO THE EXISTING BURIED GROUND ELECTRODE SYSTEM WITH A SINGLE CONDUCTOR #2 AWG SOLID TINNED COPPER WIRE.

DETAIL 511

SYMBOLS

- S/G — SOLID GROUND BUS BAR
- S/N — SOLID NEUTRAL BUS BAR
- 2-POLE THERMAL-MAGNETIC CIRCUIT BREAKER
- SINGLE-POLE THERMAL-MAGNETIC CIRCUIT BREAKER
- GROUND ROD WITH ACCESS
- CHEMICAL GROUND ROD
- GROUND ROD
- DISCONNECT SWITCH
- M — METER
- CIRCUIT BREAKER
- CADWELD TYPE CONNECTION
- COMPRESSION TYPE CONNECTION
- GROUNDING WIRE
- XXX / XXX — REPRESENTS DETAIL NUMBER / REFERENCE SHEET NUMBER

ABBREVIATIONS

AGL	ABOVE GRADE LEVEL
AWG	AMERICAN WIRE GAUGE
BCW	BARE COPPER WIRE
BTS	BASE TRANSCEIVER STATION
(E)	EXISTING
EG	EQUIPMENT GROUND
EGR	EXTERNAL GROUND RING
EMT	ELECTRICAL METALLIC TUBING
GEN	GENERATOR
IGR	INTERNAL GROUND RING (HALO)
IMC	INTERMEDIATE METALLIC CONDUIT
MGB	MASTER GROUND BAR
MIN	MINIMUM
NTS	NOT TO SCALE
PVC	RIGID (SCH. 40) POLYVINYL CHLORIDE CONDUIT
REF	REFERENCE
REQ	REQUIRED
RF	RADIO FREQUENCY
RGS	RIGID GALVANIZED STEEL
RWY	RACEWAY
TBD	TO BE DETERMINED
TBR	TO BE RESOLVED
TYP	TYPICAL

ELECTRICAL ABBREVIATIONS & SYMBOLS 500

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NOTES
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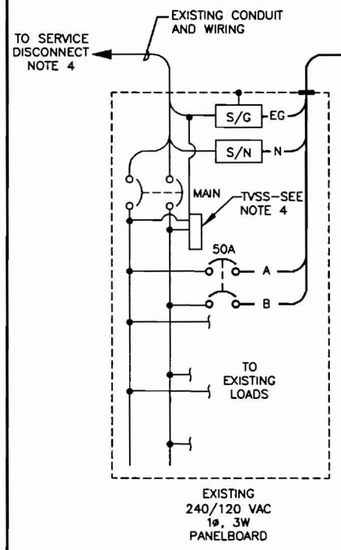
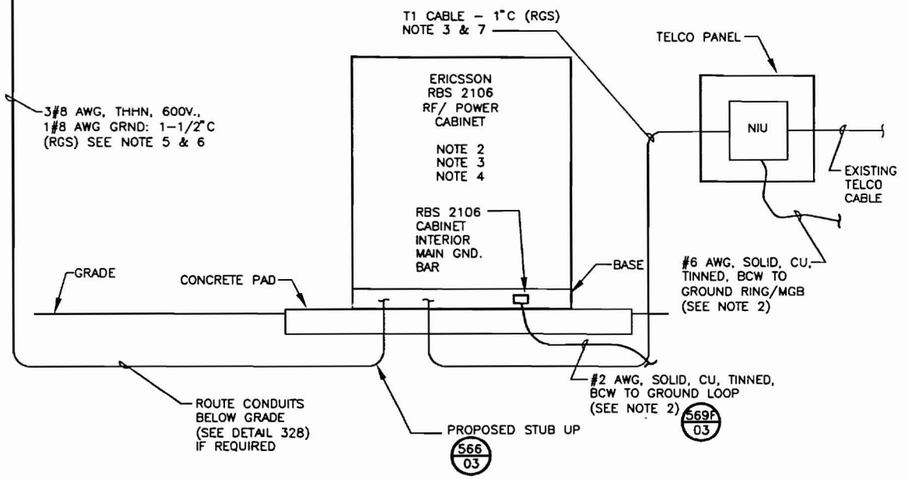
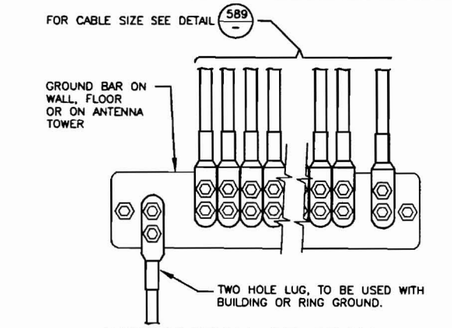
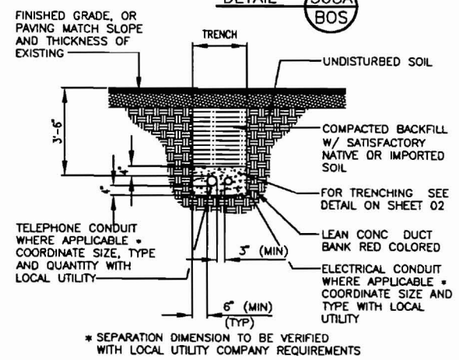






INSTALLATION OF GROUND WIRE TO GROUND BAR

DETAIL 508A BOS



* SEPARATION DIMENSION TO BE VERIFIED WITH LOCAL UTILITY COMPANY REQUIREMENTS

CONCRETE DUCT BANK ELECT/ TELEPHONE

DETAIL NTS 328 BOS

NOTES:

1. SUBCONTRACTOR SHALL CONFIRM THE AVAILABILITY OF POWER TO SUPPORT THE NEW LOAD. THE SUBCONTRACTOR SHALL SUBMIT TO CONTRACTOR A LOAD CALCULATION SHOWING THAT THE PANEL HAS ADEQUATE CAPACITY FOR THE ADDITIONAL LOADS. ALL EXISTING LOADS ON THE MAIN PANEL SHALL BE INCLUDED IN THE ANALYSIS. ALL ELECTRICAL WORK SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NEC AND ALL LOCAL CODES. SUBCONTRACTOR SHALL PROVIDE PADLOCK ACCESSORIES ON NEW CIRCUIT BREAKER HANDLES. REQUIRED.
2. ROUTE #2 AWG BCW EQUIPMENT GROUND CONDUCTORS TO BOTTOM OF ERICSSON CABINETS. CUT, COIL, AND TAPE TEN FOOT PIGTAIL FOR FUTURE CONNECTION BY ERICSSON. THE GROUND CONDUCTORS SHALL BE CONNECTED TO THE MGB BY USING TWO HOLE LUGS PER DETAIL 508A.
3. SUBCONTRACTOR SHALL INSTALL THE T1 TRANSPORT CABLE FURNISHED BY ERICSSON. SEE DETAIL 507 FOR ADDITIONAL INFORMATION.
4. FURNISH AND INSTALL NEW TVSS DEVICE AT SERVICE DISCONNECT IN ACCORDANCE WITH DETAIL 506. IF NEEDED.
5. CONTRACTOR SHALL COIL AND TAPE AN ADDITIONAL 5'-0" OF WIRING FOR CONNECTIONS TO ERICSSON EQUIPMENT.
6. TOP ENTRY ONLY IF PANEL IS LOCATED INDOORS OTHERWISE: BOTTOM OR SIDE ENTRY ONLY.
7. ALL OUTSIDE CONDUITS SHALL BE RGS. ALL UNDERGROUND CONDUITS SHALL BE PVC.

DETAIL 589 BOS

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MATERIALS	MFG.	MODEL	QUANTITY	PROVIDED BY
TVSS (AC POWER)	---	PER NOTE 5 DETAIL 589	AS REQ'D.	SUBCONTRACTOR
50A, 2P, 120/240V BREAKER	---	MATCH EXISTING PANELBOARD	AS REQ'D.	SUBCONTRACTOR
CONDUIT, POWER & GROUND CONDUCTORS	TO SUIT	MATCH EXISTING CONDUIT	TO SUIT	SUBCONTRACTOR
CABLE TRAY	---	MATCH EXISTING TRAY	AS REQ'D.	SUBCONTRACTOR
T1 CABLE AND CONNECTIONS	---	ERICSSON	AS REQ'D.	ERICSSON

BILL OF MATERIALS

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POWER AND GROUNDING SCHEMATIC
EAST DEERING

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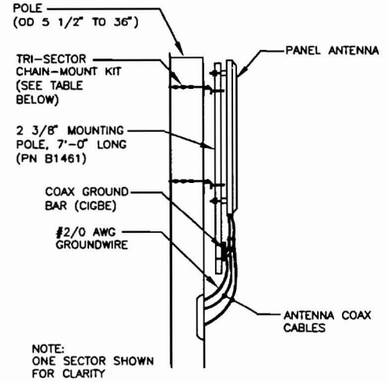
RF CABLE MINIMUM BEND RADIUS		
ANDREW HELIAX CABLE MODEL NUMBER	COAXIAL CABLE NOMINAL SIZE	COAXIAL CABLE MINIMUM BEND RADIUS
FSJ1-50A	1/4" (0.25")	1" (25 mm)
EFX2-50	3/8" (0.375")	1.75" (45 mm)
FSJ2-50	3/8" (0.375")	1" (25 mm)
FSJ4-50B & FSJ4RN-50B	1/2" (0.5")	1.25" (32 mm)
LDF4-50A & LDF4RN-50A	1/2" (0.5")	5" (127 mm)
LDF5-50A & LDF5RN-50A	7/8" (0.875")	10" (254 mm)
VXL5-50	7/8" (0.875")	5" (127 mm)
LDF8-50 & LDF6RN-50	1 1/4" (1.25")	15" (381 mm)
LDF7-50A & LDF7RN-50A	1 5/8" (1.625")	20" (508 mm)
VXL7-50	1 5/8" (1.625")	15" (381 mm)
LDF12-50	2 1/4" (2.25")	24" (610 mm)
COMMSCOPE CABLE MODEL NUMBER	COAXIAL CABLE NOMINAL SIZE	COAXIAL CABLE MINIMUM BEND RADIUS
FXL 540	1/2" (0.5")	2" (51 mm)
SFX 500	1/2" (0.5")	1.25" (32 mm)
CR 50 540	1/2" (0.5")	4" (102 mm)
CR 50 1070	7/8" (0.875")	8" (203 mm)
CR 50 1873	1 5/8" (1.625")	15" (381 mm)
RFS CABLE MODEL NUMBER	COAXIAL CABLE NOMINAL SIZE	COAXIAL CABLE MINIMUM BEND RADIUS
811028-001 811028-F01 811028-003 811028-F03	1/4" (0.25")	1" (25 mm)
810917-001 810917-F01 810917-003 810917-F03	3/8" (0.375")	2" (51 mm)
810918-001 810918-F01 810918-003 810918-F03 810918-083 810918-F83	1/2" (0.5")	3" (76 mm)
811026-001 811026-F01 811026-003 811026-F03 811026-083 811026-F83	1/2" (0.5")	1.3" (33 mm)
810921-001 810921-F01 810921-003 810921-F03 810921-083 810921-F83	7/8" (0.875")	5" (127 mm)
810916-001 810916-F01 810916-003 810916-F03 810916-083 810916-F83	1 1/4" (1.25")	8" (203 mm)
810920-001 810920-F01 810920-003 810920-F03 810920-083 810920-F83	1 5/8" (1.625")	8" (203 mm)
811046-001 811046-F01 811046-003 811046-F03 811046-083 811046-F83	2 1/4" (2.25")	9.5" (241 mm)

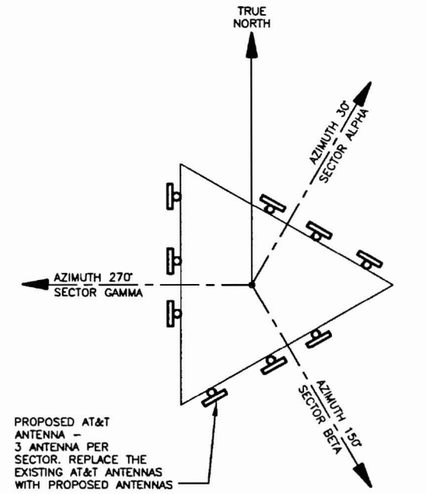
MANUFACTURERS RECOMMENDED TORQUE			
VENDOR	CONNECTOR (DIN)	CONNECTOR (N)	CONNECTOR (SMA)
ANDREW	220-265 IN-LB	15-20 IN-LB	8 IN-LB
HUBER+SUHNER	220-265 IN-LB	8-10 IN-LB	7.1-9.7 IN-LB
COMMSCOPE	220 IN-LB	15 IN-LB	NA

RF CABLE MINIMUM BEND RADIUS AND MANUFACTURERS RECOMMENDED CONNECTOR TORQUE TABLES

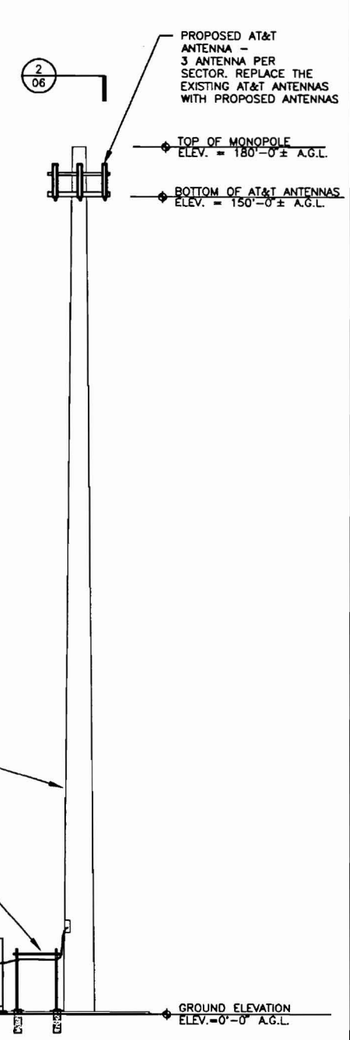
DETAIL 309/-

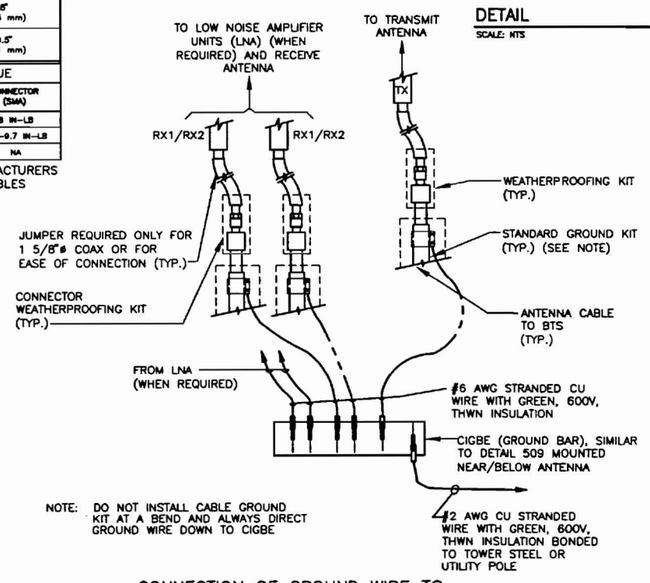


TRI-SECTOR CHAIN MOUNT KIT	PRODUCT NUMBER
FOR ROUND POLE	B1639
FOR POLYGON POLE	B1653



AT&T ANTENNA ORIENTATION 2
SCALE: NTS



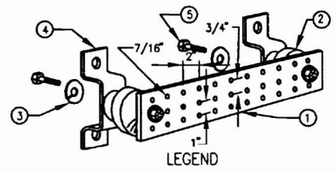


DETAIL 3
SCALE: NTS

CONNECTION OF GROUND WIRE TO GROUNDING BAR (CIGBE) MONOPOLE

DETAIL 522A/BOS

STATE OF MAINE
TRICHUR A. VENKATARAMAN
No. 9943
REGISTERED PROFESSIONAL ENGINEER



LEGEND

1- COPPER GROUND BAR, 1/4" X 4" X 20", NEWTON INSTRUMENT CO. CAT. NO. B-6142 OR EQUAL. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION.
2- INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4
3- 5/8" LOCKWASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8
4- WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT NO. A-6056
5- 5/8-11 X 1" HHCS BOLTS, NEWTON INSTRUMENT CO. CAT NO. 3012-1

GROUND BAR DETAIL

DETAIL 509/-

ANTENNA CABLE GROUNDING - MONOPOLE 1
SCALE: NTS

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TRM	Tower Resource Management, Inc. 30 Lyman Street, Suite 12 Westborough, MA 01581 Phone: 508-389-1746 Fax: 508-389-1749
EAST DEERING SITE NO. PTLDME 5022 PRESUMPSCOT STREET PORTLAND, ME	
AT&T AT&T WIRELESS SERVICES, INC. 400 BLUE HILL DRIVE, SUITE 100 WESTWOOD, MA 02090	

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	02/19/04	ANTENNA CONFIGURATION CHANGES	EXT		
0	01/19/04	ISSUED FOR CONSTRUCTION	JX		

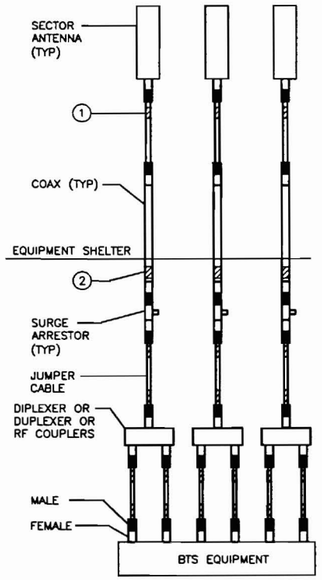
SCALE: AS SHOWN | DESIGNED BY: JX | DRAWN BY: JX

AT&T WIRELESS

ANTENNA ELEVATION & DETAILS
EAST DEERING

DRAWING NUMBER: 5022-06 | REV: 1

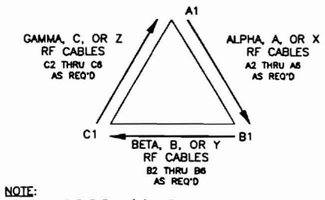
6 5 4 3 2 1 | D C B A



CABLE MARKING LOCATIONS DIAGRAM

ALL RF CABLE SHALL BE MARKED AS PER CABLE MARKING LOCATIONS TABLE BELOW:

CABLE MARKING LOCATIONS			
NO.	TAPE	TAG	LOCATIONS
1.	X		END OF THE MAIN COAX RUN WHERE THE COAXIAL CABLE AND JUMPER TO THE ANTENNA ARE CONNECTED.
2.	X	X	CABLE ENTRY PORT ON THE INTERIOR OF THE SHELTER.



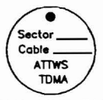
NOTE:
SECTOR ORIENTATION/AZIMUTH WILL VARY FROM REGION TO REGION AND IS SITE SPECIFIC. REFER TO RF REPORT FOR EACH SPECIFIC SITE TO DETERMINE THE SECTOR ORIENTATION.

ANTENNA SECTOR AND CABLE DEFINITION

CABLE MARKING COLOR CONVENTION TABLE						
SECTOR ALPHA, A, X	CABLE A1	CABLE A2	CABLE A3	CABLE A4	CABLE A5	CABLE A6
	ONE RED	TWO RED	THREE RED	FOUR RED	FIVE RED	SIX RED
SECTOR B BETA, B, Y	CABLE B1	CABLE B2	CABLE B3	CABLE B4	CABLE B5	CABLE B6
	ONE BLUE	TWO BLUE	THREE BLUE	FOUR BLUE	FIVE BLUE	SIX BLUE
SECTOR GAMMA, C, Z	CABLE C1	CABLE C2	CABLE C3	CABLE C4	CABLE C5	CABLE C6
	ONE GREEN	TWO GREEN	THREE GREEN	FOUR GREEN	FIVE GREEN	SIX GREEN
SECTOR DELTA, D, W	CABLE D1	CABLE D2	CABLE D3	CABLE D4	CABLE D5	CABLE D6
	ONE YELLOW	TWO YELLOW	THREE YELLOW	FOUR YELLOW	FIVE YELLOW	SIX YELLOW

NOTE:

1. USING COLOR BANDS ON THE CABLES, MARK ALL RF CABLE BY SECTOR AND CABLE NUMBER AS SHOWN ON "CABLE MARKING COLOR CONVENTION TABLE" (EXAMPLE SECTOR ALPHA, CABLE A3 WOULD BE THREE RED BANDS).
2. THE STANDARD CABLE MARKING TAPE IS BASED ON THE "4 NEMA" COLORED TAPES – RED, BLUE, GREEN AND YELLOW.
3. ON EXISTING SITE THE COLOR CODING SHALL FOLLOW THE EXISTING MARKET COLOR CODING.
4. IN THE ABSENCE OF AN EXISTING COLOR CODING AND TAGGING SCHEME, OR WHEN INSTALLING NEW COAXIAL CABLES THE GUIDELINE IS TO BE IMPLEMENTED AT THE SITE REGARDLESS OF TECHNOLOGY.



TDMA LINE TAG

GSM LINE TAG

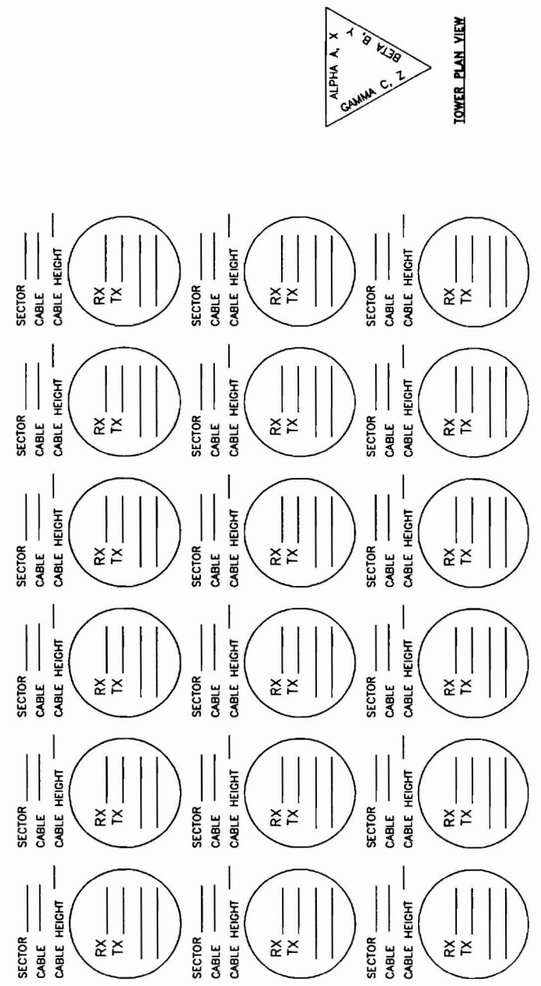
TO PROVIDE ADDITIONAL IDENTIFICATION EACH RF CABLE SHALL BE IDENTIFIED WITH A METAL TAG MADE OF STAINLESS STEEL OR BRASS AND STAMPED WITH THE SECTOR, CABLE NUMBER, AND "ATTWS" TO IDENTIFY AT&T WIRELESS CABLES. THE ID MARKING LOCATIONS SHOULD BE AS PER "CABLE MARKING LOCATIONS TABLE". THE TAG SHOULD BE ATTACHED WITH CORROSION PROOF WIRE AROUND THE CABLE. PREFERRED TAG LABELING SHOULD BE AS SHOWN ABOVE "TDMA LINE TAG" AND "GSM LINE TAG".

CABLE MARKING TAGS

DETAIL 600 BOS
NTS

CABLE PORT DIAGRAM

CAUTION: HARMFUL RF ENERGY EXISTS ON THESE LINES

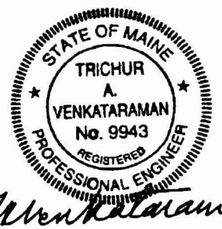


TOWER PLAN VIEW

DESIGNERS/ ENGINEERS NOTE:

1. CABLE PORT DIAGRAM WILL BE AFFIXED TO THE INTERIOR SHELTER WALL NEAR THE CABLE ENTRY PORT TO AID IN CABLE IDENTIFICATION. THE CHART IS INTENDED TO BE USED TO RECORD THE FUNCTION (Rx, Tx1, ETC.) OF EACH ANTENNA AND RF CABLE AT THE TIME OF INSTALLATION.
2. ONE COMPLETED COPY PLUS TWO BLANK COPIES OF THE CHART SHOULD BE POSTED IN THE SHELTER IN A PROTECTIVE PLASTIC SLEEVE.

DETAIL 601
NTS



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PORTLAND, ME

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400 BLUE HILL DRIVE, SUITE 100
WESTWOOD, MA 02090

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	02/19/04	ANTENNA CONFIGURATION CHANGES	EXT		
0	01/19/04	ISSUED FOR CONSTRUCTION	JX		

SCALE: AS SHOWN | DESIGNED BY: JX | DRAWN BY: JX

AT&T WIRELESS

COAX CABLE COLOR CODING & TAGGING DETAILS
EAST DEERING

DRAWING NUMBER	REV
5022-08	1