

GENERAL NOTES

- FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
CONTRACTOR - BECHTEL
SUBCONTRACTOR - GENERAL CONTRACTOR (CONSTRUCTION)
OWNER - AT&T WIRELESS SERVICES.
- 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.
- 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.
- DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- "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.
- THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- 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.
- 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.
- 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.
- 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.
- SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
- ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.
- 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.
- ALL STRUCTURAL STEEL WORK SHALL BE DONE IN ACCORDANCE WITH AISC SPECIFICATIONS.
- CONSTRUCTION SHALL COMPLY WITH SPECIFICATION 24623-03J-SAPS-A002-00002, "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF AWS SITES."
- 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.
- 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.
- 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: 1050 WESTBROOK STREET
 PORTLAND, ME 04102
 LATITUDE: 43.65138°
 LONGITUDE: -70.31047°
 JURISDICTION: TOWN OF PORTLAND
 COUNTY NAME: SOUTH PORTLAND, ME
 CURRENT USE: TELECOMMUNICATIONS FACILITY
 PROPOSED USE: TELECOMMUNICATIONS FACILITY

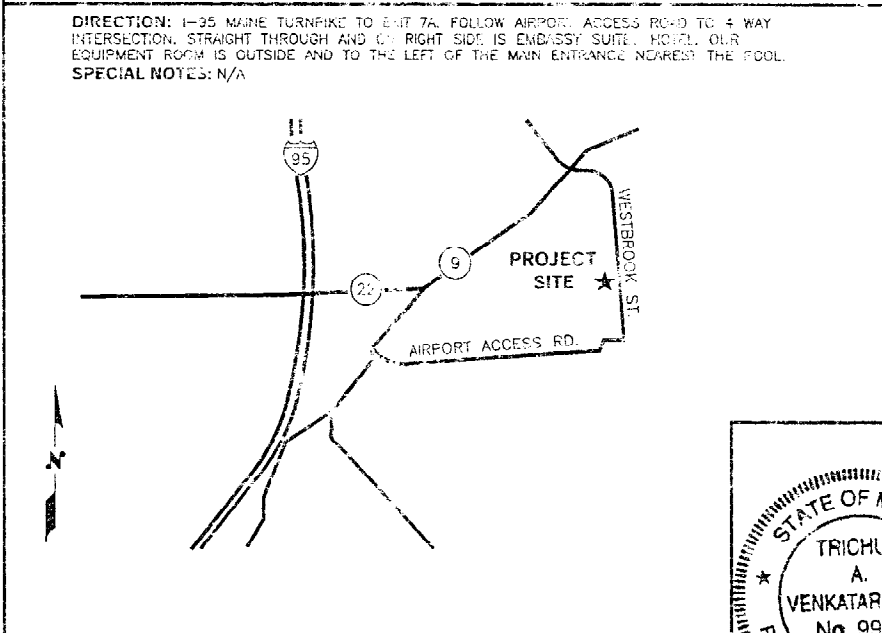
DRAWING INDEX

		REV
M023-01	TITLE SHEET	0
M023-02	EQUIPMENT LAYOUT	0
M023-03	DETAILS	0
M023-04	NOTES	0
M023-05	POWER AND GROUNDING SCHEMATIC	0
M023-06	ANTENNA ELEVATION & DETAILS	0
M023-07	ANTENNA SCHEMATIC & BILL OF MATERIALS	0
M023-08	COAX CABLE COLOR CODING & TAGGING DETAILS	0

SITE TYPE

ANTENNAS ON ROOF WITH OUTDOOR EQUIPMENT ON GROUND

VICINITY MAP



STRUCTURAL NOTES

REFER TO STRUCTURAL ANALYSIS BY OTHERS IF APPLICABLE.

AT&T
AT&T WIRELESS

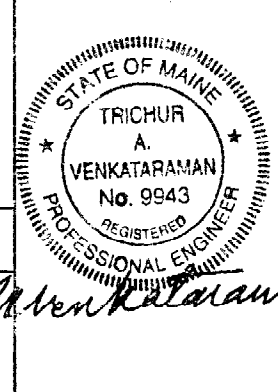
AWS SITE NO: M023
SITE NAME: BRADLEYS CORNER

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 (LAW) FOR THE LOCATION. THE EDITION OF THE 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 - 9950, 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 107, 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



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: Eng
 Date:

BAY STATE DESIGN
 Bay State Design Associates, Inc.
 Architects - Engineers
 70 Tower Office Park
 Woburn, MA 01801
 Phone: 781-932-2467
 Fax: 781-932-9771
 Copyright © Bay State Design Associates, Inc.
 (No. of working drawing sets)

TRM
 Tower Resource Management, Inc.
 30 Lyman Street, Suite 12
 Westbrook, ME 04091
 Phone: 508-389-1746
 Fax: 508-389-1748

BRADLEYS CORNER
SITE NO. M023
 1050 WESTBROOK STREET
 PORTLAND, ME 04102

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

NO.	DATE	REVISIONS	BY	CHK APPD
0	01/19/04	ISSUED FOR CONSTRUCTION	JX	

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

AT&T WIRELESS
TITLE SHEET
BRADLEYS CORNER
 DRAWING NUMBER: M023-01
 REV: 0

CONCRETE AND REINFORCING STEEL NOTES:

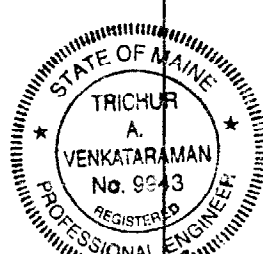
1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE.
3. REINFORCING STEEL 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 LARGER2 IN.
 - #5 AND SMALLER & WWF.....1 1/2 IN.
 - CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:
 - SLAB AND WALL3/4 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 RAMSEY/REDHEAD OR APPROVED EQUAL.

CONCRETE AND REINFORCING STEEL NOTES (302)

GENERAL NOTES FOR EXISTING AWS CELL SITES

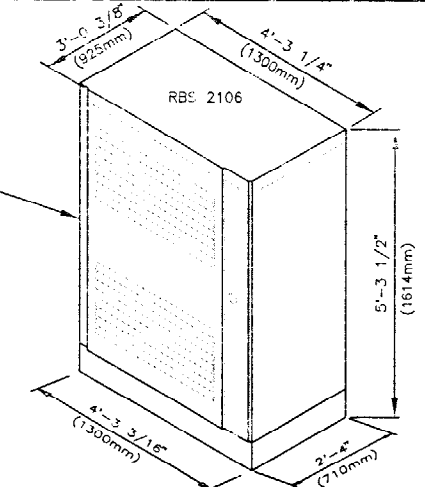
1. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.
2. SUBCONTRACTOR 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 300A
NTS



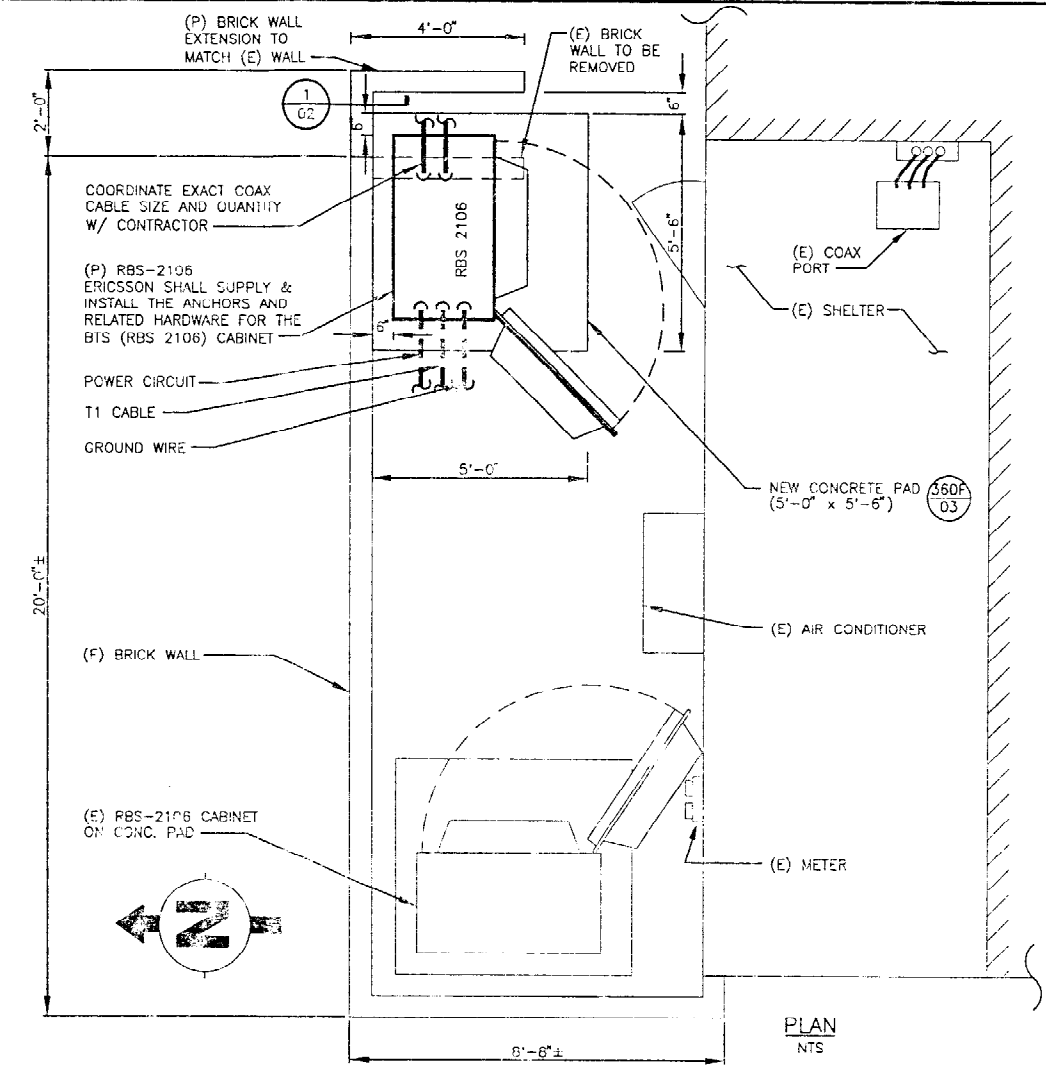
Trichur A. Venkataraman

EQUIPMENT DETAIL
SCALE: N.T.S.

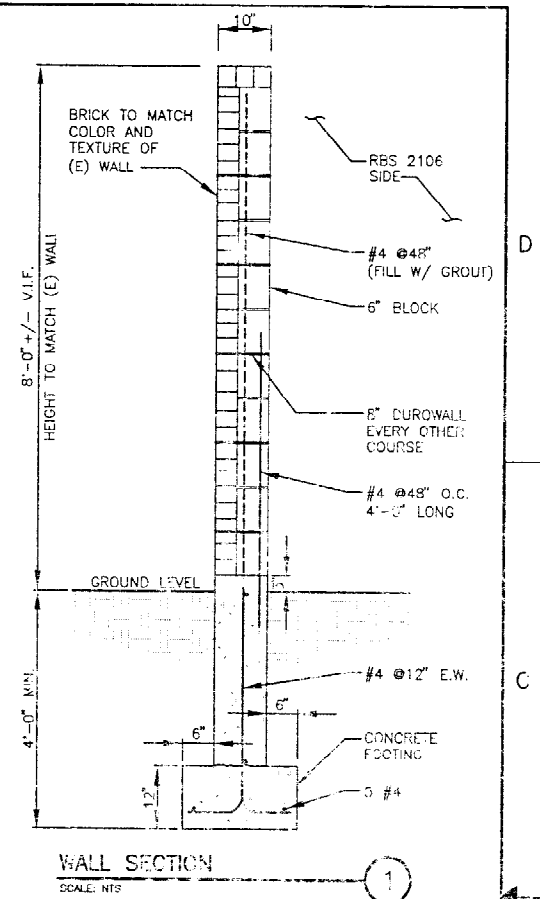


ERICSSON RBS 2106
BTS OUTDOOR CABINET

MAX. WEIGHTS RBS 2106:
WITHOUT BATTERIES: 1,213 LBS.
WITH BATTERIES: 1,301 LBS.



PLAN
NTS



WALL SECTION
SCALE: NTS

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

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



Bay State Design
Associates, Inc.
Architects - Engineers
70 Tower Office Park
Woburn, MA 01801
Phone: 781-932-2467
Fax: 781-932-9771
Copyright © Bay State Design Associates, Inc.
(As of contract drawing date)



Tower Resource
Management, Inc.
30 Lyman Street, Suite 12
Westborough, MA 01581
Phone: 508-389-1746
Fax: 508-389-1749

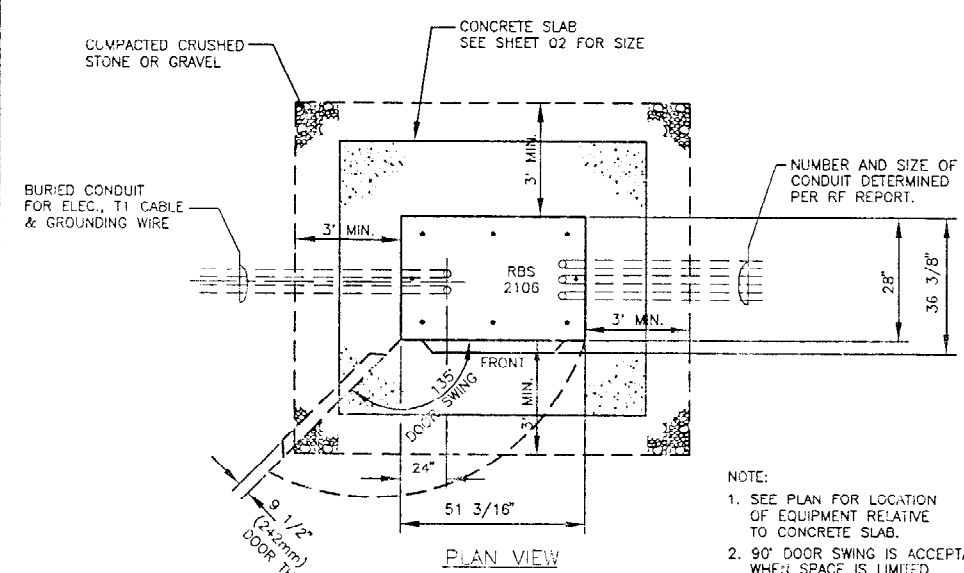
BRADLEYS CORNER
SITE NO. M023
1050 WESTBROOK STREET
PORTLAND, ME 04102



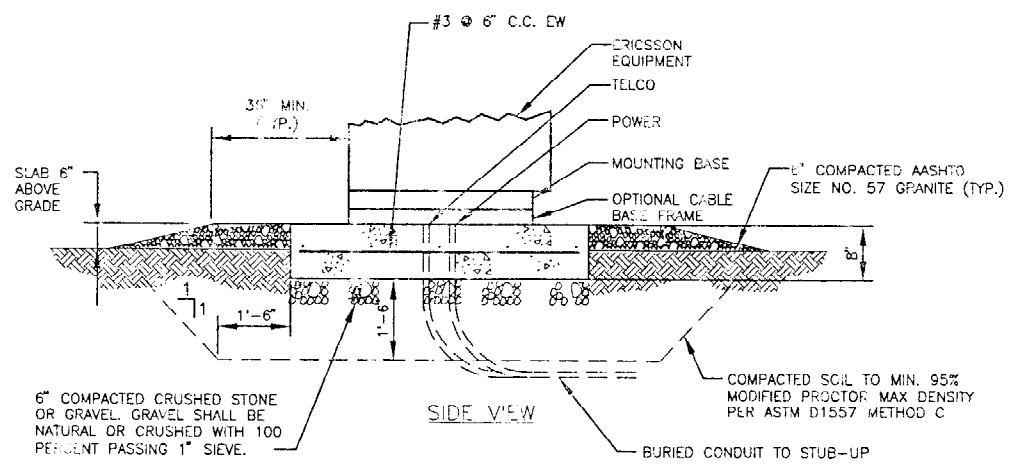
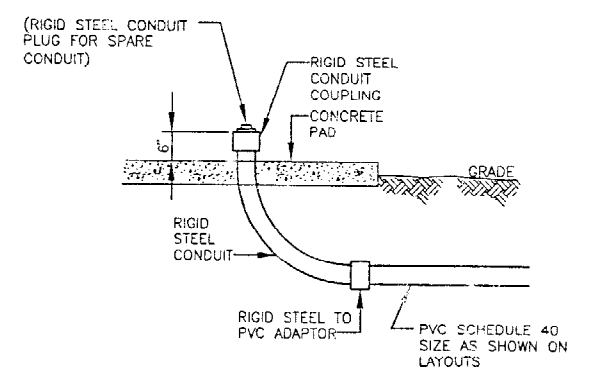
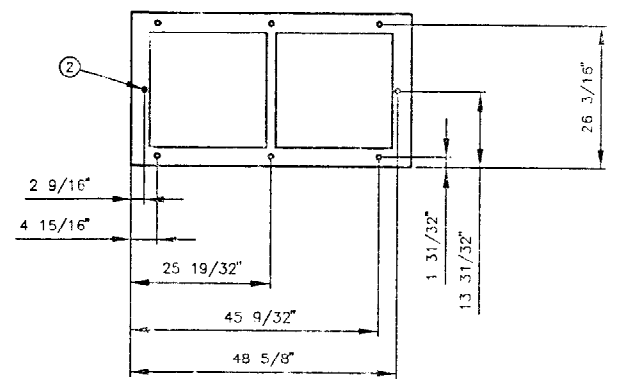
AT&T WIRELESS SERVICES, INC.
400 BLUE HILL DRIVE, SUITE 100
WESTWOOD, MA 02090

0	01/19/04	ISSUED FOR CONSTRUCTION	JX		
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN	DESIGNED BY: JX	DRAWN BY: JX			

AT&T WIRELESS	
EQUIPMENT LAYOUT BRADLEYS CORNER	
DRAWING NUMBER	REV
M023-02	0



- 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

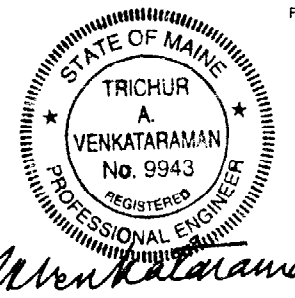
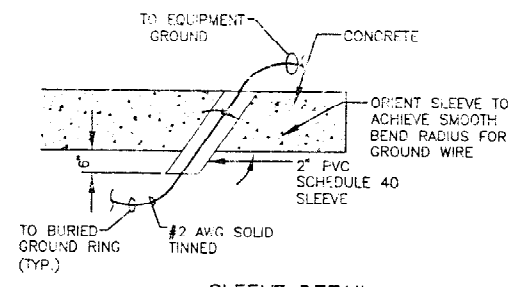


ERICSSON RBS 2106 DIMENSIONS	
CABINET	HEIGHT x WIDTH x DEPTH
RBS 2106	63 5/8" H x 51 3/16" W x 36 3/8" D (1614.5mm x 1300mm x 925mm)
FOOTPRINT (INCLUDING INSTALLATION FRAME)	63 5/8" H x 51 3/16" W x 38" D (1616.5mm x 1300mm x 914mm)

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	--



BAY STATE DESIGN
Bay State Design Associates, Inc.
Architects • Engineers
70 Tower Office Park
Woburn, MA 01801
Phone: 781-932-2457
Fax: 781-932-9771
Copyright © Bay State Design Associates, Inc. (All or reserved drawing sizes)

TRM
Tower Resource Management, Inc.
30 Lyman Street, Suite 12
Westborough, MA 01581
Phone: 508-389-1746
Fax: 508-389-1749

BRADLEYS CORNER
SITE NO. M023
1050 WESTBROOK STREET
PORTLAND, ME 04102

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

NO.	DATE	REVISIONS	BY	CHK APP'D
0	01/19/04	ISSUED FOR CONSTRUCTION	JX	

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

AT&T WIRELESS
DETAILS
BRADLEYS CORNER
DRAWING NUMBER
M023-03
0

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, 1/2 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 (#8 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.

DETAIL 512

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 PANUIT 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)

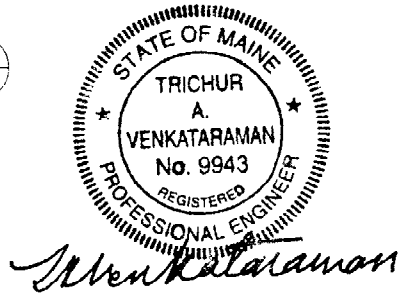
1. TVSS DEVICES FOR AC POWER SHALL BE INSTALLED IN ALL EXISTING FACILITIES THAT ARE MISSING TVSS DEVICES OR HAVE UNSUITABLE TVSS DEVICES.
2. SURGE SUPPRESSION AND PROTECTION DEVICES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) ART 250, 280, AND CHAPTER 8, AS APPLICABLE.
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. S0700 WITH 5" DIN RAIL #2100S 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



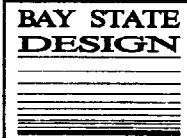
GROUNDING NOTES

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-OFF-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 COATING (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 MANUFACTURER'S REQUIREMENT.
11. ALL OUTDOOR METAL SUPPORT POSTS FOR ICE BRIDGE AND TPAY SHALL BE BONDED TO THE EXISTING BURIED GROUND ELECTRODE SYSTEM WITH A SINGLE CONDUCTOR #2 AWG SOLID TINNED COPPER WIRE.

DETAIL 511

SYMBOLS		ABBREVIATIONS	
	SOLID GROUND BUS BAR	AGL	ABOVE GRADE LEVEL
	SOLID NEUTRAL BUS BAR	AWG	AMERICAN WIRE GAUGE
	2-POLE THERMAL-MAGNETIC CIRCUIT BREAKER	BCW	BARE COPPER WIRE
	SINGLE-POLE THERMAL-MAGNETIC CIRCUIT BREAKER	BTS	BASE TRANSCEIVER STATION
	GROUND ROD WITH ACCESS	(E)	EXISTING
	CHEMICAL GROUND ROD	EG	EQUIPMENT GROUND
	GROUND ROD	EGR	EXTERNAL GROUND RING
	DISCONNECT SWITCH	EMT	ELECTRICAL METALLIC TUBING
	METER	GEN	GENERATOR
	CIRCUIT BREAKER	IGR	INTERNAL GROUND RING (HALO)
	CADWELD TYPE CONNECTION	IMC	INTERMEDIATE METALLIC CONDUIT
	COMPRESSION TYPE CONNECTION	MGB	MASTER GROUND BAR
	GROUNDING WIRE	MIN	MINIMUM
	REPRESENTS DETAIL NUMBER	NTS	NOT TO SCALE
	REFERENCE SHEET NUMBER	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



Bay State Design
Associates, Inc.
Architects - Engineers
70 Tower Office Park
Woburn, MA 01801
Phone: 781-932-2467
Fax: 781-932-9771
Copyright © Bay State Design Associates, Inc.
(Use of e-mail address, 02/02)



Tower Resource
Management, Inc.
30 Lyman Street, Suite 12
Westborough, MA 01581
Phone: 508-389-1746
Fax: 508-389-1749

BRADLEYS CORNER
SITE NO. M023
1050 WESTBROOK STREET
PORTLAND, ME 04102



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

0	01/19/04	ISSUED FOR CONSTRUCTION	JX	
NO.	DATE	REVISIONS	BY	CHK APP'D
SCALE: AS SHOWN		DESIGNED BY: JX	DRAWN BY: JX	

AT&T WIRELESS	
NOTES	
BRADLEYS CORNER	
DRAWING NUMBER	REV
M023-04	0

6

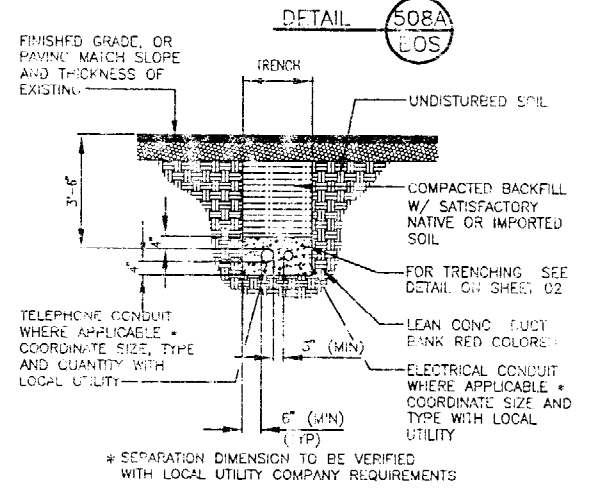
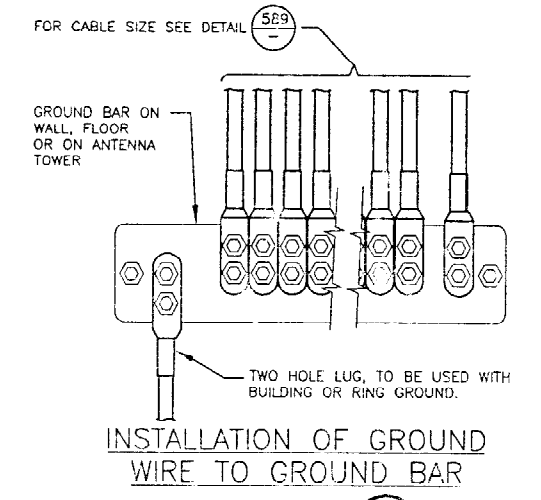
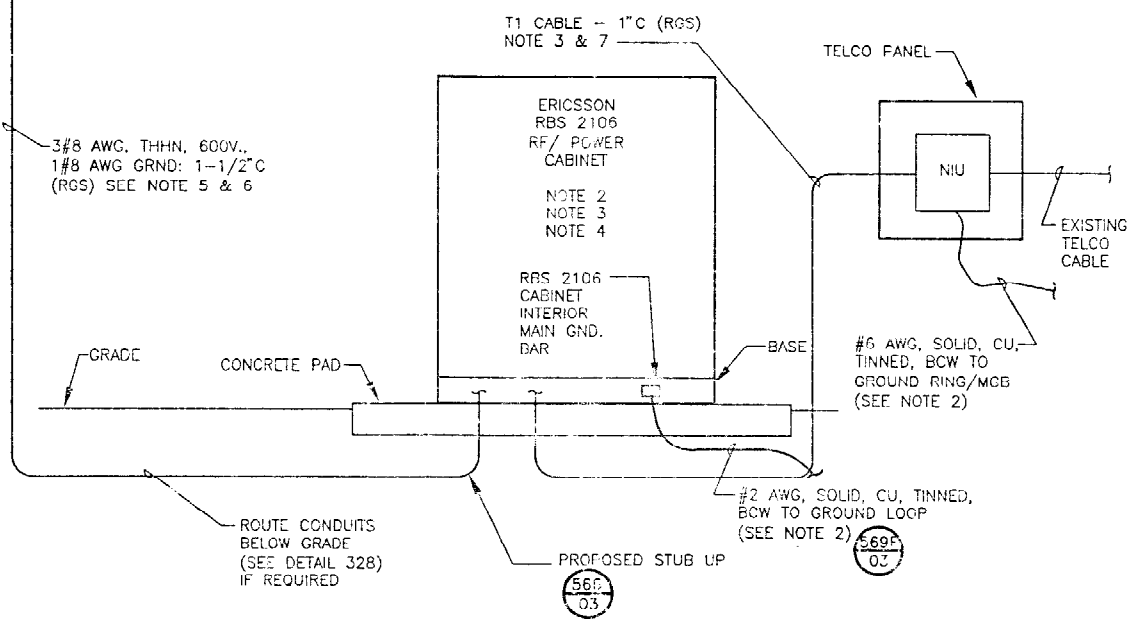
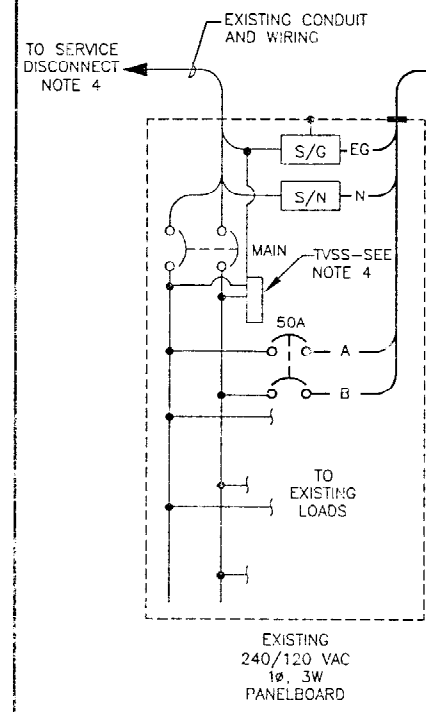
5

4

3

2

1



- NOTES:
- 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.
 - ROUTE #2 AWG BCW EQUIPMENT GROUND CONDUCTORS TO BOTTOM OF ERICSSON CABINETS. CUT, COIL, AND TAP 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.
 - SUBCONTRACTOR SHALL INSTALL THE T1 TRANSPORT CABLE FURNISHED BY ERICSSON. SEE DETAIL 507 FOR ADDITIONAL INFORMATION.
 - FURNISH AND INSTALL NEW TVSS DEVICE AT SERVICE DISCONNECT IN ACCORDANCE WITH DETAIL 506. IF NEEDED.
 - CONTRACTOR SHALL COIL AND TAPE AN ADDITIONAL 5'-0" OF WIRING FOR CONNECTIONS TO ERICSSON EQUIPMENT.
 - TOP ENTRY ONLY IF PANEL IS LOCATED INDOORS OTHERWISE: BOTTOM OR SIDE ENTRY ONLY.
 - ALL OUTSIDE CONDUITS SHALL BE RGS. ALL UNDERGROUND CONDUITS SHALL BE PVC.

DETAIL 589 BOS

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

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 PER DETAIL 504/04 & 502/04	TO SUIT	SUBCONTRACTOR
CABLE TRAY	---	MATCH EXISTING TRAY	AS REQ'D.	SUBCONTRACTOR
T1 CABLE AND CONNECTIONS	---	ERICSSON	AS REQ'D.	ERICSSON

BILL OF MATERIALS

BAY STATE DESIGN Bay State Design Associates, Inc. Architects + Engineers 70 Tower Office Park Woburn, MA 01801 Phone: 781-932-2467 Fax: 781-932-9771 <small>Copyright © Bay State Design Associates, Inc. (as of earliest drawing date)</small>	 TRM Tower Resource Management, Inc. 30 Lyman Street, Suite 12 Westborough, MA 01581 Phone: 508-389-1746 Fax: 508-389-1749	BRADLEYS CORNER SITE NO. M023 1050 WESTBROOK STREET PORTLAND, ME 04102	 AT&T AT&T WIRELESS SERVICES, INC. 400 BLUE HILL DRIVE, SUITE 100 WESTWOOD, MA 02090	0 01/19/04 ISSUED FOR CONSTRUCTION NO. DATE REVISIONS BY CHK APP'D SCALE: AS SHOWN DESIGNED BY: JX DRAWN BY: JX	AT&T WIRELESS POWER AND GROUNDING SCHEMATIC BRADLEYS CORNER DRAWING NUMBER: M023-05 REV: 0
				6	5

RF CABLE MINIMUM BEND RADIUS

ANTENNA HELIX CABLE MODEL NUMBER	COAXIAL CABLE NOMINAL SIZE	MINIMUM BEND RADIUS
FS1-50A	1/4" (0.25")	1" (25 mm)
FS2-50	3/8" (0.375")	1 1/2" (38 mm)
FS3-50	1/2" (0.5")	1" (25 mm)
FS4-50B & FS450N-50B	1/2" (0.5")	1 1/2" (38 mm)
UDF-50A & UDF50N-50A	7/8" (0.875")	5" (127 mm)
UDF-50B & UDF50N-50B	1" (1.0")	5" (127 mm)
VAL3-50	7/8" (0.875")	5" (127 mm)
UDF-50 & UDF50N-50	1 1/4" (1.25")	5" (127 mm)
UDF-50A & UDF50N-50A	1 1/2" (1.50")	5" (127 mm)
VAL7-50	1 5/8" (1.625")	5" (127 mm)
UDF7-50	2 1/4" (2.25")	5" (127 mm)

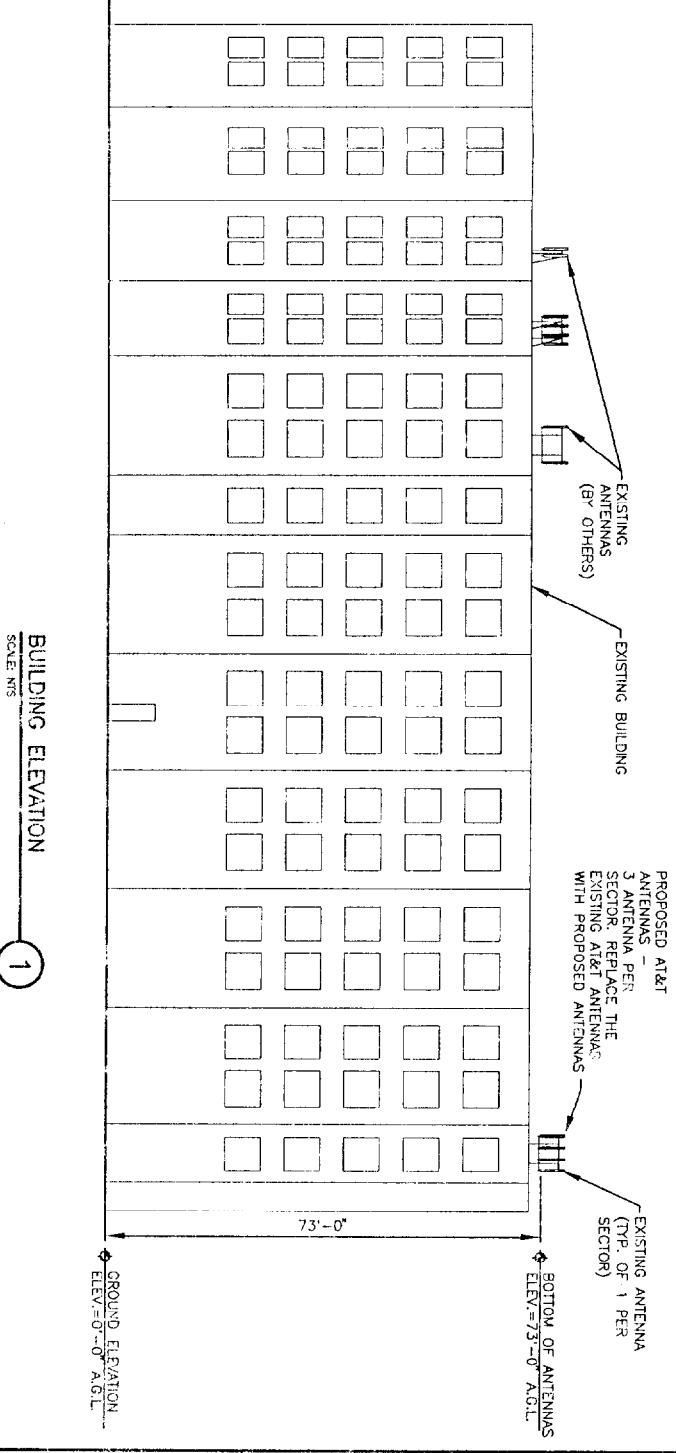
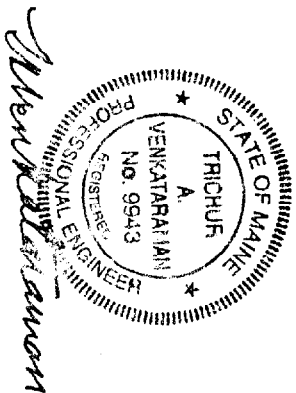
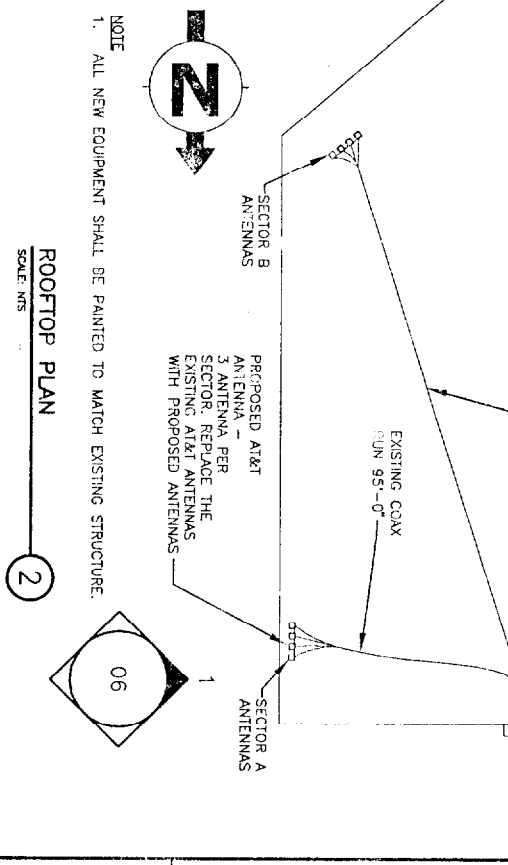
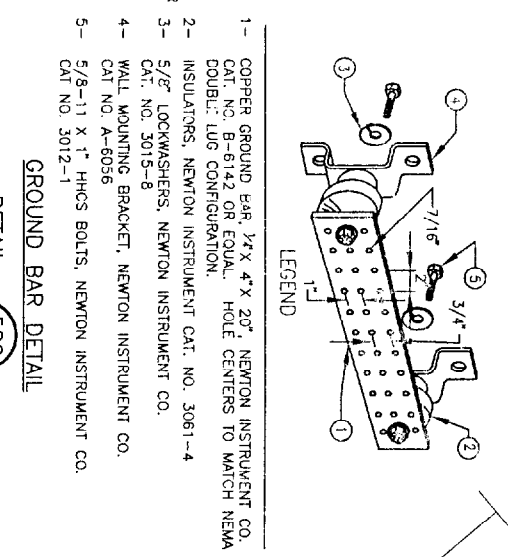
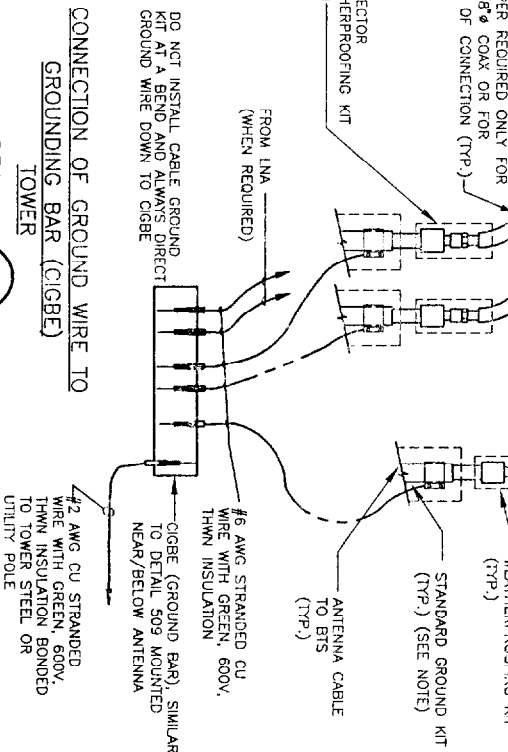
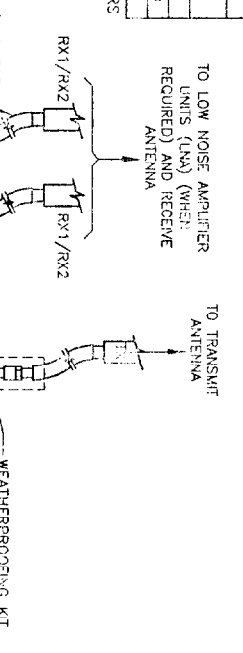
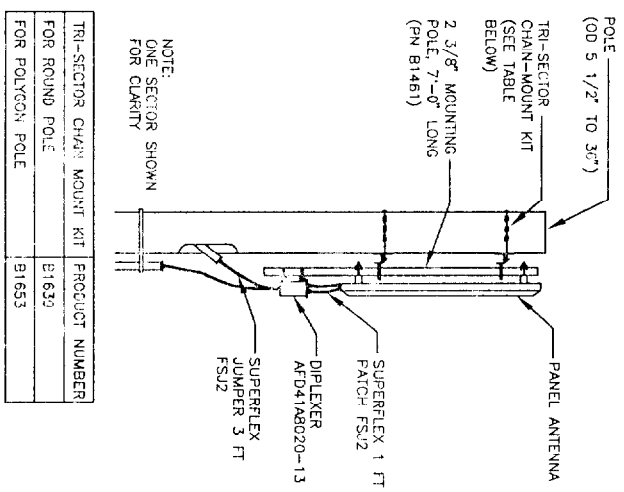
CONDUCTIVE CABLE MODEL NUMBER	CONDUCTIVE CABLE NOMINAL SIZE	MINIMUM BEND RADIUS
FS-540	1/2" (0.5")	2" (51 mm)
FS-500	1/2" (0.5")	1 1/2" (38 mm)
CR 50 540	1/2" (0.5")	4" (102 mm)
CR 50 1070	7/8" (0.875")	5" (127 mm)
CR 50 1073	1 5/8" (1.625")	5" (127 mm)

CABLE MODEL NUMBER	CONDUCTIVE CABLE NOMINAL SIZE	MINIMUM BEND RADIUS
811028-001	1/4"	1"
811028-003	1/4"	1"
811028-001	3/8"	1 1/2"
811028-003	3/8"	1 1/2"
810918-001	1/2"	2"
810918-003	1/2"	2"
810918-001	3/4"	3"
810918-003	3/4"	3"
810918-001	1"	4"
810918-003	1"	4"
810918-001	1 1/4"	5"
810918-003	1 1/4"	5"
810921-001	1 1/2"	5"
810921-003	1 1/2"	5"
810921-001	1 3/4"	5"
810921-003	1 3/4"	5"
810921-001	2 1/4"	5"
810921-003	2 1/4"	5"
811044-001	2 1/4"	5"
811044-003	2 1/4"	5"
811044-001	2 1/4"	5"
811044-003	2 1/4"	5"

MANUFACTURER'S RECOMMENDED TORQUE

CONNECTOR (RM)	CONNECTOR (N)	CONNECTOR (CAL)
ANDREW	220-225 N-LB	15-20 N-LB
HUBER+SUHNER	220-225 N-LB	6-10 N-LB
COMPOSITE	220 N-LB	15 N-LB

RF CABLE MINIMUM BEND RADIUS AND MANUFACTURER'S RECOMMENDED CONNECTOR TORQUE TABLES



BAY STATE DESIGN
Architects, Planners
70 Tower Office Park
Woburn, MA 01801
Phone: 781-932-2487
Fax: 781-932-9771
Copyright © Bay State Design, Inc. (An Equal Opportunity Employer)

TRM
Tower Resources
Management, Inc.
30 Lyman Street, Suite 12
Westborough, MA 01581
Phone: 508-389-1746
Fax: 508-389-1749

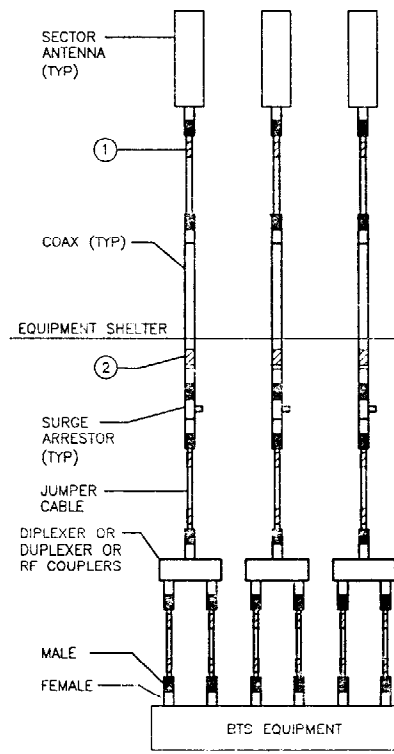
BRADLEY'S CORNER
SITE NO. M023
1050 WESTBROOK STREET
PORTLAND, ME 04102

AT&T
AT&T WIRELESS SERVICES, INC.
400 BLUE HILL DRIVE, SUITE 100
NEWTON, MA 02459

NO.	DATE	ISSUED FOR CONSTRUCTION	REVISIONS	BY	CHK
0	01/19/04	ISSUED FOR CONSTRUCTION			

AT&T WIRELESS
ANTENNA ELEVATION & DETAILS
BRADLEY'S CORNER
DRAWING NUMBER: M023-06

6 5 4 3 2 1

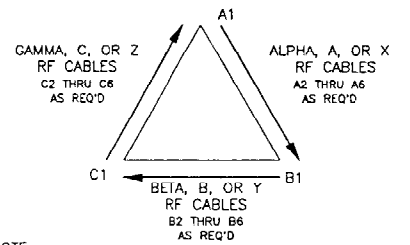


CABLE MARKING LOCATIONS DIAGRAM

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.

DETAIL 600
NTS BOS



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	CABLE A1	CABLE A2	CABLE A3	CABLE A4	CABLE A5	CABLE A6
SECTOR ALPHA, A, X	ONE RED	TWO RED	THREE RED	FOUR RED	FIVE RED	SIX RED
SECTOR BETA, B, Y	ONE BLUE	TWO BLUE	THREE BLUE	FOUR BLUE	FIVE BLUE	SIX BLUE
SECTOR GAMMA, C, Z	ONE GREEN	TWO GREEN	THREE GREEN	FOUR GREEN	FIVE GREEN	SIX GREEN
SECTOR DELTA, D, W	ONE YELLOW	TWO YELLOW	THREE YELLOW	FOUR YELLOW	FIVE YELLOW	SIX YELLOW

- NOTE:
- 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).
 - THE STANDARD CABLE MARKING TAPE IS BASED ON THE "4 NEMA" COLORED TAPES - RED, BLUE, GREEN AND YELLOW.
 - ON EXISTING SITE THE COLOR CODING SHALL FOLLOW THE EXISTING MARKET COLOR CODING.
 - 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.

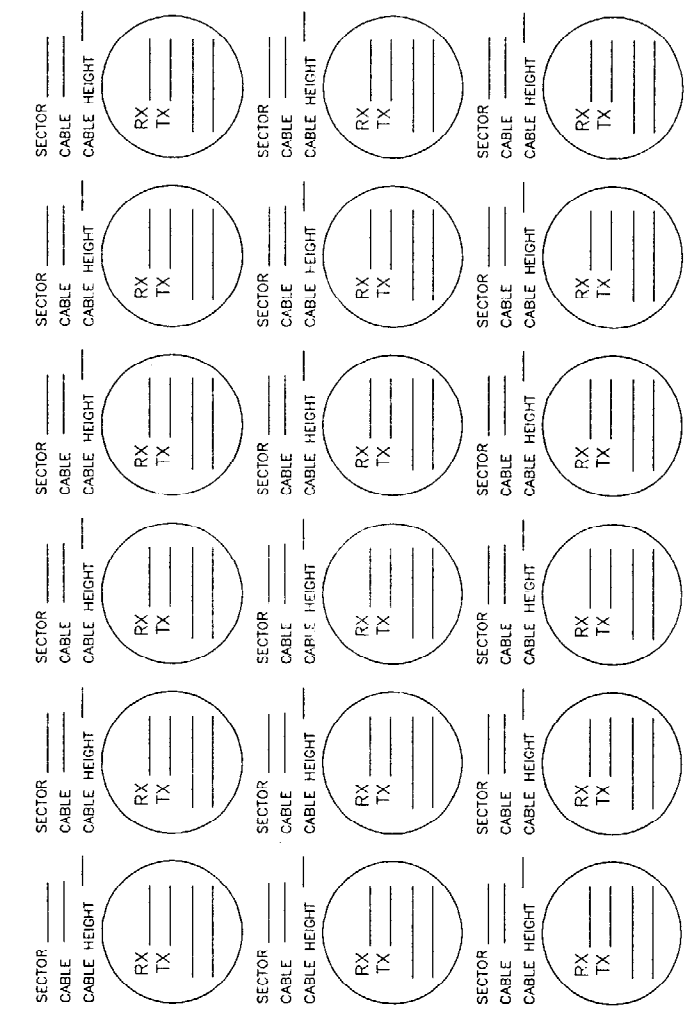


TDMA LINE TAG GSM LINE TAG

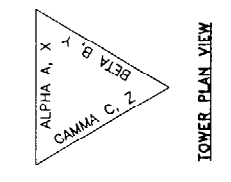
TO PROVIDE ADDITIONAL IDENTIFICATION EACH RF CABLE SHALL BE IDENTIFIED WITH A METAL TAG MADE OF STAINLESS STEEL OR BRASS AND STAMPED WITH THE SECTOR, CABLE NUMBER, AND "ATTWS" TO IDENTIFY AT&T WIRELESS CABLES. THE ID MARKING LOCATIONS SHOULD BE AS PER "CABLE MARKING LOCATIONS TABLE". THE TAG SHOULD BE 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

CABLE PORT DIAGRAM
CAUTION: HARMFUL RF ENERGY EXISTS ON THESE LINES



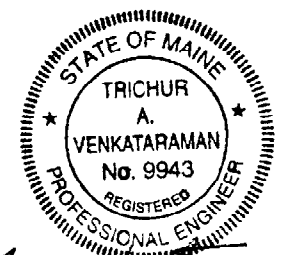
DETAIL 601
NTS



TOWER PLAN VIEW

DESIGNERS/ENGINEERS NOTE:

- 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, TX, ETC.) OF EACH ANTENNA AND RF CABLE AT THE TIME OF INSTALLATION.
- ONE COMPLETED COPY PLUS TWO BLANK COPIES OF THE CHART SHOULD BE POSTED IN THE SHELTER IN A PROTECTIVE PLASTIC SLEEVE.



Venkataraman

BAY STATE DESIGN
Bay State Design Associates, Inc. Architects • Engineers
70 Tower Office Park
Woburn, MA 01801
Phone: 781-932-2467
Fax: 781-932-9771
Copyright © Bay State Design Associates, Inc. (in accordance with state laws)

TRM
Tower Resource Management, Inc.
30 Lyman Street, Suite 12
Westborough, MA 01581
Phone: 508-389-1746
Fax: 508-389-1749

BRADLEYS CORNER
SITE NO. M023
1050 WESTBROOK STREET
PORTLAND, ME 04102

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

NO.	DATE	ISSUED FOR CONSTRUCTION	BY	CHK	APP'D
0	01/19/04	ISSUED FOR CONSTRUCTION	BR		
SCALE: AS SHOWN		DESIGNED BY: JK	DRAWN BY: BR		

AT&T WIRELESS	
COAX CABLE COLOR CODING & TAGGING DETAILS	
BRADLEYS CORNER	
DRAWING NUMBER	REV
M023-08	0



APPLICATION FOR EXEMPTION FROM SITE PLAN REVIEW

Applicant: Atlantic Cellular of Delaware LLC d/b/a AT&T Wireless Services
 Application Date: 02/24/04
 Applicant's Mailing Address: 400 Blue Hill Dr., Suite 100 Westwood MA 02090
 Project Name/Description: Suites
 Embassy Suites, 1050 Westbrook St.
 Consultant/Agent/Phone Number: Barry J. Hobbs (207) 283-8495
 Address of Proposed Site: Embassy Suites, 1050 Westbrook St.
 CBL: 210A-A-5
 Description of Proposed Development: Expansion of enclosed area by 2' on east side, additional equipment cabinet replacement of existing antennae.

Criteria for Exemptions: See Section 14-523 (4) on back side of form	Applicant's Assessment (Yes, No, N/A)	Planning Office Use Only
a) Within Existing Structures; No New Buildings, Demolitions or Additions	Yes	✓
b) Footprint Increase Less Than 500 Sq. Ft.	Yes	✓
c) No New Curb Cuts, Driveways, Parking Areas	Yes	✓
d) Curbs and Sidewalks in Sound Condition/Comply with ADA	Yes	✓
e) No Additional Parking/ No Traffic Increase	Yes	✓
f) No Stormwater Problems	Yes	✓
g) Sufficient Property Screening	Yes	✓
h) Adequate Utilities	Yes	✓

Please Attach Sketch/Plan of Proposal/Development

Exemption Granted Partial Exemption Exemption Denied
 FFA approval or letter of non-jurisdiction.
 Planner's Signature: *[Signature]*
 Date: 2/25/04
 Planning Division Use Only

White - Planning Office
 Pink - Inspections
 Yellow - Applicant